AQUA EXHIBIT 6.0

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of	)	
Aqua Ohio, Inc. to Increase Its Rates and	)	Case No. 16-0907-WW-AIR
Charges for Its Waterworks Service.	)	

DIRECT TESTIMONY
OF
DYLAN W. D'ASCENDIS, CRRA, CVA
ON BEHALF OF
AQUA OHIO, INC.

___ Management policies, practice and organization

___ Operating income

___ Rate base

___ Allocations

_X_ Rate of return

___ Rates and tariffs

___ Other

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Direct Testimony of
Dylan W. D'Ascendis

I. INTRODUCTION AND PURPOSE

Q1. Please state your name, occupation and business address.

A. My name is Dylan W. D'Ascendis. I am a Principal at Sussex Economic Advisors, LLC. My business address is 1900 West Park Drive, Suite 250, Westborough, MA 01581. My mailing address is 3000 Atrium Way, Suite 241, Mount Laurel, NJ 08054.

Q2. Please summarize your professional experience and educational background.

A. I offer expert testimony on behalf of investor-owned utilities on rate of return issues and class cost of service issues. I also assist in the preparation of rate filings, including but not limited to revenue requirements and original cost and lead/lag studies. I am a graduate of the University of Pennsylvania, where I received a Bachelor of Arts degree in Economic History. I also hold a Master of Business Administration from Rutgers University with a concentration in Finance and International Business, which was conferred with high honors. I am a Certified Rate of Return Analyst ("CRRA") and a Certified Valuation Analyst ("CVA"). My full professional qualifications are provided in Appendix A.

Q3. What is the purpose of your testimony?

A. The purpose is to provide testimony on behalf of Aqua Ohio, Inc. ("Aqua OH" or the "Company") relative to the appropriate capital structure and corresponding cost rates which it should be afforded the opportunity to earn on its jurisdictional rate base.

Q4. What is your recommended cost of capital for Aqua OH?

A. I recommend that the Public Utilities Commission of Ohio ("PUC OH" or the "Commission") authorize the Company the opportunity to earn an overall rate of

return within the range of 7.66% and 7.87% based on the actual capital structure of Aqua OH as of March 31, 2016. The ratemaking capital structure consists of 48.05% long-term debt at an embedded debt cost rate of 4.88%, and 51.95% common equity at my recommended range of common equity cost rates between 10.25% and 10.65%. The overall rate of return is summarized on page 1 of Schedule DWD-1 and in Table 1 below:

Table 1: Summary of Overall Rate of Return

Type of Capital	Ratios	Cost Rate	Weighted Cost Rate
Long-Term Debt	48.05%	4.88%	2.34%
Common Equity	51.95%	10.25% - 10.65%	5.32% - 5.53%
Total	100.00%		7.66% - 7.87%

Q5. Have you prepared an exhibit in support of your recommendation?

A. Yes. It is designated as Exhibit No. 1 and consists of Schedules DWD-1 through DWD-9.

II. SUMMARY

Q6. Please summarize your recommended range of common equity cost rates.

A. My recommended range of common equity cost rates between 10.25% and 10.65% is summarized on page 2 of Schedule DWD-1. I have assessed the market-based common equity cost rates of companies of relatively similar, but not necessarily identical, risk to Aqua OH. Using companies of relatively comparable risk as proxies is consistent with the principles of fair rate of return established in the *Hope*[1] and *Bluefield*[2] cases. No proxy group can be identical in risk to any single company, so there must be an evaluation of relative risk between the company and the proxy

1 *Federal Power Commission v. Hope Natural Gas Co*., 320 U.S. 591 (1944).
2 *Bluefield Water Works Improvement Co. v. Public Serv. Comm'n*, 262 U.S. 679 (1922).

group to see if it is appropriate to make adjustments to the proxy group's indicated rate of return.

My recommendation results from the application of several cost of common equity models, specifically the Discounted Cash Flow ("DCF") model, the Risk Premium Model ("RPM"), and the Capital Asset Pricing Model ("CAPM") to the market data of a proxy group of eight water companies ("Utility Proxy Group") whose selection will be discussed below. In addition, I also applied the DCF, RPM, and CAPM to a proxy group of domestic, non-price regulated companies comparable in total risk to the eight water companies ("Non-Price Regulated Proxy Group").

The results derived from each are as follows:

Table 2: Summary of Common Equity Cost Rate

	Utility Proxy Group
Discounted Cash Flow Model	8.23%
Risk Premium Model	10.81
Capital Asset Pricing Model	10.13
Cost of Equity Models Applied to Comparable Risk, Non-Price Regulated Companies	11.74
Indicated Common Equity Cost Rate Before Adjustments	10.25%
Size Adjustment	0.25
Flotation Cost Adjustment	0.13
	Indicated Range of Common Equity
Cost Rates after Adjustments	10.25%-10.63%
	Recommended Range of Common Equity
Cost Rate after Adjustment	**10.25%-10.65%**

After analyzing the cost rates based on these models, I conclude that a common equity cost rate of 10.25% for the Company would be indicated before any adjustment resulting from a relative risk analysis between Aqua OH and the Utility Proxy Group. The indicated 10.25% is the approximate average of the four Cost of Equity models shown above. I then adjusted the indicated common equity cost rate upward by 0.25% to reflect Aqua OH's smaller relative size as compared with the members of the Utility Proxy Group, resulting in a size-adjusted indicated common equity cost rate of 10.50%. I also adjusted the indicated common equity cost rate upward by an additional 0.13% to reflect flotation costs. These adjustments result in a size risk- and flotation cost-adjusted ROE of 10.63%. Based on these results, I recommend the Commission consider a range of common equity cost rates between 10.25% and 10.65% for use in setting rates for the Company.

III. GENERAL PRINCIPLES

Q7. What general principles have you considered in arriving at your recommended common equity cost rate range of 10.25% to 10.65%?

A. In unregulated industries, the competition of the marketplace is the principal determinant of the price of products or services. For regulated public utilities, regulation must act as a substitute for marketplace competition. Assuring that the utility can fulfill its obligations to the public, while providing safe and reliable service at all times, requires a level of earnings sufficient to maintain the integrity of presently invested capital. Sufficient earnings also permits the attraction of needed new capital at a reasonable cost, for which the utility must compete with other firms of comparable risk, consistent with the fair rate of return standards established by the U.S. Supreme Court in the previously cited *Hope* and *Bluefield* cases. Consequently, marketplace data must be relied on in assessing a common equity cost rate

appropriate for ratemaking purposes. Just as the use of the market data for the proxy group adds reliability to the informed expert judgment used in arriving at a recommended common equity cost rate, the use of multiple generally accepted common equity cost rate models also adds reliability and accuracy when arriving at a recommended common equity cost rate.

IV. BUSINESS RISK

Q8. Please define business risk and explain why it is important to the determination of a fair rate of return.

A. Business risk is the riskiness of a company's common stock without the use of debt and/or preferred capital. Examples of such general business risks faced by all utilities (i.e., electric, natural gas distribution, and water) include size, the quality of management, the regulatory environment in which they operate, customer mix and concentration of customers, service territory growth, and capital intensity. All of which have a direct bearing on earnings.

Consistent with the basic financial principle of risk and return, business risk is important to the determination of a fair rate of return because the higher the level of risk, the higher the rate of return investors demand.

Q9. What business risks face the water and wastewater industries in general?

A. Increasingly stringent standards plus aging infrastructure necessitate additional capital investment in the distribution and treatment of water, exacerbating the pressure on free cash flows arising from increased capital expenditures for infrastructure repair and replacement. The significant amount of capital investment and hence, high capital intensity is a major risk factor for the water and wastewater utility industry.

Value Line Investment Survey[3] ("*Value Line*") observes the following about the water utility industry:

> Almost every utility in this issue is spending heavily to replace and refurbished antiquated infrastructure. In the recent past, water companies and state regulators realized that it was not prudent to defer much-needed repairs in an attempt to keep customer's water bills low. Hence, even with the increases in capital spending, large capital outlays will be required for the foreseeable future.
>
> * * *
>
> On the positive side, state regulators apparently understand the magnitude of the issue and have been doing their best to forge reasonably constructive relationships with the companies. For investors, the importance of a state's regulatory climate cannot be understated.

The water and wastewater industries also experience low depreciation rates. Depreciation rates are one of the principal sources of internal cash flows for all utilities (through a utility's depreciation expense) and are vital to a company to fund ongoing replacements and repairs of the system. Water / wastewater utilities' assets have long lives, and therefore have long capital recovery periods. As such, they face greater risk due to inflation which results in a higher replacement cost per dollar of net plant.

Substantial capital expenditures, as noted by *Value Line,* will require significant financing. The three sources of financing typically used are debt, equity (common and preferred), and cash flow. All three are intricately linked to the opportunity to earn a sufficient rate of return as well as the ability to achieve that return. Consistent with *Hope* and *Bluefield*, the return must be sufficient to maintain credit quality as well as enable the attraction of necessary new capital, be it debt or equity capital. If it is unable to raise debt or equity capital, the utility must turn to

3 *Value Line Investment Survey*, April 15, 2016.

either retained earnings or free cash flow,[4] both of which are directly linked to earning a sufficient rate of return. The level of free cash flow represents a company's ability to meet the needs of its debt and equity holders. If either retained earnings or free cash flow is inadequate, it will be nearly impossible for the utility to attract the needed new capital to invest in new infrastructure to ensure quality service to its customers. An insufficient rate of return can be financially devastating for utilities and a public safety issue for their customers.

The water and wastewater utility industry's high degree of capital intensity and low depreciation rates, coupled with the need for substantial infrastructure capital spending, require regulatory support in the form of adequate and timely rate relief, particularly a sufficient authorized return on common equity, so that the industry can successfully meet the challenges they face.

V. FINANCIAL RISK

Q10. Please define financial risk and explain why it is important to the determination of a fair rate of return.

A. Financial risk is the additional risk created by the introduction of debt and preferred stock into the capital structure. The higher the proportion of debt and preferred stock in the capital structure, the higher the financial risk (i.e. likelihood of default). Therefore, consistent with the basic financial principle of risk and return, investors demand a higher common equity return as compensation for bearing higher default risk.

4 Free Cash Flow = Operating Cash Flow (funds from operations) minus Capital Expenditures.

Q11. Can bond and credit ratings be a proxy for the combined business and financial risks (i.e., investment risk of an enterprise)?

A. Yes, similar bond ratings/issuer credit ratings reflect, and are representative of, similar combined business and financial risks (i.e., total risk) faced by bond investors.[5] Although specific business or financial risks may differ between companies, the same bond/credit rating indicates that the combined risks are roughly similar, albeit not necessarily equal, as the purpose of the bond/credit rating process is to assess credit quality or credit risk and not common equity risk.

Q12. That being said, do rating agencies reflect company size in their bond ratings?

A. No. Neither S&P nor Moody's have minimum company size requirements for any given rating level. This means, all else equal, a relative size analysis would still need to be performed on companies with similar bond ratings.

VI. CAPITAL STRUCTURE

Q13. What capital structure ratios do you recommend be employed in developing an overall fair rate of return appropriate for the company?

A. I recommend the use of a ratemaking capital structure consisting of 48.05% long-term debt and 51.95% common equity as shown on page 1 of Schedule DWD-1. This capital structure is the actual capital structure of Aqua OH, as of March 31, 2016.

Q14. How does your proposed ratemaking common equity ratio of 51.95% for Aqua OH compare with the total equity ratios maintained by the companies in your Utility Proxy Group?

A. My proposed ratemaking common equity ratio of 51.95% for Aqua OH is reasonable and consistent with the range of total equity ratios maintained, on average, by the

5 Risk distinctions within S&P's bond rating categories are recognized by a plus or minus, i.e., within the A category, an S&P rating can be at A+, A, or A-. Similarly, risk distinctions for Moody's ratings are distinguished by numerical rating gradations, i.e., within the A category, a Moody's rating can be A1, A2 and A3.

1 companies in the Utility Proxy Group on which I base my recommended common
2 equity cost rate. As shown on page 2 of Schedule DWD-2, the common equity ratios
3 of the Utility Proxy Group range from 46.00% to 58.87%, with a midpoint of
4 52.43% and an average of 53.63% in 2015. The higher equity ratio, on average,
5 maintained by the Utility Proxy Group indicates a lower financial risk relative to the
6 Company.

7 In my opinion, a capital structure consisting of 48.05% long-term debt and
8 51.95% total equity is appropriate for ratemaking purposes for Aqua OH in the
9 current proceeding because it is conservative compared with the average capital
10 structure ratios (based on total permanent capital) maintained, on average, by the
11 water companies in my Utility Proxy Group on whose market data I base my
12 recommended common equity cost rate.

13 **VII. LONG-TERM DEBT COST RATE**

14 **Q15. What cost rate for long-term debt is most appropriate for use in a cost of**
15 **capital determination for Aqua OH?**

16 A. A long-term debt cost rate of 4.88% as of March 31, 2016, is reasonable and
17 appropriate and is derived from Aqua OH's actual long-term debt outstanding as of
18 March 31, 2016.

19 **VIII. AQUA OHIO, INC.**

20 **Q16. Have you reviewed financial data for Aqua OH?**

21 A. Yes. Aqua OH is a subsidiary of Aqua America, Inc. The Company serves
22 approximately 150,441 customers in Ohio. Aqua OH's common stock is not publicly
23 traded.

IX. UTILITY PROXY GROUP

Q17. Please explain how you chose your proxy group of eight water companies.

A. The basis of selection for the Utility Proxy Group was to select those companies which meet the following criteria:

1) They are included in the Water Utility Group of *Value Line Standard Edition* (April 15, 2016);
2) They have 70% or greater of 2015 total operating income derived from and 70% or greater of 2015 total assets devoted to regulated water operations;
3) At the time of the preparation of this testimony, they had not publicly announced that they were involved in any major merger or acquisition activity (i.e., one publicly-traded utility merging with or acquiring another);
4) They have not cut or omitted their common dividends during the five years ending 2015 or through the time of the preparation of this testimony;
5) They have *Value Line* and Bloomberg adjusted betas;
6) They have a positive *Value Line* five-year dividends per share (DPS) growth rate projection; and
7) They have *Value Line*, Reuters, Zacks or Yahoo! Finance, consensus five-year earnings per share (EPS) growth rate projections.

The following eight companies met these criteria: American States Water Co., American Water Works Co., Inc., Aqua America, Inc., California Water Service Corp., Connecticut Water Service, Inc., Middlesex Water Co., SJW Corp., and York Water Co.

Q18. Please describe schedule DWD-2, Page 1.

A. Page 1 of Schedule DWD-2 contains comparative capitalization and financial statistics for the eight water companies for the years 2011 to 2015.

During the five-year period ending 2015, the historically achieved average earnings rate on book common equity for the group averaged 10.26%. The average common equity ratio based on total permanent capital (excluding short-term debt) was 52.15%, and the average dividend payout ratio was 58.56%.

Total debt to earnings before interest, taxes, depreciation, and amortization ("EBITDA") for the years 2011 to 2015 ranges between 3.40 and 4.30, with an average of 3.76. Funds from operations to total debt range from 19.19% to 25.95%, with an average of 22.58%.

X. COMMON EQUITY COST RATE MODELS

Q19. Are your cost of common equity models market-based models?

A. Yes. The DCF model is market-based because market prices are used in developing the dividend yield component of the model. The RPM is market-based because the bond ratings and expected bond yields used in the application of the RPM reflect the market's assessment of bond/credit risk. In addition, the use of beta coefficients (β) to determine the equity risk premium reflects the market's assessment of market/systematic risk since beta coefficients are derived from regression analyses of market prices. The Predictive Risk Premium Model ("PRPM") uses monthly market returns in addition to expectations of the risk-free rate. The CAPM is market-based for many of the same reasons that the RPM is market-based (i.e., the use of expected bond yields and betas). Selection of the comparable risk non-price regulated companies is market-based because it is based on statistics which result

from regression analyses of market prices and reflect the market's assessment of total risk.

XI. DISCOUNTED CASH FLOW MODEL ("DCF")

Q20. What is the theoretical basis of the DCF model?

A. The theory underlying the DCF model is that the present value of an expected future stream of net cash flows during the investment holding period can be determined by discounting those cash flows at the cost of capital, or the investors' capitalization rate. DCF theory indicates that an investor buys a stock for an expected total return rate which is derived from cash flows received in the form of dividends plus appreciation in market price (the expected growth rate). Mathematically, the dividend yield on market price plus a growth rate equals the capitalization rate, i.e., the total common equity return rate expected by investors.

Q21. Which version of the DCF model do you use?

A. I use the single-stage constant growth DCF model.

XII. USE OF DIVIDEND YIELD IN APPLICATION OF THE DCF MODEL

Q22. Please describe the dividend yield you used in your application of the DCF model.

A. The unadjusted dividend yields are based on the proxy companies' dividends as of April 29, 2016, divided by the average of closing market prices for the 60 trading days ending April 29, 2016.[6]

Q23. Please explain your adjustment to the dividend yield.

A. Because dividends are paid periodically (quarterly), as opposed to continuously (daily), an adjustment must be made to the dividend yield. This is often referred to as the discrete, or the Gordon Periodic, version of the DCF model.

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6 *See* Schedule DWD-3, page 1, column 1.

DCF theory calls for the use of the full growth rate, or D_1, in calculating the dividend yield component of the model. Since the various companies in the Utility Proxy Group increase their quarterly dividend at various times during the year, a reasonable assumption is to reflect one-half the annual dividend growth rate in the dividend yield component, or $D_{1/2}$. Because the dividend should be representative of the next twelve-month period, my adjustment is a conservative approach that does not overstate the dividend yield. Therefore, the actual average dividend yields in Column 1 on page 1 of Schedule DWD-3 have been adjusted upward to reflect one-half the average projected growth rate shown in Column 6.

XIII. GROWTH RATES FOR APPLICATION OF THE DCF MODEL

Q24. Please explain the basis of your growth rates you apply to the Utility Proxy Group in your DCF model.

A. Investors with more limited resources than institutional investors are likely to rely on widely available financial information services, such as *Value Line*, Reuters, Zacks, and Yahoo! Finance. Investors realize that analysts have significant insight into the dynamics of the industries and individual companies they analyze, as well as companies' abilities to effectively manage the effects of changing laws and regulations and ever changing economic and market conditions. For these reasons, I use analysts' five-year forecasts of earnings per share ("EPS") growth in my DCF analysis.

Over the long run, there can be no growth in dividends per share ("DPS") without growth in EPS. Security analysts' earnings expectations have a more significant influence on market prices than dividend expectations. Thus, the use of earnings growth rates in a DCF analysis provides a better matching between

investors' market price appreciation expectations and the growth rate component of the DCF.

XIV. DISCOUNTED CASH FLOW MODEL RESULTS

Q25. Please summarize the DCF model results.

A. As shown on page 1 of Schedule DWD-3, the mean result of the application of the single-stage DCF model is 8.37%, the median result is 8.08%, and the average of the two is 8.23% for the Utility Proxy Group. In arriving at a conclusion for the DCF-indicated common equity cost rate for the Utility Proxy Group, I have relied on an average of the mean and the median results of the DCF. This approach takes into consideration all of the proxy companies' results while mitigating the high and low outliers of those individual results.

XV. THE RISK PREMIUM MODEL ("RPM")

Q26. Please describe the theoretical basis of the RPM.

A. The RPM is based on the fundamental financial principle of risk and return, namely, that investors require greater returns for bearing greater risk. The RPM recognizes that common equity capital has greater investment risk than debt capital, as common equity shareholders are behind debt holders in any claim on a company's assets and earnings. As a result, investors require higher returns from common stocks than from investment in bonds, to compensate them for bearing the additional risk.

While it is possible to directly observe bond returns and yields, investors' required common equity return cannot be directly determined or observed. According to RPM theory, one can estimate a common equity risk premium over bonds (either historically or prospectively), and use that premium to derive a cost rate of common equity. The cost of common equity equals the expected cost rate for

long-term debt capital plus a risk premium over that cost rate to compensate common shareholders for the added risk of being unsecured and last-in-line for any claim on the corporation's assets and earnings in the event of a liquidation.

Q27. Please explain how you derived your indicated cost of common equity based on the RPM.

A. I relied on the results of the application of two risk premium methods. The first method is the Predictive Risk Premium Model ("PRPM"), while the second method is a risk premium model using a total market approach.

XVI. THE PREDICTIVE RISK PREMIUM MODEL

Q28. Please explain the PRPM.

A. The PRPM, published in the *Journal of Regulatory Economics ("JRE"),*[7] was developed from the work of Robert F. Engle who shared the Nobel Prize in Economics in 2003 "for methods of analyzing economic time series with time-varying volatility ("ARCH") ".[8] Engle found that volatility changes over time and is related from one period to the next, especially in financial markets. Engle discovered that the volatility in prices and returns clusters over time and is therefore highly predictable and can be used to predict future levels of risk and risk premiums.

The PRPM estimates the risk / return relationship directly, as the predicted equity risk premium is generated by the prediction of volatility or risk. The PRPM isn't based on an estimate of investor behavior, but rather on the evaluation of the results of that behavior (i.e., the variance of historical equity risk premiums).

The inputs to the model are the historical returns on the common shares of each company in the Utility Proxy Group minus the historical monthly yield on

7 Autoregressive conditional heteroscedasticity. See "A New Approach for Estimating the Equity Risk Premium for Public Utilities", Pauline M. Ahern, Frank J. Hanley and Richard A. Michelfelder, Ph.D. The Journal of Regulatory Economics (December 2011), 40:261-278.

8 www.nobelprize.org.

long-term U.S. Treasury securities through April 2016. Using a generalized form of ARCH, known as GARCH, I calculate each Utility Proxy Group company's projected equity risk premium using Eviews© statistical software. When the GARCH Model is applied to the historical return data, it produces a predicted GARCH variance series[9] and a GARCH coefficient[10]. Multiplying the predicted monthly variance by the GARCH coefficient and annualizing it[11] produces the predicted annual equity risk premium. I then add the forecasted 30-year U.S. Treasury Bond yield, 3.53%[12], to each company's PRPM-derived equity risk premium to arrive at an indicated cost of common equity. The 30- year Treasury yield is a consensus forecast derived from the *Blue Chip Financial Forecasts ("Blue Chip")*[13]. The mean PRPM indicated common equity cost rate for the Utility Proxy Group is 12.14%, the median is 11.49%, and the average of the two is 11.82%. Consistent with my reliance on the average of the median and mean results of the DCF, I will rely on the average of the mean and median results of the Utility Proxy Group PRPM to calculate a cost of common equity rate of 11.82%.

XVII. THE TOTAL MARKET APPROACH RISK PREMIUM MODEL

Q29. Please explain the total market approach RPM.

A. The total market approach RPM adds a prospective public utility bond yield to an average of 1) an equity risk premium that is derived from a beta-adjusted total market equity risk premium, and 2) an equity risk premium based on the S&P Utilities Index.

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9 Illustrated on Columns 1 and 2 of page 2 of Schedule DWD-4.
10 Illustrated on Column 4 of page 2 of Schedule DWD-4.
11 Annualized Return = (1+Monthly Return)^12 - 1
12 See column 6 of page 2 of Schedule DWD-4.
13 Blue Chip Financial Forecasts, December 1, 2015 at p. 14 and January 1, 2016 at p. 2.

XVIII. THE DERIVATION OF THE PROSPECTIVE PUBLIC UTILITY BOND

Q30. Please explain the basis of the expected bond yield of 5.04% applicable to the eight water companies.

A. The first step in the total market approach RPM analysis is to determine the expected bond yield. Because both ratemaking and the cost of capital (including common equity cost rate) are prospective in nature, a prospective yield on similarly-rated long-term debt is essential. I rely on a consensus forecast of about 50 economists of the expected yield on Aaa-rated corporate bonds for the six calendar quarters ending with the third calendar quarter of 2017 and the long-term projections for 2017 to 2021 and 2022 to 2026. As shown on Line No. 1 of page 3 of Schedule DWD-4, the average expected yield on Moody's Aaa-rated corporate bonds is 4.59%. In order to derive an expected yield on A2 rated-public utility bonds, I make an upward adjustment of 0.29%, which represents a recent spread between Aaa corporate bonds and A2-rated public utility bonds, in order to adjust the expected Aaa corporate bond yield to an equivalent Moody's A2-rated public utility bond.[14] Adding the recent 0.29% spread between Aaa corporate and A2 public utility bond yields to the expected Aaa corporate bond yield of 4.59% results in an expected A2 public utility bond of 4.88%.

Since the Utility Proxy Group's average Moody's long-term issuer rating is A2/A3, another adjustment to the expected A2 public utility bond yield is needed to reflect the difference in bond ratings. An upward adjustment of 0.16%, which represents one-sixth of a recent spread between A2 and Baa2 public utility bond yields, is necessary to make the A2 prospective bond yield applicable to an A2/A3

14 As shown on Line No. 2 and explained in note 2 of page 3 of Schedule DWD-4.

public utility bond.[15] Adding the 0.16% to the 4.88% prospective A2 public utility bond yield results in a 5.04% expected bond yield for the Utility Proxy Group.

XIX. BETA DERIVED EQUITY RISK PREMIUM

Q31. Please explain the derivation of the beta-derived equity risk premium.

A. The components of the beta derived risk premium model are 1) an expected market equity risk premium over corporate bonds and 2) the beta coefficient. The derivation of the beta-derived equity risk premium that I apply to the Utility Proxy Group is shown on lines 1 through 4 of page 8 of Schedule DWD-4.

The total beta-derived equity risk premium I apply is based on an average of 1) the long-term arithmetic mean historical market equity risk premium; 2) a predicted equity risk premium based on the PRPM; 3) a forecasted market risk premium based on *Value Line's* projected market appreciation and dividend yield; and 4) a forecasted equity risk premium based on the S&P 500 projected market appreciation and dividend yield. Each of these is described in turn.

Q32. How did you derive a long-term historical market equity risk premium?

A. To derive a historical market equity risk premium, I used the most recent Morningstar data on holding period returns for the large company common stocks from the Morningstar SBBI Appendix A Tables: Morningstar Stocks, Bonds, Bills, & Inflation 1926-2015 ("SBBI – 2016")[16] and the average historical yield on Moody's Aaa- and Aa-rated corporate bonds for the period 1928 to 2015. The use of holding period returns over a very long period of time is useful because it is consistent with the long-term investment horizon presumed by investing in a going concern, i.e., a company expected to operate in perpetuity.

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15 As shown on Line No. 4 and explained in note 3 on page 3 of Schedule DWD-4.

16 Morningstar SBBI Appendix A Tables: Morningstar Stocks, Bonds, Bills, & Inflation 1926-2015.

Morningstar's long-term arithmetic mean monthly total return rate on large company common stocks is 11.68% and the long-term arithmetic mean monthly yield on Moody's Aaa- and Aa-rated corporate bonds is 6.16%.[17] As shown on Line No. 1, subtracting the mean monthly bond yield from the total return on large company stocks results in a long-term historical equity risk premium of 5.52%.

I used the arithmetic mean monthly total return rates for the large company stocks and yields (income returns) for the Moody's Aaa/Aa corporate bonds, because they are appropriate for the purpose of estimating the cost of capital as noted in Ibbotson® SBBI® 2015 Classic Yearbook – Market Results for Stocks, Bonds, Bills & Inflation ("SBBI– 2015").[18] The use of the arithmetic mean return rates and yields is appropriate because historical total returns and equity risk premiums provide insight into the variance and standard deviation of returns needed by investors in estimating future risk when making a current investment. If investors relied on the geometric mean of historical equity risk premiums, they would have no insight into the potential variance of future returns because the geometric mean relates the change over many periods to a constant rate of change, thereby obviating the year-to-year fluctuations, or variance, which is critical to risk analysis.

Q33. Please explain the derivation of a PRPM market equity risk premium.

A. I used the same PRPM approach described previously to develop a second market equity risk premium estimate. The inputs to the model are the historical monthly returns on large company common stocks minus the monthly yields on Aaa/Aa corporate bonds during the period from January 1928 through April 2016. Using the previously discussed generalized form of ARCH, known as GARCH, the market's

17 As explained in note 1 on page 8 of Schedule DWD-4.
18 SBBI – 2015, at p. 153.

projected equity risk premium is determined using Eviews© statistical software. The resulting PRPM predicted market equity risk premium is 7.75%.[19]

Q34. Please explain the derivation of a projected equity risk premium based on *Value Line* data for your RPM analysis?

A. As noted previously, because both ratemaking and the cost of capital, including the cost rate of common equity, are prospective, a prospective market equity risk premium is essential. The derivation of the forecasted or prospective market equity risk premium can be found in note 3 on page 8 of Schedule DWD-4. Consistent with my calculation of the dividend yield component in my DCF analysis, my third prospective market equity risk premium is derived from an average of the three- to five-year median market price appreciation potential by *Value Line* for the thirteen weeks ending May 6, 2016, plus an average of the median estimated dividend yield for the common stocks of the 1,700 firms covered in *Value Line*'s Standard Edition[20].

The average median expected price appreciation is 54%, which translates to a 11.40% annual appreciation, and, when added to the average of *Value Line's* median expected dividend yields of 2.38%, equates to a forecasted annual total return rate on the market as a whole of 13.78%. The forecasted Aaa bond yield of 4.59% is deducted from the total market return of 13.78%, resulting in an equity risk premium of 9.19%,[21] shown on page 8 line 3 of Schedule DWD-4.

Q35. Please explain the derivation of an equity risk premium based on the S&P 500 companies.

A. Using data from Bloomberg Professional Services, I calculate an expected total return on the S&P 500 using expected dividend yields and long-term growth

19 Shown on Line No. 2 on page 8 of Schedule DWD-4.
20 As explained in detail in note 1 of Schedule DWD-5.
21 9.19% = 13.78% - 4.59%.

estimates as a proxy for capital appreciation. The expected total return for the S&P 500 is 12.90%. Subtracting the prospective yield on Aaa Corporate bonds of 4.59% results in an 8.31% projected equity risk premium.

Q36. What is your conclusion of a beta-derived equity risk premium for use in your RPM analysis?

A. I give equal weight to the historical equity risk premium of 5.52%, the PRPM based equity risk premium of 7.75%, the forecasted equity risk premium of 9.19%, and the S&P projected equity risk premium of 8.31%, in arriving at my conclusion of an equity risk premium of 7.69%.[22]

After calculating the average market equity risk premium of 7.69%, I adjust it by beta to account for the risk of the Utility Proxy Group. As discussed below, the beta coefficient is a meaningful measure of prospective relative risk to the market as a whole and is a logical means by which to allocate a company's or proxy group's share of the market's total equity risk premium relative to corporate bond yields. As shown on Schedule DWD-5, the average of the mean and median beta coefficient for the Utility Proxy Group is 0.72. Multiplying the beta coefficient of the Utility Proxy Group of 0.72 by the market equity risk premium of 7.69% results in a beta-adjusted equity risk premium of 5.54% for the Utility Proxy Group.

XX. S&P UTILITIES INDEX DERIVED EQUITY RISK PREMIUM

Q37. How did you derive the equity risk premium based on the S&P utility index and Moody's A-rated public utility bonds?

A. I estimate three equity risk premiums based on the S&P Utility Index. First, I derive a long-term monthly arithmetic mean equity risk premium between the S&P Utility Index total returns of 10.49% and monthly A-rated public utility bond yields of

22 7.69% = (5.52% + 7.75% + 9.19% + 8.31%)/4. See Line No. 5 on page 8 of Schedule DWD-4.

6.64% from 1928 to 2015 to arrive at an equity risk premium of 3.84%.[23] Second, I applied the PRPM using the historical monthly equity risk premiums from January 1928 to April 2016 to arrive at a PRPM-derived equity risk premium of 4.37% for the S&P Utility Index. Finally, I derive an expected total return on the S&P Utilities Index of 8.55% using data from Bloomberg Professional Services and subtract the prospective A2-rated public utility bond yield, of 4.88%,[24] which results in a risk premium of 3.67%. The average of these equity risk premiums is 3.96%.[25]

Q38. What is your conclusion of an equity risk premium for use in your total market approach RPM analysis?

A. The equity risk premium I apply to the Utility Proxy Group is 4.75%, which is the average of the beta-derived and the S&P utility equity risk premiums of 5.54% and 3.96%, respectively.[26]

XXI. RISK PREMIUM MODEL RESULTS

Q39. What is the indicated RPM common equity cost rate based on the total market approach?

A. As summarized in Table 3 below and shown on Line No. 7 on Schedule DWD-4, page 3, I calculate a common equity cost rate of 9.79% for the Utility Proxy Group based on the total market approach of the RPM.

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23 As shown on Line No. 3 on page 11 of Schedule DWD-4.
24 Derived on Line No. 3 of page 3 of Schedule DWD-4.
25 3.96% = (3.84% + 3.67% + 4.37%)/3.
26 As shown on page 7 of Schedule DWD-4.

Table 3. Summary of Total Market Risk Premium Approach Estimates

Beta-Derived Equity Risk Premium	Equity Risk Premium		Beta Coefficient		Adjusted ERP
Long-Term Arithmetic Mean Historical ERP	5.52%				
PRPM-based Predicted ERP	7.75%				
Value Line Forecasted ERP	9.19%				
S&P 500 Forecasted ERP	8.31%				
Average Beta-Adjusted Equity Risk Premium	*7.69%*	*x*	*0.72*	=	*5.54%*

S&P Utilities Index-Derived Equity Risk Premium	Total Return		Bond Yield		Equity Risk Premium
Long-Term Monthly Arithmetic Mean ERP	10.49%	-	6.64%	=	3.84%
PRPM-based Historical ERP				=	4.37%
Expected S&P Utilities Index return	8.55%	-	4.88%	=	3.67%
Average S&P Utilities Index ERP					*3.96%*
Average Total Market Approach ERP					***4.75%***

	Bond Yield		Equity Risk Premium		Cost of Equity
Total Market Approach Risk Premium Cost of Equity	**5.04%**	+	**4.75%**	=	**9.79%**

Q40. What are the results of your application of the PRPM and the total market approach RPM?

A. As shown on page 1 of Schedule DWD-4, the indicated RPM-derived common equity cost rate is 10.81%,[27] which gives equal weight to the PRPM (11.82%) and the adjusted market approach results (9.79%).

XXII. THE CAPITAL ASSET PRICING MODEL (CAPM)

Q41. Please explain the theoretical basis of the CAPM.

A. CAPM theory defines risk as the co-variability of a security's returns with the market's returns as measured by the beta coefficient (β). A beta coefficient less than

27 10.81% = (11.82%+9.79%)/2.

1.0 indicates lower variability than the market as a whole, while a beta coefficient greater than 1.0 indicates greater variability than the market.

The CAPM assumes that all other risk (i.e., all non-market or unsystematic risk) can be eliminated through diversification. The risk that cannot be eliminated through diversification is called market, or systematic, risk. In addition, the CAPM presumes that investors require compensation only for systematic risk which is the result of macroeconomic and other events that affect the returns on all assets. The model is applied by adding a risk-free rate of return to a market risk premium, which is adjusted proportionately to reflect the systematic risk of the individual security relative to the total market as measured by the beta coefficient. The traditional CAPM model is expressed as:

$$R_s = R_f + \beta(R_m - R_f)$$

Where:

R_s	=	Return rate on the common stock
R_f	=	Risk-free rate of return
R_m	=	Return rate on the market as a whole
B	=	Adjusted beta coefficient (volatility of the security relative to the market as a whole)

Numerous tests of the CAPM have measured the extent to which security returns and beta coefficients are related as predicted by the CAPM confirming its validity. The empirical CAPM ("ECAPM") reflects the reality that while the results of these tests support the notion that the beta coefficient is related to security returns, the empirical Security Market Line ("SML") described by the CAPM formula is not as steeply sloped as the predicted SML.[28]

28 Roger A. Morin, New Regulatory Finance (Public Utility Reports, Inc., 2006) 175.

In view of theory and practical research, I have applied both the traditional CAPM and the ECAPM to the companies in the Utility Proxy Group and averaged the results.

XXIII. USE OF BETA COEFFICIENTS IN THE CAPM ANALYSIS

Q42. What beta coefficients did you use in your CAPM analysis?

A. With respect to the beta coefficient, I considered two methods of calculation: 1) the average of the Beta coefficients of the Utility Proxy Group companies reported by Bloomberg Professional Services and 2) the average of the Beta coefficients of the Utility Proxy Group companies as reported by *Value Line*. While both of those services adjust their calculated (or "raw") Beta coefficients to reflect the tendency of the Beta coefficient to regress to the market mean of 1.00, *Value Line* calculates the Beta coefficient over a five-year period, while Bloomberg's calculation is based on two years of data.

XXIV. USE OF A RISK-FREE RATE OF RETURN IN THE CAPM ANALYSIS

Q43. Please describe your selection of a risk-free rate of return.

A. As shown in column 5 on page 1 of Schedule DWD-5, the risk-free rate adopted for both applications of the CAPM is 3.53%. This risk-free rate of 3.53% is based on the average of the *Blue Chip* consensus forecast of the expected yields on 30-year U.S. Treasury bonds for the six quarters ending with the third calendar quarter of 2017 and long-term projections for the years 2017 to 2021 and 2022 to 2026.

Q44. Why is the yield on long-term U.S. Treasury Bonds appropriate for use as the risk-free rate?

A. The yield on long-term U.S. Treasury Bonds is almost risk-free and its term is consistent with 1) the long-term cost of capital to public utilities measured by the yields on A-rated public utility bonds; 2) the long-term investment horizon inherent

in utilities' common stocks; and 3) the long-term life of the jurisdictional rate base to which the allowed fair rate of return (i.e., cost of capital) will be applied. In contrast, short-term U.S. Treasury yields are more volatile and largely a function of Federal Reserve monetary policy.

XXV. USE OF THE MARKET RISK PREMIUM IN THE CAPM ANALYSIS

Q45. Please explain the estimation of the expected equity risk premium for the market used in your CAPM analyses.

A. The basis of the market equity risk premium is explained in detail in Note 1 on Schedule DWD-5. It is derived from an average of 1) the three to five year median total market price appreciation projections for the most recent thirteen weeks ending May 6, 2016, reported by *Value Line*; 2) the arithmetic mean monthly equity risk premiums of large company common stocks relative to long-term U.S. Treasury bond income yields from SBBI-2016 from 1926 to 2015; 3) the PRPM predicted market equity risk premium, using monthly equity risk premiums for large company common stocks relative to long-term U.S. Treasury securities from January 1926 through April 2016; and 4) the projected total return on the S&P 500 minus the projected risk-free rate.

The *Value-Line*-derived forecasted total market equity risk premium is derived by deducting the forecasted risk-free rate of 3.53% discussed above from the *Value Line* projected total annual market return of 13.78%, resulting in a forecasted total market equity risk premium of 10.25%. The PRPM market equity risk premium is 8.74%, and is derived using the PRPM relative to the yields on long-term U.S. Treasury securities from January 1926 through April 2016. The long-term income return on U.S. Government Securities of 5.20% was deducted from the SBBI-2016 monthly historical total market return of 11.95%, which results in an historical

market equity risk premium of 6.75%.[29] The S&P 500 projected market equity risk premium is derived by subtracting the projected risk-free rate of 3.53% from the projected total return of the S&P 500 of 12.90%. The resulting market equity risk premium is 9.37%.

These four market equity risk premiums, when averaged, result in an average total market equity risk premium of 8.78%.[30] Table 4 below summarizes my total market equity risk premium results.

Table 4. Summary of CAPM Market Equity Risk Premium Estimates

CAPM Market Equity Risk Premium Summary	Market Return		Risk Free Rate		Equity Risk Premium
Projected *Value Line* ERP	13.78%	-	3.53%	=	10.25%
PRPM-based Historical ERP				=	8.74%
Ibbotson Arithmetic Mean Historical ERP	11.95%		5.20%		6.75%
Projected S&P 500 ERP	12.90%	-	3.53%	=	9.37%
Average CAPM Equity Risk Premium					**8.78%**

XXVI. CAPM RESULTS

Q46. What are the results of your application of the traditional and empirical CAPM to the Utility Proxy Group?

A. As shown on Schedule DWD-5, the mean result of my CAPM/ECAPM analyses is 10.10%, the median is 10.16% and the average of the two is 10.13%. Consistent with my reliance on the average of mean and median DCF results discussed above, the indicated common equity cost rate using the CAPM/ECAPM is 10.13%.

29 SBBI – 2016, at pp. 3-5 and 21-23.
30 8.78%=(10.25% + 6.75% + 8.74% + 9.37%)/4.

XXVII. COMMON EQUITY COST RATES FOR A PROXY GROUP OF DOMESTIC, NON-PRICE REGULATED COMPANIES BASED ON THE DCF, RPM AND CAPM

Q47. Why do you also consider a proxy group of domestic, non-price regulated companies?

A. In the *Hope* and *Bluefield* cases, the Court did not specify that comparable risk companies had to be utilities. Since the purpose of rate regulation is to be a substitute for the competition of the marketplace, non-price regulated firms operating in the competitive marketplace make an excellent proxy if they are comparable in total risk to the Utility Proxy Group being used to estimate the cost of common equity. The selection of such domestic, non-price-regulated competitive firms theoretically and empirically results in a proxy group which is comparable in total risk to the Utility Proxy Group of water companies.

XXVIII. SELECTION CRITERIA OF THE NON-PRICE REGULATED PROXY GROUP

Q48. How did you select unregulated companies that are comparable in total risk to the regulated public Utility Proxy Group?

A. In order to select a proxy group of domestic, non-price regulated companies similar in total risk to the Utility Proxy Group, I rely on the beta coefficients and related statistics derived from *Value Line* regression analyses of weekly market prices over the most recent 260 weeks (i.e., five years). Using this selection criteria results in a proxy group of twelve domestic, non-price regulated firms comparable in total risk to the Utility Proxy Group. Total risk is the sum of non-diversifiable market risk and diversifiable company-specific risks. The criteria used in the selection of the domestic, non-price regulated firms were:

1) They must be covered by *Value Line Investment Survey* (Standard Edition).
2) They must be domestic, non-price regulated companies, i.e., non-utilities.

3) Their beta coefficients must lie within plus or minus two standard deviations of the average unadjusted beta of the Utility Proxy Group.

4) The residual standard errors of the *Value Line* regressions which gave rise to the unadjusted beta coefficients must lie within plus or minus two standard deviations of the average residual standard error of the Utility Proxy Group.

Beta coefficients are a measure of market, or systematic, risk which is not diversifiable. The residual standard errors of the regressions were used to measure each firm's company-specific, diversifiable risk. Companies that have similar betas and similar residual standard errors resulting from the same regression analyses have similar total investment risk.

Q49. Have you prepared a schedule which shows the data from which you selected the twelve domestic, non-price regulated companies that are comparable in total risk to the Utility Proxy Group?

A. Yes, the basis of selection and both proxy groups' regression statistics are shown in Schedule DWD-6.

XXIX. COMMON EQUITY MODEL RESULTS FOR THE NON-PRICE REGULATED PROXY GROUP

Q50. Did you calculate common equity cost rates using the DCF, RPM, and CAPM for the Non-Price Regulated Proxy Group?

A. Yes. Because the DCF, RPM, and CAPM have been applied in an identical manner as described above, I will not repeat the details of the rationale and application of each model. An exception is that, in the application of the RPM, I did not use public utility-specific equity risk premiums, nor have I applied the PRPM to the individual companies.

Page 2 of Schedule DWD-7 contains the derivation of the DCF cost rates. As shown, the indicated common equity cost rate using the DCF for the Non-Price

Regulated Proxy Group comparable in total risk to the Utility Proxy Group, is 12.71%.

Pages 3 through 5 contain the data and calculations that support the 11.79% RPM cost rate. As shown on Line No. 1 of page 3 of Schedule DWD-7, the consensus prospective yield on Moody's Baa rated corporate bonds for the six quarters ending in the third quarter of 2017 and for the years 2017 to 2021 and 2022 to 2026 is 5.71%.[31] Since the Non-Price Regulated Proxy Group has an average Moody's long-term issuer rating of Baa2/Baa3, a upward adjustment of 0.16% to the projected Baa corporate bond yield is necessary to reflect the difference in ratings[32] which results in a projected Baa2/Baa3 corporate bond yield of 5.87%.

When the beta-adjusted risk premium of 5.92%[33] relative to the Non-Price Regulated Proxy Group is added to the prospective Baa2/Baa3 rated corporate bond yield of 5.87%, the indicated RPM cost rate is 11.79%.

Page 6 contains the inputs and calculation that support my indicated CAPM/ECAPM cost rate of 10.54%.

Q51. What is your conclusion of the cost rate of common equity based on the Non-Price Regulated Proxy Group comparable in total risk to the Utility Proxy Group?

A. As shown on page 1 of Schedule DWD-7, the results of the DCF, RPM, and CAPM applied to the Non-Price Regulated Proxy Group comparable in total risk to the Utility Proxy Group are 12.71%, 11.79%, and 10.54%, respectively. The average of the mean and median of these models is 11.74%, which I use as the indicated common equity cost rate for the Non-Price Regulated Proxy Group.

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31 Blue Chip Financial Forecasts, May 1, 2016 (p. 2) and December 1, 2015 (p.14).
32 As demonstrated in line 2 and described in note 2 of page 3 of Schedule DWD-7.
33 Derived on page 5 of Schedule DWD-7.

XXX. CONCLUSION OF COMMON EQUITY COST RATE BEFORE ADJUSTMENTS

Q52. What is the indicated common equity cost rate before adjustments?

A. The indicated cost of equity before adjustments is 10.25%, which is based on the results from the application of multiple cost of common equity models to the Utility Proxy Group and the Non-Price Regulated Proxy Group. I use multiple cost of common equity models as primary tools in arriving at my recommended common equity cost rate because: 1) no single model is so inherently precise that it can be relied on solely to the exclusion of other theoretically sound models; 2) the use of multiple models adds reliability to the estimation of the common equity cost rate; and 3) the prudence of using multiple cost of common equity models is supported in both the financial literature and regulatory precedent. As a result, no single model should be relied on exclusively to estimate investors' required rate of return on common equity.

Based on these common equity cost rate results, I conclude that a common equity cost rate of 10.25% is reasonable and appropriate for the Company before any adjustment is made for relative risk between the Company and the Utility Proxy Group. The 10.25% indicated ROE is the approximate average of the results produced by my application of the models as explained above.

XXXI. SIZE ADJUSTMENT

Q53. Is there a way to quantify a relative risk adjustment due to Aqua OH's small size relative to the proxy group?

A. Yes. The Company has greater relative risk than the average company in the Utility Proxy Group because of its smaller size compared with the group, as measured by an

estimated market capitalization of common equity for Aqua OH (whose common stock is not publicly-traded).

Table 5: Size as Measured by Market Capitalization for the Company and the Utility Proxy Group

	Market Capitalization* ($ Millions)	Times Greater than the Company
Aqua OH	240.227	
Utility Proxy Group	2,952.644	12.3x

*From page 1 of Schedule DWD-8.

The Company's estimated market capitalization was at $240.227 million as of April 29, 2016, compared with the market capitalization of the average water company in the Utility Proxy Group of $2.953 billion on April 29, 2016, or 12.3 times the size of Aqua OH's estimated market capitalization.

Q54. Please explain why size has a bearing on business risk.

A. Company size is a significant element of business risk for which investors expect to be compensated through higher returns. Generally, smaller companies are less able to cope with significant events that affect sales, revenues, and earnings. For example, smaller companies face more risk exposure to business cycles and economic conditions, both nationally and locally. Additionally, the loss of revenues from a few larger customers would have a greater effect on a small company than on a much larger company with a larger, more diverse, customer base.

Further evidence of the risk effects of size include the fact that investors demand greater returns to compensate for the lack of marketability and liquidity of the securities of smaller firms. For these reasons, the Commission should authorize a

cost of common equity in this proceeding that reflects Aqua OH's relevant risk, including the impact of its small size.

As a result, it is necessary to upwardly adjust the indicated common equity cost rate of 10.25% to reflect Aqua OH's greater risk due to its smaller relative size. The determination is based on the size premiums for portfolios of New York Stock Exchange (NYSE), American Stock Exchange (AMEX), and NASDAQ listed companies ranked by deciles for the 1926 to 2015 period. The average size premium for the Utility Proxy Group (i.e. a market capitalization of $2.953 billion) falls in the 5th decile, while Aqua OH's market capitalization of $240.227 million puts the Company between the 9th and 10th deciles. The size premium spread between the 9th and 10th deciles and the 5th decile is 2.58%. Even though a 2.58% upward size adjustment is indicated, I apply a size premium of 0.25% to Aqua OH's indicated common equity cost rate.

Q55. What is the indicated cost of common equity after your adjustment for size?

A. After applying the 0.25% size adjustment to the indicated cost of common equity of 10.25%, a size adjusted cost of common equity of 10.50% results.

XXXII. FLOTATION COST ADJUSTMENT

Q56. What are flotation costs?

A. Flotation costs are those costs associated with the sale of new issuances of common stock. They include market pressure and the essential costs of issuance (e.g., underwriting fees and out-of-pocket costs for printing, legal, registration, etc.).

Q57. Why is it important to recognize flotation costs in the allowed common equity cost rate?

A. It is important because there is no other mechanism in the ratemaking paradigm with which such costs can be recovered. Because these costs are real and legitimate, recovery of these costs should be permitted. As noted by Dr. Roger Morin:

> The costs of issuing these securities are just as real as operating and maintenance expenses or costs incurred to build utility plants, and fair regulatory treatment must permit recovery of these costs….
>
> The simple fact of the matter is that common equity capital is not free….[Flotation costs] must be recovered through a rate of return adjustment.[34]

Q58. Should flotation costs be recognized only when there was an issuance during the test year or there is an imminent post-test year issuance of additional common stock?

A. No. As noted above, there is no mechanism to recapture such costs in the ratemaking paradigm other than an adjustment to the allowed common equity cost rate. Flotation costs are charged to capital accounts and are not expensed on a utility's income statement. As such, flotation costs are analogous to capital investments reflected on the balance sheet. Recovery of capital investments relates to the expected useful lives of the investment. Since common equity has a very long and indefinite life (assumed to be infinity in the standard regulatory DCF model), flotation costs should be recovered through an adjustment to common equity cost rate even when there has not been an issuance during the test year or in the absence of an expected imminent issuance of additional shares of common stock.

Historical flotation costs are a permanent loss of investment to the utility and should be accounted for. When any company, including a utility, issues common stock, flotation costs are incurred for legal, accounting, printing fees and the like.

34 Morin 321.

For each dollar of issuing market price, a small percentage is expensed and is permanently unavailable for investment in utility rate base. Since these expenses are charged to capital accounts and not expensed on the income statement, the only way to restore the full value of that dollar of issuing price with an assumed investor required return of 10% is for the net investment, $0.95, to earn more than 10% to net back to the investor a fair return on that dollar. In other words, if a company issues stock at $1.00 with 5% in flotation costs, it will net $0.95 in investment. Assuming the investor in that stock requires a 10% return on his or her invested $1.00 (i.e., a return of $0.10), the company needs to earn approximately 10.5% on its invested $0.95 to receive a $0.10 return.

Q59. Do the common equity cost rate models you have used already reflect investors' anticipation of flotation costs?

A. No. All of these models assume no transaction costs. The literature is quite clear that these costs are not reflected in market prices paid for common stocks. For example, Brigham and Daves confirm this and provide the methodology utilized to calculate the flotation adjustment.[35] In addition, Dr. Morin confirms the need for such an adjustment even when no new equity issuance is imminent.[36] Consequently, it is proper to include a flotation cost adjustment when using cost of common equity models to estimate the common equity cost rate.

Q60. How did you calculate the flotation cost allowance?

A. I modified the DCF calculation to provide a dividend yield that would reimburse investors for issuance costs in accordance with the method cited in literature by Brigham and Daves as well as Morin. The flotation cost adjustment recognizes the costs of issuing equity that were incurred by Aqua America, Inc. since January 2001.

35 Brigham and Daves 342.
36 Morin 327-30.

Based upon the issuance costs shown on page 1 of Schedule DWD-9, an adjustment of 0.13% is required to reflect the flotation costs applicable to the Utility Proxy Group.

Q61. What is the indicated cost of common equity after adjustments for size and flotation costs?

A. After applying the 0.13% flotation cost adjustment to the size adjusted cost of common equity of 10.50%, an adjusted cost of common equity of 10.63% results.

XXXIII. CONCLUSION OF COMMON EQUITY COST RATE

Q62. What is your recommended cost of common equity for Aqua OH?

A. Given the indicated cost of common equity of 10.25% and the size and flotation cost adjusted cost of common equity of 10.63%, I conclude that an appropriate cost of common equity for the Company would range from 10.25% to 10.65%.

Q63. Is your recommended range of common equity cost rates from 10.25% to 10.65% reasonable for Aqua OH?

A. In my opinion, a range of common equity cost rates from 10.25% to 10.65% is both reasonable and conservative, providing Aqua OH with sufficient earnings to enable it to attract necessary new capital.

Q64. Does that conclude your direct testimony?

A. Yes, it does.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the Direct Testimony of Dylan W. D'Ascendis was served by electronic mail to the following persons on this 14th of June, 2016:

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/s/ Rebekah J. Glover
One of the Attorneys for Aqua Ohio, Inc.

APPENDIX A

PROFESSIONAL QUALIFICATIONS

OF

DYLAN W. D'ASCENDIS, CRRA
PRINCIPAL

SUSSEX ECONOMIC ADVISORS, LLC

Dylan W. D'Ascendis, CRRA, CVA
Principal
Sussex Economic Advisors, LLC

Mr. D'Ascendis is an experienced consultant and Certified Rate of Return Analyst (CRRA) and Certified Valuation Analyst (CVA). He has experience in preparation of fair rate of return studies including capital structure determination, development of senior capital cost rates, as well as the determination of an appropriate rate of return on common equity on behalf of utility companies. He has submitted expert valuation reports for purposes of acquisition and for arbitration purposes. He has also assisted in the preparation of class cost of service, cash working capital, original cost and valuation studies, interrogatory responses, interrogatory requests of opposing witnesses, areas of cross-examination and rebuttal testimony in all areas discussed above. He has submitted expert testimony in the subjects of return on equity, capital structure, cost of service, rate design and valuation.

In his consulting experience, he was responsible for the data collection, distribution, marketing, and billing of a monthly utility report which provided comprehensive information on key ratios and industry rankings based on financial statistics presented in the report for the electric, gas and water industries. Mr. D'Ascendis also assisted in the monthly maintenance and calculation of the American Gas Association (AGA) Index, a market capitalization weighted index of the common stocks of the approximately 70 corporate members of the AGA, which serves as the benchmark for the American Gas Index Fund (AGIF).

Mr. D'Ascendis has co-authored "Comparative Evaluation of the Predictive Risk Premium Model, the Discounted Cash Flow Model and the Capital Asset Pricing Model" (The Electricity Journal (May 2013)) and has contributed to a number of articles and textbooks. Mr. D'Ascendis has been invited to present to a number of national organizations such as the National Association of Utility Regulatory Commissioners (NARUC) and Edison Electric Institute (EEI).

PROFESSIONAL HISTORY

AUS Consultants (2008-2014)

Principal

- Prepared fair rate of return and cost of capital exhibits which are filed in conjunction with expert testimony before various state and federal public utility regulatory bodies, which include the determination of an appropriate ratemaking capital structure and the development of embedded cost rates of senior capital as well as support the determination of a recommended return on common equity through the use of various market models, such as, but not

limited to, Discounted Cash Flow analysis, Capital Asset Pricing Model and Risk Premium Methodology, as well as an assessment of the risk characteristics of the client utility.

- Assisted in the preparation of class cost of service, rate design, cash working capital, original cost and valuation studies, and responses to interrogatories received regarding such testimonies filed on behalf of client utilities.
- Evaluated opposition testimony following the filing of fair rate of return testimonies in order to assist in the preparation of interrogatory questions, areas of cross-examination, and rebuttal testimony.
- Evaluated and assisted in the preparation of briefs and exceptions following the hearing process.
- Evaluated the final orders and decisions of various commissions to determine whether further actions were warranted and to gain insight which might assist in the preparation of future rate of return studies.

Editor of AUS Utility Reports (formerly C. A. Turner Utility Reports)

- Responsible for the data collection, distribution, marketing, and billing of the AUS Monthly Utility Report, which provides comprehensive information on key ratios and industry rankings based on financial statistics presented in the report for the electric, gas and water industries.
- Assisted in the calculation and production of the AGA Index, a market capitalization weighted index of the common stocks of the approximately 70 corporate members of the AGA.

EDUCATION

M.B.A., Rutgers University, Cum Laude, 2008

B.A., University of Pennsylvania, 2003

PROFESSIONAL AFFILIATIONS

National Association of Certified Valuators and Analysts
Society of Utility and Regulatory Financial Analysts
National Association of Water Companies
American Water Works Association

SPEAKING ENGAGEMENTS

"Decoupling: Impact on the Risk and Cost of Common Equity of Public Utility Stocks", before the Society of Utility and Regulatory Financial Analysts: 45th Financial Forum, April 17-18, 2013, Indianapolis, IN.

"Application of a New Risk Premium Model for Estimating the Cost of Common Equity", Co-Presenter with Pauline M. Ahern, CRRA, AUS Consultants, Edison Electric Institute Cost of Capital Working Group, October 3, 2012, Webinar.

"Application of a New Risk Premium Model for Estimating the Cost of Common Equity", Co-Presenter with Pauline M. Ahern, CRRA, AUS Consultants, Staff Subcommittee on Accounting and Finance of the National Association of Regulatory Commissioners, September 10, 2012, St. Paul, MN.

Chair – "Cost of Capital" - Advanced Workshop in Regulation and Competition, 31st Annual Eastern Conference of the Center for Research in Regulated Industries (CRRI), May 18, 2012, Rutgers University, Shawnee on Delaware, PA.

PAPERS

"Comparative Evaluation of the Predictive Risk Premium Model™, the Discounted Cash Flow Model and the Capital Asset Pricing Model", co-authored with Pauline M. Ahern, CRRA, Richard A. Michelfelder, Ph.D. of Rutgers University and Frank J. Hanley, The Electricity Journal, May 2013.

"A New Approach for Estimating the Equity Risk Premium for Public Utilities", co-authored with Frank J. Hanley and Richard A. Michelfelder, Ph.D., Rutgers University, The Journal of Regulatory Economics (December 2011), 40:261-278. (Research Assistant).

Aqua Ohio, Inc.
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to Exhibit No. 1

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Aqua Ohio, Inc.
Summary of Cost of Capital and Fair Rate of Return
Based on the Actual Capital Structure of Aqua Ohio, Inc. at March 31, 2016

Type Of Capital	Ratios (1)	Cost Rate		Weighted Cost Rate
Long-Term Debt	48.05%	4.88%	(1)	2.34%
Common Equity	51.95%	10.25% - 10.65%	(2)	5.32% - 5.53%
Total	100.00%			7.66% - 7.87%

Notes:
(1) Company provided.
(2) From page 2 of this Schedule.

Aqua Ohio, Inc.
Brief Summary of Common Equity Cost Rate

Line No.	Principal Methods	Proxy Group of Eight Water Utilities
1.	Discounted Cash Flow Model (DCF) (1)	8.23%
2.	Risk Premium Model (RPM) (2)	10.81%
3.	Capital Asset Pricing Model (CAPM) (3)	10.13%
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	11.74%
5.	Indicated Range of Common Equity Cost Rates before Adjustment for Business Risks	10.25%
6.	Size Adjustment (5)	0.25%
7.	Flotation Cost Adjustment (6)	0.13%
8.	Indicated Range of Common Equity Cost Rates	10.25% - 10.63%
9.	Recommended Range of Common Equity Cost Rates	10.25% - 10.65%

Notes:
(1) From Schedule DWD-3.
(2) From page 1 of Schedule DWD-4.
(3) From page 1 of Schedule DWD-5.
(4) From page 1 of Schedule DWD-7.
(5) Business risk adjustment to reflect Aqua Ohio, Inc.'s greater business risk due to its small size relative to the proxy group as detailed in the accompanying direct testimony.

Proxy Group of Eight Water Utilities
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2011 - 2015, Inclusive

	2015	2014	2013	2012	2011	
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$2,269.476	$2,156.407	$2,058.747	$1,998.358	$1,926.369	
SHORT-TERM DEBT	$95.003	$72.459	$95.589	$60.594	$89.698	
TOTAL CAPITAL EMPLOYED	$2,364.479	$2,228.866	$2,154.336	$2,058.952	$2,016.067	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	4.89 %	5.01 %	5.19 %	5.36 %	5.32 %	
PREFERRED STOCK	5.42 %	5.30 %	5.51 %	5.53 %	5.53 %	
CAPITAL STRUCTURE RATIOS						5 YEAR AVERAGE
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	46.25 %	45.71 %	46.24 %	49.32 %	50.91 %	47.69 %
PREFERRED STOCK	0.12	0.13	0.16	0.18	0.21	0.16
COMMON EQUITY	53.63	54.16	53.60	50.50	48.88	52.15
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	47.63 %	47.00 %	47.77 %	50.87 %	52.68 %	49.19 %
PREFERRED STOCK	0.12	0.13	0.15	0.17	0.19	0.15
COMMON EQUITY	52.25	52.87	52.08	48.96	47.13	50.66
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	4.72 %	5.44 %	4.84 %	5.47 %	5.19 %	5.13 %
MARKET / AVERAGE BOOK RATIO	224.46	212.84	206.33	187.65	181.94	202.64
DIVIDEND YIELD	2.66	2.76	2.88	3.17	3.40	2.97
DIVIDEND PAYOUT RATIO	56.71	52.46	58.35	60.42	64.84	58.56
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	10.40 %	11.38 %	10.08 %	10.12 %	9.30 %	10.26 %
TOTAL DEBT / EBITDA (3)	3.64 X	3.40 X	3.65 X	3.83 X	4.30 X	3.76 X
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	24.07 %	25.95 %	22.85 %	20.86 %	19.19 %	22.58 %
TOTAL DEBT / TOTAL CAPITAL	47.63 %	47.00 %	47.77 %	50.87 %	52.68 %	49.19 %

Notes:

(1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.

(2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.

(3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).

(4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges as a percentage of total debt.

Source of Information: Company Annual Forms 10-K

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Eight Water Utilities
2011 - 2015, Inclusive

	2015	2014	2013	2012	2011	5 YEAR AVERAGE
American States Water Co.						
Long-Term Debt	41.15 %	39.15 %	40.30 %	42.49 %	45.46 %	41.71 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	58.85	60.85	59.70	57.51	54.54	58.29
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
American Water Works Company Inc						
Long-Term Debt	53.89 %	52.70 %	52.42 %	54.30 %	55.72 %	53.81 %
Preferred Stock	0.11	0.15	0.17	0.21	0.27	0.18
Common Equity	46.00	47.15	47.41	45.49	44.01	46.01
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Aqua America Inc						
Long-Term Debt	50.76 %	49.45 %	50.32 %	53.41 %	54.11 %	51.61 %
Preferred Stock	0.00	0.00	0.01	0.01	0.02	0.01
Common Equity	49.24	50.55	49.67	46.58	45.87	48.38
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
California Water Service Group						
Long-Term Debt	44.69 %	40.46 %	42.03 %	50.39 %	52.04 %	45.92 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	55.31	59.54	57.97	49.61	47.96	54.08
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Connecticut Water Service Inc						
Long-Term Debt	44.54 %	45.91 %	47.34 %	49.03 %	53.05 %	47.97 %
Preferred Stock	0.19	0.20	0.20	0.21	0.30	0.22
Common Equity	55.27	53.89	52.46	50.76	46.65	51.81
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Middlesex Water Co.						
Long-Term Debt	40.44 %	41.55 %	41.37 %	43.53 %	43.12 %	42.00 %
Preferred Stock	0.69	0.71	0.88	1.02	1.06	0.87
Common Equity	58.87	57.74	57.75	55.45	55.82	57.13
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
SJW Corp						
Long-Term Debt	50.03 %	51.66 %	51.09 %	55.39 %	56.63 %	52.96 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	49.97	48.34	48.91	44.61	43.37	47.04
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
York Water Co.						
Long-Term Debt	44.46 %	44.81 %	45.07 %	45.98 %	47.16 %	45.50 %
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	55.54	55.19	54.93	54.02	52.84	54.50
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Eight Water Utilities						
Long-Term Debt	46.25 %	45.71 %	46.24 %	49.32 %	50.91 %	47.69 %
Preferred Stock	0.12	0.13	0.16	0.18	0.21	0.16
Common Equity	53.63	54.16	53.60	50.50	48.88	52.15
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information
Annual Forms 10-K

Aqua Ohio, Inc.
Indicated Common Equity Cost Rate Using the Discounted Cash Flow Model for
Proxy Group of Eight Water Utilities

Proxy Group of Eight Water Utilities	[1] Average Dividend Yield (1)	[2] Value Line Projected Five Year Growth in EPS (2)	[3] Reuters Mean Consensus Projected Five Year Growth Rate in EPS	[4] Zack's Five Year Projected Growth Rate in EPS	[5] Yahoo! Finance Projected Five Year Growth in EPS	[6] Average Projected Five Year Growth in EPS (3)	[7] Adjusted Dividend Yield (4)	[8] Indicated Common Equity Cost Rate (5)
American States Water Co.	2.15 %	6.00 %	3.85 %	3.80 %	3.85 %	4.38 %	2.20 %	6.58 %
American Water Works Company Inc	2.20	8.00	7.60	7.40	7.60	7.65	2.28	9.93
Aqua America Inc	2.25	7.00	5.85	6.20	5.85	6.23	2.32	8.55
California Water Service Group	2.63	6.00	9.05	9.10	9.05	8.30	2.74	11.04
Connecticut Water Service Inc	2.45	4.50	5.00	5.00	5.00	4.88	2.51	7.39
Middlesex Water Co.	2.58	3.50	N/A	N/A	2.70	3.10	2.62	5.72
SJW Corp	2.26	1.50	N/A	N/A	14.00	7.75	2.35	10.10
York Water Co.	2.11	6.00	N/A	N/A	4.90	5.45	2.17	7.62
							Average	8.37 %
							Median	8.08 %
							Average of Mean and Median	8.23 %

NA= Not Available

Notes:

(1) Indicated dividend at 04/29/2016 divided by the average closing price of the last 60 trading days ending 04/29/2016 for each company.

(2) From pages 2 through 10 of this Schedule.

(3) Average of columns 2 through 5 excluding negative growth rates.

(4) This reflects a growth rate component equal to one-half the conclusion of growth rate (from column 6) x column 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for American States Water Co., 2.15% x (1+(1/2 x 4.38%)) = 2.20%.

(5) Column 6 + column 7.

Source of Information:

Value Line Investment Survey
www.reuters.com Downloaded on 04/29/2016
www.zacks.com Downloaded on 04/29/2016
www.yahoo.com Downloaded on 04/29/2016

AMER. STATES WATER NYSE-AWR

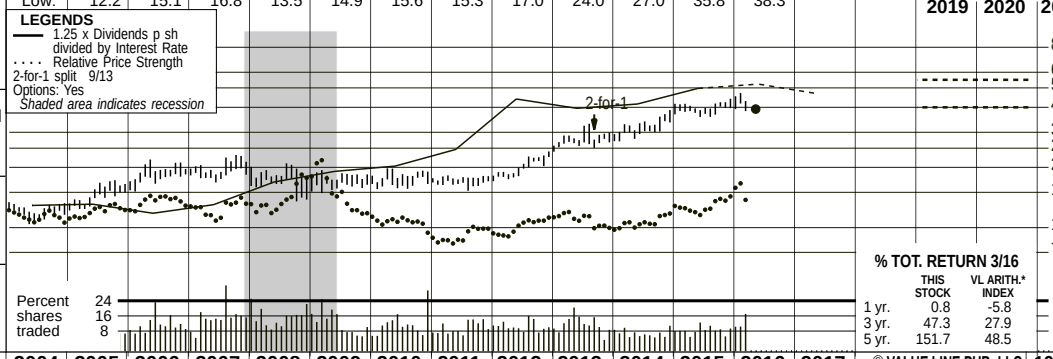
RECENT PRICE **39.23** | P/E RATIO **23.4** (Trailing: 24.5 Median: 20.0) | RELATIVE P/E RATIO **1.28** | DIV'D YLD **2.4%** | VALUE LINE

TIMELINESS 3 Lowered 4/1/16
SAFETY 2 Raised 7/20/12
TECHNICAL 1 Raised 3/18/16
BETA .75 (1.00 = Market)

High:	17.3	21.9	23.1	21.0	19.4	19.8	18.2	24.1	33.1	38.7	44.1	47.2
Low:	12.2	15.1	16.8	13.5	14.9	15.6	15.3	17.0	24.0	27.0	35.8	38.3

Target Price Range
2019 | 2020 | 2021

LEGENDS
— 1.25 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
2-for-1 split 9/13
Options: Yes
Shaded area indicates recession



2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+40%)	*11%*
Low	40	(Nil)	*4%*

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	0	0	0	0	0	0	0	0	0
Options	0	1	0	5	3	4	2	11	1
to Sell	3	1	1	5	3	3	1	2	1

Institutional Decisions

	2Q2015	3Q2015	4Q2015
to Buy	80	91	88
to Sell	82	89	88
Hld's(000)	23707	23779	23016

% TOT. RETURN 3/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	0.8	-5.8
3 yr.	47.3	27.9
5 yr.	151.7	48.5

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
6.08	6.53	6.89	6.99	6.81	7.03	7.88	8.75	9.21	9.74	10.71	11.12	12.12	12.19	12.17	12.56	*12.60*	*13.00*	Revenues per sh	*15.80*
1.10	1.26	1.27	1.04	1.11	1.32	1.45	1.65	1.69	1.70	2.11	2.13	2.48	2.65	2.67	2.81	*2.95*	*3.05*	"Cash Flow" per sh	*3.80*
.64	.67	.67	.39	.53	.66	.67	.81	.78	.81	1.11	1.12	1.41	1.61	1.57	1.60	*1.70*	*1.80*	Earnings per sh A	*2.25*
.43	.43	.44	.44	.44	.45	.46	.48	.50	.51	.52	.55	.64	.76	.83	.87	*.92*	*.97*	Div'd Decl'd per sh B■	*1.25*
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	*2.35*	*2.35*	Cap'l Spending per sh	*2.75*
6.37	6.61	7.02	6.98	7.51	7.86	8.32	8.77	8.97	9.70	10.13	10.84	11.80	12.72	13.24	12.77	*13.55*	*14.10*	Book Value per sh	*16.50*
30.24	30.24	30.36	30.42	33.50	33.60	34.10	34.46	34.60	37.06	37.26	37.70	38.53	38.72	38.29	36.50	*36.50*	*36.50*	Common Shs Outst'g C	*37.00*
15.9	16.7	18.3	31.9	23.2	21.9	27.7	24.0	22.6	21.2	15.7	15.4	14.3	17.2	20.1	24.6	*Bold figures are*		Avg Ann'l P/E Ratio	*20.0*
1.03	.86	1.00	1.82	1.23	1.17	1.50	1.27	1.36	1.41	1.00	.97	.91	.97	1.06	1.25	*Value Line*		Relative P/E Ratio	*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%	*estimates*		Avg Ann'l Div'd Yield	*2.7%*

CAPITAL STRUCTURE as of 12/31/15
Total Debt $325.8 mill. **Due in 5 Yrs** $41.6 mill.
LT Debt $325.5 mill. **LT Interest** $21.1 mill.
(41% of Cap'l)

Leases, Uncapitalized: Annual rentals $2.5 mill.
Pension Assets-12/15 $142.2 mill. **Oblig.** $168.9 mill.
Pfd Stock None.

Common Stock 36,523,179 shs.
as of 2/22/16

MARKET CAP: $1.4 billion (Mid Cap)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		19-21
268.6	301.4	318.7	361.0	398.9	419.3	466.9	472.1	465.8	458.6	*460*	*475*	Revenues ($mill)	*585*
23.1	28.0	26.8	29.5	41.4	42.0	54.1	62.7	61.1	60.5	*62.0*	*66.0*	Net Profit ($mill)	*83.0*
40.5%	42.6%	37.8%	38.9%	43.2%	41.7%	39.9%	36.3%	38.4%	38.4%	*38.0%*	*37.0%*	Income Tax Rate	*36.0%*
12.2%	8.5%	6.9%	3.2%	5.8%	2.0%	2.5%	- -	2.5%	.5%	*1.0%*	*1.5%*	AFUDC % to Net Profit	*1.0%*
48.6%	46.9%	46.2%	45.9%	44.3%	45.4%	42.2%	39.8%	39.1%	41.1%	*42.0%*	*42.5%*	Long-Term Debt Ratio	*57.0%*
51.4%	53.1%	53.8%	54.1%	55.7%	54.6%	57.8%	60.2%	60.9%	58.9%	*58.0%*	*57.5%*	Common Equity Ratio	*43.0%*
551.6	569.4	577.0	665.0	677.4	749.1	787.0	818.4	832.6	791.5	*860*	*900*	Total Capital ($mill)	*1060*
750.6	776.4	825.3	866.4	855.0	896.5	917.8	981.5	1003.5	1060.8	*1105*	*1150*	Net Plant ($mill)	*1370*
6.0%	6.7%	6.4%	5.9%	7.6%	7.1%	8.3%	8.9%	8.6%	9.0%	*9.0%*	*8.5%*	Return on Total Cap'l	*9.5%*
8.1%	9.3%	8.6%	8.2%	11.0%	10.3%	11.9%	12.7%	12.0%	13.0%	*12.5%*	*13.0%*	Return on Shr. Equity	*13.5%*
8.1%	9.3%	8.6%	8.2%	11.0%	10.3%	11.9%	12.7%	12.0%	13.0%	*12.5%*	*13.0%*	Return on Com Equity	*13.5%*
2.7%	3.9%	3.1%	3.2%	5.8%	5.3%	6.6%	6.8%	5.7%	6.0%	*6.0%*	*6.0%*	Retained to Com Eq	*6.0%*
67%	58%	64%	61%	47%	49%	45%	47%	53%	54%	*54%*	*54%*	All Div'ds to Net Prof	*56%*

CURRENT POSITION ($MILL.)	2013	2014	12/31/15
Cash Assets	38.2	76.0	4.4
Accts Receivable	23.8	18.8	18.9
Other	129.6	114.7	109.4
Current Assets	191.6	209.5	132.7
Accts Payable	49.8	41.9	50.6
Debt Due	6.3	.3	.3
Other	44.8	57.1	72.6
Current Liab.	100.9	99.3	123.5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	6.0%	4.5%	*4.5%*
"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%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	110.6	120.7	130.9	109.9	472.1
2014	102.0	115.6	138.3	109.9	465.8
2015	100.9	114.6	133.0	110.1	458.6
2016	*100*	*115*	*135*	*110*	*460*
2017	*102*	*120*	*140*	*113*	*475*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	.35	.43	.53	.30	1.61
2014	.28	.39	.54	.36	1.57
2015	.32	.41	.56	.31	1.60
2016	*.31*	*.47*	*.59*	*.33*	*1.70*
2017	*.35*	*.50*	*.60*	*.35*	*1.80*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.14	.14	.1775	.1775	.64
2013	.1775	.1775	.2025	.2025	.76
2014	.2025	.2025	.213	.213	.83
2015	.213	.213	.224	.224	.87
2016	.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 9.8% of out. shares; Vanguard, 8.5%; off. & dir. 1.5%. (4/15 Proxy). Chairman: Lloyd Ross. President & Chief Executive Officer: Robert J. Sprowls. Inc: CA. Address: 630 East Foothill Boulevard, San Dimas, CA 91773. Tel: 909-394-3600. Internet: www.aswater.com.

Shares of American States Water continue to struggle. For the second straight quarter, the stock has underperformed both the water industry and the market averages. Since our January report, the value of the equity has declined 4% while many water utility stocks posted double-digit gains, and the S&P 500 Index rose about 2%.

We think the company's earnings may break out of their narrow range in 2016. Over the past three years, American States' share net has been close to $1.60. Last year's bottom line was held back due to an accounting practice regarding a water revenue adjusted mechanism (WRAP). In brief, a utility can't recognize certain revenues that can't be collected over a certain time. The funds will eventually be recouped, but have to be deferred. Indeed, management estimates that $1.4 million in revenues earned in 2015, will be realized in 2016. All told, the company's earnings should increase a solid 6%, to $1.70 a share. We are introducing our 2017 share-earnings estimate at $1.80, another healthy 6% increase.

Results at American States' nonregulated business will be the wild card. Through its ASUS subsidiary, the company installs and operates water facilities at major U.S. Army bases. The contracts to run the camps are for 50 years and enable American States to earn more than it does on its regulated operations. The armed forces are privatizing this business at many bases, and ASUS continues to bid on new proposals. Since the firm has enjoyed success here, we are assuming it will land more contracts in the future. In 2015, this business accounted for 20% of the company's net income, a percentage that may well increase in the coming years.

This equity is an Average (3) selection for year-ahead performance. AWR gets good marks for Safety (2: Above Average), Financial Strength (A), Earnings Predictability (90), and also has a low Beta coefficient (0.75). And even though conservative accounts are willing to accept lower future payouts in return for a reduced risk profile, we do not think that the stock's potential returns through 2019-2021 are sufficient. Hence, investors can do better elsewhere on a risk-adjusted basis.

James A. Flood *April 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 May.
(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions, adjusted for splits.

Company's Financial Strength	A
Stock's Price Stability	90
Price Growth Persistence	70
Earnings Predictability	90

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AMERICAN WATER NYSE-AWK

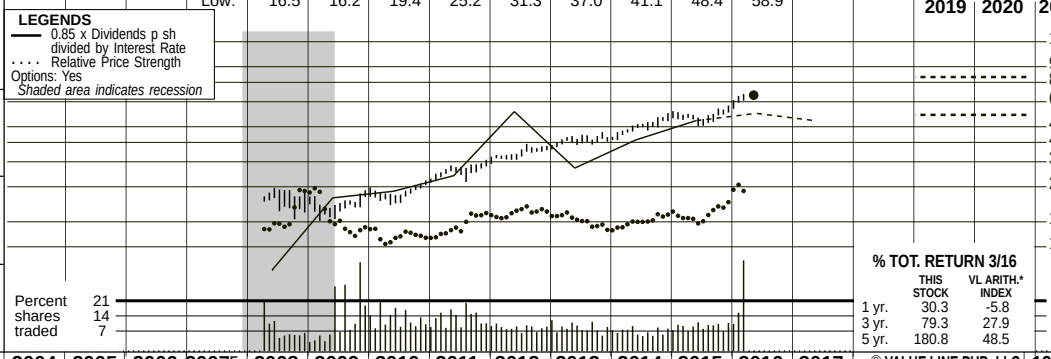
RECENT PRICE 69.05 | P/E RATIO 24.7 (Trailing: 26.2 Median: NMF) | RELATIVE P/E RATIO 1.35 | DIV'D YLD 2.1% | VALUE LINE

TIMELINESS 2 Lowered 4/8/16
SAFETY 3 New 7/25/08
TECHNICAL 2 Raised 3/18/16
BETA .70 (1.00 = Market)

High:	23.7	23.0	25.8	32.8	39.4	45.1	56.2	61.2	70.1			
Low:	16.5	16.2	19.4	25.2	31.3	37.0	41.1	48.4	58.9			

Target Price Range 2019 | 2020 | 2021

LEGENDS
— 0.85 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	85	(+25%)	8%
Low	55	(-20%)	-2%

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	0	0	1	0	0	0	0	0	0
Options	0	0	1	0	0	4	0	0	10
to Sell	0	0	1	0	0	4	0	0	0

Institutional Decisions

	2Q2015	3Q2015	4Q2015
to Buy	247	211	241
to Sell	206	220	227
Hld's(000)	145636	148013	147408

% TOT. RETURN 3/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	30.3	-5.8
3 yr.	79.3	27.9
5 yr.	180.8	48.5

2000	2001	2002	2003	2004	2005	2006	2007E	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
- -	- -	- -	- -	- -	- -	13.08	13.84	14.61	13.98	15.49	15.18	16.25	16.28	16.78	17.72	*18.70*	*19.75*	Revenues per sh	*22.30*
- -	- -	- -	- -	- -	- -	.65	d.47	2.87	2.89	3.56	3.73	4.27	4.36	4.75	5.13	*5.40*	*5.70*	"Cash Flow" per sh	*6.60*
- -	- -	- -	- -	- -	- -	d.97	d2.14	1.10	1.25	1.53	1.72	2.11	2.06	2.39	2.64	*2.80*	*3.05*	Earnings per sh A	*3.75*
- -	- -	- -	- -	- -	- -	- -	- -	.40	.82	.86	.90	1.21	.84	1.21	1.33	*1.45*	*1.57*	Div'd Decl'd per sh B■	*2.05*
- -	- -	- -	- -	- -	- -	4.31	4.74	6.31	4.50	4.38	5.27	5.25	5.50	5.33	6.51	*6.15*	*6.10*	Cap'l Spending per sh	*6.00*
- -	- -	- -	- -	- -	- -	23.86	28.39	25.64	22.91	23.59	24.11	25.11	26.52	27.39	28.25	*29.05*	*30.95*	Book Value per sh D	*34.65*
- -	- -	- -	- -	- -	- -	160.00	160.00	160.00	174.63	175.00	175.66	176.99	178.25	179.46	178.28	*179.00*	*181.00*	Common Shs Outst'g C	*187.50*
- -	- -	- -	- -	- -	- -	- -	- -	18.9	15.6	14.6	16.8	16.7	19.9	20.0	20.5	*Bold figures are*		Avg Ann'l P/E Ratio	*19.0*
- -	- -	- -	- -	- -	- -	- -	- -	1.14	1.04	.93	1.05	1.06	1.12	1.05	1.04	*Value Line*		Relative P/E Ratio	*1.20*
- -	- -	- -	- -	- -	- -	- -	- -	1.9%	4.2%	3.8%	3.1%	3.4%	2.0%	2.5%	2.5%	*estimates*		Avg Ann'l Div'd Yield	*2.8%*
						2093.1	2214.2	2336.9	2440.7	2710.7	2666.2	2876.9	2901.9	3011.3	3159.0	*3350*	*3575*	Revenues ($mill)	*4180*
						d155.8	d342.3	187.2	209.9	267.8	304.9	374.3	369.3	429.8	476.0	*500*	*550*	Net Profit ($mill)	*700*
						- -	- -	37.4%	37.9%	40.4%	39.5%	40.7%	39.1%	39.4%	39.1%	*38.5%*	*38.5%*	Income Tax Rate	*37.0%*
						- -	- -	- -	- -	- -	- -	6.2%	5.1%	5.1%	1.4%	*2.5%*	*3.0%*	AFUDC % to Net Profit	*3.0%*
						56.1%	50.9%	53.1%	56.9%	56.8%	55.7%	53.9%	52.4%	52.4%	53.7%	*55.0%*	*55.0%*	Long-Term Debt Ratio	*55.0%*
						43.9%	49.1%	46.9%	43.1%	43.2%	44.2%	46.1%	47.6%	47.4%	46.2%	*45.0%*	*45.0%*	Common Equity Ratio	*45.0%*
						8692.8	9245.7	8750.2	9289.0	9561.3	9580.3	9635.5	9940.7	10364	10911	*11610*	*12300*	Total Capital ($mill)	*14540*
						8720.6	9318.0	9991.8	10524	11059	11021	11739	12391	12900	13933	*14600*	*15400*	Net Plant ($mill)	*17200*
						NMF	NMF	3.7%	3.8%	4.4%	4.8%	5.4%	5.1%	5.5%	5.7%	*5.5%*	*6.0%*	Return on Total Cap'l	*6.0%*
						NMF	NMF	4.6%	5.2%	6.5%	7.2%	8.4%	7.8%	8.7%	9.4%	*9.5%*	*10.0%*	Return on Shr. Equity	*10.5%*
						NMF	NMF	4.6%	5.2%	6.5%	7.2%	8.4%	7.8%	8.7%	9.4%	*9.5%*	*10.0%*	Return on Com Equity	*10.5%*
						NMF	NMF	3.0%	1.8%	2.8%	3.5%	3.6%	4.7%	4.3%	4.7%	*4.5%*	*5.0%*	Retained to Com Eq	*5.0%*
						- -	- -	34%	65%	56%	52%	57%	40%	50%	50%	*52%*	*51%*	All Div'ds to Net Prof	*55%*

CAPITAL STRUCTURE as of 12/31/15
Total Debt $6544.0 mil. **Due in 5 Yrs** $1272.0 mil.
LT Debt $5862.0 mil. **LT Interest** $293.0 mil.
(54% of Cap'l)

Leases, Uncapitalized: Annual rentals $14.0 mill.
Pension Assets 12/15 $1376.0 mill
Oblig. $1584.0 mill.
Pfd Stock $12.0 mill. **Pfd Div'd** $.5 mill

Common Stock 178,008,765 shs.
as of 2/19/2016

MARKET CAP: $12.3 billion (Large Cap)

CURRENT POSITION ($MILL.)	2013	2014	12/31/15
Cash Assets	27.0	23.1	45.0
Accts Receivable	244.6	267.1	255.0
Other	523.4	638.3	357.0
Current Assets	550.4	661.4	657.0
Accts Payable	264.6	285.8	126.0
Debt Due	644.5	511.1	682.0
Other	326.4	444.1	725.0
Current Liab.	1235.5	1241.0	1533.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	- -	3.0%	*4.5%*
"Cash Flow"	- -	9.0%	*5.5%*
Earnings	- -	13.0%	*8.0%*
Dividends	- -	10.0%	*10.5%*
Book Value	- -	2.5%	*4.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	636.1	724.3	829.2	712.3	2901.9
2014	679.0	754.8	846.1	731.4	3011.3
2015	698.0	782.0	896.0	783.0	3159.0
2016	*735*	*830*	*950*	*835*	*3350*
2017	*775*	*865*	*975*	*960*	*3575*

Cal-endar	EARNINGS PER SHARE A 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	.96	.56	2.64
2016	*.46*	*.74*	*1.03*	*.57*	*2.80*
2017	*.53*	*.77*	*1.10*	*.65*	*3.05*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.23	.23	.25	.50	1.21
2013	- -	.28	.28	.28	.84
2014	.28	.31	.31	.31	1.21
2015	.31	.34	.34	.34	1.33
2016	.34				

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 16 states.) Nonregulated business assists municipalities and military bases with the maintenance and upkeep as well. Regulated operations made up 86.8% 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 an impressive run. Since our January report, the value of the stock has risen nearly 15%, or 1,300 basis points greater than the broader market averages. A partial reason for the strong showing was the company's inclusion into the S&P 500 Index. This resulted in greater demand for AWK, as specific index funds were forced to purchase the equity.

Meanwhile, a recently proposed acquisition could augur well for future takeovers. The water industry is comprised of thousands of small municipally run districts. In the recent past, bigger investor-owned utilities have been gradually absorbing hundreds of these small water authorities into their operations. Due to the vast amounts of redundancies in the industry, significant cost savings have been generated. The recent $190 million agreement to acquire the wastewater assets from the cash-strapped city of Scranton is substantially larger than previous purchases. Thus, the size of mergers could well climb as economically depressed districts struggle to raise the capital needed to be in compliance with EPA requirements. As the largest member of the group, by a wide margin, American Water stands to benefit the most from this trend.

Controlling expenses and increasing the rate base should continue to drive the utility's earnings growth. In this decade, management has been focused on lowering the company's operating and maintenance (O&M) ratio. With the exception of last year (a rise caused by the purchase of a nonregulated business), this percentage has been on the decline. Indeed, the ratio, which stood at 44% in 2010, fell to 36% in 2015, and should be reduced to 34% by 2020. Also, American Water plans on spending $1.1 billion annually over the next five years to upgrade its water infrastructure. As these expenditures are incorporated into the rate base, profits should expand.

This stock is mainly for momentum investors. AWK is favorably ranked for year-ahead performance. With the recent spike in the value of the equity, however, all the positive developments we expect from the company through 2019-2021 appear to be factored into the share price.

James A. Flood *April 15, 2016*

(A) Diluted earnings. Excludes nonrecurring losses: '08, $4.62; '09, $2.63; '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 May. 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	35

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AQUA AMERICA NYSE-WTR

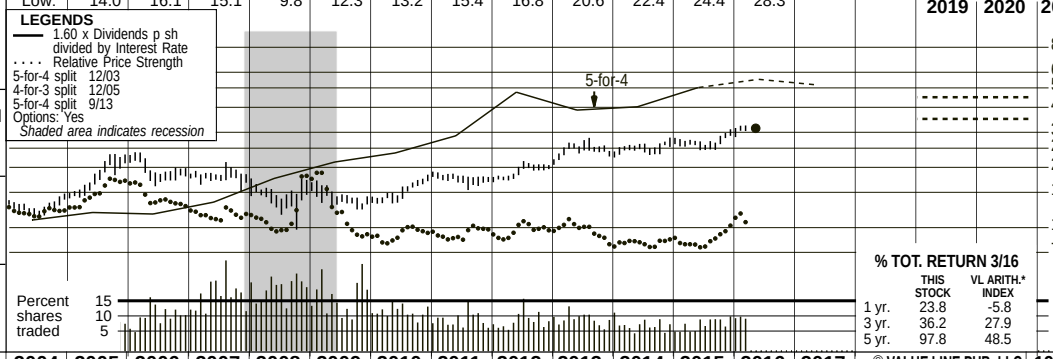
RECENT PRICE **31.39** | P/E RATIO **25.7** (Trailing: 27.5 / Median: 22.0) | RELATIVE P/E RATIO **1.40** | DIV'D YLD **2.4%** | VALUE LINE

TIMELINESS 3 Lowered 3/25/16
SAFETY 2 Raised 4/20/12
TECHNICAL 2 Raised 3/11/16
BETA .75 (1.00 = Market)

High:	23.4	23.8	21.3	17.6	17.2	18.4	19.0	21.5	28.1	28.2	31.1	32.4
Low:	14.0	16.1	15.1	9.8	12.3	13.2	15.4	16.8	20.6	22.4	24.4	28.3

Target Price Range
2019 | 2020 | 2021

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



2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	45	(+45%)	12%
Low	35	(+10%)	6%

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	1	0	1	3	0	1	0
to Sell	1	0	2	1	1	4	1	0	0

Institutional Decisions

	2Q2015	3Q2015	4Q2015
to Buy	156	166	182
to Sell	145	138	149
Hld's(000)	82530	84833	83005

% TOT. RETURN 3/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	23.8	-5.8
3 yr.	36.2	27.9
5 yr.	97.8	48.5

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	4.61	*4.80*	*5.10*	Revenues per sh	*6.05*
.61	.69	.76	.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	.46	.51	.57	.56	.57	.58	.62	.72	.83	.87	1.16	1.20	1.14	*1.35*	*1.45*	Earnings per sh A	*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 B■	*1.05*
.93	.87	.96	1.06	1.23	1.47	1.64	1.43	1.58	1.66	1.89	1.90	1.98	1.73	1.84	2.07	*2.10*	*2.10*	Cap'l Spending per sh	*2.10*
3.08	3.32	3.49	4.27	4.71	5.04	5.57	5.85	6.26	6.50	6.81	7.21	7.90	8.63	9.27	9.78	*10.90*	*11.70*	Book Value per sh	*13.10*
139.78	142.47	141.49	154.31	158.97	161.21	165.41	166.75	169.21	170.61	172.46	173.60	175.43	177.93	178.59	176.54	*177.00*	*177.00*	Common Shs Outst'g C	*177.00*
18.2	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	*Bold figures are*		Avg Ann'l P/E Ratio	*22.5*
1.18	1.21	1.29	1.40	1.33	1.69	1.87	1.70	1.50	1.54	1.34	1.34	1.39	1.19	1.09	1.19	*Value Line*		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%	*estimates*		Avg Ann'l Div'd Yield	*2.7%*

CAPITAL STRUCTURE as of 12/31/15
Total Debt $1795.9 mill. **Due in 5 Yrs** $441.5 mill.
LT Debt $1743.6 mill. **LT Interest** $75.4 mill.
(50% of Cap'l)

Pension Assets-12/15 $238.6 mill.
Oblig. $306.5 mill.

Pfd Stock None
Common Stock 177,042,334 shares
as of 2/10/16

MARKET CAP: $5.6 billion (Large Cap)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		19-21
533.5	602.5	627.0	670.5	726.1	712.0	757.8	768.6	779.9	814.2	*850*	*900*	Revenues ($mill)	*1070*
92.0	95.0	97.9	104.4	124.0	144.8	153.1	205.0	213.9	201.8	*240*	*255*	Net Profit ($mill)	*310*
39.6%	38.9%	39.7%	39.4%	39.2%	32.9%	39.0%	10.0%	10.5%	6.9%	*10.0%*	*11.0%*	Income Tax Rate	*25.0%*
--	--	--	--	--	--	--	1.1%	2.4%	3.1%	*3.0%*	*3.0%*	AFUDC % to Net Profit	*3.0%*
51.6%	55.4%	54.1%	55.6%	56.6%	52.7%	52.7%	48.9%	48.5%	50.3%	*51.0%*	*52.0%*	Long-Term Debt Ratio	*52.0%*
48.4%	44.6%	45.9%	44.4%	43.4%	47.3%	47.3%	51.1%	51.5%	49.7%	*49.0%*	*48.0%*	Common Equity Ratio	*48.0%*
1904.4	2191.4	2306.6	2495.5	2706.2	2646.8	2929.7	3003.6	3216.0	3469.5	*3930*	*4330*	Total Capital ($mill)	*4850*
2506.0	2792.8	2997.4	3227.3	3469.3	3612.9	3936.2	4167.3	4402.0	4688.9	*4930*	*5170*	Net Plant ($mill)	*5500*
6.4%	5.9%	5.7%	5.6%	5.9%	6.9%	6.6%	8.0%	7.8%	6.9%	*7.5%*	*7.0%*	Return on Total Cap'l	*7.5%*
10.0%	9.7%	9.3%	9.4%	10.6%	11.6%	11.0%	13.4%	12.9%	11.7%	*12.5%*	*12.5%*	Return on Shr. Equity	*13.5%*
10.0%	9.7%	9.3%	9.4%	10.6%	11.6%	11.0%	13.4%	12.9%	11.7%	*12.5%*	*12.5%*	Return on Com Equity	*13.5%*
3.7%	3.2%	2.8%	2.7%	3.7%	4.6%	4.3%	6.7%	6.1%	4.7%	*7.0%*	*7.0%*	Retained to Com Eq	*4.5%*
63%	67%	70%	72%	65%	60%	61%	50%	52%	60%	*55%*	*55%*	All Div'ds to Net Prof	*60%*

CURRENT POSITION ($MILL.)	2013	2014	12/31/15
Cash Assets	5.1	4.1	3.2
Receivables	95.4	97.0	99.1
Inventory (AvgCst)	11.4	12.8	12.4
Other	59.8	38.6	13.7
Current Assets	171.7	152.5	128.4
Accts Payable	65.8	60.0	56.5
Debt Due	123.0	70.0	52.3
Other	78.1	95.3	84.4
Current Liab.	266.9	225.3	193.2

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	5.0%	2.5%	*5.5%*
"Cash Flow"	8.0%	8.0%	*6.0%*
Earnings	8.5%	13.0%	*7.0%*
Dividends	8.0%	7.5%	*9.0%*
Book Value	7.0%	7.0%	*6.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	180.0	195.7	204.3	188.6	768.6
2014	182.7	195.3	210.5	191.4	779.9
2015	190.3	205.8	221.0	197.1	814.2
2016	*197*	*215*	*233*	*205*	*850*
2017	*205*	*225*	*255*	*215*	*900*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	.26	.30	.36	.24	1.16
2014	.24	.31	.38	.27	1.20
2015	.27	.32	.38	.17	1.14
2016	*.28*	*.35*	*.42*	*.30*	*1.35*
2017	*.30*	*.37*	*.46*	*.32*	*1.45*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
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				

BUSINESS: Aqua America, Inc. is the holding company for water and wastewater utilities that serve approximately three million residents in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, Florida, Indiana, and five other states. Has 1,617 employees. Acquired AquaSource, 7/13; North Maine Utilities, 7/15; and others. Water supply revenues '2015: residential, 69%; commercial, 18%; industrial & other, 13%. Officers and directors own less than 1% of the common stock; Vangurad Group, 7.7%; Blackrock, Inc, 7.3%; State Street Capital, 5.5% (3/16 Proxy). President & Chief Executive Officer: Christopher Franklin. Incorporated: Pennsylvania. Address: 762 West Lancaster Avenue, Bryn Mawr, Pennsylvania 19010. Tel.: 610-525-1400. Internet: www.aquaamerica.com.

Aqua America's earnings should get back on track this year. In the final quarter of 2015, the water utility had to take a $0.12-a-share impairment charge related to the poor performance of a non regulated business. In any case, with the help of rate relief in several states and synergies realized from previous acquisitions, we expect Aqua's share earnings to recover to $1.35 in 2016, an 18% increase over 2014's depressed level. Next year, we think the bottom line should climb a solid 7%, to $1.45 a share.

Acquisitions may play an even more important role in the company's strategy. The American water market consists of over 50,000 major-to-midsized water districts. Because there are many redundancies in the industry, large utilities can buy small ones and realize significant cost savings when absorbing them into existing operations. Since 2000, Aqua has bought almost 300 small water operations. Management recently indicated a proclivity to acquire much-bigger systems. The likely candidates are water districts in financially depressed areas. There are many municipally-run water utilities that don't have the needed capital required to modernize aging infrastructures and to make costly improvements mandated by the EPA. The city of Scranton, PA recently agreed to sell its wastewater assets to American Water Works for $190 million. Last year, both Indiana and New Jersey passed laws making the process easier for a strong water company to take over a weak one. These larger potential purchases should enable Aqua to maintain healthy earnings and dividend growth for the foreseeable future.

Finances will probably weaken modestly. Aqua was able to keep its debt-to-total capital ratio below 50% for 2013 and 2014 before exceeding it in 2015. With a capital budget of about $1.1 billion over the next three years, we think the ratio will be about 52% through late decade.

The stock's strong performance has removed much of its appeal. Since mid-August, shares of Aqua have outpaced the S&P 500 Index by about 1,700 basis points. Thus, most of the company's positive attributes appear to be fully reflected in the current price of the equity.

James A. Flood *April 15, 2016*

(A) Diluted egs. Excl. nonrec. gains: '00, 2¢; '01, 2¢; '02, 4¢; '03, 3¢; '12, 18¢. Excl. gain from disc. operations: '12, 7¢; '13, 9¢; '14, 11¢. May not sum due to rounding. Next earnings report due early May.
(B) Dividends historically paid in early March, June, Sept. & Dec. ■ Div'd. reinvestment plan available (5% discount).
(C) In millions, adjusted for stock splits.

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

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CALIFORNIA WATER NYSE-CWT

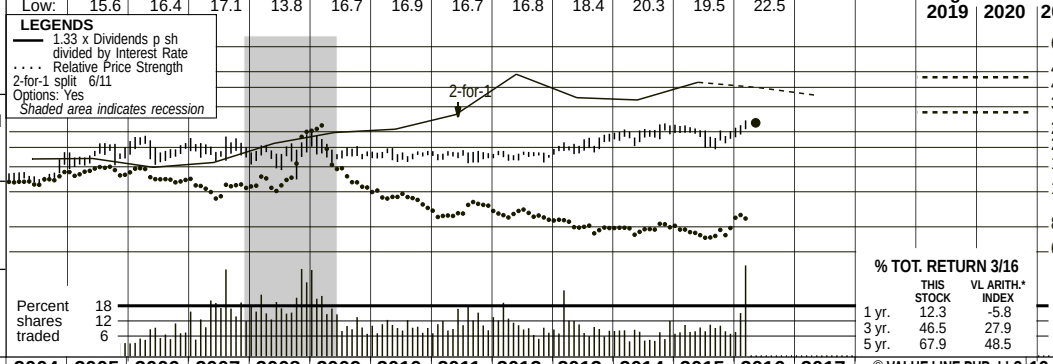
RECENT PRICE **26.59** | P/E RATIO **25.8** (Trailing: 28.3 / Median: 20.0) | RELATIVE P/E RATIO **1.41** | DIV'D YLD **2.6%** | VALUE LINE

TIMELINESS 3 Raised 1/8/16
SAFETY 3 Lowered 7/27/07
TECHNICAL 2 Lowered 4/15/16
BETA .75 (1.00 = Market)

High:	21.1	22.9	22.7	23.3	24.1	19.8	19.4	19.3	23.4	26.4	26.0	27.3
Low:	15.6	16.4	17.1	13.8	16.7	16.9	16.7	16.8	18.4	20.3	19.5	22.5

Target Price Range
2019 | 2020 | 2021

LEGENDS
— 1.33 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
2-for-1 split 6/11
Options: Yes
Shaded area indicates recession



2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	45	(+70%)	*16%*
Low	30	(+15%)	*6%*

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	0	0	1	1	1	1	1	1	1
Options	0	0	0	10	10	1	0	0	0
to Sell	0	0	1	0	0	0	0	0	0

Institutional Decisions

	2Q2015	3Q2015	4Q2015
to Buy	82	69	69
to Sell	66	74	75
Hld's(000)	29659	28655	30579

% TOT. RETURN 3/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	12.3	-5.8
3 yr.	46.5	27.9
5 yr.	67.9	48.5

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
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	*12.60*	*13.00*	Revenues per sh	*14.70*
1.26	1.10	1.32	1.26	1.42	1.52	1.36	1.56	1.86	1.93	1.93	2.07	2.32	2.21	2.47	2.22	*2.35*	*2.65*	"Cash Flow" per sh	*3.25*
.66	.47	.63	.61	.73	.74	.67	.75	.95	.98	.91	.86	1.02	1.02	1.19	.94	*1.05*	*1.35*	Earnings per sh A	*1.60*
.55	.56	.56	.56	.57	.57	.58	.58	.59	.59	.60	.62	.63	.64	.65	.67	*.69*	*.71*	Div'd Decl'd per sh B ■	*.99*
1.23	2.04	2.91	2.19	1.87	2.01	2.14	1.84	2.41	2.66	2.97	2.83	3.04	2.58	2.76	3.69	*3.65*	*3.55*	Cap'l Spending per sh	*3.30*
6.45	6.48	6.56	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	*13.55*	*14.25*	Book Value per sh C	*16.00*
30.29	30.36	30.36	33.86	36.73	36.78	41.31	41.33	41.45	41.53	41.67	41.82	41.98	47.74	47.81	47.88	*48.00*	*48.00*	Common Shs Outst'g D	*50.00*
19.6	27.1	19.8	22.1	20.1	24.9	29.2	26.1	19.8	19.7	20.3	21.3	17.9	20.1	19.7	24.8	*Bold figures are*		Avg Ann'l P/E Ratio	*23.0*
1.27	1.39	1.08	1.26	1.06	1.33	1.58	1.39	1.19	1.31	1.29	1.34	1.14	1.13	1.04	1.26	*Value Line*		Relative P/E Ratio	*1.45*
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%	*estimates*		Avg Ann'l Div'd Yield	*2.6%*

CAPITAL STRUCTURE as of 12/31/15
Total Debt $552.5 mill. **Due in 5 Yrs** $175.3 mill.
LT Debt $512.3 mill. **LT Interest** $27.2 mill.
(44% of Cap'l)

Pension Assets-12/15 $328.6 mill.
Oblig. $501.9 mill.

Pfd Stock None

Common Stock 47,875,000 shs.

MARKET CAP: $1.3 billion (Mid Cap)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		19-21
334.7	367.1	410.3	449.4	460.4	501.8	560.0	584.1	597.5	588.3	*605*	*625*	Revenues ($mill) E	*735*
25.6	31.2	39.8	40.6	37.7	36.1	42.6	47.3	56.7	45.0	*50.0*	*65.0*	Net Profit ($mill)	*80.0*
37.4%	39.9%	37.7%	40.3%	39.5%	40.5%	37.5%	30.3%	33.0%	35.3%	*32.0%*	*32.0%*	Income Tax Rate	*35.0%*
10.6%	8.3%	8.6%	7.6%	4.2%	7.6%	8.0%	4.3%	2.7%	4.2%	*5.0%*	*5.0%*	AFUDC % to Net Profit	*5.0%*
43.5%	42.9%	41.6%	47.1%	52.4%	51.7%	47.8%	41.6%	40.1%	44.4%	*44.5%*	*43.5%*	Long-Term Debt Ratio	*42.0%*
55.9%	56.6%	58.4%	52.9%	47.6%	48.3%	52.2%	58.4%	59.9%	55.6%	*55.5%*	*56.5%*	Common Equity Ratio	*58.0%*
670.1	674.9	690.4	794.9	914.7	931.5	908.2	1024.9	1045.9	1154.5	*1175*	*1210*	Total Capital ($mill)	*1375*
941.5	1010.2	1112.4	1198.1	1294.3	1381.1	1457.1	1515.8	1590.4	1701.8	*1775*	*1815*	Net Plant ($mill)	*1900*
5.2%	5.9%	7.1%	6.5%	5.5%	5.5%	6.3%	6.0%	6.3%	5.1%	*5.5%*	*6.5%*	Return on Total Cap'l	*7.0%*
6.8%	8.1%	9.9%	9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	7.0%	*7.5%*	*9.5%*	Return on Shr. Equity	*10.0%*
6.8%	8.1%	9.9%	9.6%	8.6%	8.0%	9.0%	7.9%	9.1%	7.0%	*7.5%*	*9.5%*	Return on Com Equity	*10.0%*
1.0%	1.8%	3.8%	3.8%	3.0%	2.3%	3.4%	3.4%	4.1%	2.0%	*2.5%*	*4.5%*	Retained to Com Eq	*4.0%*
86%	77%	61%	60%	66%	71%	62%	56%	55%	71%	*66%*	*52%*	All Div'ds to Net Prof	*62%*

CURRENT POSITION ($MILL.)	2013	2014	12/31/15
Cash Assets	27.5	19.6	8.8
Other	112.0	134.5	118.8
Current Assets	139.5	154.1	127.6
Accts Payable	55.1	59.4	66.4
Debt Due	54.7	85.7	40.2
Other	56.8	72.6	41.9
Current Liab.	166.6	217.7	148.5

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	4.0%	5.0%	*2.0%*
"Cash Flow"	6.0%	5.5%	*5.0%*
Earnings	5.0%	4.0%	*6.0%*
Dividends	1.5%	2.0%	*6.5%*
Book Value	5.5%	5.0%	*4.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.)E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	111.4	154.6	184.4	133.7	584.1
2014	110.5	158.4	191.2	137.4	597.5
2015	122.0	144.4	183.5	138.4	588.3
2016	*125*	*150*	*190*	*140*	*605*
2017	*130*	*155*	*195*	*145*	*625*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2013	.01	.28	.61	.12	1.02
2014	d.11	.36	.70	.24	1.19
2015	.03	.21	.52	.18	.94
2016	*.03*	*.22*	*.60*	*.20*	*1.05*
2017	*.05*	*.35*	*.65*	*.30*	*1.35*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.1575	.1575	.1575	.1575	.63
2013	.16	.16	.16	.16	.64
2014	.1625	.1625	.1625	.1625	.65
2015	.1675	.1675	.1675	.1675	.67
2016	.1725				

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 (9/08). 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.

The California Water Service Group did not have the best financial showing in 2015. Both the top and bottom lines contracted on a year-over-year basis. Revenues of $588 million slipped nearly $10 million from the prior-year tally. The earnings decline was even more pronounced. Annual share net shrank by a quarter, to $0.94, its lowest figure in almost five years. Indeed, the ongoing pressures of the California drought, alongside higher maintenance and pension expenses, contributed to the lackluster performance.

Our approach to 2016 is a cautious one. Namely, the unbilled revenues figure (incurred expenses that CWT is waiting to be reimbursed for) is slightly thinner than for previous quarters. On top of that, with a higher tax rate in place, bottom-line growth will probably be limited. As a result, we have trimmed our 2016 share-net estimate by $0.15, to $1.05.

However, earnings should see a meaningful rebound in 2017. At the moment, unfavorable drought conditions seem to be on their last leg. As the environment improves, related expenses will probably abate. Too, the main catalyst on the horizon is the California General Rate Case, which has an ask of just below $700 million. All in all, we think CWT will earn $1.35 a share in 2017. Revenues should get a lift, as well.

Further capital investments might be in the cards over the pull to late decade. Improvements to the infrastructure, water supply, and tanks are at the top of the list. We think there is the potential for some acquisition activity, too. CWT is in good financial shape, with decent liquidity and a debt profile in line with the industry's average.

The dividend remains a feature here. At present, CWT shares yield 2.6%, somewhat low compared to historical levels. Nevertheless, we think the payout ratio will be consistent through late decade, with steady dividend hikes.

California Water shares are neutrally ranked for relative year-ahead price performance. What's more, investors with a long-term bent will find better options elsewhere, at this juncture, as total return potential three to five years hence is below the *Value Line* median.

Nicholas P. Patrikis *April 15, 2016*

(A) Basic EPS. Excl. nonrecurring gain (loss): '00, (4¢); '01, 2¢; '02, 4¢; '11, 4¢. Next earnings report due late May.
(B) Dividends historically paid in late Feb., May, Aug., and Nov. ■ Div'd reinvestment plan available.
(C) Incl. intangible assets. In '15 : $7.5 mill., $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	35
Earnings Predictability	85

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CONNECTICUT WATER NDQ-CTWS

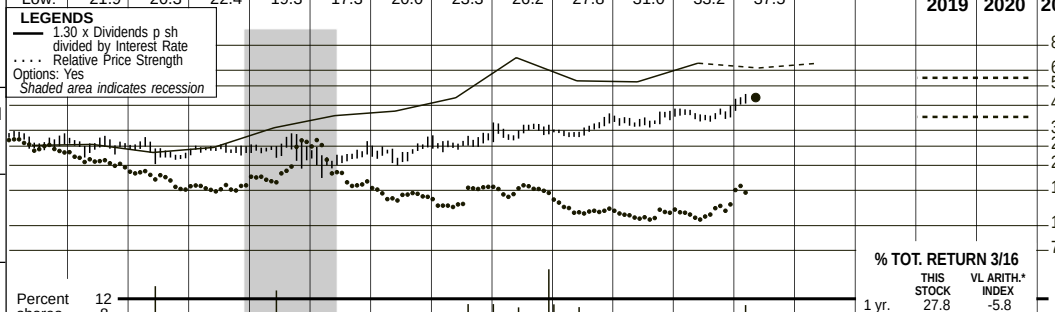
RECENT PRICE 43.81 | P/E RATIO 21.4 (Trailing: 21.5 Median: 21.0) | RELATIVE P/E RATIO 1.17 | DIV'D YLD 2.4% | VALUE LINE

TIMELINESS 3 Lowered 3/25/16
SAFETY 3 New 1/18/13
TECHNICAL 2 Raised 3/11/16
BETA .60 (1.00 = Market)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
High:	28.2	27.7	25.6	29.0	26.4	27.9	29.1	32.8	36.4	37.5	39.9	45.7
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

Target Price Range 2019 | 2020 | 2021

LEGENDS
— 1.30 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
Options: Yes
Shaded area indicates recession



2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+25%)	8%
Low	35	(-20%)	-2%

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	2Q2015	3Q2015	4Q2015
to Buy	54	50	51
to Sell	37	34	44
Hld's(000)	4391	4527	4535

Percent shares traded 12 8 4

% TOT. RETURN 3/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	27.8	-5.8
3 yr.	68.8	27.9
5 yr.	100.2	48.5

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
5.70	5.93	5.77	5.91	6.04	5.81	5.68	7.05	7.24	6.93	7.65	7.93	9.47	8.29	8.45	8.58	*9.00*	*9.20*	Revenues per sh	*13.35*
1.73	1.78	1.78	1.89	1.91	1.62	1.52	1.90	1.95	1.93	2.04	2.11	2.64	2.63	2.97	3.18	*3.25*	*3.45*	"Cash Flow" per sh	*3.60*
1.09	1.13	1.12	1.15	1.16	.88	.81	1.05	1.11	1.19	1.13	1.13	1.53	1.66	1.92	2.04	*2.10*	*2.20*	Earnings per sh A	*2.35*
.79	.80	.81	.83	.84	.85	.86	.87	.88	.90	.92	.94	.96	.98	1.01	1.05	*1.09*	*1.30*	Div'd Decl'd per sh B■	*1.35*
1.43	1.86	1.98	1.49	1.58	1.96	1.96	2.24	2.44	3.28	3.06	2.61	2.79	3.02	4.11	4.29	*5.80*	*4.35*	Cap'l Spending per sh	*3.35*
8.92	9.25	10.06	10.46	10.94	11.52	11.60	11.95	12.23	12.67	13.05	13.50	20.95	17.92	18.83	20.02	*21.15*	*21.75*	Book Value per sh D	*22.90*
7.28	7.65	7.94	7.97	8.04	8.17	8.27	8.38	8.46	8.57	8.68	8.76	8.85	11.04	11.12	11.19	*11.35*	*11.50*	Common Shs Outst'g C	*12.00*
18.2	21.5	24.3	23.5	22.9	28.6	29.0	23.0	22.2	18.4	20.7	23.0	19.4	18.4	17.5	17.6	*Bold figures are*		Avg Ann'l P/E Ratio	*19.0*
1.18	1.10	1.33	1.34	1.21	1.52	1.57	1.22	1.34	1.23	1.32	1.44	1.23	1.03	.92	.89	*Value Line*		Relative P/E Ratio	*1.20*
4.0%	3.3%	3.0%	3.0%	3.1%	3.4%	3.6%	3.6%	3.6%	4.1%	3.9%	3.6%	3.2%	3.2%	3.0%	2.9%	*estimates*		Avg Ann'l Div'd Yield	*3.0%*

CAPITAL STRUCTURE as of 12/31/15
Total Debt $180.5 mill. **Due in 5 Yrs** $19.3 mill.
LT Debt $177.7 mill. **LT Interest** $7.0 mill.
(44% of Cap'l)

Leases, Uncapitalized: Annual rentals $.3 mill.
Pension Assets-12/15 $56.6 mill. **Oblig.** $75.8 mill.

Pfd Stock $0.8 mill. **Pfd Divd** NMF

Common Stock 11,192,882 shs.

MARKET CAP: $500 million (Small Cap)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		19-21
46.9	59.0	61.3	59.4	66.4	69.4	83.8	91.5	94.0	96.0	*102*	*106*	Revenues ($mill)	*160*
6.7	8.8	9.4	10.2	9.8	9.9	13.6	18.3	21.3	22.7	*24.0*	*25.5*	Net Profit ($mill)	*28.0*
23.5%	32.4%	27.2%	19.5%	35.2%	41.3%	32.0%	28.0%	14.4%	4.2%	*7.5%*	*19.0%*	Income Tax Rate	*27.0%*
- -	- -	1.7%	- -	- -	- -	1.7%	2.0%	2.4%	2.2%	*2.5%*	*2.5%*	AFUDC % to Net Profit	*2.0%*
44.4%	47.8%	46.9%	50.6%	49.5%	53.2%	49.0%	46.9%	45.7%	44.2%	*45.0%*	*46.0%*	Long-Term Debt Ratio	*47.5%*
55.1%	51.8%	52.7%	49.1%	50.2%	46.5%	50.8%	52.9%	54.1%	55.8%	*55.0%*	*54.0%*	Common Equity Ratio	*52.5%*
174.1	193.2	196.5	221.3	225.6	254.2	364.6	373.6	386.8	401.7	*435*	*465*	Total Capital ($mill)	*525*
268.1	284.3	302.3	325.2	344.2	362.4	447.9	471.9	506.9	546.3	*565*	*590*	Net Plant ($mill)	*675*
4.9%	5.5%	5.9%	5.5%	5.4%	4.9%	4.8%	5.9%	6.4%	6.6%	*6.5%*	*6.0%*	Return on Total Cap'l	*6.5%*
6.9%	8.7%	9.0%	9.3%	8.6%	8.3%	7.3%	9.2%	10.1%	10.1%	*10.0%*	*10.0%*	Return on Shr. Equity	*10.5%*
7.0%	8.7%	9.1%	9.4%	8.7%	8.3%	7.3%	9.2%	10.2%	10.1%	*10.0%*	*10.0%*	Return on Com Equity	*10.5%*
NMF	1.6%	1.9%	2.3%	1.6%	1.4%	2.8%	3.8%	4.8%	4.9%	*5.0%*	*5.0%*	Retained to Com Eq	*4.5%*
105%	82%	79%	76%	81%	83%	62%	59%	53%	52%	*52%*	*51%*	All Div'ds to Net Prof	*57%*

CURRENT POSITION ($MILL.)	2013	2014	12/31/15
Cash Assets	18.4	2.5	.7
Accounts Receivable	12.3	12.0	11.0
Other	16.2	21.7	15.3
Current Assets	46.9	36.2	27.0
Accts Payable	10.8	10.0	11.9
Debt Due	4.1	4.4	2.8
Other	7.8	9.2	22.2
Current Liab.	22.7	23.6	36.9

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	4.0%	4.5%	*6.0%*
"Cash Flow"	4.0%	7.5%	*4.0%*
Earnings	4.0%	9.0%	*4.5%*
Dividends	2.0%	2.0%	*4.5%*
Book Value	6.5%	9.5%	*2.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	19.7	22.6	27.6	21.6	91.5
2014	20.3	25.4	27.6	20.7	94.0
2015	20.0	26.6	28.4	21.0	96.0
2016	*22.5*	*27.5*	*30.0*	*22.0*	*102*
2017	*23.0*	*28.0*	*32.0*	*23.0*	*106*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	.24	.39	.86	.17	1.66
2014	.27	.67	.76	.22	1.92
2015	.28	.77	.79	.20	2.04
2016	*.32*	*.68*	*.85*	*.25*	*2.10*
2017	*.34*	*.70*	*.88*	*.28*	*2.20*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ 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	.2675				

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.ctwater.com.

Connecticut Water Service reported fourth-quarter results roughly in line with our expectations. Earnings of $0.20 for the period were merely a penny shy of our call. Likewise, revenues of $21.0 million missed by a fraction. Nonetheless, year-over-year top- and bottom-line comparisons were solid, giving investors reason to cheer.

Shares of Connecticut Water have risen sharply since our January review. The stock is up approximately 15% in price over the past three months, etching a new all-time high along the way.

Dividend growth is encouraging. The company has indeed stepped up it's game, increasing the payout growth rate in both 2014 and 2015. This trend ought to help the annual return catch up with the stock's steady ascent. At that point, the yield will likely hover around the 3% level over the next several years, in our view.

We are introducing our 2017 top- and bottom-line estimates. Connecticut Water should continue to reap the rewards of the repair tax credit, as well as a lower tax rate. Additionally, benefits from the pipeline in Mansfield (currently under way), a project to meet the long-term water supply for the University of Connecticut and surrounding community, ought to be noticeable next year. All told, we look for 2017 revenue and earnings of $106 million and $2.20 a share, respectively.

Capital expenditures ought to remain elevated in the near-to-intermediate term. Management has set aside $66 million for major projects this year. These endeavors include the upgrading of the wastewater facility, along with repairing its aging infrastructure. Once the latter is completed, spending should return to more-normal levels.

This equity is pegged to move in line with the broader market averages over the coming six to 12 months. On top of that, these shares do not stand out for the long haul. Much of the growth we envision over the 3- to 5-year time frame appears to already be baked into the stock price, as Connecticut Water is trading well within our recently raised Target Price Range. We recommend investors remain on the sidelines, for now.

Nicholas P. Patrikis *April 15, 2016*

(A) Diluted earnings. Next earnings report due late May.
(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.

Company's Financial Strength	B+
Stock's Price Stability	90
Price Growth Persistence	50
Earnings Predictability	85

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MIDDLESEX WATER NDQ-MSEX

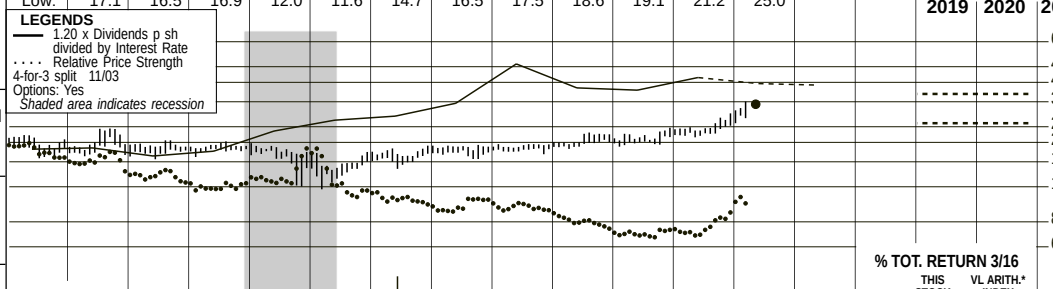
RECENT PRICE 31.05 | P/E RATIO 24.1 (Trailing: 25.5 Median: 20.0) | RELATIVE P/E RATIO 1.32 | DIV'D YLD 2.6% | VALUE LINE

TIMELINESS 2 Raised 3/18/16
SAFETY 2 New 10/21/11
TECHNICAL 2 Lowered 4/8/16
BETA .70 (1.00 = Market)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
High:	23.5	20.5	20.2	19.8	17.9	19.3	19.4	19.6	22.5	23.7	28.0	32.1
Low:	17.1	16.5	16.9	12.0	11.6	14.7	16.5	17.5	18.6	19.1	21.2	25.0

Target Price Range 2019 | 2020 | 2021

LEGENDS
— 1.20 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
4-for-3 split 11/03
Options: Yes
Shaded area indicates recession



2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	35	(+15%)	6%
Low	25	(-20%)	-2%

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	0	0	0	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	0	0	0	1	0	0	0

Institutional Decisions

	2Q2015	3Q2015	4Q2015
to Buy	43	47	41
to Sell	36	42	50
Hld's(000)	6487	6614	6584

% TOT. RETURN 3/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	40.0	-5.8
3 yr.	75.4	27.9
5 yr.	103.8	48.5

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
5.39	5.87	5.98	6.12	6.25	6.44	6.16	6.50	6.79	6.75	6.60	6.50	6.98	7.19	7.26	7.77	*8.00*	*8.00*	Revenues per sh	*9.40*
.99	1.18	1.20	1.15	1.28	1.33	1.33	1.49	1.53	1.40	1.55	1.46	1.56	1.72	1.84	1.97	*2.10*	*2.20*	"Cash Flow" per sh	*2.45*
.51	.66	.73	.61	.73	.71	.82	.87	.89	.72	.96	.84	.90	1.03	1.13	1.22	*1.30*	*1.35*	Earnings per sh A	*1.40*
.61	.62	.63	.65	.66	.67	.68	.69	.70	.71	.72	.73	.74	.75	.76	.78	*.81*	*.84*	Div'd Decl'd per sh B■	*.91*
1.32	1.25	1.59	1.87	2.54	2.18	2.31	1.66	2.12	1.49	1.90	1.50	1.36	1.26	1.40	1.59	*1.75*	*1.80*	Cap'l Spending per sh	*2.05*
6.98	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	*13.25*	*13.95*	Book Value per sh	*15.60*
10.11	10.17	10.36	10.48	11.36	11.58	13.17	13.25	13.40	13.52	15.57	15.70	15.82	15.96	16.12	16.23	*16.25*	*16.50*	Common Shs Outst'g C	*17.00*
28.7	24.6	23.5	30.0	26.4	27.4	22.7	21.6	19.8	21.0	17.8	21.7	20.8	19.7	18.5	19.1	*Bold figures are*		Avg Ann'l P/E Ratio	*21.0*
1.87	1.26	1.28	1.71	1.39	1.46	1.23	1.15	1.19	1.40	1.13	1.36	1.32	1.11	.97	.97	*Value Line*		Relative P/E Ratio	*1.30*
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%	*estimates*		Avg Ann'l Div'd Yield	*3.0%*
						81.1	86.1	91.0	91.2	102.7	102.1	110.4	114.8	117.1	126.0	*130*	*132*	Revenues ($mill)	*160*
						10.0	11.8	12.2	10.0	14.3	13.4	14.4	16.6	18.4	20.0	*21.0*	*22.0*	Net Profit ($mill)	*24.0*
						33.4%	32.6%	33.2%	34.1%	32.1%	32.7%	33.9%	34.1%	35.0%	34.5%	*35.0%*	*35.0%*	Income Tax Rate	*34.0%*
						- -	- -	- -	- -	6.8%	6.1%	3.4%	1.9%	1.7%	1.9%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.5%*
						49.5%	49.0%	45.6%	46.6%	43.1%	42.3%	41.5%	40.4%	40.5%	39.4%	*39.0%*	*40.0%*	Long-Term Debt Ratio	*40.0%*
						47.5%	49.6%	51.8%	52.1%	55.8%	56.6%	57.4%	58.7%	58.8%	59.8%	*61.0%*	*60.0%*	Common Equity Ratio	*60.0%*
						264.0	268.8	259.4	267.9	310.5	312.5	316.5	321.4	335.8	345.4	*355*	*365*	Total Capital ($mill)	*440*
						317.1	333.9	366.3	376.5	405.9	422.2	435.2	446.5	465.4	481.9	*495*	*515*	Net Plant ($mill)	*565*
						5.1%	5.6%	5.8%	5.0%	5.7%	5.2%	5.4%	5.9%	6.3%	6.6%	*6.5%*	*7.0%*	Return on Total Cap'l	*6.0%*
						7.5%	8.6%	8.6%	7.0%	8.1%	7.5%	7.8%	8.7%	9.2%	9.6%	*10.0%*	*10.0%*	Return on Shr. Equity	*9.0%*
						7.8%	8.7%	8.9%	7.0%	8.2%	7.5%	7.8%	8.7%	9.3%	9.6%	*10.0%*	*10.0%*	Return on Com Equity	*9.0%*
						1.3%	1.8%	2.0%	.1%	2.1%	1.0%	1.4%	2.4%	3.1%	3.5%	*3.5%*	*3.5%*	Retained to Com Eq	*3.0%*
						84%	79%	78%	98%	75%	87%	83%	73%	67%	63%	*62%*	*61%*	All Div'ds to Net Prof	*65%*

CAPITAL STRUCTURE as of 12/31/15
Total Debt 144.9 mill. **Due in 5 Yrs** $30.8 mill.
LT Debt $136.2 mill. **LT Interest** $5.6 mill.

(39% of Cap'l)

Pension Assets-12/15 $52.9 mill. **Oblig.** $72.5 mill.
Pfd Stock $2.4 mill. **Pfd Div'd:** $.1 mill.

Common Stock 16,225,000 shs.

MARKET CAP: $500 million (Small Cap)

CURRENT POSITION ($MILL.)	2013	2014	12/31/15
Cash Assets	4.8	2.7	3.5
Other	21.0	20.2	20.9
Current Assets	25.8	22.9	24.4
Accts Payable	6.3	6.4	6.5
Debt Due	33.8	24.9	8.7
Other	12.6	12.6	13.1
Current Liab.	52.7	43.9	28.3

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%	*5.0%*
Earnings	5.0%	5.5%	*3.5%*
Dividends	1.5%	1.5%	*3.0%*
Book Value	4.5%	3.0%	*4.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) 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	*29.5*	*32.5*	*35.5*	*32.5*	*130*
2017	*30.0*	*33.0*	*36.0*	*33.0*	*132*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	.20	.28	.36	.19	1.03
2014	.20	.29	.42	.22	1.13
2015	.22	.31	.41	.28	1.22
2016	*.23*	*.33*	*.45*	*.29*	*1.30*
2017	*.25*	*.34*	*.46*	*.30*	*1.35*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ 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	.76
2015	.1925	.1925	.1925	.19875	.78
2016	.19875				

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., 6.6% (4/15 proxy). Add.: 1500 Ronson Road, Iselin, NJ 08830. Tel.: 732-634-1500. Internet: www.middlesexwater.com.

Middlesex Water Company shares rose more than 15% in price over the past three months. The stock has been trending higher since the middle of 2015, piggybacking off a string of better-than-expected financial results. Indeed, MSEX traded at an all-time high during the period, at $32 per share.

Financials continue to impress. The company ended the year on the right foot, registering high single-digit top- and bottom-line growth, on an annual basis. Full-year revenues increased to $126 million (approximately 8% year over year), while share net ticked up $0.09 (nearly 9%) from the prior-year figure, to $1.22. Rate increases and greater weather-driven customer demand from the company's New Jersey systems were primarily responsible for the strong performance.

We are optimistic about 2016 and 2017 earnings prospects, despite steadily increasing operations and maintenance costs. The recently approved rate hike from New Jersey regulators will be in effect through this year, boosting revenues. Though expenses are a concern, namely employee benefits, retirement, and healthcare, we think MSEX is doing a solid job navigating the waters. All things considered, we are lifting our 2016 earnings estimate by a dime, to $1.30 a share. Meanwhile, we are introducing our 2017 share-net forecast of $1.35.

Dividend growth ought to persist over the pull to late decade. The company has a pristine track record of payout hikes, and as of last year, ramped up the rate at which it will increase. Thus, we have tweaked our model to incorporate dividend growth of 2¢ per year, rather than the traditional 1¢ rise. At present, however, the yield is less appealing than investors may be used to, due largely to the recent surge in price. Over the long haul, we think a 3.0% annual return is likely in the cards.

Middlesex shares are ranked to outperform the broader market averages over the coming six to 12 months. Conversely, investors with an eye to late decade may want to stay on the sidelines, for now, as much of the gains we envision out to 2019-2021 appear to already be baked into the stock price, rendering capital appreciation potential subpar.

Nicholas P. Patrikis *April 15, 2016*

(A) Diluted earnings. May not sum due to rounding. Next earnings report due late May.
(B) Dividends historically paid in mid-Feb., May, Aug., and November.■ Div'd reinvestment plan available.
(C) In millions, adjusted for splits.

Company's Financial Strength	B++
Stock's Price Stability	95
Price Growth Persistence	40
Earnings Predictability	80

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SJW CORP. NYSE-SJW

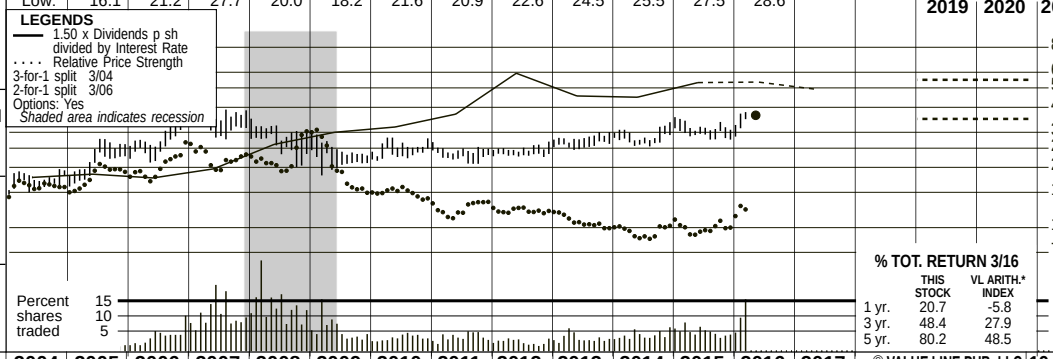
RECENT PRICE **36.41** | P/E RATIO **18.2** (Trailing: 19.8 Median: 24.0) | RELATIVE P/E RATIO **0.99** | DIV'D YLD **2.2%** | VALUE LINE

TIMELINESS **2** Raised 3/11/16
SAFETY **3** New 4/22/11
TECHNICAL **1** Raised 4/1/16
BETA .75 (1.00 = Market)

High:	27.8	45.3	43.0	35.1	30.4	28.2	26.8	26.9	30.1	33.7	35.7	37.9
Low:	16.1	21.2	27.7	20.0	18.2	21.6	20.9	22.6	24.5	25.5	27.5	28.6

Target Price Range
2019 | 2020 | 2021

LEGENDS
— 1.50 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
3-for-1 split 3/04
2-for-1 split 3/06
Options: Yes
Shaded area indicates recession



2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+50%)	13%
Low	35	(-5%)	2%

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	1	0	1	0	0	0	3	0	0
Options	0	0	0	0	0	0	0	9	0
to Sell	1	0	0	0	0	0	0	0	0

Institutional Decisions

	2Q2015	3Q2015	4Q2015
to Buy	63	61	43
to Sell	49	44	59
Hld's(000)	10749	9038	8694

% TOT. RETURN 3/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	20.7	-5.8
3 yr.	48.4	27.9
5 yr.	80.2	48.5

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
6.74	7.45	7.97	8.20	9.14	9.86	10.35	11.25	12.12	11.68	11.62	12.85	14.01	13.73	15.76	14.97	*15.10*	*15.25*	Revenues per sh	*18.50*
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	*3.85*	*3.95*	"Cash Flow" per sh	*3.95*
.58	.77	.78	.91	.87	1.12	1.19	1.04	1.08	.81	.84	1.11	1.18	1.12	2.54	1.85	*1.80*	*1.95*	Earnings per sh A	*2.00*
.41	.43	.46	.49	.51	.53	.57	.61	.65	.66	.68	.69	.71	.73	.75	.78	*.82*	*.85*	Div'd Decl'd per sh B■	*1.05*
1.89	2.63	2.06	3.41	2.31	2.83	3.87	6.62	3.79	3.17	5.65	3.75	5.67	4.68	5.02	5.24	*5.35*	*5.50*	Cap'l Spending per sh	*5.00*
7.90	8.17	8.40	9.11	10.11	10.72	12.48	12.90	13.99	13.66	13.75	14.20	14.71	15.92	17.75	18.83	*19.00*	*19.75*	Book Value per sh	*22.40*
18.27	18.27	18.27	18.27	18.27	18.27	18.28	18.36	18.18	18.50	18.55	18.59	18.67	20.17	20.29	20.38	*20.50*	*21.00*	Common Shs Outst'g C	*23.00*
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	16.6	*Bold figures are*		Avg Ann'l P/E Ratio	*22.0*
2.15	.95	.94	.88	1.04	1.05	1.27	1.77	1.58	1.91	1.85	1.33	1.30	1.37	.59	.84	*Value Line*		Relative P/E Ratio	*1.40*
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%	*estimates*		Avg Ann'l Div'd Yield	*2.3%*
						189.2	206.6	220.3	216.1	215.6	239.0	261.5	276.9	319.7	305.1	*310*	*320*	Revenues ($mill)	*425*
						22.2	19.3	20.2	15.2	15.8	20.9	22.3	23.5	51.8	37.9	*37.5*	*40.0*	Net Profit ($mill)	*45.0*
						40.8%	39.4%	39.5%	40.4%	38.8%	41.1%	41.1%	38.7%	32.5%	38.1%	*39.0%*	*39.5%*	Income Tax Rate	*38.0%*
						2.1%	2.7%	2.3%	2.0%	- -	- -	- -	- -	2.0%	1.0%	*1.5%*	*1.5%*	AFUDC % to Net Profit	*1.5%*
						41.8%	47.7%	46.0%	49.4%	53.7%	56.6%	55.0%	51.1%	51.6%	49.8%	*50.5%*	*51.5%*	Long-Term Debt Ratio	*51.5%*
						58.2%	52.3%	54.0%	50.6%	46.3%	43.4%	45.0%	48.9%	48.4%	50.2%	*49.5%*	*48.5%*	Common Equity Ratio	*48.5%*
						391.8	453.2	470.9	499.6	550.7	607.9	610.2	656.2	744.5	764.6	*790*	*855*	Total Capital ($mill)	*1065*
						541.7	645.5	684.2	718.5	785.5	756.2	831.6	898.7	963.0	1036.8	*1100*	*1200*	Net Plant ($mill)	*1325*
						7.0%	5.7%	5.8%	4.4%	4.3%	4.9%	5.0%	5.0%	8.3%	6.3%	*6.0%*	*6.0%*	Return on Total Cap'l	*5.5%*
						9.7%	8.2%	8.0%	6.0%	6.2%	7.9%	8.1%	7.3%	14.4%	9.9%	*9.5%*	*9.5%*	Return on Shr. Equity	*9.0%*
						9.7%	8.2%	8.0%	6.0%	6.2%	7.9%	8.1%	7.3%	14.4%	9.9%	*9.5%*	*9.5%*	Return on Com Equity	*9.0%*
						5.2%	3.5%	3.3%	1.2%	1.2%	3.1%	3.3%	2.8%	10.2%	5.7%	*5.0%*	*5.5%*	Retained to Com Eq	*4.0%*
						46%	57%	59%	80%	80%	61%	59%	62%	29%	42%	*45%*	*45%*	All Div'ds to Net Prof	*60%*

CAPITAL STRUCTURE as of 12/31/15
Total Debt $418.9 mill. **Due in 5 Yrs** $21.2 mill.
LT Debt $380.8 mill. **LT Interest** $21.0 mill.
(50% of Cap'l)

Leases, Uncapitalized: Annual rentals $6.6 mill.

Pension Assets-12/15 $105.0 mill. **Oblig.** $164.3 mill.

Pfd Stock None.

Common Stock 20,381,949 shs.

MARKET CAP: $750 million (Small Cap)

CURRENT POSITION ($MILL.)	2013	2014	12/31/15
Cash Assets	2.3	2.4	5.2
Accts Receivable	14.5	15.0	16.4
Other	22.9	50.7	51.8
Current Assets	39.7	68.1	73.4
Accts Payable	12.6	7.0	16.2
Debt Due	23.0	13.8	38.1
Other	23.6	23.9	25.3
Current Liab.	59.2	44.7	79.6

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	5.0%	4.5%	*3.5%*
"Cash Flow"	6.5%	10.0%	*2.5%*
Earnings	6.5%	15.0%	*1.5%*
Dividends	4.0%	2.5%	*6.0%*
Book Value	6.0%	5.0%	*6.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	50.1	74.2	85.2	67.4	276.9
2014	54.6	70.4	125.4	69.3	319.7
2015	62.1	72.4	83.0	87.6	305.1
2016	*65.0*	*75.0*	*90.0*	*80.0*	*310*
2017	*67.0*	*78.0*	*92.0*	*83.0*	*320*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2013	.07	.37	.44	.24	1.12
2014	.04	.34	1.88	.28	2.54
2015	.23	.36	.46	.80	1.85
2016	*.20*	*.40*	*.60*	*.60*	*1.80*
2017	*.25*	*.45*	*.65*	*.60*	*1.95*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2012	.1775	.1775	.1775	.1775	.71
2013	.1825	.1825	.1825	.1825	.73
2014	.1875	.1875	.1875	.1875	.75
2015	.1950	.1950	.1950	.1950	.78
2016	.2025				

BUSINESS: 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.

SJW Corp. ended the year on a strong note. The water utility delivered better-than-expected top- and bottom-line results for the fourth quarter. Revenues of $87.6 million bested our target by roughly $15 million. Similarly, net income of $0.80 a share for the period came in well above the Street's and our estimate. Indeed, the outperformance can be partly attributed to the accumulation of lost revenue at the end of 2015, as a result of Mandatory Conservation Revenue Adjustment Memorandum. This form of revenue recognition helped bolster financials this year, and ought to continue to do so going forward. What's more, investors have taken notice of the favorable operating environment, sending the stock price more than 20% higher over the past three months, establishing a new 52-week high.

The stage is set for a profitable 2016 and beyond. Despite embarking on the fourth consecutive year of drought conditions, which have undoubtedly raised costs overall, the company has actually experienced lower water production expenses of late. Meanwhile, selling and administrative costs, as well as pension expenses, should begin to cool. In addition, the General Rate Case proceeding may be another positive for the bottom line, even with substantial capital investments on tap. On balance, we are raising our full-year 2016 earnings estimate by $0.25, to $1.80 a share. Too, we are introducing our 2017 projection at $1.95 per share.

SJW Corp. pays a decent dividend. At the recent quotation, the payout yields a somewhat unimpressive 2.2%. That said, the distribution is poised to increase year-after-year, like the company has done throughout its operating history. Moreover, we anticipate a similarly healthy yield over the 3- to 5-year stretch.

Shares of SJW Corp. have been raised two notches for Timeliness, to 2, and are now favorably ranked for relative year ahead price performance. We think there is some room to run in the near-term, as investors may look to piggyback off of strong earnings results. Conversely, this issue offers little upside potential for the pull to 2019-2021. SJW stock is already trading above the lower-end of our Target Price Range.

Nicholas P. Patrikis *April 15, 2016*

(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 May. Quarterly earnings may not add due to rounding.
(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions, adjusted for stock splits.

Company's Financial Strength	B+
Stock's Price Stability	85
Price Growth Persistence	20
Earnings Predictability	50

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YORK WATER NDQ-YORW

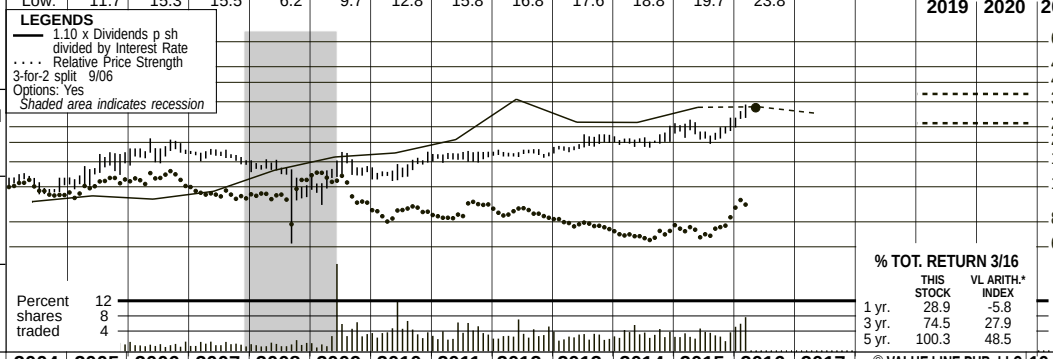
RECENT PRICE 29.87 | P/E RATIO 29.6 (Trailing: 30.8 Median: 24.0) | RELATIVE P/E RATIO 1.62 | DIV'D YLD 2.1% | VALUE LINE

TIMELINESS 2 Lowered 4/1/16
SAFETY 3 Lowered 7/17/15
TECHNICAL 2 Raised 3/11/16
BETA .70 (1.00 = Market)

High:	17.9	21.0	18.5	16.5	18.0	18.0	18.1	18.5	22.0	24.3	26.7	31.0
Low:	11.7	15.3	15.5	6.2	9.7	12.8	15.8	16.8	17.6	18.8	19.7	23.8

Target Price Range 2019 | 2020 | 2021

LEGENDS
— 1.10 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
3-for-2 split 9/06
Options: Yes
Shaded area indicates recession



2019-21 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	35	(+15%)	6%
Low	25	(-15%)	-2%

Insider Decisions

	J	J	A	S	O	N	D	J	F
to Buy	0	4	1	0	0	0	0	0	0
Options	0	0	0	0	0	0	0	0	0
to Sell	0	0	0	0	0	0	0	0	0

Institutional Decisions

	2Q2015	3Q2015	4Q2015
to Buy	34	30	36
to Sell	31	27	24
Hld's(000)	3769	3840	3820

Percent shares traded 12 8 4

% TOT. RETURN 3/16

	THIS STOCK	VL ARITH.* INDEX
1 yr.	28.9	-5.8
3 yr.	74.5	27.9
5 yr.	100.3	48.5

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	© VALUE LINE PUB. LLC	19-21
- -	2.05	2.05	2.17	2.18	2.58	2.56	2.79	2.89	2.95	3.07	3.18	3.21	3.27	3.58	3.68	*4.00*	*4.40*	Revenues per sh	*5.40*
- -	.59	.57	.65	.65	.79	.77	.86	.88	.95	1.07	1.09	1.12	1.19	1.36	1.47	*1.55*	*1.70*	"Cash Flow" per sh	*1.90*
- -	.43	.40	.47	.49	.56	.58	.57	.57	.64	.71	.71	.72	.75	.89	.97	*1.00*	*1.08*	Earnings per sh A	*1.25*
- -	.34	.35	.37	.39	.42	.45	.48	.49	.51	.52	.53	.54	.55	.57	.60	*.63*	*.66*	Div'd Decl'd per sh B	*.85*
- -	.75	.66	1.07	2.50	1.69	1.85	1.69	2.17	1.18	.83	.74	.94	.76	1.10	1.08	*1.60*	*1.10*	Cap'l Spending per sh	*.85*
- -	3.79	3.90	4.06	4.65	4.85	5.84	5.97	6.14	6.92	7.19	7.45	7.73	7.98	8.15	8.52	*8.80*	*9.35*	Book Value per sh	*10.15*
- -	9.46	9.55	9.63	10.33	10.40	11.20	11.27	11.37	12.56	12.69	12.79	12.92	12.98	12.83	12.81	*12.50*	*12.00*	Common Shs Outst'g C	*12.00*
- -	17.8	26.9	24.5	25.7	26.3	31.2	30.3	24.6	21.9	20.7	23.9	24.4	26.3	23.1	23.5	*Bold figures are*		Avg Ann'l P/E Ratio	*22.5*
- -	.91	1.47	1.40	1.36	1.40	1.68	1.61	1.48	1.46	1.32	1.50	1.55	1.48	1.22	1.19	*Value Line*		Relative P/E Ratio	*1.40*
- -	4.4%	3.3%	3.2%	3.1%	2.9%	2.5%	2.8%	3.5%	3.6%	3.5%	3.1%	3.1%	2.8%	2.8%	2.6%	*estimates*		Avg Ann'l Div'd Yield	*3.4%*

CAPITAL STRUCTURE as of 12/31/15
Total Debt $87.3 mill. **Due in 5 Yrs** $30.5 mill.
LT Debt $87.3 mill. **LT Interest** $5.1 mill.
(45% of Cap'l)
Pension Assets 12/15 $31.8 mill.
Oblig. $39.5 mill.

Pfd Stock None

Common Stock 12,812,377 shs.

MARKET CAP: $375 million (Small Cap)

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		19-21
28.7	31.4	32.8	37.0	39.0	40.6	41.4	42.4	45.9	47.1	*50.0*	*53.0*	Revenues ($mill)	*65.0*
6.1	6.4	6.4	7.5	8.9	9.1	9.3	9.7	11.5	12.6	*12.5*	*13.0*	Net Profit ($mill)	*15.0*
34.4%	36.5%	36.1%	37.9%	38.5%	35.3%	37.6%	37.6%	29.8%	27.2%	*28.5%*	*28.5%*	Income Tax Rate	*32.5%*
7.2%	3.6%	10.1%	- -	1.2%	1.1%	1.1%	.8%	1.8%	1.6%	*1.0%*	*1.0%*	AFUDC % to Net Profit	*1.0%*
48.3%	46.5%	54.5%	45.7%	48.3%	47.1%	46.0%	45.1%	44.8%	44.5%	*45.0%*	*46.5%*	Long-Term Debt Ratio	*47.0%*
51.7%	53.5%	45.5%	54.3%	51.7%	52.9%	54.0%	54.9%	55.2%	55.5%	*55.0%*	*53.5%*	Common Equity Ratio	*53.0%*
126.5	125.7	153.4	160.1	176.4	180.2	184.8	188.4	189.4	196.4	*200*	*210*	Total Capital ($mill)	*230*
174.4	191.6	211.4	222.0	228.4	233.0	240.3	244.2	253.2	261.4	*270*	*275*	Net Plant ($mill)	*290*
6.2%	6.7%	5.7%	6.2%	6.5%	6.4%	6.4%	6.5%	7.4%	7.7%	*7.5%*	*7.5%*	Return on Total Cap'l	*7.5%*
9.3%	9.5%	9.2%	8.6%	9.8%	9.5%	9.3%	9.3%	11.0%	11.5%	*11.5%*	*11.5%*	Return on Shr. Equity	*12.5%*
9.3%	9.5%	9.2%	8.6%	9.8%	9.5%	9.3%	9.3%	11.0%	11.5%	*11.5%*	*11.5%*	Return on Com Equity	*12.5%*
2.2%	1.7%	1.4%	1.9%	2.7%	2.5%	2.4%	2.4%	3.9%	4.5%	*4.0%*	*4.5%*	Retained to Com Eq	*4.0%*
77%	82%	85%	78%	72%	73%	74%	74%	64%	61%	*64%*	*61%*	All Div'ds to Net Prof	*68%*

CURRENT POSITION ($MILL.)	2013	2014	12/31/15
Cash Assets	7.6	1.5	2.9
Accounts Receivable	3.8	4.0	3.5
Inventory (Avg. Cost)	.7	.8	.8
Other	3.1	4.9	4.6
Current Assets	15.2	11.2	11.8
Accts Payable	1.8	1.6	1.8
Debt Due	- -	- -	- -
Other	6.0	4.3	4.4
Current Liab.	7.8	5.9	6.2

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '13-'15 to '19-'21
Revenues	4.5%	3.0%	*7.5%*
"Cash Flow"	7.0%	6.5%	*6.0%*
Earnings	5.5%	6.0%	*6.0%*
Dividends	4.0%	2.5%	*6.5%*
Book Value	6.5%	4.5%	*3.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) 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	11.6	47.1
2016	*11.5*	*12.5*	*13.0*	*13.0*	*50.0*
2017	*12.0*	*13.0*	*13.5*	*14.5*	*53.0*

Cal-endar	EARNINGS PER SHARE A 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	*.20*	*.26*	*.28*	*.26*	*1.00*
2017	*.22*	*.27*	*.30*	*.29*	*1.08*

Cal-endar	QUARTERLY DIVIDENDS PAID B 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	.572
2015	.1495	.1495	.1495	.1555	.604
2016	.1555				

BUSINESS: The York Water Company is the oldest investor-owned regulated water utility in the United States. It has operated continuously since 1816. As of December 31, 2015, the company's average daily availability was 35.4 million gallons and its service territory had an estimated population of 194,000. Has more than 66,000 customers. Residential customers accounted for 63% of 2015 revenues; commercial and industrial (29%); other (8%). It also provides sewer billing services. Incorporated: PA. York had 108 full-time employees at 12/31/15. President/CEO: Jeffrey R. Hines. Officers/directors own 1.1% of the common stock (4/16 proxy). Address: 130 East Market Street, York, Pennsylvania 17401. Telephone: (717) 845-3601. Internet: www.yorkwater.com.

York Water shares continue to march higher. The stock rose more than 20% in value since our January full-page review, driven by a better-than-expected earnings report. Moreover, this equity has surged approximately 50% from the midway point of last year.

Several factors are contributing to York's well-performing financials. For one, IRS Tangible Property Rules, which allow for more favorable quarterly reporting rather than year end, ought to remain a tailwind to profitability. This has resulted in a lower effective tax rate and should persist over the intermediate term. Second, lower operating expenses may play a marginal role in share-net growth. Lastly, revenues are apt to get a boost from the purchase of 1,700 wastewater connections, expected to close in the back end of 2016.

All things considered, bottom-line expansion is likely in the cards for this year and next. We are leaving unaltered our 2016 earnings called, at $1.00 per share. In 2017, we look for more-pronounced high single-digit growth, to $1.08 a share, underpinned by a slightly reduced share count, as well as the abovementioned drivers.

Increased capital investments, coupled with acquisitions, augur well for growth over the long haul. Indeed, an aging infrastructure in need of upgrading should attract a large allocation of funds in the near term. Additional resources will likely be used for acquisitions. Management has indicated capital spending of roughly $20 million and $13 million in 2016 and 2017, respectively. We expect this figure to cool a bit looking out to the 2019-2021 time frame, considering major pipeline replacements should no longer be an issue.

York Water is ranked (Timeliness: 2) to outperform the broader market averages over the coming six to 12 months. Momentum accounts may still have some success here, given quarterly earnings comparisons should continue to impress. However, the prolonged run-up in price does give us pause. To that end, capital appreciation potential out to late decade is limited, even with our increased Target Price Range.

Nicholas P. Patrikis *April 15, 2016*

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

Company's Financial Strength	B+
Stock's Price Stability	90
Price Growth Persistence	50
Earnings Predictability	95

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Aqua Ohio, Inc.
Summary of Risk Premium Models for the
Proxy Group of Eight Water Utilities

	Proxy Group of Eight Water Utilities	
Predictive Risk Premium Model ™ (PRPM™) (1)	11.82	%
Risk Premium Using an Adjusted Total Market Approach (2)	9.79	%
Average	10.81	%

Notes:
(1) From page 2 of this Schedule.
(2) From page 3 of this Schedule.

Aqua Ohio, Inc.
Indicated ROE
Derived by the Predictive Risk Premium Model (1)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Proxy Group of Eight Water Utilities	LT Average Predicted Variance	Spot Predicted Variance	Average Predicted Variance	GARCH Coefficient	Predicted Risk Premium (2)	Risk-Free Rate (3)	Indicated ROE (4)
American States Water Co.	0.39%	0.38%	0.38%	1.68577	7.96%	3.53%	11.49%
American Water Works Company Inc	NMF	NMF	NMF	NMF	NMF	3.53%	NMF
Aqua America Inc	0.46%	0.28%	0.37%	2.29703	10.69%	3.53%	14.22%
California Water Service Group	0.31%	0.29%	0.30%	1.91381	7.11%	3.53%	10.64%
Connecticut Water Service Inc	0.28%	0.35%	0.32%	1.92066	7.63%	3.53%	11.16%
Middlesex Water Co.	0.28%	0.36%	0.32%	2.19705	8.77%	3.53%	12.30%
SJW Corp	0.42%	0.40%	0.41%	1.40026	7.11%	3.53%	10.64%
York Water Co.	0.44%	0.34%	0.39%	2.23828	10.99%	3.53%	14.52%
						Average	12.14%
						Median	11.49%
						Average of Mean and Median	11.82%

NMF = No Meaningful Figure

Notes:

(1) The Predictive Risk Premium Model uses historical data to generate a predicted variance and a GARCH coefficient. The historical data used are the equity risk premiums for the first available trading month on a major exchange (e.g. NYSE) through April 2016.

(2) (1+(Column [3] * Column [4]) ^12) - 1.

(3) From note 2 on page 2 of Schedule DWD-5.

(4) Column [5] + Column [6].

Aqua Ohio, Inc.
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Eight Water Utilities	
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	4.59	%
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A Rated Public Utility Bonds	0.29	(2)
3.	Adjusted Prospective Yield on A Rated Public Utility Bonds	4.88	%
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group	0.16	(3)
5.	Adjusted Prospective Bond Yield	5.04	%
6.	Equity Risk Premium (4)	4.75	
7.	Risk Premium Derived Common Equity Cost Rate	9.79	%

Notes:
(1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 9-10 of this Schedule).
(2) The average yield spread of A rated public utility bonds over Aaa rated corporate bonds of 0.29% from page 4 of this Schedule.
(3) Adjustment to reflect the A2 / A3 Moody's LT issuer rating of the proxy group of eight water companies as shown on page 5 of this Schedule. The 0.16% upward adjustment is derived by taking 1/6 of the spread between A2 and A3 Public Utility Bonds (1/6 * 0.96% = 0.16%) as derived from page 4 of this Schedule.
(4) From page 7 of this Schedule.

Aqua Ohio, Inc.
Interest Rates and Bond Spreads for
Moody's Corporate and Public Utility Bonds

Selected Bond Yields

	[1] Aaa Rated Corporate Bond	[2] A Rated Public Utility Bond	[3] Baa Rated Public Utility Bond
Apr-16	3.62 %	4.00 %	4.75 %
Mar-2016	3.82	4.16	5.12
Feb-2016	3.96	4.11	5.28
Average	3.80 %	4.09 %	5.05 %

Selected Bond Spreads

A Rated Public Utility Bonds Over Aaa Rated Corporate Bonds:
0.29 % (1)

Baa Rated Public Utility Bonds Over A Rated Public Utility Bonds:
0.96 % (2)

Notes:
(1) Column [2] - Column [1].
(2) Column [3] - Column [2].

Source of Information:
Bloomberg Professional Service

Aqua Ohio, Inc.
Comparison of Long-Term Issuer Ratings for
Proxy Group of Eight Water Utilities

	Moody's Long-Term Issuer Rating April 2016		Standard & Poor's Long-Term Issuer Rating April 2016	
Proxy Group of Eight Water Utilities	Long-Term Issuer Rating	Numerical Weighting(1)	Long-Term Issuer Rating	Numerical Weighting(1)
American States Water Co. (2)	A2	6.0	A+	5.0
American Water Works Company Inc. (3)	A3	7.0	A	6.0
Aqua America Inc (4)	NR	- -	A+	5.0
California Water Service Group (4)	NR	- -	A+	5.0
Connecticut Water Service Inc (5)	NR	- -	A	6.0
Middlesex Water Co.	NR	- -	A	6.0
SJW Corp (6)	NR	- -	A	6.0
York Water Co.	NR	- -	A-	7.0
Average	A2/A3	6.5	A	5.8

Notes:

(1) From page 6 of this Schedule.
(2) Ratings that of Golden State Water Company.
(3) Ratings that of New Jersey and Pennsylvania American Water Companies.
(4) Ratings that of California Water Service Company.
(5) Ratings that of Connecticut Water Company.
(6) Ratings that of San Jose Water Company.

Source Information: Moody's Investors Service
Standard & Poor's Global Utilities Rating Service

Numerical Assignment for
Moody's and Standard & Poor's Bond Ratings

Moody's Bond Rating	Numerical Bond Weighting	Standard & Poor's Bond Rating
Aaa	1	AAA
Aa1	2	AA+
Aa2	3	AA
Aa3	4	AA-
A1	5	A+
A2	6	A
A3	7	A-
Baa1	8	BBB+
Baa2	9	BBB
Baa3	10	BBB-
Ba1	11	BB+
Ba2	12	BB
Ba3	13	BB-
B1	14	B+
B2	15	B
B3	16	B-

Aqua Ohio, Inc.
Judgment of Equity Risk Premium for
Proxy Group of Eight Water Utilities

Line No.		Proxy Group of Eight Water Utilities
1.	Calculated equity risk premium based on the total market using the beta approach (1)	5.54 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)	3.96
3.	Average equity risk premium	4.75 %

Notes: (1) From page 8 of this Schedule.
(2) From page 11 of this Schedule.

Aqua Ohio, Inc.
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
Proxy Group of Eight Water Utilities

Line No.	Equity Risk Premium Measure	Proxy Group of Eight Water Utilities
1.	Ibbotson Equity Risk Premium (1)	5.52 %
2.	Ibbotson Equity Risk Premium based on PRPM™ (2)	7.75
3.	Equity Risk Premium Based on Value Line Summary and Index (3)	9.19
4.	Equity Risk Premium Based on S&P 500 Companies(4)	8.31
5.	Conclusion of Equity Risk Premium (5)	7.69 %
6.	Adjusted Beta (6)	0.72
7.	Forecasted Equity Risk Premium	5.54 %

Notes:

(1) Based on the arithmetic mean historical monthly returns on large company common stocks from Ibbotson® SBBI® 2016 Market Report minus the arithmetic mean monthly yield of Moody's Aaa and Aa corporate bonds from 1928-2015. (11.68% - 6.16% = 5.52%).

(2) The Predictive Risk Premium Model (PRPM) is discussed in the accompanying direct testimony. The Ibbotson equity risk premium based on the PRPM is derived by applying the PRPM to the monthly risk premiums between Ibbotson large company common stock monthly returns minus the average Aaa and Aa corporate monthly bond yields from January 1928 through April 2016.

(3) The equity risk premium based on the Value Line Summary and Index is derived from taking the projected 3-5 year total annual market return of 13.78% (described fully in note 1 of Schedule DWD-5) and subtracting the average consensus forecast of Aaa corporate bonds of 4.59% (Shown on page 3 of this Schedule). (13.78% - 4.59% = 9.19%).

(4) Using data from the Bloomberg Professional Service for the S&P 500, an expected total return of 12.90% was derived based upon expected dividend yields and long-term growth estimates as a proxy for capital appreciation.

Subtracting the average consensus forecast of Aaa corporate bonds of 4.59% results in an expected equity risk premium of 8.31%. (12.90% - 4.59% = 8.31%).

(5) Average of lines 1 through 4.

(6) Average of mean and median beta from Schedule DWD-5.

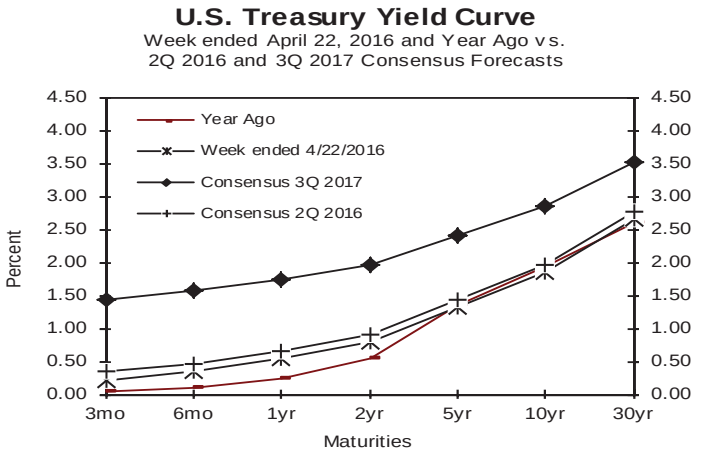
Sources of Information:

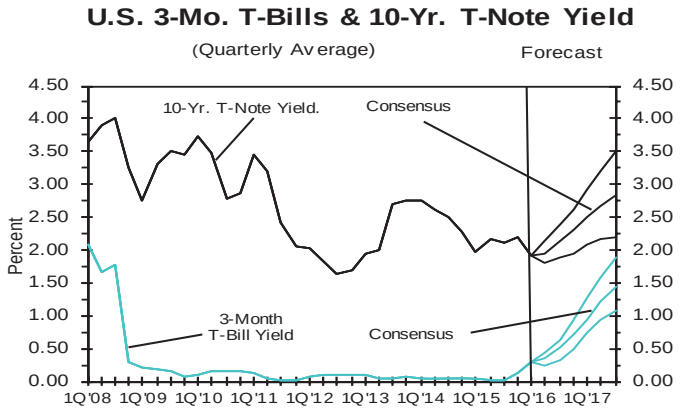
Stocks, Bonds, Bills, and Inflation - Ibbotson® SBBI® 2016 Market Report, Morningstar, Inc., 2016 Chicago, IL.
Industrial Manual and Mergent Bond Record Monthly Update.
Value Line Summary and Index
Blue Chip Financial Forecasts, May 1, 2016 and December 1, 2015
Bloomberg Professional Services

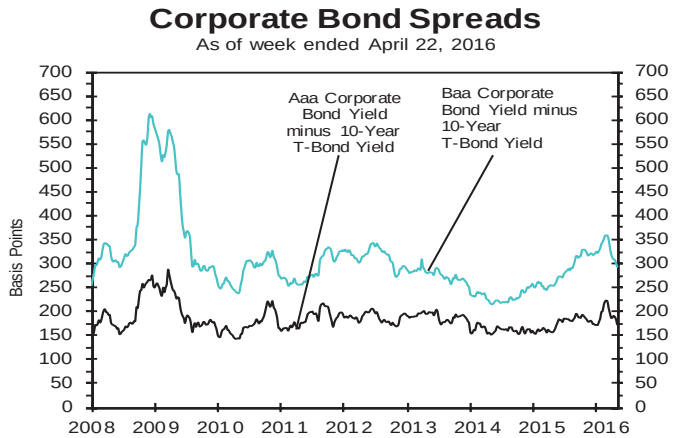
Consensus Forecasts Of U.S. Interest Rates And Key Assumptions[1]

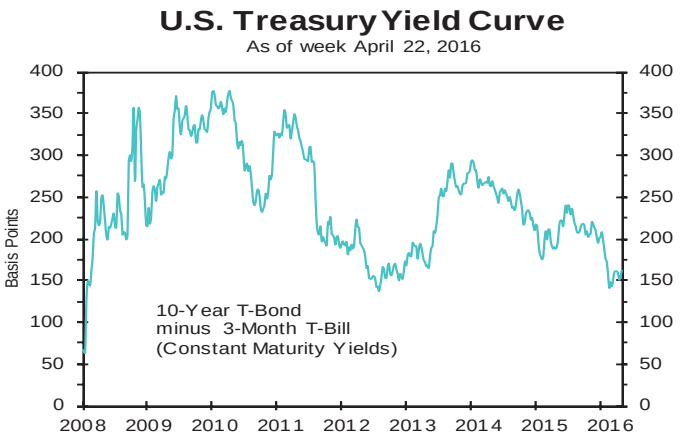
	History								Consensus Forecasts-Quarterly Avg.					
	-------Average For Week Ending------				----Average For Month---			Latest Qtr	2Q	3Q	4Q	1Q	2Q	3Q
Interest Rates	Apr. 22	Apr. 15	Apr. 8	Apr. 1	Mar.	Feb.	Jan.	1Q 2016	2016	2016	2016	2017	2017	2017
Federal Funds Rate	0.37	0.37	0.35	0.37	0.36	0.38	0.34	0.36	**0.4**	**0.6**	**0.8**	**1.0**	**1.2**	**1.5**
Prime Rate	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	**3.6**	**3.7**	**3.8**	**4.1**	**4.3**	**4.5**
LIBOR, 3-mo.	0.63	0.63	0.63	0.63	0.63	0.62	0.61	0.62	**0.7**	**0.9**	**1.0**	**1.3**	**1.5**	**1.8**
Commercial Paper, 1-mo.	0.34	0.35	0.33	0.32	0.34	0.35	0.34	0.34	**0.5**	**0.6**	**0.8**	**1.1**	**1.3**	**1.6**
Treasury bill, 3-mo.	0.22	0.22	0.23	0.23	0.30	0.31	0.26	0.29	**0.3**	**0.5**	**0.7**	**1.0**	**1.2**	**1.4**
Treasury bill, 6-mo.	0.36	0.36	0.36	0.42	0.47	0.45	0.43	0.45	**0.5**	**0.7**	**0.8**	**1.1**	**1.3**	**1.6**
Treasury bill, 1 yr.	0.54	0.54	0.55	0.62	0.66	0.53	0.54	0.58	**0.6**	**0.8**	**1.0**	**1.3**	**1.5**	**1.7**
Treasury note, 2 yr.	0.80	0.74	0.72	0.78	0.88	0.73	0.90	0.84	**0.9**	**1.1**	**1.3**	**1.5**	**1.7**	**1.9**
Treasury note, 5 yr.	1.31	1.22	1.18	1.27	1.38	1.22	1.52	1.37	**1.4**	**1.6**	**1.8**	**2.0**	**2.2**	**2.4**
Treasury note, 10 yr.	1.84	1.77	1.74	1.82	1.89	1.78	2.09	1.92	**2.0**	**2.1**	**2.3**	**2.5**	**2.7**	**2.8**
Treasury note, 30 yr.	2.65	2.58	2.56	2.63	2.68	2.62	2.86	2.72	**2.8**	**2.9**	**3.1**	**3.2**	**3.4**	**3.5**
Corporate Aaa bond	3.57	3.61	3.63	3.73	3.82	3.96	4.00	3.93	**3.8**	**4.0**	**4.1**	**4.3**	**4.5**	**4.6**
Corporate Baa bond	4.77	4.78	4.82	4.91	5.13	5.32	5.45	5.30	**5.0**	**5.2**	**5.3**	**5.5**	**5.6**	**5.8**
State & Local bonds	3.28	3.30	3.28	3.38	3.38	3.30	3.41	3.36	**3.4**	**3.6**	**3.7**	**3.9**	**4.1**	**4.2**
Home mortgage rate	3.59	3.58	3.59	3.71	3.69	3.66	3.87	3.74	**3.8**	**4.0**	**4.1**	**4.3**	**4.5**	**4.7**
	History								Consensus Forecasts-Quarterly					
	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
Key Assumptions	2014	2014	2014	2015	2015	2015	2015	2016	2016	2016	2016	2017	2017	2017
Major Currency Index	76.6	77.8	82.6	89.4	89.9	91.8	93.1	93.3	**90.8**	**91.2**	**91.9**	**92.1**	**92.0**	**91.9**
Real GDP	4.6	4.3	2.1	0.6	3.9	2.0	1.4	0.5	**2.3**	**2.4**	**2.4**	**2.3**	**2.4**	**2.3**
GDP Price Index	2.2	1.6	0.1	0.1	2.1	1.3	0.9	0.7	**1.8**	**1.9**	**1.9**	**2.0**	**2.1**	**2.0**
Consumer Price Index	1.9	0.9	-0.3	-2.9	2.4	1.4	0.8	-0.3	**1.9**	**2.2**	**2.3**	**2.3**	**2.4**	**2.3**

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Interest rate definitions are same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for Fed's Major Currency Index is from FRSR H.10 and G.5. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).









Long-Range Estimates:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2017 through 2021 and averages for the five-year periods 2017-2021 and 2022-2026. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

		----------Average For The Year----------					Five-Year Averages	
Interest Rates		**2017**	**2018**	**2019**	**2020**	**2021**	**2017-2021**	**2022-2026**
1. Federal Funds Rate	**CONSENSUS**	**2.0**	**2.8**	**3.2**	**3.3**	**3.4**	**2.9**	**3.3**
	Top 10 Average	2.7	3.6	4.0	4.0	4.0	3.7	3.8
	Bottom 10 Average	1.4	2.1	2.3	2.4	2.7	2.2	2.7
2. Prime Rate	**CONSENSUS**	**5.0**	**5.8**	**6.2**	**6.4**	**6.4**	**6.0**	**6.3**
	Top 10 Average	5.7	6.5	7.0	7.1	7.0	6.7	6.8
	Bottom 10 Average	4.4	5.2	5.5	5.7	5.8	5.3	5.7
3. LIBOR, 3-Mo.	**CONSENSUS**	**2.3**	**3.1**	**3.3**	**3.4**	**3.6**	**3.1**	**3.5**
	Top 10 Average	2.8	3.7	4.0	4.2	4.1	3.8	4.0
	Bottom 10 Average	1.8	2.4	2.6	2.7	3.0	2.5	3.0
4. Commercial Paper, 1-Mo.	**CONSENSUS**	**2.2**	**3.0**	**3.4**	**3.5**	**3.4**	**3.1**	**3.4**
	Top 10 Average	2.6	3.5	3.9	4.1	4.0	3.6	3.8
	Bottom 10 Average	1.7	2.4	2.9	2.9	2.9	2.6	2.9
5. Treasury Bill Yield, 3-Mo.	**CONSENSUS**	**2.0**	**2.8**	**3.2**	**3.3**	**3.3**	**2.9**	**3.2**
	Top 10 Average	2.8	3.5	3.9	4.0	3.9	3.6	3.7
	Bottom 10 Average	1.4	2.1	2.5	2.7	2.7	2.3	2.6
6. Treasury Bill Yield, 6-Mo.	**CONSENSUS**	**2.1**	**2.9**	**3.3**	**3.4**	**3.4**	**3.0**	**3.3**
	Top 10 Average	3.0	3.6	4.0	4.1	4.0	3.7	3.8
	Bottom 10 Average	1.5	2.2	2.6	2.8	2.8	2.4	2.7
7. Treasury Bill Yield, 1-Yr.	**CONSENSUS**	**2.3**	**3.1**	**3.4**	**3.5**	**3.5**	**3.2**	**3.4**
	Top 10 Average	3.2	3.8	4.1	4.2	4.2	3.9	4.0
	Bottom 10 Average	1.6	2.3	2.7	2.9	2.9	2.5	2.8
8. Treasury Note Yield, 2-Yr.	**CONSENSUS**	**2.5**	**3.2**	**3.5**	**3.6**	**3.7**	**3.3**	**3.7**
	Top 10 Average	3.4	4.0	4.4	4.4	4.4	4.1	4.3
	Bottom 10 Average	1.8	2.4	2.6	2.7	3.0	2.5	3.0
10. Treasury Note Yield, 5-Yr.	**CONSENSUS**	**3.0**	**3.6**	**3.8**	**3.9**	**4.0**	**3.6**	**4.0**
	Top 10 Average	3.8	4.4	4.7	4.8	4.8	4.5	4.7
	Bottom 10 Average	2.3	2.7	2.8	2.9	3.2	2.8	3.3
11. Treasury Note Yield, 10-Yr.	**CONSENSUS**	**3.4**	**3.8**	**4.1**	**4.2**	**4.3**	**4.0**	**4.3**
	Top 10 Average	4.2	4.7	5.0	5.2	5.2	4.9	5.1
	Bottom 10 Average	2.8	2.9	3.0	3.2	3.5	3.1	3.5
12. Treasury Bond Yield, 30-Yr.	**CONSENSUS**	**4.0**	**4.4**	**4.6**	**4.8**	**4.9**	**4.5**	**4.8**
	Top 10 Average	4.9	5.3	5.7	5.9	5.9	5.5	5.7
	Bottom 10 Average	3.3	3.6	3.5	3.7	3.9	3.6	3.9
13. Corporate Aaa Bond Yield	**CONSENSUS**	**5.1**	**5.5**	**5.7**	**5.8**	**5.8**	**5.6**	**5.8**
	Top 10 Average	5.7	6.2	6.5	6.6	6.6	6.3	6.5
	Bottom 10 Average	4.5	4.9	5.0	5.0	4.9	4.9	5.2
13. Corporate Baa Bond Yield	**CONSENSUS**	**6.0**	**6.5**	**6.7**	**6.8**	**6.7**	**6.5**	**6.8**
	Top 10 Average	6.8	7.2	7.6	7.7	7.6	7.4	7.5
	Bottom 10 Average	5.2	5.7	5.9	6.0	5.8	5.7	6.0
14. State & Local Bonds Yield	**CONSENSUS**	**4.5**	**4.9**	**5.0**	**5.1**	**5.1**	**4.9**	**5.1**
	Top 10 Average	5.0	5.5	5.7	5.8	5.8	5.6	5.8
	Bottom 10 Average	4.0	4.3	4.3	4.4	4.4	4.3	4.4
15. Home Mortgage Rate	**CONSENSUS**	**5.1**	**5.6**	**5.8**	**5.9**	**6.0**	**5.7**	**6.0**
	Top 10 Average	5.8	6.3	6.7	6.8	6.8	6.5	6.7
	Bottom 10 Average	4.4	4.8	4.9	5.0	5.1	4.9	5.2
A. FRB - Major Currency Index	**CONSENSUS**	**92.8**	**91.7**	**91.2**	**90.8**	**91.1**	**91.5**	**90.1**
	Top 10 Average	96.9	96.6	96.4	96.4	96.4	96.5	96.0
	Bottom 10 Average	88.4	86.6	85.7	85.1	85.7	86.3	84.2
		----------Year-Over-Year, % Change----------					Five-Year Averages	
		2017	**2018**	**2019**	**2020**	**2021**	**2017-2021**	**2022-2026**
B. Real GDP	**CONSENSUS**	**2.5**	**2.4**	**2.2**	**2.2**	**2.3**	**2.3**	**2.2**
	Top 10 Average	2.9	2.8	2.6	2.6	2.6	2.7	2.5
	Bottom 10 Average	2.2	1.8	1.8	1.9	1.9	1.9	2.0
C. GDP Chained Price Index	**CONSENSUS**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.1**	**2.0**
	Top 10 Average	2.3	2.5	2.4	2.3	2.2	2.3	2.2
	Bottom 10 Average	1.8	1.8	1.9	1.9	1.9	1.9	1.9
D. Consumer Price Index	**CONSENSUS**	**2.3**	**2.4**	**2.3**	**2.3**	**2.3**	**2.3**	**2.2**
	Top 10 Average	2.8	2.8	2.7	2.6	2.5	2.7	2.5
	Bottom 10 Average	2.0	2.0	2.0	2.0	2.1	2.0	2.0

Aqua Ohio, Inc.
Derivation of Mean Equity Risk Premium Based on a Study
Using Holding Period Returns of Public Utilities

Line No.		Over A Rated Moody's Public Utility Bonds (1)
1.	Arithmetic Mean Holding Period Returns on the Standard & Poor's Utility Index 1928-2015 (2):	10.49 %
2.	Arithmetic Mean Yield on Moody's A Rated Public Utility Yields 1928-2015	(6.64)
3.	Historical Equity Risk Premium	3.84 %
4.	Forecasted Equity Risk Premium Based on PRPM™ (3)	4.37
5.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (4)	3.67
6.	Average of Historical and PRPM™ Equity Risk Premium	3.96 %

Notes: (1) Based on S&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2015.

(2) Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.

(3) The Predictive Risk Premium Model (PRPM) is applied to the risk premium of the monthly total returns of the S&P Utility Index and the monthly yields on Moody's A rated public utility bonds from January 1928 - April 2016.

(4) Using data from Bloomberg Professional Service for the S&P Utilities Index, an expected return of 8.55% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation.

Subtracting the expected A rated public utility bond yield of 4.88%, calculated on line 3 of page 3 of this Schedule results in an equity risk premium of 3.67%. (8.55% - 4.88% = 3.67%)

Aqua Ohio, Inc.
Indicated Common Equity Cost Rate Through Use
of the Traditional Capital Asset Pricing Model (CAPM) and Empirical Capital Asset Pricing Model (ECAPM)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Eight Water Utilities	Value Line Adjusted Beta	Bloomberg Adjusted Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
American States Water Co.	0.75	0.67	0.71	8.78 %	3.53 %	9.76 %	10.40 %	10.08 %
American Water Works Company Inc	0.70	0.54	0.62	8.78	3.53	8.97	9.81	9.39
Aqua America Inc	0.75	0.62	0.69	8.78	3.53	9.59	10.27	9.93
California Water Service Group	0.75	0.73	0.74	8.78	3.53	10.03	10.60	10.31
Connecticut Water Service Inc	0.60	0.68	0.64	8.78	3.53	9.15	9.94	9.54
Middlesex Water Co.	0.70	0.75	0.73	8.78	3.53	9.94	10.53	10.24
SJW Corp	0.75	0.86	0.81	8.78	3.53	10.64	11.06	10.85
York Water Co.	0.70	0.82	0.76	8.78	3.53	10.20	10.73	10.47
Average			0.71			9.79 %	10.42 %	10.10 %
Median			0.72			9.85 %	10.47 %	10.16 %
Average of Mean and Median			0.72			9.82 %	10.45 %	10.13 %

Please see page 2 for notes.

Aqua Ohio, Inc.
Notes to Accompany the Application of the CAPM and ECAPM

Notes:

(1) The market risk premium (MRP) is an average of four different measures. The first measure of the MRP derives the total return on the market by adding the thirteen-week average forecasted 3-5 year capital appreciation to the thirteen-week average expected dividend yield from Value Line Summary and Index. The projected risk-free rate (developed in Note 2) is then subtracted from the total return to arrive at the projected MRP. The second measure of MRP is based on the arithmetic mean of historical monthly return data of large company stocks less the income return on long-term government bonds from 1926-2015 as published by Morningstar, Inc. The third measure applies the PRPM to the Ibbotson historical data to derive a projected MRP. The fourth measure uses data from Bloomberg Professional Services to derive a total projected return on the S&P 500 by using expected dividend yields and long-term growth estimates as a proxy for capital appreciation. The projected risk-free rate is then subtracted from the projected total return to arrive at the projected MRP. The four measures of MRP are illustrated below:

Measure 1: Value Line Projected MRP (Thirteen weeks ending May 6, 2016)

Total projected return on the market 3 -5 years hence:	13.78	%
Projected Risk-Free Rate (described in Note 2):	3.53	
MRP based on Value Line Summary & Index:	10.25	%

Measure 2: Ibbotson Arithmetic Mean MRP (1926-2015)

Arithmetic Mean Monthly Returns for Large Stocks 1926-2015:	11.95	%
Arithmetic Mean Income Returns on Long-Term Government Bonds:	5.20	
MRP based on Ibbotson Historical Data:	6.75	%

Measure 3: Application of the PRPM to Ibbotson Historical Data:
(January 1926 - April 2016) 8.74 %

Measure 4: Bloomberg Projected MRP

Total return on the Market based on the S&P 500:	12.90	%
Projected Risk-Free Rate (described in Note 2):	3.53	
MRP based on Bloomberg data	9.37	%

Average MRP: 8.78 %

(2) For reasons explained in the direct testimony, the appropriate risk-free rate for cost of capital purposes is the average forecast of 30 year Treasury Bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts (See pages 9 and 10 of Schedule DWD-4). The projection of the risk-free rate is illustrated below:

Second Quarter 2016	2.80	%
Third Quarter 2016	2.90	
Fourth Quarter 2016	3.10	
First Quarter 2017	3.20	
Second Quarter 2017	3.40	
Third Quarter 2017	3.50	
2017-2021	4.50	
2022-2026	4.80	
	3.53	%

(3) Average of Column 6 and Column 7.

Sources of Information:

Value Line Summary and Index
Blue Chip Financial Forecasts, May 1, 2016 and December 1, 2015
Stocks, Bonds, Bills, and Inflation - Ibbotson® SBBI® 2016 Market Report, Morningstar, Inc., 2016 Chicago, IL.
Bloomberg Professional Services

Aqua Ohio, Inc.
Basis of Selection of the Group of Non-Price Regulated Companies
Comparable in Total Risk to the Proxy Group of Eight Water Companies

The criteria for selection of the proxy group of twelve non-price regulated companies was that the non-price regulated companies be domestic and reported in Value Line Investment Survey (Standard Edition).

The proxy group of twelve non-price regulated companies were then selected based on the unadjusted beta range of 0.40 – 0.66 and residual standard error of the regression range of 2.0755 – 2.4755 of the water proxy group.

These ranges are based upon plus or minus two standard deviations of the unadjusted beta and standard error of the regression. Plus or minus two standard deviations captures 95.50% of the distribution of unadjusted betas and residual standard errors of the regression.

The standard deviation of the water industry's residual standard error of the regression is 0.1000. The standard deviation of the standard error of the regression is calculated as follows:

$$\text{Standard Deviation of the Std. Err. of the Regr.} = \frac{\text{Standard Error of the Regression}}{\sqrt{2N}}$$

where: N = number of observations. Since Value Line betas are derived from weekly price change observations over a period of five years, N = 259

$$\text{Thus, } 0.1000 = \frac{2.2755}{\sqrt{518}} = \frac{2.2755}{22.7596}$$

Source of Information: Value Line, Inc., March 2016
Value Line Investment Survey (Standard Edition)

Aqua Ohio, Inc.
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

Proxy Group of Eight Water Utilities	[1] Value Line Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
American States Water Co.	0.75	0.55	2.4755	0.0718
American Water Works Company Inc	0.70	0.51	1.8032	0.0523
Aqua America Inc	0.75	0.57	1.9718	0.0572
California Water Service Group	0.75	0.58	2.1481	0.0623
Connecticut Water Service Inc	0.60	0.38	2.5512	0.0740
Middlesex Water Co.	0.70	0.52	2.2142	0.0642
SJW Corp	0.75	0.56	2.5700	0.0745
York Water Co.	0.70	0.53	2.4700	0.0716
Average	0.71	0.53	2.2755	0.0660

Beta Range (+/- 2 std. Devs. of Beta)	0.40	0.66
2 std. Devs. of Beta	0.13	
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.0755	2.4755
Std. dev. of the Res. Std. Err.	0.1000	
2 std. devs. of the Res. Std. Err.	0.2000	

Source of Information: Valueline Proprietary Database March-2016

Aqua Ohio, Inc.
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Eight Water Utilities

Proxy Group of Twelve Non-Price-Regulated Companies	[1] VL Adjusted Beta	[2] Unadjusted Beta	[3] Residual Standard Error of the Regression	[4] Standard Deviation of Beta
AmerisourceBergen	0.80	0.66	2.1312	0.0618
ConAgra Foods	0.75	0.55	2.4288	0.0704
Erie Indemnity	0.80	0.62	2.1752	0.0631
Kroger Co.	0.80	0.63	2.3555	0.0683
Lancaster Colony	0.80	0.62	2.2041	0.0639
Lilly (Eli)	0.75	0.62	2.2274	0.0646
Mercury General	0.70	0.53	2.4192	0.0702
Reynolds American	0.65	0.44	2.3062	0.0669
Smucker (J.M.)	0.75	0.56	2.1499	0.0623
Target Corp.	0.75	0.54	2.2244	0.0645
Verisk Analytics	0.75	0.61	2.3546	0.0683
Waste Connections	0.75	0.59	2.0766	0.0602
Average	0.75	0.58	2.2500	0.0700
Proxy Group of Eight Water Utilities	0.71	0.53	2.2755	0.0660

Aqua Ohio, Inc.
Summary of Cost of Equity Models Applied to the
Proxy Group of Twelve Non-Price-Regulated Companies
Comparable in Total Risk to the
Proxy Group of Eight Water Utilities

Principal Methods	Proxy Group of Twelve Non-Price-Regulated Companies
Discounted Cash Flow Model (DCF) (1)	12.71 %
Risk Premium Model (RPM) (2)	11.79
Capital Asset Pricing Model (CAPM) (3)	10.54
Mean	11.68 %
Median	11.79 %
Average of Mean and Median	11.74 %

Notes:
(1) From page 2 of this Schedule.
(2) From page 3 of this Schedule.
(3) From page 6 of this Schedule.

Aqua Ohio, Inc.
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Eight Water Utilities

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Twelve Non-Price-Regulated Companies	Average Dividend Yield	Value Line Projected Five Year Growth in EPS	Reuters Mean Consensus Projected Five Year Growth Rate in EPS	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth Rate in EPS	Adjusted Dividend Yield	Indicated Common Equity Cost Rate
AmerisourceBergen	1.56 %	14.00 %	14.01 %	14.40 %	14.01 %	14.11 %	1.67 %	15.78 %
ConAgra Foods	2.30	6.00	6.98	8.10	6.98	7.02	2.38	9.40
Erie Indemnity	3.11	10.00	NA	10.00	10.00	10.00	3.27	13.27
Kroger Co.	1.11	10.50	9.81	9.60	9.81	9.93	1.17	11.10
Lancaster Colony	1.88	6.00	3.00	NA	3.00	4.00	1.92	5.92
Lilly (Eli)	2.77	9.50	12.02	11.80	11.96	11.32	2.93	14.25
Mercury General	4.67	11.00	8.00	8.00	8.00	8.75	4.87	13.62
Reynolds American	3.37	12.50	12.20	12.20	12.20	12.28	3.58	15.86
Smucker (J.M.)	2.10	7.00	9.68	8.10	10.10	8.72	2.19	10.91
Target Corp.	2.83	11.00	11.35	10.50	11.35	11.05	2.99	14.04
Verisk Analytics	-	12.50	11.70	12.10	12.36	12.17	-	NA
Waste Connections	0.92	9.50	6.88	10.80	6.88	8.52	0.96	9.48
							Mean	12.15 %
							Median	13.27 %
							Average of Mean and Median	12.71 %

NA= Not Available

(1) The application of the DCF model to the domestic, non-price regluated comparable risk companies is identical to the application of the DCF to the proxy group of water companies. The 60 trading day average price and the spot indicated dividend as of April 29, 2016 is used for the dividend yield. The yield is then adjusted by 1/2 the average projected growth rate in EPS, which is calculated by averaging the 5 year projected growth in EPS provided by Value Line, www.reuters.com, www.zacks.com, and www.yahoo.com (excluding any negative growth rates) and then adding that growth rate to the adjusted dividend yield.

Source of Information: Value Line Investment Survey:
www.reuters.com Downloaded on 04/29/2016
www.zacks.com Downloaded on 04/29/2016
www.yahoo.com Downloaded on 04/29/2016

Aqua Ohio, Inc.
Indicated Common Equity Cost Rate
Through Use of a Risk Premium Model
Using an Adjusted Total Market Approach

Line No.		Proxy Group of Twelve Non-Price-Regulated Companies
1.	Prospective Yield on Baa Rated Corporate Bonds (1)	5.71 %
2.	Adjustment to Reflect Bond rating Difference of Non-Price Regulated Companies (2)	0.16
3.	Adjusted Prospective Bond Yield	5.87
4.	Equity Risk Premium (3)	5.92
5.	Risk Premium Derived Common Equity Cost Rate	11.79 %

Notes: (1) Average forecast of Baa corporate bonds based upon the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated May 1, 2016 and December 1, 2015 (see pages 9-10 of Schedule DWD-4). The estimates are detailed below.

Second Quarter 2016	5.00 %
Third Quarter 2016	5.20
Fourth Quarter 2016	5.30
First Quarter 2017	5.50
Second Quarter 2017	5.60
Third Quarter 2017	5.80
2017-2021	6.50
2022-2026	6.80
Average	5.71 %

(2) To reflect the Baa2/Baa3 average rating of the non-utility proxy group, the prosepctive yield on Baa corporate bonds must be adjusted upward by 1/6 of the spread between A and Baa corporate bond yields as shown below:

	A Corp. Bond Yield	Baa Corp. Bond Yield	Spread
Apr-16	3.98 %	4.79 %	0.81 %
Mar-16	4.16	5.13	0.97
Feb-16	4.22	5.34	1.12
		Average yield spread	0.97 %
		1/6 of spread	0.16 %

Using the spread between A and Baa corporate bonds is a conservative approach due to the intuitively much higher difference in spreads between investment grade and non-investment grade (i.e. junk) bonds. Mr. D'Ascendis does not have access to non-investment grade bond yields.

(3) From page 5 of this Schedule.

Aqua Ohio, Inc.
Comparison of Long-Term Issuer Ratings for the
Proxy Group of Twelve Non-Price-Regulated Companies of comparable risk to the
Proxy Group of Eight Water Utilities

	Moody's Long-Term Issuer Rating April 2016		Standard & Poor's Long-Term Issuer Rating April 2016	
Proxy Group of Twelve Non-Price-Regulated Companies	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
AmerisourceBergen	Baa2	9.0	A-	7.0
ConAgra Foods	Baa2	9.0	BBB-	10.0
Erie Indemnity	NR	--	NR	--
Kroger Co.	Baa2	9.0	BBB	9.0
Lancaster Colony	NR	--	NR	--
Lilly (Eli)	A2	6.0	AA-	4.0
Mercury General	WR	--	NR	--
Reynolds American	Baa3	10.0	BBB-	10.0
Smucker (J.M.)	Baa2	9.0	BBB	9.0
Target Corp.	A2	6.0	A	6.0
Verisk Analytics	Baa3	10.0	BBB-	10.0
Waste Connections	NR	--	BBB+	8.0
Average	Baa2/Baa3	8.5	BBB+	8.1

Notes:
(1) From page 6 of Schedule DWD-4.

Source of Information:
Bloomberg Professional Services

Aqua Ohio, Inc.
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
Proxy Group of Twelve Non-Price-Regulated Companies of comparable risk to the
Proxy Group of Eight Water Utilities

Line No.	Equity Risk Premium Measure	Proxy Group of Twelve Non-Price-Regulated Companies
1.	Ibbotson Equity Risk Premium (1)	5.52 %
2.	Ibbotson Equity Risk Premium based on PRPM (2)	7.75
3.	Equity Risk Premium Based on Value Line Summary and Index (3)	9.19
4.	Equity Risk Premium Based on S&P 500 Companies(4)	8.31
5.	Conclusion of Equity Risk Premium (5)	7.69 %
6.	Adjusted Beta (6)	0.77
7.	Forecasted Equity Risk Premium	5.92 %

Notes:
(1) From note 1 of page 8 of Schedule DWD-4.
(2) From note 2 of page 8 of Schedule DWD-4.
(3) From note 3 of page 8 of Schedule DWD-4.
(4) From note 4 of page 8 of Schedule DWD-4.
(5) Average of lines 1 through 4.
(6) Average of mean and median beta from page 6 of this Schedule.

Sources of Information:
Stocks, Bonds, Bills, and Inflation - Ibbotson® SBBI® 2016 Market Report, Morningstar, Inc., 2016 Chicago, IL.
Value Line Summary and Index
Blue Chip Financial Forecasts, May 1, 2016 and December 1, 2015
Bloomberg Professional Services

Aqua Ohio, Inc.
Traditional CAPM and ECAPM Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to
Proxy Group of Eight Water Utilities

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Twelve Non-Price-Regulated Companies	Value Line Adjusted Beta	Bloomberg Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
AmerisourceBergen	0.80	0.78	0.79	8.78 %	3.53 %	10.47 %	10.93 %	10.70 %
ConAgra Foods	0.75	0.73	0.74	8.78	3.53	10.03	10.60	10.31
Erie Indemnity	0.80	0.71	0.75	8.78	3.53	10.12	10.66	10.39
Kroger Co.	0.80	0.80	0.80	8.78	3.53	10.55	10.99	10.77
Lancaster Colony	0.80	0.65	0.73	8.78	3.53	9.94	10.53	10.24
Lilly (Eli)	0.75	0.75	0.75	8.78	3.53	10.12	10.66	10.39
Mercury General	0.70	0.83	0.76	8.78	3.53	10.20	10.73	10.47
Reynolds American	0.65	0.73	0.69	8.78	3.53	9.59	10.27	9.93
Smucker (J.M.)	0.75	0.84	0.80	8.78	3.53	10.55	10.99	10.77
Target Corp.	0.75	0.81	0.78	8.78	3.53	10.38	10.86	10.62
Verisk Analytics	0.75	0.84	0.79	8.78	3.53	10.47	10.93	10.70
Waste Connections	0.75	0.90	0.83	8.78	3.53	10.82	11.19	11.00
Mean			0.77			10.27 %	10.78 %	10.53 %
Median			0.77			10.29 %	10.80 %	10.55 %
Average of Mean and Median			0.77			10.28 %	10.79 %	10.54 %

Notes:
(1) From Schedule DWD-5, note 1.
(2) From Schedule DWD-5, note 2.
(3) Average of CAPM and ECAPM cost rates.

Aqua Ohio, Inc.
Derivation of Investment Risk Adjustment Based upon
Ibbotson Associates' Size Premia for the Decile Portfolios of the NYSE/AMEX/NASDAQ

Line No.		[1] Market Capitalization on April 29, 2016 (1) (millions)	(times larger)	[2] Applicable Decile of the NYSE/AMEX/ NASDAQ (2)	[3] Applicable Size Premium (3)	[4] Spread from Applicable Size Premium (4)
1.	Aqua Ohio, Inc.	$ 240.227		9-10	4.07%	
2.	Proxy Group of Eight Water Utilities	$ 2,952.644	12.3 x	5	1.49%	2.58%

	(A) Decile	(B) Number of Companies (millions)	(C) Recent Total Market Capitalization (millions)	(D) Recent Average Market Capitalization (millions)	(E) Premium (Return in Excess of CAPM) (2)
	1	193	$14,835,871.93	$76,869.80	-0.36%
	2	209	$2,942,893.47	$14,080.83	0.57%
	3	208	$1,538,888.75	$7,398.50	0.86%
	4	240	$998,160.99	$4,159.00	0.99%
	5	240	$665,743.39	$2,773.93	1.49%
	6	258	$480,964.63	$1,864.20	1.63%
	7	350	$419,011.59	$1,197.18	1.62%
	8	392	$270,179.79	$689.23	2.04%
	9	494	$175,122.78	$354.50	2.54%
Smallest	10	796	$81,112.94	$101.90	5.60%

*From Duff & Phelps 2016 Valuation Handbook Guide to Cost of Capital

Notes:

(1) From Page 2 of this Schedule.

(2) Gleaned from Column (D) on the bottom of this page. The appropriate decile (Column (A)) corresponds to the market capitalization of the proxy group, which is found in Column 1.

(3) Corresponding risk premium to the decile is provided on Column (E) on the bottom of this page.

(4) Line No. 1a Column 3 – Line No. 2 Column 3 and Line No. 1b, Column 3 – Line No. 3 of Column 3 etc.. For example, the 2.58% in Column 4, Line No. 2 is derived as follows 2.58% = 4.07% - 1.49%.

Aqua Ohio, Inc.
Market Capitalization of Aqua Ohio, Inc. and
Proxy Group of Eight Water Utilities

Company	Exchange	[1] Common Stock Shares Outstanding at Fiscal Year End 2015 (millions)	[2] Book Value per Share at Fiscal Year End 2015	[3] Total Common Equity at Fiscal Year End 2015 (millions)	[4] Closing Stock Market Price on April 29, 2016	[5] Market-to-Book Ratio on April 29, 2016 (2)	[6] Market Capitalization on April 29, 2016 (3) (millions)
Aqua Ohio, Inc.		NA (4)	NA	88.612 (4)	NA		
Based upon Proxy Group of Eight Water Utilities						271.1 (5)	$ 240.227 (6)
Proxy Group of Eight Water Utilities							
American States Water Co.	NYSE	36.502	$ 12.765	$ 465.945	$ 41.690	326.6 %	$ 1,521.765
American Water Works Company Inc	NYSE	178.282	28.320	5,049.000	72.760	256.9	12,971.825
Aqua America Inc	NYSE	176.544	9.776	1,725.930	31.660	323.9	5,589.386
California Water Service Group	NYSE	47.875	13.413	642.155	27.930	208.2	1,337.149
Connecticut Water Service Inc	NASDAQ	11.193	20.011	223.977	47.020	235.0	526.289
Middlesex Water Co.	NASDAQ	16.225	12.739	206.694	36.580	287.1	593.511
SJW Corp	NYSE	20.382	18.830	383.783	34.410	182.7	701.343
York Water Co.	NASDAQ	12.812	8.513	109.070	29.650	348.3	379.887
Average		62.477	$ 15.546	$ 1,100.819	$ 40.213	271.1 %	$ 2,952.644

NA= Not Available

Notes:
(1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 5 * Column 3.
(4) From Aqua Ohio, Inc.'s Annual Report to the Public Utilities Commission of Ohio for the year ended December 31, 2015.
(5) The market-to-book ratio of Aqua Ohio, Inc. on April 29, 2016 is assumed to be equal to the market-to-book ratio of Proxy Group of Eight Water Utilities on April 29, 2016.
(6) Aqua Ohio, Inc.'s common stock, if traded, would trade at a market-to-book ratio equal to the average market-to-book ratio at April 29, 2016 of Proxy Group of Eight Water Utilities, 271.1%, and Aqua Ohio, Inc.'s market capitalization on April 29, 2016 would therefore have been $240.23 million.

Source of Information: 2015 Annual Forms 10K
yahoo.finance.com

Aqua Ohio, Inc.
Derivation of the Flotation Cost Adjustment to the Cost of Common Equity

Equity Issuances and Flotation Costs of the Parent Since 2001

Date	Transaction (1)	[Column 1] Shares Issued	[Column 2] Market Price per Share	[Column 3] Offering Price per Share	[Column 4] Market Pressure (2)	[Column 5] Underwriting Discount	[Column 6] Net Proceeds per Share (3)	[Column 7] Gross Equity Issue before Costs (4)	[Column 8] Total Net Proceeds (5)	[Column 9] Total Flotation Costs (6)	[Column 10] Flotation Cost Percentage (7)
09/19/02	Equity Offering	8,595,875	$ 18.7800	$ 18.2500	$ 0.5300	$ 0.7800	$ 17.4700	$ 161,430,533	$ 150,169,936	$ 11,260,596	6.98%
05/13/03	Equity Offering	1,300,000	$ 23.0800	$ 23.0800	$ -	$ 0.8800	$ 22.2000	$ 30,004,000	$ 28,860,000	$ 1,144,000	3.81%
08/18/03	Equity Offering	4,000,000	$ 23.8000	$ 23.4000	$ 0.4000	$ 0.8190	$ 22.5810	$ 95,200,000	$ 90,324,000	$ 4,876,000	5.12%
11/09/04	Equity Offering	1,700,000	$ 22.7400	$ 22.7000	$ 0.0400	$ 0.8600	$ 21.8400	$ 38,658,000	$ 37,128,000	$ 1,530,000	3.96%
06/07/06	Equity Offering	1,750,000	$ 22.3100	$ 22.3100	$ -	$ 0.8140	$ 21.4960	$ 39,042,500	$ 37,618,000	$ 1,424,500	3.65%
08/10/06	Equity Offering	3,500,000	$ 22.7500	$ 22.6500	$ 0.1000	$ 0.7930	$ 21.8570	$ 79,625,000	$ 76,499,500	$ 3,125,500	3.93%
								$ 443,960,033	$ 420,599,436	$ 23,360,596	5.26%

Flotation Cost Adjustment

	Average Dividend Yield	Average Projected EPS Growth Rate	Adjusted Dividend Yield	Average DCF Cost Rate Unadjusted for Flotation (8)	DCF Cost Rate Adjusted for Flotation (9)	Flotation Cost Adjustment (10)
Proxy Group of Eight Water Utilities	2.33 %	5.97 %	2.40 %	8.37 %	8.50 %	0.13 %

See page 2 of this Schedule for notes.

Aqua Ohio, Inc.
Notes to Accompany the
Derivation of the Flotation Cost Adjustment to the Cost of Common Equity

(1) Company-provided.

(2) Column 2 – Column 3.

(3) Column 2 – the sum of columns 4 and 5.

(4) Column 1 * Column 2.

(5) Column1 * Column 6.

(6) Column1 * (the sum of columns 4 and 5).

(7) (Column 7 – Column 8) divided by Column 7.

(8) Using the average growth rate from Schedule DWD-3.

(9) Adjustment for flotation costs based on adjusting the average DCF constant growth cost rate in accordance with the following:

$$K = \frac{D(1+0.5g)}{P(1-F)} + g \ ,$$

where g is the growth factor and F is the percentage of flotation costs.

(10) Flotation cost adjustment of 0.13% equals the difference between the flotation adjusted average DCF cost rate of 8.50% and the unadjusted average DCF cost rate of 8.37% of the proxy group of eight water companies.

Source of Information:

Company provided information

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Summary: Text Direct Testimony of Dylan W. D'Ascendis, CRRA, CVA electronically filed by Ms. Rebekah J. Glover on behalf of Aqua Ohio, Inc.