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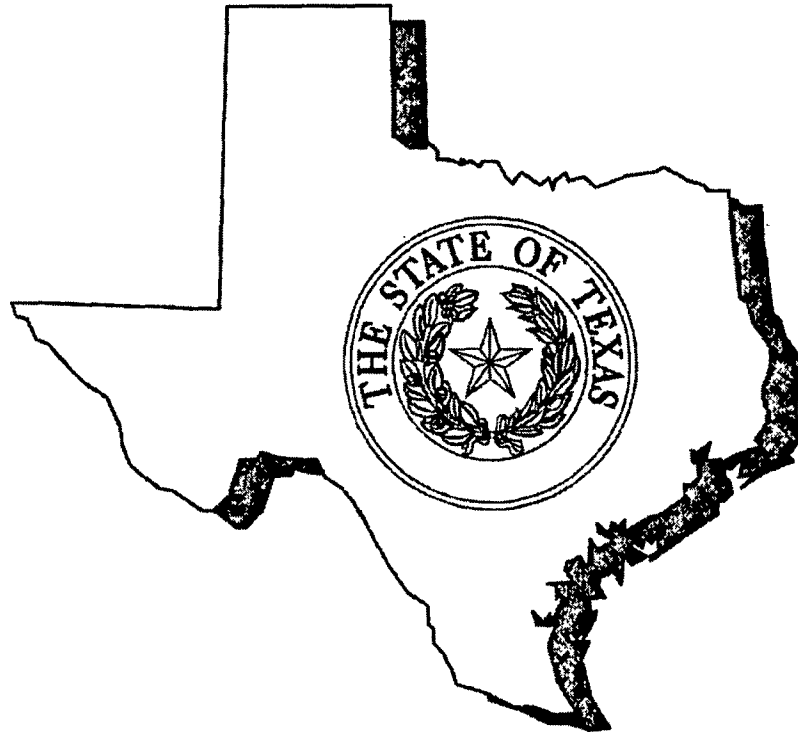
Addendum StartPage 0

SOAH DOCKET NO. 473-16-2873.WS
PUC DOCKET NO. 45570

APPLICATION OF MONARCH
UTILITIES I, LP FOR AUTHORITY
TO CHANGE RATES

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BEFORE THE STATE OFFICE
OF
ADMINISTRATIVE
HEARINGS



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DIRECT TESTIMONY OF
EMILY SEARS
WATER UTILITY REGULATION
PUBLIC UTILITY COMMISSION OF TEXAS
AUGUST 24, 2016

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1 **I. INTRODUCTION OF WITNESS**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. Ms. Emily Sears, Public Utility Commission of Texas, 1701 N. Congress Avenue, Austin,
4 Texas 78711-3326.

5

6 **Q. BY WHOM ARE YOU CURRENTLY EMPLOYED AND IN WHAT CAPACITY?**

7 A. I have been employed by the Public Utility Commission of Texas (Commission) since
8 January 1, 2015 as a Financial Analyst in the Water Utilities Division.

9

10

11 **Q. WHAT ARE YOUR PRINCIPAL RESPONSIBILITIES AT THE COMMISSION?**

12 A. I am responsible for reviewing certificate of convenience and necessity (CCN) applications
13 and amendments, sale/transfer/merger applications, tariff/rate change applications, stock
14 transfers, financial reviews, managerial reviews, and rate filings. I am also responsible for
15 preparing testimony and exhibits for contested case matters involving investor-owned, non-
16 profit and governmental water and sewer retail public utilities and wholesale matters, and
17 assisting with settlement negotiations.

18

19 **Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL
20 EXPERIENCE.**

21 A. I have provided a summary of my educational background and professional experience in
22 Attachment ES-1 to my direct testimony.

23

1 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION OR THE**
2 **STATE OFFICE OF ADMINISTRATIVE HEARINGS (SOAH)?**

3 A. Yes. I have also testified before the Pennsylvania Public Utility Commission (PA PUC).
4 Attachment ES-2 provides a summary of the cases in which I have testified or submitted
5 testimony.

6

7 **II. PURPOSE AND SCOPE OF TESTIMONY**

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

9 A. The purpose of my testimony is to present a recommendation for the rate of return (ROR)
10 for Monarch Utilities I, L.P. (Monarch or Company).

11

12 **Q. WHAT IS THE SCOPE OF YOUR REVIEW?**

13 A. I reviewed the application, testimonies, and replies to requests for information of Monarch,
14 with respect to rate of return, including capital structure, the cost of debt, the cost of common
15 equity, and the overall fair rate of return. This recommendation pertains to the following
16 issues from the Commission's preliminary order for this case:

17 9. What is the appropriate debt-to-equity capital structure of the utility?

18 10. What is the appropriate overall rate of return, return on equity, and cost of debt for the
19 utility?

20 14. What is the appropriate weighted average cost of capital?

21 17. Does the utility have any debt? If so, what is the cost of that debt?

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III. BACKGROUND

Q. PLEASE DEFINE THE TERM “RATE OF RETURN.”

A. Rate of return generally is the amount of revenue an investment generates (in the form of net income), usually expressed as a percentage of the amount of capital invested, over a given period of time. Rate of return is one of the components of the revenue requirement formula.

Q. WHAT IS THE REVENUE REQUIREMENT FORMULA?

A. The revenue requirement formula used in base rate cases is as follows:

$$RR = E + D + T + (RB \times ROR)$$

Where:

RR = Revenue Requirement

E = Operating Expense

D = Depreciation Expense

T = Taxes

RB = Rate Base

ROR = Overall Rate of Return

In the above formula the rate of return is expressed as a percentage. The calculation of the ROR is independent of the determination of the appropriate rate base value for ratemaking purposes. As such, the appropriate total dollar return (RB x ROR) is dependent upon the proper computation of the rate of return and the proper valuation of the utility’s rate base.

1 **Q. WHAT CONSTITUTES A FAIR AND REASONABLE OVERALL RATE OF**
2 **RETURN?**

3 A. A fair and reasonable overall rate of return is one which will allow the utility the opportunity
4 to recover those costs prudently incurred by all classes of capital used to finance the rate base
5 during the prospective period in which its rates will be in effect.

6 *The Bluefield Water Works & Improvements Co. v. Public Service Comm. of West*
7 *Virginia*, 292 U.S. 679, 692-93 (1923), and the *FPC v. Hope Natural Gas Co.* 320 U.S. 591,
8 603 (1944) cases set forth the principles that are generally accepted by regulators throughout
9 the country as the appropriate criteria for measuring a fair rate of return:

- 10 1) A utility is entitled to a return similar to that being earned by other enterprises with
11 corresponding risks and uncertainties, but not as high as those earned by highly profitable
12 or speculative ventures;
- 13 2) A utility is entitled to a return level reasonably sufficient to assure financial soundness;
- 14 3) A utility is entitled to a return sufficient to maintain and support its credit and raise
15 necessary capital;
- 16 4) A fair return can change (increase or decrease) along with economic conditions and
17 capital markets.

18

19 **Q. HOW IS THE RATE OF RETURN CALCULATED?**

20 A. The overall rate of return in this rate proceeding is calculated using the weighted average
21 cost of capital method. To calculate the weighted average cost of capital, the utility's capital
22 structure must first be determined by calculating the percentage of each capitalization

1 component which has financed the rate base to total capital. The capital components consist
2 of long-term debt and common equity. Next, the effective cost rate of each capital structure
3 component must be determined. The cost rate of debt is typically fixed, and can be
4 computed accurately. The cost rate of common equity is not fixed and it is more difficult to
5 measure. Next, each capital structure component percentage is multiplied by its
6 corresponding effective cost rate to determine the weighted capital component cost rate.
7 Lastly, the sum of the weighted cost rates produces the overall rate of return. This overall
8 rate of return is multiplied by the rate base to determine the return portion of utility's revenue
9 requirement.

10
11 **IV. COMPANY POSITION**

12 **Q. PLEASE SUMMARIZE MONARCH'S RATE OF RETURN REQUEST IN THIS**
13 **CASE.**

14 **A.** Based on the rate/tariff change application, Monarch requested the following rate of return:

| <u>Type of Capital</u> | <u>Ratios</u> | <u>Cost Rate</u> | <u>Weighted Cost Rate</u> |
|------------------------|-----------------|------------------|---------------------------|
| Long-Term Debt | 46.00 % | 6.45 % | 2.97 % |
| Common Equity | <u>54.00 %</u> | 10.75 % | <u>5.81 %</u> |
| Total | <u>100.00 %</u> | | <u>8.77 %</u> |

Source: Application, Schedule II-C-1(1).

15
16 **V. STAFF POSITION**

17 **Q. PLEASE SUMMARIZE STAFF'S RECOMMENDATION IN THIS PROCEEDING.**

1 A. Staff recommends the following rate of return for Monarch:

| <u>Type of Capital</u> | <u>Ratios</u> | <u>Cost Rate</u> | <u>Weighted Cost Rate</u> |
|------------------------|-----------------|------------------|---------------------------|
| Long-Term Debt | 47.37 % | 6.36 % | 3.01 % |
| Common Equity | <u>52.63 %</u> | 8.48 % | <u>4.46 %</u> |
| Total | <u>100.00 %</u> | | <u>7.47 %</u> |

Source: Attachment ES-3

2

3 **VI. PROXY (BAROMETER) GROUP**

4 **Q. WHAT IS A PROXY GROUP, AS USED IN BASE RATE CASES?**

5 A. A proxy group, also called a barometer group, is a group of companies which act as a
6 benchmark for determining the subject utility's rate of return in a base rate case.

7

8 **Q. WHAT ARE THE REASONS FOR USING A BAROMETER GROUP?**

9 A. Many public utility companies are not publicly traded, and therefore lack specific market
10 data. A barometer group provides that industry specific market data. Furthermore, a
11 barometer group of water utilities have shared common characteristics of regulated water
12 distribution utilities, and are well suited to comparison among utility companies. This
13 comparative method is a standard approach in utility rate cases.

14

15 **Q. ARE THERE ADDITIONAL REASONS FOR USING A BAROMETER GROUP?**

16 A. Yes. A barometer group is typically utilized since the use of data exclusively from one
17 company may be less reliable than using a barometer group. The lower reliability occurs

1 because the data for one company may be subject to events which can cause short-term
2 anomalies in the marketplace. The rate of return on common equity for a single company
3 could become distorted in these particular circumstances, and would therefore not be
4 representative of similarly situated companies. The use of a barometer group has the effect
5 of smoothing out potential anomalies associated with a single company.

6 A barometer group cost of equity is also used as a benchmark to satisfy the long
7 established guideline of utility regulation that seeks to provide the subject utility with the
8 opportunity to earn a return equal to that of similar risk enterprises.

9
10 **Q. WHAT CRITERIA DID YOU USE IN SELECTING YOUR BAROMETER GROUP**
11 **COMPANIES?**

12 A. As in this docket, I generally use the following criteria when selecting a barometer group: 1)
13 50% or more of the company's revenues must be generated from the water utility distribution
14 industry; 2) the company's stock must be publicly traded; 3) investment information for the
15 company must be available from more than one source; and 4) the company must not be
16 currently involved/targeted in an announced merger or acquisition.

17
18 **Q. WHAT CRITERIA DID MONARCH WITNESS MR. PAUL MOUL USE IN**
19 **SELECTING HIS BAROMETER GROUP COMPANIES?**

20 A. Mr. Moul's criteria for the Water Group are as follows: '(i) they are contained in The
21 Value Line Investment Survey; (ii) they have stock that is publicly traded, and (iii) they are

1 not currently the target of a publicly-announced merger or acquisition.¹

2

3 **Q. WHAT BAROMETER GROUP DID YOU USE IN YOUR ANALYSIS?**

4 A. I selected American States Water Company, American Water Works, Aqua America,
5 California Water Service Group, Connecticut Water Service, Middlesex Water, SJW
6 Corporation, and York Water.

7

8 **Q. WHAT BAROMETER GROUP DID MR. MOUL USE IN HIS ANALYSIS?**

9 A. Mr. Moul uses the same barometer group, with the addition of Artesian Resources Corp.²

10

11 **Q. WHY DO YOU NOT USE ARTESIAN RESOURCES CORP. IN YOUR ANALYSIS?**

12 A. Artesian Resources Corp. is a part of the small-midcap Value Line Investment Survey, to
13 which Staff does not have access.

14

15 **VII. CAPITAL STRUCTURE**

16 **Q. WHAT DOES CAPITAL STRUCTURE REPRESENT IN A RATE CASE?**

17 A. Capital structure represents the financing of long-term assets (rate base). The primary forms
18 of financing employed by public utilities includes debt and common equity.

19

¹ Direct Testimony of Paul R. Moul, page 7, line 22 – page 8, line 1.
Exhibit PRM-1, Schedule PRM-3, page 2 of 2.

1 **Q. WHAT IS MONARCH'S CLAIMED CAPITAL STRUCTURE?**

2 A. Monarch is claiming a hypothetical capital structure of 46.00% debt, and 54.00% equity.

3

4 **Q. WHAT IS THE BASIS FOR MONARCH'S CLAIMED CAPITAL STRUCTURE?**

5 A. Mr. Moul testifies that Monarch's actual capital structure at year-end 2014 is 33.8% debt,
6 and 66.2% equity. Mr. Moul states this is unusual, and using a hypothetical capital structure
7 equal to that of the average of the barometer group will shift Monarch's financial risk to be
8 equal to that of the barometer group, and synchronize the cost of equity determination in this
9 case.³ Mr. Moul used the barometer group average capital structure for the year ending
10 December 31, 2014.

11

12 **Q. WHAT IS YOUR RECOMMENDATION REGARDING MONARCH'S CAPITAL**
13 **STRUCTURE?**

14 A. I recommend using a hypothetical capital structure of 47.37% debt and 52.63% equity.

15

16 **Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION TO USE A**
17 **HYPOTHETICAL CAPITAL STRUCTURE?**

18 A. A capital structure should be representative of the industry norm, and be an efficient use of
19 capital. The use of a capital structure that is outside the range of the industry's capital
20 structure may result in an overstated overall rate of return.

³ Direct Testimony of Paul R. Moul, page 20, lines 2-12.

1 The current 5-year average capital structure of the barometer group (the industry norm)
2 is 47.37% debt and 52.63% equity.⁴ In this case, Monarch's actual capital structure at the
3 end of the June 30, 2015 is 32.14% debt and 67.86% equity. This is not representative of
4 current capital structures among water utility distribution systems and is an inefficient use of
5 capital.

6 Therefore, a hypothetical capital structure based upon an industry average should be
7 used for ratemaking purposes.

8
9 **Q. WHY DO YOU USE A 5-YEAR AVERAGE, INSTEAD OF THE YEAR ENDING**
10 **DECEMBER 31, 2014?**

11 A. There are several reasons. First, capital structures tend to fluctuate over time. Using a 5-
12 year average can give a better idea of the central tendency of a capital structure. In theory
13 there is an 'optimal' capital structure. This 'optimal' capital structure is one which
14 minimizes the cost of capital for the utility. In the case of regulated utilities, the historic
15 capital structures have included debt of approximately 45-55%, with an average of 50%.
16 This could be considered utilities 'optimal' capital structure, and also the central tendency
17 of a utility capital structure over time.

18 Second, while long-term debt in capital structures was decreasing from 2010-2014, it
19 increased in 2015. Value Line also shows the percentage of long-term debt in capital

⁴ Attachment ES-3, page 2 of 2.

1 structures continuing to increase in 2016 and 2017.⁵ Using a 5-year average eliminates the
2 'snapshot' of 2014, in which you would only see the lowest long-term debt percentage
3 utilities may tolerate before reverting towards the 'optimal' capital structure.

4 Finally, due to the current low interest rate environment, utilities with the capability of
5 taking on debt should take advantage of this market to lower their overall cost of capital.

6
7 **VIII. COST RATE OF LONG-TERM DEBT**

8 **Q. WHAT IS MONARCH'S CLAIMED COST RATE OF LONG-TERM DEBT?**

9 A. Monarch calculates its claimed effective cost rate of long-term debt to be 6.45%.

10
11 **Q. WHAT IS THE BASIS FOR MONARCH'S CLAIMED COST RATE OF LONG-
12 TERM DEBT?**

13 A. Monarch's claim of 6.45% is the weighted cost of debt of all debt issuances, adjusted for net
14 proceeds.

15
16 **Q. WHAT ARE NET PROCEEDS?**

17 A. Net proceeds can be defined as the amount of money received from a loan, after subtracting
18 transaction costs.

19
20 **Q. WHAT IS YOUR RECOMMENDATION REGARDING MONARCH'S COST RATE**

⁵ Attachment ES-4.

1 **OF LONG-TERM DEBT?**

2 A. Staff recommends using the actual weighted cost of debt of 6.36%, unadjusted for net
3 proceeds.⁶

4

5

6 **Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?**

7 A. Monarch calculated an overall cost rate of 6.36% unadjusted for net proceeds. Given that
8 Monarch's hypothetical capital structure includes more debt than the actual capital structure,
9 any difference for net proceeds is included.

10 For example, the actual debt costs are \$25,625,704 at a cost rate of 6.36%. Because
11 any issuance costs removed from that amount are not included in rate base, the utility can
12 use the net proceeds of \$25,350,684 with a cost rate of 6.45%. However, this only can occur
13 if the actual capital structure is used. Since the Staff's hypothetical capital structure would
14 set the debt at \$37,359,491 based on Monarch's claimed rate base of \$78,867,407, the use of
15 the actual cost rate of 6.36% is more appropriate.

16

17 **IX. EQUITY ANALYSIS**

18 **Q. WHAT IS YOUR RECOMMENDATION FOR THE APPROPRIATE COST OF**
19 **COMMON EQUITY IN THIS PROCEEDING?**

20 A. Based upon my analysis, I recommend a cost of common equity of 8.48%.

⁶ Monarch filing, schedule II-C-4, Long-Term Debt.

1

2 **Q. WHAT IS THE BASIS FOR YOUR RECOMMENDATION?**

3 A. I arrived at this equity return using the Discounted Cash Flow (DCF) method. My DCF
4 analysis employed a spot dividend yield, a 52-week dividend yield, and earnings growth
5 forecasts. I also used the Capital Asset Pricing Model (CAPM) method as a comparison to
6 my DCF results.

7

8 **A. DISCOUNTED CASH FLOW (DCF)**

9 **Q. WHAT IS THE THEORETICAL BASIS FOR THE DCF METHOD?**

10 A. The theoretical basis for the DCF model is the 'dividend discount model' of financial
11 theory, which maintains that the value (price) of any security or commodity is the
12 discounted present value of all future cash flows. The DCF model assumes that investors
13 evaluate stocks in the classical economic framework, which maintains that the value of a
14 financial asset is determined by its earning power, or its ability to generate future cash
15 flows.

16

17 **Q. PLEASE EXPLAIN YOUR DCF ANALYSIS.**

18 A. My analysis employs the standard discrete DCF model as portrayed in the following formula:

19
$$k = D_1/P_0 + g$$

20 Where:

21 k = Cost of equity

22 D_1 = Dividend expected during the year

1 P_0 = Current price of the stock

2 g = Expected growth rate of dividends

3 When a forecast of D_1 is not available, D_0 (the current dividend) must be adjusted by $\frac{1}{2}$ the
4 expected growth rate⁷ in order to account for changes in the dividend paid in period 1. In
5 this case I have used a forecast of D_1 .

6

7 **Q. PLEASE EXPLAIN HOW YOU DEVELOPED THE DIVIDEND YIELDS USED IN**
8 **YOUR DCF ANALYSIS.**

9 A. A representative dividend yield must be calculated over a time frame that avoids the
10 problems of short-term anomalies and 'stale' data series. For purposes of my DCF analysis,
11 the dividend yield calculation places equal emphasis on the most recent spot, and 52-week
12 average dividend yield. The following table summarizes my dividend yield computations
13 for the barometer group:

| <u>Eight Company Barometer Group</u> | <u>Dividend Yield</u> |
|--------------------------------------|-----------------------|
| Spot | 2.16% |
| 52-week average | 2.51% |
| Average | 2.34% |

Source: Attachment ES-5

14

⁷ The adjustment of $\frac{1}{2}$ the growth rate is used when the timing of the dividend increase is not known for certain. It could occur next month, or in the twelfth month. On average, it is safe to assume that the increase will occur half way through the prospective year. Therefore, an adjustment by $\frac{1}{2}$ the expected growth rate is appropriate.

1 **Q. WHAT INFORMATION DID YOU RELY UPON TO DETERMINE YOUR**
2 **EXPECTED GROWTH RATE?**

3 A. I have examined the earnings growth forecasts.
4

5 **Q. PLEASE EXPLAIN YOUR USE OF EARNINGS GROWTH FORECASTS.**

6 A. I have used 5-year projected growth rate estimates from established forecasting entities
7 including Value Line, Reuters, Zacks, and Morningstar.
8

9 **Q. WHAT WERE THE RESULTS OF YOUR FORECASTED EARNINGS GROWTH**
10 **RATES?**

11 A. The expected growth rates for the eight company barometer group are 4.55%, 7.24%, 6.45%,
12 8.55%, 3.55%, 3.85%, 7.75%, and 5.45%. The average of the eight companies' growth rate
13 forecasts is 6.15%.⁸
14

15 **Q. WHAT ARE THE RESULTS OF YOUR DISCOUNTED CASH FLOW ANALYSIS**
16 **BASED ON YOUR RECOMMENDED DIVIDEND YIELDS AND GROWTH**
17 **RATES?**

18 A. Using a dividend yield of 2.34% and a growth rate of 6.15%, the DCF result is 8.48%.⁹
19

⁸ Attachment ES-6.

⁹ Attachment ES-7.

1 **B. CAPITAL ASSET PRICING MODEL (CAPM)**

2 **Q. WHAT IS THE THEORETICAL BASIS FOR THE CAPM?**

3 A. The Capital Asset Pricing Model describes the relationship of a stock's investment risk and
4 its market rate of return. It identifies the rate of return investors expect so that it is
5 comparable with returns of other stocks of similar risk. The method hypothesizes that the
6 investor required return on a company's stock is equal to the return on a 'risk free' asset
7 plus an equity premium reflecting that company's investment risk. In the CAPM, two
8 types of risk are associated with a stock: (1) firm-specific risk (unsystematic risk) and (2)
9 market risk (systematic risk) which is measured by a firm's beta. The CAPM only allows
10 for investors to receive a return for bearing systematic risk. Unsystematic risk is assumed
11 to be diversified away. Therefore it does not earn a return.

12

13 **Q. EXPLAIN YOUR LIMITED USE OF THE CAPM MODEL.**

14 A. I have included a CAPM analysis to confirm the DCF results submitted in base rate cases by
15 the use of a second method.

16

17 **Q. PLEASE EXPLAIN YOUR CAPM ANALYSIS.**

18 A. My analysis employs the standard CAPM as portrayed in the following formula:

19
$$K = R_f + \beta(R_m - R_f)$$

20 Where:

21 k = Cost of equity

22 R_f = Risk-free ROR

1 R_m = Expected ROR on the overall stock

2 β = Beta measures the systematic risk of an asset

3 The CAPM formula above is actually a form of the more general risk premium approach and
4 is based on modern portfolio theory.

5

6 **Q. WHAT IS BETA, AS EMPLOYED IN YOUR USE OF THE STANDARD CAPM**
7 **MODEL?**

8 A. Beta is a measure of the systematic risk of a stock in relation to the rest of the stock market.
9 A stock's beta is estimated by running a linear regression of a stock's return against the return
10 on the overall stock market. The beta of a stock with an identical price pattern as the overall
11 stock market will have a beta of 1. A stock with a price movement that is greater than the
12 overall stock market will have a beta that is greater than 1, and would be described as having
13 more investment risk than the market. Conversely, a stock with a price movement that is
14 less than the overall stock market will have a beta of less than 1, and would be described as
15 having less investment risk than the market.

16

17 **Q. WHAT BETA DID YOU CHOOSE FOR YOUR CAPM ANALYSIS?**

18 A. In estimating an equity cost rate for the group of eight water utility companies, I used the
19 average of the betas for the water utility companies as provided in the Value Line Investment
20 Survey. The average beta for the eight water utility companies' barometer group is 0.69.¹⁰

¹⁰ Attachment ES-8.

1

2 **Q. WHAT RISK-FREE ROR HAVE YOU CHOSEN FOR YOUR CAPM ANALYSIS?**

3 A. For my CAPM analysis, I have chosen to use the risk-free rate of return (R_f) from the historic
4 yield on 10-year Treasury Bonds. While the yield on the short-term T-Bill is a more
5 theoretically correct parameter to represent a risk-free yield, this yield can be extremely
6 volatile. The volatility of short-term T-Bills is directly influenced by Federal Reserve
7 policy. At the other extreme, the 30-year Treasury bond yield exhibits more stability, but is
8 not risk-free. Long-term Treasury Bonds have substantial maturity risk associated with the
9 market risk and the risk of unexpected inflation. Long-term treasuries normally offer higher
10 yields to compensate investors for these risks. As a result, I chose to use the yield on the
11 10-year Treasury bond because it balances the short comings of the other two alternatives.
12 For my historic analysis, I chose 4.42%, which is the averages of the 10 year Treasury yield
13 over time periods matching the historic market return. For my future analysis, I chose
14 2.39%, which is the average of the 10-year Treasury yields over 6 quarters and the 5 year
15 projection.¹¹

16

17 **Q. PLEASE EXPLAIN HOW YOU DETERMINED THE RETURN ON THE OVERALL**
18 **STOCK MARKET, AS EMPLOYED IN YOUR CAPM ANALYSIS.**

19 A. To arrive at a representative expected return on the overall stock market, I surveyed three
20 sources. Value Line expects its universe of 1,500 stocks to have an average yearly return

¹¹ Attachment ES-9.

1 of 12.03% over the next 3 to 5 years, based on a forecasted dividend yield of 2.30% and a
2 yearly index appreciation of 45%. Yahoo! Finance expects the S&P 500 index to have an
3 average yearly return of 11.02% over the next five years, based upon a forecasted dividend
4 yield of 2.22% and an expected increase in the S&P 500 index of 8.80%. A historical return
5 for the S&P Composite Index is routinely used as a benchmark for the expected return on
6 the overall stock market. This component can vary widely depending on the historic period
7 used.

8
9 **Q. EXPLAIN THE RANGE OF EXPECTED RETURN ON THE OVERALL STOCK**
10 **MARKET YOU CALCULATED USING THE HISTORICAL RETURN FOR THE**
11 **S&P COMPOSITE INDEX.**

12 A. Using the geometric mean of historic returns, I calculated the following results:

| <u>Time Period</u> | <u>Return</u> |
|--------------------|---------------|
| 5 Years | 12.57% |
| 10 Years | 7.30% |
| 20 Years | 8.19% |
| 40 Years | 11.34% |
| <u>90 Years</u> | <u>10.02%</u> |
| Average | 9.88% |

Source: Attachment ES-10

13 **Q. WHY HAVE YOU SELECTED THESE TIME PERIODS?**

1 A. I have selected the above time periods to represent a variety of investor experiences and time
2 horizons. The 90-year time period represents the longest measurable time period available
3 for the S&P Composite Index. The 40 and 20-year time periods coincide with the average
4 useful lives of a utility's assets. The 10-year time period corresponds with the Treasury
5 Bond that I have employed. The 5-year time period corresponds with time period the DCF
6 growth rates are projected.

7
8 **Q. WHAT ARE THE COST OF EQUITY RESULTS FROM YOUR FORECASTED
9 AND HISTORIC CAPM ANALYSES?**

10 A. The results of these two analyses are as follows:

| | <u>CAPM cost of equity</u> |
|------------|----------------------------|
| Forecasted | 8.73% |
| Historic | 8.22% |

Source: Attachment ES-11

11

12 **Q. HOW DID YOU INCORPORATE THESE RESULTS INTO YOUR OVERALL
13 COST OF EQUITY?**

14 A. I have included the results of my CAPM analysis in my overall cost of equity calculation
15 only as a comparison to my DCF result. The DCF model measures the cost of equity
16 directly by measuring the discounted present value of future cash flows of the company. It
17 is these cash flows that actually pay dividends to shareholders.

18

1 **X. CRITIQUE OF COMPANY RECOMMENDATION**

2 **Q. WHAT ADJUSTMENTS HAS THE COMPANY MADE TO ITS COST OF EQUITY**
3 **ANALYSIS?**

4 A. Mr. Moul adjusted his DCF indicated cost of common equity upward 89 basis points to
5 account for his leverage claim. Mr. Moul also adjusted his CAPM indicated cost of
6 common equity upward by 110 basis points to reflect his claim that Monarch has higher
7 business risk due to its small size relative to his proxy group.

8

9 **Q. DO YOU AGREE WITH MR. MOUL'S PROPOSED COST OF EQUITY?**

10 A. No. Mr. Moul's cost of equity recommendation is biased due to several errors. He has
11 given undue weight to the Risk Premium method and CAPM, and has included the faulty
12 Comparable Earnings (CE) method in his analysis. Mr. Moul's DCF is distorted because
13 he employs an inflated DCF growth rate and an uncalled for dividend yield adjustment. In
14 addition, Mr. Moul employs inflated CAPM betas. Mr. Moul has made uncalled for
15 leverage and size risk adjustments.

16

17 **A. WEIGHTS GIVEN TO METHODS**

18 **Q. DO YOU AGREE WITH THE COMPANY'S RELIANCE ON THE USE OF THE**
19 **CAPM AND RP MODELS?**

20 A. No. While I am not opposed to using the CAPM results as a comparison to the results of
21 the DCF calculation, as discussed previously in this testimony, it is inappropriate to give the
22 CAPM and RP models comparable weight. The CAPM and the RP method are less reliable

1 indicators because they measure the cost of equity indirectly, and risk premiums vary
2 depending on the debt and equity being compared. Also, regulators can never be certain
3 that economic and regulatory conditions underlying the historical period during which the
4 risk premiums were calculated are the same today or in the future.

5
6 **B. COMPARABLE EARNINGS METHOD**

7 **Q. WHAT ARE THE LIMITATIONS OF THE COMPARABLE EARNINGS**
8 **APPROACH?**

9 A. The CE approach employed by Mr. Moul compares projected returns of companies of
10 dissimilar business and financial risk. Mr. Moul's barometer group for this method is ever
11 changing, and lacks current market data. Finally, Mr. Moul's use of book returns between
12 8% and 20% is skewed. Although Mr. Moul does not use the CE method in his average
13 when determining the cost of equity for this case, he does state that he relied upon the CE
14 method in his analysis.¹²

15
16 **Q. EXPLAIN HOW MR. MOUL'S CE APPROACH IS FAULTY.**

17 A. The companies in Mr. Moul's analysis are not utilities, thus they are too dissimilar for
18 Comparable Earnings. The companies in Mr. Moul's CE barometer group are simply not
19 comparable to water distribution utilities in terms of their business risk /financial risk profile.
20 Water distribution utilities, being monopolies with very low business risk, are able to

¹² Direct Testimony of Paul R. Moul, page 7, lines 14-17.

1 maintain higher financial risk profiles by employing more leverage. Conversely, since Mr.
2 Moul's CE barometer group companies are in an unregulated competitive environment with
3 much higher business risk, they must maintain lower financial risk profiles by employing
4 minimal leverage.

5
6 **Q. PLEASE EXPLAIN HOW MR. MOUL'S CE BAROMETER GROUP IS EVER**
7 **CHANGING?**

8 A. Mr. Moul's group of companies were selected from Value Line as of July 2015 and had
9 similar risks based on his factors (timeliness rank, safety rank, financial strength, price
10 stability, beta, and technical rank).¹³ However, these factors change, which changes the CE
11 group. As of April 2016, of the 15 companies on Mr. Moul's list, only 4 were in his new
12 updated CE group.¹⁴ Mr. Moul also added 3 companies to his new updated CE group. This
13 shows that the risks of the companies changes with the economy. Value Line updates
14 several industries a week on a rotating basis, and it takes 3 months for the same industry to
15 be re-evaluated. Using the returns for the companies listed in Mr. Moul's CE group going
16 back nine months, let alone six years, is not appropriate because the companies are only
17 similar for one short period of time (as little as one week). Therefore, the results for any
18 given week cannot be relied upon to determine long-term costs of equity.

19

¹³ Exhibit PRM-1, page 24 of 25, Schedule 13 [2 of 3].

¹⁴ Attachment ES-12.

1 **Q. CAN YOU PLEASE EXPLAIN HOW THE LACK OF CURRENT MARKET DATA**
2 **DIMINISHES THE VALUE OF THE CE APPROACH?**

3 A. Yes. Mr. Moul includes the historical years of 2010-2014. He proceeds to exclude current
4 market data including the years 2015-2017. Mr. Moul then picks up using projected
5 information from 2018-2020.¹⁵ This diminishes the value of the CE approach as Mr. Moul
6 is excluding three years of recent information, which is clearly imprudent when Mr. Moul's
7 goal is to 'span an entire business cycle. Furthermore, the historical (2010-2014) and
8 estimated (2018-2020) accounting returns do not include any information on what market
9 return investors expect today (2016).

10
11 **Q. PLEASE EXPLAIN HOW MR. MOUL'S USE OF RETURNS BETWEEN 8% AND**
12 **20% IS SKEWED.**

13 A. Mr. Moul chooses returns above 8% and below 20%. Excluding the values in Mr. Moul's
14 CE Approach below 8% and above 20% reduces the group from 13 companies to 4
15 companies. Of the 4 remaining values, the average return is 13.8%, and the median data
16 points are 12.5% and 19.0%. However, Mr. Moul's documentation shows that in 2015 the
17 average authorized return for gas and electric companies was 9.76%.¹⁶ This shows Mr.
18 Moul's bias towards the high end of returns, and shows that his range is unreasonable.

19 Furthermore, using his range, the 4 companies that stayed in his barometer group from

¹⁵ Exhibit PRM-1, Page 24 of 25, Schedule 13 [2 of 3].

¹⁶ Attachment ES-13.

1 July 2015 to April 2016 would not be included in his average, as they were outside his range.

2 This only further invalidates his use of the CE method as a reasonable method.

3

4 **C. DIVIDEND YIELD ADJUSTMENT**

5 **Q. WHAT DIVIDEND YIELD ADJUSTMENT HAS MR. MOUL PROPOSED IN HIS**
6 **ANALYSIS?**

7 A. Mr. Moul has proposed an ex-dividend adjustment to the dividend yields of his barometer
8 group. Mr. Moul adjusts the 'month-end prices to reflect the buildup of the dividend in the
9 price that has occurred since the last ex-dividend date.¹⁷

10

11 **Q. WHY IS MR. MOUL'S EX-DIVIDEND ADJUSTMENT INAPPROPRIATE?**

12 A. Mr. Moul's ex-dividend adjustment is inappropriate for three reasons. First, my experience
13 has not included any support for the application of an ex-dividend adjustment to the dividend
14 yield in the DCF formula as proposed by Mr. Moul. There are numerous publications
15 explaining an ex-dividend *date*, which is the date at which the stock price is being reduced
16 approximately by the amount of the dividend, and is the date before which you must own
17 stock to obtain that dividend. I am not familiar with any academic evidence showing that
18 any type of adjustment is made to the dividend yield for this occurrence.

19 Second, Mr. Moul has not provided any evidence in his testimony that suggests investors
20 make this adjustment in the context of the DCF model. Long-term stockholders generally

¹⁷Direct Testimony of Paul R. Moul, page 23, lines 8-10.

1 do not run into a problem with ex-dividend dates, as they hold their stock through price
2 cycles. The time at which ex-dividend dates are relevant is when an investor wants to exit
3 ownership of a stock, but would like to receive the dividend first.

4 Finally, I am not aware of any financial publications that provide ex-dividend adjusted
5 yields to investors that might be used for their financial investment decision making.
6 Arguably, if such information were an important factor in an investor's decision making
7 process then mainstream financial publications would include it on a regular basis. This
8 idea is supported by Mr. Moul's own testimony in which he states (regarding forecasts) .if
9 investors really required forecasts that extended beyond five years to properly value common
10 stocks, then I am sure that some investment advisory service would begin publishing that
11 information for individual stocks to meet the demands of investors. The absence of such a
12 publication is proof that investors do not require infinite forecast to purchase and sell stocks
13 in the marketplace. ¹⁸

14
15 **D. LEVERAGE (MARKET-TO-BOOK) ADJUSTMENT**

16 **Q. WHAT IS FINANCIAL LEVERAGE?**

17 A. Generally, financial leverage is the use of debt capital to supplement equity capital. A firm
18 with significantly more debt than equity is considered to be highly leveraged.

19
20 **Q. WHAT IS A MARKET-TO-BOOK RATIO?**

¹⁸ Direct Testimony of Paul R. Moul, page 29, lines 16-21.

1 A. Generally, a market-to-book ratio is used to evaluate a public firm's equity value. This is
2 done by comparing a company's equity market value to a company's equity book value.

3
4 **Q. WHAT ADJUSTMENT HAS MR. MOUL PROPOSED IN HIS ANALYSIS?**

5 A. Mr. Moul proposes to make an 85 basis point 'leverage' adjustment to his DCF. Mr. Moul
6 proposes that the adjustment arises when the results of the DCF model (k) are to be applied
7 to a capital structure that is different than that which underlies the market price (P).¹⁹

8
9 **Q. IS THE TERM "LEVERAGE" APPROPRIATE FOR THIS TYPE OF**
10 **ADJUSTMENT?**

11 A. No. Mr. Moul does not propose to change the capital structure of the utility (a leverage
12 adjustment), nor does he propose to apply the market-to-book ratio to the DCF model (a
13 market-to-book adjustment). Instead, Mr. Moul is proposing to make an adjustment to
14 account for applying the market value cost rate of equity to the book value of the utility's
15 equity. Currently, I am unaware of any academic journals or text books that describe this
16 type of adjustment.

17
18 **Q. WHAT IS THE BASIS FOR MR. MOUL'S PROPOSED LEVERAGE**
19 **ADJUSTMENT?**

¹⁹ Direct Testimony of Paul R. Moul, page 33, lines 2-4.

1 A. Mr. Moul theorizes that if regulators use the results of the DCF to compute the weighted
2 average cost of capital based on a book value capital structure used for ratemaking purposes,
3 those results will not reflect the higher level of financial risk associated with the book value
4 capital structure. Mr. Moul believes that this is because market valuations of equity are
5 based on market value capital structures, which in general have more equity, less debt and
6 therefore, less risk than the capitalization measured at its book value. Mr. Moul further
7 references cases where the PA PUC accepted his adjustment as support for this adjustment.²⁰

8
9 **Q. DO YOU AGREE WITH MR. MOUL'S "LEVERAGE ADJUSTMENT"?**

10 A. No. Mr. Moul's adjustment is inappropriate for several reasons. These reasons include the
11 Value Line published capital structure, the rating agency characterization of financial risk,
12 the PA PUC precedent, lack of support in academic literature, Mr. Moul's testimony
13 regarding his adjustment, and flaws in Mr. Moul's formula for the adjustment.

14
15 **Q. WHAT CAPITAL STRUCTURE DOES VALUE LINE PUBLISH FOR WATER
16 DISTRIBUTION UTILITIES?**

17 A. Value Line publishes the book value capital structure and the book value of debt. Value
18 Line does not publish the market value capital structure. It merely publishes the market
19 capitalization, which refers only to the amount of shares outstanding multiplied by the
20 current price, which changes daily. Mr. Moul testifies that the market return is based upon

²⁰ Direct Testimony of Paul R. Moul, page 32, lines 1-9.

1 market valued capital structures; however this is untrue in the regulated utility industry, using
2 Value Line. Investors base their decisions and therefore their required market return on the
3 book value capital structures, not the market value capital structures; therefore, no leverage
4 adjustment is needed.

5
6 **Q. PLEASE EXPLAIN HOW RATING AGENCIES ASSESS FINANCIAL RISK.**

7 A. Rating agencies assess financial risk based upon the company's booked debt obligations and
8 the ability of its cash flow to cover the interest payments on those obligations. The agencies
9 use a company's financial statements for their analysis, not market capitalization. True
10 financial risk resides in the income statement, and is a function of the actual amount of
11 interest expense and income volatility. Therefore, regardless of how the Company's
12 investments are valued in the market place, the financial risk does not change.

13 This is important because when investors determine their required rate of return, they
14 take into consideration a company's risk. A company can only have one risk profile, and as
15 stated above investors look at the book value capital structure.

16
17 **Q. PLEASE DISCUSS WHY THE PA PUC'S PRECEDENT INVALIDATES MR.
18 MOUL'S SUPPORT FOR THE "LEVERAGE ADJUSTMENT."**

19 A. There are several cases in which the same 'leverage adjustment' has been rejected. First,
20 in *Pennsylvania Public Utility Commission v. Metropolitan Edison Co.* Docket No. R-
21 00061366, p. 135 (Order entered January 11, 2007), the PA PUC did not accept the
22 Company's financial risk increment related to the leverage difference between market capital

1 structures and book value capital structures.

2 Second, in *Pennsylvania Public Utility Commission v. Aqua Pennsylvania, Inc.* Docket
3 No. R-00072711, (Order entered July 31, 2008), the PA PUC rejected the ALJ's
4 recommendation for a leverage adjustment stating .the fact that we have granted leverage
5 adjustments in the past does not mean that such adjustments are indicated in all cases.²¹

6 Finally, in the most recent case of *Pennsylvania Public Utility Commission, et al v. City*
7 *of Lancaster – Bureau of Water.* Docket No. R-2010-2179103, the PA PUC agreed with the
8 Investigation & Enforcement position and stated in the Order entered July 14, 2011, 'any
9 adjustment to the results of the market based DCF. .are unnecessary and will harm
10 ratepayers. Consistent with our determination in *Aqua 2008* there is no need to add a
11 leverage adjustment.

12 The PA PUC also has a Quarterly Earnings Report which determines a Distribution
13 Service Improvement Charge return based upon a formula determined by the PA PUC with
14 input from all parties affected. The Quarterly Earnings Report formula does not include a
15 leverage adjustment. These cases show that the PA PUC has not consistently recognized,
16 nor made a policy of including, Mr. Moul's leverage adjustment, and is not support that this
17 adjustment is needed or appropriate.

18
19 **Q. WHAT DOES MR. MOUL'S TESTIMONY STATE REGARDING THE LEVERAGE**
20 **ADJUSTMENT?**

²¹ Opinion at p. 38.

1 A. Mr. Moul contradicts himself in his direct testimony. First, on page 34, lines 4-6, he states
2 that 'the leverage adjustment is not intended, nor was it designed, to address the reasons that
3 stock prices vary from book value. Hence, any observations concerning market prices
4 relative to book value are not on point. Then, on lines 14-34, he discusses why utility
5 stocks are trading at relatively high market prices, how stock prices are above book value,
6 and current market to book multiples as support for his adjustment. Mr. Moul's support for
7 his leverage adjustment is unrelated.

8

9 **Q. HOW DOES MR. MOUL CALCULATE THE LEVERAGE ADJUSTMENT USED**
10 **IN HIS ANALYSIS?**

11 A. Mr. Moul states, 'The 0.89% [leverage] adjustment is merely a convenient way to compare
12 the 9.89% return computed directly with the Modigliani & Miller formulas to the 9.00%
13 return generated by the DCF model based on a market value capital structure.'²²

14

15 **Q. WHAT FORMULA DOES MR. MOUL USE TO CALCULATE THE 9.89% RETURN**
16 **COMPUTED DIRECTLY WITH THE MODIGLIANI & MILLER FORMULAS?**

17 A. Mr. Moul uses the following formulas:²³

18
$$ku = ke - (((ku - i) 1-t) D/E) - (ku - d) P/E$$

19
$$\text{and } ke = ku + (((ku - i) 1-t) D/E) + (ku - d) P/E$$

²² Direct Testimony of Paul R. Moul, page 36, lines 11-14.

²³ Exhibit PRM-1, p. 14 of 25, Schedule 9 [1 of 1].

1 Where:

2 k_u = cost of equity for an all equity firm

3 k_e = market determined cost equity

4 i = cost of debt

5 d = dividend rate on preferred stock

6 D = debt ratio

7 P = preferred stock ratio

8 E = common equity ratio

9

10 **Q. ARE THERE FLAWS IN THE FORMULAS MR. MOUL USES IN HIS ANALYSIS?**

11 **A. Yes. The formulas employed by Mr. Moul do not appear anywhere in the research he cites.**
12 **Also, the literature Mr. Moul cites does not espouse using even its native formulas in a DCF**
13 **adjustment setting.**

14

15 **Q. CAN THE FORMULA SHOWN IN EXHIBIT PRM-1, SCHEDULE 9 AND PAGE 31**
16 **OF THIS TESTIMONY BE FOUND IN THE MODIGLIANI & MILLER**
17 **LITERATURE?**

18 **A. No, it cannot.**

19

20 **Q. IS THE MODIGLIANI AND MILLER RESEARCH ON THE SUBJECT OF**
21 **CAPITAL STRUCTURE AND COST OF CAPITAL THAT MR. MOUL HAS CITED**
22 **AS JUSTIFICATION FOR HIS LEVERAGE ADJUSTMENT APPROPRIATE?**

1 A. No. Mr. Moul has misinterpreted Modigliani and Miller's theory and used it in a way the
2 researchers never advocated. Modigliani and Miller's research is primarily to understand
3 company capital investment behavior, not Mr. Moul's claimed financial risk associated with
4 a stock's market price diverging from its book value. Also, the adjustment and formula
5 employed by Mr. Moul cannot be found in the research he cites.

6

7 **Q. EXPLAIN FURTHER WHAT THE WORK OF MODIGLIANI AND MILLER**
8 **STATES ABOUT THE EFFECT OF THE TYPE OF CAPITAL EMPLOYED (DEBT**
9 **OR EQUITY) ON THE VALUE OF THE FIRM.**

10 A. The work of Modigliani and Miller actually points to the opposite conclusion of Mr. Moul:

11 That is, the market value of any firm is independent of its capital
12 structure.²⁴

13 Furthermore,

14 the value of any firm must be independent of its financial
15 structure.²⁵

16

17 **Q. ARE YOU AWARE OF ANY OTHER ACADEMIC LITERATURE THAT**
18 **SUPPORTS MR. MOUL'S "LEVERAGE ADJUSTMENT"?**

²⁴ Modigliani, Franco and Miller, Merton H. "The Cost of Capital, Corporation Finance, and the Theory of Investment" *American Economic Review*, June 1958, p. 268.

²⁵ Modigliani, Franco and Miller, Merton H. "The Cost of Capital, Corporation Finance, and the Theory of Investment: Reply" *American Economic Review*, June 1965, p. 525.

1 A. No. I am not aware of any other academic literature that supports Mr. Moul's leverage
2 adjustment.

3

4 **Q. PLEASE SUMMARIZE YOUR RECOMMENDATION REGARDING THE**
5 **LEVERAGE ADJUSTMENT.**

6 A. I recommend the rejection of the leverage adjustment because there is no academic support
7 for such an adjustment in a DCF setting, the PÀ PUC precedent does not unequivocally
8 support its use, and true financial risk is a function of the amount of interest expense.

9

10 **Q. WHAT IS MR. MOUL'S DCF PRIOR TO HIS ADJUSTMENTS?**

11 A. Mr. Moul's DCF, using the 6.00% growth, plus the 2.91% dividend yield, equals 8.91%.
12 This figure supports the reasonableness of Staff's DCF.

13

14 **Q. DO YOU HAVE ANY COMMENTS REGARDING MR. MOUL'S DCF PRIOR TO**
15 **ADJUSTMENTS?**

16 A. Yes. Using all of Mr. Moul's adjustments simply inflates his DCF calculation by 98 basis
17 points (9.89%-8.91% = 0.98%).

18

19 **E. INFLATED CAPM BETAS**

20 **Q. WHAT BETA HAS MR. MOUL USED IN HIS CAPM ANALYSIS?**

21 A. Mr. Moul uses an inflated beta equal to 0.84.

22

1 **Q. HOW HAS MR. MOUL INFLATED THE BETAS EMPLOYED IN HIS CAPM**
2 **ANALYSIS?**

3 A. Mr. Moul has used the same logic for inflating his CAPM betas that he used to enhance his
4 DCF returns, through a financial risk, or leverage, adjustment.²⁶ Such enhancements are
5 unwarranted for beta in a CAPM analysis for the same reasons that enhancements are
6 unwarranted for DCF results. Also, if the unadjusted Value Line betas do not reflect an
7 accurate investment risk, as Mr. Moul contends, the question naturally arises as to why Value
8 Line does not publish betas that are adjusted for leverage. Until this type of adjustment is
9 demonstrated in the academic literature to be valid, such leverage adjusted betas in a CAPM
10 model should be appropriately rejected.

11

12 **F. SIZE ADJUSTMENT**

13 **Q. WHAT IS MR. MOUL'S SIZE ADJUSTMENT?**

14 A. Mr. Moul makes a 110 basis point adjustment because he believes as the size of a firm
15 decreases, its risk and required return increases. Further, Mr. Moul uses the SBBI Yearbook
16 to argue that the returns for stocks in lower deciles had returns in excess of those shown by
17 the simple CAPM.²⁷

18

19 **Q. WHAT COMMENTS DO YOU HAVE REGARDING MR. MOUL'S SIZE**

²⁶ Direct Testimony of Paul R. Moul, pages 42-43.

²⁷ Direct Testimony of Paul R. Moul page 46.

1 **ADJUSTMENT?**

2 A. First, although the scale of operations for water utility distribution systems can vary, the basic
3 nature of a water utility's business does not change with respect to scale. A water utility's
4 core business is to provide water to its customers, regardless of size. Therefore, it must
5 construct and maintain its distribution system, provide administrative functions, treat the
6 water, etc. This business model remains essentially the same for any size utility, along with
7 the fact that water utilities operate as monopolies with a captive customer base in the areas
8 they serve.

9 Second, water utilities are regulated, and the utility's earnings are set by the ratemaking
10 process. The utilities are also subject to regulatory oversight.

11 Finally, while Mr. Moul presented numerous articles regarding the size premium, none are
12 specific to the utility industry. However, there are articles examining the size premium in the
13 utility industry. Wallace Davidson states:

14 [O]ur results suggest that neither large nor small utilities merit a premium because
15 of their size. The implications of our findings for regulatory officials for
16 regulatory accounting standard-setters are straightforward: we find no evidence
17 among the electric utility industry. .to suggest that a utility's cost of capital or its
18 allowable ARR should be adjusted to reflect firm size.²⁸
19

20 In research also specific to public utilities, Professor Annie Wong states:

21 [G]iven firm size, utility stocks are consistently less risky than industrial stocks.
22 Second, industrial betas tend to decrease with firm size, but utility betas do not.
23 These findings may be attributed to the fact that all public utilities operate in an
24 environment with regional monopolistic power and regulated financial structure.

²⁸ Wallace Davidson III, Kenneth Ferris, and William Reichenstein, A Note on the Relationship Between Firm Size and Return in the Electric Utility Industry, *Journal of Accounting, Auditing, and Finance* Vol. 8, Issue 3 (Summer 1993).

1 As a result, the business and financial risks are very similar among the utilities
2 regardless of their size. Therefore, utility betas would not necessarily be related
3 to firm size.

4
5 She then concludes:

6 The object of this study is to examine if the size effect exists in the utility industry.
7 After controlling for equity values, there is some weak evidence that firm size is
8 a missing factor from the CAPM for industrial but not utility stocks. This implies
9 that although the size phenomenon has been strongly documented for industrials,
10 findings suggest that there is no need to adjust for the firm size in utility
11 regulation.²⁹
12

13 For all these reasons, I have not included a size premium in this case, and Mr. Moul's size
14 adjustment should be rejected.

15

16 **Q. WHAT WOULD MR. MOUL'S CAPM RESULT BE WITHOUT HIS**
17 **ADJUSTMENTS?**

18 A. Mr. Moul's CAPM using the average beta of 0.71 reported by Value Line, and removing the
19 size adjustment would equal 8.89% (3.75%+0.71(7.24%)). This result is comparable to
20 Staff's DCF of 8.85%, confirming the reasonableness of Staff's recommended return on
21 equity.

22

23 **Q. DO YOU HAVE ANY COMMENTS REGARDING MR. MOUL'S CAPM PRIOR TO**
24 **ADJUSTMENTS?**

²⁹ Annie Wong, *Utility Stocks and the Size Effect: An Empirical Analysis*, *Journal of the Midwest Finance Association* (1993), p.98.

1 A. Yes. Using Mr. Moul's adjustments simply inflates his CAPM calculation by 204 basis
2 points (10.93% - 8.89%=2.04%).
3

4 **XI. FUNDAMENTAL RISK ANALYSIS**

5 **Q. PLEASE SUMMARIZE MR. MOUL'S TESTIMONY REGARDING FINANCIAL**
6 **DATA COMPARISON FOR MONARCH AND HIS BAROMETER GROUP.**

7 A. Mr. Moul discusses several categories of risk including bond ratings, size, market ratios,
8 common equity ratio, return on equity, operating ratios, coverage, quality of earnings,
9 internally generated funds, and betas.³⁰ Mr. Moul compares Monarch, the Water Group,
10 and the S&P Public Utilities. Mr. Moul concludes that the 'risk of Monarch is vastly greater
11 than that of the Water Group.'³¹
12

13 **Q. DO YOU AGREE WITH MR. MOUL'S COMPARISON OF THE WATER GROUP**
14 **TO THE S&P PUBLIC UTILITIES?**

15 A. No. The S&P Public Utilities index is comprised of electric power and natural gas
16 companies. These are not comparable to the water distribution utility industry.
17

18 **Q. WHAT COMMENTS DO YOU HAVE REGARDING MR. MOUL'S TESTIMONY**
19 **ABOUT SIZE?**

³⁰ Direct Testimony of Paul R. Moul, pages 15-19.

³¹ Direct Testimony of Paul R. Moul, page 19, line 8.

1 A. Mr. Moul discusses size on page 15 of the Direct Testimony of Paul R. Moul. I have
2 previously discussed why size is not a factor in this proceeding on pages 36-37 of this
3 testimony.

4
5 **Q. WHAT COMMENTS DO YOU HAVE REGARDING MARKET RATIOS?**

6 A. Mr. Moul discusses dividend yields, and market-to-book ratios.³² Since dividend yields are
7 already included in the DCF, there is no need to make additional risk analysis based on this
8 information.

9
10 **Q. WHAT COMMENTS DO YOU HAVE REGARDING COMMON EQUITY RATIOS?**

11 A. Mr. Moul states that the use of a hypothetical capital structure aligns the financial risk of
12 Monarch with the water group. However, the Company's 60.5% equity ratio is higher than
13 the 51.3% equity ratio for the Water group, making Monarch less risky than the barometer
14 / group.

15
16 **Q. WHAT COMMENTS DO YOU HAVE REGARDING MR. MOUL'S TESTIMONY
17 ABOUT RETURN ON BOOK EQUITY, OPERATING RATIOS, AND COVERAGE?**

18 A. Mr. Moul testifies that Monarch has higher earnings variability than his water group,
19 meaning Monarch has greater risk. Mr. Moul states that Monarch's coefficient of variation
20 is 1.541, while the Water Group is 0.083. Mr. Moul further claims that Monarch has

³² Direct testimony of Paul R. Moul, pages 15-16.

1 experienced losses during four of the last five years. Mr. Moul states that Monarch's high
2 operating ratio can be traced to very low, or in some years negative operating margins, and
3 that Monarch was unable to cover its interest expense from operations.³³ Monarch's last
4 rate case, which settled, was in 2013. That would mean that Monarch settled on rates that
5 were less than its required cost of service, and therefore, the experienced losses were the
6 result of rates that Monarch supported as reasonable in settlement. The return in this case
7 is sufficient for Monarch to have the opportunity to earn a fair and reasonable overall return
8 under efficient and economical management.

9
10 **Q. WHAT COMMENTS DO YOU HAVE REGARDING MR. MOUL'S STATEMENTS**
11 **ABOUT INTERNALLY GENERATED FUNDS?**

12 A. Mr. Moul indicates that the percentage of internally generated funds to capital expenditures
13 for Monarch was 109.7%, while the Water Group was only 81.6%.³⁴ This shows that
14 Monarch generates more funds than it spends on capital expenditures, while the Water group
15 generates less than it spends on capital expenditures, making Monarch less risky than the
16 barometer group.

17
18 **Q. DO YOU AGREE WITH MR. MOUL'S COMMENTS REGARDING MONARCH'S**
19 **RISK COMPARED TO THE WATER GROUP?**

³³ Direct Testimony of Paul R. Moul, page 17.

³⁴ Direct Testimony of Paul R. Moul, page 18.

1 A. No. I believe that with the capital structure adjustment, and the offsetting risks Mr. Moul
2 discusses, that Monarch is in-line with the risks of the barometer group, and no additional
3 changes need to be made to the cost of equity.

4

5 **XII. SUMMARY**

6 **Q. WHAT IS STAFF'S RECOMMENDED RETURN ON EQUITY?**

7 A. Staff recommends a return on equity of 8.48%.

8

9 **Q. WHAT IS STAFF'S OVERALL RECOMMENDED RETURN?**

10 A. Staff recommends an overall rate of return, to be applied to rate base, of 7.47%.

11

12 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

13 A. Yes. I reserve the right to supplement this testimony during the course of the proceeding
14 as new evidence is presented.

Emily Sears

Professional Experience

- **Public Utility Commission of Texas**
Utility Rates Analyst
Water Utilities Division
January 2015 Present
- **Commonwealth of Pennsylvania, Public Utility Commission**
Fixed Utility Financial Analyst
Bureau of Investigation and Enforcement
May 2009 – December 2014
- **Commonwealth of Pennsylvania, Public Utility Commission**
Fixed Utility Financial Analyst
Bureau of Fixed Utility Services
April 2008 – May 2009
- **Nationwide Insurance Company**
Personal Lines Underwriting Screener
October 2004 – May 2007

Education

- **University of Pittsburgh, College of Business Administration**
Bachelors of Science in Business Administration
Major – Finance
August 2004
- **Annual Regulatory Studies Program: Camp NARUC**
Week 1-Introduction to Regulation
August 2008
- **Pennsylvania Public Utility Commission Rate Case Training**
December 2008
- **Society of Utility and Regulatory Financial Analysts**
Certified Rate of Return Analyst
June 2010

Presentations

- **Pennsylvania Public Utility Commission Rate Case Training**
Presented on Rate of Return/Return on Equity
October 2012, September 2014

TESTIMONY SUBMITTED:

I have testified and/or submitted testimony in the following proceedings before the Pennsylvania Public Utility Commission:

- Duquesne Light Company, Docket No. M-2009-2093217
- West Penn Power Company d/b/a Allegheny Power, Docket No. M-2009-2093218
- Duquesne Light Company, Docket No. M-2009-2123948
- West Penn Power Company d/b/a Allegheny Power, Docket No. M-2009-2123951
- Utilities, Inc. – Westgate, Docket No. R-2009-2117389
- Utilities, Inc. of Pennsylvania, Docket No. R-2009-2117402
- PECO Energy Company – Electric Division, Docket No. P-2009-2143607
- PECO Energy Company – Gas Division, Docket No. P-2009-2143588
- Philadelphia Gas Works, Docket No. R-2009-2139884
- York Water Company, Docket No. R-2010-2157140
- City of Lancaster, Docket No. R-2010-2179103
- Columbia Gas of Pennsylvania, Inc. Docket No. R-2010-2215623
- CMV Sewage, Inc. Docket No. R-2011-2218562
- Pennsylvania American Water Company, Docket No. R-2011-2232243
- UGI Penn Natural Gas, Docket No. R-2011-2238943
- Aqua Pennsylvania, Inc. Docket No. R-2011-2267958
- Equitable Gas Company, LLC, Docket No. R-2012-2287044
- Peoples Natural Gas Company, LLC, Docket No. R-2012-2285985
- PPL Electric Utilities Corporation, Docket No. R-2012-2290597
- Columbia Gas of Pennsylvania, Inc. Docket No. R- 2012-2321748
- The City of Lancaster – Sewer Fund, Docket No. R-2012-2310366
- Columbia Gas of Pennsylvania, Inc. Docket No. R-2012-2321748 and M-2012-2323645
- UGI Penn Natural Gas, Docket No. R-2013-2361763
- City of DuBois – Bureau of Water, Docket No. R-2013-2350509
- Pennsylvania-American Water Company, Docket No. R-2013-2355276
- Duquesne Light Company, Docket No. R-2013-2372129
- Pike County Light and Power Company, Gas Division, Docket No. R-2013-2397353
- Pike County Light and Power Company, Electric Division, Docket No. R-2013-2397237
- UGI Penn Natural Gas, Docket No. R-2014-2420273
- Emporium Water Company, Docket No. R-2014-2402324
- City of Lancaster – Water Fund, Docket No. R-2014-2418872
- Peoples TWP. LLC, R-2014-2429613
- Peoples Natural Gas Company, LLC, R-2014-2429606

I have testified and/or submitted testimony in the following proceedings before the Public Utility Commission of Texas and the Texas State Office of Administrative Hearings:

- City of Austin water rate appeal, Docket No. 42857

- City of Austin wastewater rate appeal, Docket No. 42867
- Quadvest, L.P. Docket No. 44809
- Consumers Water, Inc. Docket No. 43076

Summary of Cost of Capital

| Type of Capital | Ratio | Cost Rate | Weighted Cost |
|-----------------|--------|-----------|---------------|
| Long term Debt | 47.37% | 6.36% | 3.01% |
| Common Equity | 52.63% | 8.48% | 4.46% |
| Total | 100% | | 7.48% |

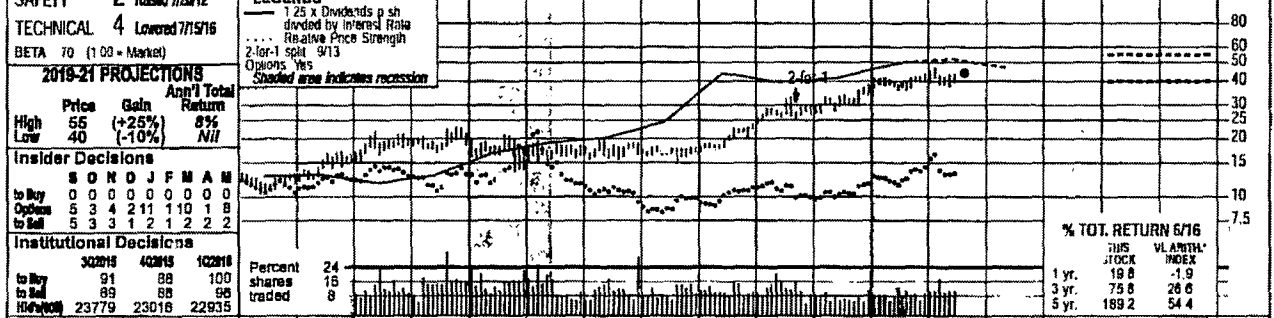
Summary of Cost of Capital

| Type of Capital | 2015 Ratio | 2014 Ratio | 2013 Ratio | 2012 Ratio | 2011 Ratio | 2010 Ratio |
|---------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| American States Water Co | | | | | | |
| Long term Debt | 41.10% | 39.10% | 39.80% | 42.20% | 45.40% | 44.30% |
| Common Equity | 58.90% | 60.90% | 60.20% | 57.80% | 54.60% | 55.70% |
| | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| American Water Works | | | | | | |
| Long term Debt | 53.80% | 52.60% | 52.40% | 53.90% | 55.80% | 56.80% |
| Common Equity | 46.20% | 47.40% | 47.60% | 46.10% | 44.20% | 43.20% |
| | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| Aqua America | | | | | | |
| Long term Debt | 50.30% | 48.50% | 48.90% | 52.70% | 52.70% | 56.60% |
| Common Equity | 49.70% | 51.50% | 51.10% | 47.30% | 47.30% | 43.40% |
| | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| California Water Service Group | | | | | | |
| Long term Debt | 44.40% | 40.10% | 41.60% | 47.80% | 51.70% | 52.40% |
| Common Equity | 55.60% | 59.90% | 58.40% | 52.20% | 48.30% | 47.60% |
| | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| Connecticut Water Service | | | | | | |
| Long term Debt | 44.20% | 45.90% | 47.10% | 49.20% | 53.50% | 49.80% |
| Common Equity | 55.80% | 54.10% | 52.90% | 50.80% | 46.50% | 50.20% |
| | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| Middlesex Water | | | | | | |
| Long term Debt | 40.20% | 41.20% | 41.30% | 42.60% | 43.40% | 44.20% |
| Common Equity | 59.80% | 58.80% | 58.70% | 57.40% | 56.60% | 55.80% |
| | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| SJW Corp. | | | | | | |
| Long term Debt | 49.80% | 51.60% | 51.10% | 55.00% | 56.60% | 53.70% |
| Common Equity | 50.20% | 48.40% | 48.90% | 45.00% | 43.40% | 46.30% |
| | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| York Water | | | | | | |
| Long term Debt | 44.50% | 44.80% | 45.10% | 46.00% | 47.10% | 48.30% |
| Common Equity | 55.50% | 55.20% | 54.90% | 54.00% | 52.90% | 51.70% |
| | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| 5 Year Average | | | | | | |
| Long term Debt | 47.375% | 48.32% | | | | |
| Common Equity | 52.625% | 51.68% | | | | |

Source: Value Line

AMER. STATES WATER NYSE-AWR

RECENT PRICE **44.12** P/E RATIO **26.7** (Trailing: 26.3 Median: 26.0) RELATIVE P/E RATIO **1.48** DVD YLD **2.1%** VALUE LINE



TIMELINESS 3 Lowered 4/1/16
SAFETY 2 Raised 7/29/12
TECHNICAL 4 Lowered 7/15/16
BETA 70 (100 = Market)

2019-21 PROJECTIONS

| Price | Gain | Return |
|----------------|------|--------|
| High 55 (+25%) | | 8% |
| Low 40 (-10%) | | N/A |

Insider Decisions

| Month | S | O | N | D | J | F | M | A | M | J | J | A | S | O |
|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| to Buy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| to Sell | 5 | 3 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

Institutional Decisions

| 3Q2018 | 4Q2018 | 1Q2019 |
|---------------|--------|--------|
| to Buy 91 | 88 | 100 |
| to Sell 99 | 88 | 98 |
| Net Buy 23779 | 23018 | 22935 |

| 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 6.08 | 6.53 | 6.59 | 6.99 | 8.81 | 7.03 | 7.88 | 8.75 | 9.21 | 9.74 | 10.71 | 11.12 | 12.12 | 12.19 | 12.17 | 12.58 | 12.29 | 12.80 | 12.80 | 12.80 | 12.80 | 12.80 |
| 1.10 | 1.28 | 1.27 | 1.04 | 1.11 | 1.32 | 1.45 | 1.85 | 1.99 | 1.70 | 2.11 | 2.13 | 2.48 | 2.65 | 2.87 | 2.81 | 2.75 | 2.90 | 2.90 | 2.90 | 2.90 | 2.90 |
| .84 | .87 | .87 | .39 | .53 | .68 | .87 | .81 | .70 | .81 | 1.11 | 1.12 | 1.41 | 1.81 | 1.57 | 1.60 | 1.85 | 1.73 | 1.73 | 1.73 | 1.73 | 1.73 |
| 43 | 43 | 44 | 44 | 44 | 45 | 48 | 48 | 50 | 51 | 52 | 55 | 84 | 78 | 83 | 87 | 82 | 87 | 87 | 87 | 87 | 87 |
| 1.51 | 1.59 | 1.34 | 1.88 | 2.51 | 2.12 | 1.95 | 1.45 | 2.23 | 2.09 | 2.12 | 2.13 | 1.77 | 2.52 | 1.89 | 2.39 | 2.48 | 2.48 | 2.48 | 2.48 | 2.48 | 2.48 |
| 0.37 | 0.81 | 7.02 | 6.98 | 7.51 | 7.88 | 8.32 | 6.77 | 6.97 | 9.70 | 10.13 | 10.84 | 11.80 | 12.72 | 13.24 | 12.77 | 13.70 | 14.50 | 14.50 | 14.50 | 14.50 | 14.50 |
| 30.24 | 30.24 | 30.36 | 30.42 | 33.50 | 33.60 | 34.10 | 34.48 | 34.60 | 37.08 | 37.26 | 37.70 | 38.53 | 38.72 | 38.29 | 38.50 | 38.50 | 38.50 | 38.50 | 38.50 | 38.50 | 38.50 |
| 15.8 | 16.7 | 18.3 | 31.9 | 23.2 | 23.9 | 27.7 | 24.0 | 22.8 | 21.2 | 15.7 | 15.4 | 14.3 | 17.2 | 20.1 | 21.8 | 21.8 | 21.8 | 21.8 | 21.8 | 21.8 | 21.8 |
| 1.03 | .88 | 1.00 | 1.82 | 1.23 | 1.17 | 1.50 | 1.27 | 1.38 | 1.41 | 1.00 | .97 | .91 | .97 | 1.06 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 |
| 4.2% | 3.9% | 3.6% | 3.5% | 3.6% | 3.1% | 2.5% | 2.5% | 2.9% | 2.9% | 3.0% | 3.2% | 3.1% | 2.7% | 2.6% | 2.2% | 2.6% | 2.2% | 2.2% | 2.2% | 2.2% | 2.2% |

CAPITAL STRUCTURE as of 3/31/18

| | | | | | | | | | | | | | | | | | |
|--|--------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|----------|----------|----------|----------|----------|----------|
| Total Debt \$384.2 mil | Due in 5 Yrs \$41.6 mil. | 2006 288.0 | 2007 301.4 | 2008 318.7 | 2009 361.0 | 2010 398.9 | 2011 418.3 | 2012 468.9 | 2013 472.1 | 2014 465.8 | 2015 458.0 | 2016 445 | 2017 470 | 2018 470 | 2019 470 | 2020 470 | 2021 470 |
| LT Debt \$320.9 mil. | LT Interest \$21.1 mil. (41% of Cap) | 23.1 | 28.0 | 26.8 | 29.5 | 41.4 | 42.0 | 54.1 | 62.7 | 61.1 | 60.5 | 68.0 | 64.0 | 64.0 | 64.0 | 64.0 | 64.0 |
| Leases, Uncapitalized: Annual rentals \$2.5 mil. | Pension Assets-12/16 \$142.2 mil. | 40.5% | 42.6% | 37.8% | 38.9% | 43.2% | 41.7% | 38.9% | 38.3% | 38.4% | 38.6% | 33.0% | 36.0% | 36.0% | 36.0% | 36.0% | 36.0% |
| | Obliq. \$168.9 mil | 12.2% | 8.5% | 8.9% | 3.2% | 5.8% | 2.0% | 2.5% | ... | 2.5% | .5% | 1.0% | 1.5% | 1.5% | 1.5% | 1.5% | 1.5% |
| Pfd Stock None. | | 48.6% | 48.9% | 48.2% | 45.9% | 44.3% | 45.4% | 42.2% | 38.8% | 38.1% | 41.1% | 41.5% | 42.5% | 42.5% | 42.5% | 42.5% | 42.5% |
| Common Stock 36,554,067 shs. as of 5/2/18 | | 51.4% | 53.1% | 53.8% | 54.1% | 55.7% | 54.6% | 57.8% | 60.2% | 60.9% | 58.9% | 58.5% | 57.5% | 57.5% | 57.5% | 57.5% | 57.5% |

MARKET CAP: \$1.6 billion (Mid Cap)

CURRENT POSITION (MILL)

| 2014 | 2015 | 3/31/18 |
|----------------------|-------|---------|
| Cash Assets 78.0 | 4.4 | 8.5 |
| Accs Receivable 18.8 | 18.9 | 16.2 |
| Other 114.7 | 109.4 | 108.4 |
| Current Assets 209.5 | 132.7 | 131.1 |
| Accs Payable 41.9 | 50.8 | 47.9 |
| Debt Due .3 | 29.3 | 43.3 |
| Other 57.1 | 44.6 | 47.9 |
| Current Liab. 99.3 | 123.5 | 139.1 |

ANNUAL RATES Past 10 Yrs. Past 5 Yrs. Est'd '13-'15 to '19-21

| | | |
|------------------|-------|------|
| Revenue 6.0% | 4.5% | 4.0% |
| "Cash Flow" 9.0% | 8.0% | 6.0% |
| Earnings 12.0% | 12.0% | 6.0% |
| Dividends 6.5% | 10.0% | 7.0% |
| Book Value 5.5% | 6.0% | 4.0% |

QUARTERLY REVENUES (\$ MIL)

| Cal-ender | Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|-----------|--------|--------|--------|--------|-----------|
| 2013 | 110.8 | 120.7 | 130.9 | 109.9 | 472.1 |
| 2014 | 102.0 | 115.8 | 138.3 | 108.9 | 465.0 |
| 2015 | 100.9 | 114.8 | 133.0 | 110.1 | 458.8 |
| 2016 | 93.5 | 108.5 | 135 | 110 | 449 |
| 2017 | 98.0 | 117 | 142 | 113 | 470 |

EARNINGS PER SHARE

| Cal-ender | Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|-----------|--------|--------|--------|--------|-----------|
| 2013 | .35 | .43 | .53 | .30 | 1.61 |
| 2014 | .28 | .39 | .54 | .38 | 1.57 |
| 2015 | .32 | .41 | .56 | .31 | 1.60 |
| 2016 | .28 | .39 | .62 | .38 | 1.65 |
| 2017 | .33 | .47 | .60 | .35 | 1.75 |

QUARTERLY DIVIDENDS PAID

| Cal-ender | Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|-----------|--------|--------|--------|--------|-----------|
| 2012 | .14 | .14 | .1775 | .1775 | .64 |
| 2013 | .1775 | .1775 | .2025 | .2025 | .78 |
| 2014 | .2025 | .2025 | .213 | .213 | .83 |
| 2015 | .213 | .213 | .224 | .224 | .87 |
| 2016 | .224 | .224 | | | |

BUSINESS: American States Water Co. operates as a holding company. Through its principal subsidiary, Golden States Water Company, it supplies water to 260,151 customers in 75 cities and 10 counties. Service areas include the greater metropolitan areas of Los Angeles and Orange Counties. The company also provides electric utility services to 23,846 customers in the city of Big Bear Lake and in areas of San Bernardino County. Sold Chaparral City Water of Arizona (6/11). Has 707 employees. Blackrock Inc. owns 9.9% of out. shares; Vanguard, 9.4% off. & dir. 1.4% (4/16 Proxy) Chairman: Lloyd Rosa. President & Chief Executive Officer: Robert J. Sprows, Inc. CA. Address: 630 East Foothill Boulevard, San Dimas, CA 91773. Tel: 909-394-3600. Internet: www.aswater.com.

American States Water is the city of Big Bear...
 The decision by the CPUC should provide immediate relief to the bottom line. Once the case is decided, the revenues will be retroactive to the first of the year. American States' share net dipped 13% in the March period (and probably declined 5% in the second quarter) because GSWC has not been able to raise prices to keep up with its rising costs. The CPUC is bound to make a final ruling sometime in 2016. For our earnings presentation, we are estimating that a decision will be made in the third quarter, which should provide a boost to the company's second-

half earnings. In any case, the significance of the CPUC's ruling cannot be underestimated, as this will determine what price the utility can charge its customers for three years. In the recent past, the state and water utilities appear to have established a good working relationship, so we expect the ruling to be reasonable. Contributions from nonregulated businesses should continue to grow. Through its ASUS subsidiary, American States builds and operates water systems in U.S. Army installations. Lately, many military bases have been outsourcing this function. The privatization process is not occurring all at once, so we expect ASUS to be an active bidder on these contracts as they become public. Share earnings attributable to this segment fell in the first quarter, but we expect profits here to grow from about 10%-12% of the company's bottom line to 15%-20% out to late decade. Investors can find better selections elsewhere. These neutrally ranked shares offer well-below average total return potential over the next 3- to 5-year period.
James A. Flood July 15, 2016

(A) Primary earnings. Excludes nonrecurring gains/losses: 04, 7; '05, 13; '06, 3; '08, (14); '10, (23); '11, 10; Next earnings report due early August.
 (B) Dividends historically paid in early March, June, September, and December. 1 Div'd reinvestment plan available.
 (C) In millions, adjusted for split.
 Company's Financial Strength A
 Stock's Price Stability 85
 Price Growth Persistence 70
 Earnings Predictability 85
 To subscribe call 1-800-VALUELINE

AMERICAN WATER NYSE-AWK

RECENT PRICE 84.76

P/E RATIO 30.3 (Trailing: 31.9 Median: NMF)

RELATIVE P/E RATIO 1.68

DIV YLD 1.8%

VALUE LINE

High: 23.7 23.0 25.8 32.8 39.4 45.1 59.2 61.2 85.2

Low: 16.5 18.2 19.4 25.2 31.3 37.0 41.1 48.4 58.9

TIMELINESS 3 Lowered 6/24/16

SAFETY 3 New 7/25/08

TECHNICAL 5 Lowered 7/15/16

BETA 70 (1.00 = Market)

2018-21 PROJECTIONS

| Price | Gain | Ann'l Total Return |
|---------|--------|--------------------|
| High 90 | (+5%) | 4% |
| Low 60 | (-30%) | -5% |

Insider Decisions

| | S | O | N | D | J | F | M | A | M |
|---------|---|---|---|---|---|---|---|---|---|
| To Buy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| To Sell | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| To Buy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Institutional Decisions

| | 3Q2019 | 4Q2019 | 1Q2019 |
|---------|--------|--------|--------|
| To Buy | 211 | 241 | 313 |
| To Sell | 220 | 227 | 232 |
| Net Buy | 148013 | 147408 | 168854 |

LEGENDS
 - 0.85 x Dividends p.sh. divided by Interest Rate
 - Relative Price Strength
 - Dotted line: Yrs
 - Shaded area indicates recession

Percent shares traded
 21
 14
 7

% TOT. RETURN 6/16
 1YR: 17.8
 3YR: 120.7
 5YR: 227.0

| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007* | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 19-21 |
|-----------------------|------|------|------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Revenue per sh | | | | | 13.08 | 13.84 | 14.81 | 13.98 | 15.49 | 15.18 | 18.25 | 18.25 | 16.28 | 16.28 | 16.78 | 17.72 | 18.70 | 19.20 | 22.20 |
| "Cash Flow" per sh | | | | | .86 | 0.47 | 2.87 | 2.89 | 3.58 | 3.73 | 4.27 | 4.36 | 4.75 | 5.13 | 5.40 | 5.70 | 5.70 | 5.70 | 6.55 |
| Earnings per sh | | | | | 0.97 | 0.24 | 1.10 | 1.25 | 1.53 | 1.72 | 2.11 | 2.08 | 2.39 | 2.64 | 2.80 | 3.05 | 3.05 | 3.05 | 3.75 |
| Div'd Decl'd per sh | | | | | | | 0.40 | 0.82 | 0.88 | 0.90 | 1.21 | 1.04 | 1.21 | 1.33 | 1.47 | 1.57 | 1.57 | 1.57 | 2.05 |
| Cap't Spending per sh | | | | | 4.31 | 4.74 | 6.31 | 4.50 | 4.38 | 5.27 | 5.25 | 5.50 | 5.33 | 6.51 | 6.15 | 6.10 | 6.10 | 6.10 | 6.00 |
| Book Value per sh | | | | | 23.86 | 28.39 | 25.84 | 22.91 | 23.59 | 24.11 | 25.11 | 26.52 | 27.39 | 28.25 | 28.05 | 30.85 | 30.85 | 30.85 | 34.80 |
| Common Shs Outst'g | | | | | 180.00 | 180.00 | 180.00 | 174.63 | 175.00 | 175.66 | 178.99 | 178.25 | 179.46 | 178.28 | 179.00 | 181.00 | 181.00 | 181.00 | 187.50 |
| Avg Ann'l P/E Ratio | | | | | 18.0 | 15.8 | 14.8 | 14.8 | 18.8 | 18.7 | 19.8 | 20.0 | 20.5 | 20.5 | 20.5 | 20.5 | 20.5 | 20.5 | 20.0 |
| Relative P/E Ratio | | | | | 1.14 | 1.04 | 0.93 | 1.05 | 1.06 | 1.12 | 1.05 | 1.06 | 1.05 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.25 |
| Avg Ann'l Div'd Yield | | | | | 1.9% | 4.2% | 3.8% | 3.1% | 3.4% | 2.0% | 2.5% | 2.5% | 2.5% | 2.5% | 2.5% | 2.5% | 2.5% | 2.5% | 2.7% |

CAPITAL STRUCTURE as of 3/31/16

Total Debt \$6754.0 mil. Due in 5 Yrs \$1272.0 mil.
 LT Debt \$3861.0 mil. LT Interest \$293.0 mil.
 (54% of Cap)

Leases, Uncapitalized: Annual rentals \$14.0 mil.
 Pension Assets 12/15 \$1376.0 mil.
 Oblig. \$1584.0 mil.
 Pfd Stock \$11.0 mil. Pfd Div'd \$ 2 mil.

Common Stock 177,714,495 shs. as of 4/28/16

MARKET CAP: \$15.1 billion (Large Cap)

| Year | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| Total Debt | 2093.1 | 2214.2 | 2336.9 | 2440.7 | 2710.7 | 2868.2 | 2878.9 | 2901.9 | 3011.3 | 3159.0 | 3350 | 3475 | 3475 | 3475 | 3475 |
| LT Debt | 1155.8 | 1342.3 | 187.2 | 209.0 | 287.8 | 304.9 | 374.3 | 369.3 | 428.8 | 478.0 | 500 | 550 | 550 | 550 | 550 |
| Debt to Cap | 37.4% | 37.9% | 40.4% | 39.5% | 40.7% | 38.1% | 38.1% | 38.1% | 39.4% | 38.1% | 38.5% | 38.8% | 38.8% | 38.8% | 38.8% |

CURRENT POSITION (MILL.)

| Category | 2014 | 2016 | 3/31/16 |
|------------------|--------|--------|---------|
| Cash Assets | 23.1 | 45.0 | 88.0 |
| Accts Receivable | 287.1 | 258.0 | 220.0 |
| Other | 636.3 | 357.0 | 330.0 |
| Current Assets | 681.4 | 657.0 | 638.0 |
| Accts Payable | 285.8 | 128.0 | 116.0 |
| Debt Due | 511.1 | 682.0 | 893.0 |
| Other | 444.1 | 725.0 | 605.0 |
| Current Liab. | 1241.0 | 1533.0 | 1614.0 |

ANNUAL RATES of change (per cent)

| Category | Past 16 Yrs | Past 5 Yrs | Est'd '13-'16 to '19-21 |
|-------------|-------------|------------|-------------------------|
| Revenue | 3.0% | 4.5% | 4.5% |
| "Cash Flow" | 9.0% | 5.5% | 5.5% |
| Earnings | 13.0% | 8.0% | 8.0% |
| Dividends | 10.0% | 10.5% | 10.5% |
| Book Value | 2.5% | 4.0% | 4.0% |

QUARTERLY REVENUES (\$mil.)

| Year | Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|------|--------|--------|--------|--------|-----------|
| 2013 | 838.1 | 724.3 | 829.2 | 712.3 | 2001.9 |
| 2014 | 679.0 | 754.8 | 848.1 | 731.4 | 3011.3 |
| 2015 | 898.0 | 782.0 | 898.0 | 783.0 | 3159.0 |
| 2016 | 743.0 | 832 | 950 | 825 | 3350 |
| 2017 | 756 | 860 | 990 | 870 | 3475 |

EARNINGS PER SHARE

| Year | Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|------|--------|--------|--------|--------|-----------|
| 2013 | .32 | .57 | .84 | .33 | 2.06 |
| 2014 | .39 | .62 | .86 | .52 | 2.39 |
| 2015 | .44 | .68 | .98 | .58 | 2.64 |
| 2016 | .48 | .73 | 1.01 | .60 | 2.80 |
| 2017 | .50 | .78 | 1.11 | .68 | 3.05 |

QUARTERLY DIVIDENDS PAID

| Year | Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|------|--------|--------|--------|--------|-----------|
| 2012 | .23 | .23 | .25 | .50 | 1.21 |
| 2013 | .28 | .28 | .28 | .28 | .84 |
| 2014 | .28 | .31 | .31 | .31 | 1.21 |
| 2015 | .31 | .34 | .34 | .34 | 1.33 |
| 2016 | .34 | .375 | | | |

BUSINESS: American Water Works Company, Inc. is the largest investor-owned water and wastewater utility in the U.S., providing services to over 15 million people in over 47 states and Canada. (Regulated presence in 18 states.) Nonregulated business assists municipalities and military bases with the maintenance and upkeep as well. Regulated operations made up 86.6% of 2015 revenues.

New Jersey is its largest market accounting for 25.7% of regulated revenues. Has 6,700 employees. BlackRock, Inc., owns 10.2% of outstanding shares; Vanguard, 7.2%; officers & directors, less than 1.0%. (4/16 Proxy). President & CEO: Susan Story. Chairman: George Mackenzie. Address: 1025 Laurel Oak Road, Voorhees, NJ 08043 Tel.: 856-346-8200. Internet: www.amwater.com

Shares of American Water Works have been on a nice run. Since our last report three months ago, the price of the stock has climbed 22%, and is now up over 40% year to date. By comparison, the S&P 500 Index has increased by only 3% and 2%, over these similar periods.

Does the equity have any more gas left in its tank? Not according to our ranking system, which only pegs AWK to be an average performer in the year ahead. Traditionally purchased by risk-averse investors willing to forego some capital appreciation in return for a high yield, good dividend growth prospects, and well-defined earnings, this group has benefited from a shift in sentiment by the institutional sector. The recent turmoil in the global markets and the extraordinary accommodative policies by world central banks have resulted in historically low interest rates, which have seemingly made water utilities attractive to these investors. Indeed, due to the recent surge in its price, the stock is currently trading near the top end of our projected 2019-2021 Target Price Range, and thus offers negative returns to that time. True, there is no guarantee that the stock won't continue to move higher, but long-term holders of this issue that have enjoyed generous paper profits may want to consider reducing their positions.

Meanwhile, controlling costs remains the company's main earnings impetus. American Water has been expanding its customer base via acquisitions of smaller water districts for some time. Because many of the expenses of running a water utility are redundant, large cost savings can be achieved by merging smaller water districts into existing operations. The company usually has to buy dozens of water authorities to gain a decent number of new customers, but the recent \$190 million purchase of part of the city of Scranton's system could mean the trend is changing. This would appear to be an ideal moment for a new equity offering. Of the three large water companies, American Water has the most leveraged balance sheet and lowest Financial Strength. Moreover, the company has increased outstanding shares by only 1.8% since year-end 2009.

James A. Flood July 15, 2016

(A) Diluted earnings. Excludes nonrecurring losses: '08, \$4.62; '09, \$2.83; '11, \$0.07. Discontinued operations: '06, (\$0.04); '11, \$0.03; '12, (\$0.10); '13, (\$0.01). GAAP used as of 2014. Next earnings report due early August. Quarterly earnings may not sum due to rounding. (B) Dividends paid in March, June, September, and December. - Div. reinvestment available. Two payments made in 4th quarter of 2012. (C) In millions. (D) Includes intangibles. In 2015 \$1.38 billion, \$7.74/share. (E) Pro forma numbers for '06 & 07.

Company's Financial Strength B+
 Stock's Price Stability 100
 Price Growth Persistence 85
 Earnings Predictability 95

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000051

| AQUA AMERICA NYSE-WTR | | | RECENT PRICE | P/E RATIO | RELATIVE P/E RATIO | DIVID YLD | VALUE LINE | | | | | | | | | | | | | | | | | | |
|--|--------------------|---|--------------|------------------------------------|--------------------|-----------|------------|--------------------|-----------------|--------------------------|--------|--------|--------|--------|--------|--------|--------|-----------------------|--------|--------|--|--------|--|--------|--|
| | | | 35.62 | 26.4 (Trailing: 38.7 Median: 22.8) | 1.47 | 2.1% | | | | | | | | | | | | | | | | | | | |
| TIMELINESS | 2 Raised 5/13/16 | High: 23.4 23.8 21.3 17.6 17.2 16.4 19.0 21.5 26.1 28.2 31.1 35.8 | | | | | | Target Price | Range | | | | | | | | | | | | | | | | |
| SAFETY | 2 Raised 4/20/12 | Low: 14.0 16.1 15.1 9.8 12.3 13.2 15.4 16.8 20.8 22.4 24.4 28.3 | | | | | | 2019 | 2020 | | | | | | | | | | | | | | | | |
| TECHNICAL | 4 Lowered 7/15/16 | LEGENDS 1.60 x Dividends p sh divided by Interest Rate Relative Price Strength 5 for 4 split 12/03 4 for 3 split 12/05 5 for 4 split 9/13 Options: Yes Shaded area indicates recession | | | | | | | 2021 | | | | | | | | | | | | | | | | |
| BETA | 70 (100 = Market) | | | | | | | | 80 | | | | | | | | | | | | | | | | |
| 2018-21 PROJECTIONS | | | | | | | | 75 | | | | | | | | | | | | | | | | | |
| Ann'l Total | | | | | | | | % TOT. RETURN 6/16 | | | | | | | | | | | | | | | | | |
| Price | Gain | Return | | | | | | THIS STOCK | VL ARITH. INDEX | | | | | | | | | | | | | | | | |
| High 45 | (+25%) | 8% | | | | | | 1 yr. 49.1 | -1.9 | | | | | | | | | | | | | | | | |
| Low 35 | (Nil) | 2% | | | | | | 3 yr. 53.4 | 26.6 | | | | | | | | | | | | | | | | |
| | | | | | | | | 5 yr. 130.6 | 54.4 | | | | | | | | | | | | | | | | |
| Insider Decisions | | | | | | | | | | | | | | | | | | | | | | | | | |
| S O N D J F M A M | | | | | | | | | | | | | | | | | | | | | | | | | |
| to Buy | 0 0 0 0 0 0 0 0 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| Options | 0 1 3 0 1 0 8 13 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| to Sell | 1 1 4 1 0 0 4 0 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Institutional Decisions | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3Q2015 4Q2015 1Q2016 | | | | | | | | | | | | | | | | | | | | | | | | | |
| to Buy | 166 182 190 | | | | | | | | | | | | | | | | | | | | | | | | |
| to Sell | 138 149 147 | | | | | | | | | | | | | | | | | | | | | | | | |
| Net Buy | 84833 83005 85054 | | | | | | | | | | | | | | | | | | | | | | | | |
| Percent shares traded | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | VALUE LINE PUB. LLC | 19-21 | | | | | | |
| 1.97 | 2.16 | 2.28 | 2.38 | 2.78 | 3.08 | 3.23 | 3.61 | 3.71 | 3.93 | 4.21 | 4.10 | 4.32 | 4.32 | 4.37 | 4.81 | 4.70 | 4.85 | Revenue per sh | 5.85 | | | | | | |
| .61 | .69 | .78 | .77 | .87 | .97 | 1.01 | 1.10 | 1.14 | 1.29 | 1.42 | 1.45 | 1.51 | 1.82 | 1.89 | 1.87 | 2.10 | 2.25 | *Cash Flow* per sh | 2.65 | | | | | | |
| .37 | .41 | .43 | .48 | .51 | .57 | .58 | .57 | .58 | .62 | .72 | .83 | .87 | 1.16 | 1.20 | 1.14 | 1.38 | 1.43 | Earnings per sh ^ | 1.75 | | | | | | |
| .23 | .24 | .26 | .28 | .29 | .32 | .35 | .38 | .41 | .44 | .47 | .50 | .54 | .58 | .63 | .69 | .74 | .80 | Div'd Decl'd per sh = | 1.05 | | | | | | |
| .93 | .87 | .96 | 1.08 | 1.23 | 1.47 | 1.84 | 1.43 | 1.58 | 1.88 | 1.89 | 1.90 | 1.98 | 1.73 | 1.84 | 2.07 | 2.00 | 2.00 | Cap'l Spending per sh | 2.10 | | | | | | |
| 3.08 | 3.32 | 3.49 | 4.27 | 4.71 | 5.04 | 5.57 | 5.85 | 6.28 | 6.50 | 6.81 | 7.21 | 7.90 | 8.63 | 9.27 | 9.78 | 10.40 | 11.10 | Book Value per sh | 13.75 | | | | | | |
| 139.78 | 142.47 | 141.49 | 154.31 | 158.97 | 161.21 | 165.41 | 168.75 | 180.21 | 170.81 | 172.48 | 173.60 | 175.43 | 177.93 | 178.50 | 178.54 | 177.50 | 178.00 | Common Shs Outd'g ^ | 180.00 | | | | | | |
| 16.2 | 23.6 | 23.6 | 24.5 | 25.1 | 31.8 | 34.7 | 32.0 | 24.9 | 23.1 | 21.1 | 21.3 | 21.9 | 21.2 | 20.8 | 23.5 | 23.5 | 23.5 | Avg Ann'l P/E Ratio | 22.5 | | | | | | |
| 1.18 | 1.21 | 1.29 | 1.40 | 1.33 | 1.89 | 1.87 | 1.70 | 1.50 | 1.54 | 1.34 | 1.34 | 1.39 | 1.19 | 1.09 | 1.19 | 1.09 | 1.19 | Relative P/E Ratio | 1.40 | | | | | | |
| 3.3% | 2.5% | 2.5% | 2.5% | 2.3% | 1.8% | 1.8% | 2.1% | 2.8% | 3.1% | 3.1% | 2.8% | 2.8% | 2.4% | 2.5% | 2.6% | 2.6% | 2.6% | Avg Ann'l Div'd Yield | 2.7% | | | | | | |
| CAPITAL STRUCTURE as of 3/31/16 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Debt \$1801.2 mill. Due in 5 Yrs \$441.5 mill. | | | 533.5 | | | | | 802.5 | | 627.0 | | 728.1 | | 712.0 | | 757.8 | | 788.8 | | 830 | | 875 | | | |
| LT Debt \$1744.1 mill. LT Interest \$75.4 mill. (50% of Cap'l) | | | 92.0 | | | | | 95.0 | | 97.9 | | 104.4 | | 124.0 | | 144.8 | | 153.1 | | 205.0 | | 213.9 | | 201.8 | |
| Pension Assets-12/15 \$238.6 mill. Oblig. \$306.5 mill. | | | 39.6% | | | | | 38.9% | | 38.7% | | 38.4% | | 39.2% | | 39.0% | | 39.0% | | 10.5% | | 6.9% | | 6.0% | |
| Pfd Stock None | | | 48.4% | | | | | 44.6% | | 45.9% | | 44.4% | | 43.4% | | 47.3% | | 47.3% | | 51.1% | | 51.5% | | 49.7% | |
| Common Stock 177,271,652 shares as of 4/22/16 | | | 19044 | | | | | 21914 | | 2308.6 | | 2495.5 | | 2706.2 | | 2848.8 | | 2929.7 | | 3003.6 | | 3218.0 | | 3409.5 | |
| MARKET CAP: \$6.3 billion (Large Cap) | | | 2500.0 | | | | | 2792.8 | | 2897.4 | | 3227.3 | | 3498.3 | | 3812.9 | | 3938.2 | | 4167.3 | | 4402.0 | | 4888.9 | |
| | | | 6.4% | | | | | 5.8% | | 5.7% | | 5.6% | | 5.9% | | 6.5% | | 6.0% | | 8.0% | | 7.8% | | 6.9% | |
| | | | 10.0% | | | | | 9.7% | | 9.3% | | 9.4% | | 10.6% | | 11.6% | | 11.0% | | 13.4% | | 12.9% | | 11.7% | |
| | | | 10.0% | | | | | 9.7% | | 9.3% | | 8.4% | | 10.6% | | 11.6% | | 11.0% | | 13.4% | | 12.9% | | 11.7% | |
| | | | 3.7% | | | | | 3.2% | | 2.8% | | 2.7% | | 3.7% | | 4.6% | | 4.3% | | 6.7% | | 6.1% | | 4.7% | |
| | | | 63% | | | | | 67% | | 70% | | 72% | | 65% | | 60% | | 61% | | 50% | | 52% | | 60% | |
| CURRENT POSITION (MILL.) | | | 2014 | | | | | 2015 | | 3/31/16 | | | | | | | | | | | | | | | |
| Cash Assets | | | 4.1 | | | | | 3.2 | | 3.9 | | | | | | | | | | | | | | | |
| Receivables | | | 97.0 | | | | | 99.1 | | 91.7 | | | | | | | | | | | | | | | |
| Inventory (AvgCst) | | | 12.8 | | | | | 12.4 | | 12.5 | | | | | | | | | | | | | | | |
| Other | | | 38.6 | | | | | 13.7 | | 14.6 | | | | | | | | | | | | | | | |
| Current Assets | | | 152.5 | | | | | 128.4 | | 122.7 | | | | | | | | | | | | | | | |
| Accts Payable | | | 60.0 | | | | | 56.5 | | 34.0 | | | | | | | | | | | | | | | |
| Debt Due | | | 70.0 | | | | | 52.3 | | 57.1 | | | | | | | | | | | | | | | |
| Other | | | 95.3 | | | | | 84.4 | | 83.2 | | | | | | | | | | | | | | | |
| Current Liab. | | | 225.3 | | | | | 193.2 | | 174.3 | | | | | | | | | | | | | | | |
| ANNUAL RATES of change (per cent) | | | Past 10 Yrs. | | | | | Past 5 Yrs. | | Est'd '13-'16 to '18-'21 | | | | | | | | | | | | | | | |
| Revenues | | | 5.0% | | | | | 2.5% | | 4.5% | | | | | | | | | | | | | | | |
| "Cash Flow" | | | 8.0% | | | | | 6.0% | | 6.0% | | | | | | | | | | | | | | | |
| Earnings | | | 8.5% | | | | | 13.0% | | 7.0% | | | | | | | | | | | | | | | |
| Dividends | | | 8.0% | | | | | 7.5% | | 9.0% | | | | | | | | | | | | | | | |
| Book Value | | | 7.0% | | | | | 7.9% | | 7.0% | | | | | | | | | | | | | | | |
| QUARTERLY REVENUES (\$ mill.) | | | Full Year | | | | | | | | | | | | | | | | | | | | | | |
| Cal-ender | Mar.31 | Jun.30 | Sep.30 | Dec.31 | 2013 | 180.0 | 195.7 | 204.3 | 188.6 | 788.6 | | | | | | | | | | | | | | | |
| | 2014 | 182.7 | 195.3 | 210.5 | 191.4 | 779.9 | | | | | | | | | | | | | | | | | | | |
| | 2015 | 190.3 | 205.8 | 221.0 | 197.1 | 814.2 | | | | | | | | | | | | | | | | | | | |
| | 2016 | 192.8 | 210 | 227.4 | 200 | 830 | | | | | | | | | | | | | | | | | | | |
| | 2017 | 205 | 220 | 240 | 210 | 875 | | | | | | | | | | | | | | | | | | | |
| EARNINGS PER SHARE ^ | | | Full Year | | | | | | | | | | | | | | | | | | | | | | |
| Cal-ender | Mar.31 | Jun.30 | Sep.30 | Dec.31 | 2013 | .28 | .30 | .38 | .24 | 1.16 | | | | | | | | | | | | | | | |
| | 2014 | .24 | .31 | .38 | .27 | 1.20 | | | | | | | | | | | | | | | | | | | |
| | 2015 | .27 | .32 | .38 | .17 | 1.14 | | | | | | | | | | | | | | | | | | | |
| | 2016 | .29 | .34 | .41 | .31 | 1.35 | | | | | | | | | | | | | | | | | | | |
| | 2017 | .31 | .37 | .45 | .32 | 1.45 | | | | | | | | | | | | | | | | | | | |
| QUARTERLY DIVIDENDS PAID ^ | | | Full Year | | | | | | | | | | | | | | | | | | | | | | |
| Cal-ender | Mar.31 | Jun.30 | Sep.30 | Dec.31 | 2012 | .132 | .132 | .132 | .14 | .54 | | | | | | | | | | | | | | | |
| | 2013 | .14 | .14 | .152 | .152 | .58 | | | | | | | | | | | | | | | | | | | |
| | 2014 | .152 | .152 | .165 | .165 | .63 | | | | | | | | | | | | | | | | | | | |
| | 2015 | .165 | .165 | .178 | .178 | .69 | | | | | | | | | | | | | | | | | | | |
| | 2016 | .178 | .178 | | | | | | | | | | | | | | | | | | | | | | |

(A) Diluted eqs. Excl. nonrec. gains: '00, 2¢, 01, 2¢; '02, 4¢; '03, 3¢; '12, 18¢ Excl. gain from osc. operations: '12, 7¢; '13, 9¢; '14, 11¢. May not sum due to rounding. Next earnings report due early Aug.

(B) Dividends historically paid in early March, June, Sept. & Dec. Divid. reinvestment plan available (5% discount).

(C) In millions, adjusted for stock splits.

Company's Financial Strength A
Stock's Price Stability 100
Price Growth Persistence 70
Earnings Predictability 95

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CALIFORNIA WATER NYSE-CWT

| | | | |
|---|--|---|--|
| RECENT PRICE 35.44 P/E RATIO 35.4 (Trading: 39.8 Median: 20.8) RELATIVE P/E RATIO 1.97 DIVID YLD 1.9% VALUE LINE | | High: 21.1 Low: 15.8 22.8 16.4 22.7 17.1 23.3 13.8 24.1 18.7 19.8 16.9 19.4 18.7 19.3 18.8 23.4 18.4 26.4 20.3 26.0 19.5 35.4 22.5 | Target Price Range 2019 2020 2021 64 48 40 32 24 20 16 12 8 6 |
| TIMELINESS 1 Raised 6/24/16 SAFETY 3 Lowered 7/27/07 TECHNICAL 4 Lowered 7/8/16 BETA 75 (1.00 = Market) | LEGENDS 1.33 x Dividends p sh divided by Interest Rate Relative Price Strength 2 for 1 split 6/11 Options: Yes Shadow area indicates recession | | |
| 2016-21 PROJECTIONS Price Gain Return High 45 (+25%) 9% Low 30 (-15%) -1% | | % TOT. RETURN 6/16 THIS STOCK 57.3 VL ARITH. INDEX -1.9 1 yr. 94.9 3 yr. 117.8 5 yr. 54.4 | |
| Insider Decisions Buy: 1 1 1 1 1 1 1 1 1 Options: 10 10 1 0 0 0 25 0 0 Sell: 0 0 0 0 0 0 2 0 2 | | Institutional Decisions Buy: 89 69 100 Sell: 74 75 72 Shares: 28555 30578 34783 Percent traded: 18 12 6 | |

| 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | VALUE LINE P.B. I.L.C. | 19-21 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------------------|-------|
| 8.08 | 8.13 | 8.67 | 8.18 | 8.59 | 8.72 | 8.10 | 8.88 | 9.90 | 10.82 | 11.05 | 12.00 | 13.34 | 12.23 | 12.50 | 12.29 | 12.50 | 13.00 | Revenue per sh | 14.70 |
| 1.28 | 1.10 | 1.32 | 1.26 | 1.42 | 1.52 | 1.38 | 1.58 | 1.86 | 1.93 | 2.07 | 2.32 | 2.21 | 2.27 | 2.47 | 2.22 | 2.30 | 2.65 | "Cash Flow" per sh | 3.28 |
| .68 | .47 | .63 | .61 | .73 | .74 | .67 | .75 | .95 | .98 | .91 | .88 | 1.02 | 1.02 | 1.19 | .94 | 1.00 | 1.35 | Earnings per sh A | 1.60 |
| .55 | .56 | .50 | .50 | .57 | .57 | .58 | .58 | .59 | .59 | .60 | .62 | .63 | .64 | .65 | .67 | .69 | .71 | Div'd Decl'd per sh 1 | .99 |
| 1.23 | 2.04 | 2.91 | 2.19 | 1.87 | 2.01 | 2.14 | 1.84 | 2.41 | 2.06 | 2.97 | 2.83 | 3.04 | 2.58 | 2.78 | 3.69 | 3.65 | 3.55 | Cap'l Spending per sh | 3.30 |
| 6.45 | 6.48 | 6.58 | 7.22 | 7.83 | 7.90 | 9.07 | 9.25 | 9.72 | 10.13 | 10.45 | 10.76 | 11.28 | 12.54 | 13.11 | 13.41 | 13.58 | 14.25 | Book Value per sh C | 16.00 |
| 30.26 | 30.36 | 30.38 | 33.88 | 38.73 | 38.78 | 41.31 | 41.33 | 41.45 | 41.53 | 41.67 | 41.82 | 41.98 | 47.74 | 47.81 | 47.88 | 48.00 | 48.08 | Common Shs Outst'g D | 58.00 |
| 19.8 | 27.1 | 19.8 | 22.1 | 20.1 | 24.9 | 29.2 | 28.1 | 18.8 | 19.7 | 20.3 | 21.3 | 17.9 | 20.1 | 18.7 | 24.8 | 24.8 | 24.8 | Avg Annl' P/E Ratio | 23.0 |
| 1.27 | 1.39 | 1.08 | 1.28 | 1.08 | 1.33 | 1.58 | 1.39 | 1.19 | 1.31 | 1.28 | 1.34 | 1.14 | 1.13 | 1.04 | 1.28 | 1.28 | 1.28 | Relative P/E Ratio | 1.48 |
| 4.3% | 4.4% | 4.5% | 4.2% | 3.9% | 3.1% | 2.9% | 3.0% | 3.1% | 3.1% | 3.2% | 3.4% | 3.5% | 3.1% | 2.8% | 2.9% | 2.9% | 2.9% | Avg Annl' Div'd Yield | 2.9% |

| CAPITAL STRUCTURE as of 3/31/16 | | | | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Revenue (\$mil) E | Net Profit (\$mil) F | Income Tax Rate | APUDC % to Net Profit | Long-Term Debt Ratio | Common Equity Ratio |
|---|--|--|--|-------|--------|---|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------------------|----------------------|-----------------|-----------------------|----------------------|---------------------|
| Total Debt \$588.4 mil. Due In 5 Yrs \$175.3 mil. | | | | 334.7 | 387.1 | 410.3 | 448.4 | 460.4 | 501.8 | 560.0 | 584.1 | 597.5 | 588.3 | 600 | 628 | 735 | 80.0 | 35.0% | 5.0% | 44.4% | 48.0% |
| LT Debt \$557.8 mil. LT Interest \$27.2 mil. (47% of Cap'l) | | | | 25.6 | 31.2 | 39.8 | 40.6 | 37.7 | 36.1 | 42.8 | 47.3 | 58.7 | 45.0 | 48.0 | 65.0 | 80.0 | 80.0 | 32.0% | 5.0% | 44.4% | 48.0% |
| Pension Assets-12/16 \$328.8 mil. Oblig. \$501.9 mil. | | | | 37.4% | 39.9% | 37.7% | 40.3% | 39.5% | 40.5% | 37.5% | 30.3% | 33.0% | 35.3% | 32.8% | 32.0% | 35.0% | 5.0% | 44.4% | 48.0% | 48.0% | 58.0% |
| Pfd Stock None | | | | 10.6% | 8.3% | 8.6% | 7.8% | 4.2% | 7.6% | 8.0% | 4.3% | 2.7% | 4.2% | 5.0% | 5.0% | 10.0% | 42.0% | 58.0% | 58.0% | 58.0% | |
| Common Stock 47,974,000 sha. | | | | 670.1 | 674.9 | 690.4 | 784.9 | 914.7 | 931.5 | 908.2 | 1024.9 | 1045.9 | 1154.5 | 1200 | 1250 | 1375 | 1900 | 7.0% | 10.0% | 10.0% | 10.0% |
| MARKET CAP: \$1.7 billion (Mid Cap) | | | | 941.5 | 1010.2 | 1112.4 | 1198.1 | 1294.3 | 1391.1 | 1457.1 | 1515.8 | 1580.4 | 1701.8 | 1775 | 1815 | 1815 | 1900 | 7.0% | 10.0% | 10.0% | 10.0% |
| CURRENT POSITION (MILL.) | | | | 86% | 77% | 61% | 60% | 66% | 71% | 62% | 56% | 55% | 71% | 69% | 52% | 62% | 62% | 62% | 62% | 62% | 62% |
| Cash Assets 19.5 | | | | 8 8 | 30 9 | BUSINESS: California Water Service Group provides regulated and nonregulated water service to 477,900 customers in 85 communities in the state of California. Accounts for over 94% of total customers. Also operates in Washington, New Mexico, and Hawaii. Main service areas: San Francisco Bay area, Sacramento Valley, Salinas Valley, San Joaquin Valley & parts of Los Angeles. Acquired Rio Grande Corp, West Hawaii Utilities (8/08). Revenue breakdown, '15: residential, 70%; business, 20%; industrial, 5%; public authorities, 4%; other 1%. '15 reported depreciation rate, 4.0%. Has 1,155 employees. President, Chairman, and CEO, Peter C. Nelson, Inc.: DE. Address: 1720 North First St., San Jose, CA 95112-4598. Tel.: 408-367-8200. Internet: www.calwatergroup.com. | | | | | | | | | | | | | | | |
| Other 134.5 | | | | 118.8 | 117.6 | California Water Service Group shares have risen sharply in price since our April review. Despite a rather rough start to 2016, in which both the top and bottom lines fell short of our estimates, the stock increased more than 25% in value. Not unlike other water utility equities, CWT has been a stellar performer over the past two quarters. Year to date, the stock is up approximately 45% in price, and trades at its all-time high of just over \$35 a share. We are shaving a nickel from our full-year 2016 earnings forecast. California Water reported an unexpected loss of \$0.03 a share in the first quarter, weighed down by several headwinds, namely higher operating expenses, ongoing drought costs, and interest charges. We do not foresee an immediate reversal in these trends, though our outlook for 2017 is more optimistic. Lastly, the company has projected a greater tax rate going forward, further supporting our reduced call for \$1.00 share net this year. On a brighter note, revenues appear to be holding up nicely. Specifically, greater collections of accrued unbilled revenues (incurred expenses that CWT is waiting to be reimbursed for) has been a boost. Looking further out, positive long-term rate activity along with an eventual end to unfavorable and costly drought conditions are also encouraging. All told, we continue to look for low single-digit top-line growth this year and next. Capital spending ought to remain a staple in the company's long-term growth plan. Indeed, CWT is well-positioned to expand its footprint through acquisitions, as it boasts a relatively stable balance sheet with a manageable debt level. Purchases aside, organic growth, mainly through investment in its water tanks, aging infrastructure, and water supply, is likely on tap. Based on recent levels, investors with a longer-term holding period would do well to remain on the sidelines. The stock's sustained ascent now renders capital appreciation potential subpar three to five years out. Conversely, accounts with a short-term horizon could do well riding CWT's price momentum higher (Timeliness: 1). | | | | | | | | | | | | | | | |
| Current Assets 154.1 | | | | 127.6 | 148.5 | Nicholas P. Patrikis July 15, 2016 | | | | | | | | | | | | | | | |
| Accrs Payable 59.4 | | | | 66.4 | 85.4 | Company's Financial Strength B++ | | | | | | | | | | | | | | | |
| Debt Due 85.7 | | | | 40.2 | 40.6 | Stock's Price Stability 95 | | | | | | | | | | | | | | | |
| Other 72.6 | | | | 41.9 | 52.1 | Price Growth Persistence 40 | | | | | | | | | | | | | | | |
| Current Liab. 217.7 | | | | 148.5 | 158.1 | Earnings Profitability 75 | | | | | | | | | | | | | | | |

| ANNUAL RATES Past 10 Yrs. | Past 5 Yrs. | Est'd '13-'16 to '19-'21 | Cal-endar | QUARTERLY REVENUES (\$ mil) F | Full Year | | | | |
|---------------------------|-------------|--------------------------|------------|-------------------------------|-----------|--------|--------|-------|-------|
| of change (per sh) | 10 Yrs. | 5 Yrs. | to '19-'21 | Mar.31 | Jun.30 | Sep.30 | Dec.31 | | |
| Revenues | 4.0% | 5.0% | 3.0% | 2013 | 111.4 | 154.8 | 184.4 | 133.7 | 584.1 |
| "Cash Flow" | 6.0% | 5.5% | 6.0% | 2014 | 110.5 | 158.4 | 191.2 | 137.4 | 597.5 |
| Earnings | 5.0% | 4.0% | 7.5% | 2015 | 122.0 | 144.8 | 183.5 | 138.4 | 588.3 |
| Dividends | 1.5% | 2.0% | 7.0% | 2016 | 121.7 | 148 | 190 | 148.3 | 600 |
| Book Value | 5.5% | 5.0% | 3.5% | 2017 | 130 | 155 | 195 | 145 | 625 |

| Cal-endar | EARNINGS PER SHARE A | Full Year | | | |
|-----------|----------------------|-----------|--------|-----|------|
| Mar.31 | Jun.30 | Sep.30 | Dec.31 | | |
| 2013 | .01 | .28 | .61 | .12 | 1.02 |
| 2014 | d.11 | .38 | .70 | .24 | 1.19 |
| 2015 | .03 | .21 | .52 | .18 | .94 |
| 2016 | d.02 | .22 | .60 | .20 | 1.00 |
| 2017 | .05 | .35 | .65 | .30 | 1.35 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B | Full Year | | | |
|-----------|----------------------------|-----------|--------|-------|-----|
| Mar.31 | Jun.30 | Sep.30 | Dec.31 | | |
| 2012 | .1575 | .1575 | .1575 | .1575 | .63 |
| 2013 | .18 | .18 | .18 | .18 | .84 |
| 2014 | .1625 | .1625 | .1625 | .1625 | .65 |
| 2015 | .1675 | .1675 | .1675 | .1675 | .67 |
| 2016 | .1725 | .1725 | | | |

(A) Basic EPS. Excl. nonrecurring gain (loss) DD. (4¢), '01, 2¢, '02, 4¢, '11, 4¢. Next earnings report due late August.
 (B) Dividends historically paid in late Feb., May, Aug., and Nov. 7 Div'd reinvestment plan available.
 (C) Incl intangible assets. In '15: \$7.5 mil., \$0.16/sh.
 (D) In millions, adjusted for splits.
 (E) Excludes non-reg. rev.

Company's Financial Strength B++
 Stock's Price Stability 95
 Price Growth Persistence 40
 Earnings Profitability 75

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| CONNECTICUT WATER NDQ-CTWS | | | | | | | | | | RECENT PRICE | P/E RATIO | | RELATIVE P/E RATIO | DIV YLD | VALUE LINE | | |
|--|----|-----------------|---|------|------|------|------|------|------|--------------|------------------------------------|------|--------------------|---------|--------------|-------|------|
| | | | | | | | | | | 55.66 | 26.5 (Trading: 27.3; Median: 20.9) | | 1.47 | 2.0% | | | |
| TIMELINESS | 2 | Lowered 7/8/16 | High: 28.2 | 27.7 | 25.6 | 29.0 | 26.4 | 27.9 | 29.1 | 32.8 | 36.4 | 37.5 | 39.9 | 56.8 | Target Price | Range | |
| SAFETY | 3 | New 1/18/13 | Low: 21.9 | 20.3 | 22.4 | 19.3 | 17.3 | 20.0 | 23.3 | 26.2 | 27.8 | 31.0 | 33.2 | 37.5 | 2019 | 2020 | 2021 |
| TECHNICAL | 4 | Lowered 7/8/16 | | | | | | | | | | | | | | | |
| BETA | 60 | (1.00 = Market) | LEGENDS 1.30 x Dividends p sh divided by Interest Rate Relative Price Strength Colors: Yes Shaded area indicates recession | | | | | | | | | | | | | | |
| 2019-21 PROJECTIONS Price Gain Return High 55 (Nil) 2% Low 35 (-35%) -8% | | | | | | | | | | | | | | | | | |
| Insider Decisions S O N D J F M A M Buy 0 0 0 0 0 0 0 0 0 0 Sell 0 0 0 0 0 0 2 0 0 0 Net 0 0 0 0 0 0 0 0 0 0 | | | | | | | | | | | | | | | | | |
| Institutional Decisions 3Q2015 4Q2015 1Q2016 Buy 50 51 45 Sell 34 44 48 Net 16 7 3 Micro 4527 4535 4728 Percent shares traded: 12, 8, 4 | | | | | | | | | | | | | | | | | |
| VALUE LINE PUB. LLC 19-21 Revenue per sh 11.35 Cash Flow per sh 3.60 Earnings per sh 2.35 Div'd Dec'd per sh 1.35 Cap'l Spending per sh 3.38 Book Value per sh 22.90 Common Shs Outst'g 12.00 Avg Ann'l P/E Ratio 19.0 Relative P/E Ratio 1.20 Avg Ann'l Div'd Yield 3.0% | | | | | | | | | | | | | | | | | |
| CAPITAL STRUCTURE as of 3/31/16 Total Debt \$174.0 mil. Due in 5 Yrs \$19.3 mil. LT Debt \$171.1 mil. LT Interest \$7.0 mil. (43% of Cap'l) Leases, Uncapitalized: Annual rentals \$3 mil. Pension Assets-12/15 \$56.6 mil. Oblig. \$75.6 mil. Pfd Stock \$0.8 mil. Pfd Divd NMF Common Stock 11,218,582 shs. MARKET CAP: \$626 million (Small Cap) | | | | | | | | | | | | | | | | | |
| CURRENT POSITION (Mill.) Cash Assets 2.5 7 1.5 Accounts Receivable 12.0 11.0 9.7 Other 21.7 15.3 18.1 Current Assets 36.2 27.0 29.3 Accts Payable 10.0 11.9 8.5 Debt Due 4.4 2.8 2.9 Other 9.2 22.2 34.9 Current Liab. 23.6 36.9 46.3 | | | | | | | | | | | | | | | | | |
| ANNUAL RATES of change (per sh) Past 10 Yrs Past 5 Yrs Est'd '13-'16 to '19-21 Revenues 4.0% 4.5% 8.0% "Cash Flow" 4.0% 7.5% 3.5% Earnings 4.0% 9.0% 4.0% Dividends 2.0% 2.0% 5.0% Book Value 6.5% 9.5% 3.0% | | | | | | | | | | | | | | | | | |
| QUARTERLY REVENUES (\$ mil.) Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2013 18.7 22.8 27.6 21.8 91.5 2014 20.3 25.4 27.8 20.7 94.0 2015 20.0 26.8 28.4 21.0 96.0 2016 21.8 27.5 30.0 21.9 101 2017 23.0 28.0 32.0 23.0 106 | | | | | | | | | | | | | | | | | |
| EARNINGS PER SHARE Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2013 .24 .39 .88 .17 1.68 2014 .27 .67 .78 .22 1.92 2015 .28 .77 .79 .20 2.04 2016 .28 .72 .85 .25 2.10 2017 .30 .74 .88 .28 2.20 | | | | | | | | | | | | | | | | | |
| QUARTERLY DIVIDENDS PAID Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2012 .238 .238 .2425 .2425 .962 2013 .2425 .2425 .2475 .2475 .98 2014 .2475 .2475 .2575 .2575 1.01 2015 .2575 .2575 .2675 .2675 1.05 2016 .2575 .2625 | | | | | | | | | | | | | | | | | |
| BUSINESS: Connecticut Water Service, Inc. is a non-operating holding company, whose income is derived from earnings of its wholly-owned subsidiary companies (regulated water utilities). In 2015, 92% of net income was derived from these activities. Provides water services to 400,000 people in 77 municipalities throughout Connecticut and Maine. Acquired The Maine Water Company, January, 2012; Biddeford and Saco Water, December, 2012. Incorporated; Connecticut. Has 266 employees. Chairman/President/Chief Executive Officer: Eric W. Thornburg. Officers and directors own 2.6% of the common stock; BlackRock, Inc. 7.0%; (4/16 proxy). Address: 93 West Main Street, Clinton CT 06413. Telephone: (860) 669-8636. Internet: www.cwwater.com. | | | | | | | | | | | | | | | | | |
| Shareholders: Connecticut Water Service continue to boil higher. The stock price has risen more than 25% since our April review. Year to date, CTWS shares are up approximately 45%, which far outpaces the now negative performance of the S&P 500 Index. Too, the stock etched an all-time high over the March interim, breaking through the \$56-a-share level. First-quarter financials were decent. The company reported moderate annual revenue growth of 8% during the period, helped along by surcharges and general rate activity, specifically in Maine. Earnings of \$0.28 a share were flat year over year, as a one-time tax item offset a noticeable improvement in operating and maintenance expenses. Nonetheless, the strong operating showing lends support to our calls for full-year bottom-line expansion in 2016 and 2017, even more so as tax rates should return to normal levels in the near term. We still think larger capital investments and smaller bolt-on acquisitions are likely on tap through late decade. For this year, management has earmarked approximately \$66 million for improvements to its existing infrastructure, and projects a total of \$150 million may be spent over the pull to 2018. What's more, CTWS will probably expand its footprint through purchases of smaller water service providers, as it has done so frequently in the past. On balance, we look for an expanding customer base to drive top- and bottom-line growth over the coming three to five years. The company raised its quarterly payout, to \$0.2825. This is encouraging from a dividend growth standpoint, as CTWS is focused on returning value to shareholders. (Note: The current yield is now below average). Connecticut Water shares are favorably ranked for relative year-ahead price performance (Timeliness, 2). That said, we think this may be an opportune time to take some profits off the table. Due to the stock's steady climb in price, CTWS is currently trading at the high point of our 3- to 5-year Target Price Range. Moreover, from a price-to earnings perspective, the shares appear richly valued compared to historical ratios. | | | | | | | | | | | | | | | | | |
| Nicholas P. Patrikis July 15, 2016 | | | | | | | | | | | | | | | | | |

(A) Diluted earnings. Next earnings report due late August.
 (B) Dividends historically paid in mid-March, June, September, and December. Div'd reinvestment plan available.
 (C) In millions, adjusted for split.
 (D) Includes intangibles. In 2015: \$30.4 million/\$2.72 a share.
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 Company's Financial Strength 8+
 Stock's Price Stability 90
 Price Growth Persistence 50
 Earnings Predictability 85
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| MIDDLESEX WATER NDAQ-MSEX | | | | | | | | | | RECENT PRICE | PIE RATIO | RELATIVE PIE RATIO | DVD YLD | VALUE LINE | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|------------------------------------|--------------------|---------|-----------------------------------|--|--|--|--|--|
| 1 Raised 6/3/16 2 New 10/21/15 3 Lowered 7/8/16 BETA 70 (100 = Market) 2019-21 PROJECTIONS High: 23.5 20.2 19.8 17.9 19.3 19.4 19.8 22.5 23.7 28.0 44.1 Low: 17.1 16.5 15.9 12.0 11.8 14.7 16.5 17.5 18.6 19.1 21.2 25.0 Legend: 1.20 x Dividends p sh divided by Interest Rate Relative Price Strength 4 for 3 spn 11/33 Shaded area indicates recession | | | | | | | | | | 43.42 | 31.5 (Trailing: 33.7 Median: 20.0) | 1.75 | 1.8% | Target Price Range 2019 2020 2021 | | | | | |
| Insider Decisions Buy 0 Sell 0 Institutional Decision Buy 47 41 62 Sell 42 50 45 Net Buy 5 11 17 Percent shares traded 12 8 4 | | | | | | | | | | | | | | | | | | | |
| 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 | | | | | | | | | | 2017 | | | | | | | | | |
| 5.39 5.87 5.98 6.12 6.25 6.44 6.16 6.50 6.70 6.75 6.60 6.50 6.58 7.19 7.28 7.77 8.06 .99 1.16 1.20 1.15 1.28 1.33 1.33 1.48 1.53 1.40 1.55 1.48 1.56 1.72 1.84 1.97 2.15 .51 .66 .73 .61 .76 .71 .82 .87 .89 .72 .72 .73 .74 .90 1.03 1.13 1.22 1.38 .61 .62 .63 .65 .63 .67 .68 .69 .70 .71 .72 .73 .74 .75 .76 78 .81 1.32 1.25 1.59 1.87 2.54 2.18 2.31 1.96 2.12 1.49 1.90 1.50 1.36 1.26 1.40 1.58 1.75 8.98 7.11 7.39 7.60 8.02 8.26 9.52 10.05 10.03 10.33 11.13 11.27 11.48 11.82 12.24 12.74 12.90 10.11 10.17 10.36 10.48 11.38 11.58 13.17 13.25 13.40 13.52 15.57 15.70 15.82 15.98 16.12 16.23 16.28 28.7 24.8 23.5 30.0 28.4 27.4 22.7 21.6 19.8 21.0 17.8 21.7 20.8 19.7 18.5 19.1 1.87 1.28 1.28 1.71 1.39 1.48 1.23 1.15 1.19 1.40 1.13 1.38 1.32 1.11 .97 .97 4.2% 3.8% 3.7% 3.5% 3.4% 3.5% 3.7% 3.7% 4.0% 4.7% 4.2% 4.0% 4.0% 3.7% 3.7% 3.3% | | | | | | | | | | 2017 Revenues per sh 8.05 Cash Flow per sh 2.30 Earnings per sh 1.50 Div'd Decl'd per sh 0.81 Cap'l Spending per sh 2.05 Book Value per sh 15.60 Common Shs Outst'g 17.00 Avg Ann'l P/E Ratio 21.0 Relative P/E Ratio 1.30 Avg Ann'l Div'd Yield 3.0% | | | | | | | | | |
| CAPITAL STRUCTURE as of 3/31/16 Total Debt \$139.2 mill. Due in 6 Yrs \$30.9 mill LT Debt \$131.5 mill. LT Interest \$5.6 mill. (Total interest coverage: 11.6x) (39% of Cap'l) Pension Assets-12/16 \$52.9 mill Oblig. \$72.5 mill. Pfd Stock \$2.4 mill. Pfd Div'd: \$.1 mill. Common Stock 16,240,000 shs MARKET CAP: \$700 million (Small Cap) | | | | | | | | | | 2017 131 133 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| CURRENT POSITION (MILL.) Cash Assets 2.7 3.5 3.6 Other 20.2 20.9 21.0 Current Assets 22.9 24.4 24.6 Accts Payable 6.4 6.5 6.5 Debt Due 24.9 8.7 7.7 Other 12.6 13.1 16.3 Current Liab. 43.9 28.3 30.5 | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| ANNUAL RATES of change (per sh) Past 10 Yrs. Past 5 Yrs. Est'd '13-'15 to '19-21 Revenues 1.5% 2.0% 4.0% Cash Flow 4.0% 4.5% 5.5% Earnings 5.0% 5.5% 5.0% Dividends 1.5% 1.5% 3.0% Book Value 4.5% 3.0% 4.0% | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| QUARTERLY REVENUES (\$ mil.) Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2013 27.0 29.1 31.3 27.4 114.8 2014 27.1 29.2 32.7 28.1 117.1 2015 28.8 31.7 34.7 30.8 126.0 2016 30.8 32.5 35.5 32.4 131 2017 31.0 33.0 36.0 33.0 133 | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| EARNINGS PER SHARE ^ Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2013 .20 .28 .38 .19 1.03 2014 .20 .29 .42 .22 1.13 2015 .22 .31 .41 .28 1.22 2016 .29 .33 .44 .32 1.38 2017 .32 .34 .46 .33 1.45 | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| QUARTERLY DIVIDENDS PAID ^ Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2012 .185 .185 .185 .1875 .74 2013 .1875 .1875 .1875 .19 .75 2014 .19 .19 .19 .1925 .78 2015 .1925 .1925 .1925 .19875 .78 2016 .19875 .19875 | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| BUSINESS: Middlesex Water Company engages in the ownership and operation of regulated water utility systems in New Jersey, Delaware, and Pennsylvania. It also operates water and wastewater systems under contract on behalf of municipal and private clients in NJ and DE. Its Middlesex System provides water services to 60,000 retail customers, primarily in Middlesex County, New Jersey. In 2015, the Middlesex System accounted for 59% of operating revenues. At 12/31/15, the company had 293 employees. Incorporated: NJ. President, CEO, and Chairman: Dennis W. Doll. Officers & directors own 3.5% of the common stock; BlackRock Institutional Trust Co., 6.4% (4/18 proxy). Add: 1500 Ronson Road, Iselin, NJ 08830 Tel: 732-634-1600. Internet: www.middlesexwater.com. | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| Middlesex Water Company reported better-than-expected financial results to begin the year. Indeed, the recently approved rate increase by the New Jersey Board of Public Utilities, alongside higher water demand drove strong top- and bottom-line growth in the first quarter. Year over year, March interim share net expanded 32%, to \$0.29. Meanwhile, revenues increased 6% over the same period, to \$30.6 million. On balance, we are lifting our 2016 revenue and earnings estimates to \$131 million and \$1.38 a share, respectively. | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| Middlesex shares still have some wind at their back. The stock is up more than 30% in value since our April review and 60% year to date, handily outperforming the broader market averages. We think the price momentum is apt to persist, as MSEX boasts our Highest (1) rank for Timeliness. What's more, the abovementioned strength in profitability and revenue growth supports our viewpoint. A major infrastructure project is set to commence in Edison and South Amboy, New Jersey. A total of \$12 million has been tagged to replace eight miles | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| of water mains, service lines, valves, meters, and hydrants over the coming six months. This ought to bolster Middlesex's water distribution system by providing greater carrying capacity. Customer cost savings are expected to be an additional benefit of the project, thanks to improved efficiency. Going forward, we think capital spending, mainly on its existing infrastructure, will continue to rise. Income-seeking accounts with a long-term bent may want to wait for a more attractive entry point. At present, the equity leaves much to be desired from a capital appreciation perspective, as the stock currently trades above our 3- to 5-year Target Price Range. That said, our sanguine outlook on water demand, infrastructure upgrades, and expanding customer base (largely into Delaware), highlights MSEX's potential out to late decade. Lastly, the company's ability to consistently raise its annual dividend payout (43 consecutive years) should help maintain its historically above-average yield. Note that the current yield (1.8%) is below average, however. | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| Nicholas P. Patrikis July 15, 2016 | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| (A) Diluted earnings. May not sum due to rounding. Next earnings report due early August. (B) Dividends historically paid in mid-Feb. (C) In millions, adjusted for split. | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| Company's Financial Strength B++ Stock's Price Stability 90 Price Growth Persistence 45 Earnings Predictability 85 | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |
| THE PUBLISHER IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS HEREIN. This publication is strictly for subscribers' own non-commercial personal use. No part of it may be reproduced, stored or transmitted in any printed, electronic or other form, or used for generating or marketing any printed or electronic publication, service or product. | | | | | | | | | | 2015 117.1 126.0 22.5 24.6 35.0% 35.0% 2.0% 2.0% 38.5% 38.5% 61.5% 61.5% 360 360 515 515 7.0% 7.5% 10.5% 11.0% 10.5% 10.5% 4.5% 4.5% 58% 58% | | | | | | | | | |

| SJW CORP. NYSE: SJW | | RECENT PRICE | 39.07 | P/E RATIO | 22.3 | (Trailing: 22.1) | Mediant: 24.0 | RELATIVE P/E RATIO | 1.24 | DIVID YLD | 2.1% | VALUE LINE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| TIMELINESS 3 | Lowered 5/8/16 | High: 27.8 | 45.3 | 43.0 | 35.1 | 30.4 | 28.2 | 26.8 | 26.9 | 30.1 | 33.7 | 35.7 | 39.5 | Target Price Range | 2019 | 2020 | 2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SAFETY 3 | New 4/22/11 | Low: 16.1 | 21.2 | 27.7 | 20.0 | 18.2 | 21.8 | 20.9 | 22.8 | 24.5 | 25.5 | 27.5 | 28.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TECHNICAL 3 | Lowered 6/24/16 | LEGENDS --- 1.50 x Dividends p sh divided by Interest Rate Relative Price Strong 1 for 1 split 3/04 2 for 1 split 3/06 Openings: Yes Shaded area indicates recession | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BETA 70 | (1.00 = Market) | 2018-21 PROJECTIONS Price Gain Return High 55 (+40%) 11% Low 36 (-10%) Nil | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Insider Decisions | | <table border="1"> <tr> <th></th> <th>S</th> <th>O</th> <th>N</th> <th>D</th> <th>J</th> <th>F</th> <th>M</th> <th>A</th> <th>M</th> </tr> <tr> <td>To Buy</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>3</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Options</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>9</td> <td>0</td> <td>5</td> <td>8</td> <td>0</td> </tr> <tr> <td>To Sell</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </table> | | | | | | | | | | | | | | | | | S | O | N | D | J | F | M | A | M | To Buy | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | Options | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 5 | 8 | 0 | To Sell | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | S | O | N | D | J | F | M | A | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| To Buy | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Options | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 5 | 8 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| To Sell | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Institutional Decisions | | <table border="1"> <tr> <th></th> <th>3Q2015</th> <th>4Q2015</th> <th>1Q2016</th> <th>Percent shares traded</th> </tr> <tr> <td>To Buy</td> <td>81</td> <td>43</td> <td>84</td> <td>15</td> </tr> <tr> <td>To Sell</td> <td>44</td> <td>59</td> <td>41</td> <td>10</td> </tr> <tr> <td>Holdings</td> <td>9038</td> <td>8684</td> <td>9256</td> <td>5</td> </tr> </table> | | | | | | | | | | | | | | | | | 3Q2015 | 4Q2015 | 1Q2016 | Percent shares traded | To Buy | 81 | 43 | 84 | 15 | To Sell | 44 | 59 | 41 | 10 | Holdings | 9038 | 8684 | 9256 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3Q2015 | 4Q2015 | 1Q2016 | Percent shares traded | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| To Buy | 81 | 43 | 84 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| To Sell | 44 | 59 | 41 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Holdings | 9038 | 8684 | 9256 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKET CAP: \$800 million (Small Cap) | | <table border="1"> <tr> <th>Year</th> <th>2000</th> <th>2001</th> <th>2002</th> <th>2003</th> <th>2004</th> <th>2005</th> <th>2006</th> <th>2007</th> <th>2008</th> <th>2009</th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> <th>2021</th> </tr> <tr> <td>Revenue per sh</td> <td>8.74</td> <td>7.45</td> <td>7.97</td> <td>8.20</td> <td>9.14</td> <td>8.86</td> <td>10.35</td> <td>11.25</td> <td>12.12</td> <td>11.88</td> <td>11.82</td> <td>12.85</td> <td>14.01</td> <td>13.73</td> <td>15.78</td> <td>14.97</td> <td>14.90</td> <td>15.00</td> <td>15.00</td> <td>18.50</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cash Flow per sh</td> <td>1.23</td> <td>1.49</td> <td>1.55</td> <td>1.75</td> <td>1.89</td> <td>2.21</td> <td>2.38</td> <td>2.30</td> <td>2.44</td> <td>2.21</td> <td>2.38</td> <td>2.80</td> <td>2.97</td> <td>2.90</td> <td>4.42</td> <td>3.86</td> <td>3.80</td> <td>4.00</td> <td>4.00</td> <td>3.95</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Earnings per sh</td> <td>.58</td> <td>.77</td> <td>.78</td> <td>.91</td> <td>.87</td> <td>1.12</td> <td>1.19</td> <td>1.04</td> <td>1.08</td> <td>.81</td> <td>.84</td> <td>1.11</td> <td>1.18</td> <td>1.18</td> <td>2.54</td> <td>1.85</td> <td>1.75</td> <td>1.85</td> <td>1.85</td> <td>2.00</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Div'd Decl'd per sh</td> <td>.41</td> <td>.43</td> <td>.46</td> <td>.49</td> <td>.51</td> <td>.53</td> <td>.57</td> <td>.61</td> <td>.65</td> <td>.68</td> <td>.68</td> <td>.69</td> <td>.71</td> <td>.73</td> <td>.75</td> <td>.78</td> <td>.82</td> <td>.85</td> <td>.85</td> <td>1.05</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cap'l Spending per sh</td> <td>1.89</td> <td>2.63</td> <td>2.08</td> <td>3.41</td> <td>2.31</td> <td>2.83</td> <td>3.87</td> <td>6.82</td> <td>3.79</td> <td>3.17</td> <td>5.85</td> <td>3.75</td> <td>5.87</td> <td>4.68</td> <td>5.02</td> <td>5.24</td> <td>5.35</td> <td>5.50</td> <td>5.50</td> <td>5.00</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Book Value per sh</td> <td>7.80</td> <td>8.17</td> <td>8.40</td> <td>9.11</td> <td>10.11</td> <td>10.72</td> <td>12.48</td> <td>12.90</td> <td>13.99</td> <td>13.86</td> <td>13.75</td> <td>14.20</td> <td>14.71</td> <td>15.92</td> <td>17.75</td> <td>18.83</td> <td>19.00</td> <td>19.75</td> <td>19.75</td> <td>22.40</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Common Shs Outstg</td> <td>18.27</td> <td>18.27</td> <td>18.27</td> <td>18.27</td> <td>18.27</td> <td>18.27</td> <td>18.28</td> <td>18.36</td> <td>18.16</td> <td>18.50</td> <td>18.55</td> <td>18.59</td> <td>18.67</td> <td>20.17</td> <td>20.28</td> <td>20.58</td> <td>21.00</td> <td>21.00</td> <td>21.00</td> <td>23.00</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Avg Ann'l P/E Ratio</td> <td>33.1</td> <td>18.5</td> <td>17.3</td> <td>15.4</td> <td>19.6</td> <td>19.7</td> <td>23.5</td> <td>33.4</td> <td>26.2</td> <td>28.7</td> <td>29.1</td> <td>21.2</td> <td>20.4</td> <td>24.3</td> <td>11.2</td> <td>16.8</td> <td>16.8</td> <td>16.8</td> <td>16.8</td> <td>22.0</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Relative P/E Ratio</td> <td>2.15</td> <td>.85</td> <td>.94</td> <td>.88</td> <td>1.04</td> <td>1.05</td> <td>1.27</td> <td>1.77</td> <td>1.58</td> <td>1.91</td> <td>1.85</td> <td>1.33</td> <td>1.30</td> <td>1.37</td> <td>.59</td> <td>.84</td> <td>.84</td> <td>.84</td> <td>.84</td> <td>1.40</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Avg Ann'l Div'd Yield</td> <td>2.1%</td> <td>3.0%</td> <td>3.4%</td> <td>3.5%</td> <td>3.0%</td> <td>2.4%</td> <td>2.0%</td> <td>1.7%</td> <td>2.3%</td> <td>2.8%</td> <td>2.8%</td> <td>2.9%</td> <td>3.0%</td> <td>2.7%</td> <td>2.6%</td> <td>2.5%</td> <td>2.5%</td> <td>2.5%</td> <td>2.5%</td> <td>2.3%</td> <td></td> <td></td> <td></td> </tr> </table> | | | | | | | | | | | | | | | | Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Revenue per sh | 8.74 | 7.45 | 7.97 | 8.20 | 9.14 | 8.86 | 10.35 | 11.25 | 12.12 | 11.88 | 11.82 | 12.85 | 14.01 | 13.73 | 15.78 | 14.97 | 14.90 | 15.00 | 15.00 | 18.50 | | | | Cash Flow per sh | 1.23 | 1.49 | 1.55 | 1.75 | 1.89 | 2.21 | 2.38 | 2.30 | 2.44 | 2.21 | 2.38 | 2.80 | 2.97 | 2.90 | 4.42 | 3.86 | 3.80 | 4.00 | 4.00 | 3.95 | | | | Earnings per sh | .58 | .77 | .78 | .91 | .87 | 1.12 | 1.19 | 1.04 | 1.08 | .81 | .84 | 1.11 | 1.18 | 1.18 | 2.54 | 1.85 | 1.75 | 1.85 | 1.85 | 2.00 | | | | Div'd Decl'd per sh | .41 | .43 | .46 | .49 | .51 | .53 | .57 | .61 | .65 | .68 | .68 | .69 | .71 | .73 | .75 | .78 | .82 | .85 | .85 | 1.05 | | | | Cap'l Spending per sh | 1.89 | 2.63 | 2.08 | 3.41 | 2.31 | 2.83 | 3.87 | 6.82 | 3.79 | 3.17 | 5.85 | 3.75 | 5.87 | 4.68 | 5.02 | 5.24 | 5.35 | 5.50 | 5.50 | 5.00 | | | | Book Value per sh | 7.80 | 8.17 | 8.40 | 9.11 | 10.11 | 10.72 | 12.48 | 12.90 | 13.99 | 13.86 | 13.75 | 14.20 | 14.71 | 15.92 | 17.75 | 18.83 | 19.00 | 19.75 | 19.75 | 22.40 | | | | Common Shs Outstg | 18.27 | 18.27 | 18.27 | 18.27 | 18.27 | 18.27 | 18.28 | 18.36 | 18.16 | 18.50 | 18.55 | 18.59 | 18.67 | 20.17 | 20.28 | 20.58 | 21.00 | 21.00 | 21.00 | 23.00 | | | | Avg Ann'l P/E Ratio | 33.1 | 18.5 | 17.3 | 15.4 | 19.6 | 19.7 | 23.5 | 33.4 | 26.2 | 28.7 | 29.1 | 21.2 | 20.4 | 24.3 | 11.2 | 16.8 | 16.8 | 16.8 | 16.8 | 22.0 | | | | Relative P/E Ratio | 2.15 | .85 | .94 | .88 | 1.04 | 1.05 | 1.27 | 1.77 | 1.58 | 1.91 | 1.85 | 1.33 | 1.30 | 1.37 | .59 | .84 | .84 | .84 | .84 | 1.40 | | | | Avg Ann'l Div'd Yield | 2.1% | 3.0% | 3.4% | 3.5% | 3.0% | 2.4% | 2.0% | 1.7% | 2.3% | 2.8% | 2.8% | 2.9% | 3.0% | 2.7% | 2.6% | 2.5% | 2.5% | 2.5% | 2.5% | 2.3% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Revenue per sh | 8.74 | 7.45 | 7.97 | 8.20 | 9.14 | 8.86 | 10.35 | 11.25 | 12.12 | 11.88 | 11.82 | 12.85 | 14.01 | 13.73 | 15.78 | 14.97 | 14.90 | 15.00 | 15.00 | 18.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cash Flow per sh | 1.23 | 1.49 | 1.55 | 1.75 | 1.89 | 2.21 | 2.38 | 2.30 | 2.44 | 2.21 | 2.38 | 2.80 | 2.97 | 2.90 | 4.42 | 3.86 | 3.80 | 4.00 | 4.00 | 3.95 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Earnings per sh | .58 | .77 | .78 | .91 | .87 | 1.12 | 1.19 | 1.04 | 1.08 | .81 | .84 | 1.11 | 1.18 | 1.18 | 2.54 | 1.85 | 1.75 | 1.85 | 1.85 | 2.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Div'd Decl'd per sh | .41 | .43 | .46 | .49 | .51 | .53 | .57 | .61 | .65 | .68 | .68 | .69 | .71 | .73 | .75 | .78 | .82 | .85 | .85 | 1.05 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cap'l Spending per sh | 1.89 | 2.63 | 2.08 | 3.41 | 2.31 | 2.83 | 3.87 | 6.82 | 3.79 | 3.17 | 5.85 | 3.75 | 5.87 | 4.68 | 5.02 | 5.24 | 5.35 | 5.50 | 5.50 | 5.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Book Value per sh | 7.80 | 8.17 | 8.40 | 9.11 | 10.11 | 10.72 | 12.48 | 12.90 | 13.99 | 13.86 | 13.75 | 14.20 | 14.71 | 15.92 | 17.75 | 18.83 | 19.00 | 19.75 | 19.75 | 22.40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Common Shs Outstg | 18.27 | 18.27 | 18.27 | 18.27 | 18.27 | 18.27 | 18.28 | 18.36 | 18.16 | 18.50 | 18.55 | 18.59 | 18.67 | 20.17 | 20.28 | 20.58 | 21.00 | 21.00 | 21.00 | 23.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avg Ann'l P/E Ratio | 33.1 | 18.5 | 17.3 | 15.4 | 19.6 | 19.7 | 23.5 | 33.4 | 26.2 | 28.7 | 29.1 | 21.2 | 20.4 | 24.3 | 11.2 | 16.8 | 16.8 | 16.8 | 16.8 | 22.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Relative P/E Ratio | 2.15 | .85 | .94 | .88 | 1.04 | 1.05 | 1.27 | 1.77 | 1.58 | 1.91 | 1.85 | 1.33 | 1.30 | 1.37 | .59 | .84 | .84 | .84 | .84 | 1.40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Avg Ann'l Div'd Yield | 2.1% | 3.0% | 3.4% | 3.5% | 3.0% | 2.4% | 2.0% | 1.7% | 2.3% | 2.8% | 2.8% | 2.9% | 3.0% | 2.7% | 2.6% | 2.5% | 2.5% | 2.5% | 2.5% | 2.3% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CAPITAL STRUCTURE as of 3/31/16 | | <table border="1"> <tr> <th>Year</th> <th>2000</th> <th>2001</th> <th>2002</th> <th>2003</th> <th>2004</th> <th>2005</th> <th>2006</th> <th>2007</th> <th>2008</th> <th>2009</th> <th>2010</th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> <th>2021</th> </tr> <tr> <td>Total Debt \$420.1 mil. Due in 5 Yrs \$21.2 mil.</td> <td>188.2</td> <td>206.8</td> <td>220.3</td> <td>216.1</td> <td>215.8</td> <td>239.0</td> <td>261.5</td> <td>278.9</td> <td>319.7</td> <td>305.1</td> <td>308</td> <td>315</td> <td>315</td> <td>315</td> <td>305.1</td> <td>308</td> <td>315</td> <td>315</td> <td>315</td> <td>425</td> <td></td> <td></td> <td></td> </tr> <tr> <td>LT Debt \$365.8 mil. LT Interest \$21.0 mil. (49% of Cap)</td> <td>22.2</td> <td>19.3</td> <td>20.2</td> <td>15.2</td> <td>15.8</td> <td>20.9</td> <td>22.3</td> <td>23.5</td> <td>51.8</td> <td>37.9</td> <td>38.0</td> <td>41.0</td> <td>41.0</td> <td>41.0</td> <td>51.8</td> <td>37.9</td> <td>38.0</td> <td>41.0</td> <td>41.0</td> <td>48.0</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Leases, Uncapitalized: Annual rentals \$8.6 mil.</td> <td>40.8%</td> <td>39.4%</td> <td>39.5%</td> <td>40.4%</td> <td>38.6%</td> <td>41.1%</td> <td>41.1%</td> <td>38.7%</td> <td>32.5%</td> <td>38.1%</td> <td>38.0%</td> <td>38.5%</td> <td>38.5%</td> <td>32.5%</td> <td>38.1%</td> <td>38.0%</td> <td>38.5%</td> <td>38.5%</td> <td>38.5%</td> <td>38.0%</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pension Assets-12/16 \$105.0 mil. Oblig. \$164.3 mil.</td> <td>2.1%</td> <td>2.7%</td> <td>2.3%</td> <td>2.0%</td> <td>2.0%</td> <td>2.0%</td> <td>2.0%</td> <td>2.0%</td> <td>4.8%</td> <td>4.8%</td> <td>4.8%</td> <td>4.8%</td> <td>4.8%</td> <td>4.8%</td> <td>4.8%</td> <td>4.8%</td> <td>4.8%</td> <td>4.8%</td> <td>4.8%</td> <td>50.5%</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pfd Stock None.</td> <td>58.2%</td> <td>52.3%</td> <td>54.0%</td> <td>50.8%</td> <td>48.3%</td> <td>43.4%</td> <td>45.0%</td> <td>48.9%</td> <td>48.4%</td> <td>50.2%</td> <td>51.0%</td> <td>48.4%</td> <td>48.4%</td> <td>48.4%</td> <td>48.4%</td> <td>50.2%</td> <td>51.0%</td> <td>48.4%</td> <td>48.4%</td> <td>48.5%</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Common Stock 20,425,794 shs.</td> <td>391.8</td> <td>453.2</td> <td>470.8</td> <td>498.6</td> <td>550.7</td> <td>607.9</td> <td>610.2</td> <td>656.2</td> <td>744.5</td> <td>784.8</td> <td>785</td> <td>840</td> <td>840</td> <td>840</td> <td>744.5</td> <td>784.8</td> <td>785</td> <td>840</td> <td>840</td> <td>1040</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MARKET CAP: \$800 million (Small Cap)</td> <td>541.7</td> <td>645.5</td> <td>684.2</td> <td>718.5</td> <td>785.5</td> <td>758.2</td> <td>831.8</td> <td>898.7</td> <td>963.0</td> <td>1038.8</td> <td>1100</td> <td>1200</td> <td>1200</td> <td>963.0</td> <td>1038.8</td> <td>1100</td> <td>1200</td> <td>1200</td> <td>1200</td> <td>1325</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Current Position (Mill)</td> <td>7.0%</td> <td>5.7%</td> <td>5.8%</td> <td>4.4%</td> <td>4.3%</td> <td>4.9%</td> <td>5.0%</td> <td>5.0%</td> <td>8.3%</td> <td>8.3%</td> <td>8.0%</td> <td>8.0%</td> <td>8.0%</td> <td>8.3%</td> <td>8.3%</td> <td>8.0%</td> <td>8.0%</td> <td>8.0%</td> <td>8.0%</td> <td>5.5%</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cash Assets</td> <td>8.7%</td> <td>8.2%</td> <td>8.0%</td> <td>6.0%</td> <td>6.2%</td> <td>7.9%</td> <td>8.1%</td> <td>7.3%</td> <td>14.4%</td> <td>9.9%</td> <td>9.0%</td> <td>10.0%</td> <td>10.0%</td> <td>14.4%</td> <td>9.9%</td> <td>9.0%</td> <td>9.0%</td> <td>9.0%</td> <td>9.0%</td> <td>8.0%</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Accts Receivable</td> <td>9.7%</td> <td>8.2%</td> <td>8.0%</td> <td>8.0%</td> <td>8.2%</td> <td>7.9%</td> <td>8.1%</td> <td>7.3%</td> <td>14.4%</td> <td>9.9%</td> <td>9.0%</td> <td>10.0%</td> <td>10.0%</td> <td>14.4%</td> <td>9.9%</td> <td>9.0%</td> <td>9.0%</td> <td>9.0%</td> <td>9.0%</td> <td>10.0%</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td>5.2%</td> <td>3.5%</td> <td>3.3%</td> <td>1.2%</td> <td>1.2%</td> <td>3.1%</td> <td>3.3%</td> <td>2.8%</td> <td>10.2%</td> <td>5.7%</td> <td>5.0%</td> <td>5.5%</td> <td>5.5%</td> <td>10.2%</td> <td>5.7%</td> <td>5.0%</td> <td>5.5%</td> <td>5.5%</td> <td>5.5%</td> <td>4.0%</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Current Assets</td> <td>46%</td> <td>57%</td> <td>58%</td> <td>50%</td> <td>50%</td> <td>60%</td> <td>61%</td> <td>59%</td> <td>29%</td> <td>42%</td> <td>47%</td> <td>44%</td> <td>44%</td> <td>29%</td> <td>42%</td> <td>47%</td> <td>44%</td> <td>44%</td> <td>44%</td> <td>53%</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Accts Payable</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Debt Due</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Current Liab.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | | | | | | | | | | | | | | | | Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Total Debt \$420.1 mil. Due in 5 Yrs \$21.2 mil. | 188.2 | 206.8 | 220.3 | 216.1 | 215.8 | 239.0 | 261.5 | 278.9 | 319.7 | 305.1 | 308 | 315 | 315 | 315 | 305.1 | 308 | 315 | 315 | 315 | 425 | | | | LT Debt \$365.8 mil. LT Interest \$21.0 mil. (49% of Cap) | 22.2 | 19.3 | 20.2 | 15.2 | 15.8 | 20.9 | 22.3 | 23.5 | 51.8 | 37.9 | 38.0 | 41.0 | 41.0 | 41.0 | 51.8 | 37.9 | 38.0 | 41.0 | 41.0 | 48.0 | | | | Leases, Uncapitalized: Annual rentals \$8.6 mil. | 40.8% | 39.4% | 39.5% | 40.4% | 38.6% | 41.1% | 41.1% | 38.7% | 32.5% | 38.1% | 38.0% | 38.5% | 38.5% | 32.5% | 38.1% | 38.0% | 38.5% | 38.5% | 38.5% | 38.0% | | | | Pension Assets-12/16 \$105.0 mil. Oblig. \$164.3 mil. | 2.1% | 2.7% | 2.3% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 50.5% | | | | Pfd Stock None. | 58.2% | 52.3% | 54.0% | 50.8% | 48.3% | 43.4% | 45.0% | 48.9% | 48.4% | 50.2% | 51.0% | 48.4% | 48.4% | 48.4% | 48.4% | 50.2% | 51.0% | 48.4% | 48.4% | 48.5% | | | | Common Stock 20,425,794 shs. | 391.8 | 453.2 | 470.8 | 498.6 | 550.7 | 607.9 | 610.2 | 656.2 | 744.5 | 784.8 | 785 | 840 | 840 | 840 | 744.5 | 784.8 | 785 | 840 | 840 | 1040 | | | | MARKET CAP: \$800 million (Small Cap) | 541.7 | 645.5 | 684.2 | 718.5 | 785.5 | 758.2 | 831.8 | 898.7 | 963.0 | 1038.8 | 1100 | 1200 | 1200 | 963.0 | 1038.8 | 1100 | 1200 | 1200 | 1200 | 1325 | | | | Current Position (Mill) | 7.0% | 5.7% | 5.8% | 4.4% | 4.3% | 4.9% | 5.0% | 5.0% | 8.3% | 8.3% | 8.0% | 8.0% | 8.0% | 8.3% | 8.3% | 8.0% | 8.0% | 8.0% | 8.0% | 5.5% | | | | Cash Assets | 8.7% | 8.2% | 8.0% | 6.0% | 6.2% | 7.9% | 8.1% | 7.3% | 14.4% | 9.9% | 9.0% | 10.0% | 10.0% | 14.4% | 9.9% | 9.0% | 9.0% | 9.0% | 9.0% | 8.0% | | | | Accts Receivable | 9.7% | 8.2% | 8.0% | 8.0% | 8.2% | 7.9% | 8.1% | 7.3% | 14.4% | 9.9% | 9.0% | 10.0% | 10.0% | 14.4% | 9.9% | 9.0% | 9.0% | 9.0% | 9.0% | 10.0% | | | | Other | 5.2% | 3.5% | 3.3% | 1.2% | 1.2% | 3.1% | 3.3% | 2.8% | 10.2% | 5.7% | 5.0% | 5.5% | 5.5% | 10.2% | 5.7% | 5.0% | 5.5% | 5.5% | 5.5% | 4.0% | | | | Current Assets | 46% | 57% | 58% | 50% | 50% | 60% | 61% | 59% | 29% | 42% | 47% | 44% | 44% | 29% | 42% | 47% | 44% | 44% | 44% | 53% | | | | Accts Payable | | | | | | | | | | | | | | | | | | | | | | | | Debt Due | | | | | | | | | | | | | | | | | | | | | | | | Other | | | | | | | | | | | | | | | | | | | | | | | | Current Liab. | | | | | | | | | | | | | | | | | | | | | | | |
| Year | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Debt \$420.1 mil. Due in 5 Yrs \$21.2 mil. | 188.2 | 206.8 | 220.3 | 216.1 | 215.8 | 239.0 | 261.5 | 278.9 | 319.7 | 305.1 | 308 | 315 | 315 | 315 | 305.1 | 308 | 315 | 315 | 315 | 425 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LT Debt \$365.8 mil. LT Interest \$21.0 mil. (49% of Cap) | 22.2 | 19.3 | 20.2 | 15.2 | 15.8 | 20.9 | 22.3 | 23.5 | 51.8 | 37.9 | 38.0 | 41.0 | 41.0 | 41.0 | 51.8 | 37.9 | 38.0 | 41.0 | 41.0 | 48.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leases, Uncapitalized: Annual rentals \$8.6 mil. | 40.8% | 39.4% | 39.5% | 40.4% | 38.6% | 41.1% | 41.1% | 38.7% | 32.5% | 38.1% | 38.0% | 38.5% | 38.5% | 32.5% | 38.1% | 38.0% | 38.5% | 38.5% | 38.5% | 38.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pension Assets-12/16 \$105.0 mil. Oblig. \$164.3 mil. | 2.1% | 2.7% | 2.3% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 4.8% | 50.5% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pfd Stock None. | 58.2% | 52.3% | 54.0% | 50.8% | 48.3% | 43.4% | 45.0% | 48.9% | 48.4% | 50.2% | 51.0% | 48.4% | 48.4% | 48.4% | 48.4% | 50.2% | 51.0% | 48.4% | 48.4% | 48.5% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Common Stock 20,425,794 shs. | 391.8 | 453.2 | 470.8 | 498.6 | 550.7 | 607.9 | 610.2 | 656.2 | 744.5 | 784.8 | 785 | 840 | 840 | 840 | 744.5 | 784.8 | 785 | 840 | 840 | 1040 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MARKET CAP: \$800 million (Small Cap) | 541.7 | 645.5 | 684.2 | 718.5 | 785.5 | 758.2 | 831.8 | 898.7 | 963.0 | 1038.8 | 1100 | 1200 | 1200 | 963.0 | 1038.8 | 1100 | 1200 | 1200 | 1200 | 1325 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Current Position (Mill) | 7.0% | 5.7% | 5.8% | 4.4% | 4.3% | 4.9% | 5.0% | 5.0% | 8.3% | 8.3% | 8.0% | 8.0% | 8.0% | 8.3% | 8.3% | 8.0% | 8.0% | 8.0% | 8.0% | 5.5% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cash Assets | 8.7% | 8.2% | 8.0% | 6.0% | 6.2% | 7.9% | 8.1% | 7.3% | 14.4% | 9.9% | 9.0% | 10.0% | 10.0% | 14.4% | 9.9% | 9.0% | 9.0% | 9.0% | 9.0% | 8.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accts Receivable | 9.7% | 8.2% | 8.0% | 8.0% | 8.2% | 7.9% | 8.1% | 7.3% | 14.4% | 9.9% | 9.0% | 10.0% | 10.0% | 14.4% | 9.9% | 9.0% | 9.0% | 9.0% | 9.0% | 10.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other | 5.2% | 3.5% | 3.3% | 1.2% | 1.2% | 3.1% | 3.3% | 2.8% | 10.2% | 5.7% | 5.0% | 5.5% | 5.5% | 10.2% | 5.7% | 5.0% | 5.5% | 5.5% | 5.5% | 4.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Current Assets | 46% | 57% | 58% | 50% | 50% | 60% | 61% | 59% | 29% | 42% | 47% | 44% | 44% | 29% | 42% | 47% | 44% | 44% | 44% | 53% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accts Payable | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Debt Due | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Current Liab. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ANNUAL RATES | | <table border="1"> <tr> <th>Year</th> <th>2014</th> <th>2015</th> <th>3/31/16</th> </tr> <tr> <td>Cash Assets</td> <td>2.4</td> <td>5.2</td> <td>8.7</td> </tr> <tr> <td>Accts Receivable</td> <td>15.0</td> <td>18.4</td> <td>13.8</td> </tr> <tr> <td>Other</td> <td>50.7</td> <td>51.8</td> <td>40.1</td> </tr> <tr> <td>Current Assets</td> <td>68.1</td> <td>73.4</td> <td>62.6</td> </tr> <tr> <td>Accts Payable</td> <td>7.0</td> <td>16.2</td> <td>19.1</td> </tr> <tr> <td>Debt Due</td> <td>13.8</td> <td>38.1</td> <td>54.3</td> </tr> <tr> <td>Other</td> <td>23.9</td> <td>25.3</td> <td>24.4</td> </tr> <tr> <td>Current Liab.</td> <td>44.7</td> <td>79.6</td> <td>97.8</td> </tr> </table> | | | | | | | | | | | | | | | | Year | 2014 | 2015 | 3/31/16 | Cash Assets | 2.4 | 5.2 | 8.7 | Accts Receivable | 15.0 | 18.4 | 13.8 | Other | 50.7 | 51.8 | 40.1 | Current Assets | 68.1 | 73.4 | 62.6 | Accts Payable | 7.0 | 16.2 | 19.1 | Debt Due | 13.8 | 38.1 | 54.3 | Other | 23.9 | 25.3 | 24.4 | Current Liab. | 44.7 | 79.6 | 97.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year | 2014 | 2015 | 3/31/16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cash Assets | 2.4 | 5.2 | 8.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accts Receivable | 15.0 | 18.4 | 13.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other | 50.7 | 51.8 | 40.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Current Assets | 68.1 | 73.4 | 62.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accts Payable | 7.0 | 16.2 | 19.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Debt Due | 13.8 | 38.1 | 54.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other | 23.9 | 25.3 | 24.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Current Liab. | 44.7 | 79.6 | 97.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Business: | | <p>SJW Corporation engages in the production, purchase, storage, purification, distribution, and retail sale of water. It provides water service to approximately 229,000 connections with a total population of roughly one million people in the San Jose area and 12,000 connections that reaches about 36,000 residents in the region between San Antonio and Austin, Texas. The company also offers nonregulated water-related services and owns and operates commercial real estate investments. Has about 399 employees. Officers and directors (including Nancy O. Moss) own 28.3% of outstanding shares. Chairman: Charles J. Toeniskoetter, Incorporated: California. Address: 110 West Taylor Street, San Jose, CA 95110. Telephone: (408) 279-7800. Internet: www.sjwater.com.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| California Public Utilities Commission: | | <p>Commission to authorize a rate increase, a capital improvement program of more than \$300 million has been granted to SJW. This will allow the company to upgrade its water systems infrastructure thereby improving customer water distribution and operational efficiency. The dividend yield should hold steady over the coming 3 to 5 years. At the recent quotation, the stock yields 2.1%, fractionally lower than <i>The Value Line Investment Survey</i> median. Nevertheless, SJW has an impeccable track record of payout hikes, and its solid free cash flow generation leads us to expect consistent dividend increases in the years to come, thus keeping the yield about average. SJW stock has been lowered one notch for Timeliness, to 3 (Average), and is now pegged to move in line with the year-ahead broader market. Our ranking system suggests that recent price momentum may be cooling. Too, capital appreciation three to five years out is below average. Thus, we recommend investors turn the page, for now.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quarterly Revenues (\$ mil.) | | <table border="1"> <tr> <th>Year</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> </tr> <tr> <td>Mar.31</td> <td>50.1</td> <td>74.2</td> <td>85.2</td> <td>67.4</td> <td>278.9</td> </tr> <tr> <td>Jun.30</td> <td>54.6</td> <td>70.4</td> <td>125.4</td> <td>69.3</td> <td>319.7</td> </tr> <tr> <td>Sep.30</td> <td>62.1</td> <td>72.4</td> <td>83.0</td> <td>87.8</td> <td>305.1</td> </tr> <tr> <td>Dec.31</td> <td>61.1</td> <td>75.0</td> <td>88.9</td> <td>80.0</td> <td>305</td> </tr> <tr> <td>Full Year</td> <td>248.0</td> <td>277.0</td> <td>300.0</td> <td>224.0</td> <td>1118</td> </tr> </table> | | | | | | | | | | | | | | | | Year | 2013 | 2014 | 2015 | 2016 | 2017 | Mar.31 | 50.1 | 74.2 | 85.2 | 67.4 | 278.9 | Jun.30 | 54.6 | 70.4 | 125.4 | 69.3 | 319.7 | Sep.30 | 62.1 | 72.4 | 83.0 | 87.8 | 305.1 | Dec.31 | 61.1 | 75.0 | 88.9 | 80.0 | 305 | Full Year | 248.0 | 277.0 | 300.0 | 224.0 | 1118 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year | 2013 | 2014 | 2015 | 2016 | 2017 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar.31 | 50.1 | 74.2 | 85.2 | 67.4 | 278.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jun.30 | 54.6 | 70.4 | 125.4 | 69.3 | 319.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sep.30 | 62.1 | 72.4 | 83.0 | 87.8 | 305.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dec.31 | 61.1 | 75.0 | 88.9 | 80.0 | 305 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Full Year | 248.0 | 277.0 | 300.0 | 224.0 | 1118 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Earnings per Share | | <table border="1"> <tr> <th>Year</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> </tr> <tr> <td>Mar.31</td> <td>.07</td> <td>.37</td> <td>.44</td> <td>.24</td> <td>1.12</td> </tr> <tr> <td>Jun.30</td> <td>.04</td> <td>.34</td> <td>1.88</td> <td>.28</td> <td>2.54</td> </tr> <tr> <td>Sep.30</td> <td>.23</td> <td>.38</td> <td>.48</td> <td>.80</td> <td>1.85</td> </tr> <tr> <td>Dec.31</td> <td>.18</td> <td>.40</td> <td>.50</td> <td>.59</td> <td>1.75</td> </tr> <tr> <td>Full Year</td> <td>.25</td> <td>.45</td> <td>.65</td> <td>.60</td> <td>1.95</td> </tr> </table> | | | | | | | | | | | | | | | | Year | 2013 | 2014 | 2015 | 2016 | 2017 | Mar.31 | .07 | .37 | .44 | .24 | 1.12 | Jun.30 | .04 | .34 | 1.88 | .28 | 2.54 | Sep.30 | .23 | .38 | .48 | .80 | 1.85 | Dec.31 | .18 | .40 | .50 | .59 | 1.75 | Full Year | .25 | .45 | .65 | .60 | 1.95 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year | 2013 | 2014 | 2015 | 2016 | 2017 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar.31 | .07 | .37 | .44 | .24 | 1.12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jun.30 | .04 | .34 | 1.88 | .28 | 2.54 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sep.30 | .23 | .38 | .48 | .80 | 1.85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dec.31 | .18 | .40 | .50 | .59 | 1.75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Full Year | .25 | .45 | .65 | .60 | 1.95 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quarterly Dividends Paid | | <table border="1"> <tr> <th>Year</th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> </tr> <tr> <td>Mar.31</td> <td>.1775</td> <td>.1775</td> <td>.1775</td> <td>.1775</td> <td>.71</td> </tr> <tr> <td>Jun.30</td> <td>.1825</td> <td>.1825</td> <td>.1825</td> <td>.1825</td> <td>.73</td> </tr> <tr> <td>Sep.30</td> <td>.1875</td> <td>.1875</td> <td>.1875</td> <td>.1875</td> <td>.75</td> </tr> <tr> <td>Dec.31</td> <td>.1950</td> <td>.1950</td> <td>.1950</td> <td>.1950</td> <td>.78</td> </tr> <tr> <td>Full Year</td> <td>.71</td> <td>.73</td> <td>.75</td> <td>.78</td> <td></td> </tr> </table> | | | | | | | | | | | | | | | | Year | 2012 | 2013 | 2014 | 2015 | 2016 | Mar.31 | .1775 | .1775 | .1775 | .1775 | .71 | Jun.30 | .1825 | .1825 | .1825 | .1825 | .73 | Sep.30 | .1875 | .1875 | .1875 | .1875 | .75 | Dec.31 | .1950 | .1950 | .1950 | .1950 | .78 | Full Year | .71 | .73 | .75 | .78 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year | 2012 | 2013 | 2014 | 2015 | 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mar.31 | .1775 | .1775 | .1775 | .1775 | .71 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jun.30 | .1825 | .1825 | .1825 | .1825 | .73 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sep.30 | .1875 | .1875 | .1875 | .1875 | .75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dec.31 | .1950 | .1950 | .1950 | .1950 | .78 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Full Year | .71 | .73 | .75 | .78 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Company's Financial Strength | | <table border="1"> <tr> <td>Stock's Price Stability</td> <td>B+</td> </tr> <tr> <td>Price Growth Persistence</td> <td>B5</td> </tr> <tr> <td>Earnings Predictability</td> <td>50</td> </tr> </table> | | | | | | | | | | | | | | | | Stock's Price Stability | B+ | Price Growth Persistence | B5 | Earnings Predictability | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stock's Price Stability | B+ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Price Growth Persistence | B5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Earnings Predictability | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

(A) Diluted earnings. Excludes nonrecurring losses: '03, \$1.97, '04, \$3.78, '05 \$1.09, '06, \$16.36; '08, \$1.22, '10, \$0.46 GAAP accounting as of 2013. Next earnings report due late August. Quarterly earnings may not add due to rounding. (B) Dividends historically paid in early March, June, September, and December. (C) In millions, adjusted for stock splits.

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For subscribe call 1-800-VALUELINE

| YORK WATER NDQ:YORW | | RECENT PRICE | P/E RATIO | RELATIVE P/E RATIO | DIV YLD | VALUE LINE |
|--|--|---|-----------------------------------|--------------------|---------|--|
| TIMELINESS 3 Lowered 7/8/16 SAFETY 3 Lowered 7/17/15 TECHNICAL 3 Lowered 7/8/16 BETA 70 (100 = Market) | | 31.44 | 31.4 (Trading 32.6, Median: 24.8) | 1.74 | 2.0% | Target Price Range 2019 2020 2021 |
| 2019-21 PROJECTIONS High 35 (+10%) 5% Low 25 (-20%) -2% | | | | | | 64 48 40 32 24 20 16 12 8 6 |
| Insider Decisions BOND J F M A M to Buy 0 0 0 0 0 0 0 0 to Sell 0 0 0 0 0 0 0 0 | | Institutional Decisions 3Q2015 4Q2015 1Q2016 to Buy 30 36 43 to Sell 27 24 30 Net Buy 3840 3820 3980 | | | | Percent shares traded 12 8 4 |
| CAPITAL STRUCTURE as of 3/31/16 Total Debt \$84.5 mill Due In 5 Yrs \$30.5 mill LT Debt \$84.5 mill LT Interest \$5.1 mill. | | MARKET CAP: \$400 million (Small Cap) | | | | % TOT. RETURN 6/16 1 yr 57.2 3 yr 81.5 5 yr 120.5 |
| ANNUAL RATES Past 10 Yrs Past 5 Yrs Est'd '13-'15 to '19-21 Revenue 4.5% 3.0% 7.5% "Cash Flow" 7.0% 8.5% 6.0% Earnings 5.5% 6.0% 6.0% Dividends 4.0% 2.5% 6.5% Book Value 6.5% 4.5% 3.5% | | YORK WATER DELIVERED FIRST-QUARTER FINANCIAL RESULTS roughly in line with our expectations. The Pennsylvania-based operator generated revenues of \$11.3 million, fractionally higher than the prior-year figure. Meanwhile, earnings of \$0.19 a share during the period missed our mark by a penny, largely owing to a marginally higher tax rate than we anticipated. However, slimmer operating expenses, as well as relatively calmer weather, kept the company moving in the right direction. At this time, we are reiterating our 2016 top- and bottom-line estimates of \$50.0 million and \$1.00 per share, respectively. | | | | Revenue per sh 5.40 "Cash Flow" per sh 1.90 Earnings per sh 1.25 Div'd Decl'd per sh .85 Cap'l Spending per sh .85 Book Value per sh 10.15 Common Sta Outing 12.00 Avg Ann'l P/E Ratio 22.5 Relative P/E Ratio 1.40 Avg Ann'l Div'd Yield 3.4% |
| CURRENT POSITION Cash Assets 1.5 Accounts Receivable 4.0 Inventory (Avg. Cost) 8 Other 4.9 Current Assets 11.2 Accts Payable 1.8 Debt Due - Other 4.3 Current Liab. 5.9 | | YORK WATER DELIVERED FIRST-QUARTER FINANCIAL RESULTS shelter from the recent global volatility. We remain confident that acquisitions and capital investments will likely comprise the long-term story. York spent just under \$2 million in capex in the first quarter, but has guided a massive ramp-up of \$15 million over the last three quarters of the year. Funds will probably be used to lead an overhaul of its aging infrastructure, after having been allocated to its water treatment systems and new water mains. In addition, much of the growth we envision over the coming years ought to be attributed to acquisitions. To wit, the company is poised to aggressively spend in 2016 and 2017 to position itself for sustainable expansion through late decade. | | | | Revenue (\$mil) 53.0 Net Profit (\$mil) 15.0 Income Tax Rate 32.5% AFUDC % to Net Profit 1.0% Long-Term Debt Ratio 47.0% Common Equity Ratio 53.0% Total Capital (\$mil) 230 Net Plant (\$mil) 290 Return on Total Cap'l 7.5% Return on Shr. Equity 12.5% Return on Com Equity 12.5% Retained to Com Eq 4.0% All Div'd to Net Prof 68% |
| QUARTERLY REVENUES (\$ mil.) Calendar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2013 10.1 10.7 10.9 10.7 42.4 2014 10.6 11.8 12.0 11.5 45.9 2015 11.2 11.9 12.4 11.8 47.1 2016 11.3 12.5 13.0 13.2 50.0 2017 12.0 13.0 13.5 14.5 53.0 | | YORK WATER DELIVERED FIRST-QUARTER FINANCIAL RESULTS This equity is neutrally ranked (Timeliness: 3). However, the market reacted positively to the aforementioned performance, sending shares to a record high price of just over \$33 a share during the March interim. We look for momentum to persist in the near term, driven by modest year-over-year top- and bottom-line gains. Moreover, domestic water utilities exhibit lower correlations to broader market indices (Beta: 0.70), especially those outside the U.S. thus providing some | | | | Return on Total Cap'l 7.5% Return on Shr. Equity 12.5% Return on Com Equity 12.5% Retained to Com Eq 4.0% All Div'd to Net Prof 68% |
| QUARTERLY EARNINGS PER SHARE Calendar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2013 .17 .18 .19 .21 .75 2014 .16 .22 .23 .28 .89 2015 .20 .22 .28 .27 .97 2016 .19 .26 .28 .27 1.00 2017 .22 .27 .30 .29 1.08 | | YORK WATER DELIVERED FIRST-QUARTER FINANCIAL RESULTS This stock does not stand out for the near-term. In the same breath, investors looking for a buy-and-hold play would be best served waiting on the sidelines for a better entry point. Based on our current 3- to 5-year earnings estimate, YORW shares are trading near the mid-point of our Target Price Range. Too, the dividend yield is below average at recent levels. | | | | Return on Total Cap'l 7.5% Return on Shr. Equity 12.5% Return on Com Equity 12.5% Retained to Com Eq 4.0% All Div'd to Net Prof 68% |
| QUARTERLY DIVIDENDS PAID Calendar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2012 .134 .134 .134 .134 .535 2013 .138 .138 .138 .138 .552 2014 .1431 .1431 .1431 .1431 .574 2015 .1495 .1495 .1495 .1555 .604 2016 .1555 .1555 .1555 | | YORK WATER DELIVERED FIRST-QUARTER FINANCIAL RESULTS Nicholas P. Patrikis July 15, 2016 | | | | Return on Total Cap'l 7.5% Return on Shr. Equity 12.5% Return on Com Equity 12.5% Retained to Com Eq 4.0% All Div'd to Net Prof 68% |

(A) Diluted earnings. Next earnings report due late August. (B) Dividends historically paid in mid-January, April, July, and October. (C) In millions, adjusted for splits.

Company's Financial Strength 6+
 Stock's Price Stability 85
 Price Growth Persistence 55
 Earnings Predictability 95

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Dividend Yields of Eight Company Peer Group

| Symbol | American States Water Co | American Water Works | Aqua America | California Water Service Group | Connecticut Water Service | Middlesex Water | S.J.W. Corp. | York Water |
|-----------------|--------------------------|----------------------|--------------|--------------------------------|---------------------------|-----------------|--------------|------------|
| | AWR | AWK | WTR | CWT | CTWS | MSEX | SJW | YORW |
| Div | 0.97 | 1.57 | 0.80 | 0.71 | 1.20 | 0.84 | 0.85 | 0.66 |
| 52 wk low | 36.80 | 50.16 | 24.45 | 19.55 | 33.15 | 22.12 | 27.54 | 19.69 |
| 52 wk high | 47.24 | 85.24 | 35.83 | 35.62 | 56.62 | 44.11 | 39.48 | 33.40 |
| Spot Price | 43.42 | 81.59 | 34.03 | 33.01 | 51.98 | 41.58 | 39.34 | 31.26 |
| Spot Div Yield | 2.23 | 1.92 | 2.35 | 2.15 | 2.31 | 2.02 | 2.16 | 2.11 |
| 52 wk Div Yield | 2.34 | 2.32 | 2.65 | 2.57 | 2.67 | 2.54 | 2.54 | 2.49 |
| Average | 2.29% | 2.12% | 2.50% | 2.38% | 2.49% | 2.28% | 2.35% | 2.30% |

Source: Barrons Value Line
 July 18, 2016
 July 15, 2016

Five Year Growth Estimate Forecast for Eight Company Barometer Group

| <u>Company</u> | <u>Symbol</u> | Yahoo! Finance | Zacks | Morning star | Value Line | Average |
|--------------------------------|---------------|----------------|-------|--------------|------------|---------|
| | | <u>Source</u> | | | | |
| American States Water Co | AWR | 3.85% | 3.80% | N/A | 6.00% | 4.55% |
| American Water Works | AWK | 7.27% | 7.20% | 6.50% | 8.00% | 7.24% |
| Aqua America | WTR | 6.05% | 6.30% | N/A | 7.00% | 6.45% |
| California Water Service Group | CWT | 9.05% | 9.10% | N/A | 7.50% | 8.55% |
| Connecticut Water Service | CTWS | 6.00% | 6.00% | N/A | 4.00% | 5.33% |
| Middlesex Water | MSEX | 2.70% | N/A | N/A | 5.00% | 3.85% |
| SJW Corp. | SJW | 14.00% | N/A | N/A | 1.50% | 7.75% |
| York Water | YORW | 4.90% | N/A | N/A | 6.00% | 5.45% |
| | | | | | | 6.15% |

Source:
Internet

July 18, 2016

Expected Market Cost Rate of Equity
Using Data for the Barometer Group of Eight Water Companies
5 Year Forecasted Growth Rates

| <u>Time Period</u> | <u>Adjusted Dividend Yield(1)</u> (1) | <u>Growth Rate</u> (2) | <u>Expected Rate of Return</u> (3=1+2) |
|--|--|-------------------------------|---|
| (1) 52 Week Average Ending: July 18, 2016 | 2.51% | 6.15% | 8.66% |
| (2) Spot Price Ending: July 18, 2016 | <u>2.16%</u> | <u>6.15%</u> | <u>8.30%</u> |
| (3) Average: | <u>2.34%</u> | <u>6.15%</u> | <u>8.48%</u> |

Sources: Value Line July 15, 2016
Barrons July 18, 2016

ES-8

| <u>Company</u> | <u>Beta</u> |
|--------------------------------|-------------|
| American States Water Co | 0.70 |
| American Water Works | 0.70 |
| Aqua America | 0.70 |
| California Water Service Group | 0.75 |
| Connecticut Water Service | 0.60 |
| Middlesex Water | 0.70 |
| SJW Corp. | 0.70 |
| York Water | 0.70 |
| Average beta for CAPM | <u>0.69</u> |

Source:
Value Line

| Forecasted Risk Free Rate | |
|---------------------------|-------------|
| Treasury note 10-yr Note | Yield |
| 2Q 2016 | 1.84 |
| 3Q 2016 | 1.80 |
| 4Q 2016 | 2.00 |
| 1Q 2017 | 2.20 |
| 2Q 2017 | 2.30 |
| 3Q 2017 | 2.50 |
| 4Q 2017 | 2.70 |
| 2018-2022 | 3.80 |
| Average | <u>2.39</u> |

Source:
Blue Chip

June 1, 2016

| <u>Historic Risk Free Rate</u> | <u>Yield</u> |
|--------------------------------|--------------|
| 61 years | 5.94 |
| 40 years | 6.58 |
| 20 years | 4.15 |
| 10 years | 3.11 |
| 5 years | 2.32 |
| Average | <u>4.42</u> |

Source:
Federal Reserve Board H.15 Release
<https://www.federalreserve.gov/releases/h15/data.htm>

Required Rate of Return on Market as a Whole Forecasted

| | <u>Dividend Yield</u> | + | <u>Growth Rate</u> | = | <u>Expected Market Return</u> |
|--------------------------------|---------------------------|-----|------------------------|-----|---------------------------------------|
| Value Line Estimate | 2.30% | | 9.73% | (a) | 12.03% |
| S&P 500 | 2.22% | (b) | 8.80% | | 11.02% |
| Average Expected Market Return | | | | = | <u>11.53%</u> |

(a) $((1+0.45)^{.25} - 1)$ Value Line forecast for the 3 to 5 year index appreciation is 45%
 (b) S&P 500 multiplied by half the growth rate

Required Rate of Return on Market as a Whole Historic

| | <u>Expected Market Return</u> |
|---|---------------------------------------|
| 5 yr S&P Composite Index Historical Return | 12.57% |
| 10 yr S&P Composite Index Historical Return | 7.30% |
| 20 yr S&P Composite Index Historical Return | 8.19% |
| 40 yr S&P Composite Index Historical Return | 11.34% |
| 85 yr S&P Composite Index Historical Return | <u>10.02%</u> |
| Average Expected Market Return = | <u><u>9.88%</u></u> |

CAPM with forecasted return

Re Required return on individual equity security
Rf Risk-free rate
Rm Required return on the market as a whole
Be Beta on individual equity security

$$Re = Rf + Be(Rm - Rf)$$

$$Rf = 2.3925$$

$$Rm = 11.5290$$

$$Be = 0.6938$$

$$Re = \underline{\underline{8.73}}$$

Sources: Value Line July 15, 2016
Blue Chip March 1, 2016
ES-10, Page 1 of 2

CAPM with historical return

Re Required return on individual equity security
Rf Risk-free rate
Rm Required return on the market as a whole
Be Beta on individual equity security

$$Re = Rf + Be(Rm - Rf)$$

$$Rf = 4.4384$$

$$Rm = 9.8842$$

$$Be = 0.6938$$

$$Re = \underline{\underline{8.22}}$$

Sources: Value Line July 15, 2016
Blue Chip March 1, 2016
ES-10, Page 2 of 2

**PUC DOCKET NO. 45570
SOAH DOCKET NO. 473-16-2873.WS**

MONARCH'S RESPONSES TO STAFF'S THIRD REQUESTS FOR INFORMATION

STAFF RFI 3-12: Reference Schedule PRM-13. Provide this schedule using the most recent, up-to-date Value Line information.

RESPONSE: Please see Attachment Staff 3-12.

Prepared by: Paul R. Moul
Sponsored by: Paul R. Moul

Attachment
Staff 3-12

Comparable Earnings Approach
Five -Year Average Historical Earned Returns
for Years 2011-2016 and
Projected 3-5 Year Returns

| <u>Company</u> | <u>2011</u> | <u>2012</u> | <u>2013</u> | <u>2014</u> | <u>2015</u> | <u>Average</u> | <u>Projected 2019-21</u> |
|---|-------------|-------------|-------------|-------------|-------------|----------------|------------------------------|
| Altria Group Inc | 92.1% | NMF | NMF | NMF | NMF | 92.1% | NMF |
| Capitol Federal Financial Inc | 3.3% | 4.1% | 4.2% | 5.2% | 5.5% | 4.5% | 6.0% |
| Forrester Research Inc | 10.1% | 8.6% | 9.7% | 13.2% | 15.8% | 11.5% | 16.0% |
| Hershey Company | 76.4% | 71.4% | 52.6% | 61.6% | 71.0% | 66.6% | 42.0% |
| Mercury General Corp | 8.2% | 6.3% | 6.6% | 6.7% | 7.1% | 7.0% | 12.0% |
| Northwest Bancshares Inc | 5.6% | 5.6% | 5.8% | 5.8% | 5.2% | 5.6% | 8.0% |
| Verisk Analytics Inc | | NMF | NMF | NMF | 35.5% | 35.5% | 17.5% |
| Mean | | | | | | <u>31.8%</u> | <u>16.9%</u> |
| Median | | | | | | <u>11.5%</u> | <u>14.0%</u> |
| Average (excluding values <8% and >20%) | | | | | | <u>11.5%</u> | <u>13.4%</u> |

**FUC DOCKET NO. 45570
SOAH DOCKET NO. 473-16-2873.WS**

MONARCH'S RESPONSES TO STAFF'S THIRD REQUESTS FOR INFORMATION

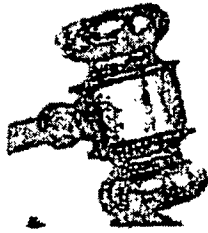
**STAFF RFI 3-15: Reference the Direct Testimony of Paul R. Moul, page 50, lines 1-11.
Provide the following:**

- a. The reasoning for using 20% as the cut off for a high return;
- b. The reasoning for using 8% as the cut off for a low return; and
- c. Any documents in Monarch's or Mr. Moul's possession showing the average state commission-granted return on common equity during any of the last 5 years for any utility and specify the commission and the industry.

RESPONSE:

- a. It is Mr. Moul's opinion that returns above 20% would constitute those associated with highly profitable enterprises or speculative ventures.
- b. The reason that 8% was used to set the low end of the range of returns in the Comparable Earnings approach was to add symmetry to the range.
- c. Please see Attachment Staff 3-15.

Prepared by: Paul R. Moul
Sponsored by: Paul R. Moul



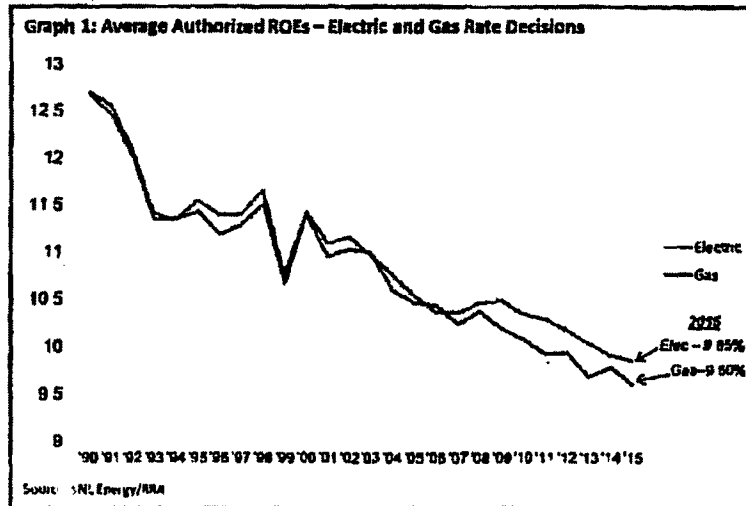
Regulatory Research Associates

REGULATORY FOCUS

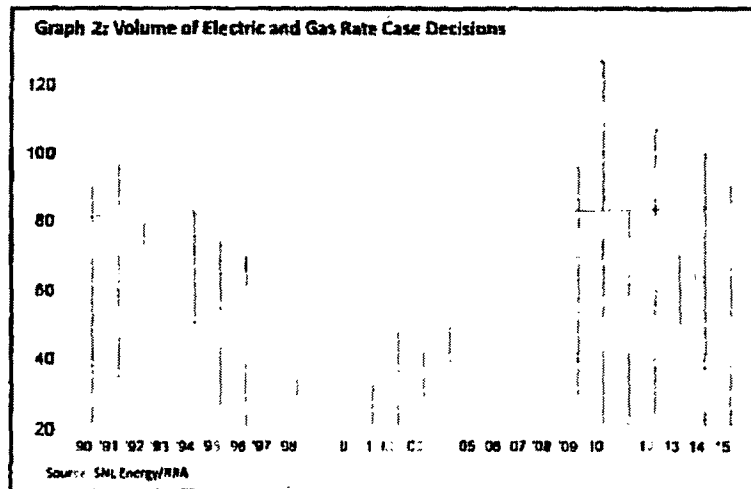
January 14, 2016

MAJOR RATE CASE DECISIONS—CALENDAR 2015

The average return on equity (ROE) authorized electric utilities was 9.85% in 2015, compared to 9.91% in 2014. There were 30 electric ROE determinations in 2015, versus 38 in 2014. We note that the data includes several surcharge/rider generation cases in Virginia that incorporate plant-specific ROE premiums. Virginia statutes authorize the State Corporation Commission to approve ROE premiums of up to 200 basis points for certain generation projects (see the Virginia Commission Profile). Excluding these Virginia surcharge/rider generation cases from the data, the average authorized electric ROE was 9.58% in 2015 compared to 9.76% in 2014. The average ROE authorized gas utilities was 9.6% in 2015 compared to 9.78% in 2014. There were 16 gas cases that included an ROE determination in 2015, versus 26 in 2014. The 2014 averages do not include a Feb. 20, 2014 New York Public Service Commission steam rate decision for Consolidated Edison Co. of New York that adopted a 9.3% ROE.



As shown in Graph 2 below, after reaching a low in the early-2000s, the number of rate case decisions for energy companies has generally increased over the last several years, peaking in 2010 at more than 125 cases.



Since 2010, the number of cases has moderated somewhat but has approximated 90 or more in the last five calendar years. There were 89 electric and gas rate cases resolved in 2015, 99 in both 2014 and 2013, 110 in 2012, and 86 in 2011. The number of rate cases decided in 2015 declined slightly from the level of activity in 2014, but this level remains robust compared to the late-1990s/early-2000s. Increased costs for environmental compliance (including the CO₂ reduction mandates), generation and delivery infrastructure upgrades and expansion, renewable generation mandates, and employee benefits argue for the continuation of an active rate case agenda over the next few years. In addition, if the Federal Reserve continues its policy initiated in December 2015 to gradually raise the federal funds rate, utilities eventually would face higher capital costs and would need to initiate rate cases to reflect the higher capital costs in rates.

We note that this report utilizes the simple mean for the return averages. In addition, the average equity returns indicated in this report reflect the cases decided in the specified time periods and are not necessarily representative of the returns actually earned by utilities industry wide.

As a result of electric industry restructuring, certain states unbundled electric rates and implemented retail competition for generation. Commissions in those states now have jurisdiction only over the revenue requirement and return parameters for delivery operations (which we footnote in our chronology beginning on page 5), thus complicating historical data comparability. We note that since 2008, interest rates declined significantly, and average authorized ROEs have declined modestly. We also note the increased utilization of limited issue rider proceedings that allow utilities to recover certain costs outside of a general rate case and typically incorporate previously-determined return parameters.

The table on page 3 shows the average ROE authorized in major electric and gas rate decisions annually since 1990, and by quarter since 2011, followed by the number of observations in each period. The tables on page 4 indicate the composite electric and gas industry data for all major cases summarized annually since 2001 and by quarter for the past eight quarters. The individual electric and gas cases decided in 2015 are listed on pages 5-9, with the decision date shown first, followed by the company name, the abbreviation for the state issuing the decision, the authorized rate of return (ROR), ROE, and percentage of common equity in the adopted capital structure. Next we indicate the month and year in which the adopted test year ended, whether the commission utilized an average or a year-end rate base, and the amount of the permanent rate change authorized. The dollar amounts represent the permanent rate change ordered at the time decisions were rendered. Fuel adjustment clause rate changes are not reflected in this study.

The table below tracks the average equity return authorized for all electric and gas rate cases combined, by year, for the last 26 years. As the table indicates, since 1990 the authorized ROEs have generally trended downward, reflecting the significant decline in interest rates and capital costs that has occurred over this time frame. The combined average equity returns authorized for electric and gas utilities in each of the years 1990 through 2015, and the number of observations for each year are as follows:

| | | | | | |
|------|--------|------|------|--------|-------|
| 1990 | 12.69% | (75) | 2003 | 10.98% | (47) |
| 1991 | 12.51 | (80) | 2004 | 10.67 | (39) |
| 1992 | 12.06 | (77) | 2005 | 10.50 | (55) |
| 1993 | 11.37 | (77) | 2006 | 10.39 | (42) |
| 1994 | 11.34 | (59) | 2007 | 10.30 | (76) |
| 1995 | 11.51 | (49) | 2008 | 10.42 | (67) |
| 1996 | 11.29 | (42) | 2009 | 10.36 | (68) |
| 1997 | 11.34 | (24) | 2010 | 10.28 | (100) |
| 1998 | 11.59 | (20) | 2011 | 10.21 | (59) |
| 1999 | 10.74 | (29) | 2012 | 10.08 | (93) |
| 2000 | 11.41 | (24) | 2013 | 9.92 | (71) |
| 2001 | 11.05 | (25) | 2014 | 9.86 | (63) |
| 2002 | 11.10 | (43) | 2015 | 9.76 | (46) |

Please note: Historical data provided in this report may not match data provided on RRA's website due to certain differences in presentation.

Dennis Spurduto

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-3-

January 14, 2016

Average Equity Returns Authorized January 1990 - December 2015

| Year | Period | Electric Utilities | | Gas Utilities | |
|------|--------------|--------------------|-----------|---------------|-----------|
| | | ROE % | (# Cases) | ROE % | (# Cases) |
| 1990 | Full Year | 12.70 | (44) | 12.67 | (31) |
| 1991 | Full Year | 12.55 | (45) | 12.46 | (35) |
| 1992 | Full Year | 12.09 | (48) | 12.01 | (29) |
| 1993 | Full Year | 11.41 | (32) | 11.35 | (45) |
| 1994 | Full Year | 11.34 | (31) | 11.35 | (28) |
| 1995 | Full Year | 11.55 | (33) | 11.43 | (16) |
| 1996 | Full Year | 11.39 | (22) | 11.19 | (20) |
| 1997 | Full Year | 11.40 | (11) | 11.29 | (13) |
| 1998 | Full Year | 11.66 | (10) | 11.51 | (10) |
| 1999 | Full Year | 10.77 | (20) | 10.66 | (9) |
| 2000 | Full Year | 11.43 | (12) | 11.39 | (12) |
| 2001 | Full Year | 11.09 | (18) | 10.95 | (7) |
| 2002 | Full Year | 11.16 | (22) | 11.03 | (21) |
| 2003 | Full Year | 10.97 | (22) | 10.99 | (25) |
| 2004 | Full Year | 10.75 | (19) | 10.59 | (20) |
| 2005 | Full Year | 10.54 | (29) | 10.46 | (26) |
| 2006 | Full Year | 10.36 | (26) | 10.43 | (16) |
| 2007 | Full Year | 10.36 | (39) | 10.24 | (37) |
| 2008 | Full Year | 10.46 | (37) | 10.37 | (30) |
| 2009 | Full Year | 10.48 | (39) | 10.19 | (29) |
| 2010 | Full Year | 10.37 | (61) | 10.15 | (39) |
| | 1st Quarter | 10.32 | (13) | 10.10 | (5) |
| | 2nd Quarter | 10.12 | (10) | 9.88 | (5) |
| | 3rd Quarter | 10.36 | (8) | 9.65 | (2) |
| | 4th Quarter | 10.34 | (11) | 9.88 | (4) |
| 2011 | Full Year | 10.29 | (42) | 9.92 | (16) |
| | 1st Quarter | 10.84 | (12) | 9.63 | (5) |
| | 2nd Quarter | 9.92 | (13) | 9.83 | (8) |
| | 3rd Quarter | 9.78 | (8) | 9.75 | (1) |
| | 4th Quarter | 10.10 | (25) | 10.07 | (21) |
| 2012 | Full Year | 10.17 | (58) | 9.94 | (35) |
| | 1st Quarter | 10.28 | (14) | 9.57 | (3) |
| | 2nd Quarter | 9.84 | (7) | 9.47 | (6) |
| | 3rd Quarter | 10.06 | (7) | 9.60 | (1) |
| | 4th Quarter | 9.91 | (21) | 9.83 | (11) |
| 2013 | Full Year | 10.03 | (49) | 9.68 | (21) |
| | 1st Quarter | 10.23 | (8) | 9.54 | (6) |
| | 2nd Quarter | 9.83 | (5) | 9.84 | (8) |
| | 3rd Quarter | 9.87 | (12) | 9.45 | (6) |
| | 4th Quarter | 9.78 | (13) | 10.28 | (6) |
| 2014 | Full Year | 9.91 | (38) | 9.78 | (26) |
| | 1st Quarter | 10.37 | (9) | 9.47 | (3) |
| | 2nd Quarter | 9.73 | (7) | 9.43 | (3) |
| | 3rd Quarter | 9.40 | (2) | 9.75 | (1) |
| | 4th Quarter | 9.62 | (12) | 9.68 | (9) |
| 2015 | Year-to-Date | 9.85 | (30) | 9.60 | (16) |

Electric Utilities—Summary Table

| Period | ROR % (# Cases) | | ROE % (# Cases) | | Eq. as % Cap. Struc. (# Cases) | | Amt. \$ Mil. (# Cases) | |
|--------|-----------------|-----------|-----------------|------------|--------------------------------|--|------------------------|--|
| | | | | | | | | |
| 2001 | Full Year | 8.93 (15) | 11.09 (18) | 47.20 (13) | 14.2 (21) | | | |
| 2002 | Full Year | 8.72 (20) | 11.16 (22) | 46.27 (19) | -475.4 (24) | | | |
| 2003 | Full Year | 8.86 (20) | 10.97 (22) | 49.41 (19) | 313.8 (12) | | | |
| 2004 | Full Year | 8.44 (18) | 10.75 (19) | 46.84 (17) | 1,091.5 (30) | | | |
| 2005 | Full Year | 8.30 (26) | 10.54 (29) | 46.73 (27) | 1,373.7 (36) | | | |
| 2006 | Full Year | 8.24 (24) | 10.36 (26) | 48.67 (23) | 1,465.0 (42) | | | |
| 2007 | Full Year | 8.22 (38) | 10.36 (39) | 48.01 (37) | 1,401.9 (46) | | | |
| 2008 | Full Year | 8.25 (35) | 10.46 (37) | 48.41 (33) | 2,899.4 (42) | | | |
| 2009 | Full Year | 8.23 (38) | 10.48 (39) | 48.61 (37) | 4,192.3 (58) | | | |
| 2010 | Full Year | 7.99 (39) | 10.37 (61) | 48.45 (54) | 5,567.7 (77) | | | |
| 2011 | Full Year | 8.00 (43) | 10.29 (42) | 48.26 (42) | 2,853.5 (55) | | | |
| 2012 | Full Year | 7.95 (51) | 10.17 (58) | 50.55 (52) | 3,131.5 (69) | | | |
| 2013 | Full Year | 7.66 (45) | 10.03 (49) | 49.25 (43) | 3,326.6 (61) | | | |
| | 1st Quarter | 7.71 (6) | 10.23 (8) | 51.08 (8) | 251.4 (9) | | | |
| | 2nd Quarter | 7.77 (2) | 9.83 (5) | 49.12 (4) | 92.5 (6) | | | |
| | 3rd Quarter | 7.55 (11) | 9.87 (12) | 50.12 (11) | 651.5 (16) | | | |
| | 4th Quarter | 7.56 (13) | 9.78 (13) | 50.29 (12) | 1,058.4 (20) | | | |
| 2014 | Full Year | 7.80 (32) | 9.91 (38) | 50.28 (35) | 2,053.8 (51) | | | |
| | 1st Quarter | 7.74 (10) | 10.37 (9) | 51.91 (9) | 203.7 (11) | | | |
| | 2nd Quarter | 7.04 (9) | 9.73 (7) | 47.83 (6) | 819.4 (16) | | | |
| | 3rd Quarter | 7.85 (3) | 9.40 (2) | 51.08 (3) | 379.6 (5) | | | |
| | 4th Quarter | 7.22 (13) | 9.62 (12) | 48.24 (12) | 484.3 (19) | | | |
| 2015 | Year-To-Date | 7.38 (35) | 9.85 (30) | 49.54 (30) | 1,887.0 (51) | | | |

Gas Utilities—Summary Table

| Period | ROR % (# Cases) | | ROE % (# Cases) | | Eq. as % Cap. Struc. (# Cases) | | Amt. \$ Mil. (# Cases) | |
|--------|-----------------|-----------|-----------------|------------|--------------------------------|--|------------------------|--|
| | | | | | | | | |
| 2001 | Full Year | 8.51 (6) | 10.95 (7) | 43.96 (5) | 114.0 (11) | | | |
| 2002 | Full Year | 8.80 (20) | 11.03 (21) | 48.29 (18) | 303.6 (26) | | | |
| 2003 | Full Year | 8.75 (22) | 10.99 (25) | 49.93 (22) | 260.1 (30) | | | |
| 2004 | Full Year | 8.34 (21) | 10.59 (20) | 45.90 (20) | 303.5 (31) | | | |
| 2005 | Full Year | 8.25 (29) | 10.46 (26) | 48.66 (24) | 458.4 (34) | | | |
| 2006 | Full Year | 8.51 (16) | 10.43 (16) | 47.43 (16) | 444.0 (25) | | | |
| 2007 | Full Year | 8.12 (32) | 10.24 (37) | 48.37 (30) | 813.4 (48) | | | |
| 2008 | Full Year | 8.48 (30) | 10.37 (30) | 50.47 (30) | 884.8 (41) | | | |
| 2009 | Full Year | 8.15 (28) | 10.19 (29) | 48.72 (28) | 475.0 (37) | | | |
| 2010 | Full Year | 7.95 (38) | 10.15 (39) | 48.56 (38) | 816.7 (50) | | | |
| 2011 | Full Year | 8.09 (18) | 9.92 (16) | 52.49 (14) | 436.3 (31) | | | |
| 2012 | Full Year | 7.98 (30) | 9.94 (35) | 51.13 (32) | 263.9 (41) | | | |
| 2013 | Full Year | 7.39 (20) | 9.68 (21) | 50.60 (20) | 494.9 (38) | | | |
| | 1st Quarter | 7.67 (6) | 9.54 (6) | 51.14 (6) | 22.2 (9) | | | |
| | 2nd Quarter | 7.74 (7) | 9.84 (8) | 52.12 (8) | 62.2 (12) | | | |
| | 3rd Quarter | 7.24 (7) | 9.45 (6) | 48.68 (7) | 329.1 (11) | | | |
| | 4th Quarter | 7.97 (7) | 10.28 (6) | 52.35 (7) | 115.5 (16) | | | |
| 2014 | Full Year | 7.65 (27) | 9.78 (28) | 51.11 (28) | 529.0 (48) | | | |
| | 1st Quarter | 6.41 (2) | 9.47 (3) | 50.41 (2) | 168.7 (9) | | | |
| | 2nd Quarter | 7.29 (3) | 9.43 (3) | 50.71 (3) | 34.9 (8) | | | |
| | 3rd Quarter | 7.35 (1) | 9.75 (1) | 42.01 (1) | 103.9 (8) | | | |
| | 4th Quarter | 7.54 (10) | 9.68 (9) | 50.40 (10) | 180.1 (13) | | | |
| 2015 | Year-To-Date | 7.34 (16) | 9.60 (16) | 49.93 (16) | 487.6 (38) | | | |

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January 14, 2016

ELECTRIC UTILITY DECISIONS

| Date | Company (State) | ROR % | ROE % | Common Eq. as % Cap. Str. | Test Year & Rate Base | Amt. \$ Mil. |
|-------------|---|--------------------|--------------------|---------------------------------|-----------------------------|---------------------|
| 1/23/15 | PacifiCorp (WY) | 7.41 | 9.50 | 51.43 | 6/15-A | 20.2 |
| 2/4/15 | Monongahela Power/Potomac Ed. (WV) | | -- | -- | 12/13 | 124.3 (B,1) |
| 2/18/15 | Virginia Electric and Power (VA) | 7.88 | 11.00 | 52.03 | 3/16-A | 36.9 (LIR,B,2) |
| 2/24/15 | Public Service Co. of Colorado (CO) | 7.55 | 9.83 | 56.00 | 12/13-YE | -39.4 (I,B) |
| 3/2/15 | Black Hills Power (SD) | 7.76 | -- | | 9/13-A | 6.9 (I,B) |
| 3/12/15 | Virginia Electric and Power (VA) | 8.40 | 12.00 | 52.03 | 3/16-A | -6.4 (LIR,B,3) |
| 3/12/15 | Virginia Electric and Power (VA) | 7.88 | 11.00 | 52.03 | 3/16-A | 11.4 (LIR,B,4) |
| 3/12/15 | Virginia Electric and Power (VA) | 7.88 | 11.00 | 52.03 | 3/16-A | 5.8 (LIR,B,5) |
| 3/18/15 | Jersey Central Power & Light (NJ) | 8.01 | 9.75 | 50.00 (Hy) | 12/11-YE | -115.0 (D) |
| 3/25/15 | PacifiCorp (WA) | 7.30 | 9.50 | 49.10 (Hy) | 12/13-A | 9.6 |
| 3/26/15 | Northern States Power-Minnesota (MN) | 7.37 | 9.72 | 52.50 | 12/14-A | 149.4 (R,I,Z) |
| 2015 | 1ST QUARTER: AVERAGES/TOTAL OBSERVATIONS | 7.74 10 | 10.37 9 | 51.91 9 | | 203.7 11 |
| 4/9/15 | Metropolitan Edison (PA) | -- | -- | -- | 4/16 | 105.7 (D,B) |
| 4/9/15 | Pennsylvania Electric (PA) | -- | -- | -- | 4/16 | 107.8 (D,B) |
| 4/9/15 | Pennsylvania Power (PA) | -- | -- | -- | 4/16 | 25.5 (D,B) |
| 4/9/15 | West Penn Power (PA) | -- | -- | -- | 4/16 | 95.2 (D,B) |
| 4/14/15 | Public Service Oklahoma (OK) | 7.63 | -- | -- | 7/13-YE | -4.8 (I,B) |
| 4/21/15 | Virginia Electric & Power (VA) | 7.88 | 11.00 | 52.03 | 8/16-A | 60.5 (LIR,Z,B,6) |
| 4/23/15 | Wisconsin Public Service (WI) | 6.01 | 10.20 | | 12/15 | 4.0 (Z,B) |
| 4/29/15 | Union Electric (MO) | 7.60 | 9.53 | 51.76 | 3/14-YE | 121.5 |
| 5/1/15 | Cross Texas Transmission (TX) | 6.11 | 9.60 | 40.00 | 9/14-YE | 30.9 (B,D,7) |
| 5/26/15 | Appalachian Pow./Wheeling Pow. (WV) | 7.38 | 9.75 | 47.16 | 12/13-A | 123.5 |
| 6/15/15 | Northern States Power-Minnesota (SD) | 7.22 | -- | | 12/13-A | 15.2 (I,B) |
| 6/17/15 | Central Hudson Gas & Electric (NY) | 6.62 | 9.00 | 48.00 | 6/16-A | 15.3 (D,B,8) |
| 6/17/15 | Consolidated Edison of New York (NY) | 6.91 | 9.00 | 48.00 | 12/16-A | -- (D,B,9) |
| 6/22/15 | Kentucky Power (KY) | -- | | | 9/14 | -23.0 (B) |
| 6/24/15 | Empire District Electric (MO) | -- | | -- | 9/14 | 17.1 (B) |
| 6/30/15 | Kentucky Utilities (KY) | -- | | | 6/16 | 125.0 (B) |
| 6/30/15 | Louisville Gas & Electric (KY) | -- | | | 6/16 | 0.0 (B) |
| 2015 | 2ND QUARTER: AVERAGES/TOTAL OBSERVATIONS | 7.04 9 | 9.73 7 | 47.83 6 | | 819.4 16 |
| 7/7/15 | Mississippi Power (MS) | -- | | | | 0.0 (LIR,10) |
| 7/20/15 | Entergy Texas (TX) | -- | | | | (11) |
| 9/2/15 | Kansas City Power & Light (MO) | 7.53 | 9.50 | 50.09 | 3/14-YE | 89.7 (12) |
| 9/10/15 | Kansas City Power & Light (KS) | 7.44 | 9.30 | 50.48 | 6/14-YE | 40.1 (12) |
| 9/23/15 | South Carolina Electric & Gas (SC) | 8.57 | | 52.66 | 6/15-YE | 64.5 (LIR,13) |
| 9/24/15 | Westar Energy (KS) | | | | 9/14 | 185.3 (B) |
| 2015 | 3RD QUARTER: AVERAGES/TOTAL OBSERVATIONS | 7.85 3 | 9.40 2 | 51.08 3 | | 379.6 5 |

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January 14, 2016

ELECTRIC UTILITY DECISIONS (continued)

| Date | Company (State) | ROR % | ROE % | Common Eq. as % Cap. Str. | Test Year & Rate Base | Amt. \$ Mil. |
|-------------|--|--------------------|--------------------|--|--|-------------------------|
| 10/15/15 | Orange & Rockland Utilities (NY) | 7.10 | 9.00 | 48.00 | 10/16-A | 9.3 (B,D,14) |
| 10/29/15 | NorthWestern Corp. (SD) | 7.24 | | | 9/14-A | 40.7 (1,B) |
| 11/5/15 | Southern California Edison (CA) | -- | -- | -- | 12/15-A | -450.4 (Z) |
| 11/19/15 | Consumers Energy (MI) | 6.18 | 10.30 | 41.50 | 5/16-A | 126.4 (1,Z) |
| 11/19/15 | PPL Electric Utilities (PA) | -- | | -- | 12/16 | 124.0 (D,B) |
| 11/19/15 | Wisconsin Public Service (WI) | 8.24 | 10.00 | 50.47 | 12/16-A | -7.9 |
| 11/23/15 | Virginia Electric and Power (VA) | | | | 12/14 | 0.0 (15) |
| 12/3/15 | Mississippi Power (MS) | 6.68 | 9.23 | 49.73 | 5/16-A | 126.1 (1,R,1,B) |
| 12/3/15 | Northern States Power-Wisconsin (WI) | 7.81 | 10.00 | 52.49 | 12/16-A | 7.6 |
| 12/9/15 | Ameren Illinois (IL) | 7.65 | 9.14 | 50.00 | 12/14-YE | 95.1 (D) |
| 12/9/15 | Commonwealth Edison (IL) | 7.05 | 9.14 | 46.25 | 12/14-YE | -65.5 (D) |
| 12/11/15 | DTE Electric (MI) | 5.70 | 10.30 | 38.03 | 6/16-A | 238.2 (1) |
| 12/15/15 | Portland General Electric (OR) | 7.51 | 9.60 | 50.00 | 12/16-A | 70.4 (B,16) |
| 12/17/15 | PECO Energy (PA) | -- | -- | -- | 12/16 | 127.0 (D,B) |
| 12/17/15 | Southwestern Public Service (TX) | 7.88 | 9.70 | 51.00 (Hy) | 6/14-YE | -4.0 |
| 12/18/15 | Avista Corp. (ID) | 7.42 | 9.50 | 50.00 | 12/14-A | 1.7 (B) |
| 12/22/15 | Georgia Power (GA) | | | -- | 12/16 | 19.1 (1,R,17) |
| 12/23/15 | PacifiCorp (ID) | -- | | -- | -- | 10.2 (1,R,18) |
| 12/30/15 | PacifiCorp (WY) | 7.40 | 9.50 | 51.44 | 12/15-A | 16.3 (R) |
| 2015 | 4TH QUARTER: AVERAGES/TOTAL OBSERVATIONS | 7.22 13 | 9.62 12 | 48.24 12 | | 484.3 19 |
| 2015 | YEAR-TO-DATE: AVERAGES/TOTAL OBSERVATIONS | 7.38 35 | 9.85 30 | 49.54 30 | | 1,887.0 51 |

GAS UTILITY DECISIONS

| <u>Date</u> | <u>Company (State)</u> | <u>ROR %</u> | <u>ROE %</u> | <u>Common Eq. as % Cap. Str.</u> | <u>Test Year & Rate Base</u> | <u>Amt. \$ Mil.</u> |
|-------------|---|------------------|------------------|----------------------------------|----------------------------------|---------------------|
| 1/13/15 | Consumers Energy (MI) | -- | 10.30 | -- | 12/15 | 45.0 (I,B) |
| 1/14/15 | Indiana Gas (IN) | -- | | | 6/14-YE | 5.7 (LIR,19) |
| 1/14/15 | Southern Indiana Gas & Electric (IN) | -- | | | 6/14-YE | 1.5 (LIR,19) |
| 1/21/15 | North Shore Gas (IL) | 6.26 | 9.05 | 50.48 | 12/15-A | 3.5 (R) |
| 1/21/15 | Peoples Gas Light & Coke (IL) | 6.56 | 9.05 | 50.33 | 12/15-A | 71.1 (R) |
| 1/26/15 | Piedmont Natural Gas (NC) | -- | | | 10/14 | 26.6 (LIR,20) |
| 1/27/15 | Atmos Energy (KS) | -- | | | 9/14-YE | 0.3 (LIR,21) |
| 1/27/15 | Northern States Power-Minnesota (MN) | -- | | -- | 12/15 | 14.7 (LIR,22) |
| 1/28/15 | Northern Indiana Public Service (IN) | -- | | -- | 6/14-YE | 0.3 (LIR,23) |
| 2015 | 1ST QUARTER: AVERAGES/TOTAL OBSERVATIONS | 6.41 1 | 9.47 3 | 50.41 2 | | 168.7 9 |
| 4/7/15 | Delta Natural Gas (KY) | -- | -- | -- | 12/14-YE | 1.3 (LIR,24) |
| 4/9/15 | Avista Corporation (OR) | 7.52 | 9.50 | 51.00 | 12/15-A | 5.3 (B) |
| 5/11/15 | Atmos Energy (TN) | 7.73 | 9.80 | 53.13 | 5/16-A | 0.7 (B) |
| 5/13/15 | Missouri Gas Energy (MO) | -- | -- | -- | 2/15-YE | 2.8 (LIR,25) |
| 5/20/15 | Laclede Gas (MO) | -- | | | 2/15-YE | 5.5 (LIR,25) |
| 6/17/15 | Central Hudson Gas & Electric (NY) | 6.62 | 9.00 | 48.00 | 6/16-A | 1.8 (B,26) |
| 6/26/15 | Liberty Utilities EnergyNorth (NH) | -- | -- | -- | 3/14 | 10.5 (I,B,27) |
| 6/30/15 | Louisville Gas & Electric (KY) | -- | | | 6/16 | 7.0 (B) |
| 2015 | 2ND QUARTER: AVERAGES/TOTAL OBSERVATIONS | 7.29 3 | 9.43 3 | 50.71 3 | | 34.9 8 |
| 7/22/15 | Indiana Gas (IN) | -- | -- | -- | 12/14-YE | 5.5 (LIR,19) |
| 7/22/15 | Southern Indiana Gas & Electric (IN) | -- | | | 12/14-YE | 3.2 (LIR,19) |
| 7/28/15 | Atmos Energy (TX) | -- | | | 12/14-YE | 52.6 (I,B,28) |
| 8/21/15 | Columbia Gas of Virginia (VA) | 7.35 | 9.75 | 42.01 | 12/13 | 25.2 (I,B) |
| 8/25/15 | CenterPoint Energy Resources (TX) | -- | | | 9/14 | 4.9 (B) |
| 9/16/15 | Liberty Utilities (Midstates N.G.) (MO) | -- | | | 5/15 | 0.3 (LIR,29) |
| 9/23/15 | Atmos Energy (KY) | -- | | | 9/16-YE | 3.8 (LIR,24) |
| 9/29/15 | ENSTAR Natural Gas (AK) | -- | | | 12/14 | 8.4 (I,B,2) |
| 2015 | 3RD QUARTER: AVERAGES/TOTAL OBSERVATIONS | 7.35 1 | 9.75 1 | 42.01 1 | | 103.9 8 |

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January 14, 2016

GAS UTILITY DECISIONS (continued)

| Date | Company (State) | ROR % | ROE % | Common Eq. as % Cap. Str. | Test Year & Rate Base | Amt. \$ MIL. |
|-------------|--------------------------------------|-------------|-------------|---------------------------------|-----------------------------|-----------------|
| 10/7/15 | Bay State Gas (MA) | 7.75 | 9.55 | 53.54 | 12/14-YE | 32.8 (B,30) |
| 10/13/15 | Mountaineer Gas (WV) | 7.96 (E) | 9.75 | 45.50 (E) | 9/14-A | 7.7 (B,31) |
| 10/15/15 | Orange and Rockland Utilities (NY) | 7.10 | 9.00 | 48.00 | 10/16-A | 27.5 (B,32) |
| 10/30/15 | NSTAR Gas (MA) | 7.72 | 9.80 | 52.10 | 12/13-YE | 15.8 |
| 11/4/15 | CenterPoint Energy Resources (OK) | 8.64 | | 49.86 | 12/14-YE | 0.9 (33) |
| 11/5/15 | Kansas Gas Service (KS) | | -- | -- | 6/15-YE | 2.5 (21) |
| 11/19/15 | Wisconsin Public Service (WI) | 7.80 | 10.00 | 50.47 | 12/16-A | -6.2 |
| 12/1/15 | Piedmont Natural Gas (NC) | -- | -- | | 9/15 | 16.5 (LIR,20) |
| 12/3/15 | Columbia Gas of Pennsylvania (PA) | | -- | -- | 12/16 | 28.0 (B) |
| 12/3/15 | Northern States Power-Wisconsin (WI) | 7.81 | 10.00 | 52.49 | 12/16-A | 4.2 |
| 12/9/15 | Ameren Illinois (IL) | 7.65 (B) | 9.60 (B) | 50.00 (B) | 12/16-A | 44.5 |
| 12/11/15 | Michigan Gas Utilities (MI) | 5.51 | 9.90 | 52.00 | 12/16 | 3.4 (B) |
| 12/18/15 | Avista Corp. (ID) | 7.42 | 9.50 | 50.00 | 12/14-A | 2.5 (B) |
| 2015 | 4TH QUARTER: AVERAGES/TOTAL | 7.54 | 9.68 | 50.40 | | 180.1 |
| | OBSERVATIONS | 10 | 9 | 10 | | 13 |
| 2015 | YEAR-TO-DATE: AVERAGES/TOTAL | 7.34 | 9.60 | 49.93 | | 487.6 |
| | OBSERVATIONS | 18 | 16 | 16 | | 38 |

FOOTNOTES

A- Average

B- Order followed stipulation or settlement by the parties. Decision particulars not necessarily precedent-setting or specifically adopted by the regulatory body.

COC- Case involved only the determination of cost-of-capital parameters.

CWIP- Construction work in progress

D- Applies to electric delivery only

DC- Date certain rate base valuation

E- Estimated

F- Return on fair value rate base

Hy- Hypothetical capital structure utilized

I- Interim rates implemented prior to the issuance of final order, normally under bond and subject to refund.

LIR Limited-issue rider proceeding

M- "Make-whole" rate change based on return on equity or overall return authorized in previous case.

R- Revised

Te- Temporary rates implemented prior to the issuance of final order

U- Double leverage capital structure utilized.

W- Case withdrawn

YE- Year-end

Z- Rate change implemented in multiple steps.

Capital structure includes cost free items or tax credit balances at the overall rate of return.

(1) Consolidated rate proceeding for Monongahela Power and Potomac Edison, whose rate schedules were combined.

(2) Increase authorized through a surcharge, Rider W, which reflects in rates the investment in the Warren County Power Station.

(3) This proceeding determines the revenue requirement for Rider B, which is the mechanism through which the company recovers costs associated with its plan to convert the Altavista, Hopewell, and Southampton Power Stations to burn biomass fuels.

(4) Represents rate increase associated with the company's Rider R proceeding, which is the mechanism through which the company recovers the investment in the Bear Garden generating facility.

(5) This proceeding determines the revenue requirement for Rider S, which recognizes in rates the company's investment in the Virginia City Hybrid Energy Center.

FOOTNOTES (continued)

- (6) This proceeding determines the revenue requirement for Rider BW, which recognizes in rates the company's investment in the Brunswick Generating Station. A \$10.1 million increase became effective Sept. 1, 2015, and an incremental \$50.5 million is to be implemented May 1, 2016.
- (7) Indicated rate increase is for base rates and reflects the transfer to base rates of \$30.1 million that was being collected through the company's interim transmission cost of service adjustment mechanism. The net overall rate increase is \$0.8 million.
- (8) The approved final Joint Proposal provides for the company to implement a \$15.3 million electric rate increase, effective July 1, 2015, based on a 9% return on equity (48% of capital) and a 6.62% overall return, a \$16 million increase on July 1, 2016, based on the same return parameters, and a \$14.1 million increase on July 1, 2017, that reflects a 9% return on equity (48% of capital) and a 6.58% overall return.
- (9) Joint Proposal adopted that extends the company's existing rate plan by one year through 12/31/16. Rates were not changed.
- (10) On 7/7/15, the PSC issued an order on remand directing the company to cease collecting CWIP-related rate increases effective 7/20/15, and to submit a refund plan. This PSC action is the result of a 2/12/15 Mississippi Supreme Court decision that reversed and remanded the PSC's 3/5/13 decision in the proceeding that had authorized the company a two-step \$156 million rate increase related to the Kemper generation plant.
- (11) Case dismissed at company request.
- (12) Approved settlements did not address rate-of-return issues.
- (13) Case involves company's request for a cash return on incremental V.C. Summer Units 2 and 3 CWIP and incorporates the 11% ROE that was initially authorized in 2009 for use in Summer CWIP-related proceedings.
- (14) The approved Joint settlement provides for a \$9.3 million electric rate increase on 11/1/15, and an \$8.8 million increase on 11/1/16. The approved rate changes incorporate a 9% return on equity (48% of capital) and overall returns of 7.1% (in rate year one) and 7.06% (in rate year two).
- (15) Proceeding reviewed earnings levels for the 2013-2014 biennium versus the 10% ROE authorized in the previous review. By law, no prospective rate change was permissible in this case. The Commission calculated the company had earned a 10.89% ROE, and ordered \$19.7 million of refunds.
- (16) A \$14.7 million base rate reduction became effective 1/1/16. An \$85.1 million base rate increase is to be implemented in mid-2016, provided the Carty generation station achieves commercial operation by 7/31/16.
- (17) Case represents recovery of a cash return on 2016 CWIP and a preliminary true-up of the cash return on 2015 CWIP for Plant Vogtle Units 3 and 4 under the company's legislatively-enabled nuclear construction cost recovery tariff.
- (18) Limited-issue proceeding to reflect updated net power costs.
- (19) Proceeding to establish the rates to be charged to customers under the company's "compliance and system improvement adjustment" mechanism.
- (20) Case involves the company's Integrity Management Rider.
- (21) Case involves the company's gas system reliability surcharge rider.
- (22) Case represents the company's first filing under its Gas Utility Infrastructure Cost Rider.
- (23) This is the initial proceeding to establish the rates to be charged to customers under the company's transmission, distribution, and storage system improvement charge rate adjustment mechanism.
- (24) Case represents an annual update to the company's pipe replacement program rider.
- (25) Case represents an update to the company's semi-annual infrastructure system replacement surcharge rider.
- (26) The approved final Joint Proposal provides for the company to implement a \$1.8 million gas rate increase, effective July 1, 2015, based on a 9% return on equity (48% of capital) and a 6.62% overall return, a \$4.6 million increase on July 1, 2016, based on the same return parameters, and a \$4.4 million increase on July 1, 2017, that reflects a 9% return on equity (48% of capital) and a 6.58% overall return.
- (27) Indicated \$10.5 million rate increase excludes a \$1.9 million "step" increase for capital additions that was effective July 1, 2015.
- (28) Rate change ratified by cities in Atmos' Mid-Tex Division.
- (29) Case represents annual update to company's infrastructure system replacement surcharge rider.
- (30) Two step rate increase authorized. A \$32.8 million first-step increase was implemented on 11/1/15, and an incremental second-step incremental increase of up to \$3.6 million to become effective on 11/1/16.
- (31) Settlement did not specify the equity ratio or ROR; in a demonstration filing, the PSC Staff calculated a 45.5% equity ratio and 7.96% ROR.
- (32) The approved settlement provides for a three-year gas rate plan under which gas rates are to increase \$27.5 million effective 11/1/15, \$4.4 million effective Nov. 1, 2016, and \$6.7 million effective Nov. 1, 2017. The approved rate changes incorporate a 9% return on equity (48% of capital) and overall returns of 7.1% (in rate year one) and 7.06% (in rate years two and three).
- (33) Case involves the company's performance based ratemaking mechanism

Dennis Spurduto