

**BEFORE THE  
STATE OF NEW JERSEY  
BOARD OF PUBLIC UTILITIES  
OFFICE OF ADMINISTRATIVE LAW**

**IN THE MATTER OF THE PETITION OF :  
SUEZ WATER ARLINGTON HILLS : BPU Docket No. WR16060510  
FOR APPROVAL OF AN INCREASE IN :  
RATES FOR WATER SERVICE AND :  
OTHER TARIFF CHANGES :**

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**SURREBUTTAL TESTIMONY OF**

**MARLON F. GRIFFING, PH.D.**

**On Behalf of the  
NEW JERSEY DIVISION OF RATE COUNSEL**

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1     **I. INTRODUCTION**

2     **Q. Please state your name, occupation and business address.**

3     A. My name is Dr. Marlon F. Griffing. I am a Senior Consultant with the economic  
4         consulting firm of PCMG & Associates Inc. ("PCMG"). My business address is 22  
5         Brookes Drive, Gaithersburg, MD 20785.

6

7     **Q. Are you the same Dr. Marlon F. Griffing who filed Direct Testimony on behalf of**  
8         **the New Jersey Division of Rate Counsel in this docket?**

9     A. Yes. I am filing Surrebuttal Testimony regarding the cost of capital for SUEZ Water  
10        Arlington Hills ("SWAH" or "the Company") in this docket before the New Jersey  
11        Board of Public Utilities ("Board").

12

13    **Q. What is the purpose of your Surrebuttal Testimony?**

14    A. My testimony has two purposes. I update my recommended return on equity ("ROE")  
15        and overall rate of return ("ROR") for SWAH using the same methods I used to  
16        develop an ROE and ROR in my Direct Testimony. I also respond to the Rebuttal  
17        Testimonies of Company witnesses Gary Prettyman and Pauline Ahern.

18

19    **Q. How is your testimony organized?**

20    A. My testimony has six sections.

21    ▪ First, I update my Discounted Cash Flow ("DCF") model ROE analysis for SWAH  
22        from the values I presented in my Direct Testimony. I apply the same methods, but I  
23        include more recent values for common-equity share prices, dividends paid, and

1 forecasted earnings per share (EPS) growth rates for the water/wastewater companies in  
2 my Comparison Group.

3 ■ Second, I update my capital asset pricing model (CAPM) analysis. Again, I use the  
4 same methods as employed in my Direct Testimony, but with the most recent values for  
5 Comparison Group companies' betas and Value Line's projected dividend yield and  
6 appreciation potential for the universe of 1,700 stocks that it follows, and the risk-free  
7 rate of return.

8 ■ Third, I update my recommended ROE and ROR.

9 ■ Fourth, I respond to criticisms of my DCF ROE analysis by Mr. Prettyman and Ms.  
10 Ahern.

11 ■ Fifth, I critique Ms. Ahern's ROE analyses.

12 ■ Sixth, I summarize my testimony and recommendations.

13  
14 **Q. Please state your conclusions regarding the Company's ROE and ROR.**

15 A. I recommend an ROE of 8.65 percent for the Company. See Exhibit MFG-18,  
16 Schedule 1. When this number is included in the calculation of the ROR, the result is a  
17 weighted-average cost of capital of 7.02 percent for SWAH. See Exhibit MFG-18,  
18 Schedule 4.

19  
20 **II. UPDATED RETURN ON EQUITY ANALYSIS**

21 **1. Review of the DCF ROE Process**

22 **Q. For ease of reference, please summarize your process for estimating an ROE for**  
23 **SUEZ Water Arlington Hills.**

1 A. SUEZ Water Arlington Hills is a wastewater company that is a wholly owned  
2 subsidiary of SUEZ Water Resources, Inc. (SWR). Neither of these entities is publicly  
3 traded, so the information needed to perform a direct DCF analysis on either one is not  
4 available. Therefore, I had to find companies similar in risk to SWAH to develop an  
5 ROE for the Company. Using proxies to determine an ROE is typical for the DCF  
6 process.

7

8 **Q. How did you proceed in finding proxies for SWAH?**

9 A. SWR provides the financing for SWAH's capital needs; SWR also has a credit rating,  
10 or measure of risk, from Standard & Poor's (S&P). See Exhibit MFG-15. Several  
11 water/wastewater companies operate under the SWR umbrella. These operations are the  
12 basis of S&P's evaluation of SWR's risk. Therefore, SWR's A- S&P credit rating is a  
13 sound criterion for choosing companies similar in risk to SWR, and by extension to  
14 SWAH. In conjunction with the SWR credit rating, I applied screens, which I described  
15 in my Direct Testimony, as I selected companies from Value Line's set of Water  
16 Utilities for my Comparison Group.

17

18 **Q. Have any events ensued since you selected the Comparison Group that caused you  
19 to change its membership?**

20 A. No.

21

22 **Q. What was the next step after the Comparison Group was created?**

23 A. I applied the constant-growth DCF model to the Comparison Group's eight members to

1 determine my recommended ROE for the Company.

2

3 **Q. In general, what is the structure of DCF models?**

4 A. The DCF model uses publicly available data for the individual companies' growth-rate  
5 estimates, dividends paid, and common-equity prices. I inserted these values for each  
6 company into the constant-growth DCF equation:

7

$$8 \quad k = \frac{D_1}{P_0} + g$$

9 Where:

10  $D_1$  is the annual dividend one year from the present;

11  $P_0$  is the current price of a stock share;

12  $g$  is the growth rate of the dividend; and

13  $k$  is the discount rate and the fair rate of return on equity.

14 The first term on the right-hand side of the equation is the dividend yield and the  
15 second term is the dividend growth rate. Together, they produce the estimated ROE for  
16 a company.

17

18 **Q. How did you use the information for several companies to determine your  
19 recommended ROE for SWAH?**

20 A. Using the DCF model, I estimated low, mean, and high growth rates for each company  
21 in my Comparison Group. The mean growth rate is the average of the growth rates  
22 from Zacks, Value Line, and Yahoo! Finance. The low growth rate for each company is  
23 the lowest of the three growth rates, while high growth rate is the highest of the three

1 growth rates. Then I calculated the averages of the low, mean, and high growth-rate  
2 estimates for the Comparison Group. Next I calculated the dividend yield for each  
3 company, adjusted for dividend growth, and found the adjusted dividend yield. I added  
4 the adjusted dividend yield to the low, mean, and high growth-rate estimates for each  
5 company to calculate their low, mean, and high ROEs. Finally, I found the means of the  
6 low, mean, and high ROEs for the Comparison Group.

## 7 8 **2. Updated DCF Analysis**

9 **Q. How many DCF analyses did you perform as you update SWAH's recommended**  
10 **ROE?**

11 A. I performed three analyses for my DCF update. I did so in response to a speech made by  
12 Federal Reserve System (the "Fed") Chair Janet Yellen on March 3, 2017 in Chicago.  
13 See Exhibit MFG-16, pages 1-2. Chair Yellen's remarks were reported as an indication  
14 that the Federal Open Market Committee (FOMC), the policy-making body of the Fed,  
15 would increase the federal funds target rate by 25 basis points at its March 14-15, 2017  
16 meeting. Further, it was reported that Yellen's statement reinforced the prevailing belief  
17 that two additional 25-basis point federal funds increases would occur in 2017. I  
18 conducted two additional analyses after I completed my first DCF ROE update to  
19 investigate whether Chair Yellen's words had a significant effect on the ROE I would  
20 recommend for SWAH.

21  
22 **Q. How do your three DCF ROE analyses differ from one another?**

23 A. For the first update of my SWAH DCF ROE analysis, the common equity prices are the

1 average of closing prices of the Comparison Group companies on the 24 trading days  
2 for the period January 23, 2017-February 24, 2017. See Exhibit MFG-17, pages 1-2.  
3 For the second analysis, the common-equity prices are the average of closing prices on  
4 the 24 trading days between January 30, 2017 and March 3, 2017. See Exhibit MFG-  
5 17, pages 3-4. These two periods reflect my practice of using a recent period long  
6 enough to dampen any short-term aberrations in the capital markets. My third analysis  
7 used only the closing share prices on March 3, 2017, the day Chair Yellen delivered her  
8 speech. See Exhibit MFG-17, pages 3-4. This third analysis is consistent with DCF  
9 theory in that the most recent prices for securities reflect the most recent information  
10 affecting investors' assessment of companies' prospects. I typically do not use this  
11 approach because one or a few days' closing prices may reflect anomalous results, but  
12 in this instance, it has value because it is related to the question of interest rates' effect  
13 on ROE results.

14  
15 **Q. What are the dates of your updated expert analysts' estimates of growth rates?**

16 A. The Value Line EPS estimates are the same as those that were inputs to my Direct  
17 Testimony analysis. Value Line has not issued new estimates for the water/wastewater  
18 companies in the Comparison Group. Thus, these estimates are from January 13, 2017.  
19 See Exhibit MFG-14, Schedule 3, pages 1-8. The Zacks' estimates are from  
20 information available on the Zacks' website as of February 28, 2017. See Exhibit  
21 MFG-22, Schedule 1, pages 1-8. The Yahoo! First Call EPS estimates were found on  
22 the Yahoo! Finance website, also on February 28, 2017. See Exhibit MFG-22,  
23 Schedule 2, pages 1-16.

1

2 **Q. What are the dates of the dividends you used to calculate the dividend-yield**  
3 **portion of Comparison Group companies' ROEs?**

4 A. I used the higher of the reported dividends annualized from either Value Line in its  
5 January 13, 2017 issue, or from Zacks as of February 28, 2017. See Exhibit MFG-15.  
6 The Zacks' dividends for California Water and SJW Group are higher than the Value  
7 Line dividends, reflecting increases for the two companies since my Direct Testimony  
8 analysis. Otherwise, the two sources have identical dividends for the companies.

9

10 **Q. What are the results of your first DCF ROE analysis using updated data?**

11 A. The mean ROE for the Comparison Group that is the outcome of my initial updated  
12 analysis is 8.65 percent. See Exhibit MFG-18, Schedule 1. This value is composed of a  
13 mean dividend growth rate of 6.48 percent (the same as in my Direct Testimony) and a  
14 mean expected dividend yield of 2.17 percent (up from 2.09 percent in the Direct  
15 Testimony).<sup>1</sup> The low ROE mean is 7.14 percent and the high ROE mean is 10.17  
16 percent.

17

18 **Q. What are the results of your second DCF ROE analysis using updated data?**

19 A. The mean ROE for the Comparison Group that is the outcome of my second updated  
20 analysis is 8.64 percent. See Exhibit MFG-18, Schedule 2. This value is composed of a  
21 mean dividend growth rate of 6.48 percent (the same as in my Direct Testimony) and a  
22 mean expected dividend yield of 2.17 percent (The 1-basis-point discrepancy is due to

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<sup>1</sup> The increase in the mean expected dividend yield is due in part to dividend increases for California Water (3 cents per share) and SJW (6 cents per share), and in part to minor changes in the average closing share prices of the Comparison Group companies since my Direct Testimony analysis.

1 rounding). The low ROE mean is 7.13 percent and the high ROE mean is 10.17 percent.

2  
3 **Q. What are the results of your third DCF ROE analysis using updated data?**

4 A. The mean ROE for the Comparison Group that is the outcome of my third updated  
5 analysis is 8.59 percent. See Exhibit MFG-18, Schedule 3. This value is composed of a  
6 mean dividend growth rate of 6.48 percent (the same as in my Direct Testimony) and a  
7 mean expected dividend yield of 2.11 percent. The low ROE mean is 7.08 percent and  
8 the high ROE mean is 10.11 percent.

9  
10 **Q. Have investors been expecting the FOMC to increase the federal funds rate?**

11 A. Yes. Investors have been expecting the FOMC to increase the federal funds rate for  
12 some time. In fact, they have been expecting the FOMC to increase the federal funds  
13 rate three times in 2017. See Exhibit PRT-2, Ahern Rebuttal Testimony, pages 10-12.

14 As SWAH witness Ahern states on page 11 of her Rebuttal Testimony:

15  
16 As shown in Table 1 (*not shown*), on February 1, 2017, the  
17 market was anticipating at least one additional rate hike  
18 (94.0% probability) and possibly two or three (71.4% and  
19 38.2% probability, respectively) by January 2018  
20 (assuming 25 basis point rate hikes) as shown in the  
21 1/31/18 column below.  
22

23 **Q. Does the fact that investors have been expecting the federal funds rate to increase**  
24 **three times explain why your three DCF ROE analyses' outcomes are so similar?**

25 A. Yes. Because the federal funds rate increases are expected, investors have largely  
26 incorporated the expected effect of the increases into their thinking about how to value

1 common-equity shares, including the shares of the regulated water/wastewater  
2 companies that are members of the Comparison Group. Therefore, Chair Yellen's  
3 speech confirms for investors what they already believe. Share prices of the  
4 Comparison Group companies moved very little in response to the speech, whether  
5 comparing the prices from the two 24-day trading periods or March 3, 2017. The  
6 similarity in the outcomes also illustrates that interest-rate expectations are not the only  
7 factor that plays a role in forming investors' assessments of companies. Expected sales  
8 and expected environmental regulations are examples of two other factors that  
9 influence investors.

### 11 **3. Updated CAPM Analysis**

#### 12 **Q. Please restate the role of the CAPM in your ROE analysis.**

13 A. I use the CAPM as a check on the reasonableness of my DCF ROE analysis outcome.  
14 As noted in my Direct Testimony, the possible input values for the riskless asset, beta,  
15 and market risk premium can vary considerably. I narrow the range of these inputs  
16 somewhat by performing only a forward-looking CAPM analysis,<sup>2</sup> but the model still is  
17 not as reliable an indicator of equity return as the DCF model.

#### 19 **Q. Did you update the Capital Asset Pricing Model (CAPM) ROE analysis you** 20 **performed in your Direct Testimony?**

21 A. Yes. I updated the calculation of a CAPM ROE using the methods and sources I  
22 employed in my Direct Testimony. Just as I did for the DCF update, I performed three

---

<sup>2</sup> My method for finding the value for the required rate of return on the market portfolio ( $k_m$ , see Exhibit MFG-19, Schedule 5) is essentially a DCF analysis of the 1,700 stocks covered by Value Line.

1 analyses, using three 30-year Treasury bond yields from different dates.

2  
3 **Q. Please review the first update of your CAPM ROE analysis.**

4 A. The updating process included using the average closing yield (3.04 percent) on a 30-  
5 year Treasury bond for January 23, 2017-February 24, 2017 as my riskless asset rate.  
6 See Exhibit MFG-19, Schedule 1. I also used the average (0.72) of the adjusted Betas  
7 for each company as published in the Value Line Research Reports of January 13,  
8 2017. See Exhibit MFG-19, Schedule 3. Like the Value-Line EPS growth-rate  
9 estimates, this value is unchanged from my Direct Testimony. To update the market  
10 risk premium, I used the Value Line March 3, 2017 Summary and Index, which  
11 forecasts aggregate dividend yields and growth rates for the broad economy (1,700  
12 stocks in the “Value Line Universe”). Value Line forecasts the dividend yield (2.0  
13 percent) and the 3- to 5-year appreciation potential (30 percent) for these companies.  
14 See Exhibit MFG-19, Schedule 4. These inputs yield a market risk premium of 5.74  
15 percent.

16  
17 **Q. What is the outcome of your first CAPM ROE update?**

18 A. The outcome of my first updated CAPM analysis is an ROE of 7.16 percent. See  
19 Exhibit MFG-19, Schedule 5. This value is down from 7.24 percent in Direct  
20 Testimony analysis.

21  
22 **Q. Please review the second update of your CAPM ROE analysis.**

23 A. For my second CAPM ROE analysis, just as I did for my DCF update, I changed the

1 period for finding the average of the 30-year Treasuries average yield to January 30,  
2 2017-March 3, 2017 to pick up the effect of Chair Yellen's speech on the yield. The  
3 average closing yield on the 30-year Treasuries remained 3.04 percent. See Exhibit  
4 MFG-19, Schedule 2. Thus, the ROE outcome remained at 7.16 percent. See Exhibit  
5 MFG-19, Schedule 5.

6  
7 **Q. Please review the third update of your CAPM ROE analysis.**

8 A. My third CAPM ROE update used the 30-year Treasury bond yield for only March 3,  
9 2017, which was 3.08 percent. This produced a CAPM ROE of 7.20 percent. See  
10 Exhibit MFG-19, Schedule 5.

11  
12 **Q. Does the fact that investors have been expecting the federal funds rate to increase**  
13 **three times explain why your three CAPM ROE analyses' outcomes are so**  
14 **similar?**

15 A. Yes. Because the federal funds rate increases are expected, investors have largely  
16 incorporated the expected effect of the increases into their thinking about how to price  
17 30-year Treasuries. Therefore, the three CAPM ROE outcomes vary little from one  
18 another. Interestingly, the 3.08 percent yield for March 3, 2017, while 4 basis points  
19 higher than the average of the 24-day trading period for which it was the last day, was 1  
20 basis point lower than the closing yield for the previous day.

21  
22 **4. ROE Recommendation**

23 **Q. Please discuss your recommended ROE for SWAH.**

1 A. For the forward-looking DCF analysis, I obtained mean ROE values of 8.65 percent,  
2 8.64 percent, and 8.59 percent. My forward-looking CAPM analysis yielded an ROEs  
3 of 7.16 percent, 7.16 percent, and 7.20 percent, near the bottom of the DCF range. This  
4 check on the DCF analysis outcome indicates that a mean ROE value of 8.65 percent is  
5 reasonable. Certainly, the CAPM result does not provide support for an ROE  
6 recommendation outside the DCF range.

7 **5. ROR Recommendation**

8 **Q. Please discuss your recommended ROR for SWAH.**

9 A. I accepted the Company's recommended capital structure of 47 percent long-term debt  
10 and 53 percent common equity in my Direct Testimony. I continue to recommend this  
11 capital structure and the long-term debt cost of 5.19 percent. When my recommended  
12 ROE of 8.65 percent is combined with these values, the ROR result is 7.02 percent,  
13 which is my recommended value. See Exhibit MFG-18, Schedule 4. The ROR  
14 outcomes for the low ROE of 7.14 percent and the high ROE of 10.17 percent are 6.22  
15 percent and 7.83 percent, respectively.

16

17 **III. RESPONSE TO THE COMPANY'S CRITICISMS OF MY DCF ROE ANALYSIS**

18 **Q. Do Mr. Prettyman and Ms. Ahern make criticisms of your DCF analysis to which**  
19 **you want to respond?**

20 A. Yes. I respond to the Company witnesses regarding:  
21 1. the assertions of Mr. Prettyman and Ms. Ahern that my recommended ROE  
22 violates a Board policy that ROE should be 9.75 percent;  
23 2. Ms. Ahern's contention that my recommended ROE is too low because it does not  
24 reflect an adjustment for the market values of the common equity of the

1 Comparison Group's members exceeding their book values;

2 3. Ms. Ahern's assertion that my DCF analysis is inadequate in the face of a capital  
3 market in which interest rates are expected to increase.

4 **1. Alleged New Jersey Board of Public Utilities' ROE "Policy"**

5 **Q. What is the "policy" that SWAH asserts the Board has adopted?**

6 A. Mr. Prettyman states on page 3, line 18 of his Rebuttal Testimony that SWAH  
7 "accepted a consistent BPU policy of a 9.75 percent return on equity" rather than  
8 pursue a higher level of ROE. Elsewhere he refers to 9.75 percent return on equity as a  
9 "long and consistent policy" of the BPU (page 16, lines 12-15), and states that 9.75  
10 percent was an ROE determined by the Board for more than five years, which seemed  
11 to him to be a clear policy (page 28, lines 12-15).

12  
13 **Q. Does Ms. Ahern also believe that the Board has an ROE policy?**

14 A. Ms. Ahern states on page 5, lines 14-16 of her Rebuttal Testimony that "SWAH has  
15 calculated its revenue requirement using the consistent BPU policy of 9.75 percent" as  
16 a return on common equity. On page 6, lines 7-9 in referring to the recent Jersey  
17 Central Power & Light (JCP&L) settlement case in which a 9.6 percent ROE was  
18 adopted, she states that the NJBPU did not indicate the outcome was a change in (its)  
19 rate of return policy. Referring to the same settled case on page 8, Ms. Ahern says she  
20 has looked at the 9.60 percent ROE in the context of more than five years of consistent  
21 NJBPU policy.

22  
23 **Q. Was Ms. Ahern able to provide support for the Company position that the Board**

1 **has a policy that ROE is to be set at 9.75 percent?**

2 A. No. Ms. Ahern was asked in Discovery Request RCR-ROE-16 to provide citations and  
3 copies of any Board Order or regulation in which the Board has adopted a given return  
4 on equity as official Board policy to apply to all water/wastewater general rate cases.  
5 Her reply was that she is not aware of any such orders, that she relies on a statement  
6 from one Board Commissioner (Commissioner Holden) and remarks by Board staff  
7 members as support that there is such a policy, and that she doubts that investors  
8 “expect a change in policy in New Jersey” in the SWAH case. See Exhibit MFG-20,  
9 “Response to RCR-ROE-16.”

10  
11 **Q. What is the statement by Commissioner Holden to which Ms. Ahern refers?**

12 A. Ms. Ahern quotes from the transcript of a BPU Agenda Session on December 12, 2016  
13 on pages 8-9 of her Rebuttal Testimony. The Board was discussing BPU Docket No.  
14 ER1616040383 and OAL PUC 10560-16, JCP&L’s 2016 Base Rate Filing. Ms. Ahern  
15 writes:

16  
17 As noted by Commissioner Holden during the BPU’s agenda session on  
18 December 12, 2016 when she stated:

19  
20 I notice that the term [sic] on equity is 9.6. And I know it's  
21 been something that's been decided and stipulated so it's not  
22 something to really put into question, but in the past it's  
23 been 9.75. And I want to make sure this isn't a policy  
24 change that I haven't been made aware of. This has been  
25 negotiated based upon the hope to reach the 45 percent  
26 equity.  
27

28 Mr. Walker [Director of the Energy Division] responded:

29  
30 That’s correct, Commissioner. This isn’t a new standard  
31 number we’re targeting. It’s just the negotiations and the

1 black-box settlement worked out those numbers.

2  
3 Commissioner Holden stated further:

4  
5 I want to make sure that this Board states that because –  
6 target and we back into it, and I want to make sure we are  
7 actually calculating the information.  
8

9 **Q. Has Ms. Ahern omitted part of the transcript?**

10 A. Yes. Board President Mroz and Director Walker have an exchange that occurs between  
11 Mr. Walker’s statement above and Commissioner Holden’s second statement above.

12 The omitted section is:

13  
14 President Mroz:

15  
16 And I would make a comment that – Mr. Walker, you can  
17 confirm – in any rate case it’s incumbent upon us each  
18 time, even though we may have some perspectives on  
19 targets or staff may have perspectives on targets, it’s still  
20 incumbent upon us to make a determination on the ROE for  
21 any particular matter in front of us.  
22

23 Mr. Walker:

24 Absolutely, sir.  
25  
26

27 **Q. What is important about the omitted section?**

28 A. President Mroz states unambiguously, and Director Walker agrees, that it is incumbent  
29 upon the Board to make a determination on the ROE each time on any particular matter  
30 before the Board. Each determination would be based on the facts and analysis  
31 presented. Speaking as he is after Commissioner Holden’s use of “policy” and Mr.  
32 Walker’s statement about not having a “new standard number,” President Mroz is  
33 clarifying that the Board does not have an ROE policy that the Board applies to all  
34 cases regardless of the facts and analysis presented in any matter before the Board.

1

2 **Q. Is there another point you want to make about the omitted section?**

3 A. Yes. When the transcript section is read in its entirety, Commissioner Holden’s phrase  
4 in her second quote about making “sure that this Board states that,” is at least  
5 ambiguous as to what “that” is. In Ms. Ahern’s incomplete version, it can be read that  
6 the Commissioner is putting the Board on record as not departing from an existing  
7 policy. On the other hand, in the complete transcript when it follows President Mroz’s  
8 words and Mr. Walker’s agreement, it is at least as likely that Commissioner Holden is  
9 agreeing with President Mroz’s statement that ROE is determined on a case-by-case  
10 basis. Reinforcing this interpretation is Mr. Walker’s reply to Commissioner Holden’s  
11 second statement (also omitted by Ms. Ahern), which is, “We are, Commissioner and  
12 President Mroz, we’re calculating all that data.”

13

14 **Q. Are there other instances in the last several years where the Board has not**  
15 **authorized an ROE award of 9.75 percent?**

16 A. Yes. The Board has authorized awards both above and below 9.75 percent. For  
17 example, “*In the Matter (I/M/O) of the Petition of Public Service Electric and Gas*  
18 *Company for Approval of an Increase in Electric and Gas Rates and for Changes in the*  
19 *Tariffs for Electric and Gas Service,*” BPU Docket No. GR09959422, the Board  
20 authorized a return on equity of 10.30 percent in a Stipulated Order approved June 7,  
21 2010. Further, in a Stipulated Order approved May 1, 2012, the Board approved an  
22 ROE of 10.15 percent “*I/M/O of the Petition of New Jersey American Water Company,*  
23 *Inc. for Approval of Increased Tariff Rates and Changes for Water and Sewer Service;*

1 *Change in Depreciation Rates and Other Tariff Modifications,”* BPU Docket No.  
2 WR11070460. In the two rate cases that have been resolved most recently the Board  
3 authorized ROEs of 9.60 percent. On February 22, 2017, “*I/M/O of the Verified*  
4 *Petition of Rockland Electric Company for Approval of Changes in Electric Rates, Its*  
5 *Tariff for Electric Service, and Its Depreciation Rates, Approval of an Advanced*  
6 *Metering Program; and for Other Relief,”* BPU Docket No. ER16050428, the Board  
7 approved a Stipulated Order authorizing an ROE of 9.60 percent without comment on  
8 the ROE.<sup>3</sup> On March 6, 2017, a stipulation was agreed to among the parties that  
9 authorizes an ROE of 9.60 percent in “*I/M/O Atlantic City Sewerage Company for*  
10 *Authorization to Increase Tariff Rates,”* BPU Docket No. 16100957. That matter is  
11 expected to appear before the Board on the March agenda.  
12

13 **Q. Please comment.**

14 A. These five cases demonstrate that within the span of 2010 to 2017 the Board departed  
15 from an authorized ROE of 9.75 percent in settled cases. Such authorizations are not  
16 consistent with an alleged “policy” of an ROE of 9.75 percent.  
17

18 **Q. Do you have an additional observation about an alleged Board ROE policy?**

19 A. Yes. The existence of an ROE policy would run counter to good analysis in rate cases.  
20 Good analysis considers the expectations of investors about companies’ earning  
21 prospects, allowing ROE analysis to go where the inputs take it rather than tailoring the  
22 analysis to meet a target. President Mroz recognizes this fact when he states that it is  
23 incumbent upon the Board to decide on an ROE based *on the matter in front of it*

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<sup>3</sup> Please see transcript attached as Exhibit MFG-23.

1 (emphasis added).

2

3 **2. Market Value-to-Book Value Ratio**

4 **Q. Ms. Ahern criticizes you for relying on the DCF model as your primary ROE**  
5 **analytical method, in part, because the market value-to-book value ratio of equity**  
6 **for the companies in the Comparison Group exceeds unity (or 1). Please respond.**

7 A. Ms. Ahern states that when the market value-to-book value ratios of equity exceeds 1  
8 that the constant-growth DCF model that I use as my primary ROE analytical method  
9 understates the market return required by investors. This criticism depends upon an  
10 assumption about the awareness of investors concerning the market environment that is  
11 wholly unrealistic. Therefore, the criticism is invalid.

12

13 **Q. Please continue.**

14 A. Let me first acknowledge that the market-to-book ratios of the companies in the  
15 Comparison Group are above 1, in fact, well above 1 as Ms. Ahern demonstrates in  
16 PMA-11 and PMA-18. These greater-than-1 ratios reflect the willingness of investors  
17 to pay market prices for common-equity shares of the companies in the Comparison  
18 Group that exceed the book value of the equity for the companies.

19

20 **Q. How does the DCF model capture the effect of investors' willingness to pay these**  
21 **prices?**

22 A. Common-equity share prices are included in the DCF model in the expected dividend  
23 yield component. Share prices are the denominator of the expected dividend yield.

1

2 **Q. Is the fact that market share prices of the common equity of companies in the**  
3 **Comparison Group may exceed 1 a flaw in the model?**

4 A. No. To the contrary, it is a strength of the DCF model that it reflects investors'  
5 expectations about the earnings prospects of the companies through the expected  
6 dividend yield component. It is one of the elements of the DCF model that makes it  
7 forward-looking.

8

9 **Q. Please explain why Ms. Ahern asserts that the DCF model understates the market**  
10 **return required by investors.**

11 A. Ms. Ahern states that because the DCF model ROE result reflects market-value share  
12 prices, while the return that investors receive from that result is based on application of  
13 that ROE result to the lower book value (as is true in utility regulation rate recovery),  
14 the return that investors receive is less than they require.<sup>4</sup> She carries out mathematical  
15 operations that she asserts show the return from applying the DCF ROE to the smaller  
16 book value falls short of what investors believe they are receiving from the ROE.

17

18 **Q. Does Ms. Ahern's market-to-book criticism have a basis in fact?**

19 A. No. For the criticism to be valid, one must assume that investors are unaware that the  
20 return that regulated utilities receive in rate cases reflects the book value of company  
21 equity rather than the market value. One must further assume that the investors remain  
22 ignorant of this aspect of public-utility regulation for rate case after rate case, never

---

<sup>4</sup> Ms. Ahern also states that when the market-to-book ratio is less than 1 that the DCF model will overcompensate investors, a position that also requires unrealistic assumptions about investors.

1 noticing that in the calculation of the amount that the utilities are allowed to recover  
2 that the allowed ROE is applied to book value and not market value.

3  
4 **Q. Are these assumptions about investors credible?**

5 A. No. It is difficult to imagine the most passive of individual investors not learning from  
6 experience regarding the rate of return they receive from utility common equity  
7 investments, let alone the managers of mutual funds, insurance company funds, or large  
8 endowment funds of universities and foundations. These fund managers are  
9 sophisticated about investing and are expected as part of their responsibilities to  
10 understand the environment in which the companies they consider including in their  
11 portfolios operate. They are aware of the role that book value plays in utility regulation.

12  
13 **Q. How is the knowledge that book value rather than market value is the base to  
14 which an ROE is applied in the utility regulatory process incorporated into the  
15 DCF model?**

16 A. The knowledge that book value rather than market value is the base to which an ROE is  
17 applied in the utility regulatory process is incorporated into the DCF model in the  
18 prices that investors pay for common equity share of utility companies. The investors  
19 adjust the prices that they are willing to pay in response to the fact that book value  
20 rather than market value is used in the computation of utilities' revenue requirement.  
21 These prices, as discussed above, affect the value of the expected dividend yield and  
22 the resulting ROE.

23

1 **Q. What is the effect on the common-equity share prices of investors knowing that**  
2 **book value rather than market value is employed in setting the revenue**  
3 **requirement?**

4 A. Ms. Ahern is correct that applying an authorized ROE results in a smaller return than  
5 would otherwise be the case. The reaction of investors to this fact is to lower the price  
6 that they are willing to pay for the common-equity shares of regulated utilities.  
7 Investors settle on a price for the shares that reflects the actual return that they find  
8 sufficient for the risk level represented by the utilities. If they are unsatisfied with a  
9 return, they continue to lower the prices they are willing to pay for the shares until the  
10 prices reach a level that does leave them satisfied. The fact that the market-to-book  
11 ratios for the Comparison Group members continue to exceed 1 is evidence that  
12 investors continue to see public utilities as good investments.

13  
14 **3. Capital Market Conditions**

15 **Q. Please summarize Ms. Ahern's position regarding current capital market**  
16 **conditions.**

17 A. Ms. Ahern spends several pages in her Rebuttal Testimony presenting her view of  
18 current and future capital market conditions. See Ahern Rebuttal, pages 9-15. As was  
19 shown in the earlier discussion of my DCF ROE analyses updates, she asserts that the  
20 Fed is going to make a series of increases in the federal funds target rate. These federal  
21 funds rate increases follow a period that began in 2008 when the FOMC, reacting to the  
22 financial upheaval and economic downturn sometimes characterized as the "Great  
23 Recession," strived to keep the federal funds rate at historically low levels to promote

1 economic recovery.

2

3 **Q. What is Ms. Ahern’s view of the Fed’s power in financial markets.**

4 A. According to Ms. Ahern, the FOMC has engineered the current low-interest  
5 environment. The anticipated federal funds rate increases signal that a period of low  
6 capital costs is ending, with the FOMC adopting policies that will “normalize” interest  
7 rates, with all capital costs following the upward movement. In such an environment,  
8 she says, the DCF model does not adequately reflect the future market conditions and  
9 understates the required ROE.

10

11 **Q. How does the DCF model accommodate expected higher future interest rates?**

12 A. As noted in the previous section about market-to-book value, the DCF model  
13 incorporates investors’ views about any expected economic event, including expected  
14 movements of interest rates, through the share prices element of the expected dividend  
15 yield. Current common-equity share prices reflect what investors think now about the  
16 effect that possible future interest-rate increases will have on the attractiveness of  
17 various investments. As the earlier discussion of my updated DCF ROE analyses  
18 demonstrated, when investors have “baked in” the effect of expected interest rate  
19 increase, there is little change in DCF ROE outcomes.

20

21 **Q. Is this reflection of investors’ current thinking about interest-rate movements a  
22 strength of the DCF model?**

23 A. Yes. The DCF model captures the anticipated effect of economic events that investors

1 truly expect are coming. If there is uncertainty about future interest-rate levels,  
2 including their timing and frequency, the common-equity share prices also reflect that  
3 uncertainty. There is no need for an analyst to predict what the future holds and  
4 recommend adjustments to an ROE outcome.

5  
6 **Q. Do the current economic conditions of historically low interest rates and the Fed's**  
7 **role in establishing them provide any reason to doubt the effectiveness of the DCF**  
8 **model?**

9 A. No. Whether interest rates are historically low, historically high, or at a historically  
10 moderate level, the DCF model reflects what investors believe about future economic  
11 events. Moreover, although Ms. Ahern states that the Fed is a market-mover with great  
12 power to influence the prices of bond and common-stock securities, as evidenced by its  
13 ability to hold the federal funds rate at a range of 0.00-0.25 percent for several years,  
14 expected higher interest rates will not change that status. The Fed is always a market-  
15 mover. In monetary systems with central banks, such as the Fed, the central bank is the  
16 dominant participant. If interest rates are expected to rise, the Fed's effect on market  
17 interest rates will be as strong as ever. The rising rates do not signal that the Fed will no  
18 longer be the dominant force in the capital markets.

19  
20 **IV. CRITIQUE OF MS. AHERN'S TESTIMONY**

21 **Q. Are there issues regarding Ms. Ahern's ROE analysis that you want to address?**

22 A. Yes. I will critique Ms. Ahern's:

- 23 1. calculation of a risk-free interest rate that is an input in many of her analyses;
- 24 2. use of historical inputs rather than forward-looking inputs;

- 1           3. her credit-risk and business-risk adjustments to her ROE;
- 2           4. her comparable-risk analysis; and
- 3           5. her DCF and CAPM ROEs.

4

5       **1. Risk-Free Interest Rate of Return**

6       **Q. Please discuss the risk-free interest of return that Ms. Ahern develops.**

7       A. Ms. Ahern relies on *Blue Chip Financial Forecasts (Blue Chip)* to develop her risk-free

8           rate for her CAPM analysis. See Ahern Appendix B, pdf page 20 of 28, and PMA-15,

9           page 2 of 2. Using the forecasts of the 30-year Treasury rates for the six quarters

10           running from 2017Q1 to 2018Q2, plus the forecasts for the five-year periods 2018-2022

11           and 2023-2027, Ms. Ahern calculates an average interest rate of 3.65 percent.<sup>5</sup>

12

13       **Q. Please discuss Ms. Ahern's use of *Blue Chip* to forecast interest rates.**

14       A. I did an Internet search for testimony filed by Ms. Ahern in which she used *Blue Chip*

15           interest-rate forecasts. I downloaded seven cases<sup>6</sup> and analyzed *Blue Chip's* forecasts

16           for 30-year Treasuries. See Exhibit MFG-21, Schedule 1, pages 1-17. I also calculated

17           the actual interest rates for 30-year Treasuries for each forecasted quarter in the periods

18           covered by the forecasts. See Exhibit MFG-21, Schedules 2-6.

19

20       **Q. Please summarize the forecasts for the seven cases.**

21       A. For the first three cases, Ms. Ahern used only the six quarters to calculate an average

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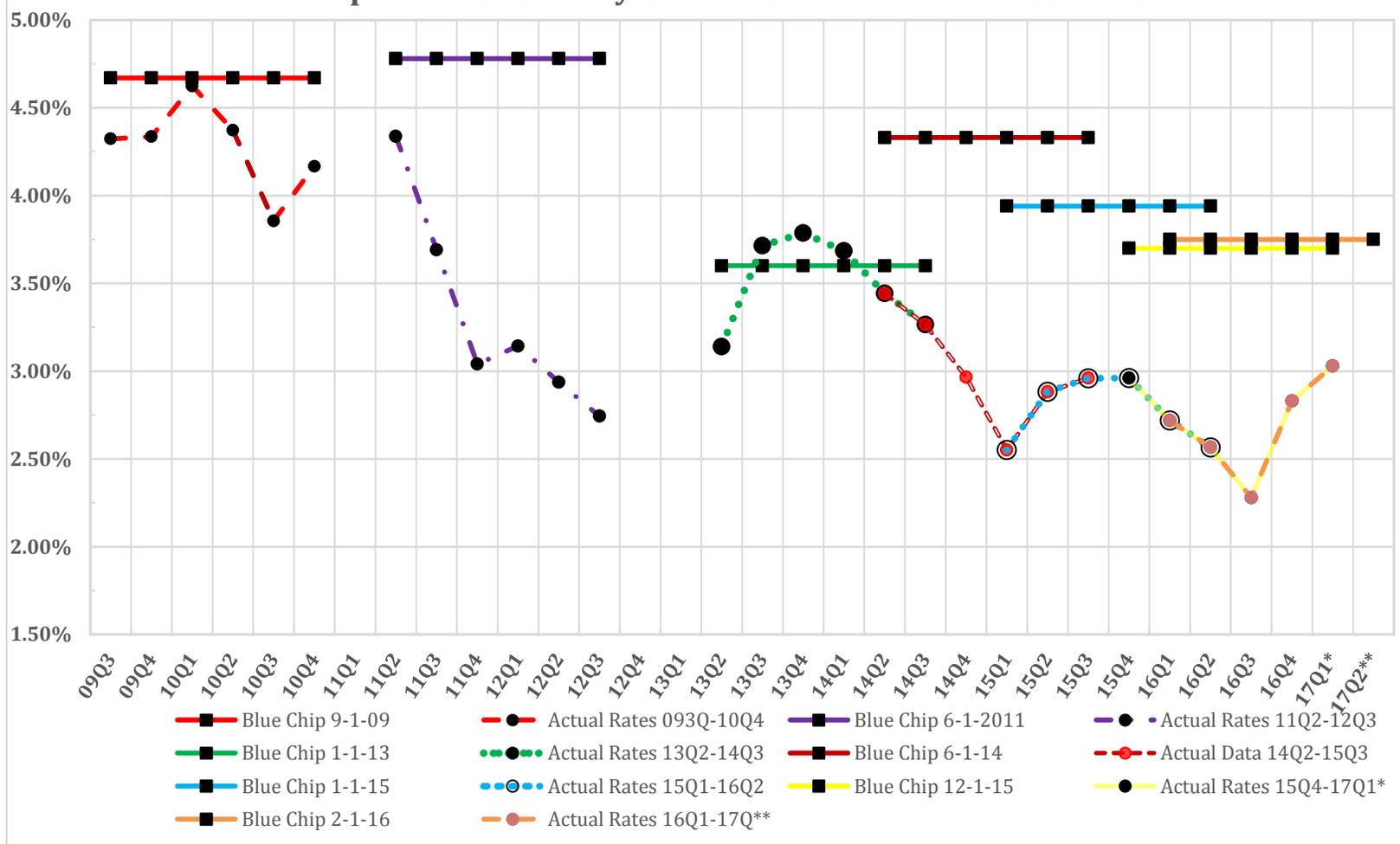
<sup>5</sup> The discussion in Appendix B states that the rate is 3.68 percent, but that is likely a typographical error. The calculation in PMA-15, page 2 of 2 states that the rate is 3.65 percent and a calculation check bears out that result.

<sup>6</sup> I make no representation that the seven cases are comprehensive or representative of Ms. Ahern's use of *Blue Chip*. The cases were readily accessible and are drawn from 2009-2016, providing a sampling of *Blue Chip's* record over time.

1 forecasted interest rate for 30-year Treasuries. Thereafter, she added two five-year  
2 periods following the six quarters to the values that she averaged. I have inserted  
3 Exhibit MFG-21, Schedule 6 on the next page. This chart shows the seven forecasted  
4 interest rates and the actual interest rates for the quarters. Some of the actual interest-  
5 rate periods overlap.

6

### Blue Chip 30-Year Treasury Interest-Rate Forecasts vs. Actual Interest Rates



1  
2  
3

Exhibit MFG-21, Schedule 6

**Q. Please discuss *Blue Chip*'s record in forecasting interest rates.**

A. *Blue Chip*'s average forecasted interest rate for 30-year Treasuries has been as high as 4.78 percent (2011Q2-2012Q3) and as low as 3.60 percent (2013Q2-2014Q3) in the seven cases. In every case, the forecasted interest rates exceeded the average of the actual interest rates. In only one case did an actual interest rate top the forecasted value for an individual quarter. The individual actual percentages for 2013Q3-2014Q1 were higher than the forecasted average of 3.60 percent, even then, the actual average for all six quarters in the period was lower than the forecasted average. See Exhibit MFG-21, Schedules 2, 5 and 6.

**Q. Why is it important to consider the *Blue-Chip* forecasting record?**

A. The record shows that Ms. Ahern's *Blue Chip*-based forecasts have consistently overestimated ensuing actual interest. If her *Blue-Chip* forecast is used to set the risk-free rate of return in this docket, it likely will result in another overstatement of that rate.

**Q. What interest rate does Ms. Ahern use for her risk-free rate of return?**

A. As noted, Ms. Ahern uses the 3.65 percent forecasted average as her risk-free rate of return. In contrast, I relied on the average interest rate of 3.04 percent for 30-year Treasuries over the 24 trading days from January 23, 2017-February 24, 2017 for my risk-free rate. The difference of 61 basis points increases Ms.

Ahern's results for her analyses that have risk-free rate as an input.<sup>7</sup>

**Q. Please discuss your risk-free rate.**

A. I use the average interest rate over a short, recent period to dampen the effect of any anomalous rates, much as I use the average of a short, recent period to dampen the effect of any anomalous share prices as I developed my share-price input for my ROE analysis. These interest rates reflect investors' view of the effect that future economic events, including expected higher future interest rates, have on the attractiveness of 30-year Treasuries. Thus, although my risk-free rate is not a prediction of future interest rates, it is forward-looking in that it captures the effects on interest rates of expected economic events.

**Q. Is there any need to forecast future interest rates to develop a risk-free rate?**

A. There is no need to correct for expected interest rate increases by using a predicted interest rate such as Ms. Ahern has done with her risk-free interest rate. *Blue Chip's* record as a predictor of interest rates as shown in Exhibit MFG-21, Schedule 2 shows the danger of using predicted interest rates. In all seven cases covered, the predicted interest rate exceeded the actual interest rate. In five of the seven cases, the margin fell between 0.97 percent and 1.46 percent. The shortfall was 0.09 percent and 0.39 percent in the other two cases. Thus, relying on an inaccurate predictor overstated the result, an unnecessary

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<sup>7</sup> As noted in the CAPM ROE updates, the average yield on 30-year Treasuries also was 3.04 percent for the 24 trading days from January 30, 2017-March 3, 2017. I also developed a risk-free interest rate of 3.08 percent using only the daily yield for March 3, 2017. This rate is 57 basis points less than Ms. Ahern's rate.

outcome.

**Q. Does Ms. Ahern use other *Blue-Chip* forecasts in her ROE analyses?**

A. Yes. Ms. Ahern uses *Blue-Chip* forecasts for Moody's Aaa-Rated Corporate bonds.

**Q. Which of Ms. Ahern's ROE models rely on inputs from her *Blue-Chip* forecasts?**

A. Ms. Ahern uses *Blue-Chip* forecasts for inputs to her:

- Adjusted total-market risk-premium model (RPM)
- CAPM analysis

These analyses, therefore, overstate the SWAH ROE.

## **2. Historical Inputs**

**Q. Does Ms. Ahern use historical data as inputs for some of her ROE analyses?**

A. Yes. Several of her CAPM and risk-premium analyses use historical data. These analyses are, therefore, flawed because they are not forward-looking.

**Q. Please identify the analyses that use historical data?**

A. Ms. Ahern's analyses that use historical data are:

- Predictive Risk Premium Model (PRPM)
- Total-Market RPM (three of five risk-premium estimates)

These analyses, therefore, are not forward-looking. They reflect long-term historical averages rather than investors' recent views regarding possible investments.

### **3. Credit-Risk and Business-Risk Adjustments**

**Q. Please discuss the upward adjustment of 9 basis points made by Ms. Ahern to her initial ROE of 10.00 percent for credit risk.**

A. Ms. Ahern adjusts the 10.00 percent outcome of her ROE analysis upward by 9 basis points to account for credit risk. Her justification is that SWR's S&P credit rating is A-, while the average S&P credit rating of the members of her proxy group is A.

**Q. Please comment.**

A. In general, a higher S&P credit rating does indicate less risk. Small differences in applying credit-rating criteria can result in different ratings, but not be indicative of significant risk differences. The range of two notches (A+ to A-) for companies in the Comparison Group indicates the companies are similar in risk. Therefore, no adjustment is warranted.

**Q. Please discuss the upward adjustment of 75 basis points made by Ms.**

**Ahern to her initial ROE of 10.00 percent for business risk.**

- A. Ms. Ahern states that SWAH faces greater business risk because of its small size compared with the size of the Comparison Group companies.

**Q. Is the 75-basis point adjustment for business risk justified?**

- A. No. There are two reasons the adjustment is not warranted. One is that SWAH is not a standalone water/wastewater utility and is not small. The other is that SWAH is a monopoly and risks for monopolies are not tied to the same factors as they are firms in competitive industries.

**Q. Does SWAH deserve an adjustment for its size relative to members of the Revised Comparison Group?**

- A. No. The size of operating companies within large utility holding companies is misleading as to their ability to operate efficiently. SWAH's revenues or system capacity may be smaller than those measures for the Comparison Group member companies, but this approach to size overlooks the fact that the Company benefits from being part of SWR. As I showed in my Direct Testimony, SWAH has access to cost efficiencies not associated with a firm its size because many of its business functions are part of the larger SWR's centralized operations. SWAH also receives all of its financing from SWR. Thus, given how tightly SWAH is integrated into SWR, the latter is the better unit to use in a comparison with Comparison Group companies.

**Q. Please compare SWR's estimated market capitalization with the average market capitalization of the Comparison Group.**

A. SWAH does not issue common equity shares. Therefore, Ms. Ahern compares SWAH's estimated market capitalization with that of the Comparison Group companies. She begins with a total common equity value for SWAH that is part of an annual report to the Board. She calculates that the Comparison Group companies' average market capitalization is 393.8 times as large as SWAH's. See Exhibit PRT-2 PMA-18, pages 1-2. Using techniques similar to those employed by Ms. Ahern, I estimated that SWR has a total common equity of \$1,015,666,485.<sup>8</sup> Multiplying this amount by the average market-to-book ratio of 3.03 calculated by Ms. Ahern, I estimate SWR's market capitalization to be \$3.077 billion. This value is close to the value of \$3.051 billion that Ms. Ahern found to be the average market capitalization for Comparison Group companies. Therefore, there is no difference in business risk based on size for SWR and SWAH with regard to the Comparison Group.

**Q. Please discuss why being a monopoly regulated utility reduces SWAH's business risk.**

A. The size of a firm can reduce its risk as it faces ebbs and flows in demand for its product. Monopolies are not immune to demand declines due to shifts in the business cycle, but the variations are less than they are for typical firms who

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<sup>8</sup> See Exhibit MFG-10, page 2. December 15, 2015 Total Capitalization of \$1,880,785,997.77 minus Long-Term Debt of \$865,119,513.09 equals \$1,015,666,484.68.

may have to lower prices to maintain sales. Thus, an adjustment for business risk is not justified for a regulated utility.

#### **4. Comparable-Risk Analysis**

**Q. Please comment on Ms. Ahern's Comparable Risk analysis.**

A. Ms. Ahern selects a group of non-price regulated companies to which she applies DCF, risk-premium model, and CAPM analysis. The parameters she uses to select the companies are unadjusted beta values and the standard errors of the regressions used to develop the beta values. She then applies the results of her ROE analyses for these companies in ROE analysis for SWAH.

**Q. Is there an alternative criterion for finding comparable risk?**

A. Yes. Credit ratings reflect the risk of companies and can be used, as I did, to find companies of similar risk. The range of S&P credit ratings within Ms. Ahern's non-price regulated companies is decidedly greater than is the range of S&P credit ratings within the Comparison Group. Three of her 15 companies do not have S&P ratings, while others have ratings as high as AA and as low as BBB-. Such a wide range calls into question whether the companies are of comparable risk with the Comparison Group companies, whose ratings fall between A+ and A-.

#### **5. DCF and CAPM ROEs**

**Q. Please compare Ms. Ahern's DCF ROE analysis with yours.**

A. We have the same eight companies in our proxy groups and make the same adjustments to dividend yield to account for growth through the year. She adds forecasts from Reuters to her growth-rate analysis, but also includes forecasts from the three sources that I use.

**Q. Please identify Ms. Ahern's DCF analysis ROE.**

A. Ms. Ahern's DCF ROE is 8.47 percent. This value is the average of the mean ROE and median ROE for the Water Proxy Group. Her mean ROE of 8.66 percent exceeds my recommended ROE by 1 basis point.

**Q. Please compare Ms. Ahern's CAPM ROE analysis with yours.**

A. Regarding CAPM analysis, I have noted previously that Ms. Ahern's risk-free rate of return is 3.65 percent, while mine is 3.04 percent. As for the market risk premium (MRP), Ms. Ahern uses five methods, then averages the results, while I use a Value Line DCF approach to calculate my MRP. Three of her five methods use historical data inputs, while a fourth relies on expected dividend yields and long-term growth forecasts for S&P 500 companies. Ms. Ahern does not show the growth rates used in the fourth analysis, which are from Bloomberg Professional Service, a subscription site.

**Q. Please discuss Ms. Ahern's CAPM analysis ROE.**

A. When the three historical input methods and the S&P 500-based method are removed, Ms. Ahern's remaining CAPM market risk premium analysis is

similar to the Value Line analysis that I use. Her total projected return on the market is somewhat higher than mine, due to her capital appreciation and expected dividend yield values being modestly higher than mine. The CAPM ROE using her inputs is 7.69 percent, including the risk-free rate of 3.65 percent, and 7.52 percent if the risk-free rate is my 3.04 percent, both close to my CAPM ROE of 7.16 percent and below my DCF ROE. It is worth noting that both Ms. Ahern's DCF and CAPM results are below the 9.60 percent ROEs recently authorized by the BPU. Ms. Ahern is only able to exceed this 9.60 percent ROE by using her adders.

## **V. SUMMARY**

**Q. What is your recommended return on equity and overall cost of capital for SWAH?**

A. I recommend an ROE of 8.65 percent, within the zone of reasonableness of 7.14 percent to 10.17 percent, and an ROR of 7.02 percent. The ROR is based on a recommended capital structure of 47 percent long-term debt (at a cost of 5.19 percent) and 53 percent common equity.

**Q. Does this conclude your testimony?**

A. Yes.

**EXHIBIT MFG-15 THROUGH MFG-23**

**ROE and ROR Analysis for SUEZ Water Arlington Hills  
Comparison Group**

**Docket No. WR16060510  
Exhibit MFG-15**

**Dividends**

<b>Name</b>	<b>Value Line</b>	<b>Zacks</b>
American States Water	\$ 0.97	\$ 0.97
American Water Works	\$ 1.50	\$ 1.50
Aqua America	\$ 0.77	\$ 0.77
California Water	\$ 0.69	\$ 0.72
Connecticut Water Services	\$ 1.13	\$ 1.13
Middlesex Water	\$ 0.85	\$ 0.85
SJW	\$ 0.81	\$ 0.87
York Water	\$ 0.64	\$ 0.64

Value Line dividends taken from January 13, 2017 survey reports.

Zacks dividends taken from website on February 28, 2017.

**Credit Rating**

<b>Name</b>	<b>S&amp;P Credit Rating</b>
American States Water	A+
American Water Works	A
Aqua America	A+
California Water	A+
Connecticut Water Services	A
Middlesex Water	A
SJW	A
York Water	A-
SUEZ Water Reasources	A-

## ***Set to Lift Interest Rate, Fed Embraces Investors' Optimism***

By **BINYAMIN APPELBAUM** MARCH 3, 2017, New York Times

The [Federal Reserve](#) is poised to raise its benchmark interest rate in mid-March, significantly sooner than investors had expected, as it moves to keep pace with a wave of economic optimism that started with the election of President Trump.

In an unusually clear statement about a pending decision, the Fed chairwoman, Janet L. Yellen, [said on Friday in Chicago](#) that the central bank was likely to act at its next policy-making meeting — barring any unpleasant economic surprises.

Ms. Yellen added that the Fed still expected to raise rates twice more later in the year, which she said would bring the benchmark rate close to a level that the Fed regards as neutral, with low rates no longer providing an inducement for borrowing and risk-taking. That outlook signals that an end is finally in sight for the Fed's economic stimulus campaign, devised during the depths of the financial crisis more than eight years ago.

Stanley Fischer, the Fed's vice chairman, delivered the same message at the same time at a conference in New York. "We've seen a lot of substantial change in a relatively short time," Mr. Fischer said of the postelection shift in economic conditions. "There is almost no economic indicator that has come in badly in the last three months."

Asked whether Fed officials were delivering a coordinated message, Mr. Fischer responded wryly, "If there has been a conscious effort, I'm about to join it."

The impending rate increase could heighten tensions with the White House, which wants to stimulate growth by cutting taxes, reducing regulation and increasing defense and infrastructure spending. Fed officials have concluded the economy is already growing at something close to the maximum sustainable pace, meaning faster growth should be offset by faster rate increases.

Financial markets, however, are taking the prospect of higher rates in stride. The Standard & Poor's 500-stock index, which is up more than 11 percent since Election Day, ended trading on Friday mostly flat.

The prospective Fed move has modest short-term implications for consumers. Interest rates on car loans and some kinds of credit card debt will tick upward, but remain at low levels by historical standards. Rates on 30-year mortgages are up by about half a percentage point over the past year.

The broader consequences depend on the Fed's ability to raise interest rates without slowing economic growth. The Fed's goal is to return rates to a level that neither encourages nor impedes economic activity. Over the past century, however, most of the central bank's attempts to strike that balance have ended in economic recessions.

The American economy is in the midst of one of the longest expansions in the nation's history, but it is also one of the weakest. The economy expanded by 1.6 percent in 2016, compared with 2.6 percent in 2015, [according to the government's most recent estimate](#).

Fed officials have concluded, however, that monetary policy cannot deliver faster growth. The Fed's job is to minimize unemployment and moderate inflation. The unemployment rate, at 4.8 percent in January, is in a range Fed officials regard as healthy, and prices rose 1.9 percent in the 12 months ending in January, the closest the Fed has come since 2012 to hitting its target of 2 percent annual inflation.

In December, the Fed [raised its benchmark rate](#) for just the second time since the financial crisis, to a range of 0.5 percent to 0.75 percent, and predicted three increases in 2017.

At the beginning of the week, however, Wall Street analysts and investors did not expect the Fed to raise rates again any earlier than June. The Fed issued a measured statement after

its [policy meeting](#) in early February, and the meeting minutes, published three weeks later, conveyed little sense of urgency.

Now, after a week of discussions, analysts regard a March increase as highly likely.

Michael Feroli, the chief United States economist at JPMorgan Chase, described the shift in Fed language as “remarkably swift and decisive.” Investors put the chances at almost 80 percent in trading on Friday, according to an analysis of asset prices by [CME Group](#).

Some Fed officials appear particularly focused on the rise of the stock market. William C. Dudley, the president of the Federal Reserve Bank of New York, who described markets as “very buoyant” on Tuesday, has said in the past that if markets did not respond to rate increases, the Fed might need to act more forcefully to tighten financial conditions.

It is also getting harder to dismiss the market’s reaction to Mr. Trump’s victory as a bout of temporary euphoria. Mr. Fischer noted on Friday that the stock market boom was creating wealth that people would begin to spend.

Ms. Yellen pointed to an improvement in the global context. “The prospects for further moderate economic growth look encouraging, particularly as risks emanating from abroad appear to have receded somewhat,” she said.

The shift in the Fed’s language over the last week also may reflect a recognition that market expectations were not keeping pace with the Fed’s evolving view of the economy. Ms. Yellen, in a February appearance before Congress, hinted that the Fed might be providing a little too much stimulus, describing the Fed’s policy as “accommodative.” But at the start of this week, investors still put a low probability on a March increase.

Markets are wary of the Fed’s flirtations with interest rate increases, as the central bank in recent years has often found reasons for last-minute postponements.

This time, the Fed chose to overwhelm any lingering doubts.

On Tuesday, Mr. Dudley [told CNBC](#) that the case for a rate increase “has become a lot more compelling.”

On Wednesday, Lael Brainard, a Fed governor who has been one of the most consistent supporters of raising interest rates slowly, [suggested](#) that she too was ready to act.

“We are closing in on full employment, inflation is moving gradually toward our target, foreign growth is on more solid footing, and risks to the outlook are as close to balanced as they have been in some time,” Ms. Brainard said at Harvard’s Kennedy School of Government. “Assuming continued progress, it will likely be appropriate soon to remove additional accommodation, continuing on a gradual path.”

Fed officials often bury their latest views on monetary policy at the end of their speeches. Ms. Brainard’s remarks came at the beginning, so that no one missed the point.

On Thursday, another Fed governor, Jerome H. Powell, issued a similarly blunt notice of intent in [an interview](#) with CNBC. “I think the case for a rate increase for March has come together, and I think it’s on the table for discussion,” he said.

Then came Friday, the last day on which Fed rules allowed officials to comment on monetary policy before the March meeting, and Ms. Yellen delivered the last word.

“At our meeting later this month,” she said, “the committee will evaluate whether employment and inflation are continuing to evolve in line with our expectations, in which case a further adjustment of the federal funds rate would likely be appropriate.”

The committee is scheduled to meet in Washington on March 14 and 15.

ROE and ROR Analysis for SUEZ Water Arlington Hills

Docket No. WR16060510

Comparison Group

Exhibit MFG-17, page 1 of 4

Common Equity Share Price Means

Source: Yahoo Finance, February 24, 2017

Closing Prices on Trading Days January 23-February 24, 2017

American States Water (AWR)		American Water Works (AWK)		Aqua America (WTR)		California Water (CWT)	
Date	Close	Date	Close	Date	Close	Date	Close
02/24/17	\$ 44.89	02/24/17	\$ 76.30	02/24/17	\$ 31.04	02/24/17	\$ 37.00
02/23/17	\$ 44.90	02/23/17	\$ 75.57	02/23/17	\$ 30.73	02/23/17	\$ 37.60
02/22/17	\$ 44.42	02/22/17	\$ 74.92	02/22/17	\$ 30.47	02/22/17	\$ 35.50
02/21/17	\$ 44.54	02/21/17	\$ 74.38	02/21/17	\$ 30.38	02/21/17	\$ 35.55
02/17/17	\$ 44.20	02/17/17	\$ 73.81	02/17/17	\$ 30.23	02/17/17	\$ 34.90
02/16/17	\$ 43.81	02/16/17	\$ 73.44	02/16/17	\$ 30.10	02/16/17	\$ 34.60
02/15/17	\$ 43.91	02/15/17	\$ 73.01	02/15/17	\$ 29.89	02/15/17	\$ 34.75
02/14/17	\$ 43.49	02/14/17	\$ 72.81	02/14/17	\$ 29.84	02/14/17	\$ 34.45
02/13/17	\$ 44.05	02/13/17	\$ 73.22	02/13/17	\$ 30.12	02/13/17	\$ 35.00
02/10/17	\$ 44.48	02/10/17	\$ 73.46	02/10/17	\$ 30.36	02/10/17	\$ 34.65
02/09/17	\$ 43.96	02/09/17	\$ 72.85	02/09/17	\$ 30.10	02/09/17	\$ 34.15
02/08/17	\$ 43.88	02/08/17	\$ 72.93	02/08/17	\$ 30.11	02/08/17	\$ 33.85
02/07/17	\$ 43.57	02/07/17	\$ 72.09	02/07/17	\$ 29.94	02/07/17	\$ 33.80
02/06/17	\$ 43.78	02/06/17	\$ 72.09	02/06/17	\$ 29.86	02/06/17	\$ 33.75
02/03/17	\$ 44.09	02/03/17	\$ 72.41	02/03/17	\$ 30.05	02/03/17	\$ 34.00
02/02/17	\$ 44.24	02/02/17	\$ 72.99	02/02/17	\$ 29.84	02/02/17	\$ 33.90
02/01/17	\$ 42.74	02/01/17	\$ 71.80	02/01/17	\$ 29.62	02/01/17	\$ 33.65
01/31/17	\$ 43.78	01/31/17	\$ 73.44	01/31/17	\$ 30.41	01/31/17	\$ 34.50
01/30/17	\$ 43.20	01/30/17	\$ 71.91	01/30/17	\$ 29.87	01/30/17	\$ 33.95
01/27/17	\$ 43.84	01/27/17	\$ 72.31	01/27/17	\$ 30.12	01/27/17	\$ 34.75
01/26/17	\$ 44.10	01/26/17	\$ 72.19	01/26/17	\$ 30.14	01/26/17	\$ 34.85
01/25/17	\$ 44.25	01/25/17	\$ 71.72	01/25/17	\$ 30.06	01/25/17	\$ 35.10
01/24/17	\$ 43.59	01/24/17	\$ 71.91	01/24/17	\$ 29.57	01/24/17	\$ 34.05
01/23/17	\$ 42.68	01/23/17	\$ 71.77	01/23/17	\$ 29.54	01/23/17	\$ 33.55
	\$ 43.93		\$ 73.06		\$ 30.10		\$ 34.66

**ROE and ROR Analysis for SUEZ Water Arlington Hills**

**Comparison Group**

**Common Equity Share Price Means**

**Source: Yahoo Finance, February 24, 2017**

**Closing Prices on Trading Days January 23-February 24, 2017**

**Docket No. WR16060510**

**Exhibit MFG-17, page 2 of 4**

Connecticut Water Serv, (CTWS)		Middlesex Water (MSEX)		SJW Corp.(SJW)		York Water Co. (YORW)	
Date	Close	Date	Close	Date	Close	Date	Close
02/24/17	\$ 55.84	02/24/17	\$ 37.28	02/24/17	\$ 48.31	02/24/17	\$ 36.50
02/23/17	\$ 56.09	02/23/17	\$ 37.48	02/23/17	\$ 47.79	02/23/17	\$ 36.65
02/22/17	\$ 54.60	02/22/17	\$ 36.95	02/22/17	\$ 48.84	02/22/17	\$ 35.85
02/21/17	\$ 54.04	02/21/17	\$ 36.19	02/21/17	\$ 48.73	02/21/17	\$ 35.15
02/17/17	\$ 53.96	02/17/17	\$ 35.50	02/17/17	\$ 48.65	02/17/17	\$ 34.85
02/16/17	\$ 53.79	02/16/17	\$ 36.20	02/16/17	\$ 49.16	02/16/17	\$ 34.85
02/15/17	\$ 53.30	02/15/17	\$ 35.84	02/15/17	\$ 49.25	02/15/17	\$ 35.00
02/14/17	\$ 53.19	02/14/17	\$ 35.61	02/14/17	\$ 49.22	02/14/17	\$ 34.50
02/13/17	\$ 53.46	02/13/17	\$ 36.37	02/13/17	\$ 49.53	02/13/17	\$ 34.90
02/10/17	\$ 53.28	02/10/17	\$ 36.26	02/10/17	\$ 49.41	02/10/17	\$ 34.45
02/09/17	\$ 52.90	02/09/17	\$ 35.33	02/09/17	\$ 48.67	02/09/17	\$ 33.90
02/08/17	\$ 52.58	02/08/17	\$ 35.63	02/08/17	\$ 48.74	02/08/17	\$ 33.65
02/07/17	\$ 52.90	02/07/17	\$ 35.59	02/07/17	\$ 49.15	02/07/17	\$ 34.30
02/06/17	\$ 52.56	02/06/17	\$ 35.99	02/06/17	\$ 49.41	02/06/17	\$ 34.25
02/03/17	\$ 52.96	02/03/17	\$ 36.59	02/03/17	\$ 50.65	02/03/17	\$ 34.80
02/02/17	\$ 52.96	02/02/17	\$ 36.86	02/02/17	\$ 49.43	02/02/17	\$ 34.85
02/01/17	\$ 53.07	02/01/17	\$ 36.59	02/01/17	\$ 49.27	02/01/17	\$ 34.75
01/31/17	\$ 54.04	01/31/17	\$ 37.81	01/31/17	\$ 50.10	01/31/17	\$ 35.80
01/30/17	\$ 53.20	01/30/17	\$ 37.30	01/30/17	\$ 49.19	01/30/17	\$ 35.40
01/27/17	\$ 54.80	01/27/17	\$ 38.98	01/27/17	\$ 50.28	01/27/17	\$ 36.85
01/26/17	\$ 55.55	01/26/17	\$ 39.24	01/26/17	\$ 51.43	01/26/17	\$ 37.65
01/25/17	\$ 55.55	01/25/17	\$ 39.58	01/25/17	\$ 51.79	01/25/17	\$ 37.40
01/24/17	\$ 54.78	01/24/17	\$ 38.64	01/24/17	\$ 51.11	01/24/17	\$ 37.25
01/23/17	\$ 54.01	01/23/17	\$ 38.72	01/23/17	\$ 49.53	01/23/17	\$ 36.20
	\$ 53.89		\$ 36.94		\$ 49.49		\$ 35.41

**ROE and ROR Analysis for SUEZ Water Arlington Hills**

**Comparison Group**

**Common Equity Share Price Means**

Source: Yahoo Finance, March 5, 2017

Closing Prices on Trading Days January 30-March 3, 2017

Docket No. WR16060510

Exhibit MFG-17, page 3 of 4

American States Water (AWR)		American Water Works (AWK)		Aqua America (WTR)		California Water (CWT)	
Date	Close	Date	Close	Date	Close	Date	Close
03/03/17	\$ 43.88	03/03/17	\$ 77.34	03/03/17	\$ 31.65	03/03/17	\$ 37.00
03/02/17	\$ 44.84	03/02/17	\$ 77.84	03/02/17	\$ 32.01	03/02/17	\$ 37.60
03/01/17	\$ 44.89	03/01/17	\$ 77.66	03/01/17	\$ 31.68	03/01/17	\$ 35.50
02/28/17	\$ 44.72	02/28/17	\$ 78.00	02/28/17	\$ 31.74	02/28/17	\$ 35.55
02/24/17	\$ 44.48	02/24/17	\$ 76.45	02/24/17	\$ 31.37	02/24/17	\$ 34.90
02/23/17	\$ 44.89	02/23/17	\$ 76.30	02/23/17	\$ 31.04	02/23/17	\$ 34.60
02/22/17	\$ 44.90	02/22/17	\$ 75.57	02/22/17	\$ 30.73	02/22/17	\$ 34.75
02/21/17	\$ 44.42	02/21/17	\$ 74.92	02/21/17	\$ 30.47	02/21/17	\$ 34.45
02/20/17	\$ 44.54	02/20/17	\$ 74.38	02/20/17	\$ 30.38	02/20/17	\$ 35.00
02/17/17	\$ 44.20	02/17/17	\$ 73.81	02/17/17	\$ 30.23	02/17/17	\$ 34.65
02/16/17	\$ 43.81	02/16/17	\$ 73.44	02/16/17	\$ 30.10	02/16/17	\$ 34.15
02/15/17	\$ 43.91	02/15/17	\$ 73.01	02/15/17	\$ 29.89	02/15/17	\$ 33.85
02/14/17	\$ 43.49	02/14/17	\$ 72.81	02/14/17	\$ 29.84	02/14/17	\$ 33.80
02/13/17	\$ 44.05	02/13/17	\$ 73.22	02/13/17	\$ 30.12	02/13/17	\$ 33.75
02/10/17	\$ 44.48	02/10/17	\$ 73.46	02/10/17	\$ 30.36	02/10/17	\$ 34.00
02/09/17	\$ 43.96	02/09/17	\$ 72.85	02/09/17	\$ 30.10	02/09/17	\$ 33.90
02/08/17	\$ 43.88	02/08/17	\$ 72.93	02/08/17	\$ 30.11	02/08/17	\$ 33.65
02/07/17	\$ 43.57	02/07/17	\$ 72.09	02/07/17	\$ 29.94	02/07/17	\$ 34.50
02/06/17	\$ 43.78	02/06/17	\$ 72.09	02/06/17	\$ 29.86	02/06/17	\$ 33.95
02/03/17	\$ 44.09	02/03/17	\$ 72.41	02/03/17	\$ 30.05	02/03/17	\$ 34.75
02/02/17	\$ 44.24	02/02/17	\$ 72.99	02/02/17	\$ 29.84	02/02/17	\$ 34.85
02/01/17	\$ 42.74	02/01/17	\$ 71.80	02/01/17	\$ 29.62	02/01/17	\$ 35.10
01/31/17	\$ 43.78	01/31/17	\$ 73.44	01/31/17	\$ 30.41	01/31/17	\$ 34.05
01/30/17	\$ 43.20	01/30/17	\$ 71.91	01/30/17	\$ 29.87	01/30/17	\$ 33.55
	\$ 44.11		\$ 74.20		\$ 30.48		\$ 34.66

**ROE and ROR Analysis for SUEZ Water Arlington Hills**

**Comparison Group**

**Common Equity Share Price Means**

**Source: Yahoo Finance, March 5, 2017**

**Closing Prices on Trading Days January 30-March 3, 2017**

**Docket No. WR16060510**

**Exhibit MFG-17, page 4 of 4**

Connecticut Water Serv, (CTWS)		Middlesex Water (MSEX)		SJW Corp.(SJW)		York Water Co. (YORW)	
Date	Close	Date	Close	Date	Close	Date	Close
03/03/17	\$ 55.84	03/03/17	\$ 37.90	03/03/17	\$ 48.37	03/03/17	\$ 36.05
03/02/17	\$ 56.09	03/02/17	\$ 38.57	03/02/17	\$ 50.26	03/02/17	\$ 36.80
03/01/17	\$ 54.60	03/01/17	\$ 38.38	03/01/17	\$ 49.06	03/01/17	\$ 36.80
02/28/17	\$ 54.04	02/28/17	\$ 37.65	02/28/17	\$ 48.53	02/28/17	\$ 36.00
02/24/17	\$ 53.96	02/24/17	\$ 37.59	02/24/17	\$ 47.78	02/24/17	\$ 36.35
02/23/17	\$ 53.79	02/23/17	\$ 37.28	02/23/17	\$ 48.31	02/23/17	\$ 36.50
02/22/17	\$ 53.30	02/22/17	\$ 37.48	02/22/17	\$ 47.79	02/22/17	\$ 36.65
02/21/17	\$ 53.19	02/21/17	\$ 36.95	02/21/17	\$ 48.84	02/21/17	\$ 35.85
02/20/17	\$ 53.46	02/20/17	\$ 36.19	02/20/17	\$ 48.73	02/20/17	\$ 35.15
02/17/17	\$ 53.28	02/17/17	\$ 35.50	02/17/17	\$ 48.65	02/17/17	\$ 34.85
02/16/17	\$ 52.90	02/16/17	\$ 36.20	02/16/17	\$ 49.16	02/16/17	\$ 34.85
02/15/17	\$ 52.58	02/15/17	\$ 35.84	02/15/17	\$ 49.25	02/15/17	\$ 35.00
02/14/17	\$ 52.90	02/14/17	\$ 35.61	02/14/17	\$ 49.22	02/14/17	\$ 34.50
02/13/17	\$ 52.56	02/13/17	\$ 36.37	02/13/17	\$ 49.53	02/13/17	\$ 34.90
02/10/17	\$ 52.96	02/10/17	\$ 36.26	02/10/17	\$ 49.41	02/10/17	\$ 34.45
02/09/17	\$ 52.96	02/09/17	\$ 35.33	02/09/17	\$ 48.67	02/09/17	\$ 33.90
02/08/17	\$ 53.07	02/08/17	\$ 35.63	02/08/17	\$ 48.74	02/08/17	\$ 33.65
02/07/17	\$ 54.04	02/07/17	\$ 35.59	02/07/17	\$ 49.15	02/07/17	\$ 34.30
02/06/17	\$ 53.20	02/06/17	\$ 35.99	02/06/17	\$ 49.41	02/06/17	\$ 34.25
02/03/17	\$ 54.80	02/03/17	\$ 36.59	02/03/17	\$ 50.65	02/03/17	\$ 34.80
02/02/17	\$ 55.55	02/02/17	\$ 36.86	02/02/17	\$ 49.43	02/02/17	\$ 34.85
02/01/17	\$ 55.55	02/01/17	\$ 36.59	02/01/17	\$ 49.27	02/01/17	\$ 34.75
01/31/17	\$ 54.78	01/31/17	\$ 37.81	01/31/17	\$ 50.10	01/31/17	\$ 35.80
01/30/17	\$ 54.01	01/30/17	\$ 37.30	01/30/17	\$ 49.19	01/30/17	\$ 35.40
	\$ 53.89		\$ 36.73		\$ 49.06		\$ 35.27

**ROE and ROR Analysis for SUEZ Water Arlington Hills  
Comparison Group  
Discounted Cash Flow Model Analysis  
Common Equity Share Prices--January 23, 2017-February 24, 2017  
Zacks, Yahoo! Finance, and Value Line EPS Growth-Rate  
Estimates--January-February 2017**

**Docket No. WR16060510  
Exhibit MFG-18, Schedule 1**

	A	B	C	D	E	F		
				Zacks- Yahoo! Finance- Value Line Mean Growth	Zacks-Yahoo! Finance-Value Line Low Growth Rate	Zacks-Yahoo! Finance-Value Line High Growth Rate		
Company Name	Zacks EPS Growth Rate (%)	Yahoo! Finance EPS Growth Rates (%)	Value Line EPS Growth Rates (%)	Rate (%)	Line Low Growth Rate (%)	Line High Growth Rate (%)		
American States Water	4.00%	5.05%	6.00%	5.02%	4.00%	6.00%		
American Water Works	7.39%	7.40%	8.00%	7.60%	7.39%	8.00%		
Aqua America	5.50%	5.25%	7.00%	5.92%	5.25%	7.00%		
California Water	5.00%	7.35%	7.50%	6.62%	5.00%	7.50%		
Connecticut Water Services	7.00%	5.65%	5.00%	5.88%	5.00%	7.00%		
Middlesex Water	NA	2.70%	8.50%	5.60%	2.70%	8.50%		
SJW	NA	14.00%	5.50%	9.75%	5.50%	14.00%		
York Water	NA	4.90%	6.00%	5.45%	4.90%	6.00%		
Mean	5.78%	6.54%	6.69%	6.48%	4.97%	8.00%		
	G	H	I	J	K	L	M	
	Average of Closing Prices	Annualized Dividend	Dividend Yield (Rate/Price)	Expected Dividend Yield	Mean Required Rate of Return on Equity	Low Required Rate of Return on Equity	High Required Rate of Return on Equity	
American States Water	\$ 43.93	\$ 0.97	2.20%	2.26%	7.28%	6.26%	8.26%	
American Water Works	\$ 73.06	\$ 1.50	2.05%	2.13%	9.73%	9.52%	10.13%	
Aqua America	\$ 30.10	\$ 0.77	2.54%	2.62%	8.53%	7.87%	9.62%	
California Water	\$ 34.66	\$ 0.72	2.08%	2.15%	8.76%	7.15%	9.65%	
Connecticut Water Services	\$ 53.89	\$ 1.13	2.10%	2.16%	8.04%	7.16%	9.16%	
Middlesex Water	\$ 36.94	\$ 0.85	2.29%	2.35%	7.95%	5.05%	10.85%	
SJW	\$ 49.49	\$ 0.87	1.76%	1.84%	11.59%	7.34%	15.84%	
York Water	\$ 35.41	\$ 0.64	1.81%	1.86%	7.31%	6.76%	7.86%	
Mean			2.10%	2.17%	8.65%	7.14%	10.17%	

A: Zacks website, February 28 2017.

B: Yahoo! Finance website; February 28, 2017.

C: Value Line Investment Survey; January 13, 2017.

G: Yahoo! Finance website; January 23,2017-February 24, 2017 (24 trading days). See Exhibit MFG-16, pages 1-2.

H: Higher of Value Line Investment Survey; January 13, 2017 and Zacks report, February 28, 2017. See Exhibit MFG-15.

D: (A + B + C)/3

I: G/H

J: I\*(1+(0.5\*D))

K: D + J

E: MIN(A:C)

L: E + J

F: MAX(A:C)

M: F+ J

**ROE and ROR Analysis for SUEZ Water Arlington Hills  
Comparison Group  
Discounted Cash Flow Model Analysis  
Common Equity Share Prices--January 30, 2017-March 3, 2017  
Zacks, Yahoo! Finance, and Value Line EPS Growth-Rate  
Estimates--January-February 2017**

**Docket No. WR16060510  
Exhibit MFG-18, Schedule 2**

	A	B	C	D	E	F	
				Zacks- Yahoo! Finance- Value Line Mean Growth	Zacks-Yahoo! Finance-Value Line Low Growth Rate	Zacks-Yahoo! Finance-Value Line High Growth Rate	
Company Name	Zacks EPS Growth Rate (%)	Yahoo! Finance EPS Growth Rates (%)	Value Line EPS Growth Rates (%)	Rate (%)	Line Low Growth Rate (%)	Line High Growth Rate (%)	
American States Water	4.00%	5.05%	6.00%	5.02%	4.00%	6.00%	
American Water Works	7.39%	7.40%	8.00%	7.60%	7.39%	8.00%	
Aqua America	5.50%	5.25%	7.00%	5.92%	5.25%	7.00%	
California Water	5.00%	7.35%	7.50%	6.62%	5.00%	7.50%	
Connecticut Water Services	7.00%	5.65%	5.00%	5.88%	5.00%	7.00%	
Middlesex Water	NA	2.70%	8.50%	5.60%	2.70%	8.50%	
SJW	NA	14.00%	5.50%	9.75%	5.50%	14.00%	
York Water	NA	4.90%	6.00%	5.45%	4.90%	6.00%	
Mean	5.78%	6.54%	6.69%	6.48%	4.97%	8.00%	
	G	H	I	J	K	L	M
	Average of Closing Prices	Annualized Dividend	Dividend Yield (Rate/Price)	Expected Dividend Yield	Mean Required Rate of Return on Equity	Low Required Rate of Return on Equity	High Required Rate of Return on Equity
American States Water	\$ 44.11	\$ 0.97	2.19%	2.25%	7.27%	6.25%	8.25%
American Water Works	\$ 74.20	\$ 1.50	2.02%	2.10%	9.70%	9.49%	10.10%
Aqua America	\$ 30.48	\$ 0.77	2.51%	2.59%	8.50%	7.84%	9.59%
California Water	\$ 34.66	\$ 0.72	2.08%	2.15%	8.76%	7.15%	9.65%
Connecticut Water Services	\$ 53.89	\$ 1.13	2.10%	2.16%	8.04%	7.16%	9.16%
Middlesex Water	\$ 36.73	\$ 0.85	2.30%	2.37%	7.97%	5.07%	10.87%
SJW	\$ 49.06	\$ 0.87	1.77%	1.86%	11.61%	7.36%	15.86%
York Water	\$ 35.27	\$ 0.64	1.82%	1.87%	7.32%	6.77%	7.87%
Mean			2.10%	2.17%	8.64%	7.13%	10.17%

A: Zacks website, February 28 2017.

B: Yahoo! Finance website; February 28, 2017.

C: Value Line Investment Survey; January 13, 2017.

G: Yahoo! Finance website; January 30, 2017-March 3, 2017 (24 trading days). See Exhibit MFG-16, pages 3-4.

H: Higher of Value Line Investment Survey; January 13, 2017 and Zacks report, February 28, 2017. See Exhibit MFG-15.

D:  $(A + B + C)/3$

I: G/H

J:  $I*(1+(0.5*D))$

K: D + J

E:  $\text{MIN}(A:C)$

L: E + J

F:  $\text{MAX}(A:C)$

M: F+ J

**ROE and ROR Analysis for SUEZ Water Arlington Hills  
Comparison Group  
Discounted Cash Flow Model Analysis  
Common Equity Share Prices--March 3, 2017  
Zacks, Yahoo! Finance, and Value Line EPS Growth-Rate  
Estimates--January-February 2017**

**Docket No. WR16060510  
Exhibit MFG-18, Schedule 3**

	A	B	C	D	E	F		
				Zacks- Yahoo! Finance- Value Line Mean Growth	Zacks-Yahoo! Finance-Value Line Low Growth Rate	Zacks-Yahoo! Finance-Value Line High Growth Rate		
Company Name	Zacks EPS Growth Rate (%)	Yahoo! Finance EPS Growth Rates (%)	Value Line EPS Growth Rates (%)	Rate (%)	Line Low Growth Rate (%)	Line High Growth Rate (%)		
American States Water	4.00%	5.05%	6.00%	5.02%	4.00%	6.00%		
American Water Works	7.39%	7.40%	8.00%	7.60%	7.39%	8.00%		
Aqua America	5.50%	5.25%	7.00%	5.92%	5.25%	7.00%		
California Water	5.00%	7.35%	7.50%	6.62%	5.00%	7.50%		
Connecticut Water Services	7.00%	5.65%	5.00%	5.88%	5.00%	7.00%		
Middlesex Water	NA	2.70%	8.50%	5.60%	2.70%	8.50%		
SJW	NA	14.00%	5.50%	9.75%	5.50%	14.00%		
York Water	NA	4.90%	6.00%	5.45%	4.90%	6.00%		
Mean	5.78%	6.54%	6.69%	6.48%	4.97%	8.00%		
	G	H	I	J	K	L	M	
	Average of Closing Prices	Annualized Dividend	Dividend Yield (Rate/Price)	Expected Dividend Yield	Mean Required Rate of Return on Equity	Low Required Rate of Return on Equity	High Required Rate of Return on Equity	
American States Water	\$ 43.88	\$ 0.97	2.21%	2.26%	7.28%	6.26%	8.26%	
American Water Works	\$ 77.34	\$ 1.50	1.94%	2.01%	9.61%	9.40%	10.01%	
Aqua America	\$ 31.65	\$ 0.77	2.42%	2.49%	8.41%	7.74%	9.49%	
California Water	\$ 37.00	\$ 0.72	1.95%	2.01%	8.63%	7.01%	9.51%	
Connecticut Water Services	\$ 55.84	\$ 1.13	2.02%	2.08%	7.97%	7.08%	9.08%	
Middlesex Water	\$ 37.90	\$ 0.85	2.23%	2.29%	7.89%	4.99%	10.79%	
SJW	\$ 48.37	\$ 0.87	1.80%	1.89%	11.64%	7.39%	15.89%	
York Water	\$ 36.05	\$ 0.64	1.78%	1.83%	7.28%	6.73%	7.83%	
Mean			2.04%	2.11%	8.59%	7.08%	10.11%	

A: Zacks website, February 28 2017.

B: Yahoo! Finance website; February 28, 2017.

C: Value Line Investment Survey; January 13, 2017.

G: Yahoo! Finance website; March 3, 2017 (most recent trading day). See Exhibit MFG-16, pages 3-4.

H: Higher of Value Line Investment Survey: January 13, 2017 and Zacks report, February 28, 2017. See Exhibit MFG-15.

D:  $(A + B + C)/3$

I: G/H

J:  $I*(1+(0.5*D))$

K: D + J

E: MIN(A:C)

L: E + J

F: MAX(A:C)

M: F+ J

**ROE and ROR Analysis for SUEZ Water Arlington Hills  
ROR for Comparison Group**

**Docket No. WR16060510  
Exhibit MFG-18, Schedule 4**

	Recommended			Range			
	Ratio	Cost	WACC	Low	WACC	High	WACC
<b>Long-Term Debt</b>	47.00%	5.19%	2.439%	5.19%	2.44%	5.19%	2.44%
<b>Common Equity</b>	53.00%	8.65%	4.584%	7.14%	3.78%	10.17%	5.39%
	100%						
<b>Overall Rate of Return</b>			7.02%		6.22%		7.83%

Recommended common equity cost of 8.65 percent is taken from ROE analysis in Exhibit MFG-18, Schedule 1.

The long-term debt cost and the capital structure ratios are those proposed by SUEZ Arlington Hills. They are accepted.

ROE and ROR Analysis for SUEZ Water Arlington Hills  
 CAPM Analysis  
 Risk-Free Rate Analysis

Docket No. WR16060510  
 Exhibit MFG-19, Schedule 1

Daily Treasury Yield Curve Rates

January 23, 2017-February 24, 2017

Date	1 Mo	3 Mo	6 Mo	1 Yr	2 Yr	3 Yr	5 Yr	7 Yr	10 Yr	20 Yr	30 Yr
1/23/2017	0.46	0.51	0.59	0.79	1.16	1.43	1.88	2.19	2.41	2.72	2.99
1/24/2017	0.50	0.51	0.62	0.81	1.21	1.49	1.94	2.27	2.47	2.78	3.05
1/25/2017	0.48	0.50	0.61	0.82	1.23	1.52	1.99	2.33	2.53	2.84	3.10
1/26/2017	0.49	0.51	0.62	0.82	1.21	1.49	1.95	2.30	2.51	2.82	3.08
1/27/2017	0.49	0.52	0.63	0.82	1.22	1.48	1.94	2.28	2.49	2.80	3.06
1/30/2017	0.49	0.51	0.63	0.81	1.22	1.48	1.94	2.28	2.49	2.82	3.08
1/31/2017	0.50	0.52	0.64	0.84	1.19	1.46	1.90	2.24	2.45	2.78	3.05
2/1/2017	0.50	0.51	0.65	0.83	1.22	1.49	1.93	2.27	2.48	2.80	3.08
2/2/2017	0.50	0.52	0.64	0.84	1.21	1.48	1.92	2.27	2.48	2.80	3.09
2/3/2017	0.49	0.51	0.63	0.82	1.21	1.49	1.93	2.27	2.49	2.82	3.11
2/6/2017	0.48	0.53	0.62	0.79	1.16	1.43	1.86	2.19	2.42	2.76	3.05
2/7/2017	0.51	0.53	0.63	0.80	1.16	1.43	1.85	2.17	2.40	2.74	3.02
2/8/2017	0.52	0.54	0.63	0.79	1.15	1.40	1.81	2.14	2.34	2.68	2.96
2/9/2017	0.51	0.54	0.64	0.80	1.20	1.46	1.88	2.20	2.40	2.74	3.02
2/10/2017	0.51	0.55	0.64	0.81	1.20	1.47	1.89	2.22	2.41	2.75	3.01
2/13/2017	0.50	0.52	0.63	0.82	1.20	1.48	1.92	2.24	2.43	2.77	3.03
2/14/2017	0.51	0.54	0.66	0.84	1.25	1.53	1.98	2.29	2.47	2.81	3.07
2/15/2017	0.53	0.54	0.67	0.86	1.27	1.57	2.01	2.33	2.51	2.84	3.09
2/16/2017	0.51	0.53	0.66	0.82	1.22	1.50	1.95	2.26	2.45	2.80	3.05
2/17/2017	0.50	0.53	0.66	0.82	1.21	1.48	1.92	2.23	2.42	2.78	3.03
2/21/2017	0.49	0.53	0.69	0.83	1.22	1.50	1.93	2.24	2.43	2.78	3.04
2/22/2017	0.47	0.52	0.68	0.82	1.22	1.49	1.92	2.23	2.42	2.78	3.04
2/23/2017	0.39	0.51	0.66	0.81	1.18	1.44	1.87	2.20	2.38	2.75	3.02
2/24/2017	0.40	0.52	0.65	0.80	1.12	1.38	1.80	2.12	2.31	2.69	2.95
										<b>Mean</b>	<b>3.04</b>

Source: <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldAll>

**Daily Treasury Yield Curve Rates**

January 30, 2017-March 3, 2017

Date	1 Mo	3 Mo	6 Mo	1 Yr	2 Yr	3 Yr	5 Yr	7 Yr	10 Yr	20 Yr	30 Yr
1/30/2017	0.49	0.51	0.63	0.81	1.22	1.48	1.94	2.28	2.49	2.82	3.08
1/31/2017	0.5	0.52	0.64	0.84	1.19	1.46	1.9	2.24	2.45	2.78	3.05
2/1/2017	0.5	0.51	0.65	0.83	1.22	1.49	1.93	2.27	2.48	2.8	3.08
2/2/2017	0.5	0.52	0.64	0.84	1.21	1.48	1.92	2.27	2.48	2.8	3.09
2/3/2017	0.49	0.51	0.63	0.82	1.21	1.49	1.93	2.27	2.49	2.82	3.11
2/6/2017	0.48	0.53	0.62	0.79	1.16	1.43	1.86	2.19	2.42	2.76	3.05
2/7/2017	0.51	0.53	0.63	0.8	1.16	1.43	1.85	2.17	2.4	2.74	3.02
2/8/2017	0.52	0.54	0.63	0.79	1.15	1.4	1.81	2.14	2.34	2.68	2.96
2/9/2017	0.51	0.54	0.64	0.8	1.2	1.46	1.88	2.2	2.4	2.74	3.02
2/10/2017	0.51	0.55	0.64	0.81	1.2	1.47	1.89	2.22	2.41	2.75	3.01
2/13/2017	0.5	0.52	0.63	0.82	1.2	1.48	1.92	2.24	2.43	2.77	3.03
2/14/2017	0.51	0.54	0.66	0.84	1.25	1.53	1.98	2.29	2.47	2.81	3.07
2/15/2017	0.53	0.54	0.67	0.86	1.27	1.57	2.01	2.33	2.51	2.84	3.09
2/16/2017	0.51	0.53	0.66	0.82	1.22	1.5	1.95	2.26	2.45	2.8	3.05
2/17/2017	0.5	0.53	0.66	0.82	1.21	1.48	1.92	2.23	2.42	2.78	3.03
2/21/2017	0.49	0.53	0.69	0.83	1.22	1.5	1.93	2.24	2.43	2.78	3.04
2/22/2017	0.47	0.52	0.68	0.82	1.22	1.49	1.92	2.23	2.42	2.78	3.04
2/23/2017	0.39	0.51	0.66	0.81	1.18	1.44	1.87	2.2	2.38	2.75	3.02
2/24/2017	0.4	0.52	0.65	0.8	1.12	1.38	1.8	2.12	2.31	2.69	2.95
2/27/2017	0.44	0.5	0.68	0.81	1.2	1.46	1.87	2.18	2.36	2.72	2.98
2/28/2017	0.4	0.53	0.69	0.88	1.22	1.49	1.89	2.19	2.36	2.7	2.97
3/1/2017	0.46	0.63	0.79	0.92	1.29	1.57	1.99	2.29	2.46	2.81	3.06
3/2/2017	0.52	0.67	0.84	0.98	1.32	1.6	2.03	2.32	2.49	2.84	3.09
3/3/2017	0.56	0.71	0.84	0.98	1.32	1.59	2.02	2.32	2.49	2.83	3.08
										<b>Mean</b>	<b>3.04</b>

Source: <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldAll>

**ROE and ROR Analysis for SUEZ Water Arlington Hills  
CAPM Analysis  
Beta calculation for Comparison Group**

**Docket No. WR16060510  
Exhibit MFG-19, Schedule 3**

<b>Company Name</b>	<b>Value Line Betas-- Comparison Group</b>
American States Water	0.75
American Water Works	0.65
Aqua America	0.70
California Water	0.75
Connecticut Water Services	0.65
Middlesex Water	0.75
SJW	0.75
York Water	0.75
Mean	0.72

Value Line Beta values taken from January 13, 2017 survey reports.



# THE VALUE LINE

## Investment Survey®

Part 1  
**Summary & Index**

File at the front of the Ratings & Reports binder. Last week's Summary & Index should be removed.

March 3, 2017

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The Median of Estimated  
**PRICE-EARNINGS RATIOS**  
 of all stocks with earnings

**19.8**

26 Weeks Ago	Market Low	Market High
19.1	10.3	18.8

The Median of Estimated  
**DIVIDEND YIELDS**  
 (next 12 months) of all dividend paying stocks under review

**2.0%**

26 Weeks Ago	Market Low	Market High
2.2%	4.0%	2.2%

The Estimated Median Price  
**APPRECIATION POTENTIAL**  
 of all 1700 stocks in the Value Line universe in the hypothesized economic environment 3 to 5 years hence

**30%**

26 Weeks Ago	Market Low	Market High
35%	183%	40%

**ANALYSES OF INDUSTRIES IN ALPHABETICAL ORDER WITH PAGE NUMBER**  
 Numeral in parenthesis after the industry is rank for probable performance (next 12 months).

INDUSTRY	PAGE	INDUSTRY	PAGE	INDUSTRY	PAGE	INDUSTRY	PAGE
Advertising (35)	2388	Electric Utility (West) (41)	2225	Investment Co. (Foreign) (-)	421	Railroad (63)	339
Aerospace/Defense (59)	701	Electronics (79)	4318	Machinery (88)	1701	R.E.I.T. (34)	1511
Air Transport (80)	301	Engineering & Const (27)	1231	Maritime (7)	330	Recreation (54)	2301
Apparel (13)	2101	Entertainment (43)	2528	Medical Services (39)	793	Reinsurance (70)	2021
Automotive (16)	101	Entertainment Tech (67)	2007	Med Supp Invasive (81)	170	Restaurant (62)	351
Auto Parts (82)	972	Environmental (48)	411	Med Supp Non-Invasive (61)	196	Retail Automotive (90)	2118
Bank (94)	2501	Financial Svcs. (Div.) (51)	2534	Metal Fabricating (72)	729	Retail Building Supply (83)	1138
Bank (Midwest) (93)	775	Food Processing (53)	1801	Metals & Mining (Div.) (28)	1580	Retail (Hardlines) (19)	2163
Beverage (57)	1965	Foreign Electronics (4)	1933	*Natural Gas Utility (39)	546	Retail (Softlines) (8)	2200
Biotechnology (78)	828	Funeral Services (37)	1831	*Natural Gas (Div.) (18)	524	Retail Store (15)	2132
Brokers & Exchanges (94)	1730	Furn/Home Furnishings (68)	1147	Newspaper (9)	2381	Retail/Wholesale Food (32)	1944
Building Materials (73)	1101	Healthcare Information (11)	820	Office Equip/Supplies (6)	1412	Semiconductor (96)	1348
Cable TV (58)	1016	Heavy Truck & Equip (50)	151	*Oil/Gas Distribution (25)	604	Semiconductor Equip (97)	1382
Chemical (Basic) (14)	1536	Homebuilding (30)	1123	Oilfield Svcs/Equip. (3)	2414	Shoe (26)	2154
Chemical (Diversified) (84)	2538	Hotel/Gaming (64)	1244, 2351	Packaging & Container (52)	1173	Steel (42)	739
*Chemical (Specialty) (73)	557	Household Products (80)	1188	Paper/Forest Products (40)	1163	Telecom. Equipment (21)	939
Computers/Peripherals (45)	1394	Human Resources (77)	1636	*Petroleum (Integrated) (3)	501	Telecom. Services (33)	919
Computer Software (66)	2586	Industrial Services (71)	379	Petroleum (Producing) (20)	2397	Telecom. Utility (1)	1024
Diversified Co. (53)	1736	Information Services (76)	436	Pharmacy Services (31)	963	Thrift (81)	1501
Drug (17)	1607	IT Services (52)	2809	*Pipeline MLPs (22)	616	Tobacco (36)	1891
E-Commerce (69)	1810	Insurance (Life) (63)	1551	Power (10)	1214	Toiletries/Cosmetics (29)	1006
Educational Services (48)	1999	Insurance (Prop/Cas.) (74)	754	Precious Metals (2)	1837, 1553	Trucking (47)	318
Electrical Equipment (56)	1301	Internet (44)	2632	Precision Instrument (86)	112	Water Utility (85)	1780
Electric Util. (Central) (23)	901	Investment Banking (87)	1802	Public/Private Equity (24)	2669	*Wireless Networking (89)	588
Electric Utility (East) (12)	138	Investment Co. (-)	1203	Publishing (48)	2372		

\*Reviewed in this week's issue.

In three parts: This is Part 1, the Summary & Index. Part 2 is Selection & Opinion. Part 3 is Ratings & Reports. Volume LXXII, No. 29.  
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**ROE and ROR Analysis for SUEZ Water Arlington Hills**  
**CAPM Analysis**  
**Calculation of ROE**

**Docket No. WR16060510**  
**Exhibit MFG-19, Schedule 5**

$$k = r + \beta (k_m - r)$$

Where:  $k$  = required rate of return for the specific stock  
 $\beta$  = beta, the systematic or stock-specific risk  
 $r$  = rate of return on a riskless asset  
 $k_m$  = required rate of return in the market portfolio

4-Year Annualized Growth Rate for Value Line Data

Value Line March 3, 2017 forecast data*	
Dividend yield	2.00%
30 percent market appreciation potential, 3-5 years	
4-year growth rate $(1.30^{0.25} - 1.00)$	6.78%
Value Line forecast result (2.0% + 6.78%)	8.78%
Market risk premium (8.78% - 3.04%)	5.74%

\*-Exhibit MFG-19, Schedule 4

$r =$	3.04%	30-Year Treasury Bill January 23, 2017-February 24, 2017 average, Exhibit MFG-19, Schedule 1
$(k_m - r) =$	5.74%	Market risk premium
$\beta =$	0.72	Value Line mean beta for Comparison Group, Exhibit MFG-19, Schedule 3

CAPM ROE 1  $k =$  7.16%

CAPM ROE 2  $r =$  3.04% 30-Year Treasury Bill January 30, 2017-March 3, 2017 average, Exhibit MFG-19, Schedule 2.  
 $k =$  7.16%

CAPM ROE 3  $r =$  3.08% 30-Year Treasury Bill March 3, 2017 yield, Exhibit MFG-19, Schedule 2.  
 $k =$  7.20%

In the Matter of the Petition of Suez Water Arlington Hills Inc.  
For Approval of an Increase in Rates for Wastewater Service and  
Other Tariff Changes  
BPU Docket No. WR16060510

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**Division of Rate Counsel Initial Discovery Requests**

**RCR-ROE-16  
(Ahern)**

**RCR-ROE-16** Reference Witness Ahern's rebuttal testimony pages 4-9, "NJBPU Return on Common Equity Policy." Please provide citations and copies of any Board Order or regulation in which the Board has adopted a given return on equity as official Board policy to apply to all water/wastewater general rate cases.

**Response:** Ms. Ahern is not aware of any such orders as that is not her understanding of the way in which the NJ BPU has operated throughout her more than 20 years of testifying in New Jersey. As her rebuttal testimony at pages 4 – 9 indicates, she relies upon the statements of Commissioner Holden, Director of the BPU Energy Division Mr. Walker and BPU Staff Chief Economist Beyer cited on pages 8 – 9 along with the original transcript of the BPU's agenda session in PMA-2. As stated on page 7 of her Rebuttal Testimony, to the best of her knowledge, "9.75% has been constantly used for at least a decade to determine revenue requirements in water and sewer cases. . . doubts whether investors expect a change in policy in New Jersey to occur for such a small sewer utility as SWAH."

1 have measured the extent to which security returns and betas are related as  
2 predicted by the CAPM. However, Morin observes that while the results support  
3 the notion that beta is related to security returns, it has been determined that the  
4 empirical Security Market Line (SML) described by the CAPM formula is not as  
5 steeply sloped as the predicted SML. Morin<sup>26</sup> states:

6 With few exceptions, the empirical studies agree that ... low-  
7 beta securities earn returns somewhat higher than the CAPM  
8 would predict, and high-beta securities earn less than predicted.

9  
10 \* \* \*

11  
12 Therefore, the empirical evidence suggests that the expected  
13 return on a security is related to its risk by the following  
14 approximation:

15  
16 
$$K = R_F + x \beta(R_M - R_F) + (1-x) \beta(R_M - R_F)$$

17  
18 where x is a fraction to be determined empirically. The value of  
19 x that best explains the observed relationship  $\text{Return} = 0.0829 +$   
20  $0.0520 \beta$  is between 0.25 and 0.30. If  $x = 0.25$ , the equation  
21 becomes:

22  
23 
$$K = R_F + 0.25(R_M - R_F) + 0.75 \beta(R_M - R_F)^{27}$$

24  
25 In view of theory and practical research, I have applied both the  
26 traditional CAPM and the empirical CAPM to the companies in the proxy group  
27 and averaged the results.

28  
29 **Q. Please describe your selection of a risk-free rate of return.**

30 A. As shown at the top of Column 3 on page 2 of Schedule PMA-10, the risk-free  
31 rate adopted for both applications of the CAPM is 4.67%. It is based upon the

---

<sup>26</sup> Morin 175.

<sup>27</sup> Morin 190.

1 average consensus forecast of the reporting economists in the September 1, 2009  
2 Blue Chip Financial Forecasts as shown in Note 2, page 3, of the expected yields  
3 on 30-year U.S. Treasury bonds for the six quarters ending with the fourth  
4 calendar quarter 2010 as derived in Note 2 on page 3 of Schedule PMA-10.

5  
6 **Q. Why is the prospective yield on long-term U.S. Treasury Bonds appropriate**  
7 **for use as the risk-free rate?**

8 A. The yield on long-term U.S. Treasury T-Bonds is almost risk-free and its term is  
9 consistent with the long-term cost of capital to public utilities measured by the  
10 yields on A rated public utility bonds. Hence, it is consistent with the long-term  
11 investment horizon inherent in utilities' common stocks, as well as the long-term  
12 investment horizon presumed in the standard DCF model employed in regulatory  
13 ratemaking. Moreover, it is also consistent with the long-term life of the  
14 jurisdictional rate base to which the allowed fair rate of return, i.e., cost of capital  
15 will be applied. Morin<sup>28</sup> discusses several reasons why the yield on long-term  
16 U.S. Treasury bonds is appropriate as the risk-free rate:

- 17
- 18 • Common stock is a long-term investment with the dividend cash flows to
  - 19 investors lasting indefinitely. Hence, the yield on very long-term
  - 20 government bonds, such as, the yield on 30-year Treasury bonds, is the
  - 21 best measure of the risk-free rate for use in the CAPM.
  - 22 • The expected common stock return is based on long-term cash flows,
  - 23 regardless of an individual's holding time period.
  - 24 • Stability and consistency, i.e., the yields on long-term Treasury bonds
  - 25 match more closely with expected common stock returns.
  - 26 • Yields on 90-day Treasury Bills typically do not match the investor's
  - 27 planning horizons. Investors in common stocks, typically, have an
  - 28 investment horizon greater than 90 days.
  - Short-term rates are volatile, fluctuating widely, and subject to more

---

<sup>28</sup> Morin 151.

$$K = R_F + 0.25(R_M - R_F) + 0.75 \beta(R_M - R_F)^{29}$$

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

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

A. As shown in column 3 on page 1 of Schedule PMA-12, the risk-free rate adopted for both applications of the CAPM is 4.78%. Again, because both ratemaking and the cost of capital, including common equity, are prospective, the risk-free rate for my CAPM analysis is based upon the average consensus forecast of the reporting economists in the June 1, 2011 Blue Chip Financial Forecasts as shown in Note 2, page 2, of the expected yields on 30-year U.S. Treasury bonds for the six quarters ending with the third calendar quarter 2012.

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

A. The yield on long-term U.S. Treasury T-Bonds is almost risk-free and its term is consistent with the long-term cost of capital to public utilities measured by the yields on A rated public utility bonds, the long-term investment horizon inherent in utilities' common stocks, the long-term investment horizon presumed in the standard DCF model employed in regulatory ratemaking, and the long-term life of the jurisdictional rate base to which the allowed fair rate of return, i.e., cost of capital will be applied. In contrast, short-term U.S. Treasury yields are more volatile and largely a function of Federal Reserve monetary policy.

---

<sup>29</sup> Morin 190.

## Consensus Forecasts Of U.S. Interest Rates And Key Assumptions<sup>1</sup>

Interest Rates	History								Consensus Forecasts-Quarterly Avg.						
	Average For Week End				Average For Month				Latest Q	2Q 2011	3Q 2011	4Q 2011	1Q 2012	2Q 2012	3Q 2012
	May 20	May 13	May 6	Apr. 29	Apr.	Mar.	Feb.	1Q 2011							
Federal Funds Rate	0.09	0.09	0.09	0.10	0.10	0.14	0.16	0.16	0.1	0.2	0.2	0.4	0.8	1.2	
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.3	3.3	3.3	3.5	3.8	4.2	
LIBOR, 3-mo.	0.26	0.27	0.27	0.27	0.28	0.31	0.31	0.31	0.3	0.4	0.4	0.7	1.0	1.4	
Commercial Paper, 1-mo.	0.10	0.12	0.11	0.12	0.14	0.17	0.19	0.18	0.2	0.2	0.3	0.6	0.9	1.4	
Treasury bill, 3-mo.	0.05	0.03	0.03	0.06	0.06	0.10	0.13	0.13	0.1	0.1	0.2	0.5	0.8	1.2	
Treasury bill, 6-mo.	0.08	0.07	0.08	0.11	0.12	0.16	0.17	0.17	0.1	0.2	0.4	0.6	1.0	1.4	
Treasury bill, 1 yr.	0.19	0.18	0.20	0.22	0.25	0.26	0.29	0.27	0.3	0.4	0.6	0.9	1.2	1.6	
Treasury note, 2 yr.	0.55	0.57	0.59	0.64	0.73	0.70	0.77	0.69	0.7	0.9	1.1	1.4	1.8	2.1	
Treasury note, 5 yr.	1.83	1.87	1.92	2.04	2.17	2.11	2.26	2.12	2.1	2.3	2.5	2.8	3.0	3.3	
Treasury note, 10 yr.	3.15	3.20	3.24	3.36	3.46	3.41	3.58	3.46	3.4	3.5	3.7	3.9	4.1	4.3	
Treasury note, 30 yr.	4.28	4.33	4.32	4.42	4.50	4.51	4.65	4.56	4.4	4.6	4.7	4.8	5.0	5.2	
Corporate Aaa bond	4.93	4.98	5.00	5.13	5.16	5.13	5.22	5.13	5.0	5.2	5.4	5.5	5.7	5.8	
Corporate Baa bond	5.76	5.83	5.82	5.93	6.02	6.03	6.15	6.09	5.9	6.1	6.2	6.4	6.6	6.8	
State & Local bonds	4.55	4.61	4.69	4.86	4.99	4.92	5.15	5.12	4.8	4.9	5.1	5.2	5.3	5.4	
Home mortgage rate	4.61	4.63	4.71	4.78	4.84	4.84	4.95	4.85	4.8	4.9	5.1	5.3	5.5	5.7	

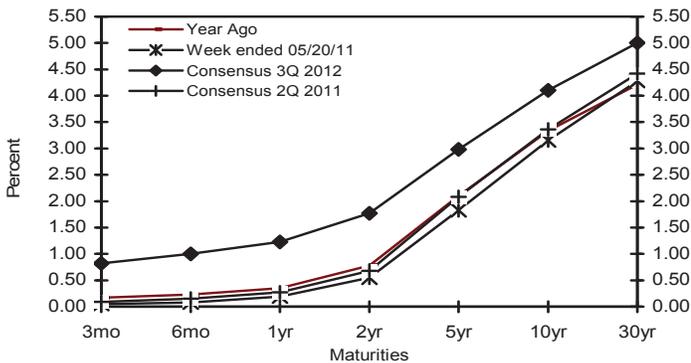
  

Key Assumptions	History								Consensus Forecasts-Quarterly					
	2Q 2009	3Q 2009	4Q 2009	1Q 2010	2Q 2010	3Q 2010	4Q 2010	1Q 2011	2Q 2011	3Q 2011	4Q 2011	1Q 2012	2Q 2012	3Q 2012
Major Currency Index	79.6	76.4	72.8	74.8	77.6	75.9	73.0	71.9	70.4	70.3	70.5	70.8	71.1	71.4
Real GDP	-0.7	1.6	5.0	3.7	1.7	2.6	3.1	1.8	3.0	3.3	3.3	3.0	3.2	3.2
GDP Price Index	0.3	0.7	-0.2	1.0	1.9	2.1	0.4	1.9	2.2	1.8	1.7	2.0	2.0	2.0
Consumer Price Index	1.9	3.7	2.7	1.3	-0.5	1.4	2.6	5.2	3.6	2.1	2.0	2.2	2.3	2.3

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

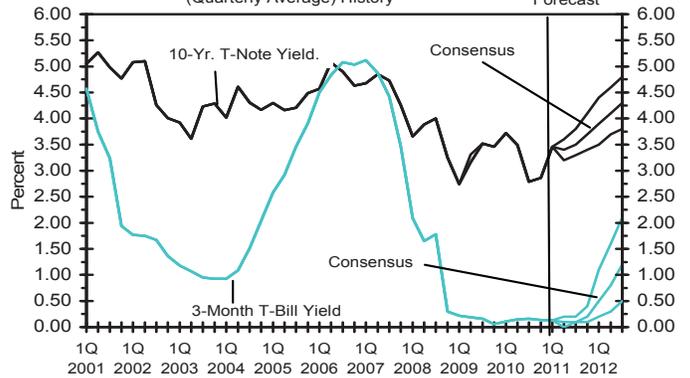
### U.S. Treasury Yield Curve

Week ended May 20, 2011 and Year Ago vs. 2Q 2011 and 3Q 2012 Consensus Forecasts



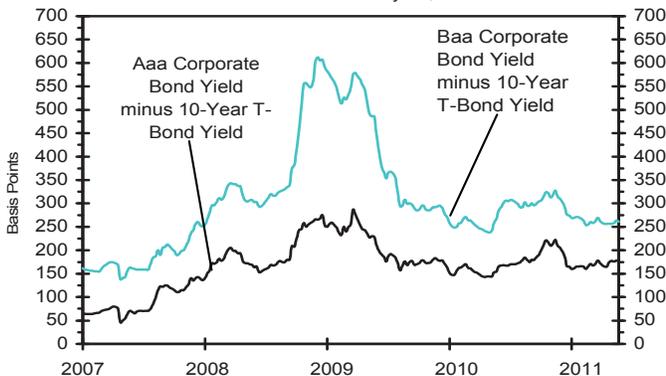
### U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield

(Quarterly Average) History Forecast



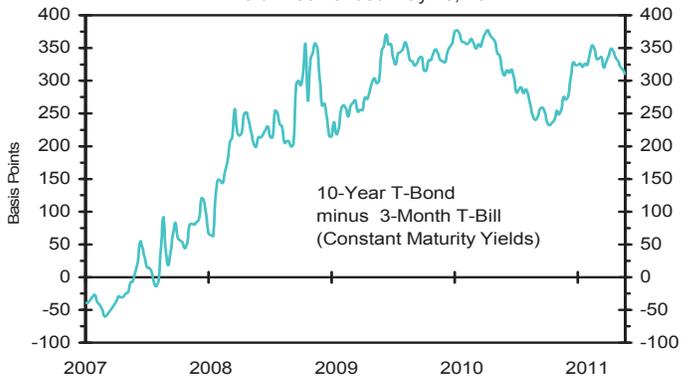
### Corporate Bond Spreads

As of week ended May 20, 2011



### U.S. Treasury Yield Curve

As of week ended May 20, 2011



1 reflects investors' expectations of future capital markets, including an  
2 expectation of interest rate levels, as well as risks. In addition, ratemaking is  
3 prospective in that the rates set in this proceeding will be in effect for a period of  
4 time in the future.

5 As with forecasts of EPS growth rates, investors are also aware of the  
6 accuracy of past forecasts, whether for earnings or dividends growth or for  
7 interest rates. However, investors do not have prior knowledge of the accuracy  
8 of the forecasts available to them at the time they make their investment  
9 decisions. The accuracy of any forecast only becomes known after some future  
10 period of time has elapsed. For example, the accuracy of the current Blue Chip  
11 Financial Forecasts (Blue Chip) January 1, 2013 consensus forecast of the 30-  
12 Year U.S. Treasury Bond of 3.60% for the six quarters ending with the second  
13 quarter 2014 (as can be gleaned from page 3 of Attachment PMA-15), cannot  
14 be known until the end of the second quarter 2014, more than one year into the  
15 future. Therefore, consistent with the efficient market hypothesis, since  
16 investors have such interest rate projections available to them and are aware of  
17 the past accuracy of such projections, current[?] interest rate projections should  
18 be used in cost of common equity analyses.

19 **Q. Please comment upon Mr. Parcell's estimation of the market equity risk**  
20 **premium for his CAPM analysis.**

21 A. Mr. Parcell's derivation of the market equity risk premium for his CAPM analysis  
22 is flawed for the following three reasons. First, he incorrectly relied upon  
23 achieved rates of return on book common equity. Second, he incorrectly relied  
24 in part upon geometric mean historical market returns. Third, he incorrectly  
25 relied upon the historical mean total return on U.S. Treasury securities. Fourth,

1 of a current risk-free rate in his CAPM analysis adds internal inconsistency to his  
2 analysis. The cost of capital, including the cost rate of common equity, is expectational in  
3 that it reflects investors' expectations of future capital markets, including an expectation  
4 of interest rate levels, as well as risks. In addition, ratemaking is prospective in that the  
5 rates set in this proceeding will be in effect for a period of time in the future.

6 Therefore, consistent with the previously discussed EMH, since investors have  
7 such interest rate projections available to them, prospective and not current interest rate  
8 projections should be used in cost of common equity analyses. Therefore, an appropriate  
9 risk-free rate is the average of the consensus forecasts of approximately 50 economists  
10 from *Blue Chip Financial Forecasts*, June 1, 2014, for the six quarters ending with the  
11 third quarter 2015 and the long-range forecasts for 2016-2020 and 2021-2025, or 4.33%,  
12 derived in Note 2 on page 24 of Schedule 9.

13 **Q. DID MR. KING INCORPORATE AN EMPIRICAL OR ECAPM ANALYSIS?**

14 A. No. Mr. King failed to consider that, although numerous tests of the CAPM have  
15 confirmed its validity, it has been determined that the empirical Security Market Line  
16 ("SML") described by the traditional CAPM is not as steeply sloped as the predicted  
17 SML.

18 As discussed in my direct testimony on page 36, lines 22-26, numerous tests of  
19 the CAPM have measured the extent to which security returns and betas are related as  
20 predicted by the CAPM confirming its validity. However, Morin observes that while the  
21 results of these tests support the notion that beta is related to security returns, the

1 **Capital Asset Pricing Model**

2 **Q. PLEASE COMMENT UPON MR. WATKINS' CAPM ANALYSIS.**

3 A. Mr. Watkins' CAPM analysis is flawed in three respects. First, he has incorrectly relied  
4 upon an historical risk-free rate despite the fact the both ratemaking and the cost of  
5 capital are prospective as previously discussed. Second, he has incorrectly calculated the  
6 market equity risk premium by relying upon: 1) actually achieved, or non-market based,  
7 rates of return on book common equity for a proxy for the market, the S&P 500; 2) a  
8 geometric mean historical market equity risk premium; 3) the historical total return on  
9 U.S. Treasury securities; and, 4) not employing a prospective, or forward-looking equity  
10 risk premium. Third, he has not incorporated an ECAPM analysis despite, as discussed  
11 previously, the fact that empirical evidence indicates that the low-beta securities earn  
12 returns higher than the CAPM predicts and high-beta securities earn less.

13 **Q. PLEASE COMMENT UPON MR. WATKINS' USE OF HISTORICAL, I.E., A**  
14 **RECENT THREE-MONTH AVERAGE, YIELDS ON 20-YEAR U.S. TREASURY**  
15 **BONDS.**

16 A. As discussed previously regarding Mr. King's direct testimony, Mr. Watkins' use of  
17 historical yields on 20-year U.S. Treasury bonds ignores the fact that both the cost of  
18 capital and ratemaking are prospective, which Mr. Watkins acknowledges himself when  
19 he states on page 7, lines 5-7 that "the cost of capital is an opportunity cost and is  
20 prospective- or forward-looking." In addition, Mr. Watkins also exclusively relies upon  
21 prospective growth rates in his DCF analysis.

22 Therefore, to be consistent with his DCF conclusion, an appropriate risk-free rate  
23 to use is the average of the consensus forecasts of approximately 50 economists from  
24 *Blue Chip Financial Forecasts* for the six quarters ending with the third quarter 2015

1 from and the long-range forecasts from 2016-2020 and 2021-2025 from the June 1, 2014  
2 issue, or 4.33%, derived in Note 2 on page 24 of Schedule 9.

3 **Q. PLEASE COMMENT UPON MR. WATKINS' ESTIMATION OF THE MARKET**  
4 **EQUITY RISK PREMIUM FOR HIS CAPM ANALYSIS.**

5 A. Mr. Watkins' derivation of the market equity risk premium for his CAPM analysis is  
6 flawed for the following four reasons. First, he incorrectly relied upon achieved rates of  
7 return on book common equity. Second, he incorrectly relied in part upon geometric  
8 mean historical market returns. Third, he incorrectly relied upon the historical mean total  
9 return on U.S. Treasury securities. Fourth, he did not employ a prospective equity risk  
10 premium.

11 **Q. PLEASE COMMENT UPON MR. WATKINS' USE OF THE RATE OF RETURN**  
12 **ON BOOK COMMON EQUITY FOR THE S&P 500.**

13 A. Mr. Watkins used the actual achieved rates of earnings on book common equity of the  
14 S&P 500 Composite for the period 1978-2012 as shown on Schedule GAW-5. As  
15 discussed in detail above, both the cost of capital and ratemaking are prospective in  
16 nature. In addition, the underlying theory of the CAPM requires the use of an expected  
17 market return. Therefore, the use of historically achieved earnings on book common  
18 equity is inconsistent with both the prospective nature of both the cost of capital and  
19 ratemaking as well as with the very theory of the CAPM. In his second CAPM analysis,  
20 Mr. Watkins calculates the historical risk premium using either of Ibbotson<sup>®</sup> SBBI<sup>®</sup> –  
21 2013 Classic Yearbook – Market Results for Stocks, Bonds, Bills and Inflation – 1926-  
22 2012 (SBBI – 2013 Classic)<sup>19</sup> which presents the average total return on large company

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<sup>19</sup> Mr. Watkins relied upon the SBBI – 2013 Classic although, at the time of the preparation of his direct testimony, the 2014 was publicly available.

2 BLUE CHIP FINANCIAL FORECASTS JUNE 1, 2014

Consensus Forecasts Of U.S. Interest Rates And Key Assumptions<sup>1</sup>

Interest Rates	History								Consensus Forecasts-Quarterly Avg.						
	Average For Week Ending				Average For Month				Latest Q 1Q 2014	2Q	3Q	4Q	1Q	2Q	3Q
	May 23	May 16	May 9	May 2	Apr.	Mar.	Feb.	2014		2014	2014	2015	2015	2015	
Federal Funds Rate	0.09	0.08	0.09	0.09	0.09	0.08	0.07	0.07	0.1	0.1	0.1	0.2	0.3	0.5	
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.3	3.3	3.3	3.3	3.3	3.6	
LIBOR, 3-mo.	0.23	0.23	0.23	0.23	0.23	0.23	0.24	0.24	0.2	0.3	0.3	0.4	0.5	0.7	
Commercial Paper, 1-mo.	0.14	0.06	0.05	0.05	0.05	0.06	0.06	0.06	0.1	0.1	0.1	0.2	0.3	0.6	
Treasury bill, 3-mo.	0.03	0.03	0.03	0.03	0.03	0.05	0.05	0.05	0.0	0.1	0.1	0.2	0.3	0.5	
Treasury bill, 6-mo.	0.05	0.05	0.05	0.05	0.05	0.08	0.08	0.08	0.1	0.1	0.2	0.2	0.4	0.7	
Treasury bill, 1 yr.	0.09	0.09	0.10	0.10	0.11	0.13	0.12	0.12	0.1	0.2	0.3	0.4	0.6	0.9	
Treasury note, 2 yr.	0.37	0.39	0.41	0.43	0.42	0.40	0.33	0.37	0.4	0.5	0.7	0.9	1.2	1.5	
Treasury note, 5 yr.	1.55	1.59	1.65	1.70	1.70	1.64	1.52	1.59	1.7	1.8	2.0	2.2	2.4	2.6	
Treasury note, 10 yr.	2.52	2.57	2.62	2.66	2.71	2.72	2.71	2.76	2.7	2.9	3.1	3.3	3.4	3.6	
Treasury note, 30 yr.	3.37	3.40	3.42	3.44	3.52	3.62	3.66	3.69	3.5	3.7	3.9	4.1	4.2	4.3	
Corporate Aaa bond	4.13	4.15	4.17	4.19	4.24	4.38	4.45	4.45	4.3	4.5	4.6	4.8	4.9	5.1	
Corporate Baa bond	4.75	4.77	4.79	4.81	4.90	5.06	5.10	5.13	5.0	5.2	5.4	5.5	5.6	5.8	
State & Local bonds	4.28	4.26	4.31	4.33	4.35	4.46	4.44	4.50	4.3	4.4	4.6	4.7	4.8	4.9	
Home mortgage rate	4.14	4.20	4.21	4.24	4.34	4.34	4.30	4.35	4.3	4.5	4.7	4.8	5.0	5.2	

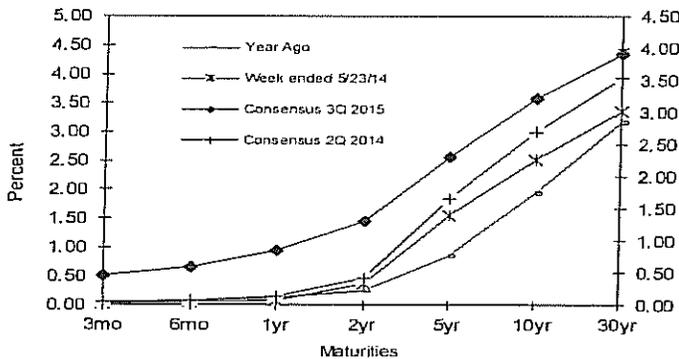
  

Key Assumptions	History								Consensus Forecasts-Quarterly					
	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
	2012	2012	2012	2013	2013	2013	2013	2014	2014	2014	2014	2015	2015	2015
Major Currency Index	73.9	74.0	73.2	74.7	76.4	76.7	76.0	77.1	76.7	77.0	77.4	77.6	77.8	78.1
Real GDP	1.2	2.8	0.1	1.1	2.5	4.1	2.6	0.1	3.4	3.0	3.1	3.0	3.0	3.0
GDP Price Index	1.8	2.3	1.1	1.3	0.6	2.0	1.6	1.3	1.8	1.9	1.9	1.9	1.9	2.0
Consumer Price Index	1.4	1.7	2.4	1.2	0.4	2.2	1.1	1.9	2.2	2.1	1.9	2.0	2.0	2.1

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

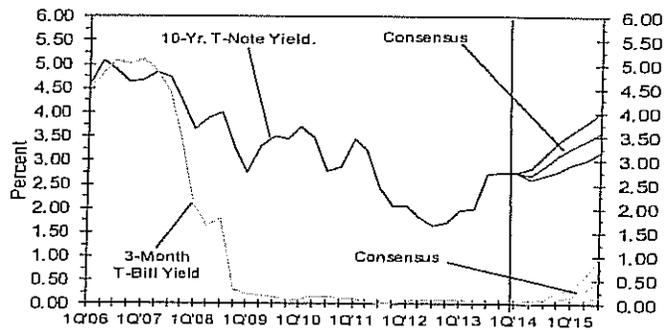
U.S. Treasury Yield Curve

Week ended May 23, 2014 and Year Ago vs. 2Q 2014 and 3Q 2015 Consensus Forecasts



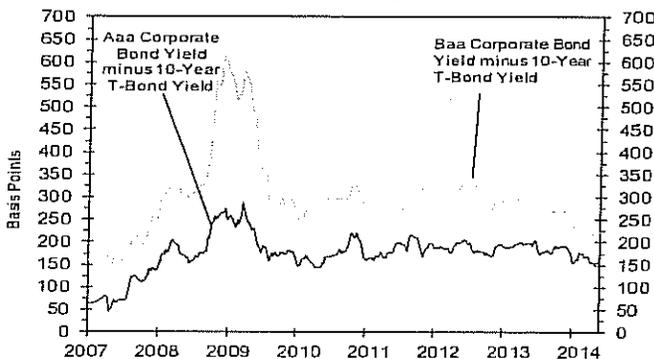
U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield

(Quarterly Average) History Forecast



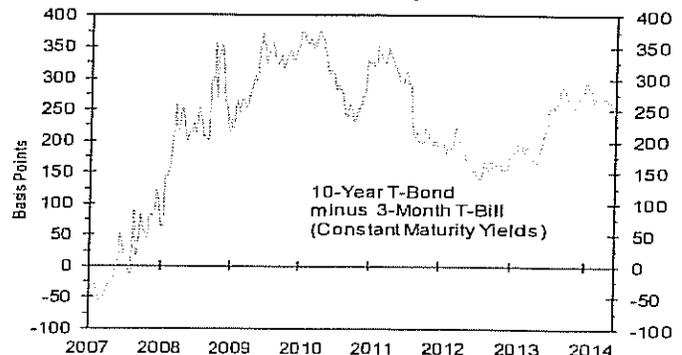
Corporate Bond Spreads

As of week ended May 23, 2014



U.S. Treasury Yield Curve

As of week ended May 23, 2014



## Long-Range Estimates:

The table below contains the results of our twice-year long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are estimates for the years 2016 through 2020 and averages for the five-year periods 2016-2020 and 2021-2025. Apply these projections cautiously. Few economic, demographic and political forces can be evaluated accurately over such long time spans.

<u>Interest Rates</u>		Average For The Year					Five-Year Averages	
		2016	2017	2018	2019	2020	2016-2020	2021-2025
1. Federal Funds Rate	CONSENSUS	1.8	3.0	3.6	3.8	3.7	3.2	3.8
	Top 10 Average	2.5	3.6	4.2	4.3	4.2	3.7	4.1
	Bottom 10 Average	1.1	2.1	2.8	3.0	3.1	2.4	3.2
2. Prime Rate	CONSENSUS	4.9	6.0	6.5	6.7	6.7	6.2	6.7
	Top 10 Average	5.5	6.6	7.1	7.2	7.1	6.7	7.1
	Bottom 10 Average	4.2	5.2	5.8	6.0	6.0	5.4	6.1
3. LIBOR, 3-Mo.	CONSENSUS	2.1	3.2	3.8	4.0	4.0	3.4	4.0
	Top 10 Average	2.7	3.8	4.4	4.6	4.5	4.0	4.5
	Bottom 10 Average	1.4	2.4	3.0	3.2	3.3	2.7	3.4
4. Commercial Paper, 1-Mo.	CONSENSUS	2.0	3.0	3.5	3.7	3.7	3.2	3.7
	Top 10 Average	2.4	3.5	4.2	4.3	4.2	3.7	4.1
	Bottom 10 Average	1.4	2.4	2.8	3.0	3.1	2.6	3.2
5. Treasury Bill Yield, 3-Mo.	CONSENSUS	1.8	2.9	3.4	3.6	3.6	3.1	3.7
	Top 10 Average	2.4	3.5	4.0	4.3	4.2	3.7	4.2
	Bottom 10 Average	1.2	2.1	2.7	2.9	3.0	2.3	3.1
6. Treasury Bill Yield, 6-Mo.	CONSENSUS	2.0	3.0	3.6	3.8	3.8	3.2	3.8
	Top 10 Average	2.6	3.7	4.2	4.4	4.3	3.9	4.3
	Bottom 10 Average	1.3	2.2	2.8	3.0	3.1	2.5	3.2
7. Treasury Bill Yield, 1-Yr.	CONSENSUS	2.3	3.2	3.7	3.9	3.9	3.4	4.0
	Top 10 Average	3.0	4.0	4.4	4.7	4.6	4.1	4.5
	Bottom 10 Average	1.6	2.3	2.9	3.1	3.2	2.6	3.4
8. Treasury Note Yield, 2-Yr.	CONSENSUS	2.7	3.6	4.0	4.2	4.2	3.7	4.3
	Top 10 Average	3.4	4.4	4.8	4.9	4.9	4.5	4.9
	Bottom 10 Average	2.0	2.7	3.1	3.3	3.5	2.9	3.7
10. Treasury Note Yield, 5-Yr.	CONSENSUS	3.4	4.0	4.4	4.5	4.5	4.2	4.6
	Top 10 Average	3.8	4.6	5.0	5.3	5.3	4.8	5.3
	Bottom 10 Average	2.9	3.4	3.6	3.7	3.8	3.5	4.0
11. Treasury Note Yield, 10-Yr.	CONSENSUS	4.1	4.5	4.8	5.0	5.0	4.7	5.0
	Top 10 Average	4.6	5.1	5.6	5.9	5.9	5.4	5.9
	Bottom 10 Average	3.6	3.9	4.0	4.2	4.2	4.0	4.3
12. Treasury Bond Yield, 30-Yr.	CONSENSUS	4.7	5.1	5.4	5.5	5.6	5.3	5.6
	Top 10 Average	5.3	5.9	6.3	6.6	6.6	6.1	6.6
	Bottom 10 Average	4.1	4.3	4.4	4.6	4.7	4.4	4.7
13. Corporate Aaa Bond Yield	CONSENSUS	5.5	5.9	6.3	6.4	6.4	6.1	6.4
	Top 10 Average	5.9	6.5	7.0	7.2	7.2	6.8	7.3
	Bottom 10 Average	4.9	5.3	5.5	5.6	5.6	5.4	5.6
13. Corporate Baa Bond Yield	CONSENSUS	6.3	6.8	7.1	7.2	7.3	6.9	7.3
	Top 10 Average	6.8	7.4	7.8	8.1	8.1	7.6	8.1
	Bottom 10 Average	5.7	6.0	6.2	6.4	6.5	6.2	6.5
14. State & Local Bonds Yield	CONSENSUS	5.1	5.4	5.6	5.8	5.8	5.5	5.8
	Top 10 Average	5.6	6.0	6.4	6.7	6.8	6.3	6.8
	Bottom 10 Average	4.7	4.8	4.8	4.9	4.9	4.8	4.9
15. Home Mortgage Rate	CONSENSUS	5.6	6.1	6.4	6.6	6.6	6.3	6.7
	Top 10 Average	6.1	6.7	7.2	7.4	7.5	7.0	7.5
	Bottom 10 Average	5.0	5.3	5.5	5.7	5.7	5.4	5.8
A. FRB - Major Currency Index	CONSENSUS	77.7	78.1	78.6	79.2	79.3	78.6	79.5
	Top 10 Average	80.5	81.3	82.1	83.1	83.5	82.1	84.2
	Bottom 10 Average	74.7	74.8	75.1	75.5	75.2	75.1	75.0
		Year-Over-Year, % Change					Five-Year Averages	
		2016	2017	2018	2019	2020	2016-2020	2021-2025
B. Real GDP	CONSENSUS	2.9	2.8	2.5	2.5	2.4	2.6	2.4
	Top 10 Average	3.3	3.1	3.0	2.9	2.7	3.0	2.7
	Bottom 10 Average	2.5	2.3	2.0	2.1	2.0	2.2	2.0
C. GDP Chained Price Index	CONSENSUS	2.0	2.2	2.2	2.2	2.1	2.1	2.1
	Top 10 Average	2.4	2.7	2.6	2.6	2.4	2.5	2.4
	Bottom 10 Average	1.7	1.8	1.9	1.9	1.9	1.8	1.9
D. Consumer Price Index	CONSENSUS	2.2	2.5	2.5	2.4	2.3	2.4	2.3
	Top 10 Average	2.7	3.1	3.0	2.9	2.7	2.9	2.7
	Bottom 10 Average	1.8	1.9	2.0	2.0	2.0	2.0	2.0

Tidewater Utilities, Inc.  
Development of the Market-Required Rate of Return on Common Equity Using  
the Capital Asset Pricing Model for  
the Proxy Group of Nine Water Companies  
Adjusted to Reflect a Forecasted Risk-Free Rate and Market Return

Notes:

- (1) From the 13 weeks ending June 13, 2014, Value Line Summary & Index, a forecasted 3-5 year total annual market return of 9.99% can be derived by averaging the 13 weeks ending June 13, 2014 forecasted total 3-5 year total appreciation, converting it into an annual market appreciation and adding the Value Line average forecasted annual dividend yield.

The 3-5 year average total market appreciation of 36% produces a four-year average annual return of 7.99%  $((1.36^{0.25}) - 1)$ . When the average annual forecasted dividend yield of 2.00% is added, a total average market return of 9.99% (2.00% + 7.99%) is derived.

The 13 weeks ending June 13, 2014 forecasted total market return of 9.99% minus the risk-free rate of 4.33% (developed in Note 2) is 5.66% (9.99% - 4.33%).

The Predictive Risk Premium Model (PRPM™) market equity risk premium of 10.37% is derived by applying the PRPM™ to the monthly equity risk premium of large company common stocks over the income return on long-term U.S. Government Securities from January 1926 through April 2014.

The Morningstar, Inc. (Ibbotson Associates) calculated arithmetic mean monthly market equity risk premium of 6.79% for the period 1926-2013 results from a total market return of 12.05% less the arithmetic mean income return on long-term U.S. Government Securities of 5.26% (12.05% - 5.26% = 6.79%).

These three expectational risk premiums are then averaged, resulting in a 7.51% market equity risk premium, which is then multiplied by the beta in column 1 of page 1 of this Schedule.  $7.61\% = (4.55\% + 10.36\% + 6.79\%) / 2$ .

- (2) The risk-free rate that Ms. Ahern relies upon for her CAPM analysis is the average forecast of 30-year Treasury Note yields per the consensus of nearly 50 economists reported in the Blue Chip Financial Forecasts dated June 1, 2014 (see pages 20 & 21 of this Schedule). The estimates are detailed below:

	<u>30-Year Treasury Note Yield</u>
Second Quarter 2014	3.50%
Third Quarter 2014	3.70%
Fourth Quarter 2014	3.90%
First Quarter 2015	4.10%
Second Quarter 2015	4.20%
Third Quarter 2015	4.30%
2016 – 2020	5.30%
2021 – 2025	<u>5.60%</u>
Average	<u>4.33%</u>

- (3) The traditional Capital Asset Pricing Model (CAPM) is applied using the following formula:

$$R_S = R_F + \beta (R_M - R_F)$$

Where  $R_S$  = Return rate of common stock  
 $R_F$  = Risk Free Rate  
 $\beta$  = Value Line Adjusted Beta  
 $R_M$  = Return on the market as a whole

- (4) The empirical CAPM is applied using the following formula:

$$R_S = R_F + .25 (R_M - R_F) + .75 \beta (R_M - R_F)$$

Where  $R_S$  = Return rate of common stock  
 $R_F$  = Risk-Free Rate  
 $\beta$  = Value Line Adjusted Beta  
 $R_M$  = Return on the market as a whole

Source of Information: Value Line Summary & Index  
Blue Chip Financial Forecasts, June 1, 2014  
Value Line Investment Survey, (Standard Edition)  
2014 Ibbotson® 2014 S&P® Classic Yearbook, Market Results for Stocks, Bonds, Bills, and Inflation  
Morningstar, Inc., 2014, Chicago, IL

1 premiums also clusters over time, making them highly predictable and available to predict  
2 future levels of risk and risk premiums. The PRPM estimates the risk / return  
3 relationship directly by analyzing the actual results of investor behavior rather than using  
4 subjective judgment as to the inputs required for the application of other cost of common  
5 equity models. Thus, the PRPM is not based upon an estimate of investor behavior, but  
6 rather upon the evaluation of the actual results of that behavior, i.e., the variance of  
7 historical equity risk premiums. In other words, the predicted equity risk premium is  
8 generated by the prediction of volatility (risk).

9 The inputs to the model are the historical returns on the common shares of each  
10 utility in the proxy group minus the historical monthly yield on long-term U.S. Treasury  
11 securities through December 2014. Using a generalized form of ARCH, known as  
12 GARCH, each water utility's projected equity risk premium was determined using  
13 Eviews<sup>®</sup> statistical software. The forecasted 30-year U.S. Treasury Bond (Note) yield of  
14 3.94% is based upon the consensus forecast for the six quarters ending with the second  
15 quarter 2016, derived from the January 1, 2015 Blue Chip Financial Forecasts (Blue  
16 Chip), was averaged with the long-range forecasts for 2016-2020 and 2021-2025 from the  
17 December 1, 2014 Blue Chip (shown on pages 9 and 10 of Schedule PMA-6) as discussed  
18 below. The risk-free rate of 3.94% was then added to each company's PRPM-derived  
19 equity risk premium to arrive at a PRPM-derived cost of common equity as shown on  
20 page 2 of Schedule PMA-6 which presents the average and median results for each proxy  
21 company. As shown on page 2, the average PRPM indicated common equity cost rate is  
22 12.43% and the median is 11.35% for the nine water companies. Consistent with my  
23 DCF results, I rely upon the median PRPM results of 11.35%.

1 ARCH, known as GARCH, each water utility's projected equity risk premium was  
2 determined using Eviews<sup>®</sup> statistical software. The forecasted 30-year U.S.  
3 Treasury Bond (Note) yield of 3.70% is based upon the consensus forecast for  
4 the six quarters ending with the first quarter 2017 derived from the December 1,  
5 2015 Blue Chip Financial Forecasts ("Blue Chip") averaged with the long-range  
6 forecasts for 2017-2021 and 2022-2026 also from the December 1, 2015 Blue  
7 Chip (shown on pages 9 and 10 of Workpaper PMA-5) as discussed below. The  
8 risk-free rate of 3.70% was then added to each company's PRPM-derived equity  
9 risk premium to arrive at a PRPM-derived cost of common equity as shown on  
10 page 2 of Workpaper PMA-5 which presents the average and median results for  
11 each proxy company. As shown on page 2, the average PRPM indicated  
12 common equity cost rate is 11.43%, while the median is 10.39% for the eight  
13 water companies. Consistent with my use of the average of the average and  
14 median DCF results, I rely upon the average of the average and median PRPM  
15 results of 10.91%<sup>22</sup> as my conclusion of PRPM cost rate.

16 **Q. PLEASE EXPLAIN THE ADJUSTED TOTAL MARKET APPROACH RPM.**

17 A. The adjusted total market approach RPM adds a prospective public utility bond  
18 yield to an equity risk premium which is derived from a beta-adjusted total market  
19 equity risk premium and an equity risk premium based upon the S&P Utilities  
20 Index.

21 **Q. PLEASE EXPLAIN THE BASIS OF THE ADJUSTED PROSPECTIVE BOND**  
22 **YIELD OF 5.31% APPLICABLE TO THE EIGHT WATER COMPANIES SHOWN**

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<sup>22</sup> (10.91% = (11.43% + 10.39%) / 2).

SUEZ WATER NEW YORK INC.  
PAULINE M. AHERN

1 As a result of the Fed's accommodative monetary policies, the U.S. stock  
2 market has recovered with the S&P 500 rising approximately 150.00% from its  
3 lows in early March 2009. That appreciation occurred despite the market's  
4 recent extreme volatility in response to the turmoil in the global economy, falling  
5 oil prices, and the uncertainty and direction of the Fed's interest rate decisions.

6 **Interest Rate Environment**

7 **Q. IS THE MARKET EXPECTING INCREASES IN INTEREST RATES?**

8 A. Yes. The U.S. 30-Year Treasury bond is currently forecasted to yield an average  
9 of 3.35%<sup>3</sup> over the six quarters ended with the second quarter of 2017, 4.5% for  
10 2017-2021 and 4.8% for 2022-2026<sup>4</sup> by *Blue Chip Financial Forecasts* ("*Blue*  
11 *Chip*"). In addition to economists' forecasts, the iShares 20+ year Treasury Bond  
12 ("TLT"), an exchange-traded fund of long-term U.S. government bonds, can  
13 provide insight into the market's expectations of future interest rate trends.  
14 Because the price of bonds is inversely related to interest rates, the TLT has  
15 increased in value as interest rates have fallen over time (see Chart 1 below).

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<sup>3</sup> From *Blue Chip Financial Forecasts*, February 1, 2016. See Page 9 of Schedule 5.

<sup>4</sup> From *Blue Chip Financial Forecasts*, December 1, 2015. See Page 10 of Schedule 5.

SUEZ WATER NEW YORK INC.  
PAULINE M. AHERN

1 PRPM is not based upon an estimate of investor behavior, but rather upon the  
2 evaluation of the actual results of that behavior, i.e., the variance of historical  
3 equity risk premiums.

4 The inputs to the model are the historical monthly returns on the common  
5 shares of each utility in the Water Proxy Group minus the historical monthly yield  
6 on long-term U.S. Treasury securities through December 2015. Using a  
7 generalized form of ARCH, known as GARCH, each water utility's projected  
8 equity risk premium was calculated using Eviews<sup>®</sup> statistical software. When the  
9 GARCH model is applied to the historical return data, it produces a predicted  
10 GARCH variance series<sup>18</sup> and a GARCH coefficient.<sup>19</sup> The forecasted 30-Year  
11 U.S. Treasury Bond (Note) yield of 3.75% is based upon the consensus forecast  
12 for the six quarters ending with the second quarter 2017 derived from the  
13 January 1, 2016 *Blue Chip* averaged with the long-range forecasts for 2017-2021  
14 and 2022-2026 from the December 1, 2015 *Blue Chip*.<sup>20</sup> As shown on Page 2 of  
15 Schedule 5, the mean PRPM indicated common equity cost rate is 11.31%, while  
16 the median is 10.22% for the Water Proxy Group. Consistent with my reliance  
17 upon the average of the mean and median DCF results, I rely upon the average  
18 of the mean and median PRPM results of 10.77%,<sup>21</sup> as the indicated of PRPM  
19 cost rate.

20 **Total Market Approach Risk Premium Model**

21 **Q. PLEASE EXPLAIN THE TOTAL MARKET APPROACH RPM.**

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<sup>18</sup> Illustrated in Columns [1] and [2] on Page 2 of Schedule 5.

<sup>19</sup> Illustrated in Column [4] on Page 2 of Schedule 5.

<sup>20</sup> See Pages 9 and 10 of Schedule 5.

## Consensus Forecasts Of U.S. Interest Rates And Key Assumptions<sup>1</sup>

Interest Rates	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month				Latest Q*	1Q 2016	2Q 2016	3Q 2016	4Q 2016	1Q 2017
	Dec. 25	Dec. 18	Dec. 11	Dec. 4	Nov.	Oct.	Sep.	4Q 2015	2016	2016	2016	2016	2017	2017
Federal Funds Rate	0.36	0.14	0.13	0.12	0.12	0.12	0.14	0.15	0.4	0.7	0.9	1.1	1.4	1.7
Prime Rate	3.50	3.25	3.25	3.25	3.25	3.25	3.25	3.28	3.5	3.7	3.9	4.2	4.4	4.7
LIBOR, 3-mo.	0.58	0.52	0.46	0.42	0.39	0.34	0.32	0.42	0.7	0.9	1.1	1.4	1.6	1.9
Commercial Paper, 1-mo.	0.35	0.35	0.26	0.16	0.11	0.11	0.13	0.18	0.4	0.7	0.9	1.2	1.4	1.7
Treasury bill, 3-mo.	0.21	0.24	0.26	0.22	0.13	0.02	0.02	0.13	0.4	0.6	0.8	1.1	1.3	1.6
Treasury bill, 6-mo.	0.48	0.51	0.55	0.44	0.33	0.11	0.18	0.32	0.5	0.7	1.0	1.2	1.4	1.7
Treasury bill, 1 yr.	0.66	0.69	0.71	0.54	0.48	0.26	0.37	0.48	0.7	0.9	1.2	1.4	1.7	1.9
Treasury note, 2 yr.	0.99	0.99	0.93	0.94	0.88	0.64	0.71	0.83	1.1	1.3	1.5	1.7	2.0	2.2
Treasury note, 5 yr.	1.70	1.70	1.65	1.66	1.67	1.39	1.49	1.58	1.8	2.0	2.2	2.4	2.6	2.8
Treasury note, 10 yr.	2.23	2.25	2.21	2.23	2.26	2.07	2.17	2.19	2.4	2.6	2.7	2.9	3.0	3.2
Treasury note, 30 yr.	2.94	2.96	2.95	2.98	3.03	2.89	2.95	2.96	3.1	3.2	3.4	3.5	3.7	3.8
Corporate Aaa bond	3.95	3.97	3.95	3.97	4.06	3.95	4.07	3.99	4.1	4.3	4.4	4.7	4.8	4.9
Corporate Baa bond	5.48	5.47	5.40	5.41	5.46	5.34	5.34	5.42	5.4	5.6	5.7	5.9	6.0	6.1
State & Local bonds	na	3.57	3.57	3.57	3.68	3.67	3.78	3.64	3.8	3.9	4.1	4.2	4.4	4.5
Home mortgage rate	na	3.97	3.95	3.93	3.94	3.80	3.89	3.90	4.1	4.3	4.5	4.7	4.8	5.0

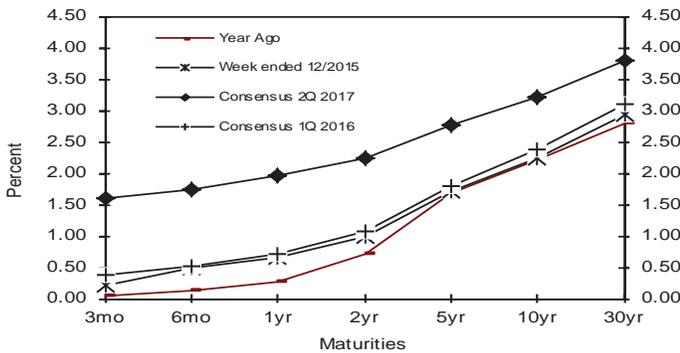
  

Key Assumptions	History								Consensus Forecasts-Quarterly					
	1Q 2014	2Q 2014	3Q 2014	4Q 2014	1Q 2015	2Q 2015	3Q 2015	4Q*	1Q 2016	2Q 2016	3Q 2016	4Q 2016	1Q 2017	2Q 2017
Major Currency Index	77.1	76.6	77.8	82.6	89.4	89.9	91.8	94.1	94.0	94.7	94.9	94.8	94.5	94.1
Real GDP	-0.9	4.6	4.3	2.1	0.6	3.9	2.1	2.0	2.5	2.6	2.6	2.5	2.4	2.5
GDP Price Index	1.5	2.2	1.6	0.1	0.1	2.1	1.3	1.1	1.7	1.9	1.9	2.0	2.0	2.1
Consumer Price Index	2.1	2.4	1.2	-0.9	-3.1	3.0	1.6	0.6	1.3	2.2	2.3	2.3	2.2	2.4

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Interest rate definitions are same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for Fed's Major Currency Index is from FRSR H.10 and G.5. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS). \*Interest rate data for 4Q 2015 based on historical data through the week ended December 25<sup>th</sup>. Data for 4Q 2015 Major Currency Index is based on data through week ended December 18<sup>th</sup>. Figures for 4Q 2015 Real GDP, GDP Chained Price Index and Consumer Price Index are consensus forecasts based on a special question asked of the panelists' this month.

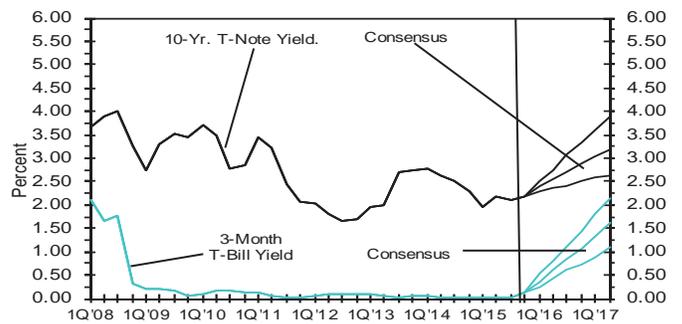
### U.S. Treasury Yield Curve

Week ended December 25, 2015 and Year Ago v.s.  
1Q 2016 and 2Q 2017 Consensus Forecasts



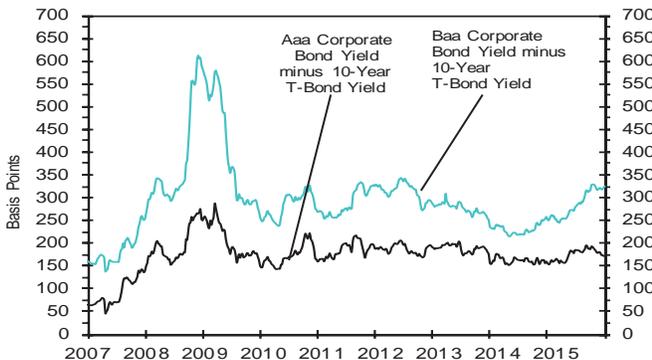
### U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield

(Quarterly Average) Forecast



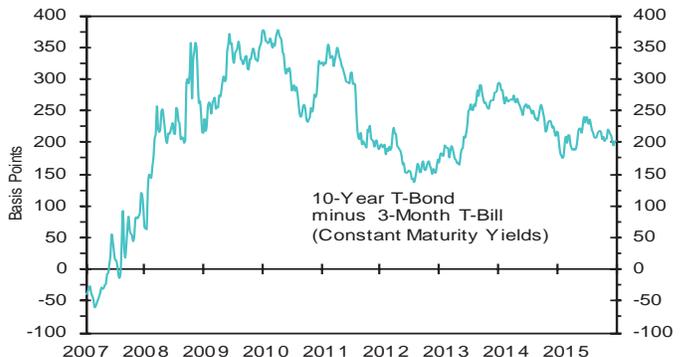
### Corporate Bond Spreads

As of week ended December 25, 2015



### U.S. Treasury Yield Curve

As of week ended December 25, 2015



## Long-Range Estimates:

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

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

## Blue Chip Financial Forecasts

## Forecasted Interest Rates vs. Actual Interest Rates

## Selected Ahern Cases

Ahern Forecasts Sources	Blue Chip 30-Year Treasury Forecast	30-Year Treasury Actual	30-Year Treasury Actual Averages					
			09Q3-10Q4	09Q3	09Q4	10Q1	10Q2	10Q3
<b>Blue Chip September 1, 2009</b>	4.67%	4.28%	4.32%	4.34%	4.62%	4.37%	3.86%	4.17%
South Carolina PSC, Docket No. 2009-479-W/S, United Utility Companies, Direct Testimony, Pages 41-42, February 2010	Difference	0.39%						
			11Q2	11Q3	11Q4	12Q1	12Q2	12Q3
<b>Blue Chip June 1, 2011</b>	4.78%	3.32%	4.34%	3.69%	3.04%	3.14%	2.94%	2.74%
Missouri PSC, Case Nos. WR-2011-0337, SR-2011-0338, Direct Testimony, Page 52 and Schedule PMA-10, Page 7 of 8, June 30, 2011	Difference	1.46%						
			13Q2	13Q3	13Q4	14Q1	14Q2	14Q3
<b>Blue Chip January 1, 2013</b>	3.60%	3.51%	3.14%	3.71%	3.79%	3.68%	3.44%	3.27%
New Hampshire PUC, DOCKET NO. DW 12-085, Rebuttal Testimony, Page 23, March 6, 2013	Difference	0.09%						
			14Q2	14Q3	14Q4	15Q1	15Q2	15Q3
<b>Blue Chip June 1, 2014</b>	4.33%	3.01%	3.44%	3.27%	2.97%	2.55%	2.88%	2.96%
Delaware PSC, PSC Docket No. 13-466, Rebuttal Testimony, Page 9, Pages 19-20, Exhibit No. T-6R, Schedule 9, Pages 20, 21, and 24 of 37, June 25, 2014.	Difference	1.32%						
			15Q1	15Q2	15Q3	15Q4	16Q1	16Q2
<b>Blue Chip January 1, 2015</b>	3.94%	2.77%	2.55%	2.88%	2.96%	2.96%	2.72%	2.57%
New Jersey Board of Public Utilities, Docket No. WR15020269, Prepared Testimony, Page 27, February 27,	Difference	1.17%						
			15Q4	16Q1	16Q2	16Q3	16Q4	17Q1*
<b>Blue Chip December 1, 2015</b>	3.70%	2.84%	2.96%	2.72%	2.57%	2.28%	2.83%	3.70%
Delaware PSC, PSC Docket No. 16-0163, Prepared Testimony, Page 28, February 5, 2016.	Difference	0.86%						
			16Q1	16Q2	16Q3	16Q4	17Q1*	17Q2**
<b>Blue Chip February 1, 2016</b>	3.75%	2.82%	2.72%	2.57%	2.28%	2.83%	3.70%	
New York PSC, Case No. 16-W-0130, Testimony, Page 7, Page 34, February 26, 2016.	Difference	0.93%						

\*-17Q1 is the average of January 1, 2017-February 28, 2017

\*\*-17Q2 No value is available for this future time period

**30-Year Treasury Actual Quarterly Averages, 2009-2016**

<b>091Q</b>	<b>09Q2</b>	<b>09Q3</b>	<b>09Q4</b>
3.46	4.17	4.32	4.34
<b>10Q1</b>	<b>10Q2</b>	<b>10Q3</b>	<b>10Q4</b>
4.62	4.37	3.86	4.17
<b>11Q1</b>	<b>11Q2</b>	<b>11Q3</b>	<b>11Q4</b>
4.56	4.34	3.69	3.04
<b>12Q1</b>	<b>12Q2</b>	<b>12Q3</b>	<b>12Q4</b>
3.14	2.94	2.74	2.86
<b>13Q1</b>	<b>13Q2</b>	<b>13Q3</b>	<b>13Q4</b>
3.13	3.14	3.71	3.79
<b>14Q1</b>	<b>14Q2</b>	<b>14Q3</b>	<b>14Q4</b>
3.68	3.44	3.27	2.97
<b>15Q1</b>	<b>15Q2</b>	<b>15Q3</b>	<b>15Q4</b>
2.55	2.88	2.96	2.96
<b>16Q1</b>	<b>16Q2</b>	<b>16Q3</b>	<b>16Q4</b>
2.72	2.57	2.28	2.83

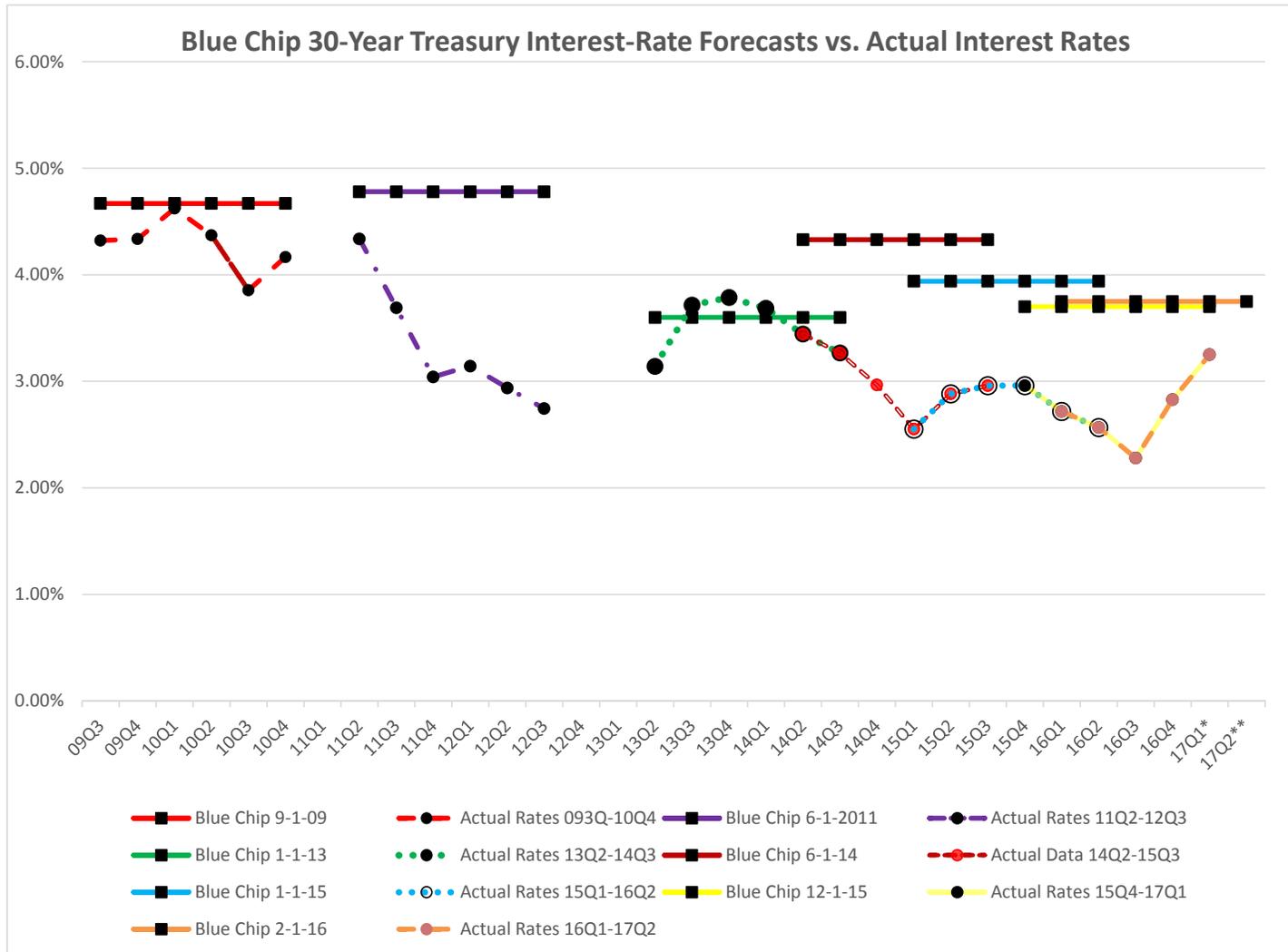
Source: <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldAll>

Daily Treasury Yield Curve Rates

January 1, 2017-February 28, 2017

Date	1 mo	3 mo	6 mo	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	20 yr	30 yr
1/3/2017	0.52	0.53	0.65	0.89	1.22	1.50	1.94	2.26	2.45	2.78	3.04
1/4/2017	0.49	0.53	0.63	0.87	1.24	1.50	1.94	2.26	2.46	2.78	3.05
1/5/2017	0.51	0.52	0.62	0.83	1.17	1.43	1.86	2.18	2.37	2.69	2.96
1/6/2017	0.50	0.53	0.61	0.85	1.22	1.50	1.92	2.23	2.42	2.73	3.00
1/9/2017	0.50	0.50	0.60	0.82	1.21	1.47	1.89	2.18	2.38	2.69	2.97
1/10/2017	0.51	0.52	0.60	0.82	1.19	1.47	1.89	2.18	2.38	2.69	2.97
1/11/2017	0.51	0.52	0.60	0.82	1.20	1.47	1.89	2.18	2.38	2.68	2.96
1/12/2017	0.52	0.52	0.59	0.81	1.18	1.45	1.87	2.17	2.36	2.68	3.01
1/13/2017	0.52	0.53	0.61	0.82	1.21	1.48	1.90	2.20	2.40	2.71	2.99
1/17/2017	0.52	0.55	0.62	0.80	1.17	1.42	1.84	2.14	2.33	2.66	2.93
1/18/2017	0.48	0.53	0.63	0.82	1.23	1.51	1.93	2.24	2.42	2.74	3.00
1/19/2017	0.47	0.52	0.62	0.83	1.25	1.53	1.97	2.28	2.47	2.77	3.04
1/20/2017	0.46	0.50	0.62	0.82	1.20	1.50	1.95	2.28	2.48	2.79	3.05
1/23/2017	0.46	0.51	0.59	0.79	1.16	1.43	1.88	2.19	2.41	2.72	2.99
1/24/2017	0.50	0.51	0.62	0.81	1.21	1.49	1.94	2.27	2.47	2.78	3.05
1/25/2017	0.48	0.50	0.61	0.82	1.23	1.52	1.99	2.33	2.53	2.84	3.10
1/26/2017	0.49	0.51	0.62	0.82	1.21	1.49	1.95	2.30	2.51	2.82	3.08
1/27/2017	0.49	0.52	0.63	0.82	1.22	1.48	1.94	2.28	2.49	2.80	3.06
1/30/2017	0.49	0.51	0.63	0.81	1.22	1.48	1.94	2.28	2.49	2.82	3.08
1/31/2017	0.50	0.52	0.64	0.84	1.19	1.46	1.90	2.24	2.45	2.78	3.05
2/1/2017	0.50	0.51	0.65	0.83	1.22	1.49	1.93	2.27	2.48	2.80	3.08
2/2/2017	0.50	0.52	0.64	0.84	1.21	1.48	1.92	2.27	2.48	2.80	3.09
2/3/2017	0.49	0.51	0.63	0.82	1.21	1.49	1.93	2.27	2.49	2.82	3.11
2/6/2017	0.48	0.53	0.62	0.79	1.16	1.43	1.86	2.19	2.42	2.76	3.05
2/7/2017	0.51	0.53	0.63	0.80	1.16	1.43	1.85	2.17	2.40	2.74	3.02
2/8/2017	0.52	0.54	0.63	0.79	1.15	1.40	1.81	2.14	2.34	2.68	2.96
2/9/2017	0.51	0.54	0.64	0.80	1.20	1.46	1.88	2.20	2.40	2.74	3.02
2/10/2017	0.51	0.55	0.64	0.81	1.20	1.47	1.89	2.22	2.41	2.75	3.01
2/13/2017	0.50	0.52	0.63	0.82	1.20	1.48	1.92	2.24	2.43	2.77	3.03
2/14/2017	0.51	0.54	0.66	0.84	1.25	1.53	1.98	2.29	2.47	2.81	3.07
2/15/2017	0.53	0.54	0.67	0.86	1.27	1.57	2.01	2.33	2.51	2.84	3.09
2/16/2017	0.51	0.53	0.66	0.82	1.22	1.50	1.95	2.26	2.45	2.80	3.05
2/17/2017	0.50	0.53	0.66	0.82	1.21	1.48	1.92	2.23	2.42	2.78	3.03
2/21/2017	0.49	0.53	0.69	0.83	1.22	1.50	1.93	2.24	2.43	2.78	3.04
2/22/2017	0.47	0.52	0.68	0.82	1.22	1.49	1.92	2.23	2.42	2.78	3.04
2/23/2017	0.39	0.51	0.66	0.81	1.18	1.44	1.87	2.20	2.38	2.75	3.02
2/24/2017	0.40	0.52	0.65	0.80	1.12	1.38	1.80	2.12	2.31	2.69	2.95
2/27/2017	0.44	0.50	0.68	0.81	1.20	1.46	1.87	2.18	2.36	2.72	2.98
2/28/2017	0.40	0.53	0.69	0.88	1.22	1.49	1.89	2.19	2.36	2.70	2.97
									Mean		3.03







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## American States Water Company (AWR)

(Delayed Data From NYSE)

**\$44.84 USD**

-0.05 (-0.11%)

Updated Mar 2, 2017 04:02 PM ET

Volume: 97,847

Open: \$44.98

Prior Close: \$44.89

Zacks Rank [?]:

Style Scores [?]:

Add to portfolio

**\$3**

3-Hold ■ ■ ■ ■ ■ ■

Value: **D** | Growth: **F** | Momentum: **F** | VGM: **F**

### Quote Overview

#### Stock Activity

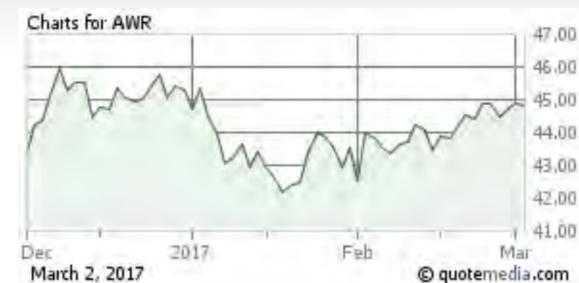
Open	44.98
Day Low	44.60
Day High	45.06
52 Wk Low	37.28
52 Wk High	46.39
Avg. Volume	121,535
Market Cap	1.64 B
Dividend	0.97 ( 2.16%)
Beta	0.42

#### Key Earnings Data

Forward PE	26.56
PEG Ratio	6.64
Current Qtr Est	0.32
Current Yr Est	1.69
Most Accurate Est	0.32
Qtr Earnings ESP [?]	0.00%
Exp Earnings Date	5/3/17
Prior Year EPS	1.62
Exp EPS Growth (3-5yr)	4.00%

Utilities » Utility - Water Supply

### Chart for AWR



[Interactive Chart](#) | [Fundamental Charts](#)

### Research Reports For AWR

- 

### Zacks News For AWR

American States Water (AWR) Earnings Meet Estimates in Q4  
 02/24/17-7:08AM EST Zacks

Aqua America (WTR) Misses Q4 Earnings, Issues '17 Guidance  
 02/23/17-8:24AM EST Zacks

AWR: What are Zacks experts saying now?  
 Zacks Private Portfolio Services

American Water Works (AWK) Beats on Q4 Earnings Estimates  
 02/22/17-7:22AM EST Zacks

Aqua America (WTR) Sees a Strong 2016, Closes 19 Buyouts  
 01/17/17-7:21AM EST Zacks

Pure Cycle (PCYO) Reports Narrower-than-Expected Q1 Loss  
 01/05/17-7:47AM EST Zacks

[More Zacks News for AWR »](#)

### Other News For AWR

American States Water's (AWR) CEO Bob Sprowls...  
 02/24/17-6:45AM EST Seeking Alpha

American States Water Co. 2016 Q4 - Results -...  
 02/24/17-2:00AM EST Seeking Alpha

American States Water meets 4Q profit forecasts  
 02/23/17-7:35PM EST Associated Press, The

American States Water Company Announces...  
 02/23/17-4:45PM EST Business Wire

American States Water reports Q4 EPS 30c,...  
 02/23/17-4:00AM EST Thefly.com



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## American Water Works (AWK)

(Delayed Data From NYSE)

**\$77.84 USD**

+0.18 (0.23%)

Updated Mar 2, 2017 04:00 PM ET

Volume: 1,341,309

Open: \$77.54

Prior Close: \$77.66

Zacks Rank [?]:

Style Scores [?]:

Value: **C** | Growth: **D** | Momentum: **F** | VGM: **D**

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[Add to portfolio](#) [Trades from \\$3](#)

2-Buy ■ ■ ■ ■

## Quote Overview

### Stock Activity

Open	77.54
Day Low	77.05
Day High	78.11
52 Wk Low	66.63
52 Wk High	85.24
Avg. Volume	970,633
Market Cap	13.84 B
Dividend	1.50 ( 1.93%)
Beta	0.21

### Key Earnings Data

Forward PE	25.60
PEG Ratio	3.47
Current Qtr Est	0.52
Current Yr Est	3.03
Most Accurate Est	0.53
Qtr Earnings ESP [?]	1.92%
Exp Earnings Date	*BMO 5/4/17
Prior Year EPS	2.84
Exp EPS Growth (3-5yr)	7.39%

Utilities » Utility - Water Supply

\*BMO = Before Market Open \*AMC = After Market Close

## Research Reports For AWK

- [Analyst](#)
- [Snapshot](#)
- [All Zacks' Analyst Reports »](#)

## Zacks News For AWK

Is it Time to Add American Water Works (AWK) to Portfolio?  
 03/02/17-8:55AM EST Zacks

American Water Works to Invest \$3.5M to Replace Water Mains  
 03/01/17-6:30AM EST Zacks

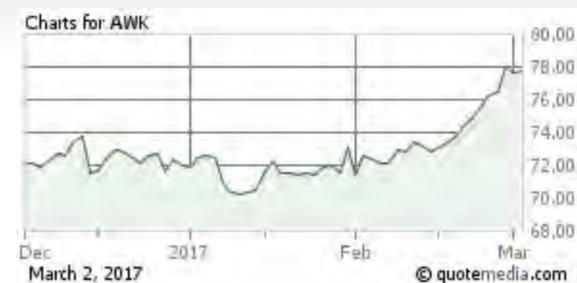
AWK: What are Zacks experts saying now?  
 Zacks Private Portfolio Services

American States Water (AWR) Earnings Meet Estimates in Q4  
 02/24/17-7:08AM EST Zacks

Aqua America (WTR) Misses Q4 Earnings, Issues '17 Guidance  
 02/23/17-8:24AM EST Zacks

American Water Works (AWK) Beats on Q4 Earnings Estimates  
 02/22/17-7:22AM EST Zacks

## Chart for AWK



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## Zacks' Top 10 Stocks for 2017

Maximize investing success with 10 stocks poised to outperform this year.

[See Them Now](#)

## Other News For AWK

Potential Stock Market Winners of 2025  
 03/01/17-8:15AM EST TheMotleyFool

New Jersey American Water Investing \$3.5 Million...  
 02/28/17-1:26PM EST Business Wire

3 Things American Water Works' Management Is...  
 02/28/17-10:15AM EST TheMotleyFool

White House begins unwinding water regulations,...  
 02/28/17-10:12AM EST Thefly.com

Rate Adjustment for Iowa American Water...  
 02/27/17-6:50PM EST Business Wire

[More Other News for AWK »](#)



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## Aqua America, Inc. (WTR)

(Delayed Data From NYSE)

**\$32.01 USD**

+0.33 (1.04%)

Updated Mar 2, 2017 04:01 PM ET

Volume: 584,481

Open: \$31.64

Prior Close: \$31.68

Zacks Rank [?]:

Style Scores [?]:

[+](#) Add to portfolio

[Trades from](#) **\$3**

3-Hold ■ ■ ■ ■ ■ ■

Value: **D** | Growth: **D** | Momentum: **A** | VGM: **D**

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### Quote Overview

#### Stock Activity

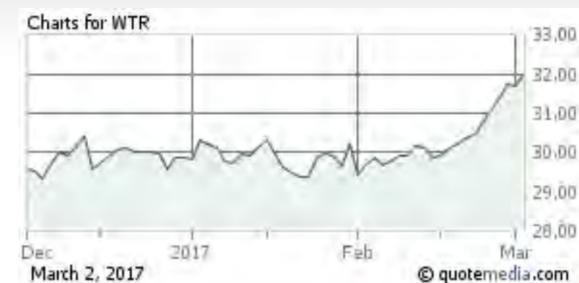
Open	31.64
Day Low	31.61
Day High	32.15
52 Wk Low	28.03
52 Wk High	35.83
Avg. Volume	504,114
Market Cap	5.62 B
Dividend	0.77 ( 2.42%)
Beta	0.48

#### Key Earnings Data

Forward PE	23.17
PEG Ratio	4.21
Current Qtr Est	0.29
Current Yr Est	1.37
Most Accurate Est	0.29
Qtr Earnings ESP [?]	0.00%
Exp Earnings Date	5/2/17
Prior Year EPS	1.32
Exp EPS Growth (3-5yr)	5.50%

Utilities » Utility - Water Supply

### Chart for WTR



[Interactive Chart](#) | [Fundamental Charts](#)

### Research Reports For WTR

- [Analyst](#)
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### Zacks News For WTR

American Water Works to Invest \$3.5M to Replace Water Mains  
 03/01/17-6:30AM EST Zacks

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WTR: What are Zacks experts saying now?  
 Zacks Private Portfolio Services

Aqua America (WTR) Misses Q4 Earnings, Issues '17 Guidance  
 02/23/17-8:24AM EST Zacks

American Water Works (AWK) Beats on Q4 Earnings Estimates  
 02/22/17-7:22AM EST Zacks

Should You Sell Aqua America (WTR) Before Earnings?  
 02/21/17-7:36AM EST Zacks

[More Zacks News for WTR »](#)



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## California Water Service Group Holding (CWT)

(Delayed Data From NYSE)

**\$37.10 USD**

+0.10 (0.27%)

Updated Mar 2, 2017 04:02 PM ET

Volume: 174,534

Open: \$36.95

Prior Close: \$37.00

Zacks Rank [?]:

Style Scores [?]:

Value: **C** | Growth: **C** | Momentum: **F** | VGM: **D**

3-Hold ■ ■ ■ ■ ■ ■

[View All Zacks Rank #1 Strong Buys](#)

[Add to portfolio](#)

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### Quote Overview

#### Stock Activity

Open	36.95
Day Low	36.37
Day High	37.50
52 Wk Low	25.24
52 Wk High	37.60
Avg. Volume	180,210
Market Cap	1.77 B
Dividend	0.72 ( 1.95%)
Beta	0.66

#### Key Earnings Data

Forward PE	27.92
PEG Ratio	5.59
Current Qtr Est	0.05
Current Yr Est	1.33
Most Accurate Est	0.03
Qtr Earnings ESP [?]	-40.00%
Exp Earnings Date	4/27/17
Prior Year EPS	1.01
Exp EPS Growth (3-5yr)	5.00%

Utilities » Utility - Water Supply

### Research Report For CWT

[Snapshot](#)

[All Zacks' Analyst Reports »](#)

### Zacks News For CWT

American Water Works (AWK) Beats on Q4 Earnings Estimates  
 02/22/17-7:22AM EST Zacks

Connecticut Water (CTWS) Misses Earnings Estimates in Q3  
 11/09/16-7:01AM EST Zacks

CWT: What are Zacks experts saying now?  
 Zacks Private Portfolio Services

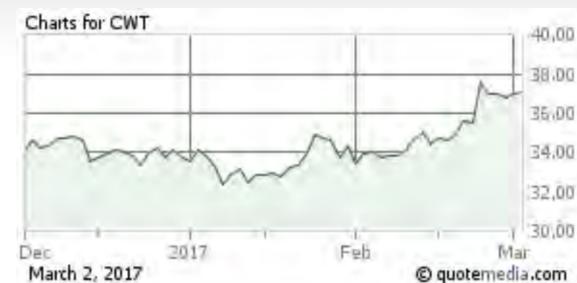
American States Water (AWR) Beats Q3 Earnings Estimates  
 11/03/16-7:49AM EST Zacks

American Water Works (AWK) Beats Q3 Earnings, Views Up  
 11/03/16-7:46AM EST Zacks

Aqua America (WTR) Beats on Q3 Earnings, 2016 View Intact  
 11/02/16-7:23AM EST Zacks

[More Zacks News for CWT »](#)

### Chart for CWT



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	Fee/Trade	Acct Min	Promotion	Site
	\$3	\$2,500	Up to \$150 for Transfer	<a href="#">Lea Mo</a>
	\$4.95	\$2,500	500 Free Trades for 2-Years	<a href="#">Lea Mo</a>
	\$6.95	\$1,000	\$6.95 online equity trades	<a href="#">Lea Mo</a>

### Other News For CWT

Analysts' Actions -- Danaher, Goldman Sachs,...  
 02/24/17-7:15AM EST TheStreet.com

California Water Service downgraded to...  
 02/24/17-5:01AM EST Thefly.com

CWT Dividend Yield Pushes Above 2%  
 02/24/17-2:30AM EST Dividend Channel

California Water Service Group 2016 Q4 - Results - ...  
 02/23/17-11:30AM EST Seeking Alpha

California Water Service Group posts 4Q profit  
 02/23/17-9:29AM EST Associated Press, The



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## Connecticut Water Service, Inc. (CTWS)

(Delayed Data From NSDQ)

**\$58.83 USD**

+0.94 (1.62%)

Updated Mar 2, 2017 03:59 PM ET

Volume: 25,772

Open: \$58.03

Prior Close: \$57.89

Zacks Rank [?]:

Style Scores [?]:

[+](#) Add to portfolio

[Trades from](#) **\$3**

3-Hold ■ ■ ■ ■ ■ ■

Value: **F** | Growth: **D** | Momentum: **C** | VGM: **F**

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### Quote Overview

#### Stock Activity

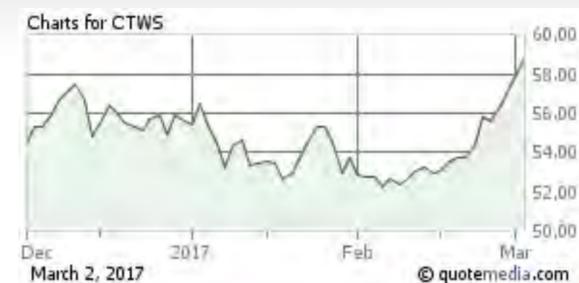
Open	58.03
Day Low	56.89
Day High	59.26
52 Wk Low	40.80
52 Wk High	59.26
Avg. Volume	23,141
Market Cap	654.97 M
Dividend	1.13 ( 1.95%)
Beta	0.09

#### Key Earnings Data

Forward PE	25.61
PEG Ratio	3.66
Current Qtr Est	0.23
Current Yr Est	2.26
Most Accurate Est	0.23
Qtr Earnings ESP [?]	0.00%
Exp Earnings Date	3/13/17
Prior Year EPS	2.04
Exp EPS Growth (3-5yr)	7.00%

Utilities » Utility - Water Supply

### Chart for CTWS



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### Research Reports For CTWS

- [Analyst](#)
- [Snapshot](#)
- [All Zacks' Analyst Reports »](#)

### Zacks News For CTWS

American Water Works to Invest \$3.5M to Replace Water Mains  
 03/01/17-6:30AM EST Zacks

Aqua America Issues 2017 Outlook, Customer Base to Grow  
 01/18/17-7:43AM EST Zacks

CTWS: What are Zacks experts saying now?  
 Zacks Private Portfolio Services

Aqua America (WTR) Sees a Strong 2016, Closes 19 Buyouts  
 01/17/17-7:21AM EST Zacks

Pure Cycle (PCYO) Reports Narrower-than-Expected Q1 Loss  
 01/05/17-7:47AM EST Zacks

American Water Unit to Invest \$2.7M in Pipeline Replacement  
 12/20/16-6:13AM EST Zacks

[More Zacks News for CTWS »](#)

### Other News For CTWS

CTWS Dividend Yield Pushes Above 2%  
 03/01/17-2:15AM EST Dividend Channel

White House begins unwinding water regulations,...  
 02/28/17-10:12AM EST Thefly.com

Connecticut Water Service, Inc. Completes...  
 02/27/17-4:55PM EST GlobeNewswire

Vanguard reports 5.81% passive stake in...  
 02/10/17-9:45AM EST Thefly.com

Connecticut Water Service, Inc. Declares Dividends...  
 01/23/17-9:15AM EST GlobeNewswire



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## Middlesex Water Company (MSEX)

(Delayed Data From NSDQ)

**\$38.57 USD**

+0.19 (0.50%)

Updated Mar 2, 2017 03:59 PM ET

Volume: 29,192

Open: \$38.12

Prior Close: \$38.38

Zacks Rank [?]:

Style Scores [?]:

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[Trades from \\$3](#)

3-Hold ■ ■ ■ ■ ■

Value: **D** | Growth: **C** | Momentum: **C** | VGM: **D**

[View All Zacks Rank #1 Strong Buys](#)

### Quote Overview

Enter Symbol

#### Stock Activity

Open	38.12
Day Low	37.73
Day High	38.90
52 Wk Low	26.46
52 Wk High	44.48
Avg. Volume	37,759
Market Cap	625.17 M
Dividend	0.85 ( 2.20%)
Beta	0.42

#### Key Earnings Data

Forward PE	24.92
PEG Ratio	NA
Current Qtr Est	0.29
Current Yr Est	1.54
Most Accurate Est	0.29
Qtr Earnings ESP [?]	0.00%
Exp Earnings Date	3/3/17
Prior Year EPS	1.22
Exp EPS Growth (3-5yr)	NA

Utilities » Utility - Water Supply

### Research Report For MSEX

Snapshot

[All Zacks' Analyst Reports »](#)

### Zacks News For MSEX

Can The Uptrend Continue for Middlesex Water (MSEX)?  
04/15/16-7:46AM EST Zacks

American Water Works Hits 52-Week High on Steady Growth  
04/08/16-11:50AM EST Zacks

MSEX: What are Zacks experts saying now?  
Zacks Private Portfolio Services

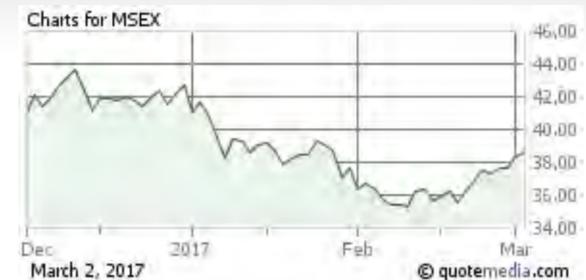
The York Water Company Upped to Strong Buy; Here's Why  
04/07/16-10:10AM EST Zacks

American Water Works Unit to Buy Sewer Utility for \$195M  
03/31/16-12:40PM EST Zacks

SABESP Shows Solid Potential, Benefits from Big Client Base  
03/30/16-9:20AM EST Zacks

[More Zacks News for MSEX »](#)

### Chart for MSEX



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### Other News For MSEX

Tidewater Utilities Affiliate, White Marsh...  
03/02/17-2:40PM EST GlobeNewswire

White House begins unwinding water regulations,...  
02/28/17-10:12AM EST Thefly.com

Middlesex Water Company Names David Brogle...  
02/27/17-2:14PM EST GlobeNewswire

MSEX Makes Bullish Cross Above Critical Moving...  
02/24/17-10:45AM EST Energy Stock Channel

Middlesex Water initiated with a Neutral at Janney...  
02/17/17-6:00AM EST Thefly.com



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## SJW Corporation (SJW)

(Delayed Data From NYSE)

**\$50.26 USD**

+1.20 (2.45%)

Updated Mar 2, 2017 04:02 PM ET

Volume: 91,244

Open: \$49.01

Prior Close: \$49.06

Zacks Rank <sup>[?]</sup>:

Style Scores <sup>[?]</sup>:

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2-Buy 2

Value: **C** | Growth: **D** | Momentum: **A** | VGM: **C**

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### Quote Overview

#### Stock Activity

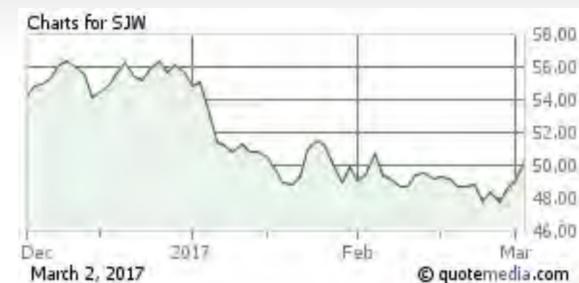
Open	49.01
Day Low	48.81
Day High	50.30
52 Wk Low	31.38
52 Wk High	56.93
Avg. Volume	56,602
Market Cap	1.01 B
Dividend	0.87 ( 1.77%)
Beta	0.22

#### Key Earnings Data

Forward PE	22.82
PEG Ratio	NA
Current Qtr Est	0.22
Current Yr Est	2.15
Most Accurate Est	0.22
Qtr Earnings ESP <sup>[?]</sup>	0.00%
Exp Earnings Date	4/26/17
Prior Year EPS	2.41
Exp EPS Growth (3-5yr)	NA

Utilities » Utility - Water Supply

### Chart for SJW



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### Research Report For SJW

[Snapshot](#)

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### Zacks News For SJW

Is it Time to Add American Water Works (AWK) to Portfolio?  
 03/02/17-8:55AM EST Zacks

Pure Cycle (PCYO) Acquires Water Service Rights for \$1.6M  
 12/20/16-6:26AM EST Zacks

**SJW: What are Zacks experts saying now?**  
 Zacks Private Portfolio Services

American Water Unit to Invest \$2.7M in Pipeline Replacement  
 12/20/16-6:13AM EST Zacks

SABESP's Long-Term Potential Solid, Runs Near-Term Risks  
 12/19/16-5:16AM EST Zacks

American Water Unit to Invest \$3.6M in Infrastructure Upgrade  
 12/09/16-8:54AM EST Zacks

[More Zacks News for SJW »](#)

### Other News For SJW

SJW's (SJW) CEO Richard Roth on Q4 2016...  
 02/23/17-5:31AM EST Seeking Alpha

SJW posts 4Q profit  
 02/23/17-5:02AM EST Associated Press, The

SJW Corp. 2016 Q4 - Results - Earnings Call Slides  
 02/23/17-1:15AM EST Seeking Alpha

SJW Group Announces 2016 Annual and Fourth...  
 02/22/17-6:00PM EST Business Wire

SJW beats by \$0.02, beats on revenue  
 02/22/17-5:15AM EST Seeking Alpha



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## The York Water Company (YORW)

(Delayed Data From NSDQ)

**\$36.80 USD**

0.00 (0.00%)

Updated Mar 2, 2017 03:59 PM ET

Volume: 14,385

Open: \$36.70

Prior Close: \$36.80

Zacks Rank <sup>[?]</sup>:

Style Scores <sup>[?]</sup>:

[+](#) Add to portfolio

[Trades from](#) **\$3**

3-Hold ■ ■ ■ ■ ■

Value: **F** | Growth: **F** | Momentum: **D** | VGM: **F**

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## Quote Overview

Enter Symbol

### Stock Activity

Open 36.70

Day Low 36.50

Day High 36.95

52 Wk Low 26.54

52 Wk High 39.85

Avg. Volume 20,564

Market Cap 472.55 M

Dividend 0.64 ( 1.74%)

Beta 0.58

### Key Earnings Data

Forward PE 35.73

PEG Ratio NA

Current Qtr Est NA

Current Yr Est 1.03

Most Accurate Est NA

Qtr Earnings ESP <sup>[?]</sup> 0.00%

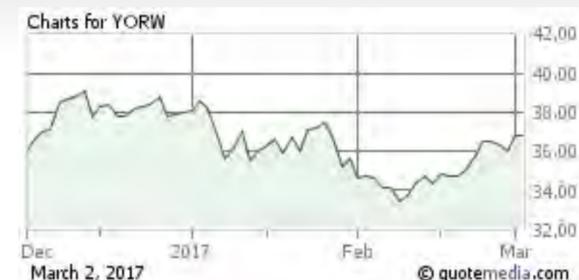
Exp Earnings Date 3/14/17

Prior Year EPS 0.97

Exp EPS Growth (3-5yr) **NA**

Utilities » Utility - Water Supply

## Chart for YORW



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## Research Report For YORW

[Snapshot](#)

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## Zacks News For YORW

Aqua America Issues 2017 Outlook, Customer Base to Grow  
 01/18/17-7:43AM EST Zacks

American Water Gains from Investments, Regulations a Woe  
 01/03/17-7:41AM EST Zacks

**YORW: What are Zacks experts saying now?**  
 Zacks Private Portfolio Services

American Water Unit Acquires Scranton Wastewater System  
 12/30/16-7:25AM EST Zacks

SABESP's Long-Term Potential Solid, Runs Near-Term Risks  
 12/19/16-5:16AM EST Zacks

Aqua America: Prudent Buyouts Impress, Regulations a Woe  
 12/02/16-2:31PM EST Zacks

[More Zacks News for YORW »](#)

## Other News For YORW

York Water goes ex-dividend tomorrow  
 02/23/17-7:00AM EST Seeking Alpha

YORW Ex-Dividend Reminder  
 02/22/17-9:30AM EST Dividend Channel

Weekly CFO Buys Highlight  
 01/20/17-4:30AM EST GuruFocus

First National Bank & Trust Co Of Newtown Buys...  
 01/18/17-1:30AM EST GuruFocus

Ex-Div Reminder for York Water (YORW)  
 12/27/16-9:45AM EST Dividend Channel

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<b>S&amp;P 500</b> 2,381.92 -14.04 (-0.59%)	<b>Dow 30</b> 21,002.97 -112.58 (-0.53%)
---	--

**American States Water Company (AWR)**  
NYSE - NYSE Delayed Price. Currency in USD

Add to watchlist

Quote Lookup

**44.84** -0.05 (-0.11%)  
At close: 4:02PM EST

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Currency in USD

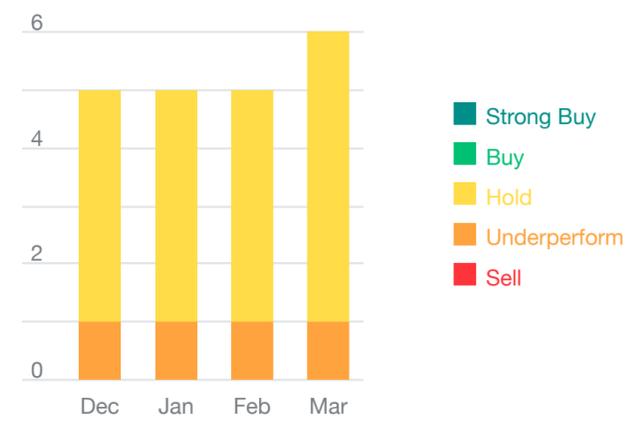
Earnings Estimate	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
No. of Analysts	3	3	6	6
Avg. Estimate	0.34	0.44	1.7	1.82
Low Estimate	0.31	0.43	1.65	1.72
High Estimate	0.38	0.45	1.75	1.9
Year Ago EPS	0.28	0.45	1.62	1.7

Revenue Estimate	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
No. of Analysts	2	2	5	5
Avg. Estimate	99.92M	112.47M	460.7M	477.9M
Low Estimate	95M	107M	446M	462M
High Estimate	104.84M	117.93M	482M	494M
Year Ago Sales	93.53M	111.95M	436.09M	460.7M
Sales Growth (year/est)	6.80%	0.50%	5.60%	3.70%

Earnings History	3/30/2016	6/29/2016	9/29/2016	12/30/2016
EPS Est.	0.32	0.44	0.58	0.3
EPS Actual	0.28	0.45	0.59	0.3
Difference	-0.04	0.01	0.01	N/A
Surprise %	-12.50%	2.30%	1.70%	N/A

EPS Trend	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
Current Estimate	0.34	0.44	1.7	1.82
7 Days Ago	0.36	0.44	1.71	1.85
30 Days Ago	0.36	0.44	1.73	1.86
60 Days Ago	0.46	0.6	1.73	1.87

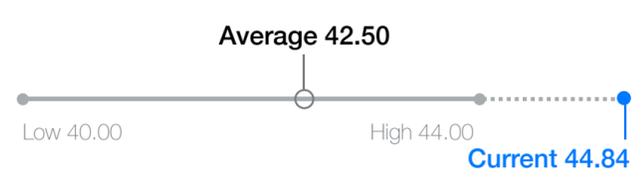
Recommendation Trends



Recommendation Rating



Analyst Price Targets (4)



Upgrades & Downgrades

Upgrade    Ladenburg Thalmann: Sell to Neutral    5/11/2016

90 Days Ago 0.34 0.46 1.73 1.88

EPS Revisions	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
Up Last 7 Days	N/A	1	1	N/A
Up Last 30 Days	N/A	1	1	N/A
Down Last 30 Days	1	1	2	1
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Estimates	AWR	Industry	Sector	S&P 500
Current Qtr.	21.40%	N/A	N/A	0.15
Next Qtr.	-2.20%	N/A	N/A	0.21
Current Year	4.90%	N/A	N/A	0.07
Next Year	7.10%	N/A	N/A	0.10
Next 5 Years (per annum)	5.05%	N/A	N/A	0.09
Past 5 Years (per annum)	7.11%	N/A	N/A	N/A

- ↓ Downgrade Ladenburg Thalmann: Neutral to Sell 2/26/2016

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- ↓ Downgrade Brean Capital: Buy to Hold 10/31/2014

---

- ↑ Upgrade Brean Capital: Buy 2/28/2014

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- ↓ Downgrade Ladenburg Thalmann: Buy 2/24/2014

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- ↓ Downgrade Brean Capital: Buy to Hold 10/22/2013

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(Ⓞ) US Markets are closed

<b>S&amp;P 500</b>	<b>Dow 30</b>
2,381.92	21,002.97
-14.04 (-0.59%)	-112.58 (-0.53%)

## American Water Works Company, Inc. (AWK)

NYSE - NYSE Delayed Price. Currency in USD

☆ Add to watchlist

Quote Lookup



# 77.84 +0.18 (+0.23%)

At close: 4:00PM EST

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Currency in USD

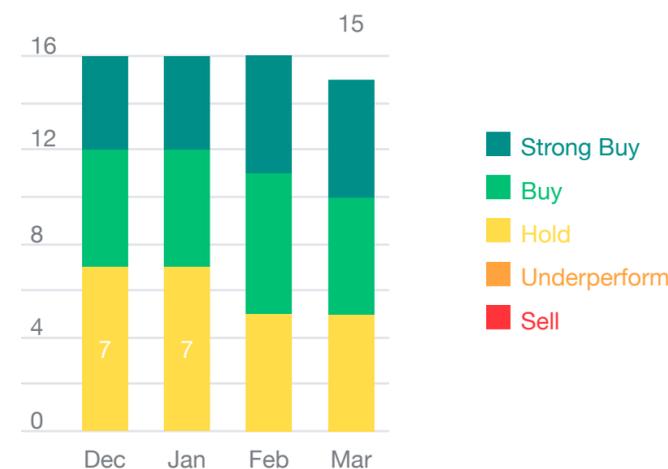
Earnings Estimate	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
No. of Analysts	8	8	12	14
Avg. Estimate	0.54	0.81	3.05	3.28
Low Estimate	0.49	0.74	3.01	3.19
High Estimate	0.59	0.89	3.12	3.4
Year Ago EPS	0.46	0.77	2.84	3.05

Revenue Estimate	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
No. of Analysts	6	6	7	10
Avg. Estimate	761.49M	866.53M	3.46B	3.66B
Low Estimate	706.56M	851.8M	3.4B	3.54B
High Estimate	793.68M	885.5M	3.51B	3.82B
Year Ago Sales	743M	827M	3.3B	3.46B
Sales Growth (year/est)	2.50%	4.80%	4.90%	5.60%

Earnings History	3/30/2016	6/29/2016	9/29/2016	12/30/2016
EPS Est.	0.46	0.73	1.01	0.57
EPS Actual	0.46	0.77	1.05	0.57
Difference	N/A	0.04	0.04	N/A
Surprise %	N/A	5.50%	4.00%	N/A

EPS Trend	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
Current Estimate	0.54	0.81	3.05	3.28

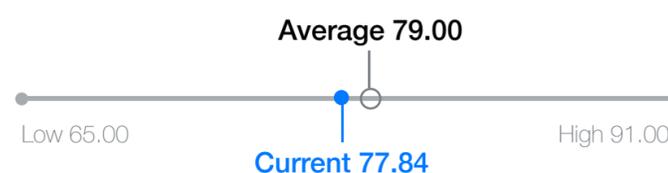
### Recommendation Trends >



### Recommendation Rating >



### Analyst Price Targets (12) >



7 Days Ago	0.28	0.35	1.38	1.45
30 Days Ago	0.28	0.35	1.39	1.46
60 Days Ago	0.29	0.35	1.39	1.48
90 Days Ago	0.29	0.35	1.39	1.48

EPS Revisions	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
Up Last 7 Days	1	1	N/A	N/A
Up Last 30 Days	1	1	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	1
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Estimates	WTR	Industry	Sector	S&P 500
Current Qtr.	N/A	N/A	N/A	0.15
Next Qtr.	6.10%	N/A	N/A	0.21
Current Year	4.50%	N/A	N/A	0.07
Next Year	5.10%	N/A	N/A	0.10
Next 5 Years (per annum)	5.25%	N/A	N/A	0.09
Past 5 Years (per annum)	11.15%	N/A	N/A	N/A

## Upgrades & Downgrades >

	Robert W. Baird: Neutral	10/14/2016
	<b>Docket No. 16060150</b> Ladenburg Thalmann: Buy to Neutral	1/7/2016
↓ Downgrade	Hilliard Lyons: Long-term Buy to Neutral	7/22/2015
	Ladenburg Thalmann: Buy	9/12/2013
↑ Upgrade	Hilliard Lyons: Neutral to Long-term Buy	11/5/2012
↓ Downgrade	Hilliard Lyons: Long-term Buy to Neutral	7/18/2012

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**S&P 500**  
2,381.92  
-14.04 (-0.59%)

**Dow 30**  
21,002.97  
-112.58 (-0.53%)

**Aqua America, Inc. (WTR)**

NYSE - NYSE Delayed Price. Currency in USD

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Quote Lookup



**32.01** +0.33 (+1.04%)

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Currency in USD

Earnings Estimate	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
No. of Analysts	5	5	10	9
Avg. Estimate	0.29	0.35	1.38	1.45
Low Estimate	0.27	0.33	1.34	1.41
High Estimate	0.3	0.37	1.43	1.5
Year Ago EPS	0.29	0.33	1.32	1.38

Revenue Estimate	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
No. of Analysts	3	3	7	7
Avg. Estimate	193.8M	210.32M	849.44M	907.07M
Low Estimate	190.98M	204.95M	830.96M	861M
High Estimate	196M	214M	876M	950.63M
Year Ago Sales	192.61M	203.88M	819.88M	849.44M
Sales Growth (year/est)	0.60%	3.20%	3.60%	6.80%

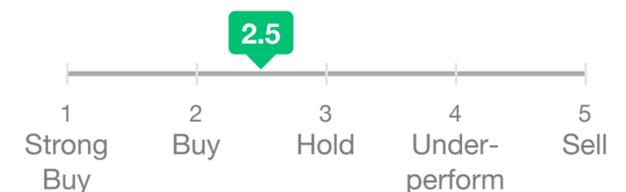
Earnings History	3/30/2016	6/29/2016	9/29/2016	12/30/2016
EPS Est.	0.28	0.33	0.4	0.29
EPS Actual	0.29	0.33	0.41	0.28
Difference	0.01	N/A	0.01	-0.01
Surprise %	3.60%	N/A	2.50%	-3.40%

EPS Trend	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
Current Estimate	0.29	0.35	1.38	1.45

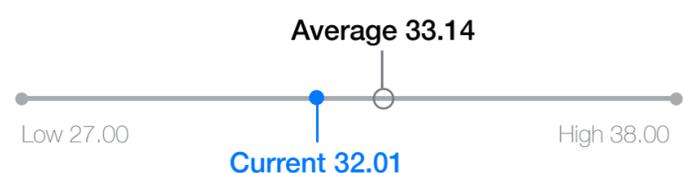
**Recommendation Trends >**

- Strong Buy
- Buy
- Hold
- Underperform
- Sell

**Recommendation Rating >**



**Analyst Price Targets (7) >**



7 Days Ago	0.53	0.81	3.04	3.27
30 Days Ago	0.54	0.82	3.04	3.26
60 Days Ago	0.53	0.79	3.04	3.26
90 Days Ago	0.53	0.79	3.05	3.26

EPS Revisions	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	1	2	3	1
Down Last 30 Days	N/A	N/A	1	N/A
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Estimates	AWK	Industry	Sector	S&P 500
Current Qtr.	17.40%	N/A	N/A	0.15
Next Qtr.	5.20%	N/A	N/A	0.21
Current Year	7.40%	N/A	N/A	0.07
Next Year	7.50%	N/A	N/A	0.10
Next 5 Years (per annum)	7.40%	N/A	N/A	0.09
Past 5 Years (per annum)	9.08%	N/A	N/A	N/A

## Upgrades & Downgrades >

	Macquarie: Neutral	1/18/2017
	<b>Docket No. 16060150</b>	
<b>↑ Upgrade</b>	BofA/Merrill: Neutral to Buy	11/9/2016
	Robert W. Baird: Outperform	10/14/2016
<b>↓ Downgrade</b>	BofA/Merrill: Buy to Neutral	7/6/2016
<b>↓ Downgrade</b>	Ladenburg Thalmann: Buy to Neutral	10/15/2015
	Goldman: Neutral	6/29/2015

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<b>S&amp;P 500</b> 2,381.92 -14.04 (-0.59%)	<b>Dow 30</b> 21,002.97 -112.58 (-0.53%)	<b>Nasdaq</b> 5,861.22 -42.81 (-0.73%)
---	--	--

## California Water Service Group (CWT)

NYSE - NYSE Delayed Price. Currency in USD

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**37.10** +0.10 (+0.27%)

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Currency in USD

Earnings Estimate	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
No. of Analysts	4	4	8	8
Avg. Estimate	0.11	0.34	1.3	1.4
Low Estimate	0.03	0.3	1.21	1.28
High Estimate	0.26	0.39	1.39	1.51
Year Ago EPS	-0.02	0.24	1.01	1.3

Revenue Estimate	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
No. of Analysts	2	2	5	5
Avg. Estimate	129.82M	165.31M	650.86M	671.99M
Low Estimate	129.64M	163M	637M	656M
High Estimate	130M	167.62M	658M	683.9M
Year Ago Sales	121.73M	152.44M	609.37M	650.86M
Sales Growth (year/est)	6.60%	8.40%	6.80%	3.20%

Earnings History	3/30/2016	6/29/2016	9/29/2016	12/30/2016
EPS Est.	0.03	0.24	0.57	0.2
EPS Actual	-0.02	0.24	0.48	0.31
Difference	-0.05	N/A	-0.09	0.11
Surprise %	-166.70%	N/A	-15.80%	55.00%

EPS Trend	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
Current Estimate	0.11	0.34	1.3	1.4
7 Days Ago	0.17	0.34	1.31	1.41

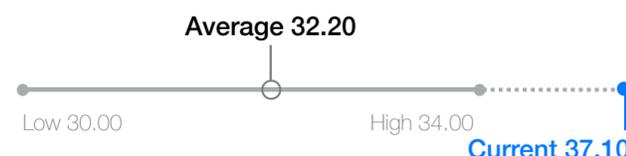
### Recommendation Trends >

- Strong Buy
- Buy
- Hold
- Underperform
- Sell

### Recommendation Rating >



### Analyst Price Targets (5) >



### Upgrades & Downgrades >

90 Days Ago 0.09 N/A 2.17 2.25

EPS Revisions	Current Qtr. (Dec 2016)	Next Qtr. (Mar 2017)	Current Year	Next Year
Up Last 7 Days	1	N/A	1	N/A
Up Last 30 Days	1	N/A	1	N/A
Down Last 30 Days	N/A	N/A	N/A	1
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Estimates	CTWS	Industry	Sector	S&P 500
Current Qtr.	-45.00%	N/A	N/A	0.15
Next Qtr.	N/A	N/A	N/A	0.21
Current Year	5.90%	N/A	N/A	0.07
Next Year	3.70%	N/A	N/A	0.10
Next 5 Years (per annum)	5.65%	N/A	N/A	0.09
Past 5 Years (per annum)	14.39%	N/A	N/A	N/A

- ↓ Downgrade Wells Fargo: Outperform to Market Perform 2/1/2016
- ↑ Upgrade Wells Fargo: Market Perform to Outperform 5/15/2015
- ↑ Upgrade Boenning & Scattergood: Neutral to Outperform 8/13/2013

Docket No. 16060150  
 Exhibit MFG-22  
 Schedule 2, page 8 of 16
- ↑ Upgrade Robert W. Baird: Neutral to Outperform 8/13/2013
- ↑ Upgrade Ladenburg Thalmann: Neutral to Buy 11/13/2012

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<b>S&amp;P 500</b> 2,381.92 -14.04 (-0.59%)	<b>Dow 30</b> 21,002.97 -112.58 (-0.53%)
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**Connecticut Water Service, Inc. (CTWS)**  
NasdaqGS - NasdaqGS Real Time Price. Currency in USD

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**58.83** +0.94 (+1.62%)  
At close: 4:00PM EST

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Currency in USD

Earnings Estimate	Current Qtr. (Dec 2016)	Next Qtr. (Mar 2017)	Current Year	Next Year
No. of Analysts	2	N/A	3	2
Avg. Estimate	0.11	N/A	2.16	2.24
Low Estimate	0.1	N/A	2.11	2.22
High Estimate	0.11	N/A	2.24	2.25
Year Ago EPS	0.2	0.28	2.04	2.16

Revenue Estimate	Current Qtr. (Dec 2016)	Next Qtr. (Mar 2017)	Current Year	Next Year
No. of Analysts	1	N/A	3	3
Avg. Estimate	22.15M	N/A	99.41M	109.15M
Low Estimate	22.15M	N/A	98M	106M
High Estimate	22.15M	N/A	101M	114.46M
Year Ago Sales	20.94M	N/A	96.04M	99.41M
Sales Growth (year/est)	5.80%	N/A	3.50%	9.80%

Earnings History	12/30/2015	3/30/2016	6/29/2016	9/29/2016
EPS Est.	0.21	0.32	0.72	0.82
EPS Actual	0.2	0.28	0.89	0.84
Difference	-0.01	-0.04	0.17	0.02
Surprise %	-4.80%	-12.50%	23.60%	2.40%

EPS Trend	Current Qtr. (Dec 2016)	Next Qtr. (Mar 2017)	Current Year	Next Year
Current Estimate	0.11	N/A	2.16	2.24
7 Days Ago	0.1	N/A	2.15	2.25
30 Days Ago	0.1	N/A	2.15	2.25
60 Days Ago	0.09	N/A	2.15	2.25

**Recommendation Trends >**

- Strong Buy
- Buy
- Hold
- Underperform
- Sell

**Recommendation Rating >**



**Analyst Price Targets (2) >**



**Upgrades & Downgrades >**

Barclays: Equal Weight 9/6/2016

30 Days Ago	0.17	0.34	1.31	1.41
60 Days Ago	0.08	0.34	1.31	1.41
90 Days Ago	0.08	0.34	1.31	1.41

EPS Revisions	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
Up Last 7 Days	N/A	N/A	1	N/A
Up Last 30 Days	N/A	N/A	1	2
Down Last 30 Days	N/A	N/A	1	N/A
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Estimates	CWT	Industry	Sector	S&P 500
Current Qtr.	650.00%	N/A	N/A	0.15
Next Qtr.	41.70%	N/A	N/A	0.21
Current Year	28.70%	N/A	N/A	0.07
Next Year	7.70%	N/A	N/A	0.10
Next 5 Years (per annum)	7.35%	N/A	N/A	0.09
Past 5 Years (per annum)	14.33%	N/A	N/A	N/A

- ↓ Downgrade** Wells Fargo: Market Perform to Underperform 2/24/2017
- Macquarie: Neutral 1/18/2017  
Docket No. 16060150  
Exhibit MFG-22  
Schedule 2, page 10 of 16
- Robert W. Baird: Neutral 10/14/2016
- Barclays: Equal Weight 4/4/2016
- ↓ Downgrade** Gabelli & Co: Buy to Hold 3/7/2016
- ↓ Downgrade** Robert W. Baird: Outperform to Neutral 2/26/2016

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<b>S&amp;P 500</b> 2,381.92 -14.04 (-0.59%)	<b>Dow 30</b> 21,002.97 -112.58 (-0.53%)	<b>Nasdaq</b> 5,861.22 -42.81 (-0.73%)
---	--	--

**Middlesex Water Company (MSEX)**

NasdaqGS - NasdaqGS Real Time Price. Currency in USD

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**38.57** +0.19 (+0.50%)

At close: 4:00PM EST

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Currency in USD

Earnings Estimate	Current Qtr. (CALENDAR_MONTH_-1 0)	Next Qtr. (Mar 0)	Current Year	Next Year
No. of Analysts	N/A	N/A	1	1
Avg. Estimate	N/A	N/A	1.48	1.54
Low Estimate	N/A	N/A	1.48	1.54
High Estimate	N/A	N/A	1.48	1.54
Year Ago EPS	N/A	0.2	1.22	1.48

Revenue Estimate	Current Qtr. (CALENDAR_MONTH_-1 0)	Next Qtr. (Mar 0)	Current Year	Next Year
No. of Analysts	1	1	1	1
Avg. Estimate	132.73M	132.73M	132.73M	136.93M
Low Estimate	132.73M	132.73M	132.73M	136.93M
High Estimate	132.73M	132.73M	132.73M	136.93M
Year Ago Sales	126.03M	126.03M	126.03M	132.73M
Sales Growth (year/est)	5.30%	5.30%	5.30%	3.20%

**Recommendation Trends >**

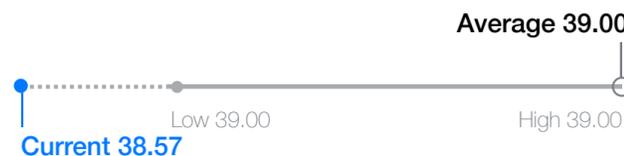
- Strong Buy
- Buy
- Hold
- Underperform
- Sell

Earnings History	Invalid Date	3/30/2014	6/29/2014	9/29/2014
EPS Est.	N/A	0.16	0.29	0.39
EPS Actual	N/A	0.2	0.29	0.42
Difference	N/A	0.04	N/A	0.03
Surprise %	N/A	25.00%	N/A	7.70%

**Recommendation Rating >**



**Analyst Price Targets (1) >**



EPS Trend	Current Qtr. (CALENDAR_MONTH_-1 0)	Next Qtr. (Mar 0)	Current Year	Next Year
Current Estimate	N/A	N/A	1.48	1.54
7 Days Ago	N/A	N/A	1.48	1.54
90 Days Ago	N/A	N/A	1.22	1.48

**Upgrades & Downgrades >**

30 Days Ago	N/A	N/A	1.3	1.37
60 Days Ago	N/A	N/A	1.3	1.37
90 Days Ago	N/A	N/A	1.3	1.37

EPS Revisions	Current Qtr. (CALENDAR_MONTH_-1 0)	Next Qtr. (Mar 0)	Current Year	Next Year
Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Estimates	MSEX	Industry	Sector	S&P 500
Current Qtr.	N/A	N/A	N/A	0.15
Next Qtr.	N/A	N/A	N/A	0.21
Current Year	21.30%	N/A	N/A	0.07
Next Year	4.10%	N/A	N/A	0.10
Next 5 Years (per annum)	2.70%	N/A	N/A	0.09
Past 5 Years (per annum)	19.89%	N/A	N/A	N/A

<b>↑ Upgrade</b>	Janney Mntgmy Scott: Neutral to Buy	5/7/2008
<b>↑ Upgrade</b>	Boenning & Scattergood: Market Perform to Market Outperform	11/8/2007 Docket No. 16060150 Exhibit MFG-22
<b>↓ Downgrade</b>	Janney Mntgmy Scott: Buy to Neutral	8/8/2007 of 16
	Boenning & Scattergood: Market Perform	11/7/2006
	Janney Mntgmy Scott: Buy	8/25/1999

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Docket No. 16060150  
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Schedule 2, page 13 of 16

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<b>S&amp;P 500</b> 2,381.92 -14.04 (-0.59%)	<b>Dow 30</b> 21,002.97 -112.58 (-0.53%)	<b>Nasdaq</b> 5,861.22 -42.81 (-0.73%)
---	--	--

## SJW Group (SJW)

NYSE - NYSE Delayed Price. Currency in USD

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**50.26** +1.20 (+2.45%)

At close: 4:02PM EST

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Currency in USD

Earnings Estimate	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
No. of Analysts	1	1	1	1
Avg. Estimate	0.22	0.67	2.15	2.29
Low Estimate	0.22	0.67	2.15	2.29
High Estimate	0.22	0.67	2.15	2.29
Year Ago EPS	0.16	0.82	2.57	2.15

Revenue Estimate	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
No. of Analysts	1	1	1	1
Avg. Estimate	64M	91M	339M	346M
Low Estimate	64M	91M	339M	346M
High Estimate	64M	91M	339M	346M
Year Ago Sales	61.11M	86.94M	339.71M	339M
Sales Growth (year/est)	4.70%	4.70%	-0.20%	2.10%

Earnings History	3/30/2016	6/29/2016	9/29/2016	12/30/2016
EPS Est.	0.21	0.41	0.45	0.65
EPS Actual	0.16	0.82	0.92	0.67
Difference	-0.05	0.41	0.47	0.02
Surprise %	-23.80%	100.00%	104.40%	3.10%

### Recommendation Trends >

- Strong Buy
- Buy
- Hold
- Underperform
- Sell

### Recommendation Rating >



### Analyst Price Targets (1) >

EPS Trend	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
Current Estimate	0.22	0.67	2.15	2.29
7 Days Ago	0.22	0.67	2.07	2.21
30 Days Ago	0.22	0.67	2.07	2.21
60 Days Ago	0.22	0.67	2.07	2.21
90 Days Ago	0.22	0.67	2.07	2.21

EPS Revisions	Current Qtr. (Mar 2017)	Next Qtr. (Jun 2017)	Current Year	Next Year
Up Last 7 Days	N/A	N/A	1	1
Up Last 30 Days	N/A	N/A	1	1
Down Last 30 Days	N/A	N/A	N/A	N/A
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Estimates	SJW	Industry	Sector	S&P 500
Current Qtr.	37.50%	N/A	N/A	0.15
Next Qtr.	-18.30%	N/A	N/A	0.21
Current Year	-16.30%	N/A	N/A	0.07
Next Year	6.50%	N/A	N/A	0.10
Next 5 Years (per annum)	14.00%	N/A	N/A	0.09
Past 5 Years (per annum)	26.08%	N/A	N/A	N/A

Low 50.00

High 50.00

### Upgrades & Downgrades >

		Docket No. 16060150 Exhibit MFG-22 When Filed, page 16
<b>↑ Upgrade</b>	Robert W. Baird: Neutral to Outperform	2/22/2016
<b>↑ Upgrade</b>	Robert W. Baird: Neutral to Outperform	7/16/2014
<b>↓ Downgrade</b>	Brean Capital: Buy to Hold	8/2/2013
<b>↑ Upgrade</b>	Brean Murray: Hold to Buy	2/23/2012
	Ladenburg Thalmann: Buy	6/9/2011
<b>↑ Upgrade</b>	Brean Murray: Sell to Hold	2/24/2011

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<b>S&amp;P 500</b>	<b>Dow 30</b>
2,381.92	21,002.97
-14.04 (-0.59%)	-112.58 (-0.53%)

**The York Water Company (YORW)**  
NasdaqGS - NasdaqGS Real Time Price. Currency in USD

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Quote Lookup



**36.80** 0.00 (0.00%)

At close: 4:00PM EST

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Currency in USD

Earnings Estimate	Current Qtr. (Dec 2016)	Next Qtr. (Mar 2017)	Current Year	Next Year
No. of Analysts	1	N/A	1	1
Avg. Estimate	0.26	N/A	0.95	1.03
Low Estimate	0.26	N/A	0.95	1.03
High Estimate	0.26	N/A	0.95	1.03
Year Ago EPS	0.27	0.19	0.97	0.95

Revenue Estimate	Current Qtr. (Dec 2016)	Next Qtr. (Mar 2017)	Current Year	Next Year
No. of Analysts	1	N/A	1	1
Avg. Estimate	12.05M	N/A	47.75M	50.13M
Low Estimate	12.05M	N/A	47.75M	50.13M
High Estimate	12.05M	N/A	47.75M	50.13M
Year Ago Sales	11.62M	N/A	47.09M	47.75M
Sales Growth (year/est)	3.70%	N/A	1.40%	5.00%

**Recommendation Trends >**

- Strong Buy
- Buy
- Hold
- Underperform
- Sell

Earnings History	12/30/2015	3/30/2016	6/29/2016	9/29/2016
EPS Est.	0.23	0.2	0.23	0.28
EPS Actual	0.27	0.19	0.23	0.27
Difference	0.04	-0.01	N/A	-0.01
Surprise %	17.40%	-5.00%	N/A	-3.60%

**Recommendation Rating >**



**Analyst Price Targets (1) >**



EPS Trend	Current Qtr. (Dec 2016)	Next Qtr. (Mar 2017)	Current Year	Next Year
Current Estimate	0.26	N/A	0.95	1.03

7 Days Ago	0.26	N/A	0.95	1.03
30 Days Ago	0.26	N/A	0.95	1.03
60 Days Ago	0.26	N/A	0.95	1.03
90 Days Ago	0.26	N/A	0.95	1.03

EPS Revisions	Current Qtr. (Dec 2016)	Next Qtr. (Mar 2017)	Current Year	Next Year
Up Last 7 Days	N/A	N/A	N/A	N/A
Up Last 30 Days	N/A	N/A	N/A	N/A
Down Last 30 Days	N/A	N/A	N/A	N/A
Down Last 90 Days	N/A	N/A	N/A	N/A

Growth Estimates	YORW	Industry	Sector	S&P 500
Current Qtr.	-3.70%	N/A	N/A	0.15
Next Qtr.	N/A	N/A	N/A	0.21
Current Year	-2.10%	N/A	N/A	0.07
Next Year	8.40%	N/A	N/A	0.10
Next 5 Years (per annum)	4.90%	N/A	N/A	0.09
Past 5 Years (per annum)	9.10%	N/A	N/A	N/A

## Upgrades & Downgrades >

- ↑ Upgrade Boenning & Scattergood: Neutral to Outperform 2/3/2015  
Docket No. 16060150  
 Boenning & Scattergood: Neutral Exhibit MFC-22 Schedule 2, page 16 of 16 10/13/2011
- ↑ Upgrade Brean Murray: Hold to Buy 3/9/2011
- ↓ Downgrade Brean Murray: Buy to Hold 12/10/2010
- Brean Murray: Buy 4/27/2009
- ↑ Upgrade Janney Mntgmy Scott: Neutral to Buy 7/25/2008

[More Upgrades & Downgrades](#)

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STATE OF NEW JERSEY  
BOARD OF PUBLIC UTILITIES  
TRENTON, NEW JERSEY

BOARD AGENDA

DATE: WEDNESDAY, FEBRUARY 22, 2017

ITEM 2B  
ENERGY

-----  
DOCKET NOS.: BPU ER16050428  
AND OAL PUC 12099-16

IN THE MATTER OF THE VERIFIED  
PETITION OF ROCKLAND ELECTRIC  
COMPANY FOR APPROVAL OF  
CHANGES IN ELECTRIC RATES,  
ITS TARIFF FOR ELECTRIC  
SERVICE, AND ITS DEPRECIATION  
RATES; APPROVAL OF AN  
ADVANCED METERING PROGRAM;  
AND FOR OTHER RELIEF  
("2016 BASE RATE FILING").  
-----

BEFORE: PRESIDENT RICHARD S. MROZ  
COMMISSIONER JOSEPH L. FIORDALISO  
COMMISSIONER MARY-ANNA HOLDEN  
COMMISSIONER DIANNE SOLOMON  
COMMISSIONER UPENDRA J. CHIVUKULA

J.H. BUEHRER & ASSOCIATES  
884 BREEZY OAKS DRIVE  
TOMS RIVER, NJ 08753  
(732) 295-1975

♀

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1           2B - Energy - February 22 2017.txt  
2           PRESIDENT MROZ: All right. We now move on  
3           to our regular agenda items. The regular agenda items,  
4           there are no items from the Audits Division.

5                     Under the Energy Division, we've disposed of  
6           2A and move to 2B which is the matter of Rockland  
7           Electric Company which is their 2016 rate -- base rate  
8           case filing.

9                     Mr. Walker, good morning.

10                    MR. WALKER: Good morning, President Mroz.  
11                    Good morning, Commissioners.

12                    COMMISSIONER FIORDALISO: Good morning.

13                    MR. WALKER: As President Mroz indicated,  
14           Item 2B is regarding a base rate case filed by Rockland  
15           Electric Company on May 13th, 2016.

16                    The company in their filing was initially  
17           asking for 9.6 million and a return on equity of 9.75.  
18           They were using a test year through the end of 2016.  
19           It was a base rate increase plus an AMI program.

20                    They were asking for the increase based on  
21           taxes, interest rates affecting financing, also  
22           inflation of labor, materials, pensions -- things along  
23           those lines.

24                    The Board suspended the rates until the  
25           matter could be heard through February 12th of this  
26           year.

♀

3

1                    In October of 2016, the AMI portion was  
2           bifurcated from the filing. That was made separately  
3           and will be handled in a whole separate docket.

4                    The case was filed with the OAL. Through  
5                    Page 2

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5 various submissions of actuals and meetings, a  
6 stipulation was reached between all parties on  
7 February 8th of this year. The stipulation indicated  
8 that the revenue requirement would be reduced to  
9 \$1.7 million. The return on equity would be reduced to  
10 9.6 percent. They would continue the storm reservice  
11 deficiency annualized recovery until the end of  
12 July 2018.

13 The stipulation again confirmed the AMI  
14 removed from the settlement. And if there was some  
15 storm-hardening costs from the 2014 order by the Board,  
16 that was included in the base rate filing.

17 The impact to the typical customer will be  
18 \$2.10 annualized monthly and that will be an increase.

19 So staff is recommending that the Board adopt  
20 the stipulation effective March 1st, 2017, with  
21 applicable tariffs being filed by the company.

22 COMMISSIONER FIORDALISO: So moved.

23 COMMISSIONER HOLDEN: Second.

24 PRESIDENT MROZ: We have a motion and a  
25 second.

♀

4

1 I have just one question to clarify, Tom.  
2 You did indicate that the original filing included the  
3 company's infrastructure upgrades of advanced metering  
4 infrastructure and that that component of the case has  
5 been bifurcated, as you indicated. And I think  
6 Commissioner Chivukula is the hearing officer in that  
7 matter as proceeding on a separate track so that is not

8           2B - Energy - February 22 2017.txt  
9           in front of us. The financial terms of the rate case  
10          filing of are what we're doing with this, you've just  
11          outlined.

12                   Correct?

13                   MR. WALKER: Correct, sir.

14                   PRESIDENT MROZ: Thank you.

15                   Other questions or comments?

16                   Okay. All right. Take a vote.

17                   SECRETARY ASBURY: Commissioner Fiordaliso?

18                   COMMISSIONER FIORDALISO: Yes.

19                   SECRETARY ASBURY: Commissioner Holden?

20                   COMMISSIONER HOLDEN: Yes.

21                   SECRETARY ASBURY: Commissioner Solomon?

22                   COMMISSIONER SOLOMON: Yes.

23                   SECRETARY ASBURY: Commissioner Chivukula?

24                   COMMISSIONER CHIVUKULA: Yes.

25                   SECRETARY ASBURY: President Mroz?

                  PRESIDENT MROZ: Yes.

5

1                   SECRETARY ASBURY: So moved.

2                   PRESIDENT MROZ: Thank you.

3                   (Whereupon recommendation of staff was approved.)

4                   (Item 2B - Energy Concluded.)

5

6                   CERTIFICATE

7

8                   I, Lorin Thompson, a Notary Public and  
9                   Shorthand Reporter of the State of New Jersey, do  
10                  hereby certify as follows:

11                  I do further certify that the foregoing is a

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12 true and accurate transcript of the testimony as taken  
13 stenographically by and before me at the time, place  
14 and on the date hereinbefore set forth.

15 I do further certify that I am neither a  
16 relative nor employee nor attorney nor counsel of any  
17 of the parties to this action, and that I am neither a  
18 relative nor employee of such attorney or counsel, and  
19 that I am not financially interested in the action.

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Notary Public of the State of New Jersey  
My commission expires July 26, 2021

Dated: February 22, 2017