BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for an increase in water and wastewater rates in Charlotte, Highlands, Lake, Lee, Marion, Orange, Pasco, Pinellas, Polk, and Seminole Counties by Utilities, Inc. of Florida
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Docket No. 20200139-WS

CORRECTED
DIRECT TESTIMONY

OF

DYLAN W. D'ASCENDIS, CRRA, CVA

on behalf of

Utilities, Inc. of Florida

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I. INTRODUCTION

Q. Please state your name, profession and address.

A. My name is Dylan W. D'Ascendis. I am a Director at ScottMadden, Inc. My business address is 3000 Atrium Way, Suite 241, Mount Laurel, NJ 08054.

Q. State briefly your educational background and experience.

A. I have offered expert testimony on behalf of investor-owned utilities before 19 state regulatory commissions in the United States, one Canadian province, and one American Arbitration Association panel on rate of return issues including, but not limited to, common equity cost rate, rate of return, valuation, capital structure issues, relative investment risk, and credit quality issues.

On behalf of the American Gas Association ("AGA"), I calculate the AGA Gas Index, which serves as the benchmark against which the performance of the American Gas Index Fund ("AGIF") is measured on a monthly basis. The AGA Gas Index and AGIF are a market capitalization weighted index and mutual fund, respectively, comprised of the common stocks of the publicly traded corporate members of the AGA.

I am a member of the Society of Utility and Regulatory Financial Analysts ("SURFA"). In 2011, I was awarded the professional designation "Certified Rate of Return Analyst" ("CRRA") by SURFA, which is based on education, experience, and the successful completion of a comprehensive written examination.

I am also a member of the National Association of Certified Valuation Analysts ("NACVA") and was awarded the professional designation Certified Valuation Analyst ("CVA") in 2015.

I am a graduate of the University of Pennsylvania, where I received a Bachelor of Arts degree in Economic History. I have also received a Master of Business Administration with high honors and concentrations in Finance and International Business from Rutgers University.

The details of my educational background and expert witness appearances are shown in Exhibit DWD-1.

Q. On whose behalf are you presenting this testimony?

A. I am presenting this testimony and appearing on behalf of Utilities, Inc. of Florida. ("UIF" or the "Company"), the applicant for rate increase in the present docket.

Q. What is the purpose of your direct testimony?

A. The purpose is to provide testimony related to the return on investor-supplied capital, including the appropriate return on common equity ("ROE") which the Company should be afforded in order to have the opportunity to earn a fair return on its property used and useful in the public service. I am presenting testimony regarding the appropriate return on investor-supplied capital associated with UIF's operations because the Company does not believe that in this case the use of the Florida Leverage Formula (the "FL ROE Formula") accurately reflects the return on equity necessary to afford it an opportunity to earn a fair return.

Q. Are you aware of the FL ROE Formula?

A. Yes. Our firm participated in Docket No. 20190006-WS and Ms. Pauline M. Ahern, CRRA sponsored comments on behalf of UIF.

Q. What would UIF's indicated ROE be using the FL ROE Formula as specified in Order No. PSC-2019-0267-PAA-WS?

A. Given UIF's 13-month common equity ratio of 49.39%[1] in this proceeding, the indicated ROE using the FL ROE Formula would be 9.69%.[2]

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1 Excluding customer deposits and deferred tax liabilities.

2 ROE = 6.05% + (1.80 / Equity Ratio) → 9.69% = 6.05% + (1.80 / 49.39%).

Q. Does the 9.69% ROE produced by the FL ROE Formula reflect the cost of common equity of water utilities, specifically, UIF, at this time?

A. No. As I will demonstrate throughout this testimony, an ROE of 9.69% understates the current investor-required return for both water and wastewater utilities generally and UIF specifically.

Q. What is your recommended common equity cost rate?

A. I recommend that the FL PSC authorize the Company the opportunity to earn an overall rate of return on common equity of 11.75%. My recommended ROE applied to the 13-month average balances of investor-supplied capital[3] based on UIF's parent, CORIX Regulated Utilities, Inc.'s ("CRU-US" or the "Parent"), consisting of 45.58% long-term debt at an embedded cost rate of 5.78%, 5.03% short-term debt at an embedded cost rate of 4.04%, and 49.39% common equity results in a return on investor-supplied capital of 8.63%, shown on page 1 of Schedule 1 and Table 1 below:

Table 1: Summary of the Return on Investor-Supplied Capital

Type of Capital	Ratio	Cost Rate	Weighted Cost Rate
Long-Term Debt	45.58%	5.78%	2.63%
Short-Term Debt	5.03%	4.04%	0.20%
Common Equity	49.39%	11.75%	5.80%
Total	100.00%		8.63%

Q. Have you prepared an exhibit that supports your recommended return on investor-supplied capital?

A. Yes, I am sponsoring Exhibit DWD-2 which summarizes my analysis supporting the reasonable rate of return, which in my opinion applies to UIF in this rate case. Exhibit DWD-2, containing Schedules 1 through 8, was prepared by me or my staff under my supervision and control.

[3] Includes long-term debt, short-term debt, and common equity and excludes customer deposits and accumulated deferred income taxes.

II. SUMMARY

Q. Please summarize your recommended common equity cost rate.

A. My recommended common equity cost rate of 11.75% is summarized on page 2 of Schedule 1. Because UIF's common stock is not publicly traded, a market-based common equity cost rate cannot be directly observed for the Company. Consequently, I have assessed the market-based common equity cost rates of companies with relatively similar, but not necessarily identical risk, *i.e.*, a proxy group, for insight into a recommended common equity cost rate applicable to UIF. Using companies of relatively similar risk as proxies is consistent with the principle of fair and reasonable rates of return required by the *Hope*[4] and *Bluefield*[5] decisions, adding reliability to the informed expert judgment necessary to arrive at a recommended common equity cost rate.

However, no proxy is completely identical in risk to any single entity. Accordingly, a comparison of relative risk between UIF and a proxy group of publicly traded water utilities ("Utility Proxy Group"), discussed in further detail later in this testimony, must be made to determine whether any adjustments to the Utility Proxy Group's indicated common equity cost rate are justified or necessary.

In determining my recommended common equity cost rate, I applied several well-recognized cost of common equity models (*i.e.,* Discounted Cash Flow ("DCF") Risk Premium Model ("RPM"), and Capital Asset Pricing Model ("CAPM")) to the market data of a Utility Proxy Group whose selection will also be discussed below. In addition, I applied the DCF model, RPM, and CAPM to a proxy group of non-price regulated companies comparable in total risk to the Utility Proxy Group ("Non-Price Regulated Proxy Group"). The results derived from each model are summarized as follows:

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4 *Federal Power Comm'n v. Hope Natural Gas Co.,* 320 U.S. 591 (1944).

5 *Bluefield Water Works Improvement Co. v. Public Serv. Comm'n,* 262 U.S. 679 (1922).

Table 2: Summary of Common Equity Cost Rate

	Utility Proxy Group
Discounted Cash Flow Model	9.07%
Risk Premium Model	10.91%
Capital Asset Pricing Model	10.90%
Cost of Equity Models Applied to Non-Price Regulated Proxy Group	11.48%
Indicated Common Equity Cost Rate before Adjustment	10.75%
Business Risk Adjustment	1.00%
Recommended Common Equity Cost Rate	11.75%

After reviewing the cost rates based on these models, I conclude that the indicated common equity cost rate is 10.75% before any adjustment for business risks arising from UIF's greater unique business risks relative to the Utility Proxy Group as discussed in more detail below. Thus, the indicated common equity cost rate of 10.75% based solely on the Utility Proxy Group must be adjusted upward by 1.00% to reflect UIF's increased unique business risk, as noted above. The details of this adjustment will be discussed below. After adjustment, my recommended Company-specific risk-adjusted common equity cost rate applicable to UIF is 11.75%.

III. GENERAL PRINCIPLES

Q. What general principles have you considered in arriving at your recommended common equity cost rate?

A. The cost of common equity is the return investors require to make an equity investment in a given firm. From the firm's perspective, that required return, whether it is provided to debt or equity investors, has a cost. Collectively, the "cost of debt" and the "cost of equity" are referred to as the "cost of capital."

The cost of capital is based on the economic principle of "opportunity cost," meaning that investing in any asset or security implies a forgone opportunity to invest in alternative assets or securities. The opportunity cost of an investment should equal the return available on investments of comparable risk.

Although both debt and equity have costs, those costs differ fundamentally. The cost of debt is often contractually defined and can be directly observed in the market as the interest rate or yield on debt securities. In contrast, the cost of equity is not normally contractually defined nor can it be directly observed in the market. Rather, because common equity investors have a claim on a firm's cash flows only after debt holders are paid, it is the uncertainty (or risk) associated with the equity investors' lower priority or junior position to receive those residual cash flows compared to debt holders that determines the cost of equity. In other words, because common equity investors bear this "residual risk," they require higher returns than debt holders. In that sense, common equity and debt investors are distinct: they invest in different securities, face different risks, and require different returns. That is not to say that the risks facing debt and equity investors are completely separate and distinct; the two may share common risks, but only to a point. Therefore, commentary from both debt and equity analysts is instructive and helps inform the determination of the required return.

According to the basic financial principle of risk and return, the investor-required return on investment is a function of the level of investor-perceived risk as reflected in the market prices paid by investors. The higher/lower the investor-perceived risk, the higher/lower the investor-required return. The investor-required return is forward-looking, or expectational, as it is the return which investors expect to receive in the future for investing capital today and is based on expected economic and capital market conditions.

In unregulated industries, the competition of the marketplace is the principal determinant of the price of products or services. For regulated public utilities, like UIF, regulation acts as a substitute for marketplace competition. A sufficient level of earnings is required to assure that the utility can: (1) fulfill its obligation to provide safe and reliable service at all times; (2) maintain the integrity of presently invested capital through future reinvestment and (3) attract needed new capital at a reasonable cost and on reasonable terms in competition with other firms of comparable risk. This is consistent with the previously noted rate of return standard established by the Supreme Court in the *Hope* and *Bluefield* cases.

In rate base/rate of return regulation, the authorized return on common equity is defined as the investor-required return. In turn, the investor-required return is defined as the return required by the investor on the funds invested in the publicly traded common stocks of firms. As stated previously, the cost of common equity is not directly observable in the capital markets since there is no contractual basis or obligation on the part of a firm to provide a return to its common shareholders, unlike the contractual coupon or interest rate on its debt obligations. Therefore, the cost of common equity must be estimated from market (economic and financial) data, using financial models developed for that purpose, such as the CAPM, DCF, and RPM. Therefore, my recommended common equity cost rate is based on the marketplace data of a proxy group of utilities that are as similar in risk as possible to UIF based on selection criteria discussed below.

Because empirical financial models for determining the cost of common equity are subject to limiting assumptions or other constraints, most finance texts recommend using multiple approaches to estimate the cost of common equity. Because of this, generally, regulatory commissions rely on multiple financial models in determining the allowed ROE for regulated utilities. As a practical matter, no individual model is more reliable than all others under all market conditions. The use of multiple common equity cost rate models adds reliability to the estimation of the investor-required return.

Using both the market data of proxy groups of similar risk and multiple common equity cost rate models adds reliability to the informed expert judgment used in estimating the common equity cost rate. Therefore, it is prudent and appropriate to use multiple methodologies to mitigate the effects of limiting assumptions and inputs associated with any single approach.

A. <u>Business Risk</u>

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

A. The investor-required return on common equity reflects investors' assessment of the total investment risk of an individual firm. Total investment risk is often discussed in the context of business risk and financial risk.

Business risk refers to the basic viability of a business, the question of whether a company will be able to generate sufficient revenue to cover its operational expenses and cost of capital. Financial risk is related to the company's ability to generate sufficient cash flow to be able to make interest payments on financing or to meet other debt-related obligations.

Examples of the business risks generally faced by water utilities include, but are not limited to, the legal and regulatory environment, mandatory environmental compliance requirements, customer mix and concentration of customers, service territory economic growth, declining per customer water use, risks and uncertainties of water supply limitations, operations, capital intensity, size, the degree of operating leverage, and the like, all of which have a direct bearing on earnings.

Although analysts, including rating agencies, may categorize business risks according to individual categories, as a practical matter they are inter-related and are not wholly distinct from one another. For determining an appropriate return on equity, the relevant issue is where investors see the subject company as falling within a spectrum of risk. To the extent investors view a company as being exposed to additional risk, the required return will increase.

For regulated water utilities, business risks are both long- and near-term in nature. Whereas near-term business risks are reflected in the year-to-year variability in earnings and cash flow brought about by economic or regulatory factors, long-term business risks reflect the prospect of an impaired ability of investors to earn a return on and of their invested capital. Moreover, because water utilities accept the obligation to provide safe, adequate, and reliable water service at all times (in exchange for the opportunity to earn a fair and reasonable return on their investment), they generally do not have the option to delay, defer, or reject required long-term capital investments in order to comply with Safe Drinking Water Act ("SDWA") standards. Those investments are generally capital-intensive, and water utilities therefore cannot choose to avoid raising external funds during periods of capital market distress.

Because water utilities invest in long-lived assets, long-term business risks are of considerable concern to equity investors. That is, the risk of not recovering the return on and of their investment extends far into the future. But, the timing and nature of events that may lead to losses are also uncertain. Consequently, those risks and their implications for the required return on equity tend to be difficult to quantify. That does not mean, however, that the risk is of no consequence to investors. Analysts may apply, for example, simulation-based methods to assess the potential risk, but in the final analysis (like the investors that commit their capital) regulatory commissions, like the FL PSC, must review a variety of quantitative and qualitative data, applying their reasoned judgment to determine how long-term risks weigh in their assessment of the market-required return on equity.

Q. What business risks does the water utility industry in general face today?

A. Water is necessary for life and is the only utility product intended for customers to ingest. Consequently, water quality is of paramount importance to the public health and well-being of customers. As a result, water utilities are subject to additional and increasingly stringent public health and safety regulations. Beyond health and safety concerns, customers also have significant aesthetic (*e.g.* taste and odor) concerns regarding the water delivered to them, with regulators paying close attention to these concerns because of the strong reactions they evoke in consumers.

Increasingly stringent environmental standards necessitate additional capital investment in the treatment and distribution of water, thereby increasing the pressure on water utilities' free cash flow through increased capital expenditure for infrastructure, repair, and replacement. In addition, the United States Environmental Protection Agency and individual state and local environmental agencies continually monitor potential contaminants in the water supply and promulgate or expand regulations when necessary. In the course of procuring water supplies and treating water so that it complies with SDWA standards, water utilities have an ever-increasing responsibility to be stewards of the environment from which supplies are drawn in order to preserve and protect essential natural resources.

Water utilities are typically vertically engaged in the entire process of acquiring supply, producing, treating, and distributing water, serving both a production function and a delivery function. Accordingly, water utilities require significant capital investment, not only in transmission and distribution systems, but also in sources of supply (surface and groundwater), production (wells), treatment, and storage. Significant capital investment is necessary to serve additional customers and to replace aging systems, creating a major risk factor for the water utility industry.

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

> Until the past decade, or so, both municipal and investor-owned utilities didn't sufficiently invest in keeping pipelines and other assets in proper condition. As a result, the average age of pipelines in the U.S. is estimated to be between 50 and 75 years. Utilities and regulators have realized that more funds would have to be allocated to replacing and modernizing large portions of the nation's water infrastructure. That's why this group's construction budget is large, though manageable. Authorities also realize that water bills were kept artificially low for years, especially in relation to other vital utility services, and have to be gradually raised.

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> Probably the prime reason for water utility stocks performing so well over the past five years has been due to constructive regulation. Unlike, electric utilities, for example, both sides are basically in agreement that upgrades are required and ratepayers[‘] bills will have to [be] raised. Investors should be aware of what can happen when authorities and utilities do not work as partners (i.e. the Electric Utility Industry). As of now, we see no signs of rifts between the water group and regulators.[6]

Q. Please discuss the capital intensity of the water utility industry relative to other utility industries.

A. As a capital-intensive industry, water utilities require significantly greater capital investment in the infrastructure required to produce a dollar of revenue than do other industries, including electric and natural gas utilities. For example, as shown on Chart 1, below, it took $4.70 of net utility plant on average to produce $1.00 in operating revenues in 2019 for the water utility industry. In contrast, for the natural gas and electric utility industries, on average it took just $2.33 and $2.93, respectively, to produce $1.00 in operating revenues in 2019. As financing needs have increased and will continue to increase, the competition for capital from traditional sources has increased and continues to increase, making the need to maintain financial integrity and the ability to attract needed new capital increasingly important.

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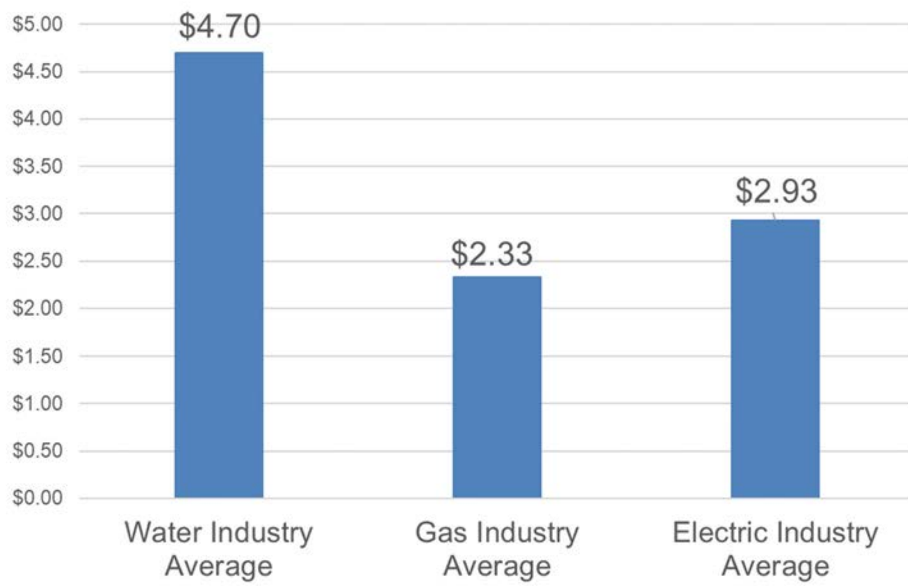
[6] *Value Line Investment Survey*, April 10, 2020. [clarification added]

Chart 1:
Capital Intensity of the Water, Gas, and Electric Utility Industries[7]



Q. How will water utilities raise the capital required to fund necessary infrastructure replacements?

A. The water utility industry's high degree of capital intensity, coupled with the need for substantial infrastructure capital spending, requires regulatory support in the form of adequate and timely rate relief, including the allowance of a sufficient rate of return on investment.

Substantial water utility investment and expenditures require significant financing. The three sources typically used for financing are debt, equity (common and preferred), and cash flow from operations. All three are intricately linked to the opportunity to earn a sufficient rate of return on investment and the ability to actually achieve that return. The return must be sufficient to maintain credit quality and enable the water utility to attract necessary new capital, be it debt or equity capital. If unable to raise debt or equity capital, the water utility must turn to either retained earnings or free cash flow[8], both of which are directly linked to earning a

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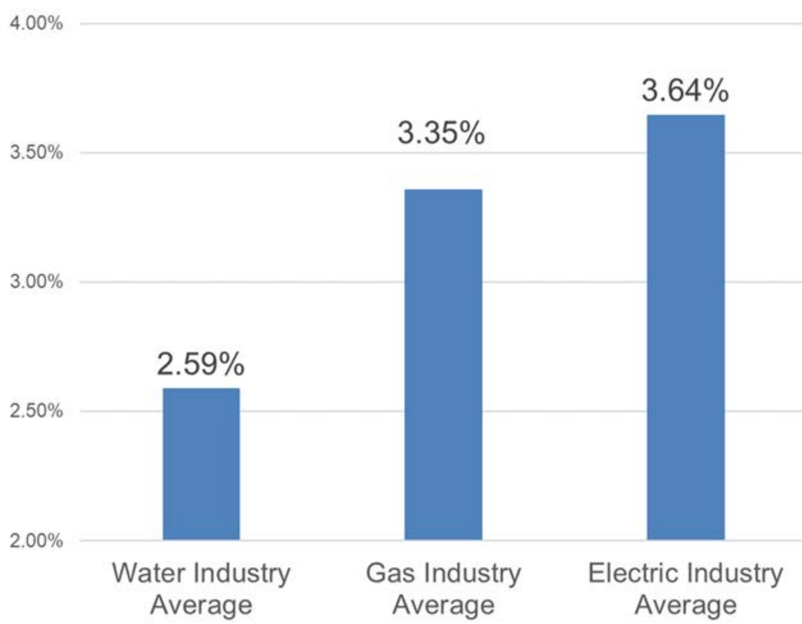
[7] SNL Financial, Company SEC Form 10-Ks.
[8] Operating cash flow (funds from operations) minus capital expenditures.

sufficient rate of return. The level of free cash flow represents the financial flexibility of a firm, *i.e.*, its ability to meet the needs of its debt and equity holders. If either retained earnings or free cash flows are inadequate, it will be nearly impossible for the water utility to attract the new capital, at a reasonable cost and on reasonable terms, needed to invest in critical new utility infrastructure. An insufficient rate of return can be financially devastating for water utilities given their obligation to protect the public health by providing safe, adequate, and reliable water service to their customers at all times.

Q. Please continue your discussion of business risks.

A. In addition to its capital-intensive nature, the water utility industry also experiences low depreciation rates. Given that depreciation is one of the principal sources of internally-generated cash flows for all utilities, low depreciation rates mean that utilities cannot rely on depreciation as a source of cash like other industries do. Because utility assets have long lives and, hence, long capital recovery periods, utilities face increased risk due to inflation, which results in a significantly higher cost to replace a decades-old utility plant where original cost was a small fraction of the cost of the plant to replace it. As shown on Chart 2, below, water utilities experienced a depreciation rate of 2.59% for 2019. In contrast, in 2019, the natural gas and electric utilities experienced average depreciation rates of 3.35% and 3.64%, respectively. Low depreciation rates signify that the pressure on cash flow remains significantly greater for water utilities than for other gas and electricity utilities, on average.

Chart 2:
Depreciation Rates of the Water, Gas, and Electric Utility Industries[9]



In view of the foregoing, the water utility industry's high degree of capital intensity and low depreciation rates, coupled with the need for capital spending to replace aging and failing water infrastructure, makes the need to maintain financial integrity and the ability to attract needed new capital, through the allowance of a sufficient rate of return, increasingly important in order for water utilities to be able to successfully meet the challenges and investment needs they face.

B. Financial Risk

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

A. Financial risk is created by the introduction of senior capital, *i.e.*, debt and preferred stock, into the capital structure. As noted above, it is the additional risk that a company may not have sufficient cash flow to meet its financial obligations. The higher the proportion of debt in the

[9] SNL Financial, Company SEC Form 10-Ks.

capital structure, the higher the financial risk which must be factored into the common equity cost rate, consistent with the previously mentioned basic financial principle of risk and return, *i.e.*, investors demand a higher common equity return as compensation for bearing higher investment risk.

Q. Can the combined business and financial risks (*i.e.*, investment risk) of an enterprise be proxied by bond and credit ratings?

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

However, one must keep in mind that a long-term credit or bond issue rating is an opinion regarding the particular company's overall financial capacity to pay its financial obligations as they become due and payable. It is not an assessment of the risk faced by equity investors. The claims of equity holders are subordinate to the claims of debt holders, including bond holders, and are perpetual in life. As noted above, whereas bondholders can be assured of the probability that a particular company will be able to meet its financial obligations (and thus have higher credit/bond ratings), common equity holders bear the residual risk of insufficient or volatile cash flows in perpetuity. For that fundamental reason, the risks of owning common equity do not directly correspond to the risks of owning bonds.

IV. UTILITIES, INC. OF FLORIDA AND THE UTILITY PROXY GROUP

Q. Have you reviewed financial data for UIF?

A. Yes. UIF provides service to approximately 64,000 water and wastewater customers in ten counties throughout Florida. UIF is an operating subsidiary of CRU-US. Neither entity is publicly-traded.

Q. **Please explain how you chose the Utility Proxy Group.**

A. I chose the Utility Proxy Group by selecting those water companies that met the following criteria:

1) They are included in the Water Utility Group of *Value Line's* Standard Edition (April 10, 2020);
2) They have 70% or greater of 2019 total operating income derived from, and 70% or greater of 2019 total assets devoted to, regulated water operations;
3) They had not publicly announced involvement in any major merger or acquisition activity (*i.e.*, one publicly-traded utility merging with or acquiring another) at the time of the preparation of this testimony;
4) They have not cut or omitted their common dividends during the past five years or through the time of the preparation of this testimony;
5) They have *Value Line* and Bloomberg adjusted Beta coefficients;
6) They have a positive *Value Line* five-year dividends per share ("DPS") growth rate projection and,
7) They have *Value Line*, Bloomberg, Zacks or Yahoo! Finance, consensus five-year earnings per share ("EPS") growth rate projections.

The following seven companies meet these criteria:

- American States Water Co. ("AWR");
- American Water Works Co. Inc. ("AWK");
- California Water Service Corp. ("CWT");
- Essential Utilities, Inc. ("WTRG");
- Middlesex Water Co. ("MSEX");
- SJW Corporation ("SJW"); and
- York Water Co. ("YORW").

Q. **Have you reviewed financial data for the utility proxy group?**

A. Yes. Page 1 of Schedule 2 contains comparative capitalization and financial statistics for the Utility Proxy Group for the years 2015-2019. As shown on page 1, during the five-year period ending 2019, the historically achieved average earnings rate on book common equity for the group was 10.45%. The Utility Proxy Group had an average common equity ratio (including short-term debt) during the years 2015-2019 of 51.09%. Total debt to earnings before interest, taxes, depreciation, and amortization ("EBITDA") for the years 2015-2019 ranged between 3.41 and 5.54 times, averaging 4.00 times. Funds from operations to total debt ranged from 14.49% to 25.81%, averaging 21.64%.

V. CAPITAL STRUCTURE AND DEBT COST RATES

Q. What are the balances of investor-provided capital that you recommend be employed in developing a return on investor-supplied capital applicable to UIF?

A. In this instance, I recommend the use of UIF's Parent's 13-month average capital structure ending December 31, 2019, which consists of 45.58% long-term debt, 5.03% short-term debt, and 49.39% common equity.

Q. How does UIF's common equity ratio of 49.39% compare with the equity ratios maintained by the Utility Proxy Group?

A. UIF's common equity ratio of 49.39% is reasonable and consistent with the range of common equity ratios maintained, on average, by the utilities used for the derivation of ROE. As shown on page 2 of Schedule 2, the range of equity ratios maintained by the Utility Proxy Group is between 38.48% and 57.05%, with an average of 49.34%.

In my opinion, a capital structure consisting of 45.58% long-term debt, 5.03% short-term debt, and 49.39% common equity is appropriate for ratemaking purposes for UIF in the current proceeding because it is comparable to the average capital structure ratios (based on total capital) maintained by the Utility Proxy Group on whose market data I base my recommended common equity cost rate.

Q. What cost rates for long-term and short-term debt are most appropriate for use in a cost of capital determination for UIF?

A. A long-term debt cost rate of 5.78% and a short-term debt cost rate of 4.04% are the most appropriate for use in a cost of capital determination for UIF, as they are the actual average debt cost rates incurred by UIF's Parent for the 13-months ended December 31, 2019.

VI. COMMON EQUITY COST RATE MODELS

Q. Is it important that cost of common equity models be market-based?

A. Yes. Public utilities, like UIF, must compete for equity in capital markets along with all other companies with commensurate risk, which includes non-utilities. The cost of common equity is thus determined based on equity market expectations for the returns of those companies. If an individual investor is choosing to invest their capital among companies with comparable risk, they will choose the company providing a higher return over a company providing a lower return.

Q. Are the cost of common equity models you use market-based models?

A. Yes. The DCF model is market-based in that market prices are used in developing the dividend yield component of the model. The RPM and CAPM are also market-based in that the bond/issuer ratings and expected bond yields/risk-free rate used in the application of the RPM and CAPM reflect the market's assessment of bond/credit risk. In addition, the use of the Beta coefficient to determine the equity risk premium also reflects the market's assessment of market/systematic risk, as Beta coefficients are derived from regression analyses of market prices. Moreover, market prices are used in the development of the monthly returns and equity risk premiums used in the Predictive Risk Premium Model ("PRPM"). Selection criteria for the Non-Price Regulated Proxy Group are based on regression analyses of market prices and reflect the market's assessment of total risk.

A. Discounted Cash Flow Model

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

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

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

A. I use the single-stage constant growth DCF model. The single-stage DCF model is expressed as:

$$K = (D_1 / P_0) + g$$

Where:

K	=	Cost of Equity Capital
D_1	=	Expected Dividend Per Share in one year
P_0	=	Current Market Price
G	=	Expected Dividend Per Share Growth

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

A. The unadjusted dividend yields are based on a recent (April 30, 2020) indicated dividend, divided by the average of closing market prices for the 60 days ending April 30, 2020, as shown in Column [1] on page 1 of Schedule 3.

Q. Please explain the adjusted dividend yield shown in column [7] on page 1 of Schedule 3.

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

DCF theory calls for the use of the full expectational growth rate, referred to as D_1, in calculating the dividend yield component of the model. However, since the various companies in the Utility Proxy Group increase their quarterly dividend at various times during the year, a reasonable assumption is to reflect one-half the annual dividend growth rate in the dividend yield component, referred to as $D_{1/2}$. This is a conservative approach because it does not overstate the dividend yield, which should be representative of the next 12-month period. Therefore, the actual average dividend yields in Column [1] on page 1 of Schedule 3, have been adjusted upward to reflect one-half the average projected growth rate shown in Column [6].

Q. Please explain the basis of the growth rates of the Utility Proxy Group used in your application of the DCF model.

A. Investors with more limited resources than institutional investors are likely to rely on widely available financial information services, such as *Value Line*, Bloomberg, Zacks, and Yahoo! Finance. Investors recognize that such analysts have significant insight into the dynamics of the industries and individual companies they analyze, as well as an entity's historical and future ability to effectively manage the effects of changing laws and regulations and ever-changing economic and market conditions.

Over the long run, there can be no growth in DPS without growth in EPS. Thus, the use of earnings growth rate forecasts in a DCF analysis provides a better matching between investors' market price appreciation expectations and the growth rate component of the DCF. Therefore, I have relied on security analysts' five-year forecasts of EPS growth in my application of the DCF model.

Q. Please summarize the DCF model results.

A. As shown on page 1 of Schedule 3, the average result of the single-stage DCF model is 8.70%, while the median result is 9.44%. I have averaged these two results in arriving at a conclusion of a DCF-indicated common equity cost rate of 9.07% for the Utility Proxy Group. By doing so, I have considered the DCF results for each company without giving undue weight to outliers on either the high or the low side.

B. The Risk Premium Model

Q. Please describe the theoretical basis of the RPM.

A. The RPM is based on the basic financial principle of risk and return, namely, that investors require greater returns for bearing greater risk. The RPM recognizes that common equity capital has greater investment risk than debt capital, as common equity shareholders are last in line in any claim on an entity's assets and earnings, as previously discussed. Therefore, investors require higher returns from investment in common stocks than from investment in bonds to compensate them for bearing the additional risk.

While it is possible to directly observe bond returns and yields, the investor-required common equity return cannot be directly determined or observed. According to RPM theory, one can estimate a common equity risk premium over bonds, either historically or prospectively, and then use that premium to derive a cost rate of common equity. In summary, according to the RPM, the cost of common equity equals the expected cost rate for long-term debt capital plus a risk premium over that cost rate to compensate common shareholders for the added risk of being unsecured and last-in-line for any claim on a corporation's assets and earnings.

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

A. I relied on the results of the application of two risk premium methods, as shown in Schedule 4. The first method is the PRPM. The second method is a risk premium model using an adjusted total market approach.

Q. Please explain the PRPM.

A. The PRPM, published in the *Journal of Regulatory Economics ("JRE")*[10] and *The Electricity*

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

Journal ("TEJ"),[11] was developed from the work of Robert F. Engle, who shared the Nobel Prize in Economics in 2003, "for methods of analyzing economic time series with time-varying volatility ("ARCH")"[12] (with "ARCH" standing for autoregressive conditional heteroskedasticity). Engle found that the volatility in market prices, returns, and equity risk premiums cluster over time, making them highly predictable and available to predict future levels of risk and risk premiums.

The PRPM estimates the risk/return relationship directly as the predicted equity risk premium is generated by the predictability of volatility, or risk. Thus, the PRPM is not based on an estimate of investor behavior, but rather on the evaluation of the actual results of that behavior, *i.e.*, the variance of historical equity risk premiums.

The inputs to the model are the historical returns on the common shares of each publicly traded utility in the Utility Proxy Group, minus the historical monthly yield on long-term U.S. Treasury securities, through April 2020. Using a generalized form of ARCH, known as GARCH, each water utility's projected equity risk premium was determined using Eviews© statistical software. When the GARCH model is applied to the historical return data, it produces a predicted GARCH variance series[13] and a GARCH coefficient.[14] The forecasted 30-year U.S. Treasury Bond yield of 2.03% is based on consensus forecasts for the six quarters ending with the third quarter 2021, derived from the May 1, 2020 *Blue Chip Financial Forecasts ("Blue Chip")*, averaged with the long-range forecasts for 2021 – 2025 and 2026 – 2030, from the December 1, 2019 *Blue Chip*. The average PRPM indicated common equity cost rate is 11.66%, while the median is 10.96% for the Utility Proxy Group, as shown in

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11 "Comparative Evaluation of the Predictive Risk Premium Model™, the Discounted Cash Flow Model and the Capital Asset Pricing Model", Pauline M. Ahern, Richard A. Michelfelder, Ph.D., Rutgers University, Dylan W. D'Ascendis, and Frank J. Hanley, The Electricity Journal (May, 2013).

12 www.nobelprize.org

13 Illustrated in Columns [1] and [2] on page 2 of Schedule 4.

14 Illustrated in Column [4] on page 2 of Schedule 4.

Column [7] on page 2 of Schedule 4. Consistent with my use of the average of the mean and median DCF results, I rely on the average of the mean and median PRPM results of 11.31% as my conclusion of the PRPM equity cost rate, also shown in Column [7] on page 2 of Schedule 4.

Q. Please explain the adjusted total market approach RPM.

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

Q. Please explain the basis of the adjusted prospective bond yield of 3.82% applicable to the Utility Proxy Group, shown on line 5 on page 3 of Schedule 4.

A. The first step in the adjusted total market approach RPM analysis is to determine the expected bond yield. Because both ratemaking and the cost of capital, including the common equity cost rate, are prospective in nature, a prospective yield on long-term debt, similarly rated to the Utility Proxy Group, is essential. Since *Blue Chip* does not publish consensus yield forecasts for the Moody's A-rated public utility bonds, I began with the May 1, 2020 *Blue Chip* consensus forecast of about 50 economists of the expected yield on Aaa-rated corporate bonds for the six calendar quarters ending with the third calendar quarter of 2021, averaged with the long-range forecasts for 2021 – 2025, and 2026 – 2030, from the December 1, 2019 *Blue Chip*.[15] As shown on line 1 on page 3, the average expected yield on Moody's Aaa-rated corporate bonds is 3.21%. In order to derive a prospective Moody's A-rated public utility bond yield, an adjustment of 0.53%, or the average spread between Moody's Aaa-rated corporate bond yields and Moody's A-rated public utility bond yields for the three months ending April 2020[16] must be made to the average Aaa corporate bond yield, which results in a bond yield of

[15] See pages 10 and 11 of Schedule 4.
[16] See page 4 of Schedule 4.

3.74% applicable to a Moody's A-rated public utility bond.

Because the Utility Proxy Group average Moody's issuer rating is A2/A3, as shown on page 5 of Schedule 4, an 0.08% upward adjustment to the prospective Moody's A-rated public utility bond yield of 3.74% is necessary. The 0.08% represents one-sixth (1/6) of the average spread of 0.46% between Moody's A-rated and Baa-rated public utility bonds for the three months ending April 2020. This is necessary so that the prospective bond yield is consistent with the Utility Proxy Group's average A2/A3 long-term issuer rating. Adding the 0.08% to the 3.74% prospective Moody's A-rated public utility bond yield results in a 3.82% expected bond yield for the Utility Proxy Group, as shown on line 5 on page 3 of Schedule 4.

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

A. The components of the beta-derived risk premium model are: (1) An expected market equity risk premium over corporate bonds, and (2) the Beta coefficient. The derivation of the beta-derived equity risk premium applied to the Utility Proxy Group is shown on lines 1 through 9 on page 8 of Schedule 4. The total beta-derived equity risk premium applied is based on an average of three historical data-based equity risk premiums, two *Value Line*-based equity risk premiums, and one Bloomberg-based equity risk premium. Each of these is described in turn.

Q. How did you derive a market risk premium based on long-term historical data?

A. To derive a historical market equity risk premium, I used the most recent holding period returns for the large company common stocks from the <u>2020 SBBI® Yearbook: Stocks, Bonds, Bills, and Inflation</u> ("<u>SBBI – 2020</u>")[17] less the average historical yield on Moody's Aaa/Aa-rated corporate bonds for the period 1928 to 2019. The use of holding period returns over a very long period of time is appropriate because it is consistent with the long-term investment horizon presumed by investing in a going concern, *i.e.*, a company expected to operate in perpetuity.

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[17] <u>SBBI – 2020</u> Appendix A Tables.

SBBI's long-term arithmetic mean monthly total return rate on large company common stocks was 11.83% and the long-term arithmetic mean monthly yield on Moody's Aaa/Aa-rated corporate bonds was 6.05%.[18] As shown on line 1 on page 8 of Schedule 4, subtracting the mean monthly bond yield from the total return on large company stocks results in a long-term historical equity risk premium of 5.78%.

I used the arithmetic mean monthly total return rates for the large company stocks and yields (income returns) for the Moody's Aaa/Aa corporate bonds, because they are appropriate for the purpose of estimating the cost of capital as noted in SBBI – 2020.[19] The use of the arithmetic mean return rates and yields is appropriate because historical total returns and equity risk premiums provide insight into the variance and standard deviation of returns needed by investors in estimating future risk when making a current investment. If investors relied on the geometric mean of historical equity risk premiums, they would have no insight into the potential variance of future returns because the geometric mean relates the change over many time periods to a constant rate of change, thereby obviating the year-to-year fluctuations, or variance, which is critical to risk analysis.

Q. Please explain the derivation of the regression-based equity risk premium.

A. To derive the regression analysis-derived market equity risk premium of 9.12%, shown on line 2 on page 8 of Schedule 4, I used the same monthly annualized total returns on large company common stocks relative to the monthly annualized yields on Moody's Aaa/Aa corporate bonds as mentioned above. The relationship between interest rates and the market equity risk premium was modeled using the observed monthly market equity risk premium as the dependent variable, and the monthly yield on Moody's Aaa/Aa corporate bonds as the independent variable. I used a linear Ordinary Least Squares ("OLS") regression, in which the

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[18] As explained in note 1 on page 8 of Schedule 4.

[19] SBBI – 2020, at 10-22.

market equity risk premium is expressed as a function of the Moody's Aaa/Aa corporate bonds yield:

$$RP = \alpha + \beta\ (R_{Aaa/Aa})$$

Q. Please explain the derivation of the PRPM equity risk premium.

A. I used the same PRPM approach described previously to develop another equity risk premium estimate. The inputs to the model are the historical monthly returns on large company common stocks minus the monthly yields on Aaa/Aa corporate bonds during the period from January 1928 through April 2020.[20] Using the previously discussed generalized form of ARCH, known as GARCH, the projected equity risk premium is determined using Eviews© statistical software. The resulting PRPM predicted market equity risk premium is 11.95%.[21]

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

A. As noted previously, because both ratemaking and the cost of capital, including the cost rate of common equity, are prospective, a prospective market equity risk premium is essential. The derivation of the forecasted or prospective market equity risk premium can be found in note 4 on page 8 of Schedule 4. Consistent with my calculation of the dividend yield component in my DCF analysis, this prospective market equity risk premium is derived from an average of the three- to five-year median market price appreciation potential by *Value Line* for the 13 weeks ending May 1, 2020, plus an average of the median estimated dividend yield for the common stocks of the 1,700 firms covered in *Value Line*'s Standard Edition.[22]

The average median expected price appreciation is 81%, which translates to a 15.99% annual appreciation, and, when added to the average of *Value Line's* median expected dividend

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20 Data from January 1926-December 2019 is from SBBI – 2020. Data from January 2020 – April 2020 is from Bloomberg Professional Services.

21 Shown on line 3 on page 8 of Schedule 4.

22 As explained in detail in page 2, note 1 of Schedule 5.

yields of 2.72%, equates to a forecasted annual total return rate on the market of 18.71%. The forecasted Aaa bond yield of 3.21% is deducted from the total market return of 18.71%, resulting in an equity risk premium of 15.50%, shown on page 8, line 4 of Schedule 4.

Q. Please explain the derivation of an equity risk premium based on the S&P 500 composite index companies using *Value Line* data.

A. Using data from *Value Line*, I calculate an expected total return on the S&P 500 using expected dividend yields and long-term growth estimates as a proxy for capital appreciation. The expected total return for the S&P 500 is 14.79%. Subtracting the prospective yield on Aaa Corporate bonds of 3.21% results in an 11.58% projected equity risk premium.

Q. Please explain the derivation of an equity risk premium based on the S&P 500 composite index companies using Bloomberg data.

A. Using data from Bloomberg Professional Services, I calculate an expected total return on the S&P 500 using expected dividend yields and long-term growth estimates as a proxy for capital appreciation, identical to the method described above relative to *Value Line* data. The expected total return for the S&P 500 is 13.53%. Subtracting the prospective yield on Aaa Corporate bonds of 3.21% results in a 10.32% projected equity risk premium.

Q. What is your conclusion of the market equity risk premium for your total market approach RPM?

A. I give equal weight to all these market equity risk premiums in arriving at my conclusion of market equity risk premium of 10.71%. After calculating the average market equity risk premium of 10.71%, I adjust it by the Beta coefficient of the Utility Proxy Group to account for the risk of the Group. As discussed below, the Beta coefficient is a meaningful measure of prospective relative risk to the market as a whole and is a logical means by which to allocate a company's or proxy group's share of the market's total equity risk premium, relative to corporate bond yields. As shown on page 1 of Schedule 5, the average of the mean and median

Beta coefficients for the Utility Proxy Group is 0.71. Multiplying the Beta coefficient of the Utility Proxy Group of 0.71 by the market equity risk premium of 10.71% results in a beta-adjusted equity risk premium of 7.60% for the Utility Proxy Group.

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

A. I estimate three equity risk premiums based on the S&P Utility Index holding returns, and two equity risk premiums based on the expected returns of the S&P Utilities Index, using *Value Line* and Bloomberg data, respectively. Turning first to the S&P Utility Index holding period returns, I derive a long-term monthly arithmetic mean equity risk premium between the S&P Utility Index total returns of 10.74% and monthly A-rated public utility bond yields of 6.53% from 1928 to 2019 to arrive at an equity risk premium of 4.21%.[23] I then use the same historical data to derive an equity risk premium of 6.68% based on a regression of the monthly equity risk premiums. The final S&P Utility Index holding period equity risk premium involves applying the PRPM using the historical monthly equity risk premiums from January 1928 to April 2020 to arrive at a PRPM-derived equity risk premium of 5.95% for the S&P Utility Index.

I then derive expected total returns on the S&P Utilities Index of 10.50% and 8.97% using data from *Value Line* and Bloomberg Professional Services, respectively, and subtract the prospective A2-rated public utility bond yield (3.74%)[24], which results in risk premiums of 6.76% and 5.23%, respectively. As with the market equity risk premiums, I average all the risk premiums to arrive at my utility-specific equity risk premium of 5.76%.

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[23] As shown on line 1 on page 12 of Schedule 4.

[24] Derived on line 3 on page 3 of Schedule 4.

Q. What is your conclusion regarding the appropriate equity risk premium for use in your adjusted total market approach RPM analysis?

A. The equity risk premium applicable to the Utility Proxy Group is 6.68%, derived by averaging the beta-derived premium of 7.60% (line 9 on page 8 of Schedule 4) with the equity risk premium of 5.76% based on the holding period returns of public utilities with Moody's A-rated bonds (line 6 on page 12 of Schedule 4).

Q. What is the RPM-based common equity cost rate based on the adjusted total market approach?

A. It is 10.50% for the Utility Proxy Group as shown on line 7 on page 3 of Schedule 4.

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

A. As shown on page 1 of Schedule 4, the indicated RPM-derived common equity cost rate is 10.91%, derived by averaging the PRPM results (11.31%) with those based on the adjusted total market approach (10.50%).

C. <u>The Capital Asset Pricing Model</u>

Q. Please explain the theoretical basis of the CAPM.

A. CAPM theory defines risk as the co-variability of a security's returns with the market's returns as measured by the Beta coefficient (β). A Beta coefficient of less than 1.0 indicates lower variability while a Beta coefficient greater than 1.0 indicates greater variability than the market.

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

$$Rs = Rf + \beta(Rm - Rf)$$

Where:

Rs	=	Return rate on the common stock
Rf	=	Risk-free rate of return
Rm	=	Return rate on the market as a whole
β	=	Adjusted beta (volatility of the security relative to the market as a whole)

Numerous tests of the CAPM have measured the extent to which security returns and Beta coefficients are related, as predicted by the CAPM, confirming the CAPM's validity. The empirical CAPM ("ECAPM") reflects the reality that, while the results of these tests support the notion that the Beta coefficient is related to security returns, the empirical Security Market Line ("SML") described by the CAPM formula is not as steeply sloped as the predicted SML. Morin[25] states:

> With few exceptions, the empirical studies agree that … low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted.
>
> * * *
>
> Therefore, the empirical evidence suggests that the expected return on a security is related to its risk by the following approximation:
>
> $$K = R_F + x\,\beta(R_M - R_F) + (1-x)\ \beta(R_M - R_F)$$
>
> where x is a fraction to be determined empirically. The value of x that best explains the observed relationship Return = 0.0829 + 0.0520 β is between 0.25 and 0.30. If x = 0.25, the equation becomes:
>
> $$K = R_F + 0.25(R_M - R_F) + 0.75\ \beta(R_M - R_F)$$

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

[25] Roger A. Morin, New Regulatory Finance, Public Utility Reports, 2006, at 175, 190.

Q. Please describe your selection of the Beta coefficient for your CAPM analysis?

A. I relied on an average of the adjusted Beta coefficients published by *Value Line* and provided by Bloomberg Professional Services. While both of those services adjust their calculated (or "raw") Beta coefficients to reflect the tendency of the Beta coefficient to regress to the market mean of 1.00, *Value Line* calculates its Beta coefficients over a five-year period, while Bloomberg's calculation is based on two years of data.

Q. Please describe your selection of a risk-free rate of return for your CAPM analysis.

A. As shown in Column [5] on Schedule 5, the risk-free rate adopted for both applications of the CAPM is 2.03%. The risk-free rate of 2.03% is based on the average of the consensus forecast for the six quarters ending with the third quarter 2021, from the May 1, 2020 *Blue Chip*, averaged with the long-range forecasts for 2021 – 2025 and 2026 – 2030, from the December 1, 2019 *Blue Chip,*[26] as detailed in note 2 on page 2 of Schedule 5.

Q. Why is the yield on long-term U.S. treasury bonds appropriate for use as the risk-free rate?

A. The yield on long-term U.S. Treasury Bonds is almost risk-free and its term is consistent with: (1) the long-term cost of capital to public utilities measured by the yields on A-rated public utility bonds; (2) the long-term investment horizon inherent in utilities' common stock and (3) the long-term life of the jurisdictional rate base to which the allowed reasonable rate of return (*i.e.,* cost of capital) will be applied. In contrast, short-term U.S. Treasury yields are more volatile, and reflect a short-term investment horizon that is not consistent with the long-term investment horizon, and life of the rate base to which the allowed rate of return is applied.

Q. Please explain the estimation of the expected equity risk premium for the market.

A. The basis of the market risk premium is explained in detail in note 1 on page 2 of Schedule 5.

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[26] See pages 10 and 11 of Schedule 4.

As discussed previously, the market risk premium is derived from an average of three historical data-based market risk premiums, two *Value Line* data-based market risk premiums, and one Bloomberg data-based market risk premium.

The long-term income return on U.S. Government Securities of 5.09% was deducted from the SBBI – 2020 monthly historical total market return of 12.10%, which resulted in a historical market equity risk premium of 7.01%.[27] I applied a linear OLS regression to the monthly annualized historical returns on the S&P 500 relative to historical yields on long-term U.S. Government Securities from SBBI – 2020. That regression analysis yielded a market equity risk premium of 10.26%. The PRPM market equity risk premium is 13.44% and is derived using the PRPM relative to the yields on long-term U.S. Treasury securities from January 1926 through April 2020.

The *Value Line*-derived forecasted total market equity risk premium is derived by deducting the forecasted risk-free rate of 2.03%, discussed above, from the *Value Line* projected total annual market return of 18.71%, resulting in a forecasted total market equity risk premium of 16.68%. The S&P 500 projected market equity risk premium using *Value Line* data is derived by subtracting the projected risk-free rate of 2.03% from the projected total return of the S&P 500 of 14.79%. The resulting market equity risk premium is 12.76%.

The S&P 500 projected market equity risk premium using Bloomberg data is derived by subtracting the projected risk-free rate of 2.03% from the projected total return of the S&P 500 of 13.53%. The resulting market equity risk premium is 11.50%.

These six measures, when averaged, result in an average total market equity risk premium of 11.94%.

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27 SBBI – 2020, at Appendix A-1 (1) through A-1 (3) and Appendix A-7 (19) through A-7 (21).

Q. What are the results of applying the traditional and empirical CAPM to the Utility Proxy Group?

A. As shown in Column [8] on page 1 of Schedule 5, the average and median CAPM/ECAPM equity cost rate is 10.90%.

D. Common Equity Cost Rates for a Proxy Group of Domestic, Non-Price Regulated Companies Based on the DCF, RPM, and CAPM

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

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

Q. How did you select non-price regulated companies that are comparable in total risk to the Utility Proxy Group?

A. In *order* to select a proxy group of domestic, non-price regulated companies similar in total risk to the Utility Proxy Group, I relied on the Beta coefficients and related statistics derived from *Value Line* regression analyses of weekly market prices over the most recent 260 weeks (*i.e.*, five years). These selection criteria resulted in a proxy group of 12 domestic, non-price regulated firms comparable in total risk to the Utility Proxy Group. Total risk is the sum of non-diversifiable market risk and diversifiable company-specific risks. The criteria used in selecting the domestic, non-price regulated firms was:

1) They must be covered by *Value Line Investment Survey* (Standard Edition);

2) They must be domestic, non-price regulated companies, *i.e.*, not utilities;

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

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

Beta coefficients measure market, or systematic, risk, which is not diversifiable. The residual standard errors of the regressions measure each firm's company-specific, diversifiable risk. This is demonstrated clearly by Jack C. Francis on page 273 of Investments: Analysis and Management, where he states "Total risk can be measured by the variance of returns, denoted Var(*r*). This measure of *total risk is partitioned into its systematic and unsystematic components*."[28] Essentially, companies that have similar betas and standard errors of regression have similar total investment risk.

Q. Have you prepared a schedule which shows the data from which you selected the 12 domestic, non-price regulated companies that are comparable in total risk to the Utility Proxy Group?

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

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

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

[28] Jack C. Francis, Investments: Analysis and Management 5th (McGraw-Hill, 1991) at 273 (italics in original).

companies.

Page 2 of Schedule 7 derives the constant growth DCF model common equity cost rate. As shown, the indicated common equity cost rate, using the constant growth DCF for the Non-Price Regulated Proxy Group comparable in total risk to the Utility Proxy Group, is 8.41%.

Pages 3 through 5 of Schedule 7 contain the data and calculations that support the 13.12% RPM common equity cost rate. As shown on line 1, page 3 of Schedule 7, the consensus prospective yield on Moody's Baa-rated corporate bonds for the six quarters ending in the third quarter of 2021, and for the years 2021 – 2025 and 2026 – 2030, is 4.55%.[29] When the beta-adjusted risk premium of 8.57%[30] relative to the Non-Price Regulated Proxy Group is added to the prospective Baa2-rated corporate bond yield of 4.55%, the indicated RPM common equity cost rate is 13.12%.

Page 6 of Schedule 7 contains the inputs and calculations that support my indicated CAPM/ECAPM common equity cost rate of 11.83%.

Q. What is the cost rate of common equity based on the Non-Price Regulated Proxy Group?

A. As shown on page 1 of Schedule 7, the results of the common equity models applied to the Non-Price Regulated Proxy Group -- which group is comparable in total risk to the Utility Proxy Group -- are as follows: 8.41% (DCF), 13.12% (RPM), and 11.83% (CAPM). The average of the mean and median of these models is 11.48%, which I used as the indicated common equity cost rate for the Non-Price Regulated Proxy Group.

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29 *Blue Chip Financial Forecasts*, December 1, 2019, at page 14 and May 1, 2020, at page 2.
30 Derived on page 4 of Schedule 7.

VII. INDICATED COMMON EQUITY COST RATE BEFORE ADJUSTMENT FOR COMPANY-SPECIFIC RISK

Q. What is the indicated common equity cost rate based on the cost of common equity model results?

A. It is 10.75%, based on the common equity cost rates resulting from the application of cost of common equity models to the Utility Proxy Group and the Non-Price Regulated Proxy Group summarized in Table 2 above and on page 2 of Schedule 1. As discussed above, I employ multiple cost of common equity models as primary tools in arriving at my recommended common equity cost rate because:

1) No single model is so inherently precise that it can be relied on solely to the exclusion of other theoretically sound models;
2) All of the models are market-based;
3) The use of multiple models adds reliability to the estimation of the common equity cost rate; and
4) The prudence of using multiple cost of common equity models is supported in both the financial literature and regulatory precedent.

Based on these common equity cost rate results, I conclude that a common equity cost rate of 10.75% is indicated for the Utility Proxy Group before determining if there need to be any Company-specific adjustments.

A. Company-Specific Risk Adjustments

1. Business Risk Adjustment

Q. Does UIF's smaller size compared with the Utility Proxy Group increase its business risk?

A. Yes. UIF's smaller size relative to the Utility Proxy Group companies indicates greater relative business risk for the Company because, all else being equal, size has a material bearing on risk.

Size affects business risk because smaller companies generally are less able to cope with significant events that affect sales, revenues and earnings. For example, smaller companies face more risk exposure to business cycles and economic conditions, both nationally and locally. Additionally, the loss of revenues from a few larger customers would have a greater effect on a small company than on a bigger company with a larger, more diverse, customer base.

As further evidence illustrates that smaller firms are riskier, investors generally demand greater returns from smaller firms to compensate for less marketability and liquidity of their securities. Duff & Phelps 2019 Valuation Handbook Guide to Cost of Capital - Market Results through 2018 ("D&P - 2019") discusses the nature of the small-size phenomenon, providing an indication of the magnitude of the size premium based on several measures of size. In discussing "Size as a Predictor of Equity Premiums," D&P - 2019 states:

> The size effect is based on the empirical observation that companies of smaller size are associated with greater risk and, therefore, have greater cost of capital [sic]. The "size" of a company is one of the most important risk elements to consider when developing cost of equity capital estimates for use in valuing a business simply because size has been shown to be a *predictor* of equity returns. In other words, there is a significant (negative) relationship between size and historical equity returns - as size *decreases*, returns tend to *increase*, and vice versa. (footnote omitted) (emphasis in original)[31]

Furthermore, in "The Capital Asset Pricing Model: Theory and Evidence," Fama and French note size is indeed a risk factor which must be reflected when estimating the cost of common equity. On page 14, they note:

> **. . .** the higher average returns on small stocks and high book-to-market stocks reflect unidentified state variables that produce undiversifiable risks (covariances) in returns not captured in the market return and are priced separately from market betas.[32]

Based on this evidence, Fama and French proposed their three-factor model which includes a size variable in recognition of the effect size has on the cost of common equity.

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31 Duff & Phelps 2019 Valuation Handbook Guide to Cost of Capital - Market Results through 2018, Wiley 2018, at 4-1.

32 Eugene F. Fama and Kenneth R. French, "The Capital Asset Pricing Model: Theory and Evidence," *Journal of Economic Perspectives*, Volume 18, Number 3, Summer 2004, at 25-43.

Also, it is a basic financial principle that the use of funds invested, and not the source of funds, is what gives rise to the risk of any investment.[33] Eugene Brigham, a well-known authority, states:

> A number of researchers have observed that portfolios of small-firms (sic) have earned consistently higher average returns than those of large-firm stocks; this is called the "small-firm effect." On the surface, it would seem to be advantageous to the small firms to provide average returns in a stock market that are higher than those of larger firms. In reality, it is bad news for the small firm; **what the small-firm effect means is that the capital market demands higher returns on stocks of small firms than on otherwise similar stocks of the large firms.** (emphasis added)[34]

Consistent with the financial principle of risk and return discussed above, increased relative risk due to small size must be considered in the allowed rate of return on common equity. Therefore, the Commission's authorization of a cost rate of common equity in this proceeding must appropriately reflect the unique risks of UIF's, including its small size, which is justified and supported above by evidence in the financial literature.

Q. Is there a way to quantify an adjustment to compensate UIF for greater business risk due to its smaller size relative to the Utility Proxy Group?

A. Yes. UIF has greater relative risk than the average utility in the Utility Proxy Group because of its smaller size compared with the Utility Proxy Group, as measured by an estimated market capitalization of common equity for UIF.

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33 Brealey, Richard A. and Myers, Stewart C., Principles of Corporate Finance (McGraw-Hill Book Company, 1996), at 204-205, 229.

34 Brigham, Eugene F., Fundamentals of Financial Management, Fifth Edition (The Dryden Press, 1989), at 623.

Table 3: Size as Measured by Market Capitalization for UIF and the Utility Proxy Group

	Market Capitalization* ($ Millions)	Times Greater Than The Company
UIF	$196.004	
Utility Proxy Group	$5,657.608	28.9x

*From page 1 of Schedule 8.

UIF's estimated market capitalization was $196.004 million as of April 30, 2020,[35] compared with the market capitalization of the average company in the Utility Proxy Group of $5.657 billion as of April 30, 2020. The average company in the Utility Proxy Group has a market capitalization 28.9 times the size of UIF's estimated market capitalization.

As a result, it is necessary to upwardly adjust the indicated common equity cost rate of 10.75% to reflect UIF's greater risk due to their smaller relative size. The determination is based on the size premiums for portfolios of the New York Stock Exchange, American Stock Exchange, and NASDAQ listed companies ranked by deciles for the 1926 to 2019 period as shown on the bottom half of page 1 of Schedule 8. The average size premium for the Utility Proxy Group with a market capitalization of $5.7 billion falls in the 4th decile, while the Company's estimated market capitalization of $196.004 million places it in the 10th decile. The size premium spread between the 4th decile and the 10th decile is 4.20% as shown on the top half of page 1 of Schedule 8. Even though a 4.20% upward size adjustment is indicated, I applied a size premium of 1.00% to the Company's indicated common equity cost rate.

[35] $196.004M = $122.446M (book equity from UIF 2019 Annual Report to the FL PSC) * 49.39% (requested common equity ratio from page 1 of Schedule 1) * 324.1% (market-to-book ratio of the Utility Proxy Group) as demonstrated on page 2 of Schedule 8.

Q. Did you evaluate UIF's parent, CRU-US's estimated market capitalization compared to the proxy group?

A. Yes. Even though I do not think it is applicable,[36] I looked at CRU's common equity balance at December 31, 2019. I then adjusted it by the proxy group market-to-book ratio and compared it with the proxy group. CRU-US's estimated market capitalization, $944.372 million,[37] would fall in the 8th decile, which would indicate a 0.80% size premium over the average proxy group company.

Q. Does the FL ROE Formula allow for adjustments for increased risks of small utilities?

A. Yes, it does. Order No. PSC-2019-0267-PAA-WS states the following:

> 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.
>
> A small utility risk premium of 50 basis points is added because the average Florida WAW [water and wastewater] utility is too small to qualify for privately placed debt and smaller companies are considered by investors to be more risky than larger companies. [clarification added]

In view of the all of the above, and especially given CRU-US's debt was privately placed, my 1.00% upward adjustment to reflect the increased risk of UIF relative to the Utility Proxy Group is both reasonable and conservative.

VIII. <u>CONCLUSION</u>

Q. What is your recommended return on investor-supplied capital for UIF?

A. Given the Company's 13-month average balances of investor-supplied capital ending December 31, 2019 which consists of 45.58% long-term debt at an embedded debt cost rate of 5.78%, 5.03% short-term debt at an embedded debt cost rate of 4.04%, and 49.39% common equity at my recommended ROE of 11.75%, I conclude that an appropriate return on investor-

36 It is Mr. D'Ascendis' opinion that the parent company's size is irrelevant in setting rates for one of its jurisdictional subsidiaries. Regulation is required to look at each operating utility as a stand-alone company since they can only set rates for that particular utility and no other operating subsidiary outside of their jurisdiction.

37 $291.383M (CRU-US book equity) * 324.1% (market-to-book ratio of the Utility Proxy Group) = $944.372M

supplied capital for the Company is 8.63%. A common equity cost rate of 11.75% is consistent with the *Hope* and *Bluefield* standard of a just and reasonable return which ensures the integrity of presently invested capital and enables the attraction of needed new capital on reasonable terms. It also ensures that UIF will be able to continue providing safe, adequate and reliable water service to the benefit of customers. Thus, it balances the interests of both customers and the Company.

Q. Does that conclude your direct testimony?

A. Yes

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for increase in water and wastewater rates in Charlotte, Highlands, Lake, Lee, Marion, Orange, Pasco, Pinellas, Polk, and Seminole Counties by Utilities, Inc. of Florida.	)	Docket No. 20200139-WS

EXHIBIT (DWD-1) ______

OF

DYLAN D. D'ASCENDIS

on behalf of

Utilities, Inc. of Florida

Summary

Dylan is an experienced consultant and a Certified Rate of Return Analyst (CRRA) and Certified Valuation Analyst (CVA). He has served as a consultant for investor-owned and municipal utilities and authorities for 11 years. Dylan has extensive experience in rate of return analyses, class cost of service, rate design, and valuation for regulated public utilities. He has testified as an expert witness in the subjects of rate of return, cost of service, rate design, and valuation before 19 regulatory commissions in the U.S. and an American Arbitration Association panel.

He also maintains the benchmark index against which the Hennessy Gas Utility Mutual Fund performance is measured.

Areas of Specialization

- Regulation and Rates
- Utilities
- Mutual Fund Benchmarking
- Capital Market Risk
- Financial Modeling
- Valuation
- Regulatory Strategy
- Rate Case Support
- Rate of Return
- Cost of Service
- Rate Design

Recent Expert Testimony Submission/Appearances

Jurisdiction	***Topic***
Massachusetts Department of Public Utilities	Rate of Return
New Jersey Board of Public Utilities	Rate of Return
Hawaii Public Utilities Commission	Cost of Service, Rate Design
South Carolina Public Service Commission	Return on Common Equity
American Arbitration Association	Valuation

Recent Assignments

- Provided expert testimony on the cost of capital for ratemaking purposes before numerous state utility regulatory agencies
- Maintains the benchmark index against which the Hennessy Gas Utility Mutual Fund performance is measured
- Sponsored valuation testimony for a large municipal water company in front of an American Arbitration Association Board to justify the reasonability of their lease payments to the City
- Co-authored a valuation report on behalf of a large investor-owned utility company in response to a new state regulation which allowed the appraised value of acquired assets into rate base

Recent Publications and Speeches

- Co-Author of: “Decoupling, Risk Impacts and the Cost of Capital”, co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. The Electricity Journal, March, 2020.
- Co-Author of: “Decoupling Impact and Public Utility Conservation Investment”, co-authored with Richard A. Michelfelder, Ph.D., Rutgers University and Pauline M. Ahern. Energy Policy Journal, 130 (2019), 311-319.
- “Establishing Alternative Proxy Groups”, before the Society of Utility and Regulatory Financial Analysts: 51st Financial Forum, April 4, 2019, New Orleans, LA.
- “Past is Prologue: Future Test Year”, Presentation before the National Association of Water Companies 2017 Southeast Water Infrastructure Summit, May 2, 2017, Savannah, GA.
- Co-author of: “Comparative Evaluation of the Predictive Risk Premium Model™, the Discounted Cash Flow Model and the Capital Asset Pricing Model”, co-authored with Richard A. Michelfelder, Ph.D., Rutgers University, Pauline M. Ahern, and Frank J. Hanley, The Electricity Journal, May, 2013.
- “Decoupling: Impact on the Risk and Cost of Common Equity of Public Utility Stocks”, before the Society of Utility and Regulatory Financial Analysts: 45th Financial Forum, April 17-18, 2013, Indianapolis, IN.

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Regulatory Commission of Alaska				
Alaska Power Company	07/16	Alaska Power Company	Docket No. TA857-2	Rate of Return
Arizona Corporation Commission				
Arizona Water Company	12/19	Arizona Water Company – Western Group	Docket No. W01445A-19-0278	Rate of Return
Arizona Water Company	08/18	Arizona Water Company – Northern Group	Docket No. W01445A-18-0164	Rate of Return
Colorado Public Utilities Commission				
Summit Utilities, Inc.	04/18	Colorado Natural Gas Company	Docket No. 18AL-0305G	Return on Equity
Atmos Energy Corporation	06/17	Atmos Energy Corporation	Docket No. 17AL-0429G	Return on Equity
Delaware Public Service Commission				
Tidewater Utilities, Inc.	11/13	Tidewater Utilities, Inc.	Docket No. 13-466	Capital Structure
Hawaii Public Utilities Commission				
Lanai Water Company, Inc.	12/19	Lanai Water Company, Inc.	Docket No. 2019-0386	Cost of Service / Rate Design
Manele Water Resources, LLC	8/19	Manele Water Resources, LLC	Docket No. 2019-0311	Cost of Service / Rate Design
Kaupulehu Water Company	02/18	Kaupulehu Water Company	Docket No. 2016-0363	Rate of Return
Aqua Engineers, LLC	05/17	Puhi Sewer & Water Company	Docket No. 2017-0118	Cost of Service / Rate Design
Hawaii Resources, Inc.	09/16	Laie Water Company	Docket No. 2016-0229	Cost of Service / Rate Design
Illinois Commerce Commission				
Utility Services of Illinois, Inc.	11/17	Utility Services of Illinois, Inc.	Docket No. 17-1106	Cost of Service / Rate Design
Aqua Illinois, Inc.	04/17	Aqua Illinois, Inc.	Docket No. 17-0259	Rate of Return
Utility Services of Illinois, Inc.	04/15	Utility Services of Illinois, Inc.	Docket No. 14-0741	Rate of Return
Indiana Utility Regulatory Commission				
Aqua Indiana, Inc.	03/16	Aqua Indiana, Inc. Aboite Wastewater Division	Docket No. 44752	Rate of Return
Twin Lakes, Utilities, Inc.	08/13	Twin Lakes, Utilities, Inc.	Docket No. 44388	Rate of Return
Kansas Corporation Commission				
Atmos Energy	07/19	Atmos Energy	19-ATMG-525-RTS	Rate of Return
Louisiana Public Service Commission				
Louisiana Water Service, Inc.	06/13	Louisiana Water Service, Inc.	Docket No. U-32848	Rate of Return
Maryland Public Service Commission				
FirstEnergy, Inc.	08/18	Potomac Edison Company	Case No. 9490	Rate of Return
Massachusetts Department of Public Utilities				
Unitil Corporation	12/19	Fitchburg Gas & Electric Co. (Elec.)	D.P.U. 19-130	Rate of Return
Unitil Corporation	12/19	Fitchburg Gas & Electric Co. (Gas)	D.P.U. 19-131	Rate of Return

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Liberty Utilities	07/15	Liberty Utilities d/b/a New England Natural Gas Company	Docket No. 15-75	Rate of Return
Mississippi Public Service Commission				
Atmos Energy	03/19	Atmos Energy	Docket No. 2015-UN-049	Capital Structure
Atmos Energy	07/18	Atmos Energy	Docket No. 2015-UN-049	Capital Structure
Missouri Public Service Commission				
Indian Hills Utility Operating Company, Inc.	10/17	Indian Hills Utility Operating Company, Inc.	Case No. SR-2017-0259	Rate of Return
Raccoon Creek Utility Operating Company, Inc.	09/16	Raccoon Creek Utility Operating Company, Inc.	Docket No. SR-2016-0202	Rate of Return
New Jersey Board of Public Utilities				
Aqua New Jersey, Inc.	12/18	Aqua New Jersey, Inc.	Docket No. WR18121351	Rate of Return
Middlesex Water Company	10/17	Middlesex Water Company	Docket No. WR17101049	Rate of Return
Middlesex Water Company	03/15	Middlesex Water Company	Docket No. WR15030391	Rate of Return
The Atlantic City Sewerage Company	10/14	The Atlantic City Sewerage Company	Docket No. WR14101263	Cost of Service / Rate Design
Middlesex Water Company	11/13	Middlesex Water Company	Docket No. WR1311059	Capital Structure
North Carolina Utilities Commission				
Aqua North Carolina, Inc.	12/19	Aqua North Carolina, Inc.	Docket No. W-218 Sub 526	Rate of Return
Carolina Water Service, Inc.	06/19	Carolina Water Service, Inc.	Docket No. W-354 Sub 364	Rate of Return
Carolina Water Service, Inc.	09/18	Carolina Water Service, Inc.	Docket No. W-354 Sub 360	Rate of Return
Aqua North Carolina, Inc.	07/18	Aqua North Carolina, Inc.	Docket No. W-218 Sub 497	Rate of Return
Public Utilities Commission of Ohio				
Aqua Ohio, Inc.	05/16	Aqua Ohio, Inc.	Docket No. 16-0907-WW-AIR	Rate of Return
Pennsylvania Public Utility Commission				
Valley Energy, Inc.	07/19	C&T Enterprises	Docket No. R-2019-3008209	Rate of Return
Wellsboro Electric Company	07/19	C&T Enterprises	Docket No. R-2019-3008208	Rate of Return
Citizens' Electric Company of Lewisburg	07/19	C&T Enterprises	Docket No. R-2019-3008212	Rate of Return
Steelton Borough Authority	01/19	Steelton Borough Authority	Docket No. A-2019-3006880	Valuation
Mahoning Township, PA	08/18	Mahoning Township, PA	Docket No. A-2018-3003519	Valuation
SUEZ Water Pennsylvania Inc.	04/18	SUEZ Water Pennsylvania Inc.	Docket No. R-2018-000834	Rate of Return
Columbia Water Company	09/17	Columbia Water Company	Docket No. R-2017-2598203	Rate of Return

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Veolia Energy Philadelphia, Inc.	06/17	Veolia Energy Philadelphia, Inc.	Docket No. R-2017-2593142	Rate of Return
Emporium Water Company	07/14	Emporium Water Company	Docket No. R-2014-2402324	Rate of Return
Columbia Water Company	07/13	Columbia Water Company	Docket No. R-2013-2360798	Rate of Return
Penn Estates Utilities, Inc.	12/11	Penn Estates, Utilities, Inc.	Docket No. R-2011-2255159	Capital Structure / Long-Term Debt Cost Rate
South Carolina Public Service Commission				
Blue Granite Water Co.	12/19	Blue Granite Water Company	Docket No. 2019-292-WS	Rate of Return
Carolina Water Service, Inc.	02/18	Carolina Water Service, Inc.	Docket No. 2017-292-WS	Rate of Return
Carolina Water Service, Inc.	06/15	Carolina Water Service, Inc.	Docket No. 2015-199-WS	Rate of Return
Carolina Water Service, Inc.	11/13	Carolina Water Service, Inc.	Docket No. 2013-275-WS	Rate of Return
United Utility Companies, Inc.	09/13	United Utility Companies, Inc.	Docket No. 2013-199-WS	Rate of Return
Utility Services of South Carolina, Inc.	09/13	Utility Services of South Carolina, Inc.	Docket No. 2013-201-WS	Rate of Return
Tega Cay Water Services, Inc.	11/12	Tega Cay Water Services, Inc.	Docket No. 2012-177-WS	Capital Structure
Virginia State Corporation Commission				
WGL Holdings, Inc.	7/18	Washington Gas Light Company	PUR-2018-00080	Rate of Return
Atmos Energy Corporation	5/18	Atmos Energy Corporation	PUR-2018-00014	Rate of Return
Aqua Virginia, Inc.	7/17	Aqua Virginia, Inc.	PUR-2017-00082	Rate of Return
Massanutten Public Service Corp.	08/14	Massanutten Public Service Corp.	PUE-2014-00035	Rate of Return / Rate Design

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Application for increase in water and wastewater rates in Charlotte, Highlands, Lake, Lee, Marion, Orange, Pasco, Pinellas, Polk, and Seminole Counties by Utilities, Inc. of Florida.

Docket No. 20200139-WS

EXHIBIT (DWD-2) ______

OF

DYLAN D. D'ASCENDIS

on behalf of

Utilities, Inc. of Florida

Utilities, Inc. of Florida
Table of Contents to Exhibit DWD-2

Utilities, Inc of Florida
Recommended Capital Structure and Cost Rates
for Ratemaking Purposes
at December 31, 2019

Type Of Capital	Ratios (1)	Cost Rate		Weighted Cost Rate
Long-Term Debt	45.58%	5.78%	(1)	2.63%
Short-Term Debt	5.03%	4.04%	(1)	0.20%
Common Equity	49.39%	11.75%	(2)	5.80%
Total	100.00%			8.63%

Notes:

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

Utilities, Inc of Florida
Brief Summary of Common Equity Cost Rate

Line No.	Principal Methods	Proxy Group of Seven Water Companies
1.	Discounted Cash Flow Model (DCF) (1)	9.07%
2.	Risk Premium Model (RPM) (2)	10.91%
3.	Capital Asset Pricing Model (CAPM) (3)	10.90%
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	11.48%
5.	Indicated Common Equity Cost Rate before Adjustment for Risk	10.75%
6.	Size Risk Adjustment (5)	1.00%
7.	Recommended Common Equity Cost Rate after Adjustment for Risk	11.75%

Notes:
(1) From Schedule 3.
(2) From page 1 of Schedule 4.
(3) From page 1 of Schedule 5.
(4) From page 1 of Schedule 7.
(5) Business risk adjustment to reflect UIF's smaller relative size to the Utility Proxy Group as detailed in the accompanying direct testimony.

Proxy Group of Seven Water Companies
CAPITALIZATION AND FINANCIAL STATISTICS (1)
2014 - 2018, Inclusive

	2019	2018	2017	2016	2015	
			(MILLIONS OF DOLLARS)			
CAPITALIZATION STATISTICS						
AMOUNT OF CAPITAL EMPLOYED						
TOTAL PERMANENT CAPITAL	$3,888.223	$3,208.636	$2,837.657	$2,680.018	$2,535.795	
SHORT-TERM DEBT	$189.862	$184.221	$185.250	$152.691	$106.277	
TOTAL CAPITAL EMPLOYED	$4,078.085	$3,392.857	$3,022.907	$2,832.709	$2,642.072	
INDICATED AVERAGE CAPITAL COST RATES (2)						
TOTAL DEBT	4.30 %	4.75 %	4.829 %	4.943 %	5.079 %	
PREFERRED STOCK	5.84 %	5.92 %	5.91 %	5.91 %	5.91 %	
CAPITAL STRUCTURE RATIOS						5 YEAR AVERAGE
BASED ON TOTAL PERMANENT CAPITAL:						
LONG-TERM DEBT	47.17 %	45.15 %	45.58 %	46.14 %	46.49 %	46.11 %
PREFERRED STOCK	0.06	0.09	0.10	0.11	0.11	0.09
COMMON EQUITY	52.77	54.76	54.32	53.75	53.40	53.80
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
BASED ON TOTAL CAPITAL:						
TOTAL DEBT, INCLUDING SHORT-TERM	50.61 %	48.37 %	48.93 %	48.42 %	47.77 %	48.82 %
PREFERRED STOCK	0.06	0.08	0.09	0.10	0.11	0.09
COMMON EQUITY	49.34	51.54	50.98	51.47	52.12	51.09
TOTAL	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED						
EARNINGS / PRICE RATIO	2.67 %	6.31 %	7.91 %	3.97 %	4.59 %	5.09 %
MARKET / AVERAGE BOOK RATIO	340.26	289.89	288.75	280.21	229.70	285.76
DIVIDEND YIELD	1.77	3.74	3.69	2.15	2.62	2.79
DIVIDEND PAYOUT RATIO	72.32	60.08	55.80	56.03	57.45	60.34
RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	9.49 %	10.12 %	11.31 %	10.93 %	10.39 %	10.45 %
TOTAL DEBT / EBITDA (3)	5.54 x	4.22 x	3.42 x	3.41 x	3.42 x	4.00 x
FUNDS FROM OPERATIONS / TOTAL DEBT (4)	14.49 %	21.37 %	22.87 %	23.65 %	25.81 %	21.64 %
TOTAL DEBT / TOTAL CAPITAL	50.61 %	48.37 %	48.93 %	48.42 %	47.77 %	48.82 %

Notes:

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

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

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

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

Source of Information: Company Annual Forms 10-K

Capital Structure Based upon Total Permanent Capital for the
Proxy Group of Seven Water Companies
2014 - 2018, Inclusive

	2019	2018	2017	2016	2015	5 YEAR AVERAGE
American States Water Co.						
Long-Term Debt	25.86 %	32.96 %	35.30 %	35.48 %	39.75 %	33.87 %
Short-Term Debt	18.84	9.79	6.48	9.94	3.41	9.69
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	55.30	57.25	58.22	54.58	56.84	56.44
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
American Water Works Company Inc						
Long-Term Debt	55.63 %	52.78 %	51.96 %	50.99 %	50.98 %	52.47 %
Short-Term Debt	5.05	6.66	6.90	6.85	5.41	6.17
Preferred Stock	0.03	0.05	0.06	0.08	0.10	0.06
Common Equity	39.29	40.51	41.08	42.08	43.51	41.30
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
California Water Service Group						
Long-Term Debt	45.85 %	50.61 %	35.44 %	42.44 %	43.44 %	43.56 %
Short-Term Debt	9.93	4.04	18.34	7.39	2.81	8.50
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	44.22	45.35	46.22	50.17	53.75	47.94
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Essential Utilities, Inc.						
Long-Term Debt	44.06 %	55.87 %	52.21 %	50.72 %	50.52 %	50.67 %
Short-Term Debt	0.37	0.34	0.09	0.17	0.47	0.29
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	55.57	43.79	47.70	49.11	49.01	49.04
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Middlesex Water Co.						
Long-Term Debt	40.76 %	34.83 %	35.98 %	37.66 %	40.10 %	37.87 %
Short-Term Debt	3.42	10.55	6.90	3.21	0.85	4.99
Preferred Stock	0.36	0.53	0.60	0.65	0.68	0.56
Common Equity	55.46	54.09	56.52	58.48	58.37	56.58
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
SJW Group						
Long-Term Debt	56.45 %	30.37 %	46.89 %	49.86 %	47.88 %	46.29 %
Short-Term Debt	5.07	7.04	2.72	1.63	4.31	4.15
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	38.48	62.59	50.39	48.51	47.81	49.56
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
York Water Co.						
Long-Term Debt	42.95 %	42.33 %	42.81 %	42.60 %	44.46 %	43.03 %
Short-Term Debt	0.00	0.45	0.48	0.00	0.00	0.19
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	57.05	57.22	56.71	57.40	55.54	56.78
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Proxy Group of Seven Water Companies						
Long-Term Debt	44.51 %	42.82 %	42.94 %	44.25 %	45.30 %	43.97 %
Short-Term Debt	6.10	5.55	5.99	4.17	2.47	4.85
Preferred Stock	0.05	0.08	0.09	0.10	0.11	0.09
Common Equity	49.34	51.55	50.98	51.48	52.12	51.09
Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %

Source of Information
Annual Forms 10-K

Utilities, Inc of Florida
Indicated Common Equity Cost Rate Using the Discounted Cash Flow Model for
Proxy Group of Seven Water Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Seven Water Companies	Average Dividend Yield (1)	Value Line Projected Five Year Growth in EPS (2)	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Bloomberg Projected Five Year Growth in EPS	Average Projected Five Year Growth in EPS (3)	Adjusted Dividend Yield (4)	Indicated Common Equity Cost Rate (5)
American States Water Co.	1.45 %	6.50 %	NA %	6.00 %	6.00 %	6.17 %	1.49 %	7.66 %
American Water Works Company Inc	1.73	8.50	8.10	8.20	8.19	8.25	1.80	10.05
California Water Service Group	1.66	6.50	NA	9.80	9.00	8.43	1.73	10.16
Essential Utilities, Inc.	2.11	10.00	5.90	6.40	6.69	7.25	2.19	9.44
Middlesex Water Co.	1.66	6.00	NA	2.70	NA	4.35	1.70	6.05
SJW Group	2.04	6.00	4.00	14.00	7.00	7.75	2.12	9.87
York Water Co.	1.66	7.00	NA	4.90	NA	5.95	1.71	7.66
							Average	8.70 %
							Median	9.44 %
							Average of Mean and Median	9.07 %

NA= Not Available

Notes:

(1) Indicated dividend at 04/30/2020 divided by the average closing price of the last 60 trading days ending 04/30/2020 for each company.

(2) From pages 2 through 8 of this Schedule.
(3) Average of columns 2 through 4 excluding negative growth rates.
(4) This reflects a growth rate component equal to one-half the conclusion of growth rate (from column 5) x column 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for American States Water Co., 1.45% x (1+(1/2 x 6.17%)) = 1.49%.

(5) Column 5 + column 6.

Source of Information:

Value Line Investment Survey
www.zacks.com Downloaded on 04/30/2020
www.yahoo.com Downloaded on 04/30/2020
Bloomberg Professional Services

AMER. STATES WATER NYSE-AWR

RECENT PRICE 84.60 | P/E RATIO 37.6 (Trailing: 37.1 Median: 22.0) | RELATIVE P/E RATIO 2.85 | DIV'D YLD 1.5% | VALUE LINE

TIMELINESS 2 Lowered 3/20/20
SAFETY 2 Raised 7/20/12
TECHNICAL 3 Raised 3/6/20
BETA .60 (1.00 = Market)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	19.4	19.8	18.2	24.1	33.1	38.7	44.1	47.2	58.4	69.6	96.0
Low:	14.9	15.6	15.3	17.0	24.0	27.0	35.8	37.3	41.1	50.1	63.3

(2020 High 96.6, Low 65.1)

Target Price Range 2023 | 2024 | 2025

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$68-$116	$92 (10%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	80	(-5%)	1%
Low	60	(-30%)	-6%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	139	149	137
to Sell	109	124	145
Hld's(000)	26893	27173	26734

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	8.9	-6.8
3 yr.	79.8	6.6
5 yr.	109.4	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
6.81	7.03	7.88	8.75	9.21	9.74	10.71	11.12	12.12	12.19	12.17	12.56	11.92	12.01	11.88	12.86	***12.95***	***13.30***	Revenues per sh	***16.40***
1.11	1.32	1.45	1.65	1.69	1.70	2.11	2.13	2.48	2.65	2.67	2.81	2.70	2.96	2.84	3.26	***3.25***	***3.55***	"Cash Flow" per sh	***4.50***
.53	.66	.67	.81	.78	.81	1.11	1.12	1.41	1.61	1.57	1.61	1.62	1.88	1.72	2.28	***2.25***	***2.40***	Earnings per sh A	***2.90***
.44	.45	.46	.48	.50	.51	.52	.55	.64	.76	.83	.87	.91	.99	1.06	1.16	***1.25***	***1.35***	Div'd Decl'd per sh B■	***1.85***
2.51	2.12	1.95	1.45	2.23	2.09	2.12	2.13	1.77	2.52	1.89	2.39	3.55	3.08	3.44	4.12	***3.50***	***3.50***	Cap'l Spending per sh	***3.75***
7.51	7.86	8.32	8.77	8.97	9.70	10.13	10.84	11.80	12.72	13.24	12.77	13.52	14.45	15.19	16.33	***17.15***	***18.10***	Book Value per sh D	***21.35***
33.50	33.60	34.10	34.46	34.60	37.06	37.26	37.70	38.53	38.72	38.29	36.50	36.57	36.68	36.76	36.85	***37.00***	***37.25***	Common Shs Outst'g C	***37.50***
23.2	21.9	27.7	24.0	22.6	21.2	15.7	15.4	14.3	17.2	20.1	24.6	25.6	25.7	34.0	34.4	*Bold figures are*		Avg Ann'l P/E Ratio	***23.5***
1.23	1.17	1.50	1.27	1.36	1.41	1.00	.97	.91	.97	1.06	1.24	1.34	1.29	1.84	1.87	*Value Line*		Relative P/E Ratio	***1.30***
3.6%	3.1%	2.5%	2.5%	2.9%	2.9%	3.0%	3.2%	3.1%	2.7%	2.6%	2.2%	2.2%	2.0%	1.8%	1.5%	*estimates*		Avg Ann'l Div'd Yield	***2.6%***

CAPITAL STRUCTURE as of 12/31/19
Total Debt $286.3 mill. **Due in 5 Yrs** $6.9 mill.
LT Debt $281.0 mill. **LT Interest** $24.5 mill.
(32% of Cap'l)

Leases, Uncapitalized: Annual rentals $2.7 mill.
Pension Assets-12/19 $192.5 mill.
Oblig. $231.9 mill.

Pfd Stock None

Common Stock 36,859,505 shs.
as of 2/20/20

MARKET CAP: $3.1 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
398.9	419.3	466.9	472.1	465.8	458.6	436.1	440.6	436.8	473.9	***480***	***495***	Revenues ($mill)	***615***
41.4	42.0	54.1	62.7	61.1	60.5	59.7	69.4	63.9	84.3	***83.0***	***90.0***	Net Profit ($mill)	***110***
43.2%	41.7%	39.9%	36.3%	38.4%	38.4%	36.8%	36.0%	22.0%	22.6%	***23.0%***	***23.0%***	Income Tax Rate	***23.0%***
5.8%	2.0%	2.5%	- -	- -	- -	- -	- -	2.5%	- -	***1.0%***	***1.0%***	AFUDC % to Net Profit	***1.0%***
44.3%	45.4%	42.2%	39.8%	39.1%	41.1%	39.4%	38.0%	40.5%	44.4%	***46.0%***	***47.0%***	Long-Term Debt Ratio	***49.5%***
55.7%	54.6%	57.8%	60.2%	60.9%	58.9%	60.6%	62.0%	59.5%	55.6%	***54.0%***	***53.0%***	Common Equity Ratio	***51.5%***
677.4	749.1	787.0	818.4	832.6	791.5	815.3	854.9	938.4	1082.5	***1180***	***1275***	Total Capital ($mill)	***1565***
855.0	896.5	917.8	981.5	1003.5	1060.8	1150.9	1205.0	1296.3	1415.7	***1485***	***1590***	Net Plant ($mill)	***1780***
7.6%	7.1%	8.3%	8.9%	8.6%	9.0%	8.6%	9.3%	7.9%	8.9%	***8.0%***	***8.0%***	Return on Total Cap'l	***8.5%***
11.0%	10.3%	11.9%	12.7%	12.0%	13.0%	12.1%	13.1%	11.4%	14.0%	***13.0%***	***13.5%***	Return on Shr. Equity	***14.0%***
11.0%	10.3%	11.9%	12.7%	12.0%	13.0%	12.1%	13.1%	11.4%	14.0%	***13.0%***	***13.5%***	Return on Com Equity	***14.0%***
5.8%	5.3%	6.6%	6.8%	5.7%	6.0%	5.3%	6.2%	4.5%	6.9%	***6.0%***	***6.0%***	Retained to Com Eq	***5.0%***
47%	49%	45%	47%	53%	54%	56%	52%	61%	51%	***56%***	***56%***	All Div'ds to Net Prof	***64%***

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	.2	7.1	1.3
Accts Receivable	26.1	23.4	20.9
Other	129.2	101.0	100.3
Current Assets	155.5	131.5	122.5
Accts Payable	51.0	59.5	55.6
Debt Due	59.3	40.3	5.3
Other	46.4	46.8	55.1
Current Liab.	156.7	146.6	116.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.0%	- -	*5.0%*
"Cash Flow"	6.0%	3.0%	*7.0%*
Earnings	9.5%	5.0%	*6.5%*
Dividends	8.0%	7.5%	*9.5%*
Book Value	5.5%	4.0%	*5.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	98.8	113.2	124.4	104.2	440.6
2018	94.7	106.9	124.2	111.0	436.8
2019	101.7	124.7	134.5	113.0	473.9
2020	***105***	***120***	***140***	***115***	***480***
2021	***107***	***123***	***145***	***120***	***495***

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.34	.62	.57	.35	1.88
2018	.29	.44	.62	.37	1.72
2019	.35	.72	.76	.45	2.28
2020	***.40***	***.68***	***.72***	***.50***	***2.25***
2021	***.43***	***.72***	***.75***	***.55***	***2.40***

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.224	.224	.224	.242	.91
2017	.242	.242	.255	.255	.99
2018	.255	.255	.275	.275	1.06
2019	.275	.275	.305	.305	1.16
2020	.305				

BUSINESS: American States Water Co. operates as a holding company. Through its principal subsidiary, Golden State Water Co., it supplies water to 260,708 customers in 10 California counties. Service areas include the metropolitan areas of Los Angeles and Orange Counties. The company also provides electricity to 24,420 customers in Big Bear Lake and San Bernardino Cnty. Provides water & wastewater services to U.S. military bases through its ASUS subsidiary. Sold Chaparral City Wtr. of AZ. (6/11). Employs 841. BlackRock, Inc. owns 15.1% of out. shares; Vanguard, 11.5%; off. & dir. 1.2%. (4/19 Proxy). Chairman: Lloyd Ross. Pres. & CEO: Robert Sprowls. Inc: CA. Address: 630 East Foothill Blvd., San Dimas, CA 91773. Tel: 909-394-3600. Internet: www.aswater.com.

The stock of American States Water has performed better than most equities during the latest disruption in the financial markets. The utility provides a service that is essential. So, whether the economy is booming or experiencing problems, people's usage of water will not change significantly. Hence, American States' income stream is much better defined than the typical corporation. This has been reflected in AWR's year-to-date price performance, as the equity has declined less than 7%, versus the approximately 19% decrease posted by the broader market averages.

Earnings in 2020 will most likely not be able to match last year's impressive showing. The company's stronger-than-expected fourth quarter of 2019 will make year-over-year comparisons difficult. Still, a combination of rate relief, cost control improvements, and a greater contribution from ASUS (more below), could enable share net to reach $2.25. These same factors, along with growth in the rate base, ought to result in an increase in earnings per share to $2.40, a 6% rise, in 2021.

The nonregulated business should remain a key growth driver. Through its ASUS subsidiary, American States provides water services to U.S. Army bases. As more water services at military installations are privatized, we expect ASUS to continue to increase, or at least maintain, its market share. The typical contract is for 50 years, and unlike its other operations, income is not regulated by state authorities. In 2019, profits increased here by 12%, and represented $0.47 of the company's total share net.

Dividend growth prospects are bright. The board usually announces a new annual increase in the payout in mid-August. While we do not think that 2019's 11% hike will be equaled, the new dividend per share should be somewhere between $0.325 and $0.33. This would still represent a percentage increase that is higher than the group norm. Moreover, the trend should continue to mid-decade.

These shares are timely. Investors may want to note that like most members of this group, the stock's total return potential to 2023-2025 is well below average.

James A. Flood *April 10, 2020*

(A) Primary earnings. Excludes nonrecurring gains/(losses): '04, 7¢; '05, 13¢; '06, 3¢; '08, (14¢); '10, (23¢); '11, 10¢. Next earnings report due mid-May.

(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.

(C) In millions, adjusted for split.
(D) Includes intangibles. As of 12/31/19; $28.6 million/$0.78. a share.

Company's Financial Strength	A
Stock's Price Stability	85
Price Growth Persistence	95
Earnings Predictability	85

AMERICAN WATER NYSE-AWK

RECENT PRICE 126.72 | P/E RATIO 36.0 (Trailing: 36.9 Median: 22.0) | RELATIVE P/E RATIO 2.73 | DIV'D YLD 1.7% | VALUE LINE

High:	23.0	25.8	32.8	39.4	45.1	56.2	61.2	85.2	92.4	98.2	129.9	141.7
Low:	16.2	19.4	25.2	31.3	37.0	41.1	48.4	58.9	70.0	76.0	88.0	92.0

TIMELINESS 3 Lowered 4/3/20
SAFETY 3 New 7/25/08
TECHNICAL 3 Raised 4/10/20
BETA .50 (1.00 = Market)

18-Month Target Price Range

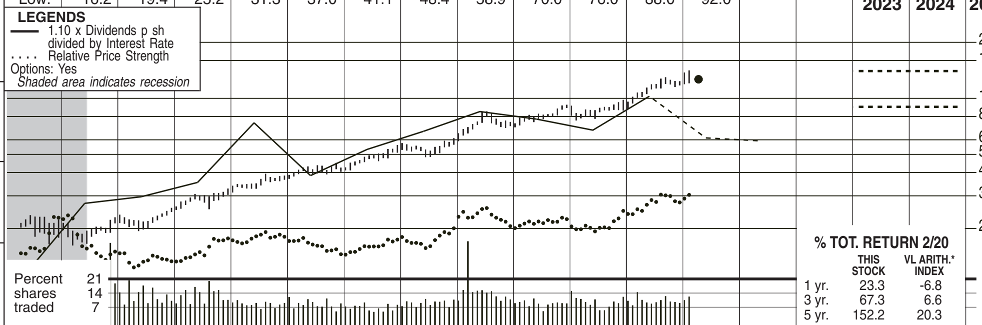
Low-High	Midpoint (% to Mid)
$119-$173	$146 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	140	(+10%)	5%
Low	90	(-30%)	-6%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	360	385	393
to Sell	331	322	361
Hld's(000)	155051	153329	155435



% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	23.3	-6.8
3 yr.	67.3	6.6
5 yr.	152.2	20.3

2004	2005	2006E	2007E	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
- -	- -	13.08	13.84	14.61	13.98	15.49	15.18	16.25	16.28	16.78	17.72	18.54	18.81	19.04	19.97	**20.90**	**21.85**	Revenues per sh	**24.75**
- -	- -	.65	d.47	2.87	2.89	3.56	3.73	4.27	4.36	4.75	5.13	5.26	5.14	6.15	6.65	**8.00**	**8.15**	"Cash Flow" per sh	**8.75**
- -	- -	d.97	d2.14	1.10	1.25	1.53	1.72	2.11	2.06	2.39	2.64	2.62	2.38	3.15	3.43	**3.70**	**4.00**	Earnings per sh A	**4.90**
- -	- -	- -	- -	.40	.82	.86	.90	1.21	.84	1.21	1.33	1.47	1.62	1.78	1.96	**2.10**	**2.25**	Div'd Decl'd per sh B■	**2.90**
- -	- -	4.31	4.74	6.31	4.50	4.38	5.27	5.25	5.50	5.33	6.51	7.36	8.04	8.78	9.15	**8.70**	**9.20**	Cap'l Spending per sh	**9.00**
- -	- -	23.86	28.39	25.64	22.91	23.59	24.11	25.11	26.52	27.39	28.25	29.24	30.13	32.42	33.83	**35.35**	**36.95**	Book Value per sh D	**42.50**
- -	- -	160.00	160.00	160.00	174.63	175.00	175.66	176.99	178.25	179.46	178.28	178.10	178.44	180.68	180.81	**181.00**	**182.00**	Common Shs Outst'g C	**189.00**
- -	- -	- -	- -	18.9	15.6	14.6	16.8	16.7	19.9	20.0	20.5	27.7	33.8	27.3	32.9	*Bold figures are*	*Value Line estimates*	Avg Ann'l P/E Ratio	**23.5**
- -	- -	- -	- -	1.14	1.04	.93	1.05	1.06	1.12	1.05	1.03	1.45	1.70	1.47	1.79			Relative P/E Ratio	**1.30**
- -	- -	- -	- -	1.9%	4.2%	3.8%	3.1%	3.4%	2.0%	2.5%	2.5%	2.0%	2.0%	2.1%	1.7%			Avg Ann'l Div'd Yield	**2.5%**

CAPITAL STRUCTURE as of 12/31/19
Total Debt $9453.0 mil. **Due in 5 Yrs** $1773.0 mil.
LT Debt $8639.0 mil. **LT Interest** $354.0 mil.
(59% of Cap'l)

Leases, Uncapitalized: Annual rentals $14.0 mill.
Pension Assets12/19 $1747.0 mill
Oblig. $2161.0 mill.
Pfd Stock $5.0 mill. **Pfd Div'd** $.4 mill

Common Stock 180,974,719 shares
as of 2/13/20

MARKET CAP: $22.9 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
2710.7	2666.2	2876.9	2901.9	3011.3	3159.0	3302.0	3357.0	3440.0	3610.0	**3785**	**3975**	Revenues ($mill)	**4675**
267.8	304.9	374.3	369.3	429.8	476.0	468.0	426.0	567.0	621.0	**670**	**730**	Net Profit ($mill)	**925**
40.4%	39.5%	40.7%	39.1%	39.4%	39.1%	39.2%	53.3%	28.2%	25.5%	**21.0%**	**21.0%**	Income Tax Rate	**21.0%**
- -	- -	6.2%	5.1%	- -	- -	- -	- -	5.1%	4.0%	**5.0%**	**5.0%**	AFUDC % to Net Profit	**5.0%**
56.8%	55.7%	53.9%	52.4%	52.4%	53.7%	52.4%	54.7%	56.3%	58.5%	**58.5%**	**59.0%**	Long-Term Debt Ratio	**59.0%**
43.2%	44.2%	46.1%	47.6%	47.4%	46.2%	47.5%	45.3%	43.6%	41.4%	**41.5%**	**41.0%**	Common Equity Ratio	**41.0%**
9561.3	9580.3	9635.5	9940.7	10364	10911	10967	11875	13433	14760	**15400**	**16325**	Total Capital ($mill)	**20000**
11059	11021	11739	12391	12900	13933	14992	16246	17409	18232	**19100**	**19900**	Net Plant ($mill)	**22200**
4.4%	4.8%	5.4%	5.1%	5.5%	5.7%	5.6%	4.9%	5.4%	5.4%	**5.5%**	**6.0%**	Return on Total Cap'l	**6.0%**
6.5%	7.2%	8.4%	7.8%	8.7%	9.4%	9.0%	7.9%	9.7%	10.1%	**10.5%**	**11.0%**	Return on Shr. Equity	**11.5%**
6.5%	7.2%	8.4%	7.8%	8.7%	9.4%	9.0%	7.9%	9.7%	10.1%	**10.5%**	**11.0%**	Return on Com Equity	**11.5%**
2.8%	3.5%	3.6%	4.7%	4.3%	4.7%	4.0%	2.5%	4.2%	4.4%	**4.5%**	**4.5%**	Retained to Com Eq	**4.5%**
56%	52%	57%	40%	50%	50%	56%	68%	56%	57%	**57%**	**56%**	All Div'ds to Net Prof	**59%**

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	82	158	91
Accts Receivable	272	301	294
Other	366	322	900
Current Assets	720	781	1285
Accts Payable	195	175	203
Debt Due	1227	1035	814
Other	903	884	1028
Current Liab.	2325	2094	2045

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	3.0%	3.0%	4.5%
"Cash Flow"	13.0%	6.0%	6.5%
Earnings	45.5%	6.5%	8.5%
Dividends	16.0%	10.5%	8.5%
Book Value	2.5%	4.0%	5.0%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	756.0	844.0	936.0	821.0	3357.0
2018	761.0	853.0	976.0	850.0	3440.0
2019	813.0	882.0	1013.0	902.0	3610.0
2020	*835*	*920*	*1080*	*950*	*3785*
2021	*885*	*970*	*1120*	*1000*	*3975*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.52	.73	1.12	.01	2.38
2018	.59	.91	1.03	.62	3.15
2019	.62	.94	1.33	.54	3.43
2020	*.66*	*.97*	*1.35*	*.72*	*3.70*
2021	*.73*	*1.05*	*1.45*	*.77*	*4.00*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.34	.375	.375	.375	1.47
2017	.375	.415	.415	.415	1.62
2018	.415	.455	.455	.455	1.78
2019	.455	.50	.50	.50	1.96
2020	.50				

BUSINESS: American Water Works Company, Inc. is the largest investor-owned water and wastewater utility in the U.S., providing services to approximately 15 million people in 46 states. Nonregulated business assists municipalities and military bases with the maintenance and upkeep as well. Regulated operations made up 86% of 2019 revenues. New Jersey is its largest market accounting for 24.6% of regulated revenues; Pennsylvania, 22.3%; Missouri, 10.5%. Has 6,800 employees. The Vanguard Grp, owns 11.0% of outstanding shares; BlackRock, Inc., 7.9%; officers & directors, less than 1.0%. (3/19 Proxy). President & CEO: Susan N. Story. Chairman: George MacKenzie. Address: 1 Water Street, Camden, NJ 08102. Tel.: 856-346-8200. Internet: www.amwater.com.

Shares of American Water Works have been a safe haven for investors during the recent turmoil caused by the coronavirus. Year to date, the price of the stock has increased nearly 3%. By comparison, the S&P 500 Index has declined about 19% over the same time period. Indeed, both long- and short-term investors have done well holding this equity, as it has outpaced bull markets, as well as outperformed most stocks during the downturns.

What's the reason behind American Water's success? There are a few basic principles behind the company's consistent positive performance. The first is to expand the asset base on which it earns a return. That's one of the reasons for the large construction program. (Domestic pipelines are in desperate need of repair.) The second is the an ongoing acquisition program. Third, is a focus on cost controls.

Earnings and dividend growth prospects are bright through mid-decade. American Water is perhaps the biggest beneficiary of the consolidation taking place in the domestic water market. As the largest water utility, it is able to continually acquire smaller water districts and merge them into its existing operations. Unlike many other industries, synergies are easily achievable in the water business. The company is able to increase its ratebase, and simultaneously make the acquired assets more efficient. This is one of the reasons that management has a constructive relationship with regulators in states where it operates.

Finances are only average. The combination of the aggressive construction program, together with an aversion to selling new equity has resulted in American Water having the highest debt-to-total capital ratio of all the water utilities we follow, by a wide margin. Over the past decade, shares outstanding have risen just 3.5%. Thus, now would seem to be a good time to have an equity offering.

Despite all of the company's positive attributes, the stock does not stand out at this time. Our ranking system pegs AWK to mirror the market in the year ahead. Moreover, like most water utilities, AWK has unattractive long-term total return potential.

James A. Flood *April 10, 2020*

(A) Diluted earnings. Excludes nonrecur. losses: '08, $4.62; '09, $2.63; '11, $0.07. Disc. oper.: '06, ($0.04); '11, $0.03; '12, ($0.10); '13,($0.01). GAAP used as of 2014. Next earnings report due mid-May. Quarterly earnings do not sum in '16 due to rounding.
(B) Dividends paid in March, June, September, and December. ■ Div. reinvestment available.
(C) In millions. (D) Includes intangibles. On 12/31/19: $1.568 billion, $8.67/share.
(E) Pro forma numbers for '06 & '07.

Company's Financial Strength	B+
Stock's Price Stability	100
Price Growth Persistence	85
Earnings Predictability	80

ESSENTIAL UTIL. NYSE-WTRG

RECENT PRICE **43.05** | P/E RATIO **32.4** (Trailing: 43.1; Median: 23.0) | RELATIVE P/E RATIO **2.45** | DIV'D YLD **2.3%** | VALUE LINE

TIMELINESS 1 Raised 12/20/19
SAFETY 2 Raised 4/20/12
TECHNICAL 3 Raised 3/6/20
BETA .60 (1.00 = Market)

18-Month Target Price Range
Low-High Midpoint (% to Mid)
$35-$68 $52 (20%)

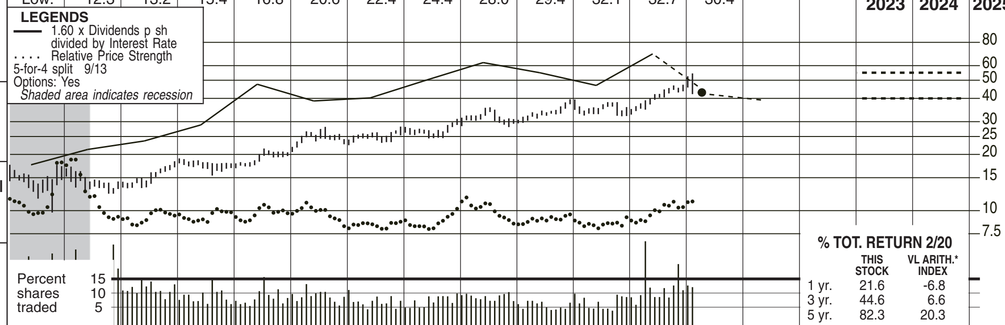
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+30%)	9%
Low	40	(-5%)	1%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	280	248	274
to Sell	167	210	242
Hld's(000)	140358	143792	149836

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	17.2	18.4	19.0	21.5	28.1	28.2	31.1	35.8	39.6	39.4	47.3	54.5
Low:	12.3	13.2	15.4	16.8	20.6	22.4	24.4	28.0	29.4	32.1	32.7	30.4



% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	21.6	-6.8
3 yr.	44.6	6.6
5 yr.	82.3	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
2.78	3.08	3.23	3.61	3.71	3.93	4.21	4.10	4.32	4.32	4.37	4.61	4.62	4.56	4.71	4.03	**6.50**	**7.70**	Revenues per sh	**8.70**
.87	.97	1.01	1.10	1.14	1.29	1.42	1.45	1.51	1.82	1.89	1.87	2.07	2.12	1.90	1.73	**2.40**	**2.65**	"Cash Flow" per sh	**3.50**
.51	.57	.56	.57	.58	.62	.72	.83	.87	1.16	1.20	1.14	1.32	1.35	1.08	1.04	**1.45**	**1.55**	Earnings per sh A	**2.05**
.29	.32	.35	.38	.41	.44	.47	.50	.54	.58	.63	.69	.74	.79	.85	.91	**.97**	**1.05**	Div'd Decl'd per sh B■	**1.30**
1.23	1.47	1.64	1.43	1.58	1.66	1.89	1.90	1.98	1.73	1.84	2.07	2.16	2.69	2.78	2.49	**3.75**	**4.45**	Cap'l Spending per sh	**4.75**
4.71	5.04	5.57	5.85	6.26	6.50	6.81	7.21	7.90	8.63	9.27	9.78	10.43	11.02	11.28	17.58	**17.35**	**17.60**	Book Value per sh	**19.55**
158.97	161.21	165.41	166.75	169.21	170.61	172.46	173.60	175.43	177.93	178.59	176.54	177.39	177.71	178.09	220.76	**225.00**	**227.00**	Common Shs Outst'g C	**230.00**
25.1	31.8	34.7	32.0	24.9	23.1	21.1	21.3	21.9	21.2	20.8	23.5	23.9	24.7	32.6	39.1	*Bold figures are*		Avg Ann'l P/E Ratio	**24.0**
1.33	1.69	1.87	1.70	1.50	1.54	1.34	1.34	1.39	1.19	1.09	1.18	1.25	1.24	1.76	2.12	*Value Line*		Relative P/E Ratio	**1.35**
2.3%	1.8%	1.8%	2.1%	2.8%	3.1%	3.1%	2.8%	2.8%	2.4%	2.5%	2.6%	2.3%	2.4%	2.4%	2.2%	*estimates*		Avg Ann'l Div'd Yield	**2.6%**

CAPITAL STRUCTURE as of 12/31/19
Total Debt $3074.1 mill. **Due in 5 Yrs** $252.0 mill.
LT Debt $2943.3 mill. **LT Interest** $123.5 mill.
(43% of Cap'l)

Pension Assets-12/19 $266.4 mill. **Oblig.** $310.5 mill.

Pfd Stock None
Common Stock 222,781,536 shares
as of 2/19/20

MARKET CAP: $9.6 billion (Large Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
726.1	712.0	757.8	768.6	779.9	814.2	819.9	809.5	838.1	889.7	**1460**	**1750**	Revenues ($mill)	**2000**
124.0	144.8	153.1	205.0	213.9	201.8	234.2	239.7	192.0	224.5	**325**	**350**	Net Profit ($mill)	**470**
39.2%	32.9%	39.0%	10.0%	10.5%	6.9%	8.2%	6.6%	6.6%	6.6%	**7.0%**	**7.5%**	Income Tax Rate	**9.0%**
--	--	--	1.1%	2.4%	3.1%	3.8%	6.3%	6.8%	7.2%	**7.0%**	**7.0%**	AFUDC % to Net Profit	**8.0%**
56.6%	52.7%	52.7%	48.9%	48.5%	50.3%	48.4%	50.6%	54.4%	43.1%	**49.0%**	**51.0%**	Long-Term Debt Ratio	**55.0%**
43.4%	47.3%	47.3%	51.1%	51.5%	49.7%	51.6%	49.4%	45.6%	56.9%	**51.0%**	**49.0%**	Common Equity Ratio	**45.0%**
2706.2	2646.8	2929.7	3003.6	3216.0	3469.5	3587.7	3965.4	4407.8	6824.2	**7600**	**8000**	Total Capital ($mill)	**9800**
3469.3	3612.9	3936.2	4167.3	4402.0	4688.9	5001.6	5399.9	5930.3	6345.8	**8200**	**8350**	Net Plant ($mill)	**10900**
5.9%	6.9%	6.6%	8.0%	7.8%	6.9%	7.6%	7.1%	5.5%	4.2%	**6.5%**	**5.5%**	Return on Total Cap'l	**7.0%**
10.6%	11.6%	11.0%	13.4%	12.9%	11.7%	12.7%	12.2%	9.6%	5.8%	**8.5%**	**9.0%**	Return on Shr. Equity	**10.5%**
10.6%	11.6%	11.0%	13.4%	12.9%	11.7%	12.7%	12.2%	9.6%	5.8%	**8.5%**	**9.0%**	Return on Com Equity	**10.5%**
3.7%	4.6%	4.3%	6.7%	6.1%	4.7%	5.6%	5.1%	2.1%	.9%	**2.5%**	**3.0%**	Retained to Com Eq	**4.0%**
65%	60%	61%	50%	52%	60%	56%	59%	79%	84%	**67%**	**68%**	All Div'ds to Net Prof	**63%**

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	4.2	3.6	1868.9
Receivables	98.6	101.2	67.1
Inventory (AvgCst)	14.4	15.8	18.4
Other	14.0	26.6	58.3
Current Assets	131.2	147.2	2012.7
Accts Payable	59.2	77.3	74.9
Debt Due	117.4	160.0	130.8
Other	107.9	161.7	113.1
Current Liab.	284.5	399.0	318.8

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	1.5%	.5%	*12.0%*
"Cash Flow"	5.0%	2.0%	*10.5%*
Earnings	7.0%	1.5%	*10.0%*
Dividends	7.5%	8.0%	*7.5%*
Book Value	8.0%	9.0%	*6.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	187.8	203.4	215.0	203.3	809.5
2018	194.3	211.9	226.2	205.7	838.1
2019	201.1	218.9	243.6	226.1	889.7
2020	***215***	***385***	***410***	***450***	***1460***
2021	***390***	***410***	***450***	***500***	***1750***

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.28	.34	.43	.30	1.35
2018	.29	.37	.44	d.02	1.08
2019	.09	.25	.38	.28	1.04
2020	***.25***	***.35***	***.45***	***.40***	***1.45***
2021	***.28***	***.40***	***.45***	***.42***	***1.55***

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.178	.178	.1913	.1913	.74
2017	.1913	.1913	.2047	.2047	.79
2018	.2047	.2047	.219	.219	.85
2019	.219	.219	.2343	.2343	.91
2020	.2343				

BUSINESS: Essential Utilities, Inc. became the new name for Aqua America on Feb. 3, 2020, to reflect the acquisition of Peoples, a natural gas utility, which occurred in 3/20. In 2019, Aqua Amer. provided water and wastewater services to about three million people in PA, OH, TX, IL, NC, NJ, IN, and VA. Employed 1,583. Acquired AquaSource, 7/13; North Maine Utilities, 7/15; and others. Water supply revenues 2019: residential, 58%; commercial, 16%; industrial, wastewater & other, 26%. Off. & dir. own less than 1% of the common stock; BlackRock, Inc. 10.5%; Vanguard Grp., 10.4%; State St. Capital, 5.0% (3/20 Pre 14A). Pres. & CEO: Christopher H. Franklin. Inc.: PA Address: 762 West Lancaster Ave., Bryn Mawr, PA 19010. Tel.: 610-525-1400. Internet: www.essential.co.

Essential Utilities is the new name for Aqua America. The water company officially made the change in February, six weeks before the completion of the acquisition of Peoples, a Pittsburgh-based natural gas utility. The cost of the transaction was $4.275 billion in cash, including the assumption of $1.1 billion of debt. In connection with the deal, Essential closed on the previously announced $750 million investment from the Canadian Pension Plan, which received 21.7 million shares of newly issued stock. The equity is also trading with a new ticker: WTRG.

The coronavirus will most likely have only a minor impact on the company. People are going to be using water and gas no matter what the economic conditions. Should unemployment rise or a recession occurs, customers will obviously try to cut back on all of their expenditures, but the usage of these vital resources is required. Hence, demand for Essential's services will not take as large a hit as the typical corporation should this pandemic worsen.

The regulatory climate in Pennsylvania will have a major impact on earnings. Nearly two-thirds of the new company's customer base is now in the Keystone state. Since Aqua had done business there for a long time, we assume that management was very aware of what the expectations are from the state's regulators. (It has promised to replace 3,000 miles of old gas lines over the next 15-year period.)

Our initial estimates for the new entity are tentative. Not much guidance on Essential's operating and financial outlook has been made public. The utility's rate base will be $2.3 billion larger, but as far as the amount of the capital budget and what revenues may total, have not been discussed. As for the bottom line, much will depend on acquisition costs. Peoples is in a different business, so we don't look for much overlap, except in dealing with regulators. Moreover, since the purchase was only just approved, we won't have a good idea about quarterly earnings until after the June period, though the March interim balance sheet should provide some insight.

This stock is timely. However, like most members of this industry, long-term total return potential is unappealing.

James A Flood *April 10, 2020*

(A) Diluted egs. Excl. nonrec. gains: '12, 18¢. Excl. gain from disc. operations: '12, 7¢; '13, 9¢; '14, 11¢. Quarterly EPS do not add in '19 due to a large change in the number of shares outstanding in the Dec. period. Next earnings report due mid-May. (B) Dividends historically paid in early March, June, Sept. & Dec. ■ Div'd. reinvestment plan available (5% discount). (C) In millions, adjusted for stock splits. (D) Includes intangibles: 12/31/19, $63.8 mill./$0.29 a share.

Company's Financial Strength	A
Stock's Price Stability	95
Price Growth Persistence	75
Earnings Predictability	55

CALIFORNIA WATER NYSE-CWT

RECENT PRICE **52.32** | P/E RATIO **35.8** (Trailing: 39.9 Median: 23.0) | RELATIVE P/E RATIO **2.71** | DIV'D YLD **1.6%** | VALUE LINE

TIMELINESS 3 Lowered 3/6/20
SAFETY 3 Lowered 7/27/07
TECHNICAL 3 Raised 4/10/20
BETA .60 (1.00 = Market)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	24.1	19.8	19.4	19.3	23.4	26.4	26.0	36.8	46.2	49.1	57.5	57.4
Low:	16.7	16.9	16.7	16.8	18.4	20.3	19.5	22.5	32.4	35.3	44.6	39.7

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

Target Price Range
2023 | 2024 | 2025

18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$47-$75	$61 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	55	(+5%)	3%
Low	35	(-35%)	-7%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	120	118	115
to Sell	102	94	101
Hld's(000)	36947	36133	36624

Percent shares traded 18 12 6

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	-6.7	-6.8
3 yr.	36.9	6.6
5 yr.	108.3	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
8.59	8.72	8.10	8.88	9.90	10.82	11.05	12.00	13.34	12.23	12.50	12.29	12.70	13.89	14.53	14.72	*14.80*	*15.20*	Revenues per sh	*15.00*
1.42	1.52	1.36	1.56	1.86	1.93	1.93	2.07	2.32	2.21	2.47	2.22	2.34	3.00	3.11	3.14	*3.15*	*3.20*	"Cash Flow" per sh	*3.50*
.73	.74	.67	.75	.95	.98	.91	.86	1.02	1.02	1.19	.94	1.01	1.40	1.36	1.31	*1.55*	*1.65*	Earnings per sh A	*2.00*
.57	.57	.58	.58	.59	.59	.60	.62	.63	.64	.65	.67	.69	.72	.75	.79	*.82*	*.86*	Div'd Decl'd per sh B ■	*1.05*
1.87	2.01	2.14	1.84	2.41	2.66	2.97	2.83	3.04	2.58	2.76	3.69	4.77	5.40	5.65	5.64	*4.50*	*4.25*	Cap'l Spending per sh	*3.75*
7.83	7.90	9.07	9.25	9.72	10.13	10.45	10.76	11.28	12.54	13.11	13.41	13.75	14.44	15.19	16.07	*15.70*	*15.90*	Book Value per sh C	*16.05*
36.73	36.78	41.31	41.33	41.45	41.53	41.67	41.82	41.98	47.74	47.81	47.88	47.97	48.01	48.07	48.53	*50.00*	*51.00*	Common Shs Outst'g D	*53.00*
20.1	24.9	29.2	26.1	19.8	19.7	20.3	21.3	17.9	20.1	19.7	24.8	29.6	26.9	30.3	39.3	*Bold figures are*	*Value Line*	Avg Ann'l P/E Ratio	*23.0*
1.06	1.33	1.58	1.39	1.19	1.31	1.29	1.34	1.14	1.13	1.04	1.25	1.55	1.35	1.64	2.13	*estimates*		Relative P/E Ratio	*1.25*
3.9%	3.1%	2.9%	3.0%	3.1%	3.1%	3.2%	3.4%	3.5%	3.1%	2.8%	2.9%	2.3%	1.9%	1.8%	1.5%			Avg Ann'l Div'd Yield	*2.3%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $983.8 mill. **Due in 5 Yrs** $229.0 mill.
LT Debt $786.8 mill. **LT Interest** $40.0 mill.
(Total interest coverage: 4.2x) (50% of Cap'l)

Pension Assets-12/18 $573.6 mill.
Oblig. $812.0 mill.

Pfd Stock None

Common Stock 48,532,000 shs.

MARKET CAP: $2.5 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
460.4	501.8	560.0	584.1	597.5	588.4	609.4	666.9	698.2	714.6	*740*	*775*	Revenues ($mill) E	*795*
37.7	36.1	42.6	47.3	56.7	45.0	48.7	67.2	65.6	63.1	*78.0*	*85.0*	Net Profit ($mill)	*105*
39.5%	40.5%	37.5%	30.3%	33.0%	36.0%	35.5%	30.1%	24.5%	19.1%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
4.2%	7.6%	8.0%	4.3%	2.7%	4.3%	6.1%	3.5%	3.1%	5.8%	*5.0%*	*5.0%*	AFUDC % to Net Profit	*5.0%*
52.4%	51.7%	47.8%	41.6%	40.1%	44.4%	44.6%	42.7%	49.3%	50.2%	*49.0%*	*47.0%*	Long-Term Debt Ratio	*43.5%*
47.6%	48.3%	52.2%	58.4%	59.9%	55.6%	55.4%	57.3%	50.7%	49.8%	*51.0%*	*53.0%*	Common Equity Ratio	*56.5%*
914.7	931.5	908.2	1024.9	1045.9	1154.4	1191.2	1209.3	1440.2	1566.7	*1535*	*1525*	Total Capital ($mill)	*1500*
1294.3	1381.1	1457.1	1515.8	1590.4	1701.8	1859.3	2048.0	2232.7	2406.4	*2425*	*2450*	Net Plant ($mill)	*2500*
5.5%	5.5%	6.3%	6.0%	6.3%	5.2%	5.5%	7.1%	5.9%	5.5%	*6.0%*	*6.5%*	Return on Total Cap'l	*8.0%*
8.6%	8.0%	9.0%	7.9%	9.1%	7.0%	7.4%	9.7%	9.0%	8.1%	*10.0%*	*10.5%*	Return on Shr. Equity	*12.5%*
8.6%	8.0%	9.0%	7.9%	9.1%	7.0%	7.4%	9.7%	9.0%	8.1%	*10.0%*	*10.5%*	Return on Com Equity	*12.5%*
3.0%	2.3%	3.4%	3.4%	4.1%	2.0%	2.4%	4.7%	4.0%	3.2%	*4.5%*	*5.0%*	Retained to Com Eq	*6.0%*
66%	71%	62%	56%	55%	71%	68%	51%	55%	60%	*53%*	*52%*	All Div'ds to Net Prof	*53%*

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	94.8	47.2	42.7
Other	133.1	141.5	142.0
Current Assets	227.9	188.7	184.7
Accts Payable	94.0	95.6	108.5
Debt Due	291.0	170.0	197.0
Other	106.0	55.6	53.2
Current Liab.	491.0	321.2	358.7

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	4.0%	2.5%	*.5%*
"Cash Flow"	5.5%	5.5%	*2.0%*
Earnings	4.5%	4.5%	*6.5%*
Dividends	2.5%	3.5%	*5.5%*
Book Value	4.5%	4.5%	*1.0%*

Cal-endar	QUARTERLY REVENUES ($ mill.)E Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	122.1	171.1	211.7	162.0	666.9
2018	134.6	174.9	221.3	167.4	698.2
2019	126.1	179.0	232.6	176.9	714.6
2020	*140*	*185*	*237*	*178*	*740*
2021	*147*	*195*	*248*	*185*	*775*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2017	.02	.39	.70	.29	1.40
2018	d.02	.31	.75	.32	1.36
2019	d.16	.35	.88	.24	1.31
2020	*.03*	*.39*	*.80*	*.33*	*1.55*
2021	*.05*	*.42*	*.82*	*.36*	*1.65*

Cal-endar	QUARTERLY DIVIDENDS PAID B ■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.1725	.1725	.1725	.1725	.69
2017	.18	.18	.18	.18	.72
2018	.1875	.1875	.1875	.1875	.75
2019	.1975	.1975	.1975	.1975	.79
2020	.2125				

BUSINESS: California Water Service Group provides regulated and nonregulated water service to 489,600 customers in 100 communities in the state of California. Accounts for over 94% of total customers. Also operates in Washington, New Mexico, and Hawaii. Main service areas: San Francisco Bay area, Sacramento Valley, Salinas Valley, San Joaquin Valley & parts of Los Angeles. Acquired Rio Grande Corp; West Hawaii Utilities (9/08). Revenue breakdown, '19: residential, 67%; business, 20%; industrial, 5%; public authorities, 5%; other 3%. Off. and dir. own 1% of common stock (4/19 proxy). Has 1,184 employees. Pres. and CEO: Martin A. Kropelnicki. Inc.: DE. Addr.: 1720 North First St., San Jose, CA 95112-4598. Tel.: 408-367-8200. Internet: www.calwatergroup.com.

California Water Service Group hopes to invest more than $800 million in infrastructure-related projects over the pull to 2021. At this time, its currently running general rate case with the California Public Utilities Commission was granted a settlement extension to July 1, 2020. The agreement covers various topics including, most importantly, CWT's long-term infrastructure investment plan and associated rate increases. The company already accumulated an approximate $275 million tab last year, completing several notable upgrades, including water main replacements, new treatment facilities, the installation of backup generators, and pump station replacements. Through 2020 and 2021, it is likely that capital expenditures will range between $550 million to $600 million, and cover a similar scope of improvement projects. Finally, we are optimistic that regulators will eventually rule favorably.

California Water should be a consistent performer even amidst a difficult economic backdrop. Notably, California has been one of the major domestic hot spots for the fast-spreading coronavirus, which has severely impacted business and consumer activity. That said, with many residents urged to stay at home, increased hand washing and general utility use ought to translate into greater water usage. Thus, we are keeping intact our current-year revenue call, at $740 million. On the other hand, a number of factors, namely rising operating costs, lower income tax benefits, as well as potential equity dilution, have spurred us to trim our share-net forecast from $1.70 to $1.55. Lastly, we are introducing our preliminary 2021 top- and bottom-line estimates of $775 million and $1.65 a share, respectively.

From an investment perspective, California Water stock leaves much to be desired. The shares have slipped one notch on our Timeliness Ranking scale, to 3 (Average). Moreover, total return potential over the 3- to 5-year stretch is considerably below the *Value Line* median. While the stock may have held up relatively well during recent broader market volatility, we think more-attractive options can be found elsewhere, at this juncture.

Nicholas P. Patrikis *April 10, 2020*

(A) Basic EPS. Excl. nonrecurring gain (loss): '11, 4¢. Next earnings report due early May.
(B) Dividends historically paid in late Feb., May, Aug., and Nov. ■ Div'd reinvestment plan available.
(C) Incl. intangible assets. In '19 : $24.9 mill., $0.51/sh.
(D) In millions, adjusted for split.
(E) Excludes non-reg. rev.

Company's Financial Strength	B++
Stock's Price Stability	80
Price Growth Persistence	60
Earnings Predictability	65

MIDDLESEX WATER NDQ-MSEX

RECENT PRICE 61.47 | P/E RATIO 29.4 (Trailing: 30.6 Median: 21.0) | RELATIVE P/E RATIO 2.23 | DIV'D YLD 1.7% | VALUE LINE

TIMELINESS 3 Lowered 5/24/19
SAFETY 2 New 10/21/11
TECHNICAL 3 Lowered 2/7/20
BETA .70 (1.00 = Market)

18-Month Target Price Range
Low-High: $57-$94 | Midpoint (% to Mid): $76 (25%)

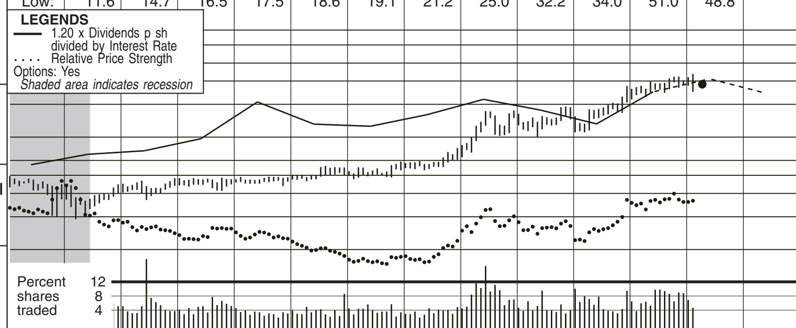
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	60	(Nil)	2%
Low	45	(-25%)	-5%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	79	56	68
to Sell	58	67	68
Hld's(000)	9432	9915	10433

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	17.9	19.3	19.4	19.6	22.5	23.7	28.0	44.5	46.7	60.3	67.7	69.9
Low:	11.6	14.7	16.5	17.5	18.6	19.1	21.2	25.0	32.2	34.0	51.0	48.8



Target Price Range 2023 | 2024 | 2025
120
100
80
64
48
32
24
20
16
12
8

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	2.3	-6.8
3 yr.	66.8	6.6
5 yr.	185.1	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
6.25	6.44	6.16	6.50	6.79	6.75	6.60	6.50	6.98	7.19	7.26	7.77	8.16	8.00	8.42	7.72	*8.20*	*8.45*	Revenues per sh	*9.15*
1.28	1.33	1.33	1.49	1.53	1.40	1.55	1.46	1.56	1.72	1.84	1.97	2.17	2.24	2.89	2.90	*2.95*	*3.10*	"Cash Flow" per sh	*3.50*
.73	.71	.82	.87	.89	.72	.96	.84	.90	1.03	1.13	1.22	1.38	1.38	1.96	2.01	*2.10*	*2.20*	Earnings per sh A	*2.50*
.66	.67	.68	.69	.70	.71	.72	.73	.74	.75	.76	.78	.81	.86	.91	.98	*1.04*	*1.10*	Div'd Decl'd per sh B■	*1.25*
2.54	2.18	2.31	1.66	2.12	1.49	1.90	1.50	1.36	1.26	1.40	1.59	2.91	3.08	4.40	5.11	*3.50*	*3.50*	Cap'l Spending per sh	*3.50*
8.02	8.26	9.52	10.05	10.03	10.33	11.13	11.27	11.48	11.82	12.24	12.74	13.40	14.02	15.17	18.57	*16.15*	*16.50*	Book Value per sh	*17.35*
11.36	11.58	13.17	13.25	13.40	13.52	15.57	15.70	15.82	15.96	16.12	16.23	16.30	16.35	16.40	17.43	*17.65*	*17.75*	Common Shs Outst'g C	*18.00*
26.4	27.4	22.7	21.6	19.8	21.0	17.8	21.7	20.8	19.7	18.5	19.1	25.6	28.4	22.2	29.7	*Bold figures are*		Avg Ann'l P/E Ratio	*21.0*
1.39	1.46	1.23	1.15	1.19	1.40	1.13	1.36	1.32	1.11	.97	.96	1.34	1.43	1.20	1.61	*Value Line*		Relative P/E Ratio	*1.15*
3.4%	3.5%	3.7%	3.7%	4.0%	4.7%	4.2%	4.0%	4.0%	3.7%	3.7%	3.3%	2.3%	2.2%	2.1%	1.6%	*estimates*		Avg Ann'l Div'd Yield	*2.4%*

CAPITAL STRUCTURE as of 12/31/19
Total Debt $258.0 mill. **Due in 5 Yrs** $33.3 mill.
LT Debt $230.8 mill. **LT Interest** $7.2 mill.
(Total interest coverage: 7.3x)
(42% of Cap'l)

Pension Assets-12/18 $80.4 mill.
Oblig. $100.9 mill.
Pfd Stock $2.4 mill. **Pfd Div'd:** $.1 mill.

Common Stock 17,434,000 shs.

MARKET CAP: $1.1 billion (Mid-Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
102.7	102.1	110.4	114.8	117.1	126.0	132.9	130.8	138.1	134.6	*145*	*150*	Revenues ($mill)	*165*
14.3	13.4	14.4	16.6	18.4	20.0	22.7	22.8	32.5	33.9	*37.0*	*39.0*	Net Profit ($mill)	*45.0*
32.1%	32.7%	33.9%	34.1%	35.0%	34.5%	34.0%	32.7%	2.8%	2.8%	*21.0%*	*21.0%*	Income Tax Rate	*21.0%*
6.8%	6.1%	3.4%	1.9%	1.7%	1.9%	2.7%	3.1%	1.4%	3.4%	*2.0%*	*2.0%*	AFUDC % to Net Profit	*2.5%*
43.1%	42.3%	41.5%	40.4%	40.5%	39.4%	37.9%	37.5%	37.8%	41.5%	*42.5%*	*41.5%*	Long-Term Debt Ratio	*39.0%*
55.8%	56.6%	57.4%	58.7%	58.8%	59.8%	61.5%	61.8%	61.6%	58.2%	*57.0%*	*58.0%*	Common Equity Ratio	*60.5%*
310.5	312.5	316.5	321.4	335.8	345.4	355.4	370.7	404.1	556.7	*500*	*505*	Total Capital ($mill)	*515*
405.9	422.2	435.2	446.5	465.4	481.9	517.8	557.2	618.5	705.7	*720*	*735*	Net Plant ($mill)	*775*
5.7%	5.2%	5.4%	5.9%	6.3%	6.6%	7.1%	6.9%	8.9%	6.7%	*8.0%*	*8.5%*	Return on Total Cap'l	*9.5%*
8.1%	7.5%	7.8%	8.7%	9.2%	9.6%	10.3%	9.8%	12.9%	10.4%	*13.0%*	*13.0%*	Return on Shr. Equity	*14.5%*
8.2%	7.5%	7.8%	8.7%	9.3%	9.6%	10.3%	9.9%	13.0%	10.4%	*13.0%*	*13.5%*	Return on Com Equity	*14.5%*
2.1%	1.0%	1.4%	2.4%	3.1%	3.5%	4.3%	3.8%	7.0%	5.4%	*6.5%*	*6.5%*	Retained to Com Eq	*7.5%*
75%	87%	83%	73%	67%	63%	58%	62%	46%	48%	*49%*	*50%*	All Div'ds to Net Prof	*50%*

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	4.9	3.7	2.2
Other	24.3	27.1	26.9
Current Assets	29.2	30.8	29.1
Accts Payable	13.9	19.3	23.3
Debt Due	34.9	55.8	27.2
Other	15.7	19.3	14.5
Current Liab.	64.5	94.4	65.0

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '17-'19 to '23-'25
Revenues	2.0%	2.5%	*2.0%*
"Cash Flow"	6.0%	9.5%	*4.5%*
Earnings	8.0%	12.0%	*6.0%*
Dividends	2.5%	4.0%	*5.5%*
Book Value	4.5%	6.0%	*1.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	30.1	33.0	36.2	31.5	130.8
2018	31.2	34.9	38.7	33.3	138.1
2019	30.7	33.4	37.8	32.7	134.6
2020	*32.0*	*36.0*	*42.0*	*35.0*	*145*
2021	*33.0*	*37.0*	*44.0*	*36.0*	*150*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.27	.33	.46	.32	1.38
2018	.27	.52	.74	.43	1.96
2019	.39	.49	.66	.46	2.01
2020	*.40*	*.53*	*.70*	*.47*	*2.10*
2021	*.42*	*.55*	*.73*	*.50*	*2.20*

Cal-endar	QUARTERLY DIVIDENDS PAID B■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.19875	.19875	.19875	.21125	.81
2017	.21125	.21125	.21125	.22375	.86
2018	.22375	.22375	.22375	.24	.91
2019	.24	.24	.24	.2562	.98
2020	.2562				

BUSINESS: Middlesex Water Company engages in the ownership and operation of regulated water utility systems in New Jersey, Delaware, and Pennsylvania. It also operates water and wastewater systems under contract on behalf of municipal and private clients in NJ and DE. Its Middlesex System provides water services to 61,000 retail customers, primarily in Middlesex County, New Jersey. In 2019, the Middlesex System accounted for 60% of operating revenues. At 12/31/19, the company had 352 employees. Incorporated: NJ. President, CEO, and Chairman: Dennis W. Doll. Officers & directors own 3.5% of the com. stock; BlackRock Inst. Trust Co., 6.8% (4/19 proxy). Add.: 485 C Route 1 South, Suite 400, Iselin, NJ 08830. Tel.: 732-634-1500. Int.: www.middlesexwater.com.

Middlesex Water Company is well positioned to handle the currently ambiguous economic climate. Indeed, impacts from the sweeping coronavirus are still largely unknown, but will likely take a major toll on consumer spending and domestic business activity in the near term. However, taking into consideration that water is one of our most basic necessities, it is highly unlikely that service will undergo even the slightest pause or consumer disruption. Additionally, health-conscious actions, such as more frequent hand washing, as well as a greater number of residents presently staying in their homes, may well drive increased water usage. Meanwhile, the company recently raised some capital via an equity issuance, which should provide financial flexibility.

The stock has held up decently since our last report. Middlesex shares etched fresh highs in mid-February before crumbling market indices resulted in the capitulation of some gains. On balance, the stock is down only about 10% in value over the past three months.

We are introducing our preliminary 2021 top- and bottom-line forecasts at $150 million and $2.20 a share, respectively. This represents modest single-digit growth over our current-year projections.

Infrastructure spending is likely to ramp up considerably over the pull to mid-decade. To start, an $11.2 million drinking water project is already under way in New Jersey. The company plans to replace more than 20,000 linear feet of water mains, as well as upgrade service lines. Moreover, through 2021, MSEX's Water for Tomorrow program sports a budget of nearly $300 million, which ought to strengthen the company's distribution infrastructure. Beyond that, we think additional investment spending is probably in the cards.

We are not presently recommending Middlesex stock. The water utility might be a conservative option amidst volatile market conditions, but the issue is just an Average selection for the year ahead. On top of that, the yield is rather unenticing, and capital appreciation potential three to five years hence is well below the *Value Line* median. Thus, we suggest investors take a pass, for now.

Nicholas P. Patrikis *April 10, 2020*

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

Company's Financial Strength	B++
Stock's Price Stability	65
Price Growth Persistence	55
Earnings Predictability	75

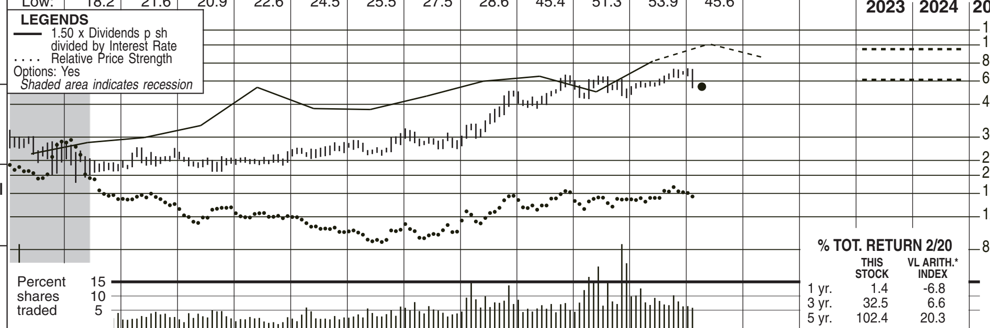
SJW GROUP NYSE-SJW

RECENT PRICE 59.78 | P/E RATIO 28.6 (Trailing: 44.3 Median: 21.0) | RELATIVE P/E RATIO 2.17 | DIV'D YLD 2.1% | VALUE LINE

TIMELINESS — E
SAFETY 3 New 4/22/11
TECHNICAL — E
BETA .60 (1.00 = Market)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High:	30.4	28.2	26.8	26.9	30.1	33.7	35.7	56.9	69.3	68.4	74.5	75.0
Low:	18.2	21.6	20.9	22.6	24.5	25.5	27.5	28.6	45.4	51.3	53.9	45.6

Target Price Range 2023 | 2024 | 2025



18-Month Target Price Range

Low-High	Midpoint (% to Mid)
$52-$85	$69 (15%)

2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	95	(+60%)	14%
Low	65	(+10%)	4%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	91	94	93
to Sell	62	69	76
Hld's(000)	19526	19354	19650

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	1.4	-6.8
3 yr.	32.5	6.6
5 yr.	102.4	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
9.14	9.86	10.35	11.25	12.12	11.68	11.62	12.85	14.01	13.73	15.76	14.97	16.61	18.97	14.00	14.78	***18.80***	***19.85***	Revenues per sh	***21.65***
1.89	2.21	2.38	2.30	2.44	2.21	2.38	2.80	2.97	2.90	4.42	3.86	4.76	5.24	3.29	3.11	***4.10***	***4.40***	"Cash Flow" per sh	***5.30***
.87	1.12	1.19	1.04	1.08	.81	.84	1.11	1.18	1.12	2.54	1.85	2.57	2.86	1.82	1.35	***2.35***	***2.70***	Earnings per sh A	***3.65***
.51	.53	.57	.61	.65	.66	.68	.69	.71	.73	.75	.78	.81	1.04	1.12	1.20	***1.28***	***1.36***	Div'd Decl'd per sh B■	***1.58***
2.31	2.83	3.87	6.62	3.79	3.17	5.65	3.75	5.67	4.68	5.02	5.24	6.95	7.26	5.08	***5.00***	***5.25***	***5.25***	Cap'l Spending per sh	***5.50***
10.11	10.72	12.48	12.90	13.99	13.66	13.75	14.20	14.71	15.92	17.75	18.83	20.61	22.57	31.31	31.27	***33.30***	***35.60***	Book Value per sh	***39.15***
18.27	18.27	18.28	18.36	18.18	18.50	18.55	18.59	18.67	20.17	20.29	20.38	20.46	20.52	28.40	28.46	***29.00***	***29.50***	Common Shs Outst'g C	***30.00***
19.6	19.7	23.5	33.4	26.2	28.7	29.1	21.2	20.4	24.3	11.2	16.6	15.7	18.8	32.7	47.8	*Bold figures are*	*Value Line estimates*	Avg Ann'l P/E Ratio	***22.0***
1.04	1.05	1.27	1.77	1.58	1.91	1.85	1.33	1.30	1.37	.59	.84	.82	.95	1.77	2.60			Relative P/E Ratio	***1.20***
3.0%	2.4%	2.0%	1.7%	2.3%	2.8%	2.8%	2.9%	3.0%	2.7%	2.6%	2.5%	2.0%	1.9%	1.9%	1.9%			Avg Ann'l Div'd Yield	***2.0%***

CAPITAL STRUCTURE as of 12/31/19
Total Debt $1305.9 mill. **Due in 5 Yrs** $.0 mill.
LT Debt $1283.6 mill. **LT Interest** $35.0 mill.
(LT Interest Coverage: 3.8x)
(59% of Cap'l)

Pension Assets-12/19 $243.5 mill.
Oblig. $338.2 mill.
Pfd Stock None.
Common Stock 28,456,508 shs.

MARKET CAP: $1.7 billion (Mid Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
215.6	239.0	261.5	276.9	319.7	305.1	339.7	389.2	397.7	420.5	***545***	***585***	Revenues ($mill)	***650***
15.8	20.9	22.3	23.5	51.8	37.9	52.8	59.2	38.8	38.5	***68.0***	***80.0***	Net Profit ($mill)	***110***
38.8%	41.1%	41.1%	38.7%	32.5%	38.1%	38.8%	36.7%	20.6%	***21.0%***	***21.0%***	***21.0%***	Income Tax Rate	***21.0%***
--	--	--	--	--	--	--	--	2.0%	***1.5%***	***1.5%***	***1.5%***	AFUDC % to Net Profit	***1.5%***
53.7%	56.6%	55.0%	51.1%	51.6%	49.8%	50.7%	48.2%	32.7%	59.0%	***51.0%***	***41.5%***	Long-Term Debt Ratio	***35.5%***
46.3%	43.4%	45.0%	48.9%	48.4%	50.2%	49.3%	51.8%	67.3%	41.0%	***49.0%***	***58.5%***	Common Equity Ratio	***64.5%***
550.7	607.9	610.2	656.2	744.5	764.6	855.0	894.3	1320.7	2173.0	***1465***	***1800***	Total Capital ($mill)	***1825***
785.5	756.2	831.6	898.7	963.0	1036.8	1146.4	1239.3	1328.8	2206.5	***2300***	***2450***	Net Plant ($mill)	***2775***
4.3%	4.9%	5.0%	5.0%	8.3%	6.3%	7.4%	7.9%	3.9%	2.3%	***4.5%***	***5.0%***	Return on Total Cap'l	***6.5%***
6.2%	7.9%	8.1%	7.3%	14.4%	9.9%	12.5%	12.8%	4.4%	4.3%	***7.5%***	***7.5%***	Return on Shr. Equity	***9.5%***
6.2%	7.9%	8.1%	7.3%	14.4%	9.9%	12.5%	12.8%	4.4%	4.3%	***7.5%***	***7.5%***	Return on Com Equity	***9.5%***
1.2%	3.1%	3.3%	2.8%	10.2%	5.7%	8.6%	8.2%	1.8%	.5%	***3.5%***	***4.0%***	Retained to Com Eq	***5.5%***
80%	61%	59%	62%	29%	42%	31%	36%	60%	89%	***52%***	***50%***	All Div'ds to Net Prof	***43%***

CURRENT POSITION ($MILL.)	2017	2018	12/31/19
Cash Assets	7.8	420.7	17.9
Accts Receivable	17.3	19.2	36.3
Other	41.8	62.8	67.8
Current Assets	66.9	502.7	122.0
Accts Payable	23.0	24.9	34.9
Debt Due	- -	- -	22.3
Other	62.1	139.1	177.4
Current Liab.	85.1	164.0	234.6

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Revenues	5.0%	5.5%	*4.0%*
"Cash Flow"	7.0%	11.0%	*2.5%*
Earnings	8.0%	18.5%	*6.0%*
Dividends	4.5%	5.0%	*7.0%*
Book Value	5.5%	8.0%	*6.5%*

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	69.0	102.1	124.6	93.5	389.2
2018	75.0	99.1	124.9	98.7	397.7
2019	77.7	103.0	114.0	126.0	420.5
2020	***105***	***135***	***170***	***135***	***545***
2021	***115***	***145***	***180***	***145***	***585***

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.18	.90	.94	.84	2.86
2018	.06	.62	.76	.38	1.82
2019	.21	.47	.33	.34	1.35
2020	***.20***	***.65***	***.90***	***.60***	***2.35***
2021	***.30***	***.70***	***1.00***	***.70***	***2.70***

Cal-endar	QUARTERLY DIVIDENDS PAID BD■ Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.2025	.2025	.2025	.2025	.81
2017	.2175	.2175	.2175	.3875	1.04
2018	.28	.28	.28	.28	1.12
2019	.30	.30	.30	.30	1.20
2020	.32				

BUSINESS: SJW Group engages in the production, purchase, storage, purification, distribution, and retail sale of water. It provides water service to approximately 231,000 connections with a total population of roughly one million people in the San Jose area and 16,000 connections that reach about 49,000 residents in the region between San Antonio and Austin, Texas. The company merged with Connecticut Water (10/19) which provides service to approx. 138,000 connections with a total population of 450,000 people. Has 361 employees. Officers and directors own 8.3% of outstanding shares (3/20 proxy). Chairman & CEO: Richard Roth. Incorporated: California. Address: 110 West Taylor Street, San Jose, CA 95110. Telephone: (408) 279-7800. Internet: www.sjwater.com.

We are lowering our current-year share-net estimate for SJW Group by a dime, to $2.35. This is largely to reflect management's recent guidance, as well as to factor in lingering integration costs from the CTWS merger (completed in October, 2019). Indeed, we look for a substantial bottom-line recovery this year, as SJW incurred an additional profit hit in 2019 in the form of a nonrecurring charge related to the denial of its subsidiary's Water Conservation Memorandum Account. Although the near-term economic outlook, especially in hard-hit California, is a bit dire, given recent health concerns, we think SJW is well positioned to operate on a fairly normal basis. In fact, a rise in household water consumption, due to increased hand washing and more people staying at home of late, may be a net positive for the company.

Long-term, we like SJW Group's business prospects. First, the recently combined company now serves more than 1.5 million people on both coasts, and the scale and scope of its operations, once the integration is in the rearview mirror, ought to support further growth. In addition, an expanding customer base and periodic rate hikes should help drive top-line results. Second, we think aggressive infrastructure investment spending is likely over the next several years. Alongside traditional upgrades, such as water main repairs and improvements to its filtration systems and treatment plants, SJW aims to roll out advanced metering technology (in an effort to achieve upcoming water standards) that can provide nearly real-time water consumption information.

The stock price has declined notably since our previous review. Over the past three months, SJW stock has lost about 20% in value, largely a consequence of broader market turbulence stemming from weakening economic concerns. Over the past five years, shares of SJW have appreciated handsomely and, even with the recent selloff, total return potential three to five years out is still subpar when compared to the *Value Line* median.

Adding it all up, given the equity's limited investment appeal, subscribers would be wise to look elsewhere at this juncture.

Nicholas P. Patrikis *April 10, 2020*

(A) Diluted earnings. Excludes nonrecurring losses: '04, $3.78; '05, $1.09; '06, $16.36; '08, $1.22; '10, $0.46. GAAP accounting as of 2013. Next earnings report due early May. Quarterly egs. may not add due to rounding.
(B) Dividends historically paid in early March, June, September, and December. ■ Div'd reinvestment plan available.
(C) In millions, adjusted for stock splits.
(D) Paid special dividend of $0.17 per share on 11/17.
(E) Suspended due to recent CTWS merger.

Company's Financial Strength	B+
Stock's Price Stability	70
Price Growth Persistence	55
Earnings Predictability	45

YORK WATER NDQ-YORW

RECENT PRICE 46.77 | P/E RATIO 42.1 (Trailing: 42.1, Median: 25.0) | RELATIVE P/E RATIO 3.19 | DIV'D YLD 1.5% | VALUE LINE

High:	18.0	18.0	18.1	18.5	22.0	24.3	26.7	39.8	39.9	36.1	47.3	49.8
Low:	9.7	12.8	15.8	16.8	17.6	18.8	19.7	23.8	31.7	27.5	30.3	34.6

TIMELINESS 2 Lowered 3/20/20
SAFETY 3 Lowered 7/17/15
TECHNICAL 3 Lowered 3/20/20
BETA .65 (1.00 = Market)

18-Month Target Price Range
Low-High: $31-$53 | Midpoint (% to Mid): $42 (-10%)

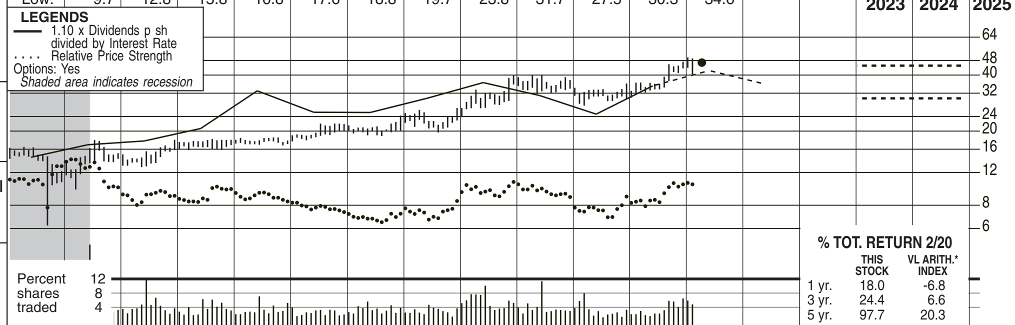
2023-25 PROJECTIONS

	Price	Gain	Ann'l Total Return
High	45	(-5%)	1%
Low	30	(-35%)	-8%

Institutional Decisions

	2Q2019	3Q2019	4Q2019
to Buy	48	55	52
to Sell	31	30	39
Hld's(000)	4866	5111	5387

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



Target Price Range 2023 2024 2025

Percent shares traded 12 8 4

% TOT. RETURN 2/20

	THIS STOCK	VL ARITH.* INDEX
1 yr.	18.0	-6.8
3 yr.	24.4	6.6
5 yr.	97.7	20.3

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	© VALUE LINE PUB. LLC	23-25
2.18	2.58	2.56	2.79	2.89	2.95	3.07	3.18	3.21	3.27	3.58	3.68	3.70	3.77	3.74	3.96	**4.05**	**4.20**	Revenues per sh	**5.10**
.65	.79	.77	.86	.88	.95	1.07	1.09	1.12	1.19	1.36	1.45	1.42	1.53	1.58	1.71	**1.75**	**1.80**	"Cash Flow" per sh	**2.40**
.49	.56	.58	.57	.57	.64	.71	.71	.72	.75	.89	.97	.92	1.01	1.04	1.11	**1.15**	**1.20**	Earnings per sh A	**1.60**
.39	.42	.45	.48	.49	.51	.52	.53	.54	.55	.57	.60	.63	.65	.67	.70	**.73**	**.78**	Div'd Decl'd per sh B	**.95**
2.50	1.69	1.85	1.69	2.17	1.18	.83	.74	.94	.76	1.10	1.11	1.03	1.95	1.95	**2.00**	**2.00**	**1.95**	Cap'l Spending per sh	**1.85**
4.65	4.85	5.84	5.97	6.14	6.92	7.19	7.45	7.73	7.98	8.15	8.51	8.88	9.28	9.75	10.32	**11.20**	**11.65**	Book Value per sh	**12.50**
10.33	10.40	11.20	11.27	11.37	12.56	12.69	12.79	12.92	12.98	12.83	12.81	12.85	12.87	12.94	13.01	**12.95**	**12.90**	Common Shs Outst'g C	**12.80**
25.7	26.3	31.2	30.3	24.6	21.9	20.7	23.9	24.4	26.3	23.1	23.5	32.8	34.6	30.3	33.7	*Bold figures are*	*Value Line*	Avg Ann'l P/E Ratio	**22.5**
1.36	1.40	1.68	1.61	1.48	1.46	1.32	1.50	1.55	1.48	1.22	1.18	1.72	1.74	1.64	1.83	*estimates*		Relative P/E Ratio	**1.25**
3.1%	2.9%	2.5%	2.8%	3.5%	3.6%	3.5%	3.1%	3.1%	2.8%	2.8%	2.6%	2.1%	1.9%	2.1%	1.9%			Avg Ann'l Div'd Yield	**2.5%**

CAPITAL STRUCTURE as of 12/31/19
Total Debt $101.0 mill. **Due in 5 Yrs** $42.5 mill.
LT Debt $94.5 mill. **LT Interest** $5.5 mill.
(41% of Cap'l)
Pension Assets12/19 $49.3 mill. **Oblig.** $47.3 mill.
Pfd Stock None
Common Stock 13,014,898 shs.
MARKET CAP: $600 million (Small Cap)

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021		23-25
39.0	40.6	41.4	42.4	45.9	47.1	47.6	48.6	48.4	51.5	**52.5**	**54.0**	Revenues ($mill)	**65.0**
8.9	9.1	9.3	9.7	11.5	12.5	11.8	13.0	13.4	14.5	**15.0**	**15.5**	Net Profit ($mill)	**20.5**
38.5%	35.3%	37.6%	37.6%	29.8%	27.5%	31.3%	25.9%	15.7%	**21.0%**	**21.0%**	**21.0%**	Income Tax Rate	**21.0%**
1.2%	1.1%	1.1%	.8%	1.8%	1.6%	1.9%	6.7%	1.7%	**2.0%**	**1.5%**	**1.5%**	AFUDC % to Net Profit	**1.5%**
48.3%	47.1%	46.0%	45.1%	44.8%	44.4%	42.6%	43.0%	42.5%	41.3%	**38.5%**	**37.5%**	Long-Term Debt Ratio	**36.0%**
51.7%	52.9%	54.0%	54.9%	55.2%	55.6%	57.4%	57.0%	57.5%	58.7%	**61.5%**	**62.5%**	Common Equity Ratio	**64.0%**
176.4	180.2	184.8	188.4	189.4	196.3	198.7	209.5	219.5	228.7	**235**	**240**	Total Capital ($mill)	**250**
228.4	233.0	240.3	244.2	253.2	261.4	270.9	288.8	299.2	313.2	**315**	**320**	Net Plant ($mill)	**335**
6.5%	6.4%	6.4%	6.5%	7.4%	7.6%	7.2%	7.5%	7.3%	7.4%	**7.5%**	**7.5%**	Return on Total Cap'l	**9.0%**
9.8%	9.5%	9.3%	9.3%	11.0%	11.5%	10.4%	10.9%	10.6%	10.8%	**10.5%**	**10.5%**	Return on Shr. Equity	**13.0%**
9.8%	9.5%	9.3%	9.3%	11.0%	11.5%	10.4%	10.9%	10.6%	10.8%	**10.5%**	**10.5%**	Return on Com Equity	**13.0%**
2.7%	2.5%	2.4%	2.4%	3.9%	4.4%	3.4%	4.0%	3.8%	4.0%	**4.0%**	**3.5%**	Retained to Com Eq	**5.0%**
72%	73%	74%	74%	64%	62%	67%	63%	64%	63%	**63%**	**65%**	All Div'ds to Net Prof	**59%**

CURRENT POSITION ($MILL.)

	2017	2018	12/31/19
Cash Assets	- -	- -	- -
Accounts Receivable	4.5	4.8	4.4
Inventory (Avg. Cost)	.9	.9	1.0
Other	3.2	3.3	4.0
Current Assets	8.6	9.0	9.4
Accts Payable	3.1	3.0	3.4
Debt Due	- -	1.0	6.5
Other	6.0	6.8	5.3
Current Liab.	9.1	10.8	15.2

ANNUAL RATES of change (per sh)	Past 10 Yrs.	Past 5 Yrs.	Est'd '16-'18 to '23-'25
Revenues	3.0%	3.0%	4.5%
"Cash Flow"	6.0%	6.0%	7.0%
Earnings	5.5%	6.5%	7.0%
Dividends	3.5%	4.0%	5.5%
Book Value	4.5%	4.0%	4.5%

Cal-endar	QUARTERLY REVENUES ($ mill.) Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	11.3	12.3	12.7	12.3	48.6
2018	11.6	12.0	12.7	12.1	48.4
2019	11.8	13.0	13.7	13.0	51.5
2020	*12.2*	*13.0*	*14.0*	*13.3*	*52.5*
2021	*12.5*	*13.3*	*14.5*	*13.7*	*54.0*

Cal-endar	EARNINGS PER SHARE A Mar.31	Jun. 30	Sep. 30	Dec. 31	Full Year
2017	.20	.23	.31	.27	1.01
2018	.20	.26	.29	.29	1.04
2019	.22	.28	.35	.26	1.11
2020	*.22*	*.28*	*.35*	*.30*	*1.15*
2021	*.23*	*.30*	*.36*	*.31*	*1.20*

Cal-endar	QUARTERLY DIVIDENDS PAID B Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2016	.1555	.1555	.1555	.1602	.627
2017	.1602	.1602	.1602	.1666	.647
2018	.1666	.1666	.1666	.1733	.673
2019	.1733	.1733	.1733	.1802	.70
2020	.1802				

BUSINESS: The York Water Company is the oldest investor-owned regulated water utility in the United States. It has operated continuously since 1816. As of December 31, 2019, the company's average daily availability was 35.4 million gallons and its service territory had an estimated population of 201,000. Has more than 71,400 customers. Residential customers accounted for 65% of 2019 revenues; commercial and industrial (28%); other (7%). It also provides sewer billing services. Incorporated: PA. York had 106 full-time employees at 12/31/19. President/CEO: Jeffrey R. Hines. Officers/directors own 1.2% of the common stock (3/19 proxy). Address: 130 East Market Street, York, Pennsylvania 17401. Telephone: (717) 845-3601. Internet: www.yorkwater.com.

York Water Company is apt to post modest top- and bottom-line gains this year and next. Although the current economic climate is far from ideal, York's operations are likely to move forward on a relatively normal basis. In fact, given an abundance of hand washing spurred by the recent health crisis, coupled with a growing number of residents urged to stay at home by government officials, the company may experience a near-term uptick in water consumption. All things considered, we continue to envision low single-digit revenue and share-net growth for 2020 and 2021.

The stock is a favorable selection for the coming six- to 12-month stretch. Based on our Timeliness Ranking scale, York is ranked 2 (Above Average) for relative year-ahead price performance. What's more, in comparison to the beaten-up broader market indices, shares of the regulated water utility have fared markedly better over the past six weeks of trading. Indeed, conservative investors may well continue to rebalance their portfolios, specifically by increasing exposure to companies with more stable year-ahead business prospects.

Investment spending over the pull to mid-decade ought to continue as planned. Leadership's recent commentary suggests capital investments of about $30 million are on the table this year, which will likely be followed up by an additional $27 million worth of spending in 2021. Funds will probably be allocated to dam construction and repair; waste water treatment plant expansion; and pipe, service line, and facility improvements. In our view, factoring in the company's aging infrastructure, as well as its expanding customer base, York is not likely to take its foot off the gas beyond 2021 in terms of investment spending.

At the recent quotation, long-term investment appeal is lacking. York shares have been on a steady ascent for the better part of the last decade. And even with the moderate pullback of late, total return potential three to five years hence is well below average. All told, despite the stock's defensive qualities, we think buy-and-hold accounts can find more-attractive options elsewhere at this juncture.

Nicholas P. Patrikis *April 10, 2020*

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

Company's Financial Strength	B+
Stock's Price Stability	65
Price Growth Persistence	65
Earnings Predictability	95

Utilities, Inc of Florida
Summary of Risk Premium Models for the
Proxy Group of Seven Water Companies

	Proxy Group of Seven Water Companies	
Predictive Risk Premium Model (PRPM) (1)	11.31	%
Risk Premium Using an Adjusted Total Market Approach (2)	10.50	%
Average	10.91	%

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

Utilities, Inc of Florida
Indicated ROE
Derived by the Predictive Risk Premium Model (1)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Proxy Group of Seven Water Companies	LT Average Predicted Variance	Spot Predicted Variance	Recommended Variance	GARCH Coefficient	Predicted Risk Premium (2)	Risk-Free Rate (3)	Indicated ROE (4)
American States Water Co.	0.38%	0.45%	0.41%	1.89033	9.83%	2.03%	11.86%
American Water Works Company Inc	NMF	NMF	NMF	5.52177	NMF	2.03%	NMF
California Water Service Group	0.32%	0.32%	0.32%	1.90111	7.55%	2.03%	9.58%
Essential Utilities, Inc.	0.44%	0.53%	0.49%	2.25364	14.02%	2.03%	16.05%
Middlesex Water Co.	0.30%	0.27%	0.29%	2.12256	7.52%	2.03%	9.55%
SJW Group	0.42%	0.44%	0.43%	1.51190	8.03%	2.03%	10.06%
York Water Co.	0.45%	0.37%	0.41%	2.09473	10.81%	2.03%	12.84%
						Average	11.66%
						Median	10.96%
						Average of Mean and Median	11.31%

NMF = Not Meaningful Figure

Notes:

(1) The Predictive Risk Premium Model uses historical data to generate a predicted variance and a GARCH coefficient. The historical data used are the equity risk premiums for the first available trading month as reported by Bloomberg Professional Service.

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

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

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

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

Line No.		Proxy Group of Seven Water Companies	
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	3.21	%
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A Rated Public Utility Bonds	0.53	(2)
3.	Adjusted Prospective Yield on A Rated Public Utility Bonds	3.74	%
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group	0.08	(3)
5.	Adjusted Prospective Bond Yield	3.82	%
6.	Equity Risk Premium (4)	6.68	
7.	Risk Premium Derived Common Equity Cost Rate	10.50	%

Notes:

(1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 10-11 of this Schedule).

(2) The average yield spread of A rated public utility bonds over Aaa rated corporate bonds of 0.53% from page 4 of this Schedule.

(3) Adjustment to reflect the A2/A3 Moody's LT issuer rating of the Utility Proxy Group as shown on page 5 of this Schedule. The 0.08% upward adjustment is derived by taking 1/6 of the spread between A2 and Baa2 Public Utility Bonds (1/6 * 0.46% = 0.08%) as derived from page 4 of this Schedule.

(4) From page 7 of this Schedule.

Utilities, Inc of Florida
Interest Rates and Bond Spreads for
Moody's Corporate and Public Utility Bonds

Selected Bond Yields

	[1]	[2]	[3]
	Aaa Rated Corporate Bond	A Rated Public Utility Bond	Baa Rated Public Utility Bond
Apr-2020	2.43 %	3.19 %	3.82 %
Mar-2019	3.02	3.50	3.96
Feb-2019	2.78	3.11	3.42
Average	2.74 %	3.27 %	3.73 %

Selected Bond Spreads

A Rated Public Utility Bonds Over Aaa Rated Corporate Bonds:
0.53 % (1)

Baa Rated Public Utility Bonds Over A Rated Public Utility Bonds:
0.46 % (2)

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

Source of Information:
Bloomberg Professional Service

Utilities, Inc of Florida
Comparison of Long-Term Issuer Ratings for
Proxy Group of Seven Water Companies

	Moody's Long-Term Issuer Rating April 2020		Standard & Poor's Long-Term Issuer Rating April 2020	
Proxy Group of Seven Water Companies	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting(1)
American States Water Co. (2)	A2	6.0	A+	5.0
American Water Works Company Inc (3)	A3	7.0	A	6.0
California Water Service Group (4)	NR	- -	A+	5.0
Essential Utilities, Inc. (5)	NR	- -	A	6.0
Middlesex Water Co.	NR	- -	A	6.0
SJW Corp. (6)	NR	- -	A/A-	6.5
York Water Co.	NR	- -	A-	7.0
Average	A2/A3	6.5	A	5.9

Notes:

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

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

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

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

Utilities, Inc of Florida
Judgment of Equity Risk Premium for
Proxy Group of Seven Water Companies

Line No.		Proxy Group of Seven Water Companies
1.	Calculated equity risk premium based on the total market using the beta approach (1)	7.60 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)	5.76
3.	Average equity risk premium	6.68 %

Notes: (1) From page 8 of this Schedule.
(2) From page 12 of this Schedule.

Utilities, Inc of Florida
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Seven Water Companies

Line No.	Equity Risk Premium Measure	Proxy Group of Seven Water Companies	
	Ibbotson-Based Equity Risk Premiums:		
1.	Ibbotson Equity Risk Premium (1)	5.78	%
2.	Regression on Ibbotson Risk Premium Data (2)	9.12	
3.	Ibbotson Equity Risk Premium based on PRPM (3)	11.95	
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	15.50	
5.	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	11.58	
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	10.32	
7.	Conclusion of Equity Risk Premium	10.71	%
8.	Adjusted Beta (7)	0.71	
9.	Forecasted Equity Risk Premium	7.60	%

Notes provided on page 9 of this Schedule.

Utilities, Inc of Florida
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for the
Proxy Group of Seven Water Companies

Notes:

(1) Based on the arithmetic mean historical monthly returns on large company common stocks from Ibbotson® SBBI® 2020 Market Report minus the arithmetic mean monthly yield of Moody's average Aaa and Aa corporate bonds from 1926-2019.

(2) This equity risk premium is based on a regression of the monthly equity risk premiums of large company common stocks relative to Moody's average Aaa and Aa rated corporate bond yields from 1928-2019 referenced in Note 1 above.

(3) The Predictive Risk Premium Model (PRPM) is discussed in the accompanying direct testimony. The Ibbotson equity risk premium based on the PRPM is derived by applying the PRPM to the monthly risk premiums between Ibbotson large company common stock monthly returns and average Aaa and Aa corporate monthly bond yields, from January 1928 through April 2020.

(4) The equity risk premium based on the Value Line Summary and Index is derived by subtracting the average consensus forecast of Aaa corporate bonds of 3.21% (from page 3 of this Schedule) from the projected 3-5 year total annual market return of 18.71% (described fully in note 1 on page 2 of Schedule 5).

(5) Using data from Value Line for the S&P 500, an expected total return of 14.79% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 3.21% results in an expected equity risk premium of 11.58%.

(6) Using data from the Bloomberg Professional Service for the S&P 500, an expected total return of 13.53% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 3.21% results in an expected equity risk premium of 10.32%.

(7) Average of mean and median beta from Schedule 5.

Sources of Information:

Stocks, Bonds, Bills, and Inflation - 2020 SBBI Yearbook, John Wiley & Sons, Inc.
Industrial Manual and Mergent Bond Record Monthly Update.
Value Line Summary and Index
Blue Chip Financial Forecasts, May 1, 2020 and December 1, 2019
Bloomberg Professional Service

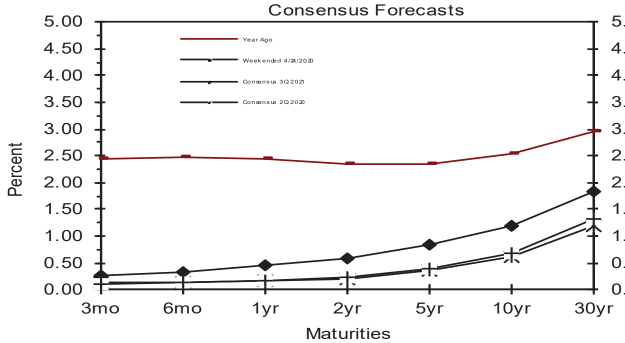
Consensus Forecasts of U.S. Interest Rates and Key Assumptions

	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month			*Latest Qtr*						
Interest Rates	Apr 24	Apr 17	Apr 10	Apr 3	Mar	Feb	Jan	1Q 2020	**2Q 2020**	**3Q 2020**	**4Q 2020**	**1Q 2021**	**2Q 2021**	**3Q 2021**
Federal Funds Rate	0.05	0.05	0.05	0.09	0.65	1.58	1.55	1.26	**0.1**	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**
Prime Rate	3.25	3.25	3.25	3.25	3.81	4.75	4.75	4.44	**3.3**	**3.3**	**3.3**	**3.3**	**3.3**	**3.4**
LIBOR, 3-mo.	1.01	1.14	1.30	1.42	1.10	1.68	1.82	1.53	**0.9**	**0.7**	**0.6**	**0.6**	**0.6**	**0.7**
Commercial Paper, 1-mo.	0.38	0.37	0.37	1.42	1.36	1.55	1.56	1.49	**0.4**	**0.4**	**0.4**	**0.4**	**0.5**	**0.6**
Treasury bill, 3-mo.	0.12	0.17	0.19	0.10	0.30	1.54	1.55	1.13	**0.1**	**0.1**	**0.1**	**0.2**	**0.2**	**0.3**
Treasury bill, 6-mo.	0.14	0.21	0.21	0.14	0.30	1.51	1.56	1.12	**0.1**	**0.2**	**0.2**	**0.2**	**0.3**	**0.3**
Treasury bill, 1 yr.	0.17	0.21	0.22	0.15	0.33	1.41	1.53	1.09	**0.2**	**0.2**	**0.3**	**0.3**	**0.4**	**0.4**
Treasury note, 2 yr.	0.21	0.22	0.26	0.23	0.45	1.33	1.52	1.10	**0.2**	**0.3**	**0.4**	**0.4**	**0.5**	**0.6**
Treasury note, 5 yr.	0.36	0.38	0.45	0.38	0.59	1.32	1.56	1.16	**0.4**	**0.5**	**0.6**	**0.7**	**0.7**	**0.8**
Treasury note, 10 yr.	0.61	0.68	0.73	0.65	0.87	1.50	1.76	1.38	**0.7**	**0.8**	**0.9**	**1.0**	**1.1**	**1.2**
Treasury note, 30 yr.	1.19	1.31	1.33	1.29	1.46	1.97	2.22	1.88	**1.3**	**1.4**	**1.5**	**1.6**	**1.7**	**1.8**
Corporate Aaa bond	2.75	2.81	3.03	3.05	3.11	2.85	3.04	3.00	**2.6**	**2.7**	**2.8**	**2.8**	**2.9**	**3.0**
Corporate Baa bond	3.70	3.75	4.13	4.23	4.11	3.50	3.66	3.76	**4.3**	**4.3**	**4.2**	**4.3**	**4.2**	**4.3**
State & Local bonds	3.37	3.29	3.42	3.45	3.29	2.93	3.00	3.07	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**
Home mortgage rate	3.33	3.31	3.33	3.33	3.45	3.47	3.62	3.51	**3.3**	**3.3**	**3.2**	**3.2**	**3.3**	**3.3**

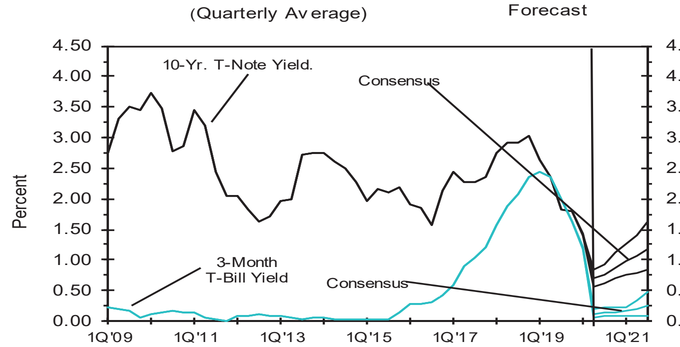
	History								Consensus Forecasts-Quarterly					
Key Assumptions	2Q 2018	3Q 2018	4Q 2018	1Q 2019	2Q 2019	3Q 2019	4Q 2019	1Q 2020	**2Q 2020**	**3Q 2020**	**4Q 2020**	**1Q 2021**	**2Q 2021**	**3Q 2021**
Fed's AFE $ Index	105.5	107.8	109.4	109.4	110.3	110.5	110.3	111.2	**113.5**	**113.5**	**113.2**	**112.9**	**112.5**	**112.2**
Real GDP	3.5	2.9	1.1	3.1	2.0	2.1	2.1	-4.8	**-27.8**	**7.4**	**9.2**	**6.6**	**4.8**	**3.6**
GDP Price Index	3.2	2.0	1.6	1.1	2.4	1.8	1.3	1.3	**0.1**	**1.1**	**1.3**	**1.7**	**1.9**	**1.8**
Consumer Price Index	2.2	2.1	1.3	0.9	3.0	1.8	2.4	1.2	**-2.4**	**1.1**	**1.7**	**2.1**	**2.1**	**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: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; LIBOR quotes from Intercontinental Exchange. All interest rate data are sourced from Haver Analytics. Historical data for Fed's Major Currency Index are from FRSR H.10. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).

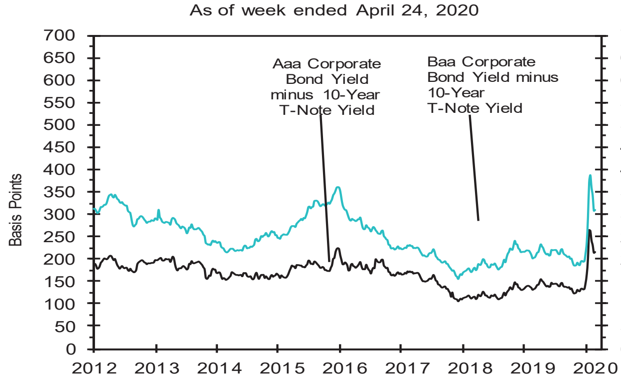
U.S. Treasury Yield Curve
Week ended April 24, 2020 & Year Ago vs.
2Q 2020 & 3Q 2021
Consensus Forecasts



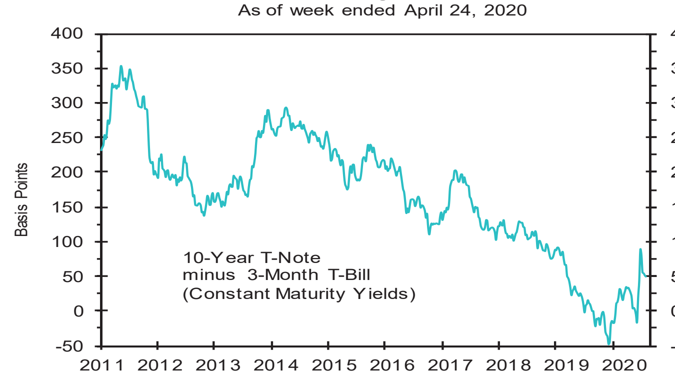
U.S. 3-Mo. T-Bills & 10-Yr. T-Note Yield
(Quarterly Average) Forecast



Corporate Bond Spreads
As of week ended April 24, 2020



U.S. Treasury Yield Curve
As of week ended April 24, 2020



Long-Range Survey:

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 2021 through 2025 and averages for the five-year periods 2021-2025 and 2026-2030. 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	
		2021	2022	2023	2024	2025	2021-2025	2026-2030
1. Federal Funds Rate	CONSENSUS	**1.5**	**1.9**	**2.1**	**2.3**	**2.4**	**2.1**	**2.4**
	Top 10 Average	2.1	2.6	2.7	2.9	3.0	2.6	3.0
	Bottom 10 Average	1.0	1.2	1.5	1.8	1.9	1.5	1.9
2. Prime Rate	CONSENSUS	**4.5**	**4.9**	**5.1**	**5.4**	**5.5**	**5.1**	**5.5**
	Top 10 Average	5.0	5.5	5.7	6.0	6.0	5.6	6.0
	Bottom 10 Average	4.0	4.3	4.6	4.9	5.0	4.5	5.0
3. LIBOR, 3-Mo.	CONSENSUS	**1.9**	**2.2**	**2.4**	**2.6**	**2.7**	**2.3**	**2.7**
	Top 10 Average	2.4	2.7	2.9	3.1	3.2	2.9	3.2
	Bottom 10 Average	1.4	1.6	1.8	2.0	2.2	1.8	2.2
4. Commercial Paper, 1-Mo.	CONSENSUS	**1.7**	**2.1**	**2.3**	**2.5**	**2.7**	**2.3**	**2.7**
	Top 10 Average	2.2	2.5	2.8	3.0	3.1	2.7	3.1
	Bottom 10 Average	1.3	1.6	1.8	2.1	2.2	1.8	2.2
5. Treasury Bill Yield, 3-Mo.	CONSENSUS	**1.5**	**1.8**	**2.0**	**2.3**	**2.4**	**2.0**	**2.4**
	Top 10 Average	2.1	2.6	2.7	2.9	3.0	2.6	**3.0**
	Bottom 10 Average	1.0	1.2	1.4	1.7	1.8	1.4	**1.8**
6. Treasury Bill Yield, 6-Mo.	CONSENSUS	**1.6**	**1.9**	**2.2**	**2.4**	**2.5**	**2.1**	**2.5**
	Top 10 Average	2.2	2.6	2.8	3.0	3.1	2.7	**3.1**
	Bottom 10 Average	1.1	1.3	1.5	1.8	2.0	1.5	**2.0**
7. Treasury Bill Yield, 1-Yr.	CONSENSUS	**1.7**	**2.0**	**2.2**	**2.5**	**2.6**	**2.2**	**2.7**
	Top 10 Average	2.3	2.7	2.9	3.2	3.2	2.8	**3.2**
	Bottom 10 Average	1.2	1.3	1.6	1.9	2.1	1.6	**2.1**
8. Treasury Note Yield, 2-Yr.	CONSENSUS	**1.8**	**2.1**	**2.4**	**2.6**	**2.7**	**2.3**	**2.8**
	Top 10 Average	2.4	2.8	3.1	3.3	3.4	3.0	**3.4**
	Bottom 10 Average	1.2	1.5	1.7	2.0	2.2	1.7	**2.2**
10. Treasury Note Yield, 5-Yr.	CONSENSUS	**2.0**	**2.3**	**2.6**	**2.8**	**2.9**	**2.5**	**3.0**
	Top 10 Average	2.6	3.0	3.2	3.5	3.5	3.2	**3.6**
	Bottom 10 Average	1.5	1.7	1.9	2.1	2.3	1.9	**2.3**
11. Treasury Note Yield, 10-Yr.	CONSENSUS	**2.3**	**2.5**	**2.8**	**3.0**	**3.1**	**2.8**	**3.2**
	Top 10 Average	2.9	3.3	3.6	3.8	3.9	3.5	**4.0**
	Bottom 10 Average	1.8	1.9	2.1	2.3	2.4	2.1	**2.5**
12. Treasury Bond Yield, 30-Yr.	CONSENSUS	**2.8**	**3.0**	**3.2**	**3.5**	**3.6**	**3.2**	**3.7**
	Top 10 Average	3.3	3.6	4.0	4.2	4.3	3.9	**4.4**
	Bottom 10 Average	2.2	2.4	2.5	2.7	2.9	2.6	**2.9**
13. Corporate Aaa Bond Yield	CONSENSUS	**3.7**	**4.0**	**4.3**	**4.5**	**4.6**	**4.2**	**4.7**
	Top 10 Average	4.3	4.6	4.9	5.2	5.3	4.9	**5.4**
	Bottom 10 Average	3.2	3.4	3.6	3.7	3.9	3.6	**4.0**
13. Corporate Baa Bond Yield	CONSENSUS	**4.7**	**4.9**	**5.2**	**5.4**	**5.6**	**5.2**	**5.6**
	Top 10 Average	5.3	5.6	5.9	6.2	6.3	5.9	**6.4**
	Bottom 10 Average	4.2	4.3	4.4	4.6	4.8	4.5	**4.8**
14. State & Local Bonds Yield	CONSENSUS	**3.6**	**3.7**	**3.9**	**4.1**	**4.2**	**3.9**	**4.2**
	Top 10 Average	4.0	4.3	4.5	4.6	4.7	4.4	**4.7**
	Bottom 10 Average	3.2	3.2	3.3	3.5	3.7	3.4	**3.8**
15. Home Mortgage Rate	CONSENSUS	**4.1**	**4.2**	**4.5**	**4.7**	**4.8**	**4.5**	**4.9**
	Top 10 Average	4.5	4.8	5.1	5.4	5.4	5.0	**5.5**
	Bottom 10 Average	3.7	3.7	3.9	4.1	4.2	3.9	**4.2**
A. Fed's AFE Nominal $ Index	CONSENSUS	**108.8**	**108.8**	**109.1**	**109.2**	**108.8**	**108.9**	**108.3**
	Top 10 Average	110.6	110.7	111.1	111.5	111.6	111.1	111.8
	Bottom 10 Average	107.0	107.0	107.1	107.1	106.5	106.9	105.7

		Year-Over-Year, % Change					Five-Year Averages	
		2021	2022	2023	2024	2025	2021-2025	2026-2030
B. Real GDP	CONSENSUS	**1.9**	**2.0**	**2.0**	**1.9**	**2.0**	**1.9**	**2.0**
	Top 10 Average	2.4	2.4	2.3	2.2	2.2	2.3	2.3
	Bottom 10 Average	1.4	1.6	1.6	1.7	1.7	1.6	1.7
C. GDP Chained Price Index	CONSENSUS	**2.2**	**2.3**	**2.3**	**2.2**	**2.2**	**2.2**	**2.2**
	Top 10 Average	2.6	2.8	2.7	2.6	2.6	2.7	2.6
	Bottom 10 Average	1.8	1.8	1.9	1.9	1.9	1.9	1.9
D. Consumer Price Index	CONSENSUS	**2.1**	**2.2**	**2.2**	**2.2**	**2.1**	**2.2**	**2.1**
	Top 10 Average	2.4	2.4	2.5	2.4	2.3	2.4	2.3
	Bottom 10 Average	1.8	1.9	2.0	2.0	1.9	1.9	2.0

Utilities, Inc of Florida
Derivation of Mean Equity Risk Premium Based Studies
Using Holding Period Returns and
Projected Market Appreciation of the S&P Utility Index

Line No.		Implied Equity Risk Premium
	Equity Risk Premium based on S&P Utility Index Holding Period Returns (1):	
1.	Historical Equity Risk Premium	4.21 %
2.	Regression of Historical Equity Risk Premium (2)	6.68
3.	Forecasted Equity Risk Premium Based on PRPM (3)	5.95
4.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Value Line Data) (4)	6.76
5.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Bloomberg Data) (5)	5.23
6.	Average Equity Risk Premium (6)	5.76 %

Notes: (1) Based on S&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2019. Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.

(2) This equity risk premium is based on a regression of the monthly equity risk premiums of the S&P Utility Index relative to Moody's A rated public utility bond yields from 1928 - 2019 referenced in note 1 above.

(3) The Predictive Risk Premium Model (PRPM) is applied to the risk premium of the monthly total returns of the S&P Utility Index and the monthly yields on Moody's A rated public utility bonds from January 1928 - April 2020.

(4) Using data from Value Line for the S&P Utilities Index, an expected return of 10.50% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A rated public utility bond yield of 3.74%, calculated on line 3 of page 3 of this Schedule results in an equity risk premium of 7.47%. (10.50% - 3.74% = 6.76%)

(5) Using data from Bloomberg Professional Service for the S&P Utilities Index, an expected return of 8.97% was derived based on expected dividend yields and long-term growth estimates as a proxy for market appreciation. Subtracting the expected A rated public utility bond yield of 3.74%, calculated on line 3 of page 3 of this Schedule results in an equity risk premium of 5.23%. (8.97% - 3.74% = 5.23%)

(6) Average of lines 1 through 5.

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

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Seven Water Companies	Value Line Adjusted Beta	Bloomberg Adjusted Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
American States Water Co.	0.60	0.52	0.56	11.94 %	2.03 %	8.72 %	10.03 %	9.37 %
American Water Works Company Inc	0.50	1.00	0.75	11.94	2.03	10.99	11.73	11.36
California Water Service Group	0.60	0.51	0.55	11.94	2.03	8.60	9.94	9.27
Essential Utilities, Inc.	0.60	0.96	0.78	11.94	2.03	11.34	12.00	11.67
Middlesex Water Co.	0.70	0.73	0.72	11.94	2.03	10.63	11.46	11.05
SJW Group	0.60	0.83	0.71	11.94	2.03	10.51	11.37	10.94
York Water Co.	0.65	0.89	0.77	11.94	2.03	11.22	11.91	11.57
Mean			0.69			10.29 %	11.21 %	10.75 %
Median			0.72			10.63 %	11.46 %	11.05 %
Average of Mean and Median			0.71			10.46	11.34	10.90 %

Notes on page 2 of this Schedule.

Utilities, Inc of Florida
Notes to Accompany the Application of the CAPM and ECAPM

Notes:

(1) The market risk premium (MRP) is derived by using six different measures from three sources: Ibbotson, Value Line, and Bloomberg as illustrated below:

Historical Data MRP Estimates:

Measure 1: Ibbotson Arithmetic Mean MRP (1926-2019)

Arithmetic Mean Monthly Returns for Large Stocks 1926-2019:	12.10	%
Arithmetic Mean Income Returns on Long-Term Government Bonds:	5.09	
MRP based on Ibbotson Historical Data:	7.01	%

Measure 2: Application of a Regression Analysis to Ibbotson Historical Data (1926-2019)	10.26	%

Measure 3: Application of the PRPM to Ibbotson Historical Data: (January 1926 - April 2020)	13.44	%

Value Line MRP Estimates:

Measure 4: Value Line Projected MRP (Thirteen weeks ending May 01, 2020)

Total projected return on the market 3-5 years hence*:	18.71	%
Projected Risk-Free Rate (see note 2):	2.03	
MRP based on Value Line Summary & Index:	16.68	%

*Forcasted 3-5 year capital appreciation plus expected dividend yield

Measure 5: Value Line Projected Return on the Market based on the S&P 500

Total return on the Market based on the S&P 500:	14.79	%
Projected Risk-Free Rate (see note 2):	2.03	
MRP based on Value Line data	12.76	%

Measure 6: Bloomberg Projected MRP

Total return on the Market based on the S&P 500:	13.53	%
Projected Risk-Free Rate (see note 2):	2.03	
MRP based on Bloomberg data	11.50	%
Average of Value Line, Ibbotson, and Bloomberg MRP:	11.94	%

(2) For reasons explained in the direct testimony, the appropriate risk-free rate for cost of capital purposes is the average forecast of 30 year Treasury Bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts. (See pages 10-11 of Schedule 4.) The projection of the risk-free rate is illustrated below:

Second Quarter 2020	1.30	%
Third Quarter 2020	1.40	
Fourth Quarter 2020	1.50	
First Quarter 2021	1.60	
Second Quarter 2021	1.70	
Third Quarter 2021	1.80	
2021-2025	3.20	
2026-2030	3.70	
	2.03	%

(3) Average of Column 6 and Column 7.

Sources of Information:

Value Line Summary and Index
Blue Chip Financial Forecasts, May 1, 2020 and December 1, 2019
Stocks, Bonds, Bills, and Inflation - 2020 SBBI Yearbook, John Wiley & Sons, Inc.
Bloomberg Professional Services

Utilities, Inc. of Florida
Basis of Selection of the Group of Non-Price Regulated Companies
Comparable in Total Risk to the Utility Proxy Group

The criteria for selection of the Non-Price Regulated Proxy Group was that the non-price regulated companies be domestic and reported in Value Line Investment Survey (Standard Edition).

The Non-Price Regulated Proxy Group was then selected based on the unadjusted beta range of 0.17 – 0.61 and residual standard error of the regression range of 2.6429 – 3.1521 of the Utility Proxy Group.

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

The standard deviation of the Utility Proxy Group's residual standard error of the regression is 0.1273. The standard deviation of the standard error of the regression is calculated as follows:

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

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

$$\text{Thus, } 0.1273 = \frac{2.8975}{\sqrt{518}} = \frac{2.8975}{22.7596}$$

Source of Information: Value Line, Inc., March 2020
Value Line Investment Survey (Standard Edition)

Utilities, Inc of Florida
Basis of Selection of Comparable Risk
Domestic Non-Price Regulated Companies

	[1]	[2]	[3]	[4]
Proxy Group of Seven Water Companies	Value Line Adjusted Beta	Unadjusted Beta	Residual Standard Error of the Regression	Standard Deviation of Beta
American States Water Co.	0.60	0.36	2.6563	0.0986
American Water Works Company Inc	0.50	0.23	2.2596	0.0839
California Water Service Group	0.60	0.38	2.3220	0.0862
Essential Utilities, Inc.	0.60	0.39	2.9281	0.1087
Middlesex Water Co.	0.70	0.54	3.4080	0.1265
SJW Group	0.60	0.38	3.2407	0.1203
York Water Co.	0.65	0.46	3.4676	0.1287
Average	0.61	0.39	2.8975	0.1076

Beta Range (+/- 2 std. Devs. of Beta)	0.17	0.61
2 std. Devs. of Beta	0.22	
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.6429	3.1521
Std. dev. of the Res. Std. Err.	0.1273	
2 std. devs. of the Res. Std. Err.	0.2546	

Source of Information: Valueline Proprietary Database, March 2020

Utilities, Inc of Florida
Proxy Group of Non-Price Regulated Companies
Comparable in Total Risk to the
Proxy Group of Seven Water Companies

	[1]	[2]	[3]	[4]
Proxy Group of Twelve Non-Price Regulated Companies	VL Adjusted Beta	Unadjusted Beta	Residual Standard Error of the Regression	Standard Deviation of Beta
Casey's Gen'l Stores	0.70	0.53	2.9602	0.1099
Cboe Global Markets	0.65	0.46	2.7206	0.1010
Cracker Barrel	0.70	0.54	3.0507	0.1132
Campbell Soup	0.65	0.40	2.9785	0.1105
Dunkin' Brands Group	0.70	0.51	2.7046	0.1004
Darden Restaurants	0.75	0.60	2.9890	0.1109
Hormel Foods	0.60	0.34	2.6862	0.0997
Lancaster Colony	0.70	0.48	2.6628	0.0988
Lilly (Eli)	0.75	0.54	2.6484	0.0983
Lamb Weston Holdings	0.65	0.43	2.8592	0.1543
Altria Group	0.70	0.50	2.6455	0.0982
Valvoline Inc.	0.75	0.57	3.1081	0.1659
Average	0.69	0.49	2.8300	0.1100
Proxy Group of Seven Water Companies	0.61	0.39	2.8975	0.1076

Source of Information: Valueline Proprietary Database, March 2020

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

Principal Methods	Proxy Group of Twelve Non-Price Regulated Companies	
Discounted Cash Flow Model (DCF) (1)	8.41	%
Risk Premium Model (RPM) (2)	13.12	
Capital Asset Pricing Model (CAPM) (3)	11.83	
Mean	11.12	%
Median	11.83	%
Average of Mean and Median	11.48	%

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

Utilities, Inc of Florida
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the
Proxy Group of Seven Water Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Twelve Non-Price Regulated Companies	Average Dividend Yield	Value Line Projected Five Year Growth in EPS	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Bloomberg Projected Five Year Growth in EPS	Average Projected Five Year Growth Rate in EPS	Adjusted Dividend Yield	Indicated Common Equity Cost Rate (1)
Casey's Gen'l Stores	0.83 %	6.50 %	8.30 %	9.27 %	11.53 %	8.90 %	0.87 %	9.77 %
Cboe Global Markets	1.39	12.50	2.30	3.24	6.15	6.05	1.43	7.48
Cracker Barrel	-	7.50	NA	0.30	(4.99)	3.90	-	NA
Campbell Soup	2.89	2.00	7.20	2.75	7.48	4.86	2.96	7.82
Dunkin' Brands Group	-	9.50	9.90	4.76	6.14	7.58	-	NA
Darden Restaurants	-	11.00	10.00	NA	5.82	8.94	-	NA
Hormel Foods	2.02	8.50	6.00	4.00	4.63	5.78	2.08	7.86
Lancaster Colony	1.96	5.00	NA	3.00	NA	4.00	2.00	6.00
Lilly (Eli)	2.09	10.00	12.30	12.52	11.31	11.53	2.21	13.74
Lamb Weston Holdings	1.31	9.50	3.40	3.40	(1.85)	5.43	1.35	6.78
Altria Group	8.29	8.50	5.00	3.53	5.25	5.57	8.52	14.09
Valvoline Inc.	2.71	8.50	2.60	2.60	4.84	4.63	2.77	7.40
							Mean	8.99 %
							Median	7.82 %
							Average of Mean and Median	8.41 %

NA= Not Available
NMF= Not Meaningful Figure

(1) The application of the DCF model to the domestic, non-price regluated comparable risk companies is identical to the application of the DCF to the utility proxy group. The dividend yield is derived by using the 60 day average price and the spot indicated dividend as of April 30, 2020. The dividend yield is then adjusted by 1/2 the average projected growth rate in EPS, which is calculated by averaging the 5 year projected growth in EPS provided by Value Line, www.reuters.com, www.zacks.com, and www.yahoo.com (excluding any negative growth rates) and then adding that growth rate to the adjusted dividend yield.

Source of Information: Value Line Investment Survey
www.reuters.com Downloaded on 04/30/2020
www.zacks.com Downloaded on 04/30/2020
www.yahoo.com Downloaded on 04/30/2020
Bloomberg Professional Services

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

Line No.		Proxy Group of Twelve Non-Price Regulated Companies	
1.	Prospective Yield on Baa Rated Corporate Bonds (1)	4.55	%
2.	Equity Risk Premium (2)	8.57	
3.	Risk Premium Derived Common Equity Cost Rate	13.12	%

Notes: (1) Average forecast of Baa corporate bonds based upon the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated May 1, 2020 and December 1, 2019 (see pages 10 and 11 of Schedule 4). The estimates are detailed below.

Second Quarter 2020	4.30	%
Third Quarter 2020	4.30	
Fourth Quarter 2020	4.20	
First Quarter 2021	4.30	
Second Quarter 2021	4.20	
Third Quarter 2021	4.30	
2021-2025	5.20	
2026-2030	5.60	
Average	4.55	%

(2) From page 5 of this Schedule.

Utilities, Inc of Florida
Comparison of Long-Term Issuer Ratings for the
Proxy Group of Twelve Non-Price Regulated Companies of Comparable risk to the
Proxy Group of Seven Water Companies

	Moody's Long-Term Issuer Rating April 2020		Standard & Poor's Long-Term Issuer Rating April 2020	
Proxy Group of Twelve Non-Price Regulated Companies	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
Casey's Gen'l Stores	NA	--	NA	--
Cboe Global Markets	A3	7.0	A-	7.0
Cracker Barrel	WR	--	NR	--
Campbell Soup	Baa2	9.0	BBB-	10.0
Dunkin' Brands Group	NA	--	NA	--
Darden Restaurants	Baa3	10.0	BBB-	10.0
Hormel Foods	A1	5.0	A	6.0
Lancaster Colony	NA	--	NA	--
Lilly (Eli)	A2	6.0	A+	5.0
Lamb Weston Holdings	Ba2	12.0	BB+	11.0
Altria Group	A3	7.0	BBB	9.0
Valvoline Inc.	Ba3	13.0	BB	12.0
Average	Baa2	8.6	BBB+	8.8

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

Source of Information:
Bloomberg Professional Services

Utilities, Inc of Florida
Derivation of Equity Risk Premium Based on the Total Market Approach
Using the Beta for
Proxy Group of Twelve Non-Price Regulated Companies of Comparable risk to the
Proxy Group of Seven Water Companies

Line No.	Equity Risk Premium Measure	Proxy Group of Twelve Non-Price Regulated Companies
	Ibbotson-Based Equity Risk Premiums:	
1.	Ibbotson Equity Risk Premium (1)	5.78 %
2.	Regression on Ibbotson Risk Premium Data (2)	9.12
3.	Ibbotson Equity Risk Premium based on PRPM (3)	11.95
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	15.50
5	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	11.58
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	10.32
7.	Conclusion of Equity Risk Premium	10.71 %
8.	Adjusted Beta (7)	0.80
9.	Forecasted Equity Risk Premium	8.57 %

Notes:
(1) From note 1 of page 9 of Schedule 4.
(2) From note 2 of page 9 of Schedule 4.
(3) From note 3 of page 9 of Schedule 4.
(4) From note 4 of page 9 of Schedule 4.
(5) From note 5 of page 9 of Schedule 4.
(6) From note 6 of page 9 of Schedule 4.
(7) Average of mean and median beta from page 6 of this Schedule.

Sources of Information:
Stocks, Bonds, Bills, and Inflation - 2020 SBBI Yearbook, John Wiley & Sons, Inc.
Value Line Summary and Index
Blue Chip Financial Forecasts, May 1, 2020 and December 1, 2019
Bloomberg Professional Services

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

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Twelve Non-Price Regulated Companies	Value Line Adjusted Beta	Bloomberg Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Casey's Gen'l Stores	0.70	0.81	0.75	11.94 %	2.03 %	10.99 %	11.73 %	11.36 %
Cboe Global Markets	0.65	0.83	0.74	11.94	2.03	10.87	11.64	11.25
Cracker Barrel	0.70	1.31	1.01	11.94	2.03	14.09	14.06	14.08
Campbell Soup	0.65	0.55	0.60	11.94	2.03	9.19	10.39	9.79
Dunkin' Brands Group	0.70	1.36	1.03	11.94	2.03	14.33	14.24	14.28
Darden Restaurants	0.75	1.72	1.23	11.94	2.03	16.72	16.03	16.37
Hormel Foods	0.60	0.41	0.51	11.94	2.03	8.12	9.58	8.85
Lancaster Colony	0.70	0.57	0.64	11.94	2.03	9.67	10.75	10.21
Lilly (Eli)	0.75	0.79	0.77	11.94	2.03	11.22	11.91	11.57
Lamb Weston Holdings	0.65	1.09	0.87	11.94	2.03	12.42	12.81	12.61
Altria Group	0.70	0.82	0.76	11.94	2.03	11.11	11.82	11.46
Valvoline Inc.	0.75	1.22	0.99	11.94	2.03	13.85	13.88	13.87
Mean			0.83			11.88 %	12.40 %	12.14 %
Median			0.77			11.17 %	11.87 %	11.52 %
Average of Mean and Median			0.80			11.53 %	12.14 %	11.83 %

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

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

Line No.		[1] Market Capitalization on April 30, 2020 (1) (millions)	(times larger)	[2] Applicable Decile of the NYSE/AMEX/ NASDAQ (2)	[3] Applicable Size Premium (3)	[4] Spread from Applicable Size Premium (4)
1.	Utilities, Inc of Florida	$ 196.004		10	4.99%	
2.	Proxy Group of Seven Water Companies	$ 5,657.608	28.9 x	4	0.79%	4.20%

	[A] Decile	[B] Market Capitalization of Smallest Company (millions)	[C] Market Capitalization of Largest Company (millions)	[D] Size Premium (Return in Excess of CAPM)*
Largest	1	$ 31,090.379	$ 1,061,355.011	-0.28%
	2	13,142.606	30,542.936	0.50%
	3	6,618.604	13,100.225	0.73%
	4	4,312.546	6,614.962	0.79%
	5	2,688.889	4,311.252	1.10%
	6	1,669.856	2,685.865	1.34%
	7	993.855	1,668.282	1.47%
	8	515.621	993.847	1.59%
	9	230.024	515.602	2.22%
Smallest	10	1.973	299.748	4.99%

*From 2020 Duff & Phelps Cost of Capital Navigator

Notes:

(1) From page 2 of this Schedule.
(2) Gleaned from Columns [B] and [C] on the bottom of this page. The appropriate decile (Column [A]) corresponds to the market capitalization of the proxy group, which is found in Column [1].
(3) Corresponding risk premium to the decile is provided in Column [D] on the bottom of this page.
(4) Line No. 1 Column [3] – Line No. 2 Column [3]. For example, the 4.20% in Column [4], Line No. 2 is derived as follows 4.20% = 2.22% - 0.79%.

Utilities, Inc of Florida
Market Capitalization of Utilities, Inc of Florida and the
Proxy Group of Seven Water Companies

Company	Exchange	[1] Common Stock Shares Outstanding at Fiscal Year End 2019 (millions)	[2] Book Value per Share at Fiscal Year End 2019 (1)	[3] Total Common Equity at Fiscal Year End 2019 (millions)	[4] Closing Stock Market Price on April 30, 2020	[5] Market-to-Book Ratio on April 30, 2020 (2)	[6] Market Capitalization on April 30, 2020 (3) (millions)
Utilities, Inc of Florida		NA	NA	$ 60.48 (4)	NA		
Based upon Proxy Group of Seven Water Companies						324.1 (5)	$ 196.004 (6)
Proxy Group of Seven Water Companies							
American States Water Co.	NYSE	36.847	$ 16.325	$ 601.530	$ 79.370	486.2 %	$ 2,924.516
American Water Works Company Inc	NYSE	180.813	33.853	6,121.000	121.690	359.5	$ 22,003.118
California Water Service Group	NYSE	48.532	16.070	779.906	44.920	279.5	$ 2,180.066
Essential Utilities, Inc.	NYSE	220.759	17.580	3,880.860	41.790	237.7	$ 9,225.507
Middlesex Water Co.	NASDAQ	17.434	18.572	323.792	60.300	324.7	$ 1,051.270
SJW Group	NYSE	28.457	31.275	889.984	59.530	190.3	$ 1,694.016
York Water Co.	NASDAQ	13.015	10.310	134.185	40.320	391.1	$ 524.761
Average		77.979	$ 20.569	$ 1,818.751	$ 63.989	324.1 %	$ 5,657.608

NA= Not Available

Notes:
(1) Column 3 / Column 1.
(2) Column 4 / Column 2.
(3) Column 1 * Column 4.
(4) Book common equity UIF's 2019 Annual Report to the FL PSC multiplied by the requested common equity ratio.
(5) The market-to-book ratio of Utilities, Inc of Florida on April 30, 2020 is assumed to be equal to the market-to-book ratio of Proxy Group of Seven Water Companies on April 30, 2020 as appropriate.
(6) Column [3] multiplied by Column [5].

Source of Information: 2019 Annual Forms 10K
yahoo.finance.com

CERTIFICATE OF SERVICE

HEREBY CERTIFY that on the 28th day of October 2020, a true and correct copy of the foregoing Corrected Prefiled Direct Testimony has been served via email to:

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/s/ Martin S. Friedman

MARTIN S. FRIEDMAN