

State of Florida



## Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

**-M-E-M-O-R-A-N-D-U-M-**

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**DATE:** June 3, 2021

**TO:** Office of Commission Clerk (Teitzman)

**FROM:** Division of Accounting and Finance (Osorio, D. Buys, Cicchetti) *ALM*  
Office of the General Counsel (Lherisson) *JSC*

**RE:** Docket No. 20210006-WS – Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.

**AGENDA:** 06/15/21 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

**COMMISSIONERS ASSIGNED:** All Commissioners

**PREHEARING OFFICER:** Graham

**CRITICAL DATES:** None

**SPECIAL INSTRUCTIONS:** None

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### Case Background

Section 367.081(4)(f), Florida Statutes (F.S.), authorizes the Commission to establish, not less than once each year, a leverage formula to calculate a reasonable range of returns on equity (ROE) for water and wastewater (WAW) utilities. The current leverage formula methodology was established in Order No. PSC-2001-2514-FOF-WS.<sup>1</sup> On October 23, 2008, the Commission held a formal hearing in Docket No. 20080006-WS to allow interested parties to provide testimony regarding the validity of the leverage formula.<sup>2</sup> Based on the record in that proceeding,

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<sup>1</sup>Order No. PSC-2001-2514-FOF-WS, issued December 24, 2001, in Docket No. 20010006-WS, *In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity of water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.*

<sup>2</sup>At the May 20, 2008, Commission Conference, upon request of the Office of Public Counsel, the Commission voted to set the establishment of the appropriate leverage formula directly for hearing.

the Commission approved the 2008 leverage formula in Order No. PSC-2008-0846-FOF-WS.<sup>3</sup> In that order, the Commission reaffirmed the methodology that was previously approved in Order No. PSC-2001-2514-FOF-WS.<sup>4</sup>

From 2012 through 2017, the Commission found that the range of returns on equity derived from the annual leverage formulas were not optimal for determining the appropriate authorized ROE for WAW utilities due to Federal Reserve monetary policies that resulted in historically low interest rates. Consequently, the Commission decided it was reasonable to continue using the range of returns on equity of 8.74 percent to 11.16 percent from the 2011 leverage formula approved in Order No. PSC-2011-0287-PAA-WS until 2018.<sup>5</sup>

On November 8, 2017, Commission staff held a workshop to solicit input from interested parties regarding potential changes to the leverage formula methodology. The only parties that filed pre-workshop comments in the docket were the Office of Public Counsel (OPC) and Utilities, Inc. of Florida (UIF). OPC also filed post-workshop comments on January 31, 2018. On June 26, 2018, the Commission approved the modified version of the leverage formula in Order No. PSC-2018-0327-PAA-WS.<sup>6</sup> The modified methodology approved in the 2018 Order was used to establish the 2019 leverage formula.<sup>7</sup>

In 2020, the Commission determined it was not reasonable to set a range of returns on equity for setting rates prospectively using financial data that was influenced by the Covid-19 pandemic and the associated volatility in the financial markets. Therefore, the Commission determined that the leverage formula approved in Order No. PSC-2019-0267-PAA-WS (2019 leverage formula) shall remain in place and continue to be used until the leverage formula is readdressed in 2021.<sup>8</sup>

Section 367.081(4)(f), F.S., authorizes the Commission to establish a range of returns for setting the authorized ROE for WAW utilities. However, use of the leverage formula by the utilities is discretionary and a utility can file cost of equity testimony in lieu of using the leverage formula. The Commission may set an ROE for WAW utilities based on record evidence in any

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<sup>3</sup>Order No. PSC-2008-0846-FOF-WS, issued December 31, 2008, in Docket No. 20080006-WS, *In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.*

<sup>4</sup>Order No. PSC-2001-2514-FOF-WS, issued December 24, 2001, in Docket No. 20010006-WS, *In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.*

<sup>5</sup>Order No. PSC-2011-0287-PAA-WS, issued July 5, 2011, in Docket No. 20110006-WS, *In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.*

<sup>6</sup>Order No. PSC-2018-0327-PAA-WS, issued June 26, 2018, in Docket No. 20180006-WS, *In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.*

<sup>7</sup>Order No. PSC-2019-0267-PAA-WS, issued July 1, 2019, in Docket No. 20190006-WS, *In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.*

<sup>8</sup>Order No. PSC-2020-0222-PAA-WS, issued June 29, 2020, in Docket No. 20200006-WS, *In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.*

Docket No. 20210006-WS

Date: June 3, 2021

proceeding. If a utility files cost of equity testimony, the Commission will determine the appropriate ROE based on the evidentiary record in that proceeding.

The Commission has jurisdiction pursuant to Section 367.081, F.S.

## Discussion of Issues

**Issue 1:** What is the appropriate range of returns on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S.?

**Recommendation:** Staff recommends that the current leverage formula approved by the Commission in Order No. PSC-2020-0222-PAA-WS continue to be used until readdressed in 2022. Accordingly, staff recommends the following leverage formula:

$$\text{ROE} = 6.05\% + (1.80 \div \text{Equity Ratio})$$

Where the Equity Ratio = Common Equity ÷ (Common Equity + Preferred Equity + Long-Term and Short-Term Debt)

Range: 7.85 percent at 100 percent equity to 10.55 percent at 40 percent equity

The Commission should cap returns on common equity at 10.55 percent for all WAW utilities with equity ratios less than 40 percent. Imposing a cap serves to discourage imprudent financial risk. This cap is consistent with the methodology approved by Order No. PSC-2020-0222-PAA-WS. (Osorio, D. Buys)

**Staff Analysis:** Section 367.081(4)(f), F.S., authorizes the Commission to establish a leverage formula to calculate a reasonable range of returns on common equity for WAW utilities. The Commission must establish this leverage formula not less than once a year. For administrative efficiency, the leverage formula is used to determine the appropriate return for an average Florida WAW utility. Staff continues to believe the leverage formula is a sound, workable methodology that reduces the costs and administrative burdens in WAW rate cases by eliminating the need for cost of equity testimony. However, use of the leverage formula by utilities is discretionary and a utility can file cost of equity testimony in lieu of using the leverage formula. As is the case with other regulated companies under the Commission's jurisdiction, the Commission has discretion in the determination of the appropriate ROE based on the evidentiary record in a proceeding. If one or more parties in a rate case or limited proceeding file testimony in lieu of using the leverage formula, the Commission will determine the appropriate ROE based on the evidentiary record in that proceeding.

### COVID-19 Economic Impact

In light of the uncertainty and recessionary impact on the economy caused by the COVID-19 pandemic, monetary policy remains accommodative, that is, Federal Reserve officials will continue to hold the federal funds rate at a level near zero for the near future. The Federal Open Market Committee (FOMC)<sup>9</sup> voted twice in March 2020 to reduce the target range for the federal funds rate. On March 3, 2020, the FOMC decided to lower the federal funds target range from 1.50 to 1.75 percent to 1.00 to 1.25 percent.<sup>10</sup> On March 15, 2020, the FOMC decided to

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<sup>9</sup>The FOMC, a committee within the Federal Reserve System, is charged under United States law with overseeing the nation's open market operations. This Federal Reserve committee makes key decisions about interest rates and the growth of the United States money supply.

<sup>10</sup>See "Federal Reserve Issues FOMC Statement" on March 03, 2020, available at <https://www.federalreserve.gov/newsevents/pressreleases/monetary20200303a.htm>.

lower the federal funds target range from 1.00 to 1.25 percent to 0.00 to 0.25 percent, and reasoned, “The effects of the coronavirus will weigh on economic activity in the near term and pose risks to the economic outlook.”<sup>11</sup> On April 28, 2021, the FMOC voted to maintain the target range for the federal funds rate at 0.00 to 0.25 percent. In its press release, the FMOC wrote:

The Committee seeks to achieve maximum employment and inflation at the rate of 2 percent over the longer run. With inflation running persistently below this longer-run goal, the Committee will aim to achieve inflation moderately above 2 percent for some time so that inflation averages 2 percent over time and longer-term inflation expectations remain well anchored at 2 percent. The Committee expects to maintain an accommodative stance of monetary policy until these outcomes are achieved. The Committee decided to keep the target range for the federal funds rate at 0 to 1/4 percent and expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with the Committee’s assessments of maximum employment and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time.<sup>12</sup>

While longer-term interest rates are higher than they were a year ago, and are forecast to increase over the next five quarters, the FMOC has stated it will continue to keep the federal funds rate low. This puts downward pressure on the spread between the Utility 25/30-year BBB Bond Yield and the U.S. 30-year Treasury Bond Yield as demonstrated in Figure 1-1. The lower interest rates set by the FMOC effectively decrease the overall result of the leverage formula and increase the spread between the upper and lower limits of the resulting range of the cost of equity. The range of the cost of equity for the 2021 leverage formula is 7.09 percent to 9.95 percent, or 286 basis points. This greater spread means a given change in the equity ratio will result in a greater change to the cost of equity. Staff believes it is not reasonable to set a range of returns on equity for the purpose of setting rates prospectively for the average Florida WAW utility using data that is heavily influenced by the Federal Reserve’s monetary policy to keep interest rates low. Due to this unusual and unique economic situation, staff recommends the current 2020 leverage formula remain in place. This recommendation is consistent with the Commission’s decision in the 2017 leverage formula docket to continue to use the 2016 leverage formula.<sup>13</sup> In that decision, the Commission found that the range of returns on equity was too large due to the low interest rates set by the FMOC. At that time, the assumed Baa3 rated utility bond rate was 5.66 percent. In this case the assumed Baa3 rated utility bond rate is 5.18 percent; 48 basis points lower than it was in the 2017 docket.

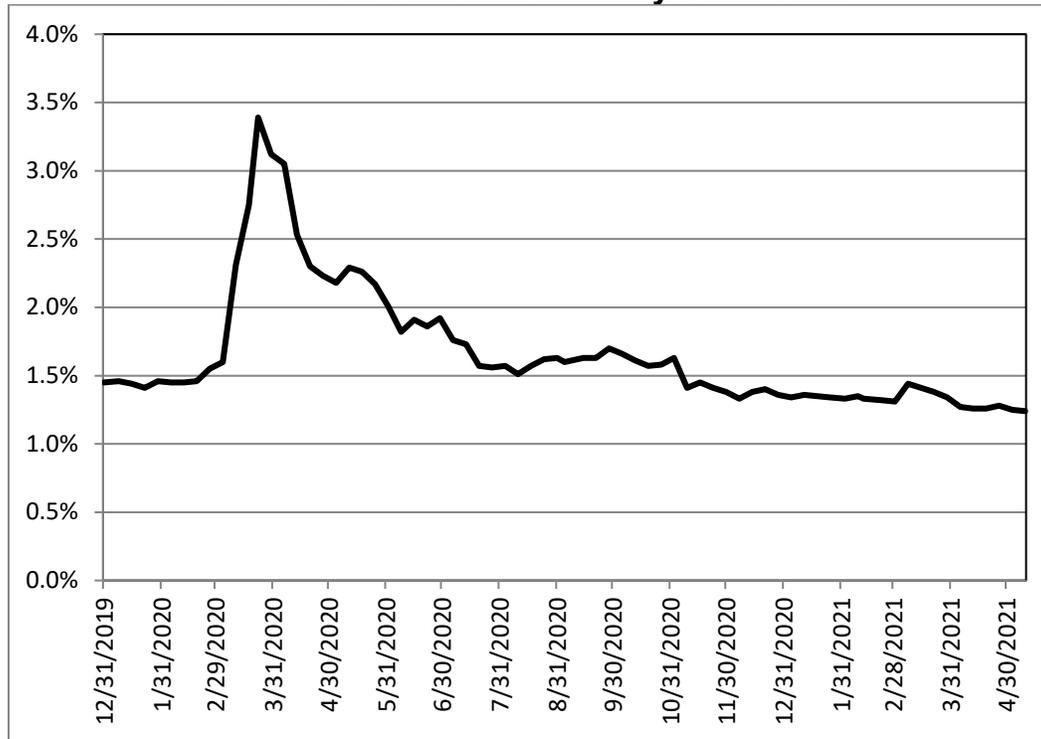
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<sup>11</sup>See “Federal Reserve Issues FMOC Statement” on March 15, 2020, available at <https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a.htm>.

<sup>12</sup>See “Federal Reserve Issues FMOC Statement on April 28, 2021, available at <https://www.federalreserve.gov/newsevents/pressreleases/monetary20210428a.htm>.

<sup>13</sup>Order No. PSC-2017-0249-PAA-WS, issued June 26, 2017, in Docket No. 20170006-WS, *In re: Water and wastewater industry annual reestablishment of authorized range of return on common equity for water and wastewater utilities pursuant to Section 367.081(4)(f), F.S*

**Figure 1-1  
 Spread between the 25/30-Year Utility BBB Bond Yield  
 and the 30-Year U.S. Treasury Bond Yield**



Source: Value Line Selection and Opinion

**Updated Leverage Formula**

Although staff recommends the 2020 leverage formula remain in place, staff has provided the updated leverage formula using the most recent financial information should the Commission decide not to continue to use the 2020 leverage formula and approve the updated leverage formula using current financial data. The updated model produced the following leverage formula:

$$\text{Return on Common Equity} = 5.18\% + (1.91 \div \text{Equity Ratio})$$

Where the Equity Ratio = Common Equity ÷ (Common Equity + Preferred Equity + Long-Term and Short-Term Debt)

Range: 7.09 percent at 100 percent equity to 9.95 percent at 40 percent equity

In conjunction with the updated leverage formula, the returns on common equity should be capped at 9.95 percent for all WAW utilities with equity ratios less than 40 percent to discourage imprudent financial risk. This cap is consistent with the modified methodology approved in Order No. PSC-2018-0327-PAA-WS.

### ***Methodology***

Staff updated the current leverage formula using the most recent financial data applied to the methodology approved in Order No. PSC-2001-2514-FOF-WS, reaffirmed in Order No. PSC-2008-0846-FOF-WS, and modified in Order No. PSC-2018-0327-PAA-WS. The methodology uses ROEs derived from widely accepted financial models applied to an index of natural gas and WAW companies that have actively traded stock and forecasted financial data. To establish the proxy group, staff selected five natural gas companies and seven WAW companies that derive at least 50 percent of their total revenue from regulated operations and have a Standard & Poor's credit rating. These selected companies have market power and are influenced significantly by economic regulation and have a median Standard & Poor's bond rating of "A."

Consistent with the approved methodology, staff used a market capitalization weighted average for: (1) the Discounted Cash Flow (DCF) model results, (2) the Beta values in the Capital Asset Pricing Model (CAPM), and (3) the equity ratio of the proxy group.

### ***Assumed Cost of Debt***

Staff used a projected yield on Baa2 rated corporate bonds to estimate the bond yield of an average Florida WAW utility in the calculation of the weighted average cost of capital of the proxy group. A projected yield is used because required returns are forward looking and based on projections.

Consistent with the methodology approved in Order No. PSC-2018-0327-PAA-WS, staff used the projected Baa2 rated corporate bond yield for the upcoming four quarters as published in the April 2021 Blue Chip Financial Forecast (Blue Chip). Staff then added the 120-month historical average spread between the Baa and A Corporate Utility Bond to the projected Baa2 rated corporate bond yield to estimate a projected Baa3 rated utility bond yield.

The projected assumed Baa3 rated utility bond yield of 5.18 percent used in the updated leverage formula calculation includes a 50 basis point adjustment for small-company risk and a 50 basis point adjustment for a private placement premium and remains low relative to historic levels. In comparison, the assumed Baa3 bond rate used in the current leverage formula is 6.05 percent. The lower Baa3 bond rate of 5.18 percent is the primary driver of the overall decrease in the results of the 2021 leverage formula compared to the 2020 leverage formula.

### ***Estimated Cost of Equity***

The current leverage formula relies on two ROE models described below. Staff adjusted the results of these models to reflect differences in risk and debt cost between the proxy group and the average Florida WAW utility. The ROE models include a four percent adjustment for flotation costs. The ROE models are as follows:

- 1) A multistage DCF model applied to an index of natural gas and WAW utilities that have publicly traded stock and are followed by Value Line. This DCF model is an annually compounded model and uses prospective dividend growth rates as published by Value Line.
- 2) A Capital Asset Pricing Model (CAPM) that relies on a market return for companies followed by Value Line, the average projected yield on 30-Year U.S. Treasury Bonds

published by Blue Chip as of April 1, 2021, and the weighted average beta for the index of natural gas and WAW utilities. The market return for the CAPM was calculated using a quarterly DCF model with stock prices as of April 16, 2021.

Consistent with Order No. PSC-2018-0327-PAA-WS, staff averaged the results of the DCF and CAPM models and adjusted the result of 7.89 percent as follows:

- 1) A bond yield differential of 53 basis points was added to reflect the difference in yields between an A/A2 rated bond, which is the median bond rating for the combined utility index, and a BBB-/Baa3 rated bond. Florida WAW utilities are assumed to be comparable to companies with the lowest investment grade bond rating which is Baa3. This adjustment compensates for the difference between the credit quality of ‘A’ rated debt and the assumed credit quality of a typical Florida WAW utility.
- 2) A private placement premium of 50 basis points is added to reflect the difference in yields on publicly traded debt and privately placed debt, which is illiquid. Investors require a premium for the lack of liquidity of privately placed debt.
- 3) A small-utility risk premium of 50 basis points is added because the average Florida WAW utility is too small to qualify for privately placed debt and smaller companies are considered by investors to be more risky than larger companies.

After the above adjustments, the resulting cost of equity estimate of 9.42 percent is included in the weighted average capital structure of the proxy group to derive the leverage formula. The derivation resulted in an adjustment of 52 basis points to reflect an estimated required return of 9.95 percent at an equity ratio of 40 percent. Table 1-1 shows the components that comprise the upper range of the leverage formula as compared between the 2020 leverage formula and the 2021 leverage formula.

**Table 1-1  
 Adjusted ROE Comparison**

Component	2020	2021
DCF Model	7.39%	6.61%
CAPM	8.97%	9.18%
Average	8.18%	7.89%
Bond Yield Differential	0.60%	0.53%
Private Placement Premium	0.50%	0.50%
Small Utility Risk Premium	0.50%	0.50%
Adjusted ROE Average	9.78%	9.42%
Adj. To Reflect Required Equity Return at a 40% Equity Ratio	0.77%	0.52%
Upper Range of ROE	10.55%	9.95%

Source: Staff worksheets.

Date: June 3, 2021

Using the most recent financial data in the leverage formula decreases the lower end of the current allowed ROE range by 76 basis points and decreases the upper end of the range by 60 basis points. Overall, the spread between the range of returns on equity based on the updated leverage formula is 286 basis points (7.09 percent to 9.95 percent). In comparison, the range of returns on equity for the current leverage formula is 270 basis points (7.85 percent to 10.55 percent).

In developing the updated leverage formula, staff acknowledges that the leverage formula depends on four basic assumptions:

- 1) Business risk is similar for all WAW utilities;
- 2) The cost of equity is an exponential function of the equity ratio but a linear function of the debt to equity ratio over the relevant range;
- 3) The marginal weighted average cost of investor capital is constant over the equity ratio range of 40 percent to 100 percent; and
- 4) The debt cost rate at an assumed Moody's Baa3 bond rating, plus a 50 point private placement premium and a 50 basis point small-utility risk premium, represents the average marginal cost of debt to an average Florida WAW utility over an equity ratio range of 40 percent to 100 percent.

For these reasons, the leverage formula is assumed to be appropriate for the average Florida WAW utility.

### **Conclusion**

In staff's opinion, the current leverage formula range of returns on equity of 7.85 percent to 10.55 percent initially approved in 2019, and continued in 2020, is still reasonable for WAW utilities. Due to the economic uncertainty caused by the unique situation of the COVID-19 pandemic and the low interest rates set by the FMOC, staff believes retaining the use of the current 2020 leverage formula until the leverage formula is addressed again in 2022 is a reasonable alternative to updating the formula using current 2021 financial information. Staff continues to believe the leverage formula is a sound, workable methodology that reduces the costs and administrative burdens in WAW rate cases by eliminating the need for cost of equity testimony. Based on the aforementioned, staff recommends that the current leverage formula approved by the Commission in Order No. PSC-2020-0222-PAA-WS continue to be used until the leverage formula is readdressed in 2022.

**Issue 2:** Should this docket be closed?

**Recommendation:** No. Upon expiration of the protest period, if a timely protest is not received from a substantially affected person, the decision should become final and effective upon the issuance of a Consummating Order. However, this docket should remain open to allow staff to monitor changes in capital market conditions and to readdress the reasonableness of the leverage formula as conditions warrant. (Lherrison)

**Staff Analysis:** Upon expiration of the protest period, if a timely protest is not received from a substantially affected person, the decision should become final and effective upon the issuance of a Consummating Order. However, this docket should remain open to allow staff to monitor changes in capital market conditions and to readdress the reasonableness of the leverage formula as conditions warrant.

**SUMMARY OF RESULTS**  
**2021 Water and Wastewater Leverage Formula**

	<u>Updated Results</u>	<u>Currently In Effect</u>
(1) DCF ROE for Proxy Group	6.61%	7.39%
(2) CAPM ROE for Proxy Group	<u>9.18%</u>	<u>8.97%</u>
AVERAGE	7.89%	8.18%
Bond Yield Differential	0.53%	0.60%
Private Placement Premium	0.50%	0.50%
Small-Utility Risk Premium	0.50%	0.50%
Adjustment to Reflect Required Equity Return at a 40% Equity Ratio	<u>0.52%</u>	<u>0.77%</u>
 Cost of Equity for Average Florida WAW Utility at 40% Equity Ratio	 <u>9.95%</u>	 <u>10.55%</u>

2020 Leverage Formula (Currently in Effect)

Return on Common Equity = 6.05% + (1.80 ÷ Equity Ratio)

Range of Returns on Equity = 7.85% to 10.55%

2021 Leverage Formula

Return on Common Equity = 5.18% + (1.91 ÷ Equity Ratio)

Range of Returns on Equity = 7.09% to 9.95%

**Marginal Cost of Investor Capital  
Average Water and Wastewater Utility**

<u>Capital Component</u>	<u>Ratio</u>	<u>Marginal Cost Rate</u>	<u>Weighted Marginal Cost Rate</u>
Common Equity	44.95%	9.42%	4.23%
Total Debt	<u>55.05%</u>	5.18%*	<u>2.85%</u>
	<u>100.00%</u>		<u>7.09%</u>

A 40% equity ratio is the floor for calculating the required return on common equity.  
 The return on equity at a 40% equity ratio:  $5.18\% + (1.91 \div 0.40) = 9.95\%$

**Marginal Cost of Investor Capital  
Average Water and Wastewater Utility at 40% Equity Ratio**

<u>Capital Component</u>	<u>Ratio</u>	<u>Marginal Cost Rate</u>	<u>Weighted Marginal Cost Rate</u>
Common Equity	40.00	9.95%	3.98%
Total Debt	<u>60.00</u>	5.18%*	<u>3.11%</u>
	<u>100.00%</u>		<u>7.09%</u>

Where: ER = Equity Ratio =  $CE \div (CE + \text{Pref. Equity} + \text{LTD} + \text{STD})$

\*Assumed Baa3 rate for April 2021 plus a 50 basis point private placement premium and a 50 basis point small utility risk premium.

Sources:  
 Value Line Selection and Opinion  
 Company 10-K Filings

**Discounted Cash Flow Model Results**  
**April 1, 2021 – April 30, 2021**

<u>Company</u>	<u>PRICE</u>			<u>Results</u>	<u>DCF</u>	<u>Weighted</u>
	<u>High</u>	<u>Low</u>	<u>Avg.</u>		<u>Weight</u>	<u>Results</u>
Atmos Energy Corporation	104.99	97.08	96.99	6.66%	16.73%	1.11%
Northwest Natural Holding	56.75	52.61	52.49	6.00%	2.00%	0.12%
ONE Gas, Inc.	81.90	75.69	75.64	7.27%	5.58%	0.41%
South Jersey Industries	25.47	22.45	23.00	10.15%	3.43%	0.35%
Spire, Inc.	77.95	72.70	72.31	6.65%	4.72%	0.31%
American States Water	83.31	75.34	76.15	6.69%	4.00%	0.27%
American Water Works	162.50	149.59	149.80	6.54%	38.33%	2.51%
Essential Utilities, Inc.	48.49	44.51	44.64	5.33%	15.73%	0.84%
California Water Services	61.98	55.85	56.56	7.28%	4.00%	0.29%
Middlesex Water	85.37	78.01	78.42	7.87%	2.00%	0.16%
SJW Group	69.22	61.79	62.88	7.06%	2.57%	0.18%
York Water	52.50	48.00	48.24	6.84%	0.89%	<u>0.06%</u>
<b>Average Weighted DCF Result:</b>						<b><u>6.61%</u></b>

The ROE of 6.61% represents the expected cost of equity required to match the average stock price, less 4% flotation costs, with the present value of expected cash flows.

Sources:

Stock prices obtained from Yahoo Finance for the 30-day period April 1, 2021 through April 30, 2021.

Natural Gas company dividends, earnings, and ROE obtained from Value Line Ratings & Reports issued March 01, 2021.

Water and Wastewater company dividends, earnings, and ROE obtained from Value Line Ratings & Reports issued April 12, 2021.

**Capital Asset Pricing Model Cost of Equity for  
Water and Wastewater Industry**

CAPM analysis formula

$$K = RF + \text{Beta} (MR - RF)$$

$$K = \text{Investor's required rate of return}$$

$$RF = \text{Risk-free rate (Blue Chip forecast for 30-year U.S. Treasury Bond Yield)}$$

$$\text{Beta} = \text{Measure of industry-specific risk (market cap weighted average for natural gas and water utilities followed by Value Line)}$$

$$MR = \text{Market Return (Value Line Investment Analyzer Web Browser)}$$

$$9.18\% = 2.60\% + 0.8410 (10.18\% - 2.60\%) + 0.20\%$$

Note:

Staff calculated the market return using a quarterly DCF model for a large number of dividend paying stocks followed by Value Line. For April 16, 2021, the result was 10.18%. Staff added 20 basis points to the CAPM result to account for a flotation cost of four percent.

**Bond Yield for Water and Wastewater Industry**

<u>Credit Rating</u>	<u>(A)</u>	<u>Equity Bond Yield Differential Adjustment</u>							
		<u>Spread</u>	<u>(A-)</u>	<u>Spread</u>	<u>(BBB+)</u>	<u>Spread</u>	<u>(BBB)</u>	<u>Spread</u>	<u>(BBB-)</u>
		0.1325		0.1325		0.1325		0.1325	

120-Month Avg. Spread: 0.1325%

Total Equity Bond  
Yield Differential 0.1325% x 4 = 0.53%

Blue Chip Financial Forecasts – Corporate Baa Bond Rate

	<u>2Q 2021</u>	<u>3Q 2021</u>	<u>4Q 2021</u>	<u>1Q 2022</u>
Forecast Corporate Baa Bond	3.90	4.00	4.10	4.20

Average Forecasted Corporate  
Baa Bond Rate 4.05%

**Assumed Bond Yield for Baa3 Utilities: 0.1325% + 4.050% = 4.1825%**

	<u>Updated Results</u>	<u>Currently In Effect</u>
Private Placement Premium	0.50%	0.50%
Small-Utility Risk Premium	0.50%	0.50%
Assumed Bond Yield for Baa3 Utilities	<u>4.18%</u>	<u>5.05%</u>
Assumed Bond Yield for Florida WAW Utilities	<u>5.18%</u>	<u>6.05%</u>

Sources:

Value Line Selection and Opinion

Blue Chip Financial Forecast April 2021

**2021 Leverage Formula Proxy Group**

<u>Company</u>	<u>S&amp;P</u> <u>Bond</u> <u>Rating</u>	<u>Regulated</u> <u>Revenue</u>	<u>V/L Market</u> <u>Capital</u> <u>(Millions)</u>	<u>Equity</u> <u>Ratio</u>	<u>Weighted</u> <u>Equity</u> <u>Ratio</u>	<u>Weighted</u> <u>Value</u> <u>Line Beta</u>
Atmos Energy Corporation	A-	93.12%	\$11,700	59.98%	10.04%	0.1339
Northwest Natural Holding	A+	98.07%	\$1,400	41.36%	0.83%	0.0160
One Gas, Inc.	BBB+	90.25%	\$3,900	52.58%	2.93%	0.0446
South Jersey Industries	A-	59.58%	\$2,400	32.16%	1.10%	0.0360
Spire Inc.	A-	94.42%	\$3,300	44.61%	2.11%	0.0401
American States Water	A+	67.72%	\$2,800	59.28%	2.37%	0.0260
American Water Works	A	86.18%	\$26,800	37.10%	14.22%	0.3258
Essential Utilities, Inc.	A	97.92%	\$11,000	45.24%	7.12%	0.1494
Cal. Water Serv. Group	A+	87.82%	\$2,800	44.35%	1.78%	0.0260
Middlesex Water	A	91.71%	\$1,400	54.88%	1.10%	0.0140
SJW Group	A-	97.30%	\$1,800	34.39%	0.89%	0.0219
York Water	A-	98.97%	\$625	52.69%	0.48%	0.0072
<b>Average</b>	<b>A</b>	<b>88.59%</b>	<b>\$5,827</b>	<b>46.64%</b>	<b>44.95%</b>	<b>0.8410</b>

Sources:  
 Value Line Ratings and Reports  
 SEC Form 10K for Companies  
 Standard & Poor's