ACCEPTED FOR PROCESSING - 2018 August 30 5:09 PM - SCPSC - 2017-292-WS - Page 1 of 53

# HEARING EXHIBIT NO. 14

## (Merits Hearing of 4/3-4/2018)

In the matter of Docket No. 2017-292-WS:
Application of Carolina Water Service, Incorporated,
for Approval of an Increase in Its Rates
for Water and Sewer Services

I hereby certify this document to be a true copy of the original.

Jocelyn Boyd
Chief Clerk

Date 8/30/18

PUBLIC SERVICE COMMISSION
SOUTH CAROLINA

ELECTRONICALLY PROCESSED 2018-May-15 2:03PM 2017-292-WS Docket 2017-292-WS Page 13 of 67

# Office of Regulatory Staff

## SBBI: 2013 Valuation Handbook Excerpt

**Carolina Water Service, Inc.**

***Docket No. 2017-292-WS***

**DECILES ARE NOT REALLY DECILES AND "DECILE" PORTFOLIOS HAVE TO BE REBALANCED FOUR TIMES A YEAR**

The term "decile" holds methodological appeal until one realizes that it is a questionable construct for two reasons. First, the deciles in SBBI do not really hold equal numbers of companies (as shown in Revised Exhibit DHC-13). Second, since it is time-series data, the Center for Research and Security Prices ("CRSP") companies are constantly changing "deciles" due to company growth, merger, bankruptcy, or company shrinkage. The absence of data indicating a -100% change in stock value and a concomitant change in any dividends, as would occur from a corporate bankruptcy is called Survivorship Bias. Even if bankruptcy was not the cause for a stock's being delisted and even if returns were higher than listed stocks', the lack of assignment of a stock to a decile, even if were not a true decile, would distort the data on returns and the relationship of returns to capitalization.

The following quotation is from Ibbotson SBBI: 2013 Valuation Handbook, p.85. I have broken a single paragraph into two halves, the first relevant to the "decile" issue and the second to how dynamic and potentially distorting the capitalization-decile may be.

> *All companies on the NYSE [New York Stock Exchange] are ranked by the combined market capitalization of their eligible equity securities. The companies are then split into 10 equally populated groups, or deciles. Eligible companies traded on the NYSE, the NYSE Amex (AMEX), and Nasdaq National Market (NASDAQ) are then assigned to the appropriate deciles according to their capitalization in relation to the NYSE breakpoints.*
>
> *The portfolios are rebalanced, using closing prices for the last trading day of March, June, September, and December. Securities added during the quarter are assigned to the appropriate portfolio when two consecutive month-end prices are available. If the final NYSE price of a security that becomes delisted is a month-end price, then that month's return is included in the quarterly return of the security's portfolio. When a month-end NYSE price is missing, the month-end value of the security is derived from merger terms, quotations on regional exchanges, and other sources.*

PENGAD 800-631-6989
EXHIBIT
4/4/18
14
2017-292-WS

# Office of Regulatory Staff

## Blue Chip Financial Forecasts March 1, 2018

### Carolina Water Service, Inc.

### *Docket No. 2017-292-WS*

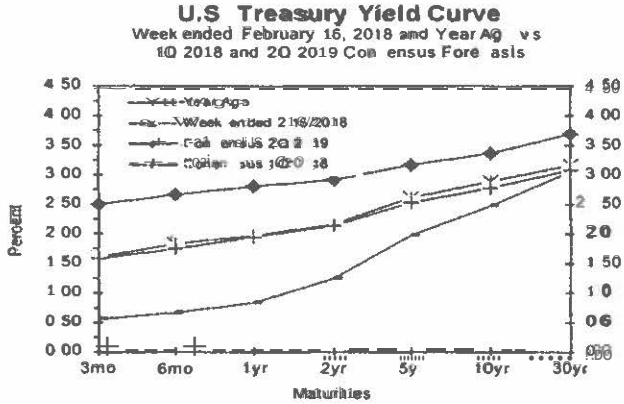


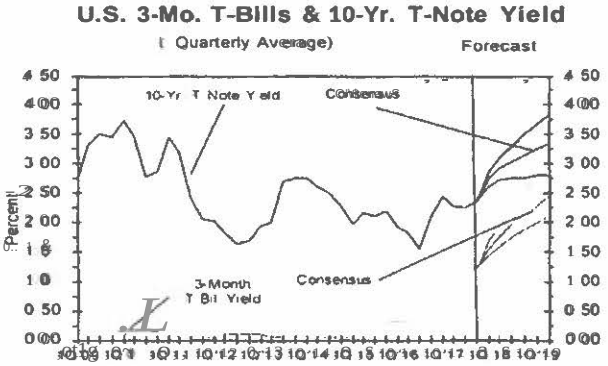
### Consensus Forecasts Of U.S. Interest Rates And Key Assumptions[1]

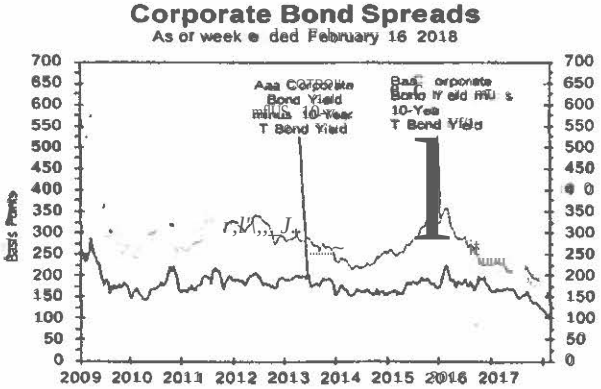
| | History | | | | | | | | Consensus Forecasts-Quarterly Avg. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Average For Week Ending | | | | Average For Month | | | Latest Qtr | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q |
| Interest Rates | Feb. 16 | Feb 9 | Feb 2 | Jan 26 | Jan | Dec | Nov | 4Q 2017 | 2018 | 2018 | 2018 | 2018 | 2019 | 2019 |
| Federal Funds Rate | 1.42 | 1.42 | 1.42 | 1.41 | 1.41 | 1.29 | 1.16 | 1.20 | 1.5 | 1.7 | 1.9 | 2.2 | 2.3 | 2.5 |
| Prime Rate | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 | 4.38 | 4.25 | 4.29 | 4.6 | 4.8 | 5.0 | 5.2 | 5.4 | 5.6 |
| LIBOR 3-mo. | 1.86 | 1.80 | 1.78 | 1.75 | 1.73 | 1.59 | 1.42 | 1.46 | 1.8 | 2.0 | 2.2 | 2.4 | 2.6 | 2.8 |
| Commercial Paper, 1-mo. | 1.53 | 1.50 | 1.50 | 1.52 | 1.50 | 1.38 | 1.15 | 1.22 | 1.5 | 1.7 | 2.0 | 2.2 | 2.4 | 2.5 |
| Treasury bill 3-mo. | 1.60 | 1.54 | 1.46 | 1.43 | 1.43 | 1.33 | 1.23 | 1.22 | 1.6 | 1.8 | 2.0 | 2.1 | 2.3 | 2.5 |
| Treasury bill 6-mo. | 1.82 | 1.71 | 1.65 | 1.64 | 1.62 | 1.49 | 1.37 | 1.37 | 1.7 | 1.9 | 2.1 | 2.3 | 2.5 | 2.6 |
| Treasury bill, 1 yr | 1.97 | 1.89 | 1.87 | 1.79 | 1.80 | 1.69 | 1.54 | 1.54 | 1.9 | 2.1 | 2.3 | 2.5 | 2.6 | 2.8 |
| Treasury note 2 yr. | 2.15 | 2.10 | 2.14 | 2.09 | 2.02 | 1.83 | 1.68 | 1.68 | 2.1 | 2.3 | 2.5 | 2.6 | 2.8 | 2.9 |
| Treasury note, 5 yr | 2.61 | 2.54 | 2.53 | 2.44 | 2.36 | 2.17 | 2.04 | 2.06 | 2.5 | 2.7 | 2.8 | 2.9 | 3.1 | 3.2 |
| Treasury note 10 yr. | 2.87 | 2.82 | 2.75 | 2.65 | 2.56 | 2.40 | 2.36 | 2.37 | 2.8 | 2.9 | 3.0 | 3.1 | 3.3 | 3.3 |
| Treasury note, 30 yr. | 3.14 | 3.10 | 2.99 | 2.91 | 2.86 | 2.77 | 2.81 | 2.82 | 3.1 | 3.2 | 3.4 | 3.5 | 3.6 | 3.7 |
| Corporate Aaa bond | 3.97 | 3.89 | 3.79 | 3.73 | 3.68 | 3.63 | 3.70 | 3.69 | 3.8 | 4.1 | 4.3 | 4.4 | 4.6 | 4.7 |
| Corporate Baa bond | 4.54 | 4.45 | 4.31 | 4.26 | 4.24 | 4.21 | 4.29 | 4.27 | 4.5 | 4.8 | 5.0 | 5.2 | 5.3 | 5.4 |
| State & Local bonds | 3.58 | 3.57 | 3.53 | 3.45 | 3.42 | 3.46 | 3.41 | 3.41 | 3.6 | 3.8 | 3.9 | 4.1 | 4.2 | 4.3 |
| Home mortgage rate | 4.38 | 4.32 | 4.22 | 4.15 | 4.03 | 3.95 | 3.92 | 3.92 | 4.3 | 4.5 | 4.6 | 4.7 | 4.9 | 5.0 |

| | History | | | | | | | | Consensus Forecasts-Quarterly | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q | 3Q | 4Q | 1Q | 2Q |
| Key Assumptions | 2016 | 2016 | 2016 | 2016 | 2017 | 2017 | 2017 | 2017 | 2018 | 2018 | 2018 | 2018 | 2019 | 2019 |
| Major Currency Index | 93.3 | 89.6 | 90.3 | 93.7 | 94.4 | 93.0 | 88.3 | 88.9 | 86.5 | 86.5 | 86.5 | 86.4 | 86.4 | 86.3 |
| Real GDP | 0.6 | 2.2 | 2.8 | 1.8 | 1.2 | 3.1 | 3.2 | 2.6 | 2.7 | 3.0 | 2.9 | 2.7 | 2.5 | 2.4 |
| GDP Price Index | 0.3 | 2.4 | 1.4 | 2.0 | 2.0 | 1.0 | 2.1 | 2.4 | 2.1 | 2.0 | 2.2 | 2.1 | 2.2 | 2.2 |
| Consumer Price Index | 0.1 | 2.3 | 1.8 | 3.0 | 3.1 | -0.3 | 2.0 | 3.7 | 3.0 | 2.0 | 2.3 | 2.1 | 2.3 | 2.3 |

[1] 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. Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15. AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years yield to maturity. State and local bond yields from Bank of America Merrill Lynch A-rated, yield to maturity. Mortgage rates from Freddie Mac 30-year fixed. LIBOR quotes from Intercontinental Exchange. All interest rate data is sourced from Haver Analytics. Historical data for the Major Currency Index is from FRSR H.10. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) historical is from the Department of Labor, Bureau of Labor Statistics (BLS).



## Value Line

**Carolina Water Service, Inc.**

*Docket No. 2017-292-WS*

# AMER. STATES WATER NYSE-AWR

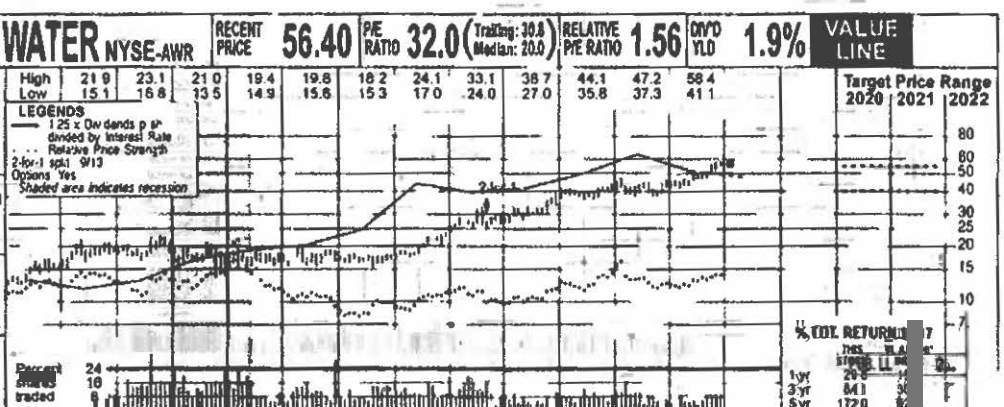
RECENT PRICE 56.40 | P/E RATIO 32.0 (Trailing: 30.8 Median: 20.0) | RELATIVE P/E RATIO 1.56 | DIV'D YLD 1.9% | VALUE LINE

TIMELINESS 2 Raised 12/1/17
SAFETY 2 Raised 7/2012
TECHNICAL 2 Raised 12/29/17
BETA .60 (1.00 = Market)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High | 21.9 | 23.1 | 21.0 | 19.4 | 19.8 | 18.2 | 24.1 | 33.1 | 38.7 | 44.1 | 47.2 | 58.4 |
| Low | 15.1 | 16.8 | 13.5 | 14.9 | 15.6 | 15.3 | 17.0 | 24.0 | 27.0 | 35.8 | 37.3 | 41.1 |

Target Price Range 2020 | 2021 | 2022

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



**2020-22 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 65 | (Nil) | 2% |
| Low | 40 | (-30%) | -5% |

**Insider Decisions**

| | M | A | M | J | J | A | S | O | N |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Options | 11 | 0 | 8 | 2 | 0 | 3 | 4 | 0 | 2 |
| to Sell | 3 | 1 | 4 | 3 | 2 | 3 | 3 | 2 | 4 |

**Institutional Decisions**

| | 1Q2017 | 2Q2017 | 3Q2017 |
|---|---|---|---|
| to Buy | 87 | 96 | 104 |
| to Sell | 89 | 82 | 79 |
| Hld's(000) | 29082 | 28355 | 27880 |

Percent shares traded 24 16 8

% TOT. RETURN 12/17

| | THIS STOCK | VL ARITH. INDEX |
|---|---|---|
| 1 yr. | 29.6 | 17.1 |
| 3 yr. | 84.1 | 30.1 |
| 5 yr. | 172.0 | 82.1 |

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | © VALUE LINE PUB. LLC | 0-2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.53 | 6.89 | 6.99 | 8.81 | 7.03 | 7.68 | 8.75 | 9.21 | 9.74 | 10.71 | 11.12 | 12.12 | 12.19 | 12.17 | 12.56 | 11.92 | 12.40 | 12.85 | Revenues per sh | 15.35 |
| 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 | 2.70 | 2.88 | 3.05 | "Cash Flow" per sh | 3.15 |
| .67 | .87 | .39 | .53 | .66 | .87 | .81 | .78 | .80 | 1.11 | 1.12 | 1.41 | 1.61 | 1.57 | 1.60 | 1.62 | 1.85 | 1.85 | Earnings per sh A | 2.15 |
| .43 | .44 | .44 | .44 | .45 | .46 | .48 | .50 | .51 | .52 | .55 | .54 | .76 | .88 | .87 | .91 | .94 | 1.06 | Div'ds Decl'd per sh B■ | 1.35 |
| 1.59 | 1.34 | 1.68 | 2.51 | 2.12 | 1.95 | 1.45 | 2.23 | 2.09 | 2.12 | 2.15 | 1.71 | -1.032 | 1.89 | 2.39 | 1.55 | 3.16 | 3.13 | Cap'l Spnd per sh | 3.60 |
| 6.61 | 7.02 | 6.98 | 7.51 | 7.88 | 8.32 | 8.77 | 8.97 | 9.70 | 10.13 | 10.84 | 11.60 | 12.72 | 13.24 | 12.77 | 13.52 | 14.20 | 14.85 | Book Value per sh | 16.40 |
| 30.24 | 30.36 | 30.42 | 33.50 | 33.60 | 34.10 | 34.46 | 34.60 | 37.06 | 37.26 | 37.70 | 37.53 | 38.72 | 38.79 | 36.50 | 36.57 | 38.70 | 38.80 | Common Shs Outstg C | 37.00 |
| 16.1 | 18.3 | 24.9 | 21.2 | 21.9 | 27.7 | 24.0 | 22.8 | 21.2 | 19.7 | 15.4 | 14.0 | 17.2 | 20.4 | 24.6 | 25.6 | 24.1 | | Avg Ann'l P/E Ratio | 21.0 |
| .86 | 1.00 | 1.02 | 1.23 | 1.17 | 1.50 | 1.27 | 1.36 | 1.4 | 1.00 | .97 | .91 | .97 | 1.06 | 1.24 | 1.15 | 1.27 | | Relative P/E Ratio | 1.30 |
| 3.9% | 3.6% | 3.5% | 3.6% | 3.1% | 2.6% | 2.5% | 2.9% | 2.9% | 3.0% | 3.2% | 3.1% | 2.7% | 2.6% | 2.2% | 2.2% | 2.0% | | Avg Ann'l Div'd Yield | 2.0% |
| | | | | | | 301.4 | 318.7 | 361.0 | 398.9 | 419.3 | 468.9 | 477.4 | 465.8 | 458.6 | 436.1 | 445 | 470 | Revenues ($mill) | 590 |
| | | | | | | 28.0 | 28.0 | 29.5 | 41.4 | 42.0 | 54.1 | 62.7 | 61.1 | 60.5 | 59.7 | 62.0 | 64.0 | Net Profit | 67.0 |
| | | | | | | 42.6% | 37.8% | 38.9% | 43.2% | 41.7% | 39.9% | 36.3% | 38.4% | 38.4 | 38.8% | 36.5% | 21.0% | Income Tax Rate | 21.0% |
| | | | | | | 9.6% | 6.9% | 3.2% | 5.8% | 2.0% | 2.5% | -- | -- | 2.5 | .5% | 1.5% | 2.0% | AFUDC % to Net Profit | 1.5% |
| | | | | | | 45.9% | 46.2% | 45.9% | 44.3% | 45.4% | 42.2% | 39.8% | 39.1% | 41.1 | 39.4% | 40.0% | 42.0% | Long-Term Debt Ratio | 42.5% |
| | | | | | | 53.1% | 53.8% | 54.1% | 55.7% | 54.6% | 57.8% | 60.2% | 60.9% | 58.8% | 60.6% | 60.0% | 58.0% | Common Eq Ratio | 56.5% |
| | | | | | | 569.4 | 572.0 | 685.0 | 677.4 | 749.1 | 787.0 | 818.4 | 832.6 | 791.5 | 815.3 | 910 | 875 | Total Capital ($mill) | 1100 |
| | | | | | | 778.4 | 825.3 | 884.8 | 855.0 | 896.5 | 917.0 | 981.5 | 1008.5 | 1060.8 | 1150.8 | 1100 | 1250 | Net Plant | 1400 |
| | | | | | | 6.7% | 6.4% | 5.9% | 7.6% | 7.1% | 9.2% | 8.9% | 8.8 | 9.0% | 8.6% | 8.5% | 8.5% | Return on Total Cap'l | 8.0% |
| | | | | | | 9.3% | 8.6% | 8.2% | 11.8% | 10.3% | 11.9% | 12.7% | 12.0 | 13.0% | 12.1% | 12.0% | 12.0% | Return on Shr. Equity | 14.0% |
| | | | | | | 9.3% | 8.6% | 8.2% | 11.8% | 10.3% | 11.9% | 12.7% | 12.0% | 13.0% | 12.1% | 12.0% | 12.0% | Return on Com Equity | 14.0% |
| | | | | | | 3.5% | 3.1% | 3.2% | 5.8% | 5.3% | 6.5% | 6.8% | 5.7% | 6.0% | 5.3% | 5.0% | 5.5% | Retained to Com Eq | 6.0% |
| | | | | | | 58% | 64 | 61% | 47% | 49% | 45% | 47% | 50% | 54% | 56% | 58% | 59% | All Div'ds to Net Prof | 57% |

**CAPITAL STRUCTURE as of 9/30/17**
Total Debt $357.3 mill. Due in 5 Yrs $41.7 mill.
LT Debt $321.0 mill. LT Interest $21.3 mill.
(38% of Cap'l)

Leases, Uncapitalized: Annual rentals $2.5 mill.
Pension Assets-12/16 $150.9 mill.
Oblig. $180.4 mill.

Pfd Stock None

Common Stock 36,679,175 shs.
as of 10/31/17

**MARKET CAP: $2.1 billion (Mid Cap)**

| CURRENT POSITION ($MILL.) | 2015 | 2016 | 9/30/17 |
|---|---|---|---|
| Cash Assets | 4.4 | 4 | 6.2 |
| Accts Receivable | 18.9 | 20.0 | 29.4 |
| Other | 109.4 | 146.5 | 110.6 |
| Current Assets | 132.7 | 170.9 | 146.7 |
| Accts Payable | 50.6 | 41.7 | 53.8 |
| Debt Due | 28.3 | 50.3 | 46.3 |
| Other | 44.6 | 43.0 | 51.0 |
| Current Liab. | 123.5 | 135.0 | 151.0 |

| ANNUAL RATES of Change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '14-'16 to '19-'22 |
|---|---|---|---|
| Revenues | 5.5% | 3.0% | 4.5% |
| "Cash Flow" | 7.5% | 6.5% | 5.0% |
| Earnings | 10.0% | 9.5% | 6.5% |
| Dividends | 7.0% | 10.5% | 7.5% |
| Book Value | 5.5% | 5.0% | 4.0% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | 102.0 | 115.6 | 138.3 | 109.9 | 465.8 |
| 2015 | 100.9 | 114.6 | 133.0 | 110.1 | 458.6 |
| 2016 | 93.5 | 112.0 | 123.8 | 106.8 | 436.1 |
| 2017 | 98.8 | 113.2 | 124.4 | 108.6 | 445 |
| 2018 | 102 | 118 | 135 | 115 | 470 |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .28 | .33 | .54 | .36 | 1.57 |
| 2015 | .32 | .41 | .56 | .31 | 1.60 |
| 2016 | .28 | .45 | .59 | .30 | 1.62 |
| 2017 | .34 | .62 | .57 | .32 | 1.85 |
| 2018 | .30 | .40 | .60 | .35 | 1.65 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .202 | .202 | .213 | .213 | .83 |
| 2015 | .213 | .213 | .224 | .224 | .87 |
| 2016 | .224 | .224 | .224 | .242 | .91 |
| 2017 | .242 | .242 | .255 | .255 | .99 |
| 2018 | | | | | |

**BUSINESS:** American States Water Co. operates as a holding company. Through its principal subsidiary, Golden State Water Company, it supplies water to 261,002 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 service to 23,040 customers in Big Bear Lake and in areas of San Bernardino County. Sold Chaparral City Water of Arizona (6/11). Has 736 employees. BlackRock, Inc. owns 11% of our shares; Vanguard, 9.5%; GR & GR, 1.5% (4/17 Proxy). Chairman: Lloyd Ross. President & Chief Executive Officer: Robert J. Sprowls. Inc.: CA. Address: 630 East Foothill Blvd., San Dimas, CA 91773. Tel.: 909-394-3600. Internet: www.aswater.com.

**American States Water has solid earnings prospects.** We estimate that the water utility earned $1.85 per share in 2017, thanks, in part, to an unusual gain resulting from the sale of certain assets. Even without this windfall, however, the company would still have likely recorded a 6% increase in its share net. The positive momentum from its core water operations should enable the company's share net to reach $1.85 once again in 2018.

**Our earnings forecasts are based upon constructive regulatory treatment.** As is the protocol in California a utility petitions state authorities for rate relief every three years. The company's Golden Gate Water subsidiary filed a general case in July of last year. The application is for the years 2019, 2020, and 2021. A final decision is expected by the end of 2018. The California Public Utility Commission has been reasonable in the past, as it has worked with utilities that have had to spend heavily to upgrade antiquated pipeline systems as well as successfully get customers to reduce consumption because of droughts.

**The nonregulated business provides opportunity for growth.** No matter how efficiently a utility is run, its profitability is limited to what state regulators allow. Through its ASUS business, which represents about 20% of net income, the company has been involved in taking over the management of water systems of major U.S. military installations. ASUS has already signed several 50-year contracts and we expect to see more agreements reached in the coming years as privatization in this sector increases.

**Timely shares of American States have been doing well, of late.** Since our last report three months ago, AWR has increased over 10%. By comparison, the S&P 500 has risen only about 6%. Typically, water stocks have been defensive investments for those seeking income. This pattern has changed, possibly due to the limited amount of shares available in the large-cap sector of the water industry. Indeed, AWR is now trading above our projected 2020-2022 Target Price Range. Also, potential interest rates hikes by the Federal Reserve may now make this group less suitable for conservative accounts.

*James A. Flood* — *January 12, 2018*

(A) Primary earnings. Excludes nonrecurring gains/(losses): '04, 7¢; '05, 13¢; '06, 3¢; '08, (44¢); '10 (23¢); '14, 10¢. Next earnings report due early February.
(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions, adjusted for split.

| | |
|---|---|
| Company's Financial Strength | A |
| Stock's Price Stability | 75 |
| Price Growth Persistence | 75 |
| Earnings Predictability | 85 |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# AMERICAN WATER NYSE-AWK

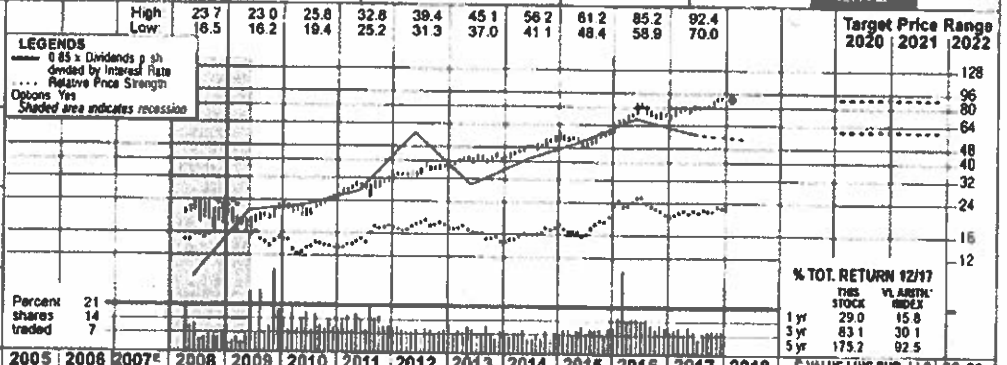
RECENT PRICE 89.08 | P/E RATIO 28.1 (Trailing: 30.2 Median: NMF) | RELATIVE P/E RATIO 1.37 | DIV'D YLD 2.0% | VALUE LINE

TIMELINESS 2 Raised 11/17/17
SAFETY 3 New 7/25/08
TECHNICAL 3 Lowered 1/12/18
BETA .65 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 23.7 | 23.0 | 25.8 | 32.8 | 39.4 | 45.1 | 56.2 | 61.2 | 85.2 | 92.4 | | |
| Low: | 16.5 | 16.2 | 19.4 | 25.2 | 31.3 | 37.0 | 41.1 | 48.4 | 58.9 | 70.0 | | |

Target Price Range 2020 | 2021 | 2022

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



**2020-22 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 90 | (Nil) | 3% |
| Low | 60 | (-35%) | -6% |

**Insider Decisions**

| | M | A | M | J | J | A | S | O | N |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Options | 3 | 0 | 7 | 0 | 0 | 1 | 0 | 0 | 2 |
| to Sell | 2 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 3 |

**Institutional Decisions**

| | 1Q2017 | 2Q2017 | 3Q2017 |
|---|---|---|---|
| to Buy | 269 | 281 | 282 |
| to Sell | 302 | 291 | 292 |
| Hld's(000) | 160388 | 158865 | 160782 |

Percent shares traded: 21, 14, 7

% TOT. RETURN 12/17

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr | 29.0 | 15.8 |
| 3 yr | 83.1 | 30.1 |
| 5 yr | 175.2 | 92.5 |

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007[E] | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | © VALUE LINE PUB. LLC | 20-22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -- | -- | -- | -- | -- | 13.08 | 13.84 | 14.61 | 13.98 | 15.49 | 15.18 | 16.25 | 16.28 | 16.78 | 17.72 | 18.54 | 18.95 | 20.10 | Revenues per sh | 23.05 |
| -- | -- | -- | -- | -- | .65 | d.47 | 2.67 | 2.88 | 3.56 | 3.73 | 4.27 | 4.36 | 4.75 | 5.13 | 5.28 | 5.80 | 6.20 | "Cash Flow" per sh | 7.50 |
| -- | -- | -- | -- | -- | d.97 | d2.14 | 1.10 | 1.25 | 1.53 | 1.72 | 2.11 | 2.06 | 2.39 | 2.64 | 2.62 | 3.00 | 3.30 | Earnings per sh A | 4.15 |
| -- | -- | -- | -- | -- | -- | -- | .40 | .82 | .88 | .90 | 1.21 | .84 | 1.21 | 1.33 | 1.47 | 1.62 | 1.78 | Div'd Decl'd per sh B■ | 2.35 |
| -- | -- | -- | -- | -- | 4.31 | 4.74 | 6.31 | 4.50 | 4.38 | 5.27 | 5.25 | 5.50 | 5.33 | 6.51 | 7.36 | 7.20 | 7.25 | Cap'l Spending per sh | 8.85 |
| -- | -- | -- | -- | -- | 23.86 | 28.39 | 25.64 | 22.91 | 23.59 | 24.11 | 25.11 | 26.52 | 27.39 | 28.25 | 29.24 | 30.90 | 32.40 | Book Value per sh D | 39.45 |
| -- | -- | -- | -- | -- | 160.00 | 160.00 | 160.00 | 174.63 | 175.00 | 175.66 | 176.99 | 178.25 | 179.46 | 178.28 | 178.10 | 178.50 | 179.00 | Common Shs Outst'g C | 187.50 |
| -- | -- | -- | -- | -- | -- | -- | 18.9 | 15.6 | 14.6 | 16.8 | 18.7 | 19.9 | 20.0 | 20.5 | 27.7 | 28.8 | | Avg Ann'l P/E Ratio | 18.0 |
| -- | -- | -- | -- | -- | -- | -- | 1.14 | 1.04 | .93 | 1.05 | 1.06 | 1.12 | 1.05 | 1.03 | 1.46 | 1.31 | | Relative P/E Ratio | 1.15 |
| -- | -- | -- | -- | -- | -- | -- | 1.9% | 4.2% | 3.8% | 3.1% | 3.4% | 2.0% | 2.5% | 2.5% | 2.0% | 2.0% | | Avg Ann'l Div'd Yield | 3.1% |
| | | | | | | 2214.2 | 2336.9 | 2440.7 | 2710.7 | 2666.2 | 2876.9 | 2901.9 | 3011.3 | 3159.0 | 3302.0 | 3380 | 3600 | Revenues ($mill) | 4325 |
| | | | | | | d342.3 | 187.2 | 209.9 | 267.8 | 304.9 | 374.3 | 369.3 | 429.8 | 478.0 | 468.0 | 535 | 590 | Net Profit ($mill) | 760 |
| | | | | | | -- | 37.4% | 37.9% | 40.4% | 39.5% | 40.7% | 39.1% | 39.4% | 39.1% | 39.2% | 40.0% | 21.0% | Income Tax Rate | 21.0% |
| | | | | | | -- | -- | -- | -- | -- | 6.2% | 5.1% | -- | 5.1% | 1.4% | 2.0% | 2.5% | AFUDC % to Net Profit | 3.5% |
| | | | | | | 50.9% | 53.1% | 56.9% | 56.8% | 55.7% | 53.9% | 52.4% | 52.4% | 53.7% | 52.4% | 52.5% | 55.0% | Long-Term Debt Ratio | 54.0% |
| | | | | | | 49.1% | 46.9% | 43.1% | 43.2% | 44.2% | 46.1% | 47.6% | 47.4% | 46.2% | 47.5% | 46.5% | 45.0% | Common Equity Ratio | 46.0% |
| | | | | | | 9245.7 | 8750.2 | 9289.0 | 9581.3 | 9580.3 | 9635.5 | 9940.7 | 10364 | 10911 | 10967 | 11600 | 12850 | Total Capital ($mill) | 16000 |
| | | | | | | 9318.0 | 9991.8 | 10524 | 11059 | 11021 | 11739 | 12391 | 12900 | 13933 | 14992 | 15875 | 16400 | Net Plant ($mill) | 18000 |
| | | | | | | NMF | 3.7% | 3.8% | 4.4% | 4.8% | 5.4% | 5.1% | 5.5% | 5.7% | 5.6% | 6.0% | 6.0% | Return on Total Cap'l | 6.5% |
| | | | | | | NMF | 4.6% | 5.2% | 6.5% | 7.2% | 8.4% | 7.8% | 8.7% | 9.4% | 9.0% | 9.5% | 10.0% | Return on Shr. Equity | 10.5% |
| | | | | | | NMF | 4.6% | 5.2% | 6.5% | 7.2% | 8.4% | 7.8% | 8.7% | 9.4% | 9.0% | 9.5% | 10.0% | Return on Com Equity | 10.5% |
| | | | | | | NMF | 3.0% | 1.8% | 2.8% | 3.5% | 3.6% | 4.7% | 4.3% | 4.7% | 4.0% | 4.5% | 4.5% | Retained to Com Eq | 4.5% |
| | | | | | | -- | 34% | 65% | 56% | 52% | 57% | 40% | 50% | 50% | 56% | 57% | 55% | All Div'ds to Net Prof | 57% |

**CAPITAL STRUCTURE as of 9/30/17**
Total Debt $7462.0 mil. Due in 5 Yrs $1696.0 mil.
LT Debt $6672.0 mil. LT Interest $349.0 mil.
(55% of Cap'l)

Leases, Uncapitalized: Annual rentals $14.0 mil.
Pension Assets 12/16 $1443.0 mil. Oblig. $1864.0 mil.
Pfd Stock $9.0 mil. Pfd Div'd $.5 mil.

Common Stock 178,375,400 shs as of 10/26/17

MARKET CAP: $15.9 billion (Large Cap)

| CURRENT POSITION ($MILL.) | 2015 | 2016 | 9/30/17 |
|---|---|---|---|
| Cash Assets | 45.0 | 75.0 | 93.0 |
| Accts Receivable | 255.0 | 269.0 | 312.0 |
| Other | 357.0 | 440.0 | 455.0 |
| Current Assets | 657.0 | 784.0 | 860.0 |
| Accts Payable | 126.0 | 154.0 | 144.0 |
| Debt Due | 682.0 | 1423.0 | 790.0 |
| Other | 725.0 | 815.0 | 813.0 |
| Current Liab. | 1533.0 | 2392.0 | 1747.0 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '14-'16 to '20-'22 |
|---|---|---|---|
| Revenues | 3.0% | 3.5% | 4.5% |
| "Cash Flow" | 23.0% | 8.5% | 6.5% |
| Earnings | -- | 11.0% | 8.5% |
| Dividends | -- | 9.0% | 10.0% |
| Book Value | 1.5% | 4.0% | 5.5% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | 679.0 | 754.8 | 846.1 | 731.4 | 3011.3 |
| 2015 | 698.0 | 782.0 | 896.0 | 783.0 | 3159.0 |
| 2016 | 743.0 | 827.0 | 930.0 | 802.0 | 3302.0 |
| 2017 | 756.0 | 844.0 | 936.0 | 844 | 3380 |
| 2018 | 770 | 895 | 1040 | 895 | 3600 |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .39 | .62 | .86 | .52 | 2.39 |
| 2015 | .44 | .68 | .96 | .56 | 2.64 |
| 2016 | .46 | .77 | .83 | .57 | 2.62 |
| 2017 | .52 | .73 | 1.13 | .62 | 3.00 |
| 2018 | .58 | .84 | 1.19 | .69 | 3.30 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .28 | .31 | .31 | .31 | 1.21 |
| 2015 | .31 | .34 | .34 | .34 | 1.33 |
| 2016 | .34 | .375 | .375 | .375 | 1.47 |
| 2017 | .375 | .415 | .415 | .415 | 1.62 |
| 2018 | | | | | |

**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 86.5% of 2016 revenues. New Jersey is its largest market accounting for 25.4% of regulated revenues. Has 6,800 employees. The Vanguard Group owns 9.6% of outstanding shares, BlackRock, Inc. 8.2%; officers & directors less than 1.0% (3/17 Proxy). President & CEO: Susan N. Story. Chair: George MacKenzie. Address: 1025 Laure Oak Road, Voorhees, NJ 08043. Tel.: 856-346-8200. Internet: www.amwater.com.

**American Water Works' prospects are bright.** In a December investor presentation, management stated once again that the in-house target for annual growth over the next five-year period for both earnings and dividends is at the high end of the 7% to 10% range. This is well above the projected industry average.

**Acquisitions and cost controls will likely remain the twin pillars of the utility's operating strategy.** The water industry in the United States is very fragmented and inefficient. As a result, there are many small and midsize water authorities that do not have the funds required to make the necessary upgrades to their aging water facilities. Hence, American Water has a continual pipeline of purchases in the works. The company is able to integrate these new additions into its asset base while achieving substantial cost savings. Moreover, regulators are happy (more below) when utilities can provide better service at a lower price.

**Regulators will probably have a major say in the company's future performance.** As the utility continues to expand, its relationship with different state water authorities should become even more important as it will have to file more rate cases. On the positive side of the ledger, American Water's internal (non GAAP) operating expense margin continues to decline. Indeed, the ratio has decreased from 44% in 2010 to about 34% this year. The goal is 32.5% by 2020-2022. In any case, being able to quantify savings keeps a utility in the good graces of those ruling on rate filings.

**The capital budget has been raised substantially.** Even though the company is already in the midst of a major construction program, management just increased the estimated outlays by about $1 billion to bring the new expected five year total to somewhere between $8.0 billion and $8.6 billion. American Water's finances are average, and probably will remain so for the next several years.

**These timely shares will most likely not interest long-term investors.** AWK has outperformed the broader market averages, of late. Indeed, the stock recently traded above our projected 2020-2022 Target Price Range.

*James A. Flood* *January 12, 2018*

(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 mid-February. Quarterly earnings do not sum in '16 due to rounding. (B) Dividends paid in March, June, September, and December. ■ Div. reinvestment available. (C) In millions. (D) Includes intangibles. On 9/30/17: $1.373 billion, $7.70/share. (E) Pro forma numbers for '06 & '07.

| | |
|---|---|
| Company's Financial Strength | B+ |
| Stock's Price Stability | 100 |
| Price Growth Persistence | 85 |
| Earnings Predictability | 90 |

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# AQUA AMERICA NYSE-WTR

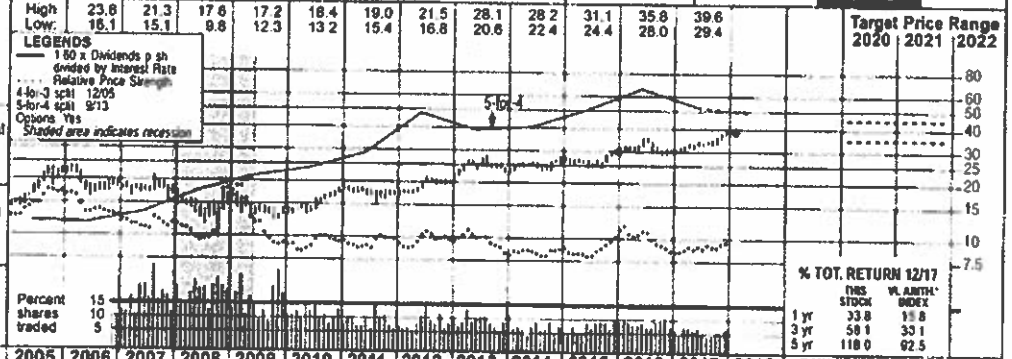
RECENT PRICE 38.65 | P/E RATIO 27.4 (Trailing: 28.1 Median: 22.0) | RELATIVE P/E RATIO 1.34 | DIV'D YLD 2.2% | VALUE LINE

TIMELINESS 2 Raised 11/17/17
SAFETY 2 Raised 4/20/12
TECHNICAL 3 Lowered 1/5/18
BETA .75 (1.00 = Market)

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 23.6 | 21.3 | 17.6 | 17.2 | 18.4 | 19.0 | 21.5 | 28.1 | 28.2 | 31.1 | 35.8 | 39.6 | |
| Low: | 16.1 | 15.1 | 9.8 | 12.3 | 13.2 | 15.4 | 16.8 | 20.6 | 22.4 | 24.4 | 28.0 | 29.4 | |

Target Price Range 2020 | 2021 | 2022

LEGENDS
— 1.60 x Dividends p sh divided by Interest Rate
.... Relative Price Strength
4-for-3 split 12/05
5-for-4 split 9/13
Options: Yes
Shaded area indicates recession




**2020-22 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 45 | (+15%) | 6% |
| Low | 35 | (-10%) | Nil |

**Insider Decisions**

| | M | A | M | J | J | A | S | O | N |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Options | 7 | 7 | 0 | 1 | 7 | 0 | 1 | 8 | 0 |
| to Sell | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 |

**Institutional Decisions**

| | 1Q2017 | 2Q2017 | 3Q2017 |
|---|---|---|---|
| to Buy | 179 | 172 | 187 |
| to Sell | 180 | 155 | 120 |
| Hld's(000) | 103594 | 104564 | 105796 |

% TOT. RETURN 12/17

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr | 33.8 | 15.8 |
| 3 yr | 58.1 | 33.1 |
| 5 yr | 118.0 | 92.5 |

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | © VALUE LINE PUB. LLC | 20-22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 4.62 | 4.50 | 4.70 | Revenues per sh | 6.05 |
| .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 | 2.07 | 2.15 | 2.25 | "Cash Flow" per sh | 2.75 |
| .41 | .43 | .46 | .51 | .57 | .56 | .57 | .58 | .62 | .72 | .83 | .87 | 1.16 | 1.20 | 1.14 | 1.32 | 1.36 | 1.45 | Earnings per sh A | 1.85 |
| .24 | .26 | .28 | .29 | .32 | .35 | .38 | .41 | .44 | .47 | .50 | .54 | .58 | .63 | .69 | .74 | .79 | .85 | Div'd Decl'd per sh B■ | 1.15 |
| .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 | 2.16 | 2.35 | 2.45 | Cap'l Spending per sh | 2.25 |
| 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 | 10.43 | 11.10 | 11.75 | Book Value per sh | 14.85 |
| 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 | 177.39 | 178.00 | 178.50 | Common Shs Outst'g C | 180.00 |
| 23.6 | 23.6 | 24.5 | 25.1 | 31.8 | 34.7 | 32.0 | 24.9 | 23.1 | 21.1 | 21.3 | 21.9 | 21.2 | 20.8 | 23.5 | 23.9 | 24.5 | | Avg Ann'l P/E Ratio | 21.0 |
| 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 | 1.18 | 1.26 | 1.20 | | Relative P/E Ratio | 1.30 |
| 2.5% | 2.5% | 2.5% | 2.3% | 1.8% | 1.6% | 2.1% | 2.8% | 3.1% | 3.1% | 2.8% | 2.8% | 2.4% | 2.5% | 2.6% | 2.3% | 2.4% | | Avg Ann'l Div'd Yield | 2.8% |
| | | | | | | 602.5 | 627.0 | 670.5 | 728.1 | 712.0 | 757.8 | 768.6 | 779.9 | 814.2 | 819.9 | 800 | 840 | Revenues ($mill) | 1085 |
| | | | | | | 95.0 | 97.9 | 104.4 | 124.0 | 144.8 | 153.1 | 205.0 | 213.9 | 201.8 | 234.2 | 245 | 260 | Net Profit ($mill) | 335 |
| | | | | | | 38.9% | 39.7% | 39.4% | 39.2% | 32.9% | 39.0% | 10.0% | 10.5% | 6.9% | 8.2% | 9.0% | 9.0% | Income Tax Rate | 10.0% |
| | | | | | | | -- | -- | -- | -- | -- | 1.1% | 2.4% | 3.1% | 3.8% | 3.5% | 3.0% | AFUDC % to Net Profit | 3.5% |
| | | | | | | 55.4% | 54.1% | 55.6% | 56.8% | 52.7% | 52.7% | 48.9% | 48.5% | 50.3% | 48.4% | 47.0% | 49.0% | Long-Term Debt Ratio | 51.0% |
| | | | | | | 44.6% | 45.9% | 44.4% | 43.4% | 47.3% | 47.3% | 51.1% | 51.5% | 49.7% | 51.6% | 53.0% | 51.0% | Common Equity Ratio | 49.0% |
| | | | | | | 2191.4 | 2306.6 | 2495.5 | 2706.2 | 2646.8 | 2929.7 | 3003.6 | 3216.0 | 3469.5 | 3587.7 | 3735 | 4100 | Total Capital ($mill) | 5500 |
| | | | | | | 2792.8 | 2997.4 | 3227.3 | 3489.3 | 3612.9 | 3936.2 | 4187.3 | 4402.0 | 4688.9 | 5001.6 | 5080 | 5275 | Net Plant ($mill) | 5800 |
| | | | | | | 5.9% | 5.7% | 5.8% | 5.9% | 6.9% | 6.6% | 8.0% | 7.8% | 6.9% | 7.8% | 7.5% | 7.5% | Return on Total Cap'l | 7.5% |
| | | | | | | 9.7% | 9.3% | 9.4% | 10.6% | 11.6% | 11.0% | 13.4% | 12.9% | 11.7% | 12.7% | 12.5% | 12.5% | Return on Shr. Equity | 12.5% |
| | | | | | | 9.7% | 9.3% | 9.4% | 10.6% | 11.6% | 11.0% | 13.4% | 12.9% | 11.7% | 12.7% | 12.5% | 12.5% | Return on Com Equity | 12.5% |
| | | | | | | 3.2% | 2.6% | 2.7% | 3.7% | 4.6% | 4.3% | 6.7% | 6.1% | 4.7% | 5.6% | 5.5% | 5.0% | Retained to Com Eq | 4.5% |
| | | | | | | 67% | 70% | 72% | 65% | 60% | 61% | 50% | 52% | 60% | 56% | 58% | 59% | All Div'ds to Net Prof | 62% |

**CAPITAL STRUCTURE as of 9/30/17**
Total Debt $2058.2 mill. Due in 5 Yrs $430.5 mill.
LT Debt $1952.5 mill. LT Interest $80.0 mill.
(50% of Cap'l)

Pension Assets-12/16 $242.4 mil. Oblig. $308.2 mil.

Pfd Stock None

Common Stock 177,690,598 shares as of 10/20/17

MARKET CAP: $6.9 billion (Large Cap)

| CURRENT POSITION ($MILL.) | 2015 | 2016 | 9/30/17 |
|---|---|---|---|
| Cash Assets | 3.2 | 3.7 | 4.1 |
| Receivables | 99.1 | 97.4 | 104.9 |
| Inventory (AvgCst) | 12.4 | 13.0 | 16.8 |
| Other | 13.7 | 14.6 | 12.7 |
| Current Assets | 128.4 | 128.7 | 138.3 |
| Accts Payable | 56.5 | 59.9 | 63.4 |
| Debt Due | 52.3 | 157.2 | 105.7 |
| Other | 84.4 | 84.4 | 83.9 |
| Current Liab | 193.2 | 301.5 | 253.0 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '14-'16 to '20-'22 |
|---|---|---|---|
| Revenues | 4.0% | 2.0% | 5.0% |
| "Cash Flow" | 7.5% | 7.0% | 6.0% |
| Earnings | 8.5% | 11.0% | 7.0% |
| Dividends | 8.0% | 8.0% | 9.0% |
| Book Value | 7.0% | 7.5% | 6.5% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | 182.7 | 195.3 | 210.5 | 191.4 | 779.9 |
| 2015 | 190.3 | 205.8 | 221.0 | 197.1 | 814.2 |
| 2016 | 192.6 | 203.9 | 226.6 | 196.8 | 819.9 |
| 2017 | 187.8 | 203.4 | 215.0 | 193.8 | 800 |
| 2018 | 195 | 215 | 225 | 205 | 840 |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .24 | .31 | .38 | .27 | 1.20 |
| 2015 | .27 | .32 | .38 | .17 | 1.14 |
| 2016 | .29 | .34 | .41 | .28 | 1.32 |
| 2017 | .28 | .34 | .43 | .31 | 1.36 |
| 2018 | .30 | .37 | .46 | .32 | 1.45 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .152 | .152 | .165 | .165 | .63 |
| 2015 | .165 | .165 | .178 | .178 | .69 |
| 2016 | .178 | .178 | .1913 | .1913 | .74 |
| 2017 | .1913 | .1913 | .2047 | .2047 | .79 |
| 2018 | | | | | |

**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 1,551 employees. Acquired AquaSource, 7/13; North Maine Utilities, 7/15; and others. Water supply revenues '2016: residential, 59%; commercial, 16%; industrial, wastewater & other, 25%. Off. & dir. own less than 1% of the common stock, Vanguard Group, 8.9%; Blackrock Inc., 8.1%; State Street Capital, 6.0% (3/17 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.

**Our earnings estimates for Aqua America remain unchanged.** But we have lowered our revenue forecast for both last year's fourth quarter and 2018 as water sales have been declining. On the positive side, the water utility's operating expenses have been decreasing at a higher rate thanks to lower power and chemical costs. Indeed, we think Aqua's 2017 share net came in at $1.36, versus 2016's tough $1.32 comparison. Rate relief granted by several states over the past 12 months will be in effect all of this year. This, plus expected new hikes in Virginia and Indiana, should enable Aqua's share earning to climb a healthy 7%, to $1.45.

**Acquisitions are being made at a modest pace.** Due to the fragmentation in the market (there are over 100,000 separate water districts in the U.S.), large-cap water utilities such as Aqua are continuously buying small water entities. Also, most of these authorities do not have the funds required to replace and upgrade their aging network of pipes and waste systems. Not only do the bigger water entities have the funds available for the needed capital outlays, they are also able to realize significant cost saving because the industry is rife with redundancies. The company's acquisitions made through September of last year combined with organic growth, led to only a 0.8% increase in the customer base. Management has targeted annual growth to be approximately 1.5%-2.0%, so we expect the pace to possible accelerate here.

**Aqua has a healthy balance sheet.** Of the nine members in this group, only two merit an "A" Financial Strength rating. This leaves the company with the capacity to borrow to buy more water assets. In addition, Aqua's policy of hardly issuing any new equity is a real positive. With the stock near its all-time high, a new equity offering would probably be well received, as institutional demand for large-cap water utilities stock remains strong.

**These shares are timely.** Also, even though WTR's long-term total return potential isn't great, it is more attractive than most other mid- and large-cap stocks in this group. So, investors that must own a water utility equity may find WTR of interest.

*James A. Flood* *January 12, 2018*

(A) Diluted egs. Excl. nonrec. gains: '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 mid-February.
(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 | 65 |
| Earnings Predictability | 90 |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# ARTESIAN RES. CORP. NDQ-ARTNA

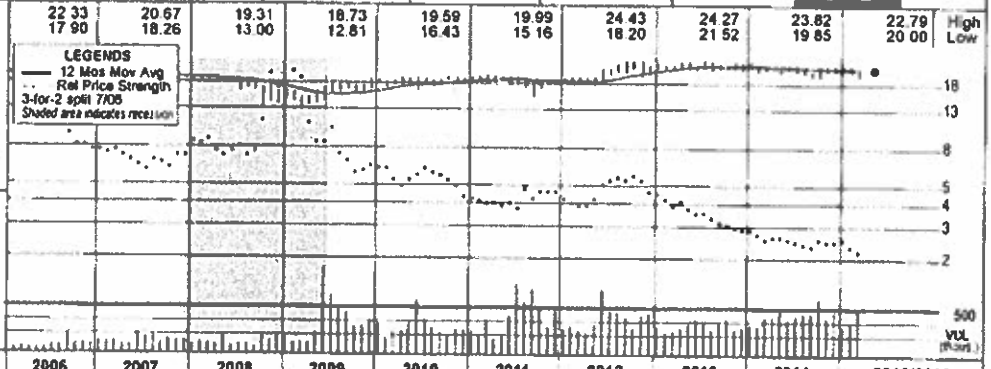
RECENT PRICE **21.74** | TRAILING P/E RATIO **20.3** | RELATIVE P/E RATIO **1.01** | DIV'D YLD **4.0%** | VALUE LINE

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 22.33 | 20.67 | 19.31 | 18.73 | 19.59 | 19.99 | 24.43 | 24.27 | 23.82 | 22.79 High |
| | 17.90 | 18.26 | 13.00 | 12.81 | 16.43 | 15.16 | 18.20 | 21.52 | 19.85 | 20.00 Low |

**RANKS**

PERFORMANCE **4** Below Average
Technical **4** Below Average
SAFETY **3** Average
BETA .55 (1.00 = Market)

Financial Strength B
Price Stability 95
Price Growth Persistence 40
Earnings Predictability 80




| © VALUE LINE PUBLISHING LLC | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2016/2016 |
|---|---|---|---|---|---|---|---|---|---|---|
| SALES PER SH | 7.77 | 7.20 | 7.59 | 8.11 | 8.48 | 7.56 | 8.10 | 7.82 | 8.13 | |
| "CASH FLOW" PER SH | 1.75 | 1.57 | 1.65 | 1.84 | 1.92 | 1.64 | 2.04 | 1.87 | 2.04 | |
| EARNINGS PER SH | .97 | .90 | .86 | .97 | 1.00 | .83 | 1.13 | .94 | 1.07 | 1.17[A,B]/1.30[C] |
| DIV'DS DECL'D PER SH | .61 | .66 | .71 | .72 | .75 | .76 | .79 | .82 | .85 | |
| CAP'L SPENDING PER SH | 5.08 | 3.66 | 6.09 | 2.32 | 2.57 | 1.83 | 2.36 | 2.40 | 2.66 | |
| BOOK VALUE PER SH | 10.15 | 11.66 | 11.86 | 12.15 | 12.44 | 13.12 | 13.57 | 13.80 | 14.09 | |
| COMMON SHS OUTST'G (MILL.) | 6.09 | 7.30 | 7.40 | 7.51 | 7.65 | 8.61 | 8.71 | 8.83 | 8.91 | |
| AVG ANN'L P/E RATIO | 20.3 | 21.5 | 20.1 | 18.4 | 18.2 | 22.5 | 18.3 | 23.9 | 20.5 | 18.6/18.7 |
| RELATIVE P/E RATIO | 1.10 | 1.14 | 1.21 | 1.09 | 1.16 | 1.41 | 1.17 | 1.34 | 1.09 | |
| AVG ANN'L DIV'D YIELD | 3.1% | 3.4% | 4.1% | 4.5% | 4.1% | 4.1% | 3.8% | 3.7% | 3.9% | |
| SALES ($MILL.) | 47.3 | 52.5 | 56.2 | 60.9 | 64.9 | 65.1 | 70.6 | 69.1 | 72.5 | Bold figures are consensus earnings estimates and, using the recent prices, P/E ratios. |
| OPERATING MARGIN | 45.6% | 45.6% | 45.1% | 46.9% | 46.5% | 45.5% | 48.7% | 47.0% | 48.8% | |
| DEPRECIATION ($MILL.) | 4.6 | 5.2 | 5.8 | 6.6 | 7.0 | 7.4 | 7.9 | 8.3 | 8.7 | |
| NET PROFIT ($MILL.) | 6.1 | 6.3 | 6.4 | 7.3 | 7.6 | 6.7 | 9.6 | 8.3 | 9.5 | |
| INCOME TAX RATE | 39.0% | 39.8% | 40.8% | 40.1% | 40.0% | 40.8% | 40.2% | 40.2% | 40.1% | |
| NET PROFIT MARGIN | 12.8% | 11.9% | 11.4% | 11.9% | 11.7% | 10.4% | 14.0% | 12.0% | 13.1% | |
| WORKING CAP'L ($MILL.) | d8.8 | 2.5 | d20.9 | d23.3 | d27.9 | d11.4 | d11.4 | d12.3 | d13.5 | |
| LONG-TERM DEBT ($MILL.) | 92.1 | 91.8 | 107.6 | 106.0 | 105.1 | 106.5 | 108.3 | 105.5 | 105.0 | |
| SHR. EQUITY ($MILL.) | 81.6 | 85.1 | 87.8 | 91.2 | 95.1 | 113.0 | 118.2 | 121.8 | 125.6 | |
| RETURN ON TOTAL CAP'L | 5.8% | 5.3% | 4.7% | 5.2% | 5.6% | 4.6% | 5.9% | 5.1% | 5.5% | |
| RETURN ON SHR. EQUITY | 9.8% | 7.4% | 7.3% | 8.0% | 8.0% | 6.0% | 8.3% | 6.8% | 7.6% | |
| RETAINED TO COM EQ | 3.8% | 2.1% | 1.4% | 2.1% | 2.0% | .5% | 2.5% | .9% | 1.6% | |
| ALL DIV'DS TO NET PROF | 61% | 71% | 81% | 74% | 75% | 92% | 70% | 87% | 79% | |

[A] No. of analysts changing earn. est. in last 3 days: 0 up, 0 down. consensus 5-year earnings growth not available. [B] Based upon 2 analysts' estimates. [C] Based upon one analyst's estimate

**ANNUAL RATES**

| of change (per share) | 5 Yrs. | 1 Yr. |
|---|---|---|
| Sales | 1.0% | 4.0% |
| "Cash Flow" | 3.5% | 9.0% |
| Earnings | 3.0% | 14.0% |
| Dividends | 3.5% | 3.0% |
| Book Value | 3.0% | 2.0% |

| Fiscal Year | QUARTERLY SALES ($mill.) 1Q | 2Q | 3Q | 4Q | Full Year |
|---|---|---|---|---|---|
| 12/31/12 | 16.7 | 17.9 | 19.0 | 17.0 | 70.6 |
| 12/31/13 | 16.3 | 17.8 | 18.1 | 16.9 | 69.1 |
| 12/31/14 | 16.9 | 17.9 | 19.6 | 18.1 | 72.5 |
| 12/31/15 | | | | | |

| Fiscal Year | EARNINGS PER SHARE 1Q | 2Q | 3Q | 4Q | Full Year |
|---|---|---|---|---|---|
| 12/31/11 | .14 | .23 | .26 | .20 | .83 |
| 12/31/12 | .28 | .32 | .33 | .20 | 1.13 |
| 12/31/13 | .20 | .28 | .29 | .17 | .94 |
| 12/31/14 | .24 | .22 | .37 | .24 | 1.07 |
| 12/31/15 | | | | | |

| Cal-endar | QUARTERLY DIVIDENDS PAID 1Q | 2Q | 3Q | 4Q | Full Year |
|---|---|---|---|---|---|
| 2012 | .193 | .198 | .198 | .203 | .79 |
| 2013 | .203 | .206 | .206 | .209 | .82 |
| 2014 | .209 | .212 | .212 | .215 | .85 |
| 2015 | .215 | | | | |

**INSTITUTIONAL DECISIONS**

| | 2Q'14 | 3Q'14 | 4Q'14 |
|---|---|---|---|
| to Buy | 36 | 27 | 30 |
| to Sell | 20 | 33 | 28 |
| Hld's(000) | 3132 | 2968 | 3004 |

| ASSETS ($mill.) | 2012 | 2013 | 12/31/14 |
|---|---|---|---|
| Cash Assets | .6 | .4 | .2 |
| Receivables | 8.7 | 8.1 | 8.4 |
| Inventory | 1.4 | 1.5 | 1.9 |
| Other | 2.8 | 3.3 | 6.1 |
| Current Assets | 13.5 | 13.3 | 16.6 |
| Property, Plant & Equip. at cost | 454.4 | 472.9 | 496.2 |
| Accum. Depreciation | 83.8 | 89.8 | 98.4 |
| Net Property | 370.6 | 383.1 | 397.8 |
| Other | 7.6 | 7.4 | 7.8 |
| Total Assets | 391.7 | 403.8 | 422.2 |
| **LIABILITIES ($mill.)** | | | |
| Accts Payable | 3.5 | 4.1 | 3.8 |
| Debt Due | 12.6 | 12.2 | 19.9 |
| Other | 8.8 | 9.3 | 6.5 |
| Current Liab. | 24.9 | 25.6 | 30.2 |

**LONG-TERM DEBT AND EQUITY as of 12/31/14**

Total Debt $124.8 mill. Due in 5 Yrs. $50.1 mill.
LT Debt $105.0 mill.
Including Cap. Leases None (46% of Cap'l)

Leases, Uncapitalized Annual rentals $.1 mill.

Pension Liability $.3 mill. in '14 vs. $.3 mill. in '13

Pfd Stock None Pfd Div'd Paid None

Common Stock 8,912,129 shares (54% of Cap'l)

**INDUSTRY: Water Utility**

**BUSINESS:** Artesian Resources Corporation, through its subsidiaries, provides water, wastewater, and other services on the Delmarva Peninsula. It distributes and sells water to residential, commercial, industrial, municipal, and utility customers in Delaware, Maryland, and Pennsylvania. The company also offers water for public and private fire protection to customers in its service territories. In addition, it provides contract water and wastewater services, water and sewer service line protection plans, and wastewater management services, as well as design, construction, and engineering services. As of December 31, 2014, the company served approximately 80,600 metered water customers through 1,201 miles of transmission and distribution mains. Artesian Water Company, the company's principal subsidiary, is the oldest and largest investor-owned public water utility on the Delmarva Peninsula, and has been providing water service since 1905. Artesian supplies over 7.3 billion gallons of water per year. Has 237 employees. Chairman, C.E.O. & President: Dian C. Taylor. Address: 664 Churchmans Rd., Newark, DE 19702. Tel.: (302) 453-6900. Internet: http://www.artesianwater.com. J.T.

*April 17, 2015*

**TOTAL SHAREHOLDER RETURN**
*Dividends plus appreciation as of 3/31/2015*

| 3 Mos. | 6 Mos. | 1 Yr. | 3 Yrs. | 5 Yrs. |
|---|---|---|---|---|
| -4.37% | 8.32% | -0.94% | 27.67% | 47.18% |

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# ARTESIAN RES. CORP. NDQ–ARTNA

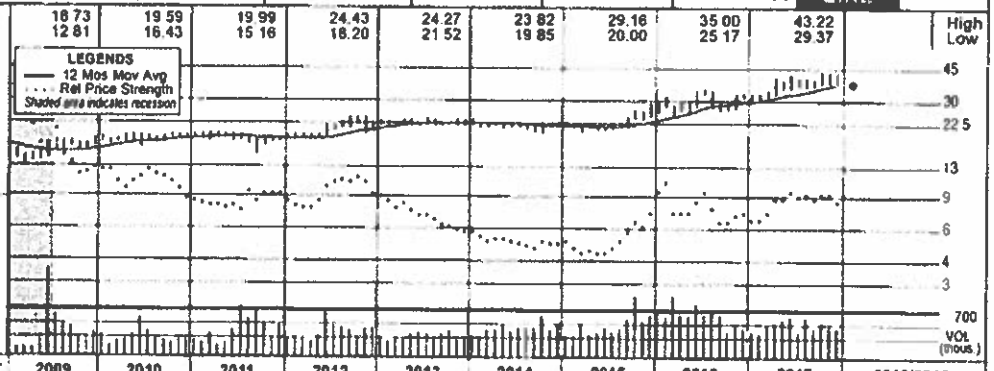
RECENT PRICE **37.31** | TRAILING P/E RATIO **26.5** | RELATIVE P/E RATIO **1.22** | DIV'D YLD **2.5%** | VALUE LINE

**RANKS**

PERFORMANCE 3 Average
Technical 3 Average
SAFETY 3 Average
BETA .85 (1.00 = Market)

Financial Strength B
Price Stability 65
Price Growth Persistence 40
Earnings Predictability 75

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 18.73 | 19.59 | 19.99 | 24.43 | 24.27 | 23.82 | 29.16 | 35.00 | 43.22 | High |
| | 12.81 | 16.43 | 15.16 | 18.20 | 21.52 | 19.85 | 20.00 | 25.17 | 29.37 | Low |




| © VALUE LINE PUBLISHING LLC | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018/2019 |
|---|---|---|---|---|---|---|---|---|---|---|
| SALES PER SH | 8.11 | 8.48 | 7.56 | 8.10 | 7.82 | 8.13 | 8.50 | 8.67 | -- | |
| "CASH FLOW" PER SH | 1.84 | 1.92 | 1.64 | 2.04 | 1.87 | 2.04 | 2.22 | 2.43 | -- | |
| EARNINGS PER SH | .97 | 1.00 | .83 | 1.13 | .94 | 1.07 | 1.26 | 1.41 | NA | NA/NA |
| DIV'DS DECL'D PER SH | .72 | .75 | .76 | .79 | .82 | .85 | .87 | .90 | -- | |
| CAP'L SPENDING PER SH | 2.32 | 2.57 | 1.83 | 2.36 | 2.40 | 2.66 | 2.28 | 3.10 | -- | |
| BOOK VALUE PER SH | 12.15 | 12.44 | 13.12 | 13.57 | 13.80 | 14.09 | 14.81 | 15.23 | -- | |
| COMMON SHS OUTST'G (MILL) | 7.51 | 7.65 | 8.61 | 8.71 | 8.83 | 8.91 | 9.06 | 9.13 | -- | |
| AVG ANN'L P/E RATIO | 16.4 | 18.2 | 22.5 | 18.3 | 23.9 | 20.5 | 18.0 | 20.9 | NA | NA/NA |
| RELATIVE P/E RATIO | 1.09 | 1.16 | 1.41 | 1.17 | 1.34 | 1.08 | .93 | 1.14 | -- | |
| AVG ANN'L DIV'D YIELD | 4.5% | 4.1% | 4.1% | 3.8% | 3.7% | 3.9% | 3.8% | 3.1% | -- | |
| SALES ($MILL) | 60.9 | 64.9 | 65.1 | 70.6 | 69.1 | 72.5 | 77.0 | 79.1 | -- | Bold figures are consensus earnings estimates and, using the recent prices, P/E ratios. |
| OPERATING MARGIN | 46.9% | 46.5% | 45.5% | 46.7% | 47.0% | 46.8% | 43.0% | 44.4% | -- | |
| DEPRECIATION ($MILL) | 6.6 | 7.0 | 7.4 | 7.9 | 8.3 | 8.7 | 8.8 | 9.2 | -- | |
| NET PROFIT ($MILL) | 7.3 | 7.6 | 6.7 | 9.8 | 8.3 | 9.5 | 11.3 | 13.0 | -- | |
| INCOME TAX RATE | 40.1% | 40.0% | 40.8% | 40.2% | 40.2% | 40.1% | -- | -- | -- | |
| NET PROFIT MARGIN | 11.9% | 11.7% | 10.4% | 14.0% | 12.0% | 13.1% | 14.7% | 16.4% | -- | |
| WORKING CAP'L ($MILL) | d23.3 | d27.9 | d11.4 | d11.4 | d12.3 | d13.5 | d8.8 | d4.7 | -- | |
| LONG-TERM DEBT ($MILL) | 106.0 | 105.1 | 106.5 | 106.3 | 105.5 | 105.0 | 103.6 | 102.3 | -- | |
| SHR. EQUITY ($MILL) | 91.2 | 95.1 | 113.0 | 118.2 | 121.8 | 125.6 | 132.3 | 139.0 | -- | |
| RETURN ON TOTAL CAP'L | 5.2% | 5.6% | 4.6% | 5.9% | 5.1% | 5.5% | 6.3% | 6.7% | -- | |
| RETURN ON SHR. EQUITY | 8.0% | 8.0% | 6.0% | 8.3% | 6.8% | 7.6% | 8.5% | 9.3% | -- | |
| RETAINED TO COM EQ | 2.1% | 2.0% | .5% | 2.5% | .9% | 1.6% | 2.6% | 3.4% | -- | |
| ALL DIV'DS TO NET PROF | 74% | 75% | 92% | 70% | 87% | 79% | 69% | 63% | -- | |

Note: No analyst estimates available.

**ANNUAL RATES**

| of change (per share) | 6 Yrs. | 1 Yr. |
|---|---|---|
| Sales | 1.0% | 2.0% |
| Cash Flow | 4.5% | 9.0% |
| Earnings | 6.0% | 12.0% |
| Dividends | 3.0% | 3.0% |
| Book Value | 3.0% | 4.5% |

| Fiscal Year | QUARTERLY SALES ($mill.) 1Q | 2Q | 3Q | 4Q | Full Year |
|---|---|---|---|---|---|
| 12/31/15 | 18.0 | 19.5 | 20.8 | 18.7 | 77.0 |
| 12/31/16 | 18.5 | 19.4 | 21.8 | 19.4 | 79.1 |
| 12/31/17 | 19.2 | 20.5 | 22.4 | | |
| 12/31/18 | | | | | |

| Fiscal Year | EARNINGS PER SHARE 1Q | 2Q | 3Q | 4Q | Full Year |
|---|---|---|---|---|---|
| 12/31/14 | .24 | .22 | .37 | .24 | 1.07 |
| 12/31/15 | .28 | .36 | .41 | .21 | 1.26 |
| 12/31/16 | .30 | .33 | .48 | .30 | 1.41 |
| 12/31/17 | .34 | .35 | .42 | | |
| 12/31/18 | | | | | |

| Cal-endar | QUARTERLY DIVIDENDS PAID 1Q | 2Q | 3Q | 4Q | Full Year |
|---|---|---|---|---|---|
| 2015 | .215 | .218 | .218 | .222 | .87 |
| 2016 | .222 | .225 | .225 | .228 | .90 |
| 2017 | .228 | .232 | .232 | .235 | .93 |
| 2018 | | | | | |

**INSTITUTIONAL DECISIONS**

| | 1Q'17 | 2Q'17 | 3Q'17 |
|---|---|---|---|
| to Buy | 37 | 42 | 36 |
| to Sell | 34 | 34 | 30 |
| Hld's(000) | 4022 | 4033 | 4073 |

| ASSETS ($mill.) | 2015 | 2016 | 9/30/17 |
|---|---|---|---|
| Cash Assets | .2 | .2 | .3 |
| Receivables | 6.4 | 7.8 | 7.2 |
| Inventory | 1.7 | 1.6 | 1.4 |
| Other | 6.1 | 5.0 | 7.5 |
| Current Assets | 14.4 | 14.6 | 16.4 |
| Property, Plant & Equip at cost | 514.8 | 539.7 | -- |
| Accum Depreciation | 105.2 | 110.3 | -- |
| Net Property | 409.6 | 429.4 | 451.7 |
| Other | 7.6 | 7.0 | 11.4 |
| Total Assets | 431.6 | 451.0 | 479.5 |
| LIABILITIES ($mill.) | | | |
| Accts Payable | 5.5 | 5.6 | 7.1 |
| Debt Due | 11.8 | 8.4 | 7.6 |
| Other | 5.9 | 5.3 | 8.5 |
| Current Liab | 23.2 | 19.3 | 23.2 |

**LONG-TERM DEBT AND EQUITY as of 9/30/17**

Total Debt $113.5 mil. Due in 5 Yrs. NA
LT Debt $105.9 mil.
Including Cap. Leases NA (42% of Cap'l)

Leases, Uncapitalized Annual rentals NA

Pension Liability $1.0 mil. in '16 vs. $1.1 mil. in '15

Pfd Stock None Pfd Div'd Paid None

Common Stock 9,193,000 shares (58% of Cap'l)

**INDUSTRY: Water Utility**

**BUSINESS:** Artesian Resources Corp. operates as a holding company of wholly owned subsidiaries offering water, wastewater services, and related services on the Delmarva Peninsula. Its Water Division (Artesian Water, Artesian Water Maryland, and Artesian Water Pennsylvania) provide water service to residential, commercial, industrial, governmental, municipal, and utility customers. For the nine months ended September 30, 2017, approximately 5.8 billion gallons of water were distributed in its Delaware systems and approximately 98.6 million gallons of water were distributed in its Maryland systems. Artesian Wastewater owns wastewater infrastructure in Delaware and Artesian Wastewater Maryland provides regulated wastewater services in Maryland. The number of Delaware wastewater customers totaled 1,685 as of June 30, 2017. Artesian Utility (non-regulated division) provides contract water and wastewater operation services to private, municipal, and governmental institutions. Has 225 employees. Chairman, C.E.O. & President: Dian C. Taylor. Address: 664 Churchmans Rd., Newark, DE 19702. Tel.: (302) 453-6900. Internet: www.artesianwater.com. *J.V.*

*January 12, 2018*

**TOTAL SHAREHOLDER RETURN**
*Dividends plus appreciation as of 12/31/2017*

| 3 Mos. | 6 Mos. | 1 Yr. | 3 Yrs. | 5 Yrs. |
|---|---|---|---|---|
| 2.64% | 3.72% | 23.94% | 87.92% | 104.13% |

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ACCEPTED ELECTRONICALLY PROCEEDING 2017-292-WS DOCKET 2017-292-WS Page 23 of 67

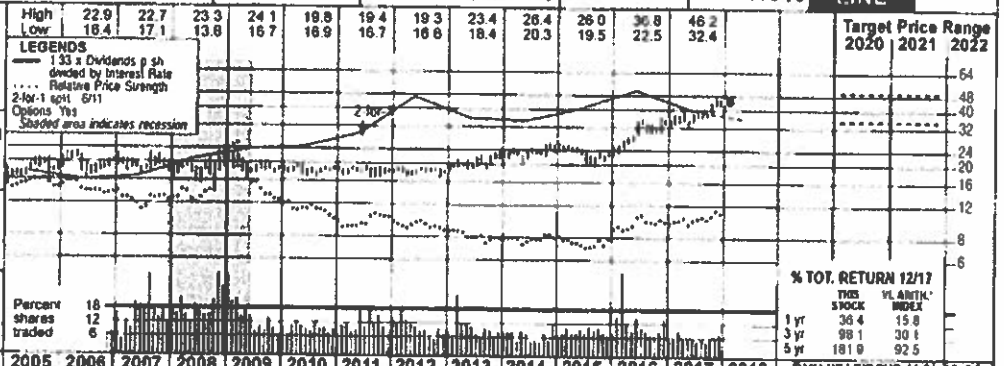
# CALIFORNIA WATER NYSE-CWT

RECENT PRICE 44.70 | P/E RATIO 30.0 (Trailing: 31.5 / Median: 20.0) | RELATIVE P/E RATIO 1.46 | DIV'D YLD 1.6% | VALUE LINE

TIMELINESS 2 Raised 9/1/17
SAFETY 3 Lowered 7/27/07
TECHNICAL 2 Raised 12/22/17
BETA .80 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High | 22.9 | 22.7 | 23.3 | 24.1 | 19.8 | 19.4 | 19.3 | 23.4 | 26.4 | 26.0 | 36.8 | 46.2 |
| Low | 16.4 | 17.1 | 13.8 | 16.7 | 16.9 | 16.7 | 16.8 | 18.4 | 20.3 | 19.5 | 22.5 | 32.4 |

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



Target Price Range 2020 | 2021 | 2022

**2020-22 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 60 | (+30%) | 5% |
| Low | 35 | (-20%) | -4% |

**Insider Decisions**

| | M | A | M | J | J | A | S | O | N |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Options | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| to Sell | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 |

**Institutional Decisions**

| | 1Q2017 | 2Q2017 | 3Q2017 |
|---|---|---|---|
| to Buy | 97 | 86 | 80 |
| to Sell | 83 | 77 | 71 |
| Hld's(000) | 38886 | 38422 | 38931 |

Percent shares traded 18 12 6

% TOT. RETURN 12/17

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr | 36.4 | 15.8 |
| 3 yr | 98.1 | 30.1 |
| 5 yr | 181.9 | 92.5 |

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | © VALUE LINE PUB. LLC | 20-22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 12.70 | 13.70 | 14.10 | Revenues per sh | 15.00 |
| 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 | 2.34 | 2.70 | 2.90 | "Cash Flow" per sh | 3.25 |
| .47 | .63 | .61 | .73 | .74 | .67 | .75 | .95 | .88 | .91 | .86 | 1.02 | 1.02 | 1.19 | .94 | 1.01 | 1.40 | 1.55 | Earnings per sh A | 1.85 |
| .56 | .56 | .56 | .57 | .57 | .58 | .58 | .59 | .59 | .60 | .62 | .63 | .64 | .65 | .67 | .69 | .72 | .75 | Div'd Decl'd per sh B ■ | 1.02 |
| 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 | 4.77 | 3.85 | 3.85 | Cap'l Spending per sh | 3.85 |
| 6.48 | 6.56 | 7.22 | 7.83 | 7.90 | 9.37 | 9.25 | 9.72 | 10.13 | 10.45 | 10.76 | 11.28 | 12.54 | 13.11 | 13.41 | 13.75 | 14.30 | 14.75 | Book Value per sh C | 16.50 |
| 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 | 47.97 | 48.25 | 48.30 | Common Shs Outst'g D | 50.00 |
| 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 | 29.6 | 28.9 | | Avg Ann'l P/E Ratio | 23.0 |
| 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 | 1.25 | 1.56 | 1.31 | | Relative P/E Ratio | 1.45 |
| 4.4% | 4.5% | 4.2% | 3.9% | 3.1% | 2.9% | 3.0% | 3.1% | 3.1% | 3.2% | 3.4% | 3.5% | 3.1% | 2.8% | 2.9% | 2.3% | 1.9% | | Avg Ann'l Div'd Yield | 2.4% |
| | | | | | | 367.1 | 410.3 | 449.4 | 460.4 | 501.8 | 560.0 | 584.1 | 597.5 | 588.3 | 609.4 | 660 | 685 | Revenues ($mill) E | 750 |
| | | | | | | 31.2 | 39.8 | 40.6 | 37.7 | 36.1 | 42.6 | 47.3 | 56.7 | 45.0 | 48.7 | 68.0 | 75.0 | Net Profit ($mill) | 93.0 |
| | | | | | | 39.9% | 37.7% | 40.3% | 39.5% | 40.5% | 37.5% | 30.3% | 33.0% | 36.0% | 35.5% | 35.0% | 21.0% | Income Tax Rate | 21.0% |
| | | | | | | 8.3% | 8.6% | 7.6% | 4.2% | 7.6% | 8.0% | 4.3% | 2.7% | 4.3% | 6.1% | 5.0% | 5.0% | AFUDC % to Net Profit | 5.0% |
| | | | | | | 42.9% | 41.6% | 47.1% | 52.4% | 51.7% | 47.8% | 41.6% | 40.1% | 44.4% | 44.6% | 43.0% | 44.5% | Long-Term Debt Ratio | 42.0% |
| | | | | | | 56.6% | 58.4% | 52.9% | 47.6% | 48.3% | 52.2% | 58.4% | 59.9% | 55.6% | 55.4% | 57.0% | 55.5% | Common Equity Ratio | 58.0% |
| | | | | | | 874.9 | 690.4 | 794.9 | 914.7 | 931.5 | 908.2 | 1024.9 | 1045.9 | 1154.4 | 1191.2 | 1215 | 1290 | Total Capital ($mill) | 1425 |
| | | | | | | 1010.2 | 1112.4 | 1198.1 | 1294.3 | 1381.1 | 1457.1 | 1515.8 | 1590.4 | 1701.6 | 1859.3 | 1900 | 1930 | Net Plant ($mill) | 2000 |
| | | | | | | 5.9% | 7.1% | 6.5% | 5.5% | 5.5% | 6.3% | 6.0% | 6.3% | 5.2% | 5.5% | 6.5% | 7.0% | Return on Total Cap'l | 7.5% |
| | | | | | | 8.1% | 9.9% | 9.6% | 8.6% | 8.0% | 9.0% | 7.9% | 9.1% | 7.0% | 7.4% | 10.0% | 10.5% | Return on Shr. Equity | 11.0% |
| | | | | | | 8.1% | 9.9% | 9.6% | 8.6% | 8.0% | 9.0% | 7.9% | 9.1% | 7.0% | 7.4% | 10.0% | 10.5% | Return on Com Equity | 11.0% |
| | | | | | | 1.8% | 3.8% | 3.8% | 3.0% | 2.3% | 3.4% | 3.4% | 4.1% | 2.0% | 2.4% | 4.5% | 5.5% | Retained to Com Eq | 5.0% |
| | | | | | | 77% | 61% | 60% | 66% | 71% | 82% | 56% | 55% | 71% | 68% | 51% | 49% | All Div'ds to Net Prof | 55% |

**CAPITAL STRUCTURE as of 9/30/17**
Total Debt $750.6 mill. Due in 5 Yrs $174.0 mill.
LT Debt $519.7 mill. LT Interest $35.0 mill.
(44% of Cap'l)

Pension Assets-12/16 $376.5 mill. Oblig. $564.8 mill.

Pfd Stock None

Common Stock 48,315,000 shs.

MARKET CAP: $2.1 billion (Mid Cap)

| CURRENT POSITION ($MILL.) | 2015 | 2016 | 9/30/17 |
|---|---|---|---|
| Cash Assets | 8.8 | 25.5 | 28.3 |
| Other | 118.8 | 116.6 | 152.2 |
| Current Assets | 127.6 | 142.1 | 180.5 |
| Accts Payable | 66.4 | 77.8 | 89.4 |
| Debt Due | 40.2 | 123.3 | 231.1 |
| Other | 41.9 | 49.1 | 59.9 |
| Current Liab. | 148.5 | 250.2 | 380.4 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '14-'16 to '20-'22 |
|---|---|---|---|
| Revenues | 4.0% | 2.0% | 3.0% |
| "Cash Flow" | 5.0% | 3.5% | 5.5% |
| Earnings | 4.0% | 3.0% | 10.0% |
| Dividends | 1.5% | 2.0% | 7.5% |
| Book Value | 5.0% | 5.0% | 3.5% |

| Cal-endar | QUARTERLY REVENUES ($ mill.)E Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | 110.5 | 158.4 | 191.2 | 137.4 | 597.5 |
| 2015 | 122.0 | 144.4 | 183.5 | 138.4 | 588.3 |
| 2016 | 121.7 | 152.4 | 184.3 | 151.0 | 609.4 |
| 2017 | 122.0 | 171.1 | 211.7 | 155.2 | 660 |
| 2018 | 130 | 175 | 215 | 165 | 685 |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | d.11 | .36 | .70 | .24 | 1.19 |
| 2015 | .03 | .21 | .52 | .18 | .94 |
| 2016 | d.02 | .24 | .48 | .31 | 1.01 |
| 2017 | .02 | .39 | .70 | .29 | 1.40 |
| 2018 | .08 | .42 | .72 | .33 | 1.55 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B ■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .1625 | .1625 | .1625 | .1625 | .65 |
| 2015 | .1675 | .1675 | .1675 | .1675 | .67 |
| 2016 | .1725 | .1725 | .1725 | .1725 | .69 |
| 2017 | .18 | .18 | .18 | .18 | .72 |
| 2018 | | | | | |

**BUSINESS:** California Water Service Group provides regulated and nonregulated water service to 482,400 customers in 100 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, '16: residential, 72%; business, 20%; industrial, 4%; public authorities, 3%; other, 1%. Off. and dir. own 1% of common stock (4/17 proxy). Has 1,163 employees. Pres. and CEO: Martin A. Kropelnicki. Inc.: DE. Addr.: 1720 North First St., San Jose, CA 95112-4598. Tel.: 408-367-8200. Internet: www.calwatergroup.com.

**California Water Service Group stock is trading around recently established all-time highs.** The regulated water utility wrapped up 2017 by surging through the $45-per-share price threshold on more than one occasion, with shares rising 33% on the year. Since our previous review, the equity is up more than 10% in value. Indeed, the investment community has handsomely rewarded the company for delivering consistent top and bottom-line growth, quarter to quarter. However, fourth-quarter share net may slip by two cents. For 2018, our ranking system suggests another strong performance may be in store, as CWT shares are poised to outpace the year-ahead broader market averages (Timeliness: 2).

**We think the positives will continue to outweigh the negatives here.** California Water Service is enjoying the fruits of recent rate increases by the California regulatory authority. In fact, the decision has added more than $30 million in incremental revenues so far. In addition, favorable changes to the corporate tax rate should help lift profits this year. To address the latter, the company's operating expenses are still on the rise, despite some progress in the second quarter. Water costs (only investment upgrades can be recouped) from greater customer usage, as well as periodic increases in wholesale supplier rates, are pushing expenses higher. Overall, we are adding $10 million and $0.10 to our 2018 revenue and earnings estimates, to $685 million and $1.55 a share, respectively.

**Aggressive infrastructure spending remains on tap through next decade.** As previously noted, California has close to $500 million left on its investment budget, and has earmarked the funds for upgrades to its aging infrastructure and water systems. On top of that, these improvements are likely to be accompanied by bolt-on acquisitions.

**This issue is best suited for short-term accounts.** On the other hand, CWT shares have been on a multiyear price ascent and, as a result, total return potential 3 to 5 years out is unappealing. Thus, we think investors with a longer term holding period can find more-attractive options elsewhere, at this time.

*Nicholas P. Patrikis* *January 12, 2018*

(A) Basic EPS. Excl. nonrecurring gain (loss): '01, 2¢; '02, 4¢; '11, 4¢. Next earnings report due late February.
(B) Dividends historically paid in late Feb., May, Aug., and Nov. ■ Div'd reinvestment plan available.
(C) Incl. intangible assets. In '16: $21.9 mill., $0.46/sh.
(D) In millions, adjusted for splits.
(E) Excludes non-reg. rev.

| | |
|---|---|
| Company's Financial Strength | B++ |
| Stock's Price Stability | 80 |
| Price Growth Persistence | 35 |
| Earnings Predictability | 65 |

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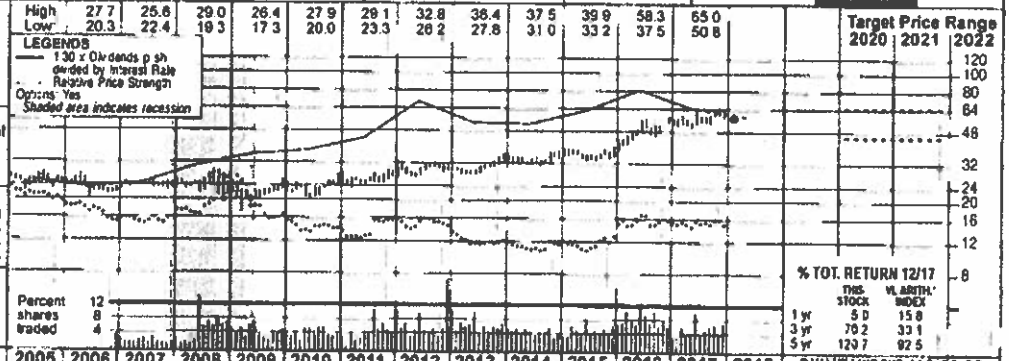
# CONNECTICUT WATER NDQ-CTWS

RECENT PRICE 57.13 | P/E RATIO 25.1 (Trailing: 27.7 Median: 20.0) | RELATIVE P/E RATIO 1.22 | DIV'D YLD 2.1% | VALUE LINE

TIMELINESS 2 Raised 1/5/18
SAFETY 3 New 1/18/13
TECHNICAL 1 Raised 1/12/18
BETA .65 (1.00 = Market)

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High | 27.7 | 25.6 | 29.0 | 26.4 | 27.9 | 29.1 | 32.8 | 36.4 | 37.5 | 39.9 | 58.3 | 65.0 | | | | | | |
| Low | 20.3 | 22.4 | 19.3 | 17.3 | 20.0 | 23.3 | 26.2 | 27.8 | 31.0 | 33.2 | 37.5 | 50.8 | | | | | | |

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



Target Price Range 2020 | 2021 | 2022
120 100 80 64 48 32 24 20 16 12 8

**2020-22 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 65 | (+15%) | 6% |
| Low | 45 | (-20%) | -3% |

**Insider Decisions**

| | M | A | M | J | J | A | S | O | N |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Options | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| to Sell | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

**Institutional Decisions**

| | 1Q2017 | 2Q2017 | 3Q2017 |
|---|---|---|---|
| to Buy | 48 | 55 | 54 |
| to Sell | 56 | 44 | 45 |
| Hld's(000) | 6170 | 6289 | 6356 |

Percent shares traded 12 8 4

**% TOT. RETURN 12/17**

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr | 5.0 | 15.8 |
| 3 yr | 70.2 | 33.1 |
| 5 yr | 129.7 | 92.5 |

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | © VALUE LINE PUB. LLC | 20-22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 8.77 | 8.75 | 9.55 | Revenues per sh | 12.80 |
| 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 | 3.31 | 3.35 | 3.55 | "Cash Flow" per sh | 4.10 |
| 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 | 2.08 | 2.20 | 2.40 | Earnings per sh A | 2.90 |
| .80 | .81 | .83 | .84 | .85 | .86 | .87 | .88 | .90 | .92 | .94 | .96 | .98 | 1.01 | 1.05 | 1.12 | 1.18 | 1.24 | Div'd Decl'd per sh B■ | 1.46 |
| 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 | 5.93 | 4.50 | 4.35 | Cap'l Spending per sh | 3.35 |
| 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 | 20.01 | 20.98 | 24.40 | 24.50 | Book Value per sh D | 28.80 |
| 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 | 11.25 | 12.10 | 12.25 | Common Shs Outst'g C | 12.50 |
| 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 | 23.3 | 25.7 | | Avg Ann'l P/E Ratio | 19.0 |
| 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 | 1.22 | 1.25 | | Relative P/E Ratio | 1.20 |
| 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% | 2.3% | 2.1% | | Avg Ann'l Div'd Yield | 2.7% |

**CAPITAL STRUCTURE as of 9/30/17**
Total Debt $263.2 mill. Due in 5 Yrs $19.8 mill.
LT Debt $255.2 mill. LT Interest $8.8 mill.
(47% of Cap'l)

Leases, Uncapitalized: Annual rentals $.3 mill.
Pension Assets-12/16 $62.7 mill. Oblig. $79.3 mill.

Pfd Stock $0.8 mill. Pfd Divd NMF

Common Stock 12,068,299 shs

MARKET CAP: $700 million (Small Cap)

| 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | | 20-22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 59.0 | 61.3 | 59.4 | 66.4 | 69.4 | 83.6 | 91.5 | 94.0 | 96.0 | 98.7 | 108 | 117 | Revenues ($mill) 160 |
| 8.8 | 9.4 | 10.2 | 9.8 | 9.9 | 13.6 | 18.3 | 21.3 | 22.8 | 23.4 | 28.5 | 29.5 | Net Profit ($mill) 36.0 |
| 32.4% | 27.2% | 19.5% | 35.2% | 41.3% | 32.0% | 28.0% | 14.4% | 3.5% | 9.9% | 19.0% | 20.0% | Income Tax Rate 20.0% |
| -- | 1.7% | -- | -- | -- | 1.7% | 2.0% | 2.4% | 2.3% | 5.1% | 3.0% | 2.5% | AFUDC % to Net Profit 2.5% |
| 47.8% | 46.9% | 50.6% | 49.5% | 53.2% | 49.0% | 46.9% | 45.7% | 44.1% | 45.4% | 46.5% | 46.5% | Long-Term Debt Ratio 45.0% |
| 51.8% | 52.7% | 49.1% | 50.2% | 46.5% | 50.8% | 52.9% | 54.1% | 55.7% | 54.4% | 53.5% | 53.5% | Common Equity Ratio 55.0% |
| 193.2 | 196.5 | 221.3 | 225.6 | 254.2 | 364.6 | 373.6 | 386.8 | 402.4 | 433.8 | 550 | 560 | Total Capital ($mill) 610 |
| 284.3 | 302.3 | 325.2 | 344.2 | 362.4 | 447.9 | 471.9 | 506.9 | 546.3 | 601.4 | 615 | 635 | Net Plant ($mill) 675 |
| 5.5% | 5.9% | 5.5% | 5.4% | 4.9% | 4.8% | 5.9% | 6.4% | 6.5% | 6.3% | 5.5% | 6.0% | Return on Total Cap'l 6.5% |
| 8.7% | 9.0% | 9.3% | 8.6% | 8.3% | 7.3% | 9.2% | 10.1% | 10.1% | 9.9% | 9.0% | 10.0% | Return on Shr. Equity 11.0% |
| 8.7% | 9.1% | 9.4% | 8.7% | 8.3% | 7.3% | 9.2% | 10.2% | 10.1% | 9.9% | 9.0% | 10.0% | Return on Com Equity 11.0% |
| 1.6% | 1.9% | 2.3% | 1.6% | 1.4% | 2.8% | 3.8% | 4.8% | 4.9% | 4.6% | 4.0% | 4.5% | Retained to Com Eq 5.5% |
| 82% | 79% | 76% | 81% | 83% | 62% | 59% | 53% | 52% | 54% | 54% | 52% | All Div'ds to Net Prof 50% |

| CURRENT POSITION ($MILL.) | 2016 | 2016 | 9/30/17 |
|---|---|---|---|
| Cash Assets | .7 | 1.6 | 8.3 |
| Accounts Receivable | 11.0 | 13.0 | 15.6 |
| Other | 15.3 | 14.8 | 23.2 |
| Current Assets | 27.0 | 29.4 | 47.1 |
| Accts Payable | 11.9 | 13.1 | 8.6 |
| Debt Due | 2.8 | 4.9 | 8.0 |
| Other | 22.2 | 37.1 | 23.2 |
| Current Liab | 36.9 | 55.1 | 39.8 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '14-'16 to '20-'22 |
|---|---|---|---|
| Revenues | 4.0% | 3.0% | 7.0% |
| "Cash Flow" | 6.5% | 9.5% | 4.5% |
| Earnings | 8.0% | 12.0% | 6.5% |
| Dividends | 2.5% | 3.0% | 5.5% |
| Book Value | 6.0% | 9.0% | 5.0% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | 20.3 | 25.4 | 27.6 | 20.7 | 94.0 |
| 2015 | 20.0 | 26.6 | 28.4 | 21.0 | 96.0 |
| 2016 | 21.6 | 26.1 | 29.5 | 21.5 | 98.7 |
| 2017 | 22.5 | 27.9 | 31.8 | 23.8 | 106 |
| 2018 | 25.5 | 30.5 | 35.0 | 26.0 | 117 |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .27 | .67 | .76 | .22 | 1.92 |
| 2015 | .28 | .77 | .79 | .20 | 2.04 |
| 2016 | .28 | .89 | .84 | .07 | 2.08 |
| 2017 | .36 | .73 | .90 | .21 | 2.20 |
| 2018 | .37 | .80 | .93 | .30 | 2.40 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .2475 | .2475 | .2575 | .2575 | 1.01 |
| 2015 | .2575 | .2575 | .2675 | .2675 | 1.05 |
| 2016 | .2675 | .2825 | .2825 | .2825 | 1.12 |
| 2017 | .2825 | .2975 | .2975 | .2975 | 1.18 |
| 2018 | | | | | |

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 2016, 95% of net income was derived from these activities. Provides water services to 440,000 people in 79 municipalities throughout Connecticut and Maine. Acquired The Maine Water Company, January, 2012; Biddeford and Saco Water, December 2012; Heritage Village, February, 2017. Inc. Conn. Has 266 employees. Chairman/President/Chief Executive Officer: Eric W. Thornburg. Officers and directors own 2.5% of the common stock; BlackRock Inc. 7.2% (4/17 proxy). Address: 93 West Main Street, Clinton, CT 06413. Telephone: (860) 669-8636. Internet: www.ctwater.com.

**Connecticut Water Service reported third-quarter financial results in line with our expectations.** Revenues of $31.8 million rose 8%, year over year, while earnings of $0.90 per share logged a similar advance. There were several noteworthy highlights during the September period. These consist of the completion and inclusion of the Heritage Village Water and Avon Water acquisitions, which added about 9,500 customers and $2.4 million to the top line. Moreover, Connecticut finalized a $30 million water treatment facility upgrade.

**The company has received approval to raise its rates.** As noted in our previous review, Connecticut Water's subsidiary, The Maine Water Company, filed for a rate hike to recoup about $5 million in past water system upgrades and associated operating costs. The rate increase (effective as of December 1st) will impact roughly 16,500 customers and lift its annual revenue haul by more than $1.5 million.

**Additional hikes are expected down the road.** No doubt, infrastructure upgrades are apt to persist over the pull to next decade, as the push to revamp outdated water pipes and mains continues to be the primary focus for most water utilities. Improvements in water treatment plants are also in the cards. Over the course of this year, we believe CTWS will match its 2017 spending budget, at around $66 million. As always, to help fund (or recoup) these investments, we expect periodic rate filings to come across the public utilities commission's desk.

**We have modestly raised our 2018 top- and bottom-line estimates.** Due to the abovementioned rate approval and wider customer base, we are adding $2 million and $0.05 to this year's revenue and earnings forecasts, to $117 million and $2.40 a share, respectively. Meanwhile, our financial projections for 2017 are unchanged.

**This issue ought to appeal primarily to those with a short-term strategy (Timeliness: 2).** On the other hand, shares of CTWS are already trading well within our 3- to 5-year Target Price Range. Therefore, we recommend longer-term accounts wait on the sidelines for a more attractive entry point.

*Nicholas P. Patrikis* *January 12, 2018*

(A) Diluted earnings. Next earnings report due late February.
(B) Dividends historically paid in mid-March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions.
(D) Includes intangibles. In 2016, $30.4 million/$2.70 a share.

| | |
|---|---|
| Company's Financial Strength | B+ |
| Stock's Price Stability | 90 |
| Price Growth Persistence | 50 |
| Earnings Predictability | 85 |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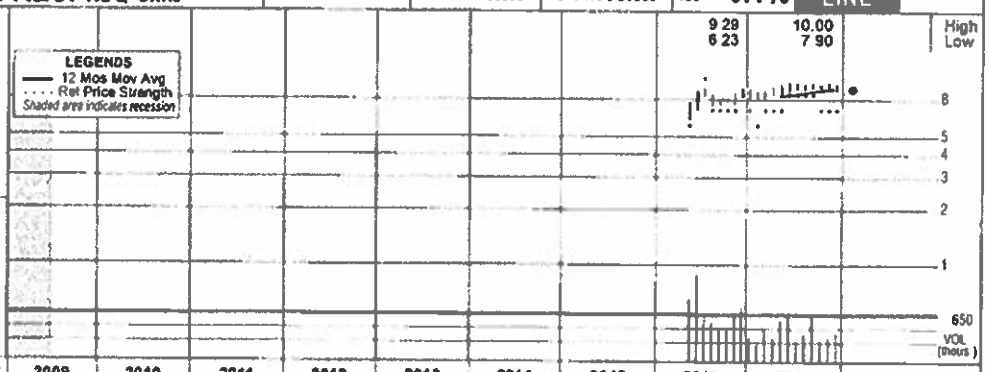
# GLOBAL WATER RES. NDQ-GWRS

RECENT PRICE **9.15** | TRAILING P/E RATIO **NMF** | RELATIVE P/E RATIO **NMF** | DIV'D YLD **3.1%** | VALUE LINE

**RANKS**

PERFORMANCE **2** Above Average
Technical **1** Highest
SAFETY **—** Short History
BETA NMF (1.00 = Market)

Financial Strength NMF
Price Stability NMF
Price Growth Persistence NMF
Earnings Predictability NMF




| © VALUE LINE PUBLISHING LLC | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018/2019 |
|---|---|---|---|---|---|---|---|---|---|---|
| REVENUES PER SH | -- | -- | -- | -- | -- | -- | -- | 1.52 | -- | |
| "CASH FLOW" PER SH | -- | -- | -- | -- | -- | -- | -- | .18 | -- | |
| EARNINGS PER SH | -- | -- | -- | -- | -- | -- | -- | d.15 | NA | NA/NA |
| DIV'DS DECL'D PER SH | -- | -- | -- | -- | -- | -- | -- | .17 | -- | |
| CAP'L SPENDING PER SH | -- | -- | -- | -- | -- | -- | -- | .44 | -- | |
| BOOK VALUE PER SH | -- | -- | -- | -- | -- | -- | -- | .78 | -- | |
| COMMON SHS OUTST'G (MILL.) | -- | -- | -- | -- | -- | -- | -- | 19.58 | -- | |
| AVG ANN'L P/E RATIO | -- | -- | -- | -- | -- | -- | -- | -- | NA | NA/NA |
| RELATIVE P/E RATIO | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| AVG ANN'L DIV'D YIELD | -- | -- | -- | -- | -- | -- | -- | 2.2% | -- | |
| REVENUES ($MILL.) | -- | -- | -- | -- | -- | -- | 32.0 | 29.8 | -- | |
| OPERATING MARGIN | -- | -- | -- | -- | -- | -- | 75.1% | 38.8% | -- | |
| DEPRECIATION ($MILL.) | -- | -- | -- | -- | -- | -- | 8.2 | 6.3 | -- | |
| NET PROFIT ($MILL.) | -- | -- | -- | -- | -- | -- | 21.4 | d2.9 | -- | |
| INCOME TAX RATE | -- | -- | -- | -- | -- | -- | 49.1% | -- | -- | |
| NET PROFIT MARGIN | -- | -- | -- | -- | -- | -- | 66.9% | NMF | -- | |
| WORKING CAP'L ($MILL.) | -- | -- | -- | -- | -- | -- | 8.0 | 13.8 | -- | |
| LONG-TERM DEBT ($MILL.) | -- | -- | -- | -- | -- | -- | 104.7 | 114.3 | -- | |
| SHR. EQUITY ($MILL.) | -- | -- | -- | -- | -- | -- | 20.1 | 15.2 | -- | |
| RETURN ON TOTAL CAP'L | -- | -- | -- | -- | -- | -- | 20.5% | 2.4% | -- | |
| RETURN ON SHR. EQUITY | -- | -- | -- | -- | -- | -- | 106.5% | NMF | -- | |
| RETAINED TO COM EQ | -- | -- | -- | -- | -- | -- | 106.5% | NMF | -- | |
| ALL DIV'DS TO NET PROF | -- | -- | -- | -- | -- | -- | -- | NMF | -- | |

*Bold figures are consensus earnings estimates and, using the recent prices, P/E ratios.*

Note: No analyst estimates available.

**ANNUAL RATES**

| of change (per share) | 5 Yrs. | 1 Yr. |
|---|---|---|
| Sales | -- | -- |
| "Cash Flow" | -- | -- |
| Earnings | -- | -- |
| Dividends | -- | -- |
| Book Value | -- | -- |

| Fiscal Year | QUARTERLY SALES ($mill.) 1Q | 2Q | 3Q | 4Q | Full Year |
|---|---|---|---|---|---|
| 12/31/15 | 7.6 | 9.1 | 8.2 | 7.1 | 32.0 |
| 12/31/16 | 6.8 | 7.6 | 8.2 | 7.2 | 29.8 |
| 12/31/17 | 6.8 | 8.1 | 8.5 | | |
| 12/31/18 | | | | | |

| Fiscal Year | EARNINGS PER SHARE 1Q | 2Q | 3Q | 4Q | Full Year |
|---|---|---|---|---|---|
| 12/31/14 | -- | -- | -- | -- | -- |
| 12/31/15 | -- | -- | -- | -- | -- |
| 12/31/16 | d.02 | d.19 | .06 | -- | d.15 |
| 12/31/17 | -- | .02 | .06 | | |
| 12/31/18 | | | | | |

| Cal-endar | QUARTERLY DIVIDENDS PAID 1Q | 2Q | 3Q | 4Q | Full Year |
|---|---|---|---|---|---|
| 2015 | -- | -- | -- | -- | -- |
| 2016 | -- | .04 | .066 | .067 | .17 |
| 2017 | .067 | .068 | .069 | .07 | .27 |
| 2018 | | | | | |

**INSTITUTIONAL DECISIONS**

| | 1Q'17 | 2Q'17 | 3Q'17 |
|---|---|---|---|
| to Buy | 22 | 29 | 29 |
| to Sell | 17 | 15 | 12 |
| Hld's(000) | 3998 | 3686 | 3678 |

| ASSETS ($mill.) | 2015 | 2016 | 9/30/17 |
|---|---|---|---|
| Cash Assets | 11.5 | 20.5 | 7.8 |
| Receivables | 1.1 | 1.5 | 1.6 |
| Inventory | .0 | 0 | .0 |
| Other | 6.1 | 2.7 | 3.3 |
| Current Assets | 18.7 | 24.7 | 12.7 |
| Property, Plant & Equip. at cost | 258.2 | 273.4 | -- |
| Accum. Depreciation | 64.0 | 72.9 | -- |
| Net Property | 194.2 | 200.5 | 211.8 |
| Other | 25.1 | 13.6 | 13.7 |
| Total Assets | 238.0 | 238.8 | 238.2 |
| **LIABILITIES ($mill.)** | | | |
| Accts Payable | 1.3 | 1.8 | .2 |
| Debt Due | 2.0 | 0 | 0 |
| Other | 7.4 | 9.1 | 10.3 |
| Current Liab. | 10.7 | 10.9 | 10.5 |

**LONG-TERM DEBT AND EQUITY as of 9/30/17**

Total Debt $114.4 mill. Due in 5 Yrs. NA
LT Debt $114.4 mill.
Including Cap. Leases NA (90% of Cap'l)

Leases, Uncapitalized Annual rentals NA

Pension Liability None in '16 vs. None in '15

Pfd Stock None Pfd Div'd Paid None

Common Stock 19,531,000 shares (10% of Cap'l)

**INDUSTRY: Water Utility**

BUSINESS: Global Water Resources, Inc. is a water resource management company that owns, operates, and manages water, wastewater, and recycled water utilities in strategically located communities, principally in metropolitan Phoenix, Arizona. It seeks to deploy its integrated approach which it refers to as "Total Water Management," a term the company uses to mean managing the entire water cycle by owning and operating the water, wastewater, and recycled water utilities within the same geographic areas in order to both conserve water and maximize its total economic and social value. Global Water uses Total Water Management to promote sustainable communities in areas where it expects growth to outpace the existing potable water supply. The company currently owns eight water and wastewater utilities in strategically targeted communities in metropolitan Phoenix and serves more than 50,000 people in approximately 19,000 homes within its certificated service areas. Has 43 employees. C.E.O. & President: Ron L. Fleming. Address: 21410 N. 19th Avenue #220, Phoenix, AZ 85027. Tel.: (480) 360-7775. Internet: www.gwresources.com. *J.T.*

*January 12, 2018*

**TOTAL SHAREHOLDER RETURN**
*Dividends plus appreciation as of 12/31/2017*

| 3 Mos. | 6 Mos. | 1 Yr. | 3 Yrs. | 5 Yrs. |
|---|---|---|---|---|
| -0.13% | -4.28% | 5.74% | -- | -- |

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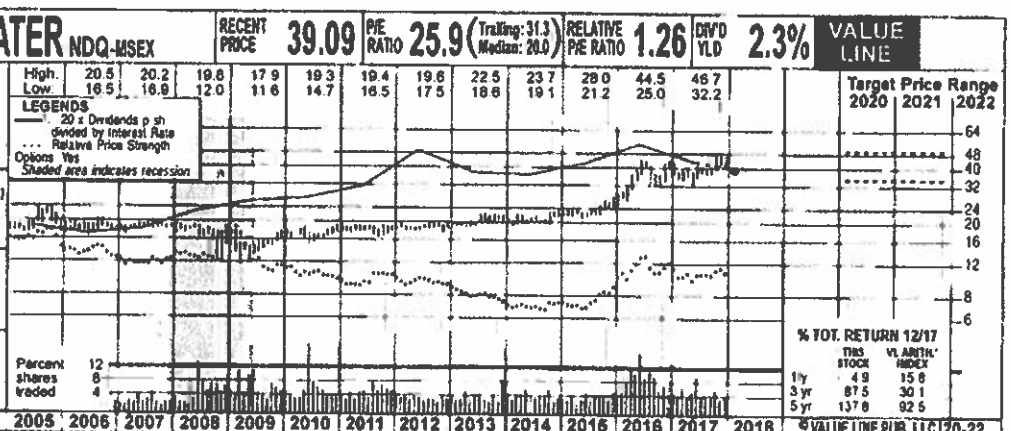
# MIDDLESEX WATER NDQ-MSEX

RECENT PRICE 39.09 | P/E RATIO 25.9 (Trailing: 31.3 / Median: 20.0) | RELATIVE P/E RATIO 1.26 | DIV'D YLD 2.3% | VALUE LINE

TIMELINESS 4 Lowered 7/7/17
SAFETY 2 New 10/21/11
TECHNICAL 1 Raised 1/12/18
BETA .60 (1.00 = Market)

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| High | 20.5 | 20.2 | 19.8 | 17.9 | 19.3 | 19.4 | 19.6 | 22.5 | 23.7 | 29.0 | 44.5 | 46.7 |
| Low | 16.5 | 16.9 | 12.0 | 11.6 | 14.7 | 16.5 | 17.5 | 18.6 | 19.1 | 21.2 | 25.0 | 32.2 |

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



Target Price Range 2020 | 2021 | 2022

**2020-22 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 60 | (+30%) | 9% |
| Low | 35 | (-10%) | Nil |

**Insider Decisions**

| | M | A | M | J | J | A | S | O | N |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Options | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| to Sell | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |

**Institutional Decisions**

| | 1Q2017 | 2Q2017 | 3Q2017 |
|---|---|---|---|
| to Buy | 45 | 60 | 46 |
| to Sell | 51 | 44 | 41 |
| Hld's(000) | 9400 | 9201 | 9500 |

Percent shares traded 12 8 4

**% TOT. RETURN 12/17**

| | THIS STOCK | VL ARITH. INDEX |
|---|---|---|
| 1 yr | 4.9 | 15.6 |
| 3 yr | 87.5 | 30.1 |
| 5 yr | 137.6 | 92.5 |

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | © VALUE LINE PUB. LLC | 20-22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 8.16 | 8.10 | 8.55 | Revenues per sh | 9.40 |
| 1.18 | 1.20 | 1.15 | 1.26 | 1.33 | 1.33 | 1.49 | 1.53 | 1.40 | 1.55 | 1.46 | 1.56 | 1.72 | 1.84 | 1.97 | 2.17 | 2.25 | 2.55 | "Cash Flow" per sh | 3.15 |
| .66 | .73 | .81 | .73 | .71 | .82 | .87 | .89 | .72 | .96 | .84 | .90 | 1.03 | 1.13 | 1.22 | 1.38 | 1.40 | 1.65 | Earnings per sh A | 2.10 |
| .62 | .63 | .65 | .66 | .67 | .68 | .69 | .70 | .71 | .72 | .73 | .74 | .75 | .76 | .78 | .81 | .86 | .91 | Div'd Decl'd per sh B■ | 1.06 |
| 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 | 2.91 | 1.80 | 1.90 | Cap'l Spending per sh | 2.05 |
| 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 | 13.40 | 13.95 | 14.65 | Book Value per sh | 16.75 |
| 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 | 16.30 | 16.50 | 16.75 | Common Shs Outst'g C | 17.00 |
| 24.6 | 23.5 | 30.0 | 26.4 | 27.4 | 22.7 | 21.6 | 19.8 | 21.0 | 17.6 | 21.7 | 20.8 | 19.7 | 18.5 | 19.1 | 25.6 | 28.0 | | Avg Ann'l P/E Ratio | 21.0 |
| 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 | .96 | 1.35 | 1.37 | | Relative P/E Ratio | 1.30 |
| 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% | 2.3% | 2.2% | | Avg Ann'l Div'd Yield | 2.5% |
| | | | | | | 86.1 | 91.0 | 91.2 | 102.7 | 102.1 | 110.4 | 114.8 | 117.1 | 126.0 | 132.9 | 134 | 143 | Revenues ($mill) | 160 |
| | | | | | | 11.8 | 12.2 | 10.0 | 14.3 | 13.4 | 14.4 | 16.6 | 18.4 | 20.0 | 22.7 | 23.0 | 27.5 | Net Profit ($mill) | 35.5 |
| | | | | | | 32.6% | 33.2% | 34.1% | 32.1% | 32.7% | 33.9% | 34.1% | 35.0% | 34.5% | 34.0% | 32.0% | 21.0% | Income Tax Rate | 21.0% |
| | | | | | | -- | -- | -- | 6.8% | 6.1% | 3.4% | 1.9% | 1.7% | 1.9% | 2.7% | 2.0% | 2.0% | AFUDC % to Net Profit | 2.5% |
| | | | | | | 49.0% | 45.6% | 46.6% | 43.1% | 42.3% | 41.5% | 40.4% | 40.5% | 39.4% | 37.9% | 37.5% | 37.0% | Long-Term Debt Ratio | 37.0% |
| | | | | | | 49.6% | 51.6% | 52.1% | 55.8% | 56.6% | 57.4% | 58.7% | 58.8% | 59.8% | 61.5% | 62.0% | 62.5% | Common Equity Ratio | 62.5% |
| | | | | | | 268.8 | 259.4 | 267.9 | 310.5 | 312.5 | 316.5 | 321.4 | 335.8 | 345.4 | 355.4 | 370 | 390 | Total Capital ($mill) | 440 |
| | | | | | | 333.9 | 366.3 | 376.5 | 405.9 | 422.2 | 435.2 | 446.5 | 465.4 | 481.9 | 517.8 | 525 | 535 | Net Plant ($mill) | 575 |
| | | | | | | 5.6% | 5.8% | 5.0% | 5.7% | 5.2% | 5.4% | 5.9% | 6.3% | 6.6% | 7.1% | 7.0% | 7.5% | Return on Total Cap'l | 8.5% |
| | | | | | | 8.6% | 8.8% | 7.0% | 8.1% | 7.5% | 7.8% | 8.7% | 9.2% | 9.6% | 10.3% | 10.0% | 11.5% | Return on Shr. Equity | 12.5% |
| | | | | | | 8.7% | 8.9% | 7.0% | 8.2% | 7.5% | 7.8% | 8.7% | 9.3% | 9.6% | 10.3% | 10.0% | 11.5% | Return on Com Equity | 12.5% |
| | | | | | | 1.8% | 2.0% | 1% | 2.1% | 1.0% | 1.4% | 2.4% | 3.1% | 3.5% | 4.3% | 4.0% | 5.0% | Retained to Com Eq | 6.0% |
| | | | | | | 79% | 78% | 98% | 75% | 87% | 83% | 73% | 67% | 63% | 58% | 61% | 55% | All Div'ds to Net Prof | 50% |

**CAPITAL STRUCTURE as of 9/30/17**
Total Debt $166.8 mill. Due in 5 Yrs $32.1 mil.
LT Debt $135.8 mill. LT Interest $6.0 mill.
(Total interest coverage: 10.9x)
(38% of Cap'l)

Pension Assets-12/16 $59.4 mill. Oblig. $78.6 mill.
Pfd Stock $2.4 mill. Pfd Div'd: $.1 mill.

Common Stock 16,346,036 shs as of 10/31/17

MARKET CAP: $650 million (Small Cap)

| CURRENT POSITION ($MILL.) | 2015 | 2016 | 9/30/17 |
|---|---|---|---|
| Cash Assets | 3.5 | 3.9 | 2.7 |
| Other | 20.9 | 22.8 | 27.4 |
| Current Assets | 24.4 | 26.7 | 30.1 |
| Accts Payable | 6.5 | 12.3 | 12.1 |
| Debt Due | 8.7 | 18.2 | 31.0 |
| Other | 13.1 | 16.6 | 15.9 |
| Current Liab. | 28.3 | 47.1 | 59.0 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '14-'16 to '20-'22 |
|---|---|---|---|
| Revenues | 2.0% | 3.0% | 3.5% |
| "Cash Flow" | 4.5% | 6.5% | 8.0% |
| Earnings | 5.0% | 8.0% | 9.0% |
| Dividends | 1.5% | 1.5% | 5.0% |
| Book Value | 4.0% | 3.0% | 4.5% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | 27.1 | 29.2 | 32.7 | 28.1 | 117.1 |
| 2015 | 28.8 | 31.7 | 34.7 | 30.8 | 126.0 |
| 2016 | 30.6 | 32.7 | 37.8 | 31.8 | 132.9 |
| 2017 | 30.1 | 33.0 | 36.2 | 34.7 | 134 |
| 2018 | 33.0 | 37.0 | 38.0 | 35.0 | 143 |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .20 | .29 | .42 | .22 | 1.13 |
| 2015 | .22 | .31 | .41 | .28 | 1.22 |
| 2016 | .29 | .36 | .54 | .19 | 1.38 |
| 2017 | .27 | .33 | .46 | .34 | 1.40 |
| 2018 | .33 | .38 | .60 | .34 | 1.65 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .19 | .19 | .19 | .1925 | .76 |
| 2015 | .1925 | .1925 | .1925 | .19875 | .78 |
| 2016 | .19875 | .19875 | .19875 | .21125 | .81 |
| 2017 | .21125 | .21125 | .21125 | .22375 | .86 |
| 2018 | | | | | |

**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. Is Middlesex System provides water services to 61,000 retail customers, primarily in Middlesex County, New Jersey. In 2016, the Middlesex System accounted for 60% of operating revenues. At 12/31/16, the company had 309 employees. Incorporated: NJ. President, CEO, and Chairman: Dennis W. Doll. Officers & directors own 3.5% of the common stock; BlackRock Institutional Trust Co., 7.2% (4/17 proxy). Add.: 1500 Ronson Road, Iselin, NJ 08830. Tel.: 732-634-1500. Internet: www.middlesexwater.com.

**Middlesex Water Company's battle with mother nature has yet to subside.** The story hasn't changed much over the past three months, as weather-related disruptions took a toll on its top line once again. Operating in the Northeast region of the U.S. leaves MSEX vulnerable to extremely volatile weather conditions, which can noticeably impact customer water consumption. Specifically, its Middlesex New Jersey operations saw revenues contract $1.8 million, year over year, due to softer consumption, while its Delaware utility system was essentially flat, thanks to contributions from added residential customers during the period. Overall, Middlesex generated $36.2 million in revenues for the September period, $1.6 million less than last year's haul. This has spurred us to trim $3.0 million off our 2017 top-line forecast, to $134 million.

**The outlook for profit growth in 2018 is good.** Operating margins ought to remain relatively steady, with few changes to the cost structure expected. Meantime, a reduced income tax rate (new tax act and various investment spending deductions) is the main driver behind our improved perspective. All told, we look for earnings to expand 18% this year, to $1.65 a share (+0.05), on revenues of $143 million ($2.0 million).

**Long-term, infrastructure upgrades ought to bear fruit.** Approximately $12 million per year (for the next three years) is earmarked for the replacement of aging water mains, valves, and other infrastructure upgrades.

**The company boosted its quarterly dividend payout by about 6%, to $0.224 per share.** Shareholders have enjoyed 45 years of consecutive dividend increases, and we don't think this streak will be broken anytime soon. At present, MSEX shares offer a yield that fractionally outpaces the average of all dividend paying stocks in *The Value Line Investment Survey*.

**This issue is still a subpar selection for relative year-ahead price performance (Timeliness: 4).** What's more, total return potential over the pull to 2020-2022 is nothing to write home about. Thus, we think investors can find better options elsewhere, at this juncture.

*Nicholas P. Patrikis* *January 12, 2018*

(A) Diluted earnings. Next earnings report due early February.
(B) Dividends historically paid in mid-Feb., May, Aug., and November.■ Div'd reinvestment plan available.
(C) In millions, adjusted for split.

| | |
|---|---|
| Company's Financial Strength | B++ |
| Stock's Price Stability | 70 |
| Price Growth Persistence | 40 |
| Earnings Predictability | 80 |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Docket 2017-292-WS - Page 10 of 11

**SJW GROUP** NYSE-SJW

RECENT PRICE 63.47 | P/E RATIO 23.6 (Trailing: 23.6 Median: 23.0) | RELATIVE P/E RATIO 1.15 | DIV'D YLD 1.4% | VALUE LINE

TIMELINESS 3 Raised 6/30/17
SAFETY 3 New 4/22/11
TECHNICAL 2 Raised 1/5/18
BETA .70 (1.00 = Market)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High | 45.3 | 43.0 | 35.1 | 30.4 | 28.2 | 28.8 | 26.9 | 30.1 | 33.7 | 35.7 | 56.9 | 69.3 |
| Low | 21.2 | 27.7 | 20.0 | 18.2 | 21.6 | 20.9 | 22.6 | 24.5 | 25.5 | 27.5 | 28.6 | 45.4 |

**2020-22 PROJECTIONS**

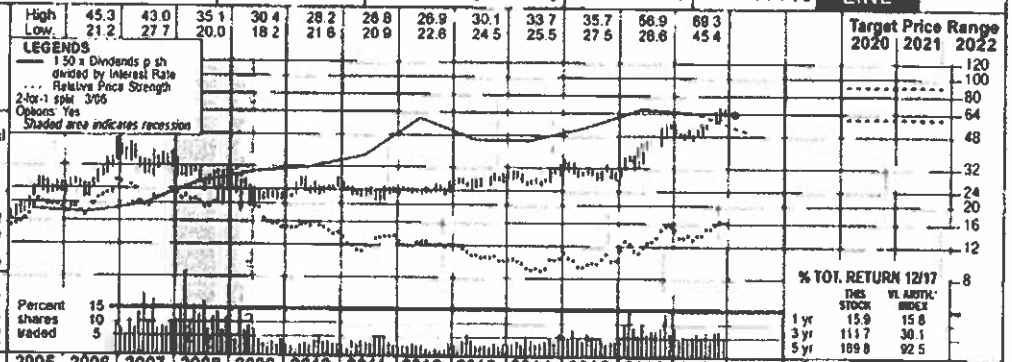
| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 90 | (+40%) | 11% |
| Low | 60 | (-5%) | 1% |

**Insider Decisions**

| | M | A | M | J | J | A | S | O | N |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Options | 6 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| to Sell | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

**Institutional Decisions**

| | 3Q2017 | 4Q2017 | 1Q2018 |
|---|---|---|---|
| to Buy | 83 | 87 | 74 |
| to Sell | 59 | 73 | 56 |
| Hld's(000) | 10726 | 10969 | 12340 |




**% TOT. RETURN 12/17**

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr | 15.9 | 15.8 |
| 3 yr | 113.7 | 30.1 |
| 5 yr | 189.8 | 92.5 |

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | © VALUE LINE PUB. LLC | 20-22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.45 | 7.97 | 8.20 | 9.14 | 9.86 | 10.35 | 11.25 | 12.12 | 11.68 | 11.82 | 12.85 | 14.01 | 13.73 | 15.76 | 14.97 | 16.61 | 18.10 | 17.95 | Revenues per sh | 21.10 |
| 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 | 4.76 | 4.60 | 4.90 | "Cash Flow" per sh | 5.85 |
| .77 | .78 | .91 | .87 | 1.12 | 1.19 | 1.04 | 1.08 | .81 | .84 | 1.11 | 1.18 | 1.12 | 2.54 | 1.85 | 2.57 | 2.60 | 2.85 | Earnings per sh A | 3.45 |
| .43 | .46 | .49 | .51 | .53 | .57 | .61 | .65 | .66 | .68 | .69 | .71 | .73 | .75 | .78 | .81 | 1.04 | .93 | Div'd Decl'd per sh B■ | 1.18 |
| 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 | 6.95 | 8.00 | 5.50 | Cap'l Spending per sh | 5.00 |
| 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 | 20.61 | 21.65 | 22.05 | Book Value per sh | 24.60 |
| 18.27 | 18.27 | 18.27 | 18.27 | 18.27 | 18.28 | 18.36 | 18.18 | 16.50 | 18.55 | 18.59 | 18.67 | 20.17 | 20.29 | 20.38 | 20.48 | 21.00 | 22.00 | Common Shs Outst'g C | 23.00 |
| 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 | 15.7 | 20.7 | | Avg Ann'l P/E Ratio | 22.0 |
| .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 | .83 | 1.01 | | Relative P/E Ratio | 1.40 |
| 3.0% | 3.4% | 3.5% | 3.0% | 2.4% | 2.0% | 1.7% | 2.3% | 2.8% | 2.8% | 2.9% | 3.0% | 2.7% | 2.6% | 2.5% | 2.0% | 1% | | Avg Ann'l Div'd Yield | 1.6% |
| | | | | | | 206.6 | 220.3 | 216.1 | 215.6 | 239.0 | 261.5 | 276.9 | 319.7 | 305.1 | 339.7 | 380 | 395 | Revenues ($mil) | 485 |
| | | | | | | 19.3 | 20.2 | 15.2 | 15.8 | 20.9 | 22.3 | 23.5 | 51.8 | 37.9 | 52.8 | 54.0 | 63.0 | Net Profit ($mill) | 69.0 |
| | | | | | | 39.4% | 39.5% | 40.4% | 38.8% | 41.1% | 41.1% | 38.7% | 32.5% | 38.1% | 38.8% | 38.0% | 21.0% | Income Tax Rate | 21.0% |
| | | | | | | 2.7% | 2.3% | 2.0% | -- | -- | -- | -- | -- | 2.0% | 1.0% | 1.5% | 1.5% | AFUDC % to Net Profit | 1.5% |
| | | | | | | 47.7% | 46.0% | 49.4% | 53.7% | 56.6% | 55.0% | 51.1% | 51.6% | 49.8% | 50.7% | 49.0% | 48.0% | Long-Term Debt Ratio | 48.0% |
| | | | | | | 52.3% | 54.0% | 50.6% | 46.3% | 43.4% | 45.0% | 48.9% | 48.4% | 50.2% | 49.3% | 51.0% | 52.0% | Common Equity Ratio | 52.0% |
| | | | | | | 453.2 | 470.9 | 499.6 | 550.7 | 607.9 | 610.2 | 656.2 | 744.5 | 784.6 | 855.0 | 890 | 935 | Total Capital ($mill) | 1090 |
| | | | | | | 645.5 | 684.2 | 718.5 | 785.5 | 756.2 | 831.6 | 898.7 | 963.0 | 1036.8 | 1146.4 | 1200 | 1250 | Net Plant ($mill) | 1325 |
| | | | | | | 5.7% | 5.8% | 4.4% | 4.3% | 4.9% | 5.0% | 5.0% | 8.3% | 6.3% | 7.4% | 7.5% | 8.0% | Return on Total Cap'l | 8.5% |
| | | | | | | 8.2% | 8.0% | 6.0% | 6.2% | 7.9% | 8.1% | 7.3% | 14.4% | 9.9% | 12.5% | 12.0% | 13.0% | Return on Shr. Equity | 14.0% |
| | | | | | | 8.2% | 8.0% | 6.0% | 6.2% | 7.9% | 8.1% | 7.3% | 14.4% | 9.9% | 12.5% | 12.0% | 13.0% | Return on Com Equity | 14.0% |
| | | | | | | 3.5% | 3.3% | 1.2% | 1.2% | 3.1% | 3.3% | 2.8% | 10.2% | 5.7% | 8.6% | 7.0% | 8.5% | Retained to Com Eq | 9.0% |
| | | | | | | 57% | 59% | 80% | 80% | 61% | 59% | 62% | 29% | 42% | 31% | 40% | 33% | All Div'ds to Net Prof | 34% |

**CAPITAL STRUCTURE as of 9/30/17**
Total Debt $431.0 mill Due in 5 Yrs $14.3 mill
LT Debt $431.0 mill LT Interest $20.0 mill
(49% of Cap'l)

Leases, Uncapitalized: Annual rentals $6.6 mill

Pension Assets-12/16 $113.9 mill
Oblig. $174.1 mill

Pfd Stock None

Common Stock 20,520,856 shs

MARKET CAP: $1.3 billion (Mid Cap)

| CURRENT POSITION ($MILL.) | 2016 | 2016 | 9/30/17 |
|---|---|---|---|
| Cash Assets | 5.2 | 25.3 | 7.6 |
| Accts Receivable | 16.4 | 16.4 | 63.0 |
| Other | 51.8 | 57.9 | 16.5 |
| Current Assets | 73.4 | 99.6 | 87.1 |
| Accts Payable | 16.2 | 18.7 | 30.7 |
| Debt Due | 38.1 | 14.3 | -- |
| Other | 25.3 | 30.6 | 59.7 |
| Current Liab. | 79.6 | 63.6 | 90.4 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '14-'16 to '20-'22 |
|---|---|---|---|
| Revenues | 5.0% | 5.5% | 5.0% |
| "Cash Flow" | 7.0% | 12.0% | 4.5% |
| Earnings | 8.0% | 20.5% | 7.0% |
| Dividends | 4.0% | 3.0% | 7.0% |
| Book Value | 5.5% | 6.5% | 4.5% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | 54.6 | 70.4 | 125.4 | 69 | 319 |
| 2015 | 62.1 | 72.4 | 83.0 | 87.6 | 305.1 |
| 2016 | 61.1 | 86.9 | 112.3 | 79.4 | 339 |
| 2017 | 69.0 | 102.1 | 124.6 | 84.3 | 380 |
| 2018 | 75.0 | 105 | 125 | 90.0 | 395 |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .04 | .34 | 1.88 | .28 | 2.54 |
| 2015 | .23 | .38 | .46 | .80 | 1.85 |
| 2016 | .16 | .82 | .92 | .67 | 2.57 |
| 2017 | .18 | .90 | .94 | .58 | 2.60 |
| 2018 | .27 | .90 | 1.00 | .68 | 2.85 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B■ Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .1875 | .1875 | .1875 | .1875 | .75 |
| 2015 | .1950 | .1950 | .1950 | .1950 | .78 |
| 2016 | .2025 | .2025 | .2025 | .2025 | .81 |
| 2017 | .2100 | .2175 | .2175 | .3875 | 1.04 |
| 2018 | | | | | |

**BUSINESS:** SJW Group 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 13,000 connections that reaches about 39,000 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 406 employees. Officers and directors (including Nancy O. Moss) own 26.9% outstanding shares (3/17 proxy). Chairman & C.E.O.: Richard Roth. Inc.: California. Address: 110 West Taylor Street, San Jose, CA 95110. Telephone: (408) 279-7800. Internet: www.sjwater.com.

**SJW Group has finalized the sale of its wholly-owned subsidiary, Texas Water Alliance Limited.** Early last year, SJW entered into an agreement with the Guadalupe-Blanco River Authority for total consideration of $31 million. SJW netted cash proceeds of $23.5 million, excluding a $3 million holdback fee (due 2021). As a result of the completed sale and subsequent proceeds, the board of directors paid a special dividend of $0.17 a share to stockholders on record as of November 29, 2017. Of note, this is in addition to its regular quarterly distribution.

**We are boosting our 2018 financial projections for several reasons.** First, revenue growth is in the cards, driven by cumulative rate increases and higher customer water usage. Meantime, operating expenses have yet to abate (marginally higher in the third quarter), but we think production costs can subside somewhat next year while administrative expenses can be held in check. Lastly, a lower effective tax rate stemming from the recent corporate tax overhaul is the primary factor underpinning our bottom-line ramp. All told, we now look for revenues of $395 million (+$25 million from last report's estimate) and earnings of $2.85 a share (+$0.25) this year.

**Investment spending is still the main theme rolling into next decade.** Its spending budget, with approximately $250 million to $300 million in available funds, will be periodically tapped to support various projects, infrastructure upgrades and general water system investments. Presently, management's focus is on the Montevina Water Treatment Plant project (retrofitting was expected to be completed by the end of 2017).

**This neutrally ranked equity has etched another high-water mark.** Shares of the California-based utility pushed past $65 per share for the first time in its history before settling slightly below that level. Still, the stock logged an advance of about 10% over the past three months. While we are bullish on the company's business prospects over the pull to 2020-2022, SJW's rapid climb in share price gives us pause. In sum, we recommend investors wait for a better entry point before initiating a position here.

*Nicholas P. Patrikis* *January 12, 2018*

(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 February. 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.
(D) Paid special dividend of $0.17 per share on 11/17

| | |
|---|---|
| Company's Financial Strength | B+ |
| Stock's Price Stability | 70 |
| Price Growth Persistence | 35 |
| Earnings Predictability | 45 |

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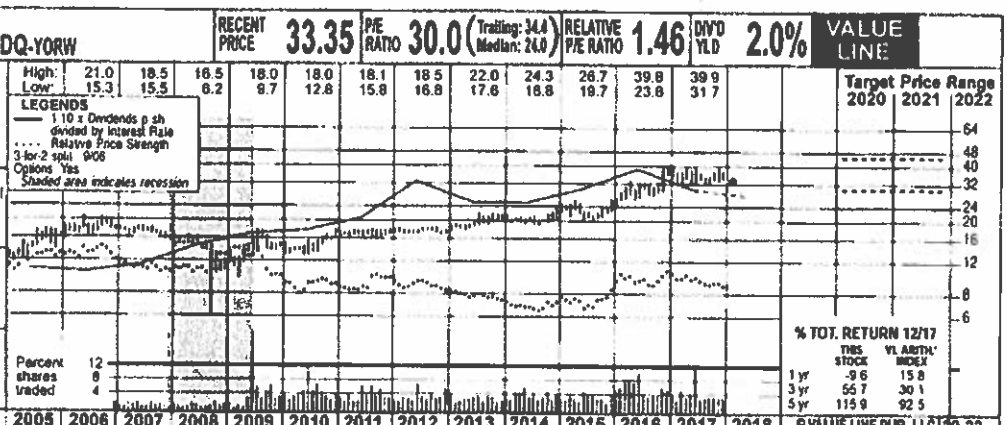
# YORK WATER NDQ-YORW

RECENT PRICE 33.35 | P/E RATIO 30.0 (Trailing: 34.4 / Median: 24.0) | RELATIVE P/E RATIO 1.46 | DIV'D YLD 2.0% | VALUE LINE

TIMELINESS 3 Raised 11/17/17
SAFETY 3 Lowered 7/17/15
TECHNICAL 2 Raised 1/5/18
BETA .60 (1.00 = Market)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High: | 21.0 | 18.5 | 16.5 | 18.0 | 18.0 | 18.1 | 18.5 | 22.0 | 24.3 | 26.7 | 39.8 | 39.9 |
| Low: | 15.3 | 15.5 | 6.2 | 9.7 | 12.8 | 15.8 | 16.8 | 17.6 | 18.8 | 19.7 | 23.8 | 31.7 |

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



Target Price Range 2020 | 2021 | 2022

**2020-22 PROJECTIONS**

| | Price | Gain | Ann'l Total Return |
|---|---|---|---|
| High | 45 | (+35%) | 10% |
| Low | 30 | (-10%) | Nil |

**Insider Decisions**

| | M | A | M | J | J | A | S | O | N |
|---|---|---|---|---|---|---|---|---|---|
| to Buy | 1 | 13 | 2 | 2 | 13 | 2 | 2 | 13 | 2 |
| Options | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 |
| to Sell | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Institutional Decisions**

| | 1Q2017 | 2Q2017 | 3Q2017 |
|---|---|---|---|
| to Buy | 38 | 42 | 40 |
| to Sell | 33 | 33 | 30 |
| Hld's(000) | 5127 | 5206 | 5125 |

Percent shares traded 12 8 4

% TOT. RETURN 12/17

| | THIS STOCK | VL ARITH.* INDEX |
|---|---|---|
| 1 yr | -9.6 | 15.8 |
| 3 yr | 56.7 | 30.1 |
| 5 yr | 115.9 | 92.5 |

| 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | © VALUE LINE PUB. LLC | 20-22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 3.70 | 3.75 | 3.95 | Revenues per sh | 5.40 |
| .59 | .57 | .65 | .65 | .79 | .77 | .86 | .88 | .95 | 1.07 | 1.09 | 1.12 | 1.19 | 1.36 | 1.45 | 1.42 | 1.45 | 1.75 | "Cash Flow" per sh | 2.25 |
| .43 | .40 | .47 | .49 | .56 | .58 | .57 | .57 | .64 | .71 | .71 | .72 | .75 | .89 | .97 | .92 | 1.05 | 1.15 | Earnings per sh A | 1.60 |
| .34 | .35 | .37 | .39 | .42 | .45 | .48 | .49 | .51 | .52 | .53 | .54 | .55 | .57 | .60 | .63 | .65 | .70 | Div'd Decl'd per sh B | .96 |
| .75 | .66 | 1.07 | 2.50 | 1.69 | 1.83 | 1.69 | 2.17 | 1.18 | .83 | .74 | .94 | .76 | 1.10 | 1.11 | 1.03 | 1.05 | 1.35 | Cap'l Spending per sh | .85 |
| 3.79 | 3.90 | 4.06 | 4.85 | 4.85 | 5.84 | 5.97 | 6.14 | 6.92 | 7.19 | 7.45 | 7.73 | 7.98 | 8.15 | 8.51 | 8.88 | 9.30 | 9.55 | Book Value per sh | 11.20 |
| 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 | 12.85 | 12.90 | 12.75 | Common Shs Outst'g C | 12.30 |
| 17.6 | 26.9 | 24.5 | 25.7 | 26.3 | 31.2 | 30.3 | 24.6 | 21.9 | 20.7 | 23.9 | 24.4 | 28.3 | 23.1 | 23.5 | 32.8 | 33.3 | | Avg Ann'l P/E Ratio | 22.5 |
| .91 | 1.47 | 1.40 | 1.38 | 1.40 | 1.68 | 1.61 | 1.48 | 1.46 | 1.32 | 1.50 | 1.55 | 1.48 | 1.22 | 1.18 | 1.72 | 1.62 | | 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% | 2.1% | 1.9% | | Avg Ann'l Div'd Yield | 2.6% |
| | | | | | | 31.4 | 32.8 | 37.0 | 39.0 | 40.6 | 41.4 | 42.4 | 45.9 | 47.1 | 47.6 | 48.5 | 50.5 | Revenues ($mill) | 67.5 |
| | | | | | | 8.4 | 6.4 | 7.5 | 8.9 | 9.1 | 9.3 | 9.7 | 11.5 | 12.5 | 11.8 | 13.5 | 14.5 | Net Profit ($mill) | 20.0 |
| | | | | | | 36.5% | 36.1% | 37.9% | 38.5% | 35.3% | 37.6% | 37.8% | 29.8% | 27.5% | 31.3% | 24.0% | 21.0% | Income Tax Rate | 21.0% |
| | | | | | | 3.6% | 10.1% | -- | 1.2% | 1.1% | 1.1% | .8% | 1.8% | 1.6% | 1.9% | 2.0% | 1.5% | AFUDC % to Net Profit | 1.5% |
| | | | | | | 46.5% | 54.5% | 45.7% | 48.3% | 47.1% | 46.0% | 45.1% | 44.8% | 44.4% | 42.6% | 43.0% | 43.0% | Long-Term Debt Ratio | 43.5% |
| | | | | | | 53.5% | 45.5% | 54.3% | 51.7% | 52.9% | 54.0% | 54.9% | 55.2% | 55.6% | 57.4% | 57.0% | 57.0% | Common Equity Ratio | 56.5% |
| | | | | | | 125.7 | 153.4 | 160.1 | 176.4 | 180.2 | 184.8 | 188.4 | 189.4 | 196.3 | 198.7 | 210 | 220 | Total Capital ($mill) | 250 |
| | | | | | | 191.6 | 211.4 | 222.0 | 228.4 | 233.0 | 240.3 | 244.2 | 253.2 | 261.4 | 270.9 | 275 | 280 | Net Plant ($mill) | 295 |
| | | | | | | 6.7% | 5.7% | 6.2% | 6.5% | 6.4% | 6.4% | 6.5% | 7.4% | 7.6% | 7.2% | 7.5% | 8.0% | Return on Total Cap'l | 9.0% |
| | | | | | | 9.5% | 9.2% | 8.6% | 9.8% | 9.5% | 9.3% | 9.3% | 11.0% | 11.5% | 10.4% | 11.5% | 12.0% | Return on Shr. Equity | 14.5% |
| | | | | | | 9.5% | 9.2% | 8.6% | 9.8% | 9.5% | 9.3% | 9.3% | 11.0% | 11.5% | 10.4% | 11.5% | 12.0% | Return on Com Equity | 14.5% |
| | | | | | | 1.7% | 1.4% | 1.9% | 2.7% | 2.5% | 2.4% | 2.4% | 3.9% | 4.4% | 3.4% | 4.0% | 4.5% | Retained to Com Eq | 5.5% |
| | | | | | | 82% | 85% | 78% | 72% | 73% | 74% | 74% | 64% | 62% | 67% | 63% | 61% | All Div'ds to Net Prof | 60% |

**CAPITAL STRUCTURE as of 9/30/17**
Total Debt $88.9 mill. Due in 5 Yrs $30.5 mill
LT Debt $88.9 mill. LT Interest $5.4 mill
(43% of Cap'l)

Pension Assets 12/16 $35.5 mill
Oblig. $40.8 mill

Pfd Stock None

Common Stock 12,859,432 shs

MARKET CAP: $425 million (Small Cap)

| CURRENT POSITION ($MILL.) | 2015 | 2016 | 9/30/17 |
|---|---|---|---|
| Cash Assets | 2.9 | 4.2 | -- |
| Accounts Receivable | 3.5 | 4.3 | 4.4 |
| Inventory (Avg. Cost) | .8 | .7 | .9 |
| Other | 4.6 | 3.4 | 3.3 |
| Current Assets | 11.8 | 12.6 | 8.6 |
| Accts Payable | 1.8 | 3.7 | 4.0 |
| Debt Due | -- | -- | -- |
| Other | 4.4 | 4.5 | 6.1 |
| Current Liab. | 6.2 | 8.2 | 10.1 |

| ANNUAL RATES of change (per sh) | Past 10 Yrs. | Past 5 Yrs. | Est'd '14-'16 to '20-'22 |
|---|---|---|---|
| Revenues | 4.0% | 3.5% | 6.5% |
| "Cash Flow" | 6.5% | 6.5% | 8.0% |
| Earnings | 5.5% | 6.0% | 9.5% |
| Dividends | 3.5% | 3.0% | 8.0% |
| Book Value | 5.0% | 3.5% | 4.5% |

| Cal-endar | QUARTERLY REVENUES ($ mill.) Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | 10.6 | 11.8 | 12.0 | 11.5 | 45.9 |
| 2015 | 11.2 | 11.9 | 12.4 | 11.6 | 47.1 |
| 2016 | 11.3 | 11.8 | 12.6 | 11.9 | 47.6 |
| 2017 | 11.3 | 12.3 | 12.7 | 12.2 | 48.5 |
| 2018 | 12.0 | 12.5 | 13.3 | 12.7 | 50.5 |

| Cal-endar | EARNINGS PER SHARE A Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .16 | .22 | .23 | .28 | .89 |
| 2015 | .20 | .22 | .28 | .27 | .97 |
| 2016 | .19 | .23 | .27 | .23 | .92 |
| 2017 | .20 | .23 | .31 | .31 | 1.05 |
| 2018 | .24 | .25 | .34 | .32 | 1.15 |

| Cal-endar | QUARTERLY DIVIDENDS PAID B Mar.31 | Jun.30 | Sep.30 | Dec.31 | Full Year |
|---|---|---|---|---|---|
| 2014 | .1431 | .1431 | .1431 | .1431 | .572 |
| 2015 | .1495 | .1495 | .1495 | .1555 | .604 |
| 2016 | .1555 | .1555 | .1555 | .1602 | .627 |
| 2017 | .1602 | .1602 | .1602 | .1666 | .647 |
| 2018 | | | | | |

**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, 2016, the company's average daily availability was 35.4 million gallons and its service territory had an estimated population of 196,000. Has more than 67,000 customers. Residential customers accounted for 63% of 2016 revenues; commercial and industrial (29%); other (8%). It also provides sewer billing services. Incorporated: PA. York had 105 full-time employees at 12/31/16. President/CEO: Jeffrey R. Hines. Officers/directors own 1.1% of the common stock (3/17 proxy). Address: 130 East Market Street, York, Pennsylvania 17401. Telephone: (717) 845-3601. Internet: www.yorkwater.com.

**York Water delivered a better-than-expected bottom-line performance in the third quarter.** The regulated water utility earned $0.31 a share for the September period (+15% year over year), beating our $0.29 call by two cents. The advance can be largely attributed to a lower effective tax rate (asset improvements qualify for deductions), higher surcharges to customers, and an increased allowance for funds used during construction (interest deduction). Meanwhile, operation and maintenance expenses as a percentage of revenues rose 200 basis points, on an annual basis, which makes the share net showing even more encouraging. On the other hand, revenue growth was essentially nonexistent, dragged down by generally lower consumption.

**We are adjusting our 2018 top- and bottom-line estimates.** Despite an expanding customer base (acquisition driven), York's top line is under some pressure. We now look for revenues of $50.5 million in 2018, down from our prior forecast of $52.0 million. Conversely, we are adding a dime to our earnings per share estimate, to $1.15.

**Capital expenditures ought to remain par for the course going forward.** Management estimates it spent approximately $25 million in 2017 on aging infrastructure, raw water pumping stations, and pipe replacements, more than double the year earlier total. With plenty of its footprint still needing to be brought up to speed, we anticipate at least several years of aggressive investment spending.

**York Water raised its quarterly dividend by 4%, to $0.17 a share.** This marks 21 consecutive years that the company has increased its annual dividend payout. The current yield is fractionally above that of the *Value Line* median, but should trend higher into next decade thanks to additional dividend hikes.

**York Water shares have moved up one notch for Timeliness, to 3, and are now pegged to track the year-ahead broader market averages.** Prospects out to the 2020-2022 time frame are bright, though most of the benefits we envision appear to already be baked into the stock price. Capital appreciation potential does not stand out at the recent quotation.

*Nicholas P. Patrikis* *January 12, 2018*

(A) Diluted earnings. Next earnings report due late February.
(B) Dividends historically paid in late February, June, September, and December.
(C) In millions, adjusted for split.

| | |
|---|---|
| Company's Financial Strength | B+ |
| Stock's Price Stability | 60 |
| Price Growth Persistence | 55 |
| Earnings Predictability | 90 |

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# Office of Regulatory Staff
## Characteristics of DCF Proxy Group
### Carolina Water Service, Inc.
### *Docket No. 2017-292-WS*

| Company | Market Capitalization (millions)‡ | Retention Ratio‡◊ | Bond Rating† | Trailing P/E‡ |
|---|---|---|---|---|
| American States | $2,100 | 0.43 | A+ | 30.8 |
| American Water | $15,900 | 0.44 | A+ | 30.2 |
| Aqua America | $6,900 | 0.50 | A+* | 29.1 |
| Artesian Resources | $334 | 0.35 | n/a | 26.5 |
| California Water | $2,100 | 0.47 | A+* | 31.5 |
| Connecticut Water | $700 | 0.49 | A | 27.7 |
| Global Water Resources | $183 | | n/a | |
| Middlesex Water | $650 | 0.43 | A | 31.3 |
| SJW | $1,300 | 0.65 | A* | 23.6 |
| York Water | $426 | 0.38 | A- | 34.4 |

†S&P rating from website: https://www.standardandpoors.com

*rating is of the principal subsidiary

‡from Revised Exhibit DHC-3

◊Retention ratio = 1 - payout ratio ("All Div'ds to Net Prof" on Revised Exhibit DHC-3)

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# Office of Regulatory Staff
## Earnings per Share - Historical Data
### Carolina Water Service, Inc.
*Docket No. 2017-292-WS*

| | $ per share* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COMPANIES \ YEARS | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| American States | $0.81 | $0.78 | $0.81 | $1.11 | $1.12 | $1.41 | $1.61 | $1.57 | $1.60 | $1.62 | $1.85 |
| American Water | N/A | $1.10 | $1.25 | $1.53 | $1.72 | $2.11 | $2.06 | $2.39 | $2.64 | $2.62 | $3.00 |
| Aqua America | $0.57 | $0.58 | $0.62 | $0.72 | $0.83 | $0.87 | $1.16 | $1.20 | $1.14 | $1.32 | $1.36 |
| Artesian Resources | $0.90 | $0.86 | $0.97 | $1.00 | $0.83 | $1.13 | $0.94 | $1.07 | $1.26 | $1.41 | N/A |
| California Water | $0.75 | $0.95 | $0.98 | $0.91 | $0.86 | $1.02 | $1.02 | $1.19 | $0.94 | $1.01 | $1.40 |
| Connecticut Water | $1.05 | $1.11 | $1.19 | $1.13 | $1.13 | $1.53 | $1.66 | $1.92 | $2.04 | $2.08 | $2.20 |
| Global Water Resources | | | | | | | | | | -$0.15 | N/A |
| Middlesex Water | $0.87 | $0.89 | $0.72 | $0.96 | $0.84 | $0.90 | $1.03 | $1.13 | $1.22 | $1.38 | $1.40 |
| SJW | $1.04 | $1.08 | $0.81 | $0.84 | $1.11 | $1.18 | $1.12 | $2.54 | $1.85 | $2.57 | $2.60 |
| York Water | $0.57 | $0.57 | $0.64 | $0.71 | $0.71 | $0.72 | $0.75 | $0.89 | $0.97 | $0.92 | $1.05 |

| | Ratios of Change over Previous Year | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COMPANIES \ YEARS | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| American States | | 0.96 | 1.04 | 1.37 | 1.01 | 1.26 | 1.14 | 0.98 | 1.02 | 1.01 | 1.14 |
| American Water | | N/A | 1.14 | 1.22 | 1.12 | 1.23 | 0.98 | 1.16 | 1.10 | 0.99 | 1.15 |
| Aqua America | | 1.02 | 1.07 | 1.16 | 1.15 | 1.05 | 1.33 | 1.03 | 0.95 | 1.16 | 1.03 |
| Artesian Resources | 0.93 | 0.96 | 1.13 | 1.03 | 0.83 | 1.36 | 0.83 | 1.14 | 1.18 | 1.12 | N/A |
| California Water | | 1.27 | 1.03 | 0.93 | 0.95 | 1.19 | 1.00 | 1.17 | 0.79 | 1.07 | 1.39 |
| Connecticut Water | | 1.06 | 1.07 | 0.95 | 1.00 | 1.35 | 1.08 | 1.16 | 1.06 | 1.02 | 1.06 |
| Global Water Resources | | | | | | | | | | | |
| Middlesex Water | | 1.02 | 0.81 | 1.33 | 0.88 | 1.07 | 1.14 | 1.10 | 1.08 | 1.13 | 1.01 |
| SJW | | 1.04 | 0.75 | 1.04 | 1.32 | 1.06 | 0.95 | 2.27 | 0.73 | 1.39 | 1.01 |
| York Water | | 1.00 | 1.12 | 1.11 | 1.00 | 1.01 | 1.04 | 1.19 | 1.09 | 0.95 | 1.14 |

*Sources are on page 3 of 3 except 2007 numbers of Artesian Resources are from Revised Exhibit DHC-3 Page 4 of 11.

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# Office of Regulatory Staff
## Earnings per Share - Historical Data
### Carolina Water Service, Inc.
### *Docket No. 2017-292-WS*

| | 10-yr Averages* | | 5-yr. Averages | | 3-Yr. Averages | |
|---|---|---|---|---|---|---|
| **COMPANIES** | **Compound** | **Simple** | **Compound** | **Simple** | **Compound** | **Simple** |
| American States | 8.61% | 9.30% | 5.58% | 5.81% | 5.62% | 5.79% |
| American Water | 10.86% | 12.11% | 7.29% | 7.57% | 7.87% | 8.07% |
| Aqua America | 9.09% | 10.41% | 9.35% | 10.12% | 4.26% | 4.61% |
| Artesian Resources† | 3.81% | 5.00% | 11.18% | 12.56% | 14.47% | 14.50% |
| California Water | 6.44% | 7.75% | 6.54% | 8.34% | 5.57% | 8.35% |
| Connecticut Water | 7.68% | 8.14% | 7.53% | 7.63% | 4.64% | 4.66% |
| Global Water Resources | | | | | | |
| Middlesex Water | 4.87% | 5.79% | 9.24% | 9.34% | 7.40% | 7.51% |
| SJW | 9.60% | 15.56% | 17.12% | 26.92% | 0.78% | 4.31% |
| York Water | 6.30% | 6.54% | 7.84% | 8.16% | 5.67% | 5.99% |
| **Means** | **7.47%** | **8.96%** | **9.07%** | **10.72%** | **6.25%** | **7.09%** |
| **Medians** | **7.68%** | **8.14%** | **7.84%** | **8.34%** | **5.62%** | **5.99%** |
| **Average of Mean & Median** | | **8.06%** | | **8.99%** | | **6.24%** |

*American Water is on a nine-year basis, as 2007 was a pro forma negative number

†Artesian Resources' numbers are set back one year, as 2017 information was not available; 2007=$47.3 million.

| Average of Period Averages |
|---|
| 7.76% |

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# Office of Regulatory Staff
## Earnings per Share - Historical Data
### Carolina Water Service, Inc.
*Docket No. 2017-292-WS*

| COMPANIES | Estimate | Growth Rate | Sources |
|---|---|---|---|
| American States | $2.35 | 7.07% | Revised Exhibit DHC-3, p. 1 of 11 |
| American Water | $4.15 | 9.71% | Revised Exhibit DHC-3, p. 2 of 11 |
| Aqua America | $1.85 | 9.19% | Revised Exhibit DHC-3, p. 3 of 11 |
| Artesian Resources | $1.24 | 5.16% | Revised Exhibit DHC-3, p. 5 of 11 |
| California Water | $1.85 | 8.29% | Revised Exhibit DHC-3, p. 6 of 11 |
| Connecticut Water | $2.90 | 8.21% | Revised Exhibit DHC-3, p. 7 of 11 |
| Global Water Resources | | | Revised Exhibit DHC-3, p. 8 of 11 |
| Middlesex Water | $2.10 | 12.28% | Revised Exhibit DHC-3, p. 9 of 11 |
| SJW | $3.45 | 8.42% | Revised Exhibit DHC-3, p. 10 of 11 |
| York Water | $1.60 | 12.79% | Revised Exhibit DHC-3, p. 11 of 11 |
| **Means** | | **9.01%** | |
| **Medians** | | **8.42%** | |
| **Average of Mean & Median** | | **8.72%** | |

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# Office of Regulatory Staff
## Book Value per Share - Historical Data
### Carolina Water Service, Inc.
*Docket No. 2017-292-WS*

| | $ per share* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **COMPANIES \ YEARS** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| American States | $8.77 | $8.97 | $9.70 | $10.13 | $10.84 | $11.80 | $12.72 | $13.24 | $12.77 | $13.52 | $14.20 |
| American Water | N/A | $25.64 | $22.91 | $23.59 | $24.11 | $25.11 | $26.52 | $27.39 | $28.25 | $29.24 | $30.90 |
| Aqua America | $5.85 | $6.26 | $6.50 | $6.81 | $7.21 | $7.90 | $8.63 | $9.27 | $9.78 | $10.43 | $11.10 |
| Artesian Resources | $11.66 | $11.86 | $12.15 | $12.44 | $13.12 | $13.57 | $13.80 | $14.09 | $14.61 | $15.23 | N/A |
| California Water | $9.25 | $9.72 | $10.13 | $10.45 | $10.76 | $11.28 | $12.54 | $13.11 | $13.41 | $13.75 | $14.30 |
| Connecticut Water | $11.95 | $12.23 | $12.67 | $13.05 | $13.50 | $20.95 | $17.92 | $18.83 | $20.01 | $20.98 | $24.40 |
| Global Water Resources | | | | | | | | | | $0.78 | N/A |
| Middlesex Water | $10.05 | $10.03 | $10.33 | $11.13 | $11.27 | $11.48 | $11.82 | $12.24 | $12.74 | $13.40 | $13.95 |
| SJW | $12.90 | $13.99 | $13.66 | $13.75 | $14.20 | $14.71 | $15.92 | $17.75 | $18.83 | $20.61 | $21.65 |
| York Water | $5.97 | $6.14 | $6.92 | $7.19 | $7.45 | $7.73 | $7.98 | $8.15 | $8.51 | $8.88 | $9.30 |

*Sources: see last page of this exhibit*

| | Ratios of Change over Previous Year | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **COMPANIES \ YEARS** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| American States | | 1.02 | 1.08 | 1.04 | 1.07 | 1.09 | 1.08 | 1.04 | 0.96 | 1.06 | 1.05 |
| American Water | | N/A | 0.89 | 1.03 | 1.02 | 1.04 | 1.06 | 1.03 | 1.03 | 1.04 | 1.06 |
| Aqua America | | 1.07 | 1.04 | 1.05 | 1.06 | 1.10 | 1.09 | 1.07 | 1.06 | 1.07 | 1.06 |
| Artesian Resources | 1.15 | 1.02 | 1.02 | 1.02 | 1.05 | 1.03 | 1.02 | 1.02 | 1.04 | 1.04 | N/A |
| California Water | | 1.05 | 1.04 | 1.03 | 1.03 | 1.05 | 1.11 | 1.05 | 1.02 | 1.03 | 1.04 |
| Connecticut Water | | 1.02 | 1.04 | 1.03 | 1.03 | 1.55 | 0.86 | 1.05 | 1.06 | 1.05 | 1.16 |
| Global Water Resources | | | | | | | | | | | |
| Middlesex Water | | 1.00 | 1.03 | 1.08 | 1.01 | 1.02 | 1.03 | 1.04 | 1.04 | 1.05 | 1.04 |
| SJW | | 1.08 | 0.98 | 1.01 | 1.03 | 1.04 | 1.08 | 1.11 | 1.06 | 1.09 | 1.05 |
| York Water | | 1.03 | 1.13 | 1.04 | 1.04 | 1.04 | 1.03 | 1.02 | 1.04 | 1.04 | 1.05 |

*Sources are on page 3 of 3 except 2007 numbers of Artesian Resources are from Revised Exhibit DHC-3 Page 4 of 11.

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# Office of Regulatory Staff
## Book Value per Share - Historical Data
### Carolina Water Service, Inc.
*Docket No. 2017-292-WS*

| | 10-yr Averages* | | 5-yr. Averages | | 3-Yr. Averages | |
|---|---|---|---|---|---|---|
| **COMPANIES** | **Compound** | **Simple** | **Compound** | **Simple** | **Compound** | **Simple** |
| American States | 4.94% | 5.00% | 3.77% | 3.85% | 2.36% | 2.45% |
| American Water | 2.10% | 2.21% | 4.24% | 4.24% | 4.10% | 4.11% |
| Aqua America | 6.61% | 6.63% | 7.04% | 7.05% | 6.19% | 6.19% |
| Artesian Resources† | 4.14% | 4.21% | 3.03% | 3.03% | 3.34% | 3.35% |
| California Water | 4.45% | 4.48% | 4.86% | 4.91% | 2.94% | 2.94% |
| Connecticut Water | 7.40% | 8.56% | 3.10% | 3.61% | 9.02% | 9.14% |
| Global Water Resources | | | | | | |
| Middlesex Water | 3.33% | 3.35% | 3.97% | 3.98% | 4.46% | 4.46% |
| SJW | 5.31% | 5.39% | 8.04% | 8.06% | 6.84% | 6.86% |
| York Water | 4.53% | 4.57% | 3.77% | 3.77% | 4.50% | 4.50% |
| **Means** | **4.76%** | **4.93%** | **4.65%** | **4.72%** | **4.86%** | **4.89%** |
| **Medians** | **4.53%** | **4.57%** | **3.97%** | **3.98%** | **4.46%** | **4.46%** |
| **Average of Mean & Median** | | **4.70%** | | **4.33%** | | **4.67%** |

*American Water is on a nine-year basis as 2007 was a pro forma negative number

†Artesian Resources' numbers are set back one year, as 2017 information was not available; 2007=$47.3 million.

| Average of Period Averages |
|---|
| **4.56%** |

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# Office of Regulatory Staff

## Book Value per Share - Historical Data

**Carolina Water Service, Inc.**

***Docket No. 2017-292-WS***



| COMPANIES | Estimate | Growth Rate | Sources |
|---|---|---|---|
| American States | $16.80 | 4.92% | Revised Exhibit DHC-3, p. 1 of 11 |
| American Water | $39.45 | 7.23% | Revised Exhibit DHC-3, p. 2 of 11 |
| Aqua America | $14.85 | 8.67% | Revised Exhibit DHC-3, p. 3 of 11 |
| Artesian Resources | | | Revised Exhibit DHC-3, p. 5 of 11 |
| California Water | $16.50 | 4.17% | Revised Exhibit DHC-3, p. 6 of 11 |
| Connecticut Water | $26.80 | 2.72% | Revised Exhibit DHC-3, p. 7 of 11 |
| Global Water Resources | | | Revised Exhibit DHC-3, p. 8 of 11 |
| Middlesex Water | $16.75 | 5.37% | Revised Exhibit DHC-3, p. 9 of 11 |
| SJW | $24.60 | 3.72% | Revised Exhibit DHC-3, p. 10 of 11 |
| York Water | $11.20 | 5.45% | Revised Exhibit DHC-3, p. 11 of 11 |
| **Means** | | **5.28%** | |
| **Medians** | | **5.14%** | |
| **Average of Mean & Median** | | **5.21%** | |

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# Office of Regulatory Staff

## Dividends per Share - Historical Data

### Carolina Water Service, Inc.

*Docket No. 2017-292-WS*

| | $ per share* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **COMPANIES \ YEARS** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| American States | $0.48 | $0.50 | $0.51 | $0.52 | $0.55 | $0.64 | $0.76 | $0.83 | $0.87 | $0.91 | $0.99 |
| American Water | N/A | $0.40 | $0.82 | $0.86 | $0.90 | $1.21 | $0.84 | $1.21 | $1.33 | $1.47 | $1.62 |
| Aqua America | $0.38 | $0.41 | $0.44 | $0.47 | $0.50 | $0.54 | $0.58 | $0.63 | $0.69 | $0.74 | $0.79 |
| Artesian Resources | $0.66 | $0.71 | $0.72 | $0.75 | $0.76 | $0.79 | $0.82 | $0.85 | $0.87 | $0.90 | N/A |
| California Water | $0.58 | $0.59 | $0.59 | $0.60 | $0.62 | $0.63 | $0.64 | $0.65 | $0.67 | $0.69 | $0.72 |
| Connecticut Water | $0.87 | $0.88 | $0.90 | $0.92 | $0.94 | $0.96 | $0.98 | $1.01 | $1.05 | $1.12 | $1.18 |
| Global Water Resources | | | | | | | | | | $0.17 | $0.27 |
| Middlesex Water | $0.69 | $0.70 | $0.71 | $0.72 | $0.73 | $0.74 | $0.75 | $0.76 | $0.78 | $0.81 | $0.86 |
| SJW | $0.61 | $0.65 | $0.66 | $0.68 | $0.69 | $0.71 | $0.73 | $0.75 | $0.78 | $0.81 | $1.04 |
| York Water | $0.48 | $0.49 | $0.51 | $0.52 | $0.53 | $0.54 | $0.55 | $0.57 | $0.60 | $0.63 | $0.65 |

| | Ratios of Change over Previous Year | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **COMPANIES \ YEARS** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| American States | | 1.04 | 1.02 | 1.02 | 1.06 | 1.16 | 1.19 | 1.09 | 1.05 | 1.05 | 1.09 |
| American Water | | | 2.05 | 1.05 | 1.05 | 1.34 | 0.69 | 1.44 | 1.10 | 1.11 | 1.10 |
| Aqua America | | 1.08 | 1.07 | 1.07 | 1.06 | 1.08 | 1.07 | 1.09 | 1.10 | 1.07 | 1.07 |
| Artesian Resources | 1.08 | 1.08 | 1.01 | 1.04 | 1.01 | 1.04 | 1.04 | 1.04 | 1.02 | 1.03 | N/A |
| California Water | | 1.02 | 1.00 | 1.02 | 1.03 | 1.02 | 1.02 | 1.02 | 1.03 | 1.03 | 1.04 |
| Connecticut Water | | 1.01 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.03 | 1.04 | 1.07 | 1.05 |
| Global Water Resources | | | | | | | | | | | |
| Middlesex Water | | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.01 | 1.03 | 1.04 | 1.06 |
| SJW | | 1.07 | 1.02 | 1.03 | 1.01 | 1.03 | 1.03 | 1.03 | 1.04 | 1.04 | 1.28 |
| York Water | | 1.02 | 1.04 | 1.02 | 1.02 | 1.02 | 1.02 | 1.04 | 1.05 | 1.05 | 1.03 |

*Sources are on page 3 of 3 except 2007 numbers of Artesian Resources are from Revised Exhibit DHC-3 Page 4 of 11.

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# Office of Regulatory Staff

## Dividends per Share - Historical Data

### Carolina Water Service, Inc.

*Docket No. 2017-292-WS*

| | 10-yr Averages* | | 5-yr. Averages | | 3-Yr. Averages | |
|---|---|---|---|---|---|---|
| **COMPANIES** | **Compound** | **Simple** | **Compound** | **Simple** | **Compound** | **Simple** |
| American States | 7.51% | 7.64% | 9.12% | 9.23% | 6.05% | 6.07% |
| American Water | 16.81% | 21.45% | 6.01% | 8.82% | 10.22% | 10.22% |
| Aqua America | 7.59% | 7.60% | 7.91% | 7.91% | 7.84% | 7.84% |
| Artesian Resources† | 3.97% | 3.99% | 3.44% | 3.44% | 3.15% | 3.15% |
| California Water | 2.19% | 2.19% | 2.71% | 2.71% | 3.47% | 3.47% |
| Connecticut Water | 3.09% | 3.11% | 4.21% | 4.23% | 5.32% | 5.33% |
| Global Water Resources | | | | | | |
| Middlesex Water | 2.23% | 2.24% | 3.05% | 3.07% | 4.21% | 4.22% |
| SJW | 5.48% | 5.73% | 7.93% | 8.36% | 11.51% | 12.08% |
| York Water | 3.08% | 3.09% | 3.78% | 3.79% | 4.48% | 4.48% |
| **Means** | **5.77%** | **6.34%** | **5.35%** | **5.73%** | **6.25%** | **6.32%** |
| **Medians** | **3.97%** | **3.99%** | **4.21%** | **4.23%** | **5.32%** | **5.33%** |
| **Average of Mean & Median** | | **5.02%** | | **4.88%** | | **5.80%** |

*American Water is on a nine-year basis as 2007 was a pro forma negative number.

†Artesian Resources' numbers are set back one year, as 2017 information was not available; 2007=$47.3 million.

| Average of Period Averages |
|---|
| **5.23%** |

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# Office of Regulatory Staff

## Dividends per Share - Historical Data

### Carolina Water Service, Inc.

*Docket No. 2017-292-WS*

| COMPANIES | Estimate | Growth Rate | Sources |
|---|---|---|---|
| American States | $1.35 | 9.27% | Revised Exhibit DHC-3, p. 1 of 11 |
| American Water | $2.35 | 11.21% | Revised Exhibit DHC-3, p. 2 of 11 |
| Aqua America | $1.15 | 11.32% | Revised Exhibit DHC-3, p. 3 of 11 |
| Artesian Resources | | | Revised Exhibit DHC-3, p. 5 of 11 |
| California Water | $1.02 | 10.46% | Revised Exhibit DHC-3, p. 6 of 11 |
| Connecticut Water | $1.46 | 6.27% | Revised Exhibit DHC-3, p. 7 of 11 |
| Global Water Resources | | | Revised Exhibit DHC-3, p. 8 of 11 |
| Middlesex Water | $1.06 | 6.16% | Revised Exhibit DHC-3, p. 9 of 11 |
| SJW | $1.18 | 3.67% | Revised Exhibit DHC-3, p. 10 of 11 |
| York Water | $0.96 | 11.79% | Revised Exhibit DHC-3, p. 11 of 11 |
| **Means** | | **8.77%** | |
| **Medians** | | **9.86%** | |
| **Average of Mean & Median** | | **9.32%** | |

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# Office of Regulatory Staff

## Sales/Revenue - Historical Data

### Carolina Water Service, Inc.

*Docket No. 2017-292-WS*

| | $ per share* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **COMPANIES \ YEARS** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| American States | $301 | $319 | $361 | $399 | $419 | $467 | $472 | $466 | $459 | $436 | $445 |
| American Water | N/A | $2,337 | $2,441 | $2,711 | $2,666 | $2,877 | $2,902 | $3,011 | $3,159 | $3,302 | $3,380 |
| Aqua America | $603 | $627 | $671 | $726 | $712 | $758 | $769 | $780 | $814 | $820 | $800 |
| Artesian Resources | $53 | $56 | $61 | $65 | $65 | $71 | $69 | $73 | $77 | $79 | N/A |
| California Water | $367 | $410 | $449 | $460 | $502 | $560 | $584 | $598 | $588 | $609 | $660 |
| Connecticut Water | $59 | $61 | $59 | $66 | $69 | $84 | $92 | $94 | $96 | $99 | $106 |
| Global Water Resources | | | | | | | | | $32 | $30 | N/A |
| Middlesex Water | $86 | $91 | $91 | $103 | $102 | $110 | $115 | $117 | $126 | $133 | $134 |
| SJW | $207 | $220 | $216 | $216 | $239 | $262 | $277 | $320 | $305 | $340 | $380 |
| York Water | $31 | $33 | $37 | $39 | $41 | $41 | $42 | $46 | $47 | $48 | $49 |

| | Ratios of Change over Previous Year | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **COMPANIES \ YEARS** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** |
| American States | | 1.06 | 1.13 | 1.10 | 1.05 | 1.11 | 1.01 | 0.99 | 0.98 | 0.95 | 1.02 |
| American Water | | | 1.04 | 1.11 | 0.98 | 1.08 | 1.01 | 1.04 | 1.05 | 1.05 | 1.02 |
| Aqua America | | 1.04 | 1.07 | 1.08 | 0.98 | 1.06 | 1.01 | 1.01 | 1.04 | 1.01 | 0.98 |
| Artesian Resources | 1.11 | 1.07 | 1.08 | 1.07 | 1.00 | 1.08 | 0.98 | 1.05 | 1.06 | 1.03 | N/A |
| California Water | | 1.12 | 1.10 | 1.02 | 1.09 | 1.12 | 1.04 | 1.02 | 0.98 | 1.04 | 1.08 |
| Connecticut Water | | 1.04 | 0.97 | 1.12 | 1.05 | 1.21 | 1.09 | 1.03 | 1.02 | 1.03 | 1.07 |
| Global Water Resources | | | | | | | | | | | |
| Middlesex Water | | 1.06 | 1.00 | 1.13 | 0.99 | 1.08 | 1.04 | 1.02 | 1.08 | 1.05 | 1.01 |
| SJW | | 1.07 | 0.98 | 1.00 | 1.11 | 1.09 | 1.06 | 1.15 | 0.95 | 1.11 | 1.12 |
| York Water | | 1.04 | 1.13 | 1.05 | 1.04 | 1.02 | 1.02 | 1.08 | 1.03 | 1.01 | 1.02 |

*Sources are on page 3 of 3 except 2007 numbers of Artesian Resources are from Revised Exhibit DHC-3 Page 4 of 11.

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# Office of Regulatory Staff

## Sales/Revenue - Historical Data

### Carolina Water Service, Inc.

*Docket No. 2017-292-WS*

| | 10-yr Averages* | | 5-yr. Averages | | 3-Yr. Averages | |
|---|---|---|---|---|---|---|
| **COMPANIES** | **Compound** | **Simple** | **Compound** | **Simple** | **Compound** | **Simple** |
| American States | 3.97% | 4.13% | -0.96% | -0.93% | -1.51% | -1.47% |
| American Water | 4.19% | 4.24% | 3.28% | 3.29% | 3.93% | 3.93% |
| Aqua America | 2.88% | 2.94% | 1.09% | 1.11% | 0.85% | 0.89% |
| Artesian Resources† | 5.28% | 5.35% | 3.97% | 4.04% | 4.61% | 4.62% |
| California Water | 6.04% | 6.13% | 3.34% | 3.39% | 3.37% | 3.45% |
| Connecticut Water | 6.03% | 6.21% | 4.81% | 4.85% | 4.09% | 4.11% |
| Global Water Resources | | | | | | |
| Middlesex Water | 4.52% | 4.60% | 3.95% | 3.98% | 4.60% | 4.63% |
| SJW | 6.28% | 6.47% | 7.76% | 8.00% | 5.93% | 6.21% |
| York Water | 4.44% | 4.50% | 3.22% | 3.25% | 1.85% | 1.86% |
| **Means** | **4.85%** | **4.95%** | **3.38%** | **3.44%** | **3.08%** | **3.14%** |
| **Medians** | **4.52%** | **4.60%** | **3.34%** | **3.39%** | **3.93%** | **3.93%** |
| **Average of Mean & Median** | | **4.73%** | | **3.39%** | | **3.52%** |

*American Water is on a nine-year basis as 2007 was a pro forma negative number

†Artesian Resources' numbers are set back one year, as 2017 information was not available; 2007=$47.3 million.

| Average of Period Averages |
|---|
| **3.88%** |

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# Office of Regulatory Staff

## Sales/Revenue - Historical Data

### Carolina Water Service, Inc.

*Docket No. 2017-292-WS*

| COMPANIES | Estimate | Growth Rate | Sources |
|---|---|---|---|
| American States | $590.0 | 8.39% | Revised Exhibit DHC-3, p. 1 of 11 |
| American Water | $4,325.0 | 7.30% | Revised Exhibit DHC-3, p. 2 of 11 |
| Aqua America | $1,085.0 | 9.10% | Revised Exhibit DHC-3, p. 3 of 11 |
| Artesian Resources | | | Revised Exhibit DHC-3, p. 5 of 11 |
| California Water | $750.0 | 3.72% | Revised Exhibit DHC-3, p. 6 of 11 |
| Connecticut Water | $160.0 | 12.48% | Revised Exhibit DHC-3, p. 7 of 11 |
| Global Water Resources | | | Revised Exhibit DHC-3, p. 8 of 11 |
| Middlesex Water | $160.0 | 5.20% | Revised Exhibit DHC-3, p. 9 of 11 |
| SJW | $485.0 | 7.22% | Revised Exhibit DHC-3, p. 10 of 11 |
| York Water | $67.5 | 9.91% | Revised Exhibit DHC-3, p. 11 of 11 |
| **Means** | | **7.91%** | |
| **Medians** | | **7.85%** | |
| **Average of Mean & Median** | | **7.88%** | |

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# Office of Regulatory Staff

## DCF Summary

**Carolina Water Service, Inc.**

***Docket No. 2017-292-WS***

| Dividend Yields | | |
|---|---|---|
| **Company** | **Yield** | **Source** |
| American States | 1.90% | Revised Exhibit DHC-3, p. 1 of 11 |
| American Water | 2.00% | Revised Exhibit DHC-3, p. 2 of 11 |
| Aqua America | 2.20% | Revised Exhibit DHC-3, p. 3 of 11 |
| Artesian Resources | 2.50% | Revised Exhibit DHC-3, p. 5 of 11 |
| California Water | 1.60% | Revised Exhibit DHC-3, p. 6 of 11 |
| Connecticut Water | 2.10% | Revised Exhibit DHC-3, p. 7 of 11 |
| Global Water Resources | 3.10% | Revised Exhibit DHC-3, p. 8 of 11 |
| Middlesex Water | 2.30% | Revised Exhibit DHC-3, p. 9 of 11 |
| SJW | 1.40% | Revised Exhibit DHC-3, p. 10 of 11 |
| York Water | 2.00% | Revised Exhibit DHC-3, p. 11 of 11 |
| *average* | **2.11%** | |

| Summary of Historical & Estimated Growth Rates | | | | |
|---|---|---|---|---|
| | **Historical** | **Estimates** | **Average of Historical & Estimates*** | **Sources of Historical & Averages** |
| EPS | 7.76% | 8.72% | 8.24% | Revised Exhibit DHC-5, pp. 2 & 3 |
| BVPS | 4.56% | 5.21% | 4.89% | Revised Exhibit DHC-6, pp. 2 & 3 |
| DPS | 5.23% | 9.32% | 7.28% | Revised Exhibit DHC-7, pp. 2 & 3 |
| Sales/Rev | 3.88% | 7.88% | 5.88% | Revised Exhibit DHC-8, pp. 2 & 3 |
| | | *Growth* | **6.57%** | |
| | | *+ Dividend Yield* | **2.11%** | |
| | | *+Dividend Yield Growth* | **0.14%** | |
| | | *= Indicated DCF Cost of Equity* | **8.82%** | |

*Computed: (Historical + Estimates)/2

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# Office of Regulatory Staff
## CEM-Retrospective
### Carolina Water Service, Inc.
*Docket No. 2017-292-WS*

| Company Name | Ticker | Industry | Beta | Book Value 5 Yr Growth Rate |
|---|---|---|---|---|
| CAE Inc | CAE.TO | Aerospace/Defense | 0.75 | 5.50 |
| CPI Aerostructures Inc | CVU | Aerospace/Defense | 0.55 | 2.50 |
| Elbit Systems Ltd | ESLT | Aerospace/Defense | 0.80 | 9.00 |
| HEICO Corp (Class A) | HEIA | Aerospace/Defense | 0.90 | 8.50 |
| Lockheed Martin Corp | LMT | Aerospace/Defense | 0.80 | 1.00 |
| Raytheon Co | RTN | Aerospace/Defense | 0.80 | 6.00 |
| SIFCO Industries | SIF | Aerospace/Defense | 0.75 | 2.00 |
| Air T Inc | AIRT | Air Transport | 0.55 | 3.50 |
| Allegiant Travel Company | ALGT | Air Transport | 0.90 | 6.50 |
| WestJet Airlines Ltd | WJA.TO | Air Transport | 0.80 | 8.00 |
| Alpha Pro Tech Ltd | APT | Apparel | 0.55 | 5.50 |
| Cherokee Inc | CHKE | Apparel | 0.75 | 24.00 |
| Carters Inc | CRI | Apparel | 0.85 | 6.50 |
| Delta Apparel Inc | DLA | Apparel | 0.80 | 4.50 |
| Dorman Products Inc | DORM | Auto Parts | 0.90 | 15.50 |
| Ameris Bancorp | ABCB | Bank | 0.90 | 10.00 |
| Access National Corporation | ANCX | Bank | 0.80 | 7.50 |
| Arrow Financial Corporation | AROW | Bank | 0.75 | 6.00 |
| Bridge Bancorp Inc | BDGE | Bank | 0.90 | 11.00 |
| Bar Harbor Bankshares | BHB | Bank | 0.90 | 5.50 |
| Bank South Carolina Corp | BKSC | Bank | 0.60 | 5.50 |
| BSB Bancorp Inc | BLMT | Bank | 0.60 | 2.00 |
| Bank of Montreal | BMO.TO | Bank | 0.80 | 9.50 |
| Bank of Marin Bancorp | BMRC | Bank | 0.75 | 9.00 |
| Bryn Mawr Bank Corporation | BMTC | Bank | 0.90 | 9.50 |
| Beneficial Bancorp Inc | BNCL | Bank | 0.75 | 10.50 |
| Bank of Nova Scotia | BNS.TO | Bank | 0.85 | 10.50 |
| Bank of Commerce Holdings | BOCH | Bank | 0.60 | 4.50 |
| Bank of the James Financial Group Inc | BOTJ | Bank | 0.55 | 7.50 |
| Camden National Corporation | CAC | Bank | 0.85 | 6.00 |
| Capital City Bank Group Inc | CCBG | Bank | 0.75 | 1.00 |
| CNB Financial Corporation | CCNE | Bank | 0.90 | 8.50 |
| C and F Financial Corp | CFFI | Bank | 0.70 | 9.50 |
| Chemung Financial Corporation | CHMG | Bank | 0.55 | 2.00 |
| Canadian Imperial Bank of Commerce | CM.TO | Bank | 0.80 | 10.50 |
| Century BanCorp | CNBKA | Bank | 0.65 | 8.00 |
| ConnectOne Bancorp Inc | CNOB | Bank | 0.85 | 17.50 |
| Centerstate Banks Inc | CSFL | Bank | 0.90 | 4.50 |
| Community Shores Bank Corporation | CSHB | Bank | 0.55 | 17.50 |
| Community Trust Bancorp Inc | CTBI | Bank | 0.85 | 6.00 |
| Codorus Valley Bancorp | CVLY | Bank | 0.70 | 8.00 |

# Office of Regulatory Staff
## CEM-Retrospective
### Carolina Water Service, Inc.
*Docket No. 2017-292-WS*

| | | | | |
|---|---|---|---|---|
| Citizens and Northern Corp | CZNC | Bank | 0.70 | 5.50 |
| First Bancorp | FBNC | Bank | 0.90 | 0.50 |
| First Connecticut Bancorp Inc | FBNK | Bank | 0.70 | 2.50 |
| First Community Bancshares Inc | FCBC | Bank | 0.90 | 4.50 |
| Farmers Capital Bank Corp | FFKT | Bank | 0.80 | 7.00 |
| First Financial Northwest Inc | FFNW | Bank | 0.70 | 3.00 |
| Financial Institutions Inc | FISI | Bank | 0.90 | 6.00 |
| First Of Long Island Corp | FLIC | Bank | 0.90 | 8.00 |
| FNCB Bancorp Inc. | FNCB | Bank | 0.60 | 6.50 |
| First Bancorp Inc | FNLC | Bank | 0.85 | 3.50 |
| First United Corporation | FUNC | Bank | 0.60 | 5.00 |
| First US Bancshares Inc. | FUSB | Bank | 0.60 | 0.50 |
| Guaranty Bancorp | GBNK | Bank | 0.70 | 1.50 |
| Heritage Financial Corp | HFWA | Bank | 0.85 | 4.00 |
| National Bank of Canada | NA.TO | Bank | 0.85 | 8.50 |
| Northfield Bancorp Inc | NFBK | Bank | 0.70 | 6.00 |
| National Bankshares Inc | NKSH | Bank | 0.90 | 5.50 |
| Northrim BanCorp Inc | NRIM | Bank | 0.80 | 7.00 |
| Old Line Bancshares Inc | OLBK | Bank | 0.70 | 6.50 |
| Oritani Financial Corp | ORIT | Bank | 0.75 | 0.50 |
| Premier Financial Bancorp Inc | PFBI | Bank | 0.55 | 5.00 |
| Peoples Financial Services Corp | PFIS | Bank | 0.85 | 15.50 |
| Peapack Gladstone Financial Corp | PGC | Bank | 0.85 | 9.00 |
| Parke Bancorp Inc | PKBK | Bank | 0.55 | 10.50 |
| Plumas Bancorp | PLBC | Bank | 0.55 | 9.50 |
| Pacific Premier Bancorp | PPBI | Bank | 0.90 | 12.50 |
| Penns Woods Bancorp Inc | PWOD | Bank | 0.85 | 9.00 |
| Royal Bank of Canada | RY.TO | Bank | 0.80 | 11.00 |
| Southern First Bancshares Inc | SFST | Bank | 0.70 | 8.50 |
| Summit Financial Group Inc | SMMF | Bank | 0.70 | 3.50 |
| Summit State Bank | SSBI | Bank | 0.55 | 3.50 |
| Stewardship Financial Corp | SSFN | Bank | 0.55 | 1.50 |
| Stock Yards Bancorp Inc | SYBT | Bank | 0.85 | 9.00 |
| Territorial Bancorp Inc | TBNK | Bank | 0.60 | 3.00 |
| Toronto Dominion Bank | TD.TO | Bank | 0.75 | 9.00 |
| Tompkins Financial Corporation | TMP | Bank | 0.90 | 6.00 |
| Union Bankshares Inc | UNB | Bank | 0.55 | 5.50 |
| UNIVEST Corp of Pennsylvania | UVSP | Bank | 0.85 | 2.50 |
| First Busey Corp | BUSE | Bank (Midwest) | 0.85 | 4.50 |
| Enterprise Financial Services Corp | EFSC | Bank (Midwest) | 0.85 | 11.00 |
| First Business Financial Services Inc | FBIZ | Bank (Midwest) | 0.70 | 9.00 |
| Farmers National Banc Corp | FMNB | Bank (Midwest) | 0.70 | 3.50 |
| First Merchants Corp | FRME | Bank (Midwest) | 0.85 | 6.00 |
| Horizon Bancorp | HBNC | Bank (Midwest) | 0.90 | 10.00 |
| Hawthorn Bancshares Inc | HWBK | Bank (Midwest) | 0.55 | 2.50 |

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# Office of Regulatory Staff
## CEM-Retrospective
### Carolina Water Service, Inc.
*Docket No. 2017-292-WS*

| | | | | |
|---|---|---|---|---|
| Independent Bank Corporation | IBCP | Bank (Midwest) | 0.75 | 7.50 |
| First Internet Bancorp | INBK | Bank (Midwest) | 0.85 | 5.50 |
| LCNB Corp | LCNB | Bank (Midwest) | 0.60 | 5.50 |
| Lakeland Financial Corp | LKFN | Bank (Midwest) | 0.90 | 9.00 |
| Macatawa Bank Corporation | MCBC | Bank (Midwest) | 0.75 | 13.50 |
| MutualFirst Financial Inc | MFSF | Bank (Midwest) | 0.55 | 13.00 |
| Old Second Bancorp Inc | OSBC | Bank (Midwest) | 0.90 | 10.00 |
| Peoples Bancorp Inc | PEBO | Bank (Midwest) | 0.75 | 4.00 |
| QCR Holdings Inc | QCRH | Bank (Midwest) | 0.70 | 0.50 |
| First Financial Corporation | THFF | Bank (Midwest) | 0.85 | 5.50 |
| Coca Cola Bottling Company | COKE | Beverage | 0.80 | 15.00 |
| Cott Corporation | COT | Beverage | 0.90 | 2.00 |
| Dr Pepper Snapple Group Inc | DPS | Beverage | 0.75 | 0.50 |
| National Beverage | FIZZ | Beverage | 0.80 | 13.50 |
| MGP Ingredients | MGPI | Beverage | 0.80 | 12.00 |
| Monster Beverage Corporation | MNST | Beverage | 0.80 | 30.00 |
| Constellation Brands | STZ | Beverage | 0.75 | 21.00 |
| Molson Coors Brewing Company | TAP | Beverage | 0.90 | 1.50 |
| Willamette Valley Vineyards Inc | WVVI | Beverage | 0.70 | 7.50 |
| ArQule Inc | ARQL | Biotechnology | 0.80 | 24.50 |
| EXACT Sciences Corp | EXAS | Biotechnology | 0.80 | 25.00 |
| iBio Inc | IBIO | Biotechnology | 0.85 | 15.50 |
| Kamada Ltd | KMDA | Biotechnology | 0.80 | 19.50 |
| Myriad Genetics Inc | MYGN | Biotechnology | 0.80 | 9.50 |
| Sinovac Biotech Ltd | SVA | Biotechnology | 0.70 | 0.50 |
| Bio-Techne Corp. | TECH | Biotechnology | 0.90 | 8.50 |
| CBOE Holdings Inc | CBOE | Brokers & Exchanges | 0.70 | 7.50 |
| CME Group Inc | CME | Brokers & Exchanges | 0.75 | 1.00 |
| Intercontinental Exch. | ICE | Brokers & Exchanges | 0.80 | 26.50 |
| Nasdaq Inc. | NDAQ | Brokers & Exchanges | 0.90 | 5.00 |
| Huttig Building Products Inc | HBP | Building Materials | 0.90 | 5.50 |
| ADDvantage Technologies Group Inc | AEY | Cable TV | 0.60 | 4.50 |
| Cogeco Communic. | CCA.TO | Cable TV | 0.60 | 7.00 |
| Cogeco Inc | CGO.TO | Cable TV | 0.65 | 3.00 |
| Comcast Corporation | CMCSA | Cable TV | 0.90 | 6.00 |
| Shaw Communications Inc (Class B) | SJRB.TO | Cable TV | 0.65 | 11.50 |
| Terra Nitrogen | TNH | Chemical (Basic) | 0.80 | 12.00 |
| Landec Corp | LNDC | Chemical (Diversified) | 0.90 | 8.50 |
| Lightwave Logic Inc | LWLG | Chemical (Diversified) | 0.70 | 24.50 |
| Ocean Bio Chem Inc | OBCI | Chemical (Diversified) | 0.60 | 10.50 |
| Adm Tronics Unlimited Inc | ADMT | Chemical (Specialty) | 0.80 | 16.00 |
| Flexible Solutions International Inc | FSI | Chemical (Specialty) | 0.85 | 3.50 |
| Sigma Industries Inc | SSG.TO | Chemical (Specialty) | 0.80 | 5.50 |
| Asure Software Inc | ASUR | Computer Software | 0.65 | 1.50 |
| Computer Modelling Group Ltd | CMG.TO | Computer Software | 0.85 | 5.00 |

# Office of Regulatory Staff
## CEM-Retrospective
### Carolina Water Service, Inc.
*Docket No. 2017-292-WS*

| | | | | |
|---|---|---|---|---|
| Formula Systems Ltd | FORTY | Computer Software | 0.85 | 12.00 |
| Information Analysis Incorporated | IAIC | Computer Software | 0.60 | 1.00 |
| Intelligent Systems Corporation New | INS | Computer Software | 0.70 | 30.00 |
| MAM Software Group Inc | MAMS | Computer Software | 0.65 | 1.00 |
| Paybox Corp. | PBOX | Computer Software | 0.60 | 1.50 |
| QAD Inc | QADA | Computer Software | 0.90 | 16.00 |
| RealPage Inc | RP | Computer Software | 0.85 | 9.50 |
| Simulations Plus Inc | SLP | Computer Software | 0.60 | 8.00 |
| Symantec Corp | SYMC | Computer Software | 0.90 | 2.00 |
| Wayside Technology Group Inc | WSTG | Computer Software | 0.60 | 6.50 |
| AstroNova Inc. | ALOT | Computers/Peripherals | 0.60 | 4.00 |
| KeyTronic Corporation | KTCC | Computers/Peripherals | 0.70 | 8.50 |
| Mercury Systems Inc | MRCY | Computers/Peripherals | 0.85 | 5.50 |
| Top Image Systems Ltd | TISA | Computers/Peripherals | 0.80 | 19.50 |
| Chemed Corporation | CHE | Diversified Co. | 0.80 | 7.00 |
| CKX Lands Inc | CKX | Diversified Co. | 0.65 | 6.00 |
| Elxsi Corporation | ELXS | Diversified Co. | 0.60 | 32.50 |
| Kaman Corporation | KAMN | Diversified Co. | 0.90 | 9.00 |
| McRae Industries Inc | MCRAA | Diversified Co. | 0.55 | 9.00 |
| Nobility Homes Inc | NOBH | Diversified Co. | 0.70 | 4.00 |
| Rogers Communications Inc (Class B) | RCIB.TO | Diversified Co. | 0.55 | 8.50 |
| Reading International Inc | RDI | Diversified Co. | 0.90 | 2.50 |
| Seaboard Corp | SEB | Diversified Co. | 0.90 | 11.00 |
| Synalloy Corp | SYNL | Diversified Co. | 0.75 | 1.50 |
| Aradigm Corporation | ARDM | Drug | 0.65 | 30.00 |
| Bristol Myers Squibb Co | BMY | Drug | 0.90 | 2.50 |
| ChromaDex Corporation | CDXC | Drug | 0.75 | 3.00 |
| Cyanotech Corp | CYAN | Drug | 0.60 | 8.50 |
| Eli Lilly and Co | LLY | Drug | 0.75 | 5.50 |
| Perrigo Company Plc Ireland | PRGO | Drug | 0.85 | 36.00 |
| RBC Life Sciences Inc | RBCL | Drug | 0.65 | 52.00 |
| Check Point Software Technologies Inc | CHKP | E-Commerce | 0.80 | 9.50 |
| Magic Software Enterprises Ltd | MGIC | E-Commerce | 0.90 | 12.50 |
| Open Text Corp | OTEX | E-Commerce | 0.90 | 16.50 |
| SharpSpring Inc. | SHSP | E-Commerce | 0.90 | 34.50 |
| Creative Learning Corporation | CLCN | Educational Services | 0.70 | 26.50 |
| Capella Education Company | CPLA | Educational Services | 0.90 | 7.50 |
| CPS Technologies Corp | CPSH | Electrical Equipment | 0.80 | 4.50 |
| FLIR Systems Inc | FLIR | Electrical Equipment | 0.90 | 5.50 |
| WW Grainger Inc | GWW | Electrical Equipment | 0.90 | 2.00 |
| Surge Components Inc/NY | SPRS | Electrical Equipment | 0.65 | 17.50 |
| Espey Manufacturing and Electronics Corp | ESP | Electronics | 0.55 | 1.00 |
| IEH Corporation | IEHC | Electronics | 0.55 | 16.00 |
| LRAD Corp | LRAD | Electronics | 0.70 | 15.00 |
| Magal Security Systems Ltd | MAGS | Electronics | 0.70 | 3.00 |

# Office of Regulatory Staff
## CEM-Retrospective
### Carolina Water Service, Inc.
*Docket No. 2017-292-WS*

| | | | | |
|---|---|---|---|---|
| Emerson Radio Corp | MSN | Electronics | 0.60 | 0.50 |
| NAPCO Security Technologies Inc | NSSC | Electronics | 0.85 | 8.00 |
| Smith Midland Corp | SMID | Engineering & Const | 0.70 | 3.00 |
| SNC-Lavalin Group | SNC.TO | Engineering & Const | 0.80 | 17.00 |
| Stantec Inc. | STN.TO | Engineering & Const | 0.80 | 17.00 |
| Beasley Broadcast Group Inc | BBGI | Entertainment | 0.85 | 18.50 |
| DHX Media Ltd | DHXB.TO | Entertainment | 0.80 | 7.50 |
| Saga Communications Inc | SGA | Entertainment | 0.90 | 9.00 |
| Dolby Laboratories Inc | DLB | Entertainment Tech | 0.85 | 5.00 |
| Koss Corporation | KOSS | Entertainment Tech | 0.75 | 3.00 |
| Diversified Royalty Corporation | BEVFF | Environmental | 0.85 | 2.50 |
| Republic Services Inc | RSG | Environmental | 0.75 | 2.00 |
| Stericycle Inc | SRCL | Environmental | 0.90 | 13.50 |
| Waste Connections | WCN | Environmental | 0.85 | 13.00 |
| Ambase Corporation | ABCP | Financial Svcs. (Div.) | 0.55 | 44.50 |
| Assurant Inc | AIZ | Financial Svcs. (Div.) | 0.90 | 11.00 |
| CBIZ Inc | CBZ | Financial Svcs. (Div.) | 0.85 | 12.00 |
| Costar Technologies Inc | CSTI | Financial Svcs. (Div.) | 0.60 | 131.00 |
| Enstar Group Limited | ESGR | Financial Svcs. (Div.) | 0.80 | 12.50 |
| FirstCash Inc. | FCFS | Financial Svcs. (Div.) | 0.85 | 17.50 |
| Fidelity Nat'l Info. | FIS | Financial Svcs. (Div.) | 0.90 | 4.50 |
| FRMO Corporation | FRMO | Financial Svcs. (Div.) | 0.60 | 10.50 |
| GAIN Capital Holdings Inc | GCAP | Financial Svcs. (Div.) | 0.90 | 5.00 |
| Green Dot Corporation | GDOT | Financial Svcs. (Div.) | 0.90 | 18.50 |
| Horace Mann Educators Corporation | HMN | Financial Svcs. (Div.) | 0.90 | 7.00 |
| Hennessy Advisors Inc | HNNA | Financial Svcs. (Div.) | 0.75 | 11.00 |
| Investors Title Company | ITIC | Financial Svcs. (Div.) | 0.70 | 10.00 |
| Morningstar Inc | MORN | Financial Svcs. (Div.) | 0.90 | 22.00 |
| Morguard Corp | MRC.TO | Financial Svcs. (Div.) | 0.70 | 20.50 |
| Nicholas Financial Inc | NICK | Financial Svcs. (Div.) | 0.65 | 5.50 |
| OTC Markets Group Inc | OTCM | Financial Svcs. (Div.) | 0.55 | 10.00 |
| Sutherland Asset Management | SLD | Financial Svcs. (Div.) | 0.70 | 1.50 |
| Steel Partners Holdings LP LTD | SPLP | Financial Svcs. (Div.) | 0.65 | 4.00 |
| JTH Holding Inc | TAX | Financial Svcs. (Div.) | 0.85 | 0.50 |
| Willis Lease Finance Corporation | WLFC | Financial Svcs. (Div.) | 0.75 | 6.00 |
| B and G Foods Inc | BGS | Food Processing | 0.60 | 12.50 |
| Campbell Soup Co | CPB | Food Processing | 0.75 | 12.00 |
| CTD Holdings Inc | CTDH | Food Processing | 0.55 | 7.50 |
| Calavo Growers Inc | CVGW | Food Processing | 0.60 | 13.00 |
| Farmer Brothers Company | FARM | Food Processing | 0.85 | 4.00 |
| Fresh Del Monte Produce Inc | FDP | Food Processing | 0.80 | 4.50 |
| Flowers Foods Inc | FLO | Food Processing | 0.90 | 9.00 |
| Hormel Foods Corporation | HRL | Food Processing | 0.75 | 11.00 |
| Hershey Company | HSY | Food Processing | 0.75 | 6.50 |
| John B Sanfilippo and Son Inc | JBSS | Food Processing | 0.65 | 4.00 |

# Office of Regulatory Staff
## CEM-Retrospective
**Carolina Water Service, Inc.**
***Docket No. 2017-292-WS***

| | | | | |
|---|---|---|---|---|
| J and J Snack Foods Corp | JJSF | Food Processing | 0.80 | 9.00 |
| Kellogg Company | K | Food Processing | 0.70 | 3.00 |
| Lancaster Colony Corporation | LANC | Food Processing | 0.85 | 1.50 |
| Snyders Lance Inc | LNCE | Food Processing | 0.90 | 8.50 |
| Lifeway Foods Inc | LWAY | Food Processing | 0.90 | 7.00 |
| Medifast Inc | MED | Food Processing | 0.85 | 11.00 |
| Maple Leaf Foods Inc | MFI.TO | Food Processing | 0.70 | 7.50 |
| McCormick and Co | MKC | Food Processing | 0.80 | 4.00 |
| Natural Alternatives International Inc | NAII | Food Processing | 0.60 | 9.00 |
| Nestle SA | NSRGY | Food Processing | 0.75 | 3.50 |
| Pilgrims Pride Corp | PPC | Food Processing | 0.90 | 8.50 |
| Sanderson Farms Inc | SAFM | Food Processing | 0.75 | 13.50 |
| Saputo Inc. | SAP.TO | Food Processing | 0.65 | 13.00 |
| Seneca Foods Corp | SENEB | Food Processing | 0.70 | 6.50 |
| Sino Agro Foods Inc | SIAF | Food Processing | 0.55 | 10.00 |
| JM Smucker Company | SJM | Food Processing | 0.75 | 5.50 |
| Treehouse Foods Inc | THS | Food Processing | 0.75 | 11.00 |
| Tootsie Roll | TR | Food Processing | 0.85 | 2.50 |
| Tyson Foods | TSN | Food Processing | 0.80 | 12.50 |
| Carriage Services Inc | CSV | Funeral Services | 0.90 | 7.50 |
| Crown Crafts Inc | CRWS | Furn/Home Furnishings | 0.65 | 3.50 |
| Culp Inc | CULP | Furn/Home Furnishings | 0.90 | 12.50 |
| Hooker Furniture Corporation | HOFT | Furn/Home Furnishings | 0.80 | 5.00 |
| Kewaunee Scientific Corporation | KEQU | Furn/Home Furnishings | 0.55 | 4.00 |
| Computer Programs and Systems Inc | CPSI | Healthcare Information | 0.60 | 14.00 |
| OptimizeRx Corporation | OPRX | Healthcare Information | 0.60 | 15.50 |
| Quality Systems Inc | QSII | Healthcare Information | 0.85 | 3.00 |
| Deere and Co | DE | Heavy Truck & Equip | 0.90 | 8.00 |
| St Joe Company | JOE | Homebuilding | 0.90 | 2.50 |
| NVR Inc | NVR | Homebuilding | 0.85 | 1.50 |
| Canterbury Park Holding Corp | CPHC | Hotel/Gaming | 0.60 | 3.50 |
| Dover Downs Gaming and Entertainment I | DDE | Hotel/Gaming | 0.55 | 0.50 |
| Full House Resorts Inc | FLL | Hotel/Gaming | 0.60 | 2.50 |
| Golden Entertainment Inc. | GDEN | Hotel/Gaming | 0.65 | 1.00 |
| Gaming Partners International Corp | GPIC | Hotel/Gaming | 0.55 | 6.00 |
| Vail Resorts | MTN | Hotel/Gaming | 0.80 | 5.00 |
| Tropicana Entertainment Inc | TPCA | Hotel/Gaming | 0.70 | 9.50 |
| Trans World Corp New | TWOC | Hotel/Gaming | 0.60 | 3.00 |
| Central Garden and Pet Co | CENT | Household Products | 0.85 | 4.00 |
| Church and Dwight Co Inc | CHD | Household Products | 0.70 | 4.00 |
| Spectrum Brands Holdings Inc New | SPB | Household Products | 0.85 | 8.50 |
| Orchids Paper Products Company | TIS | Household Products | 0.90 | 6.50 |
| Command Center Inc | CCNI | Human Resources | 0.75 | 96.00 |
| Mastech Digital Inc. | MHH | Human Resources | 0.80 | 6.00 |
| ABM Industries Inc | ABM | Industrial Services | 0.80 | 4.50 |

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## CEM-Retrospective
### Carolina Water Service, Inc.
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| | | | | |
|---|---|---|---|---|
| CH Robinson Worldwide Inc | CHRW | Industrial Services | 0.85 | 3.00 |
| Conrad Industries Inc | CNRD | Industrial Services | 0.60 | 12.00 |
| Edgewater Technology Inc | EDGW | Industrial Services | 0.80 | 13.00 |
| Exponent Inc | EXPO | Industrial Services | 0.90 | 10.00 |
| Genpact Limited | G | Industrial Services | 0.75 | 2.00 |
| Hackett Group Inc | HCKT | Industrial Services | 0.80 | 2.50 |
| Healthcare Services Group Inc | HCSG | Industrial Services | 0.90 | 5.00 |
| Hudson Technologies Inc | HDSN | Industrial Services | 0.90 | 21.00 |
| ICF International Inc | ICFI | Industrial Services | 0.90 | 9.00 |
| Kingstone Companies Inc | KINS | Industrial Services | 0.70 | 11.50 |
| Rollins Inc | ROL | Industrial Services | 0.90 | 12.00 |
| Superior Uniform Group | SGC | Industrial Services | 0.75 | 5.50 |
| Sigmatron International Inc | SGMA | Industrial Services | 0.70 | 2.50 |
| SP Plus Corporation | SP | Industrial Services | 0.80 | 39.00 |
| Syntel Inc | SYNT | Industrial Services | 0.85 | 8.00 |
| WNS Holdings Limited | WNS | Industrial Services | 0.90 | 6.00 |
| Cogint Inc | COGT | Information Services | 0.80 | 16.50 |
| FBL Financial Group Inc | FFG | Insurance (Life) | 0.90 | 6.00 |
| Independence Holding Company | IHC | Insurance (Life) | 0.80 | 8.00 |
| Power Financial | PWF.TO | Insurance (Life) | 0.90 | 10.50 |
| Security National Financial Corp | SNFCA | Insurance (Life) | 0.60 | 26.50 |
| Arch Cap Group Ltd | ACGL | Insurance (Prop/Cas.) | 0.70 | 13.50 |
| American Financial Group | AFG | Insurance (Prop/Cas.) | 0.90 | 10.50 |
| Allstate Corporation | ALL | Insurance (Prop/Cas.) | 0.85 | 7.50 |
| Berkshire Hathaway Inc New (Class B) | BRKB | Insurance (Prop/Cas.) | 0.90 | 6.00 |
| Baldwin and Lyons Inc | BWINA | Insurance (Prop/Cas.) | 0.60 | 2.00 |
| Chubb Ltd. | CB | Insurance (Prop/Cas.) | 0.85 | 9.50 |
| Cincinnati Financial Corp | CINF | Insurance (Prop/Cas.) | 0.90 | 6.50 |
| Global Indemnity PLC | GBLI | Insurance (Prop/Cas.) | 0.75 | 7.50 |
| Hallmark Financial Services Inc | HALL | Insurance (Prop/Cas.) | 0.85 | 4.00 |
| Infinity Property and Casualty Corporation | IPCC | Insurance (Prop/Cas.) | 0.70 | 3.50 |
| Mercury General Corp | MCY | Insurance (Prop/Cas.) | 0.80 | 1.50 |
| Markel Corp | MKL | Insurance (Prop/Cas.) | 0.80 | 13.50 |
| Navigators Group Inc | NAVG | Insurance (Prop/Cas.) | 0.80 | 7.50 |
| Progressive Corp. | PGR | Insurance (Prop/Cas.) | 0.90 | 8.00 |
| ProAssurance Corp | PRA | Insurance (Prop/Cas.) | 0.70 | 3.50 |
| Safety Insurance Group Inc | SAFT | Insurance (Prop/Cas.) | 0.85 | 1.00 |
| The Travelers Companies Inc | TRV | Insurance (Prop/Cas.) | 0.85 | 6.50 |
| WR Berkley Corp | WRB | Insurance (Prop/Cas.) | 0.85 | 8.00 |
| White Moutains Insurance Group Ltd | WTM | Insurance (Prop/Cas.) | 0.60 | 8.50 |
| XL Group Ltd. | XL | Insurance (Prop/Cas.) | 0.90 | 10.50 |
| Blucora Inc | BCOR | Internet | 0.85 | 5.50 |
| CynergisTek Inc | CTEK | Internet | 0.55 | 29.50 |
| MakeMyTrip Limited | MMYT | Internet | 0.80 | 27.50 |
| Sitestar Corp | SYTE | Internet | 0.60 | 4.00 |

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| | | | | |
|---|---|---|---|---|
| Tucows Inc | TCX | Internet | 0.90 | 10.50 |
| XO Group Inc | XOXO | Internet | 0.85 | 1.00 |
| Guardian Cap Group Ltd (Class A) | GCGA.TO | Investment Co.(Foreign) | 0.75 | 9.50 |
| CSG Systems International Inc | CSGS | IT Services | 0.90 | 6.50 |
| Amdocs Ltd | DOX | IT Services | 0.80 | 6.00 |
| Infosys Limited | INFY | IT Services | 0.85 | 9.50 |
| Jack Henry and Associates Inc | JKHY | IT Services | 0.85 | 4.50 |
| Network 1 Technologies Inc | NTIP | IT Services | 0.60 | 18.00 |
| ePlus inc | PLUS | IT Services | 0.90 | 11.50 |
| ATS Automation Tooling Systems | ATA.TO | Machinery | 0.80 | 5.00 |
| CompX International Inc | CIX | Machinery | 0.75 | 7.00 |
| EnviroStar Inc | EVI | Machinery | 0.55 | 5.50 |
| Gencor Industries Inc | GENC | Machinery | 0.70 | 3.50 |
| International Baler Corporation | IBAL | Machinery | 0.60 | 12.00 |
| MSC Industrial Direct Co Inc | MSM | Machinery | 0.90 | 11.50 |
| P F Industries Inc | PFIN | Machinery | 0.65 | 10.00 |
| Sono Tek Corporation | SOTK | Machinery | 0.60 | 10.00 |
| Terra Tech Corporation | TRTC | Machinery | 0.80 | 97.00 |
| WSI Industries Inc | WSCI | Machinery | 0.70 | 5.00 |
| Algoma Central Corp | ALC.TO | Maritime | 0.60 | 2.50 |
| Danaos Corp | DAC | Maritime | 0.90 | 4.00 |
| Baxter International Inc | BAX | Med Supp Invasive | 0.85 | 6.00 |
| Becton Dickinson and Company | BDX | Med Supp Invasive | 0.80 | 13.50 |
| Edwards Lifesciences | EW | Med Supp Invasive | 0.85 | 15.50 |
| Exactech Inc | EXAC | Med Supp Invasive | 0.90 | 7.50 |
| Integra LifeSciences Holdings Corporation | IART | Med Supp Invasive | 0.85 | 4.50 |
| ICU Medical Inc | ICUI | Med Supp Invasive | 0.85 | 12.50 |
| IRIDEX Corporation | IRIX | Med Supp Invasive | 0.80 | 17.00 |
| Intuitive Surgical Inc | ISRG | Med Supp Invasive | 0.80 | 17.50 |
| LeMaitre Vascular Inc | LMAT | Med Supp Invasive | 0.60 | 5.50 |
| Medtronic plc | MDT | Med Supp Invasive | 0.90 | 20.00 |
| Milestone Scientific Inc | MLSS | Med Supp Invasive | 0.70 | 25.50 |
| Nuvasive Inc | NUVA | Med Supp Invasive | 0.85 | 6.50 |
| Repro Med Systems Inc | REPR | Med Supp Invasive | 0.80 | 19.00 |
| Stryker Corp | SYK | Med Supp Invasive | 0.90 | 5.00 |
| Teleflex Inc | TFX | Med Supp Invasive | 0.85 | 1.50 |
| Utah Medical Products Inc | UTMD | Med Supp Invasive | 0.85 | 11.00 |
| Varian Medical System | VAR | Med Supp Invasive | 0.90 | 8.00 |
| Atrion Corporation | ATRI | Med Supp Non-Invasive | 0.70 | 6.00 |
| Bio Rad Laboratories Inc | BIO | Med Supp Non-Invasive | 0.85 | 8.50 |
| Chembio Diagnostics Inc | CEMI | Med Supp Non-Invasive | 0.80 | 14.50 |
| Cogentix Medical, Inc. | CGNT | Med Supp Non-Invasive | 0.60 | 11.50 |
| Cooper Companies Inc | COO | Med Supp Non-Invasive | 0.90 | 7.00 |
| Digirad Corporation | DRAD | Med Supp Non-Invasive | 0.85 | 1.50 |
| Haemonetics Corp | HAE | Med Supp Non-Invasive | 0.90 | 2.50 |

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| | | | | |
|---|---|---|---|---|
| Johnson and Johnson | JNJ | Med Supp Non-Invasive | 0.85 | 5.00 |
| Misonix Inc | MSON | Med Supp Non-Invasive | 0.85 | 6.00 |
| NxStage Medical Inc | NXTM | Med Supp Non-Invasive | 0.80 | 4.00 |
| Omnicell Inc | OMCL | Med Supp Non-Invasive | 0.90 | 7.00 |
| Patterson Companies Inc | PDCO | Med Supp Non-Invasive | 0.90 | 3.50 |
| ResMed Inc | RMD | Med Supp Non-Invasive | 0.90 | 3.50 |
| Sonoma Pharmaceuticals Inc. | SNOA | Med Supp Non-Invasive | 0.90 | 1.50 |
| Meridian Bioscience | VIVO | Med Supp Non-Invasive | 0.85 | 3.00 |
| West Pharmaceutical Services Inc | WST | Med Supp Non-Invasive | 0.85 | 9.00 |
| Almost Family Inc | AFAM | Medical Services | 0.75 | 6.50 |
| Anthem Inc. | ANTM | Medical Services | 0.90 | 8.00 |
| Cigna Corporation | CI | Medical Services | 0.85 | 13.50 |
| Quest Diagnostics Inc | DGX | Medical Services | 0.90 | 7.00 |
| DLH Holdings Corporation | DLHC | Medical Services | 0.80 | 19.50 |
| DaVita Inc. | DVA | Medical Services | 0.85 | 17.00 |
| Ensign Group Inc | ENSG | Medical Services | 0.85 | 7.00 |
| Extendicare Inc | EXE.TO | Medical Services | 0.70 | 64.00 |
| Fresenius Medical ADR | FMS | Medical Services | 0.80 | 12.00 |
| Humana Inc | HUM | Medical Services | 0.85 | 10.50 |
| ICON plc | ICLR | Medical Services | 0.80 | 8.00 |
| Laboratory Corp | LH | Medical Services | 0.90 | 14.00 |
| LHC Group | LHCG | Medical Services | 0.80 | 8.00 |
| Mednax Inc | MD | Medical Services | 0.85 | 11.50 |
| Magellan Health Inc | MGLN | Medical Services | 0.90 | 8.00 |
| Natl HealthCare Corp. | NHC | Medical Services | 0.85 | 7.50 |
| Psychemedics Corp | PMD | Medical Services | 0.60 | 5.00 |
| Providence Service Corp | PRSC | Medical Services | 0.90 | 24.50 |
| Eastern Company | EML | Metal Fabricating | 0.55 | 2.50 |
| Caledonia Mining Corp. PLC. | CAL.TO | Metals & Mining (Div.) | 0.55 | 15.50 |
| Kaiser Aluminum Corporation | KALU | Metals & Mining (Div.) | 0.85 | 1.00 |
| Mountain Province Diamonds Inc | MPVD.TO | Metals & Mining (Div.) | 0.65 | 8.50 |
| Nevsun Resources Ltd | NSU.TO | Metals & Mining (Div.) | 0.70 | 19.50 |
| U S Lime and Minerals | USLM | Metals & Mining (Div.) | 0.85 | 8.50 |
| Daily Journal Corp | DJCO | Newspaper | 0.80 | 14.00 |
| Manhattan Bridge Capital Inc | LOAN | Newspaper | 0.65 | 3.00 |
| Acme United Corp | ACU | Office Equip/Supplies | 0.60 | 9.50 |
| Badger Daylighting Ltd | BAD.TO | Oilfield Svcs/Equip. | 0.75 | 18.00 |
| North American Energy Partners Inc | NOA.TO | Oilfield Svcs/Equip. | 0.60 | 1.50 |
| CCL Industries | CCLB.TO | Packaging & Container | 0.70 | 8.00 |
| Intertape Polymer Group Inc | ITPOF | Packaging & Container | 0.85 | 4.00 |
| Northern Technologies International Corp | NTIC | Packaging & Container | 0.65 | 6.00 |
| Silgan Holdings Inc | SLGN | Packaging & Container | 0.90 | 3.00 |
| UFP Technologies Inc | UFPT | Packaging & Container | 0.90 | 13.00 |
| Winpak Ltd | WPK.TO | Packaging & Container | 0.65 | 9.00 |
| Clearwater Paper | CLW | Paper/Forest Products | 0.85 | 7.50 |

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| | | | | |
|---|---|---|---|---|
| Getty Realty Corp | GTY | Petroleum (Integrated) | 0.85 | 4.00 |
| Reserve Petroleum Co | RSRV | Petroleum (Producing) | 0.80 | 5.00 |
| Tengasco Inc | TGC | Petroleum (Producing) | 0.75 | 6.00 |
| CVS Caremark Corporation | CVS | Pharmacy Services | 0.85 | 5.00 |
| IntelGenx Technologies Corporation | IGXT | Pharmacy Services | 0.75 | 5.50 |
| Jean Coutu Group (Class A) | PJCA.TO | Pharmacy Services | 0.55 | 20.00 |
| AmeriGas Partners LP | APU | Pipeline MLPs | 0.75 | 2.50 |
| Spectra Energy Part. | SEP | Pipeline MLPs | 0.90 | 17.50 |
| Emera Inc. | EMA.TO | Power | 0.60 | 12.50 |
| Agnico Eagle Mines Ltd | AEM | Precious Metals | 0.55 | 3.00 |
| Compania De Minas Buenaventura SA | BVN | Precious Metals | 0.90 | 4.00 |
| Franco Nevada Corp | FNV | Precious Metals | 0.60 | 4.50 |
| Mag Silver Corp | MAG | Precious Metals | 0.85 | 4.50 |
| Seabridge Gold Inc | SA | Precious Metals | 0.65 | 2.50 |
| Analogic Corp | ALOG | Precision Instrument | 0.80 | 4.00 |
| Luna Innovations Incorporated | LUNA | Precision Instrument | 0.75 | 24.00 |
| OSI Systems Inc | OSIS | Precision Instrument | 0.85 | 8.50 |
| Research Frontiers Inc | REFR | Precision Instrument | 0.85 | 4.50 |
| Transcat Inc | TRNS | Precision Instrument | 0.70 | 11.50 |
| Waters Corp | WAT | Precision Instrument | 0.90 | 17.50 |
| Wireless Telecom | WTT | Precision Instrument | 0.70 | 6.00 |
| Compass Diversified | CODI | Public/Private Equity | 0.70 | 6.00 |
| Solar Capital Ltd | SLRC | Public/Private Equity | 0.80 | 4.00 |
| Avalonbay Communities Inc | AVB | R.E.I.T. | 0.70 | 12.00 |
| Boston Properties Inc | BXP | R.E.I.T. | 0.90 | 2.50 |
| Digital Realty Trust Inc | DLR | R.E.I.T. | 0.80 | 8.00 |
| Equity Residential | EQR | R.E.I.T. | 0.75 | 10.00 |
| Extra Space Storage | EXR | R.E.I.T. | 0.80 | 9.50 |
| Federal Realty Investment Trust | FRT | R.E.I.T. | 0.75 | 5.50 |
| Welltower Inc. | HCN | R.E.I.T. | 0.70 | 5.00 |
| Macerich Co | MAC | R.E.I.T. | 0.85 | 8.50 |
| Annaly Capital Management Inc | NLY | R.E.I.T. | 0.65 | 6.00 |
| Realty Income Corporation | O | R.E.I.T. | 0.70 | 13.50 |
| Ventas Inc | VTR | R.E.I.T. | 0.75 | 14.00 |
| Amer. Outdoor Brands | AOBC | Recreation | 0.90 | 22.50 |
| Carnival Corp | CCL | Recreation | 0.90 | 1.50 |
| Hasbro Inc | HAS | Recreation | 0.90 | 3.00 |
| Mattel Inc | MAT | Recreation | 0.85 | 1.00 |
| Sturm Ruger and Co | RGR | Recreation | 0.90 | 14.50 |
| Argo Group Int'l | AGII | Reinsurance | 0.90 | 8.00 |
| Aspen Insurance Holdings Limited | AHL | Reinsurance | 0.90 | 4.50 |
| Axis Capital Holdings Ltd | AXS | Reinsurance | 0.80 | 7.00 |
| EMC Insurance Group Inc | EMCI | Reinsurance | 0.85 | 6.50 |
| Everest Re Group Ltd | RE | Reinsurance | 0.80 | 10.50 |
| Renaissancere Holdings Ltd | RNR | Reinsurance | 0.70 | 11.50 |

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| | | | | |
|---|---|---|---|---|
| Validus Holdings | VR | Reinsurance | 0.80 | 5.50 |
| Biglari Holdings Inc | BH | Restaurant | 0.85 | 3.50 |
| BJs Restaurants Inc | BJRI | Restaurant | 0.90 | 3.50 |
| Cheesecake Factory Inc | CAKE | Restaurant | 0.75 | 4.50 |
| Cracker Barrel Old Country Store Inc | CBRL | Restaurant | 0.75 | 20.50 |
| Chipotle Mexican Grill Inc | CMG | Restaurant | 0.85 | 17.50 |
| DineEquity Inc | DIN | Restaurant | 0.80 | 33.50 |
| Darden Restaurants Inc | DRI | Restaurant | 0.85 | 5.00 |
| Noble Romans Inc | NROM | Restaurant | 0.70 | 5.50 |
| RCI Hospitality Holdings Inc | RICK | Restaurant | 0.80 | 8.00 |
| Rocky Mountain Chocolate Factory Inc | RMCF | Restaurant | 0.65 | 3.00 |
| Texas Roadhouse Inc | TXRH | Restaurant | 0.85 | 7.50 |
| Luxottica Group Spa | LUXTY | Retail (Hardlines) | 0.90 | 6.00 |
| PCM Inc | PCMI | Retail (Hardlines) | 0.70 | 3.50 |
| Tandy Leather Factory Inc | TLF | Retail (Hardlines) | 0.65 | 10.50 |
| Ulta Beauty | ULTA | Retail (Hardlines) | 0.90 | 26.00 |
| Citi Trends Inc | CTRN | Retail (Softlines) | 0.80 | 1.50 |
| Foot Locker Inc | FL | Retail (Softlines) | 0.90 | 7.50 |
| Francescas Holdings Corporation | FRAN | Retail (Softlines) | 0.75 | 49.50 |
| Childrens Place Inc | PLCE | Retail (Softlines) | 0.85 | 5.50 |
| TJX Companies Inc | TJX | Retail (Softlines) | 0.90 | 11.00 |
| Monro Inc. | MNRO | Retail Automotive | 0.90 | 12.50 |
| Alexanders Inc | ALX | Retail Store | 0.80 | 1.00 |
| Costco Wholesale Corporation | COST | Retail Store | 0.80 | 1.00 |
| Canadian Tire 'A' | CTCA.TO | Retail Store | 0.70 | 6.00 |
| Dollar General Corporation | DG | Retail Store | 0.85 | 10.00 |
| Dollar Tree Inc | DLTR | Retail Store | 0.85 | 24.00 |
| PriceSmart | PSMT | Retail Store | 0.90 | 1.00 |
| Walmart Inc. | WMT | Retail Store | 0.70 | 5.00 |
| Ali. Couche-Tard | ATDB.TO | Retail/Wholesale Food | 0.80 | 24.50 |
| Caseys General Stores Inc | CASY | Retail/Wholesale Food | 0.75 | 5.50 |
| Core Mark Holding Co Inc | CORE | Retail/Wholesale Food | 0.75 | 6.00 |
| Empire Company Limited (Class A) | EMPA.TO | Retail/Wholesale Food | 0.60 | 9.00 |
| Ingles Markets Incorporated | IMKTA | Retail/Wholesale Food | 0.85 | 3.50 |
| Kroger Co | KR | Retail/Wholesale Food | 0.90 | 11.50 |
| Loblaw Cos. Ltd. | L.TO | Retail/Wholesale Food | 0.65 | 6.50 |
| Metro Inc | MRU.TO | Retail/Wholesale Food | 0.60 | 7.00 |
| Village Super Market Inc | VLGEA | Retail/Wholesale Food | 0.75 | 3.50 |
| Weis Markets | WMK | Retail/Wholesale Food | 0.90 | 4.00 |
| George Weston Ltd | WN.TO | Retail/Wholesale Food | 0.65 | 5.00 |
| Alpha and Omega Semiconductor Limited | AOSL | Semiconductor | 0.80 | 1.50 |
| AXT Inc | AXTI | Semiconductor | 0.70 | 2.50 |
| Cirrus Logic Inc | CRUS | Semiconductor | 0.85 | 21.00 |
| Photronics Inc | PLAB | Semiconductor Equip | 0.65 | 5.00 |
| Rocky Brands Inc | RCKY | Shoe | 0.90 | 4.50 |

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| | | | | |
|---|---|---|---|---|
| Friedman Industries Inc | FRD | Steel | 0.65 | 0.50 |
| ADTRAN Inc | ADTN | Telecom. Equipment | 0.85 | 2.00 |
| ClearOne Inc | CLRO | Telecom. Equipment | 0.65 | 18.50 |
| Frequency Electronics Inc | FEIM | Telecom. Equipment | 0.70 | 4.00 |
| Preformed Line Products Company | PLPC | Telecom. Equipment | 0.85 | 3.50 |
| Radcom Ltd | RDCM | Telecom. Equipment | 0.90 | 8.50 |
| TESSCO Technologies Inc | TESS | Telecom. Equipment | 0.85 | 4.50 |
| ATN International | ATNI | Telecom. Services | 0.75 | 18.50 |
| China Mobile Limited | CHL | Telecom. Services | 0.80 | 7.00 |
| Hawaiian Telcom | HCOM | Telecom. Services | 0.80 | 15.50 |
| Internet Initiative Japan Inc | IIJI | Telecom. Services | 0.75 | 22.50 |
| KT Corp | KT | Telecom. Services | 0.75 | 13.00 |
| AT&T | T | Telecom. Services | 0.75 | 1.00 |
| Telus Corp | T.TO | Telecom. Services | 0.60 | 1.50 |
| Torotel Inc | TTLO | Telecom. Services | 0.80 | 13.50 |
| Vonage Holdings Corp | VG | Telecom. Services | 0.80 | 80.50 |
| New Ulm Telecom Inc | NULM | Telecom. Utility | 0.55 | 2.50 |
| Berkshire Hills Bancorp Inc | BHLB | Thrift | 0.85 | 2.50 |
| Brookline Bancorp Inc | BRKL | Thrift | 0.90 | 2.50 |
| Capitol Federal Financial Inc | CFFN | Thrift | 0.75 | 1.00 |
| Charter Financial Corp | CHFN | Thrift | 0.70 | 14.00 |
| Clifton Bancorp Inc | CSBK | Thrift | 0.60 | 14.00 |
| Dime Community Bancshares Inc | DCOM | Thrift | 0.90 | 7.50 |
| Meridian Bancorp Inc | EBSB | Thrift | 0.65 | 3.00 |
| ESSA Bancorp Inc | ESSA | Thrift | 0.55 | 3.50 |
| First Defiance Financial Corp | FDEF | Thrift | 0.80 | 5.00 |
| Home Bancorp Inc | HBCP | Thrift | 0.60 | 7.00 |
| HMN Financial Inc | HMNF | Thrift | 0.60 | 6.50 |
| Investors Bancorp Inc | ISBC | Thrift | 0.90 | 21.50 |
| Kearny Financial | KRNY | Thrift | 0.80 | 19.50 |
| NASB Financial Inc | NASB | Thrift | 0.65 | 6.00 |
| Northwest Indiana Bancorp | NWIN | Thrift | 0.55 | 7.00 |
| New York Community Bancorp Inc | NYCB | Thrift | 0.90 | 0.50 |
| OceanFirst Financial Corp | OCFC | Thrift | 0.75 | 7.00 |
| Provident Financial Services Inc | PFS | Thrift | 0.90 | 3.50 |
| Provident Financial Holdings Inc | PROV | Thrift | 0.60 | 6.00 |
| Southern Missouri Bancorp Inc | SMBC | Thrift | 0.60 | 9.50 |
| TFS Financial Corporation | TFSL | Thrift | 0.85 | 0.50 |
| Timberland Bancorp Inc | TSBK | Thrift | 0.60 | 5.50 |
| United Community Bancorp | UCBA | Thrift | 0.55 | 18.00 |
| Waterstone Financial Inc | WSBF | Thrift | 0.70 | 20.00 |
| Schweitzer Mauduit International Inc | SWM | Tobacco | 0.75 | 2.50 |
| Universal Corp | UVV | Tobacco | 0.90 | 6.50 |
| Estee Lauder Companies Inc | EL | Toiletries/Cosmetics | 0.80 | 11.00 |

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| | | | | |
|---|---|---|---|---|
| United Guardian Inc | UG | Toiletries/Cosmetics | 0.55 | 0.50 |
| Heartland Express Inc | HTLD | Trucking | 0.90 | 6.50 |
| Landstar System Inc | LSTR | Trucking | 0.90 | 15.50 |
| Crown Castle International Corporation | CCI | Wireless Networking | 0.85 | 17.50 |
| ORBCOMM Inc | ORBC | Wireless Networking | 0.85 | 2.50 |
| Spok Holdings Inc | SPOK | Wireless Networking | 0.90 | 10.50 |
| Ubiquiti Networks Inc | UBNT | Wireless Networking | 0.90 | 33.00 |
| | | | Average/Mean | 9.58 |
| | | | Median | 7.00 |
| | | | Average of Mean & Median | **8.29** |
| | | | Average, if $\beta<0.75$ | 9.53 |
| | | | Average, if $\beta\geq0.75$ | 9.61 |
| | | | Average of stratified growth rates | **9.57** |
| | | | $\beta\leq0.75$, weighted by 44%* | 4.19 |
| | | | $\beta>0.75$, weighted by 56%* | 5.38 |
| | | | Weighted stratified average | **9.58** |
| | | | Average of simple, stratified & weighted averages | **9.15** |

*See Revised Exhibit DHC-13

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# Office of Regulatory Staff

## CEM-Prospective

**Carolina Water Service, Inc.**

***Docket No. 2017-292-WS***

| Company Name | Ticker | Beta | Industry | Book Value Proj 3 To 5 Year Growth Rate |
|---|---|---|---|---|
| ABM Industries Inc | ABM | 0.80 | Industrial Services | 3.50 |
| Barrick Gold Corporation | ABX | 0.80 | Precious Metals | 7.50 |
| Arch Cap Group Ltd | ACGL | 0.70 | Insurance (Prop/Cas.) | 10.00 |
| Analogic Corp | ALOG | 0.80 | Precision Instrument | 2.00 |
| AmeriGas Partners LP | APU | 0.75 | Pipeline MLPs | 3.00 |
| Ali. Couche-Tard | ATDB.TO | 0.80 | Retail/Wholesale Food | 13.50 |
| ATN International | ATNI | 0.75 | Telecom. Services | 4.50 |
| Axis Capital Holdings Ltd | AXS | 0.80 | Reinsurance | 5.00 |
| BCE Inc | BCE | 0.75 | Telecom. Utility | 8.00 |
| Becton Dickinson and Company | BDX | 0.80 | Med Supp Invasive | 20.00 |
| Bank of Montreal | BMO.TO | 0.80 | Bank | 9.50 |
| CAE Inc | CAE.TO | 0.75 | Aerospace/Defense | 7.00 |
| Conagra Brands | CAG | 0.70 | Food Processing | 7.00 |
| Cheesecake Factory Inc | CAKE | 0.75 | Restaurant | 7.00 |
| Caseys General Stores Inc | CASY | 0.75 | Retail/Wholesale Food | 8.50 |
| Cracker Barrel Old Country Store Inc | CBRL | 0.75 | Restaurant | 7.50 |
| Capitol Federal Financial Inc | CFFN | 0.75 | Thrift | 2.50 |
| Church and Dwight Co Inc | CHD | 0.70 | Household Products | 8.00 |
| Chemed Corporation | CHE | 0.80 | Diversified Co. | 14.00 |
| Check Point Software Technologies Inc | CHKP | 0.80 | E-Commerce | 9.00 |
| Clorox Co | CLX | 0.65 | Household Products | 33.00 |
| Canadian Imperial Bank of Commerce | CM.TO | 0.80 | Bank | 10.50 |
| CME Group Inc | CME | 0.75 | Brokers & Exchanges | 3.00 |
| Compass Diversified | CODI | 0.70 | Public/Private Equity | 6.50 |
| Coca Cola Bottling Company | COKE | 0.80 | Beverage | 20.00 |
| Core Mark Holding Co Inc | CORE | 0.75 | Retail/Wholesale Food | 9.50 |
| Costco Wholesale Corporation | COST | 0.80 | Retail Store | 10.00 |
| Campbell Soup Co | CPB | 0.75 | Food Processing | 19.50 |
| Canadian Tire 'A' | CTCA.TO | 0.70 | Retail Store | 5.00 |
| Citi Trends Inc | CTRN | 0.80 | Retail (Softlines) | 5.00 |
| DineEquity Inc | DIN | 0.80 | Restaurant | 1.50 |
| Amdocs Ltd | DOX | 0.80 | IT Services | 5.50 |
| Dr Pepper Snapple Group Inc | DPS | 0.75 | Beverage | 9.00 |
| DSP Group Inc | DSPG | 0.80 | Wireless Networking | 2.00 |
| Estee Lauder Companies Inc | EL | 0.80 | Toiletries/Cosmetics | 3.50 |
| Erie Indemnity Company | ERIE | 0.80 | Insurance (Prop/Cas.) | 8.50 |
| Elbit Systems Ltd | ESLT | 0.80 | Aerospace/Defense | 11.00 |
| Fresh Del Monte Produce Inc | FDP | 0.80 | Food Processing | 9.50 |
| National Beverage | FIZZ | 0.80 | Beverage | 11.00 |
| Fresenius Medical ADR | FMS | 0.80 | Medical Services | 10.50 |
| Forrester Research Inc | FORR | 0.70 | Information Services | 6.50 |
| Francescas Holdings Corporation | FRAN | 0.75 | Retail (Softlines) | 7.50 |
| Genpact Limited | G | 0.75 | Industrial Services | 17.50 |
| Goldcorp Inc | GG | 0.75 | Precious Metals | 1.00 |
| General Mills Inc | GIS | 0.75 | Food Processing | 7.00 |
| Globus Medical Inc | GMED | 0.80 | Med Supp Invasive | 14.00 |

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# Office of Regulatory Staff
## CEM-Prospective
### Carolina Water Service, Inc.
*Docket No. 2017-292-WS*

| | | | | |
|---|---|---|---|---|
| Hawaiian Telcom | HCOM | 0.80 | Telecom. Services | 1.50 |
| Hormel Foods Corporation | HRL | 0.75 | Food Processing | 10.00 |
| Hershey Company | HSY | 0.75 | Food Processing | 18.00 |
| Intercontinental Exch. | ICE | 0.80 | Brokers & Exchanges | 8.00 |
| ICON plc | ICLR | 0.80 | Medical Services | 19.50 |
| Intuitive Surgical Inc | ISRG | 0.80 | Med Supp Invasive | 13.00 |
| J and J Snack Foods Corp | JJSF | 0.80 | Food Processing | 8.00 |
| Kellogg Company | K | 0.70 | Food Processing | 13.00 |
| Konami Corporation | KNMCY | 0.80 | Foreign Electronics | 7.00 |
| Loblaw Cos. Ltd. | L.TO | 0.65 | Retail/Wholesale Food | 5.50 |
| Eli Lilly and Co | LLY | 0.75 | Drug | 9.50 |
| Lockheed Martin Corp | LMT | 0.80 | Aerospace/Defense | 6.00 |
| Logitech International SA | LOGI | 0.80 | Computers/Peripherals | 13.00 |
| Mercury General Corp | MCY | 0.80 | Insurance (Prop/Cas.) | 3.00 |
| MGP Ingredients | MGPI | 0.80 | Beverage | 14.00 |
| McCormick and Co | MKC | 0.80 | Food Processing | 14.00 |
| Markel Corp | MKL | 0.80 | Insurance (Prop/Cas.) | 3.50 |
| Monster Beverage Corporation | MNST | 0.80 | Beverage | 19.50 |
| Altria Group Inc | MO | 0.65 | Tobacco | 15.00 |
| Vail Resorts | MTN | 0.80 | Hotel/Gaming | 20.00 |
| Myriad Genetics Inc | MYGN | 0.80 | Biotechnology | 9.50 |
| Northland Power Inc | NPI.TO | 0.70 | Power | 14.00 |
| Northwest Bancshares Inc | NWBI | 0.80 | Thrift | 2.50 |
| Phibro Animal Health | PAHC | 0.75 | Food Processing | 19.00 |
| Par Pacific Holdings | PARR | 0.80 | Petroleum (Integrated) | 7.50 |
| PepsiCo Inc | PEP | 0.80 | Beverage | 6.00 |
| Pinnacle Foods Inc | PF | 0.80 | Food Processing | 3.00 |
| Procter and Gamble Co | PG | 0.65 | Household Products | 5.00 |
| Photronics Inc | PLAB | 0.65 | Semiconductor Equip | 4.00 |
| Everest Re Group Ltd | RE | 0.80 | Reinsurance | 7.00 |
| Renaissancere Holdings Ltd | RNR | 0.70 | Reinsurance | 5.00 |
| Republic Services Inc | RSG | 0.75 | Environmental | 6.50 |
| Raytheon Co | RTN | 0.80 | Aerospace/Defense | 6.50 |
| Royal Bank of Canada | RY.TO | 0.80 | Bank | 8.50 |
| Sanderson Farms Inc | SAFM | 0.75 | Food Processing | 15.50 |
| Saputo Inc. | SAP.TO | 0.65 | Food Processing | 9.00 |
| JM Smucker Company | SJM | 0.75 | Food Processing | 5.50 |
| Shaw Communications Inc (Class B) | SJRB.TO | 0.65 | Cable TV | 3.00 |
| SNC-Lavalin Group | SNC.TO | 0.80 | Engineering & Const | 4.50 |
| Stantec Inc. | STN.TO | 0.80 | Engineering & Const | 11.00 |
| StoneMor Partners LP | STON | 0.75 | Funeral Services | 16.00 |
| Constellation Brands | STZ | 0.75 | Beverage | 10.00 |
| Schweitzer Mauduit International Inc | SWM | 0.75 | Tobacco | 9.50 |
| AT&T | T | 0.75 | Telecom. Services | 6.50 |
| Toronto Dominion Bank | TD.TO | 0.75 | Bank | 10.00 |
| Treehouse Foods Inc | THS | 0.75 | Food Processing | 6.00 |
| Terra Nitrogen | TNH | 0.80 | Chemical (Basic) | 6.50 |
| Thomson Reuters Corp | TRI.TO | 0.75 | Information Services | 7.00 |
| Tyson Foods | TSN | 0.80 | Food Processing | 9.50 |

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# Office of Regulatory Staff
## CEM-Prospective
**Carolina Water Service, Inc.**
***Docket No. 2017-292-WS***

| | | | | |
|---|---|---|---|---|
| Vonage Holdings Corp | VG | 0.80 | Telecom. Services | 13.00 |
| Village Super Market Inc | VLGEA | 0.75 | Retail/Wholesale Food | 5.00 |
| Validus Holdings | VR | 0.80 | Reinsurance | 5.50 |
| Verizon Communications Inc | VZ | 0.80 | Telecom. Services | 6.00 |
| WestJet Airlines Ltd | WJA.TO | 0.80 | Air Transport | 7.50 |
| Waste Management | WM | 0.75 | Environmental | 4.50 |
| Walmart Inc. | WMT | 0.70 | Retail Store | 4.00 |
| George Weston Ltd | WN.TO | 0.65 | Retail/Wholesale Food | 8.00 |

| | |
|---|---|
| Average/Mean | 8.86 |
| Median | 7.50 |
| Average of Mean & Median | **8.18** |
| Average, if $\beta<0.75$ | 8.84 |
| Average, if $\beta\geq0.75$ | 8.88 |
| Average of stratified growth rates | **8.86** |
| $\beta\leq0.75$, weighted by 44%* | 3.89 |
| $\beta>0.75$, weighted by 56%* | 4.97 |
| Weighted stratified average | **8.86** |
| Average of simple, stratified & weighted averages | **8.63** |
| Retrospective Book growth | **9.15** |
| Prospective Book growth | **8.63** |
| **Indicated CEM Cost of Equity** | **8.89** |

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# OFFICE OF REGULATORY STAFF

## U.S. Census Quarterly Financial Report and Calculations Based upon It

**Carolina Water Service, Inc.**

***Docket No. 2017-292-WS***

**U.S. Census Bureau**
**Source: Quarterly Financial Report**
**All Manufacturing: U.S. Total**
**Not Seasonally Adjusted Total Assets [Millions of Dollars]**
**Period: 2002 to 2017**
**Data Extracted on: August 4, 2017 (3:30 pm)**

| Year | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| **2002** | 4,733,073 | 4,767,543 | 4,780,278 | 4,823,219 |
| **2003** | 4,905,287 | 5,021,709 | 5,033,355 | 5,162,852 |
| **2004** | 5,280,255 | 5,371,716 | 5,451,203 | 5,538,113 |
| **2005** | 5,590,232 | 5,657,787 | 5,800,190 | 5,828,716 |
| **2006** | 5,998,529 | 6,116,322 | 6,205,970 | 6,179,142 |
| **2007** | 6,297,423 | 6,520,599 | 6,689,008 | 6,891,131 |
| **2008** | 7,075,200 | 7,152,498 | 7,081,610 | 6,819,681 |
| **2009** | 6,733,755 | 6,783,626 | 6,827,720 | 6,942,972 |
| **2010** | 7,082,521 | 7,189,592 | 7,346,330 | 7,432,384 |
| **2011** | 7,593,783 | 7,754,262 | 7,812,542 | 7,907,376 |
| **2012** | 8,098,156 | 8,165,826 | 8,317,436 | 8,331,651 |
| **2013** | 8,458,261 | 8,605,267 | 8,733,733 | 8,838,478 |
| **2014** | 8,921,595 | 9,031,403 | 9,103,699 | 9,088,807 |
| **2015** | 9,236,651 | 9,443,403 | 9,585,409 | 9,632,509 |
| **2016** | 9,763,918 | 9,958,829 | 10,103,978 | 10,213,936 |
| **2017** | 10,334,714 | NA | NA | NA |

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# OFFICE OF REGULATORY STAFF

## U.S. Census Quarterly Financial Report and Calculations Based upon It

**Carolina Water Service, Inc.**

***Docket No. 2017-292-WS***

**U.S. Census Bureau**
**Source: Quarterly Financial Report**
**All Manufacturing: U.S. Total**
**Not Seasonally Adjusted Total Liabilities [Millions of Dollars]**
**Period: 2002 to 2017**
**Data Extracted on: February 20, 2018 (1:16 pm)**

| Year | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| **2002** | 2,936,601 | 2,948,215 | 2,950,295 | 3,052,936 |
| **2003** | 3,062,972 | 3,083,952 | 3,077,270 | 3,090,094 |
| **2004** | 3,167,214 | 3,194,583 | 3,230,278 | 3,223,895 |
| **2005** | 3,238,902 | 3,268,717 | 3,362,435 | 3,365,083 |
| **2006** | 3,392,411 | 3,441,958 | 3,467,135 | 3,484,075 |
| **2007** | 3,522,047 | 3,620,521 | 3,729,365 | 3,838,938 |
| **2008** | 3,988,920 | 4,069,796 | 4,021,906 | 4,126,764 |
| **2009** | 4,135,332 | 4,135,752 | 3,957,093 | 3,935,594 |
| **2010** | 4,039,019 | 4,072,140 | 4,127,076 | 4,106,492 |
| **2011** | 4,152,554 | 4,203,106 | 4,269,796 | 4,427,111 |
| **2012** | 4,517,909 | 4,566,588 | 4,640,912 | 4,697,347 |
| **2013** | 4,743,587 | 4,831,184 | 4,885,360 | 4,836,900 |
| **2014** | 4,907,989 | 4,972,584 | 5,020,058 | 5,153,122 |
| **2015** | 5,270,266 | 5,427,572 | 5,547,612 | 5,625,845 |
| **2016** | 5,712,751 | 5,883,012 | 5,966,004 | 6,114,987 |
| **2017** | 6,156,789 | 6,222,641 | 6,326,520 | |

# OFFICE OF REGULATORY STAFF

## U.S. Census Quarterly Financial Report and Calculations Based upon It

**Carolina Water Service, Inc.**

***Docket No. 2017-292-WS***

## Change in Net Equity, Based upon Preceding Tables

*(deep yellow=decline; light yellow=below previous high)*

| Year | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| **2002** | 1,796,472 | 1,819,328 | 1,829,983 | 1,770,283 |
| **2003** | 1,842,315 | 1,937,757 | 1,956,085 | 2,072,758 |
| **2004** | 2,113,041 | 2,177,133 | 2,220,925 | 2,314,218 |
| **2005** | 2,351,330 | 2,389,070 | 2,437,755 | 2,463,633 |
| **2006** | 2,606,118 | 2,674,364 | 2,738,835 | 2,695,067 |
| **2007** | 2,775,376 | 2,900,078 | 2,959,643 | 3,052,193 |
| **2008** | 3,086,280 | 3,082,702 | 3,059,704 | 2,692,917 |
| **2009** | 2,598,423 | 2,647,874 | 2,870,627 | 3,007,378 |
| **2010** | 3,043,502 | 3,117,452 | 3,219,254 | 3,325,892 |
| **2011** | 3,441,229 | 3,551,156 | 3,542,746 | 3,480,265 |
| **2012** | 3,580,247 | 3,599,238 | 3,676,524 | 3,634,304 |
| **2013** | 3,714,674 | 3,774,083 | 3,848,373 | 4,001,578 |
| **2014** | 4,013,606 | 4,058,819 | 4,083,641 | 3,935,685 |
| **2015** | 3,966,385 | 4,015,831 | 4,037,797 | 4,006,664 |
| **2016** | 4,051,167 | 4,075,817 | 4,137,974 | 4,098,949 |
| **2017** | 4,177,925 | | | |

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# OFFICE OF REGULATORY STAFF

## U.S. Census Quarterly Financial Report and Calculations Based upon It

**Carolina Water Service, Inc.**

***Docket No. 2017-292-WS***

## % Change in Net Equity, Based upon Preceding Table

*(quarter over same quarter previous year)*

| Year | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
|---|---|---|---|---|
| **2003** | 2.55% | 6.51% | 6.89% | 17.09% |
| **2004** | 14.69% | 12.35% | 13.54% | 11.65% |
| **2005** | 11.28% | 9.73% | 9.76% | 6.46% |
| **2006** | 10.84% | 11.94% | 12.35% | 9.39% |
| **2007** | 6.49% | 8.44% | 8.06% | 13.25% |
| **2008** | 11.20% | 6.30% | 3.38% | -11.77% |
| **2009** | -15.81% | -14.11% | -6.18% | 11.68% |
| **2010** | 17.13% | 17.73% | 12.14% | 10.59% |
| **2011** | 13.07% | 13.91% | 10.05% | 4.64% |
| **2012** | 4.04% | 1.35% | 3.78% | 4.43% |
| **2013** | 3.75% | 4.86% | 4.67% | 10.11% |
| **2014** | 8.05% | 7.54% | 6.11% | -1.65% |
| **2015** | -1.18% | -1.06% | -1.12% | 1.80% |
| **2016** | 2.14% | 1.49% | 2.48% | 2.30% |
| **2017** | 3.13% | | | |

# Office of Regulatory Staff
## CAP-M
**Carolina Water Service, Inc.**
***Docket No. 2017-292-WS***

| Company | β* | Source |
|---|---|---|
| American States | 0.80 | Revised Exhibit DHC-3, p.1 |
| American Water | 0.65 | Revised Exhibit DHC-3, p.2 |
| Aqua America | 0.75 | Revised Exhibit DHC-3, p.3 |
| Artesian Resources | 0.65 | Revised Exhibit DHC-3, p.5 |
| California Water | 0.80 | Revised Exhibit DHC-3, p.6 |
| Connecticut Water | 0.65 | Revised Exhibit DHC-3, p.7 |
| Global Water Resources | N/A | Revised Exhibit DHC-3, p.8 |
| Middlesex Water | 0.80 | Revised Exhibit DHC-3, p.9 |
| SJW | 0.70 | Revised Exhibit DHC-3, p.10 |
| York Water | 0.80 | Revised Exhibit DHC-3, p.11 |
| *median* | 0.75 | |

*Proportion of companies by β: 56% ≥ 0.75; 44% < 0.75

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# Office of Regulatory Staff
## CAP-M
**Carolina Water Service, Inc.**
***Docket No. 2017-292-WS***

**Excerpt from SBBI, 2017 (added calculations shown in box):**

Exhibit 7-1: Aggregate Market Capitalization and company Counts of the CRSP (NYSE/NYSE MKT/ NASDAQ) Deciles and Size groupings
31-Dec-16

| Decile | Historic Average Percentage of Total Capitalization | Recent Number of Companies | Recent Decile Market Capitalization (in $thousands) | Recent Percentage of Total Capitalization | Percent of Recent Companies |
|---|---|---|---|---|---|
| 1-largest | 63.13% | 191 | 15,290,475,300 | 66.12% | 5.9% |
| 2 | 13.95% | 200 | 3,010,671,018 | 13.02% | 6.2% |
| 3 | 7.55% | 202 | 1,609,575,618 | 6.96% | 6.3% |
| 4 | 4.73% | 221 | 1,010,851,810 | 4.37% | 6.9% |
| 5 | 3.26% | 227 | 677,120,067 | 2.93% | 7.0% |
| 6 | 2.41% | 259 | 541,037,999 | 2.34% | 8.0% |
| 7 | 1.79% | 283 | 384,129,198 | 1.66% | 8.8% |
| 8 | 1.33% | 361 | 297,164,943 | 1.28% | 11.2% |
| 9 | 1.03% | 487 | 212,609,644 | 0.92% | 15.1% |
| 10-smallest | 0.82% | 790 | 92,882,169 | 0.40% | 24.5% |

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# Office of Regulatory Staff
## CAP-M
### Carolina Water Service, Inc.
***Docket No. 2017-292-WS***

Exhibit 7-6 [further SBBI excerpt: returns; added calculations shown in boxes]

| Decile | Geometric Mean | Arithmetic Mean | Geometric Mean Weightings by Number of Companies |
|---|---|---|---|
| 1-largest | 9.30% | 11.10% | 0.55% |
| 2 | 10.60% | 12.80% | 0.66% |
| 3 | 11.00% | 13.60% | 0.69% |
| 4 | 10.80% | 13.80% | 0.74% |
| 5 | 11.50% | 14.60% | 0.81% |
| 6 | 11.40% | 14.80% | 0.92% |
| 7 | 11.60% | 15.40% | 1.02% |
| 8 | 11.60% | 16.10% | 1.30% |
| 9 | 11.60% | 17.00% | 1.75% |
| 10-smallest | 13.30% | 20.30% | 3.26% |
| | 11.27% | | 11.70% |
| | Average | | Weighted Average |

| | | | |
|---|---|---|---|
| Average | 11.27% | 14.95% | 11.70% |
| ERP* | 7.57% | 11.25% | 8.00% |
| Risk-adjust ERP† | 5.68% | 8.44% | 6.00% |
| CAP-M cost of Equity‡ | **9.38%** | 12.14% | **9.70%** |

**(9.38 + 9.70)/2 = 9.54**

*Based on $R_f$ at Revised Exhibit DHC-2; $R_m$ - $R_f$

†Based on median β, p.1 of this exhibit; ERP * β

‡Rf + Risk-Adjusted ERP; result rounded

ACCEPTED FOR PROCESSING - March 15, 2018 - 4:09:03 PM - SCPSC - Docket # 2017-292-WS - Page 54 of 67

# Office of Regulatory Staff
## Comparison of Interest-Only and Regular Loan
**Carolina Water Service, Inc.**
***Docket No. 2017-292-WS***

| Year | Interest | Principal | Total Cash Flow | Remaining Principal | Coupon Rate |
|---|---|---|---|---|---|
| 2006 | | | | $ 180,000,000.00 | |
| 2007 | $ (11,844,000.00) | | $ (11,844,000.00) | $ 180,000,000.00 | 6.58% |
| 2008 | $ (11,844,000.00) | | $ (11,844,000.00) | $ 180,000,000.00 | 6.58% |
| 2009 | $ (11,844,000.00) | | $ (11,844,000.00) | $ 180,000,000.00 | 6.58% |
| 2010 | $ (11,844,000.00) | | $ (11,844,000.00) | $ 180,000,000.00 | 6.58% |
| 2011 | $ (11,844,000.00) | | $ (11,844,000.00) | $ 180,000,000.00 | 6.58% |
| 2012 | $ (11,844,000.00) | | $ (11,844,000.00) | $ 180,000,000.00 | 6.58% |
| 2013 | $ (11,844,000.00) | | $ (11,844,000.00) | $ 180,000,000.00 | 6.58% |
| 2014 | $ (11,844,000.00) | | $ (11,844,000.00) | $ 180,000,000.00 | 6.58% |
| 2015 | $ (11,844,000.00) | | $ (11,844,000.00) | $ 180,000,000.00 | 6.58% |
| 2016 | $ (11,844,000.00) | | $ (11,844,000.00) | $ 180,000,000.00 | 6.58% |
| 2017 | $ (11,844,000.00) | $ (9,000,000.00) | $ (20,844,000.00) | $ 171,000,000.00 | 6.58% |
| 2018 | $ (11,251,800.00) | $ (9,000,000.00) | $ (20,251,800.00) | $ 162,000,000.00 | 6.58% |
| 2019 | $ (10,659,600.00) | $ (9,000,000.00) | $ (19,659,600.00) | $ 153,000,000.00 | 6.58% |
| 2020 | $ (10,067,400.00) | $ (9,000,000.00) | $ (19,067,400.00) | $ 144,000,000.00 | 6.58% |
| 2021 | $ (9,475,200.00) | $ (9,000,000.00) | $ (18,475,200.00) | $ 135,000,000.00 | 6.58% |
| 2022 | $ (8,883,000.00) | $ (9,000,000.00) | $ (17,883,000.00) | $ 126,000,000.00 | 6.58% |
| 2023 | $ (8,290,800.00) | $ (9,000,000.00) | $ (17,290,800.00) | $ 117,000,000.00 | 6.58% |
| 2024 | $ (7,698,600.00) | $ (9,000,000.00) | $ (16,698,600.00) | $ 108,000,000.00 | 6.58% |
| 2025 | $ (7,106,400.00) | $ (9,000,000.00) | $ (16,106,400.00) | $ 99,000,000.00 | 6.58% |
| 2026 | $ (6,514,200.00) | $ (9,000,000.00) | $ (15,514,200.00) | $ 90,000,000.00 | 6.58% |
| 2027 | $ (5,922,000.00) | $ (9,000,000.00) | $ (14,922,000.00) | $ 81,000,000.00 | 6.58% |
| 2028 | $ (5,329,800.00) | $ (9,000,000.00) | $ (14,329,800.00) | $ 72,000,000.00 | 6.58% |
| 2029 | $ (4,737,600.00) | $ (9,000,000.00) | $ (13,737,600.00) | $ 63,000,000.00 | 6.58% |
| 2030 | $ (4,145,400.00) | $ (9,000,000.00) | $ (13,145,400.00) | $ 54,000,000.00 | 6.58% |
| 2031 | $ (3,553,200.00) | $ (9,000,000.00) | $ (12,553,200.00) | $ 45,000,000.00 | 6.58% |
| 2032 | $ (2,961,000.00) | $ (9,000,000.00) | $ (11,961,000.00) | $ 36,000,000.00 | 6.58% |
| 2033 | $ (2,368,800.00) | $ (9,000,000.00) | $ (11,368,800.00) | $ 27,000,000.00 | 6.58% |
| 2034 | $ (1,776,600.00) | $ (9,000,000.00) | $ (10,776,600.00) | $ 18,000,000.00 | 6.58% |
| 2035 | $ (1,184,400.00) | $ (9,000,000.00) | $ (10,184,400.00) | $ 9,000,000.00 | 6.58% |
| 2036 | $ (592,200.00) | $ (9,000,000.00) | $ (9,592,200.00) | $ - | 6.58% |
| **TOTALS** | $ (242,802,000.00) | $ (180,000,000.00) | $ (422,802,000.00) | | |

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# Office of Regulatory Staff

## Comparison of Interest-Only and Regular Loan

**Carolina Water Service, Inc.**

***Docket No. 2017-292-WS***

| Year | Interest | Principal | Total Cash Flow | Remaining Principal | Coupon Rate | Difference in Interest |
|---|---|---|---|---|---|---|
| 2006 | | $ 180,000,000.00 | $ 180,000,000.00 | $ 180,000,000.00 | | |
| 2007 | $ (11,844,000.00) | $ (6,000,000.00) | $ (17,844,000.00) | $ 174,000,000.00 | 6.58% | $ - |
| 2008 | $ (11,449,200.00) | $ (6,000,000.00) | $ (17,449,200.00) | $ 168,000,000.00 | 6.58% | $ (394,800.00) |
| 2009 | $ (11,054,400.00) | $ (6,000,000.00) | $ (17,054,400.00) | $ 162,000,000.00 | 6.58% | $ (789,600.00) |
| 2010 | $ (10,659,600.00) | $ (6,000,000.00) | $ (16,659,600.00) | $ 156,000,000.00 | 6.58% | $ (1,184,400.00) |
| 2011 | $ (10,624,800.00) | $ (6,000,000.00) | $ (16,264,800.00) | $ 150,000,000.00 | 6.58% | $ (1,579,200.00) |
| 2012 | $ (9,870,000.00) | $ (6,000,000.00) | $ (15,870,000.00) | $ 144,000,000.00 | 6.58% | $ (1,974,000.00) |
| 2013 | $ (9,475,200.00) | $ (6,000,000.00) | $ (15,475,200.00) | $ 138,000,000.00 | 6.58% | $ (2,368,800.00) |
| 2014 | $ (9,080,400.00) | $ (6,000,000.00) | $ (15,080,400.00) | $ 132,000,000.00 | 6.58% | $ (2,763,600.00) |
| 2015 | $ (8,685,600.00) | $ (6,000,000.00) | $ (14,685,600.00) | $ 126,000,000.00 | 6.58% | $ (3,158,400.00) |
| 2016 | $ (8,290,800.00) | $ (6,000,000.00) | $ (14,290,800.00) | $ 120,000,000.00 | 6.58% | $ (3,553,200.00) |
| 2017 | $ (7,896,000.00) | $ (6,000,000.00) | $ (13,896,000.00) | $ 114,000,000.00 | 6.58% | $ (3,948,000.00) |
| 2018 | $ (7,501,200.00) | $ (6,000,000.00) | $ (13,501,200.00) | $ 108,000,000.00 | 6.58% | $ (3,750,600.00) |
| 2019 | $ (7,106,400.00) | $ (6,000,000.00) | $ (13,106,400.00) | $ 102,000,000.00 | 6.58% | $ (3,553,200.00) |
| 2020 | $ (6,711,600.00) | $ (6,000,000.00) | $ (12,711,600.00) | $ 96,000,000.00 | 6.58% | $ (3,355,800.00) |
| 2021 | $ (6,316,800.00) | $ (6,000,000.00) | $ (12,316,800.00) | $ 90,000,000.00 | 6.58% | $ (3,158,400.00) |
| 2022 | $ (5,922,000.00) | $ (6,000,000.00) | $ (11,922,000.00) | $ 84,000,000.00 | 6.58% | $ (2,961,000.00) |
| 2023 | $ (5,527,200.00) | $ (6,000,000.00) | $ (11,527,200.00) | $ 78,000,000.00 | 6.58% | $ (2,763,600.00) |
| 2024 | $ (5,132,400.00) | $ (6,000,000.00) | $ (11,132,400.00) | $ 72,000,000.00 | 6.58% | $ (2,566,200.00) |
| 2025 | $ (4,737,600.00) | $ (6,000,000.00) | $ (10,737,600.00) | $ 66,000,000.00 | 6.58% | $ (2,368,800.00) |
| 2026 | $ (4,342,800.00) | $ (6,000,000.00) | $ (10,342,800.00) | $ 60,000,000.00 | 6.58% | $ (2,171,400.00) |
| 2027 | $ (3,948,000.00) | $ (6,000,000.00) | $ (9,948,000.00) | $ 54,000,000.00 | 6.58% | $ (1,974,000.00) |
| 2028 | $ (3,553,200.00) | $ (6,000,000.00) | $ (9,553,200.00) | $ 48,000,000.00 | 6.58% | $ (1,776,600.00) |
| 2029 | $ (3,158,400.00) | $ (6,000,000.00) | $ (9,158,400.00) | $ 42,000,000.00 | 6.58% | $ (1,579,200.00) |
| 2030 | $ (2,763,600.00) | $ (6,000,000.00) | $ (8,763,600.00) | $ 36,000,000.00 | 6.58% | $ (1,381,800.00) |
| 2031 | $ (2,368,800.00) | $ (6,000,000.00) | $ (8,368,800.00) | $ 30,000,000.00 | 6.58% | $ (1,184,400.00) |
| 2032 | $ (1,974,000.00) | $ (6,000,000.00) | $ (7,974,000.00) | $ 24,000,000.00 | 6.58% | $ (987,000.00) |
| 2033 | $ (1,579,200.00) | $ (6,000,000.00) | $ (7,579,200.00) | $ 18,000,000.00 | 6.58% | $ (789,600.00) |
| 2034 | $ (1,184,400.00) | $ (6,000,000.00) | $ (7,184,400.00) | $ 12,000,000.00 | 6.58% | $ (592,200.00) |
| 2035 | $ (789,600.00) | $ (6,000,000.00) | $ (6,789,600.00) | $ 6,000,000.00 | 6.58% | $ (394,800.00) |
| 2036 | $ (394,800.00) | $ (6,000,000.00) | $ (6,394,800.00) | $ - | 6.58% | $ (197,400.00) |
| **TOTALS** | $ (183,582,000.00) | $ (180,000,000.00) | $ (363,582,000.00) | **Cost of interest-only** | | **$ (59,220,000.00)** |

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