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November 21, 2001

Ms. Blanca S. Bayo, Director
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Florida Public Service Commission
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Re: Docket No. 010006-WS

Dear Ms. Bayo:

Enclosed herewith for filing in the above-referenced docket on behalf of Florida Waterworks Association ("FWA") are the following:

1. Original and fifteen copies of FWA's Post-Hearing Brief And Statement of Positions and Issues; and
2. A diskette containing the brief formatted in Word Perfect.

Please acknowledge receipt of these documents by stamping the extra copy of this letter "filed" and returning the same to me. Thank you for your assistance with this filing.

Sincerely,

J. Stephen Menton
J. Stephen Menton

JSM/knb
Enclosures
cc: Counsel of Record

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Water and wastewater)
industry annual reestablishment)
of authorized range of return on)
on common equity for water and)
wastewater utilities pursuant to)
Section 367.081(4)(f), F.S.)
_____)

Docket No. 010006-WS

Filed: November 21, 2001

**FLORIDA WATERWORKS ASSOCIATION'S
POST-HEARING BRIEF AND STATEMENT
OF POSITIONS AND ISSUES**

The Florida Waterworks Association (“FWA”), pursuant to Rule 28-106.215, Florida Administrative Code, and Order No. PSC-01-2139-PHO-WS, hereby submits its Post-Hearing Brief and Statement of Positions and Issues. In this Brief, references to exhibits in the record will be designated “Ex. ___” [with further reference to page number]. References to the testimony in the record transcript will be designated “T. Vol. __, p. __.”

I. Introduction

This docket was opened as a result of FWA’s petition challenging Proposed Agency Action Order No. PSC-01-1226-PAA-WS (the “PAA Order”) issued June 1, 2001. Section 367.081(4)(f) authorizes the Commission to establish by order a leverage formula that reasonably reflects the range of returns on common equity for an average water or wastewater utility. The PAA Order proposes a continuation (with only a minor correction and a minor modification) of the existing leverage formula methodology used for calculating a range of returns on equity for Florida water and wastewater utilities. Adoption of the PAA Order would result in a range of return on equity from 9.14% at 100% equity to 10.24% at 40% equity.

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FWA asserts that the range of returns set forth in the PAA Order is too low and that the proposed continuation of the existing leverage formula methodology will not appropriately reflect the risks and issues facing the water and wastewater industry in Florida. If the PAA Order is adopted, FWA contends that the allowable returns on equity for Florida water and wastewater utilities will not be commensurate with returns on investments in other enterprises with comparable risks. FWA has offered comprehensive and diversified financial modeling which demonstrates that a range of returns higher than the PAA Order proposes is necessary in order for Florida utilities to effectively compete in the capital markets.

II. Basic Position

The range of returns on equity calculated under the PAA Order are not fair and reasonable. The financial models utilized in reaching the recommendation set forth in the PAA Order result in rates of return that are significantly lower than the rates of return on equity authorized for other Commission regulated utilities. Adoption of the PAA Order would also result in rates of return that are significantly lower than returns authorized for water and wastewater utilities in other states. A more diversified and focused use of financial models results in a significantly higher range of returns than contained in the PAA Order. A thorough and objective analysis results in a range of return between 10.2% to 12.7% with a mid point of 11.5% for a typical Florida water and wastewater utility with an average capital structure.

Merely continuing the existing methodology will result in disincentives to investment in Florida water and wastewater utilities. Those utilities will not be able to attract the capital necessary to address the many challenging issues facing the industry. The PAA Order would result in returns that are at the very low end of the spectrum of returns on equity authorized for water and wastewater

utilities around the country even though Florida water and wastewater utilities on average are significantly smaller and face greater business risks. Unless the Commission modifies the PAA Order, Florida utilities will not be able to attract the capital necessary to survive.

The comprehensive and diversified analysis presented by FWA in this docket is strongly supported in the financial literature and closely correlates to the methodology and authorized returns on equity for other industries that are subject to rate base, rate of return regulation in Florida. Simply continuing the current formula will jeopardize the viability of Florida water and wastewater utilities and potentially compromise their ability to attract financing necessary to ensure their ability to provide adequate, safe and reliable service.

II. Positions on Issues:

Issue No. 1: What is the most appropriate model or method to estimate a fair and reasonable return on a water and wastewater utility's common equity capital?

Summary of Position: **No individual model or approach provides a dependable level of accuracy. Several different approaches should be utilized to cross-check results. A diversified, comprehensive analysis results in a range of returns significantly higher than contained in the PAA Order. **

Analysis and Argument: Since 1981, the Commission has adopted a leverage formula each year which establishes the range of returns on common equity ("ROE") for an average Florida water and wastewater utility. The Commission's leverage formula provides an automated generic mechanism and for adjusting the authorized ROE to reflect the degree of financial leverage of each utility within a prescribed range of common equity ratios. (T. Vol. 1, p. 60). Private utilities in this state are authorized to apply this leverage formula to their capital structure rather than file expert cost of capital testimony in each rate proceeding. (T. Vol. 1, p. 60).

The heart of utility regulation is the setting of just and reasonable rates by way of a fair and reasonable return. (T. Vol. 1, . 22). A rate of return should be set at a level sufficient to enable a company to earn a return commensurate with the cost of those funds. (T. Vol. 1, pp. 16-17). The allowed rate of return must necessarily reflect the cost of common equity funds. (T. Vol. 1, p. 16). The cost of common equity is the minimum rate of return necessary to attract capital to a common equity investment. (T. Vol. 2, p. 186). As discussed in more detail below, in determining the cost of common equity, the starting point is investors' return requirements in financial markets. Because there are no Florida water or wastewater utilities whose common stock is publicly-traded, traditional market information for the industry (stock price, earnings per share, bond rating, etc.) is severely lacking. Thus, an indirect approach to determining the cost of equity capital is required. (T. Vol. 1, p. 60).

The fundamental economic principles which underlie the appraisal of the cost of equity are described in detail in Dr. Morin's testimony. (T. Vol. 1, pp. 14-26). Those principles include the concept that a company will be unable to attract the capital funds it needs to meet its service demands and maintain financial integrity unless it can offer returns to capital suppliers that are comparable to those achieved on alternate competing investments of similar risk. (T. Vol. 1, p. 15). From the demand side, a key principle is that a company will continue to invest in real physical assets if the return on those investments exceeds or equals the company's cost of capital. This concept suggests that a regulatory commission should set rates at a level sufficient to create an equality between the return on physical asset investments and the company's cost of capital. (T. Vol. 1, p. 15).

The economic principles discussed by Dr. Morin are incorporated into the statutes and legal decisions that provide the framework for cost-based, rate of return regulation. The Commission's statutory directive is to "fix rates which are just, reasonable, compensatory, and not unfairly discriminatory." Section 367.081(2)(a)1., Fla. Stat. (2001). The Courts have held that a reasonable return must be sufficient to enable the utility to maintain its credit standing and financial integrity. The return on investment should also be sufficient to enable utilities to attract new capital at reasonable costs and should be commensurate with returns being earned on investments attended by corresponding risks. (T. Vol. 1, pp. 22-23; Vol. 2, pp. 187-188).

The rate of return allowed on utility investors' capital is generally lower than might be earned in some other types of businesses, but the return should include an allowance for the risks investors do face. (T. Vol. 1, p. 19). Utility investments are not risk free. (T. Vol. 1, p. 19). Some utility investors have suffered substantial capital losses. (T. Vol. 1, p. 19). Weather, customer usage, management's ability to control costs, competition from other providers, inflation, regulatory lag, as well as market risks are all risk factors that utilities face.¹ Florida water and wastewater utilities are also faced with used and useful determinations which increase their overall risk since some of

¹Utilities in Florida are obligated to provide safe, reliable, adequate service to all customers willing and able to pay for service within their designated service area. The Commission's interpretation of Chapter 367, Florida Statutes, is that returns allowed must be limited to the original cost of utility assets at the time of dedication to public use. This interpretation has been consistently applied for many years and was reaffirmed in Order No. 25729 issued February 17, 1992 which states "This Commission has consistently interpreted the "investment of the utility" as contained in Section 367.081(2)(a), Florida Statutes, to be the original cost of the property when first dedicated to public service, not only in the context of acquisition adjustments, but elsewhere as well." As a result, customers are shielded from price increases which might otherwise reflect increased costs. Neither depreciation nor return allowances included in utility service prices reflect the higher costs which investors will face upon replacing such assets. (T. Vol. 1, p. 20). This risk rests squarely on investors.

the money supplied by investors may have no earning power. (Ex. 1, Vol. 2, pp. 9, 23-24). Some additional specific and unique risks facing the water and wastewater industry in Florida are explored in more detail in Issue 3 below. (T. Vol. 1, pp. 62-68).

While utilities enjoy varying degrees of monopoly in the sale of public utility services, they must compete with everyone else in the free, open market for capital. The price of capital (whether debt or equity) is set by supply and demand, and is influenced by the relationship between the risk and return expected and the risks expected from the overall menu of alternate investments. (T. Vol. 1, p. 24). For equity capital, the market price is the expected return on equity. A market rate of return is defined in terms of anticipated dividends and capital gains as determined by expected changes in stock prices.

New capital will be attracted to a firm only if the return expected by the suppliers of funds is commensurate with that available from alternatives of comparable risk. (T. Vol. 1, p. 21). The basic premise is that the allowable return on equity should be commensurate with returns on investments in other firms having corresponding risks. (T. Vol. 1, p. 21). As noted above, the allowed return for a regulated company should be sufficient to assure confidence in the financial integrity of the firm in order to maintain creditworthiness and the ability to attract capital on reasonable terms. (T. Vol. 1, p. 21).

The cost of common equity funds (that is, investors' required rate of return) is difficult to estimate. (T. Vol. 2, p. 145). The cost of equity depends on investor expectations, which cannot be known entirely and which change frequently. (T. Vol. 2, p. 196). Because it cannot be specifically or directly identified or measured, the determination of the cost of equity is necessarily a subjective procedure based on estimates using stock market data. (T. Vol. 1, pp. 17, 132; Vol. 2, pp. 196, 210).

There are four broad generic methodologies available to measure the cost of equity: Risk Premium methodologies; capital asset pricing models (“CAPM”); discounted cash flow (“DCF”) methods; and Comparable Earnings. Risk Premium, CAPM and DCF are market-oriented approaches while Comparable Earnings is accounting-oriented. The market value tests are used to estimate investors' return requirements. (T. Vol. 1, pp. 21, 79). Several variants can be employed for each of the market-based methodologies. (T. Vol. 1, pp. 21, 79).

When estimating equity costs, which essentially deals with the measurement of investor expectations, no one single methodology provides a foolproof panacea. (T. Vol. 1, pp. 26, 79; Vol. 2, p. 210). Each method proceeds from different fundamental premises which cannot be validated empirically. (T. Vol. 1, pp. 79-80). Each approach has its own strengths and weaknesses. The application of financial models requires the exercise of considerable judgment on the reasonableness of the assumptions underlying the methodology and on the reasonableness of the proxies used to validate the theory. (T. Vol. 1, p. 79; Vol. 2, p. 210). Even then, each methodology possesses its own way of examining investor behavior, its own premises, and its own set of simplifications of reality. (T. Vol. 1, pp. 79-80).

Application of market based methodologies to water and wastewater utilities must be cautiously approached because of the very few companies with publically traded stock. (T. Vol. 1, pp. 39, 48). There simply are not many water utilities in the country whose shares are publicly listed and actively traded, and therefore subject to the opinions and actions of investors in a measurable way. (T. Vol. 1, p. 36). Even then, the thin trading of water and wastewater utilities limits the usefulness of the data available. (T. Vol. 1, pp. 30-31; Vol. 2, p. 188). In addition, water and wastewater utilities possess small revenue and asset bases and are small in size, both in absolute

terms and relative to other utilities. (T. Vol. 1, p. 39). Because of their small size, market information is not easily accessible and analyst coverage is scarce. (T. Vol. 1, pp. 15, 36, 39).² The limited market data available regarding water utilities necessitates the extension of market-based methodologies to determine the cost of equity to include companies of comparable risk in order to obtain reasonably reliable results. (T. Vol. 1, p. 36).

It should be noted that Florida water and wastewater utilities are even smaller than the national average. This unique characteristic of the water and wastewater industry in Florida further complicates the use of market-based models to estimate the cost equity. (T. Vol. 2, p. 183; Ex. 6, PL-5). The cost of equity for small stocks is considerably larger than for large capitalization stocks. (T. Vol. 1, pp. 40, 41). This size phenomenon is well documented in the finance literature. The size effect is particularly relevant for water utilities whose equity market value is less than \$250 million. (T. Vol. 1, p. 41). In other words, all Florida water and wastewater utilities are subject to this effect in the application of market-based models and there is no easy way to quantify it.

All of these factors increase the subjective judgments that must be made regarding the proper use of the various market-based methodologies for estimating the cost of equity. (T. Vol. 2, p. 188; Ex. 2, Vol. 2, p. 20). The inevitable conclusion is that more than one methodology should be employed in arriving at a judgment on the cost of equity for Florida water and wastewater utilities and that the methodologies should be applied across a series of comparable risk companies. (T. Vol. 1, pp. 26-27, 80, 133; Vol. 2, p. 211). The results should be carefully scrutinized and correlated to as many objective standards as possible. The financial literature strongly supports the use of

²For example, Standard & Poor's computes indexes for almost 100 different industries, but not the water industry. (T. Vol. 1, p. 39).

multiple methods. (T. Vol. 1, p. 80). All relevant evidence from a proper application of the accepted methodologies should be used and weighted equally in order to minimize judgmental error, measurement error, and conceptual infirmities. (T. Vol. 2, p. 80). The reliability of Commission's establishment of a range of returns for the water and wastewater industry depends on an analysis of the results of a variety of methods applied to a variety of comparable groups. (T. Vol. 1, p. 26).

Dr. Morin has presented in this docket a diversified and focused use of financial models which produces a significantly higher range of returns than contained in the PAA Order. Dr. Morin employed several variants of three distinct market-based methodologies: (1) CAPM, (2) Risk Premium, and (3) DCF. (T. Vol. 1, p. 18). His overall analysis includes two studies applying a CAPM and an empirical approximation of the CAPM using current market data. He also performed four risk premium analyses on historical and allowed risk premium data from both the electric utility and natural gas distribution industries.³ Finally, Dr. Morin performed DCF analyses on three surrogates for the water and wastewater industry: a group of large water utilities (which are larger than the typical Florida water and wastewater utilities), a group of generation divested electric utilities, and a group of natural gas distribution utilities. The results of his analyses and the application of his professional judgment, including an assessment of the risk circumstances of the industry, leads Dr. Morin to conclude that a just and reasonable range of returns on common equity

³Risk premium results are likely to prove unreliable for the water industry alone because of the limited number of companies and data available. (T. Vol. 1, p. 36). Therefore, as a surrogate for the risk premiums of the regulated water utility industry, Dr. Morin examined the historical risk premiums of both the electric and natural gas utility industries. (T. Vol. 1, p. 36). As with all other methodologies, the risk premium studies have inherent assumptions and limitations. However, utilizing these well-established financial tools provides a useful cross-check with other methodologies.

for the Florida water and wastewater industry is 10.2% to 12.7% with a midpoint of 11.5% for a typical Florida utility with an average capital structure. (Ex. 2, Depo. of Dr. Morin, Vol. 1, late-filed Exhibit 2).

Dr. Morin's detailed, comprehensive analysis of the appropriate range of return on equity is broader and more reliable than the financial modeling upon which the PAA Order is based. It is important to again emphasize that no one individual method provides the necessary level of precision for determining a fair return, but each method provides useful evidence so as to facilitate the exercise of an informed judgment. (T. Vol. 1, p. 26; Vol. 2, p. 210). Reliance on any single method or preset formula is inappropriate when dealing with investor expectations because of possible measurement errors and vagaries in individual companies' market data. (T. Vol. 1, pp. 26, 82). The inherent limitations of financial modeling are compounded with respect to the water and wastewater industry because of the factors discussed above. The advantage of using several different approaches is that the results of each one can be used to check the others. (T. Vol. 1, p. 26). The various risk premium estimates employed by Dr. Morin are remarkably convergent and homogeneous within the 11.5% - 12.0% range, attesting to their reliability. (T. Vol. 1, p. 43).⁴ The multiple approaches utilized by Dr. Morin produced consistent results which provides a great deal of comfort with the end result.

The PAA Order is predicated upon the use of two methodologies: a CAPM model (which has severe limitations for securities such as those used in the sample); and a single variant of the DCF methodology. The variant that was used has significant limitations and is of questionable

⁴In fact, the risk premium for the water and wastewater industry is probably understated due to the higher risks facing that industry. (T. Vol. 1, pp. 43, 62-63; Vol. 2, p. 202; Ex. 2, Depo. of Dr. Morin, Vol. 2, pp. 19-21).

validity for a regulated industry. These same methodologies have been used to establish the range of ROEs for this industry in prior Commission orders. Since at least 1997, the Commission's leverage formula has resulted in returns on common equity that are significantly lower than the returns on equity authorized for water and wastewater utilities in other states. (T. Vol. 1, p. 62; Vol. 2, pp. 189, 212-213; Ex. 6, PL-4). Mr. Lester has proposed some minor adjustments that attempt to correct this problem. However, investment in Florida water and wastewater utilities is becoming comparatively less and less attractive. Florida water and wastewater utilities will not be able to attract the capital funds needed to meet their service demands and to maintain financial integrity with the range of returns calculated using the PAA Order. (T. Vol. 1, pp. 67-68). Unless significant adjustments are made, the viability of the industry is in jeopardy.

Mr. Lester applied a CAPM analysis to a group of four very large, out-of-state water utilities. Justifiably concerned with the statistical reliability of his four-company sample of water utilities, he also performed a CAPM analysis to a group of 11 natural gas distribution utilities. (T. Vol. 2, pp. 217-218). Mr. Lester's version of the CAPM underestimates the appropriate cost of capital.⁵ (T. Vol. 1, pp. 97-98). It is well established in the academic finance literature that the CAPM produces a downward-biased estimate of equity cost for companies with market risk premiums that are

⁵Extensive empirical tests of the simple CAPM have been conducted to determine to what extent security returns and betas were related in the manner predicted by the CAPM. Based on the empirical evidence, it is one of the most well-known results in the academic finance literature that a CAPM-based estimate of the cost of capital underestimates the return required from low-beta securities and overstates the return from high-beta securities. (T. Vol. 1, p. 98). While these empirical results do not necessarily mean that the CAPM results should be discarded, they do demonstrate why the results should be cautiously interpreted and why multiple methodologies applied to several comparable risk companies should be employed to more accurately estimate the cost of capital. (T. Vol. 1, pp. 26-27).

significantly below the market average. (T. Vol. 1, pp. 35, 97-98). Mr. Lester's standard CAPM fails to recognize this inherent bias. (T. Vol. 1, p. 97). The failure to adjust for this documented bias results in an understatement of equity cost by approximately 50 to 60 basis points. (T. Vol. 1, p. 98). The CAPM estimate should be supplemented with an estimate from the empirical version of the CAPM ("ECAPM"). (T. Vol. 1, p. 97). Dr. Morin's CAPM analyses included a simple "plain vanilla" approach similar to Mr. Lester and another using an ECAPM.

Mr. Lester also utilized a multi-stage DCF test to a very small group of extremely large, publicly-traded water utility companies. His DCF test was similar to the analysis submitted by Mr. Cicchetti, the witness for the Office of Public Counsel. The DCF results obtained from the water utilities group are unreliable in view of the scarcity of available companies. (T. Vol. 1, p. 48; Vol. 2, pp. 216-217). Mr. Lester correctly recognized that the sample size for his DCF analysis of water utilities was too small. (T. Vol. 2, pp. 216-217). He consequently conducted a second DCF analysis using an index of natural gas distribution utilities on the assumption that those gas utilities were a reasonable proxy for determining the general cost of equity for water and wastewater utilities. (T. Vol. 2, pp. 297-298). The DCF tests performed by Mr. Lester and Mr. Cicchetti utilize the "retention growth" variant in order to specify the long-term growth component of the analysis. This retention growth variant is extremely fragile conceptually and of questionable validity empirically. (T. Vol. 1, pp. 75, 76).⁶ This methodology is particularly problematic in the context of a regulated industry. (T. Vol. 1, pp. 77, 79, 84). This approach is simply one of many variants and, in the present context, has many foibles that can lead to distorted results. The empirical finance literature

⁶Some of the difficulties with this approach are discussed in more detail in Issue 4 below.

demonstrates that the retention growth method is a poor explanatory variable of value and is not significantly correlated to measures of value, such as stock price and price/earnings ratios. (T. Vol. 1, pp. 85, 96). Moreover, as discussed in more detail in Issue 4, Mr. Lester and Mr. Cicchetti were limited to only one source for their growth projections and the projections that were utilized were significantly lower than more reliable analysts' growth projections.⁷ The many infirmities of this approach provide a strong incentive to utilize as many cross-checks as possible.

No witness in this proceeding has provided a cogent explanation as to why the two-stage two-growth rate DCF model utilized by Mr. Lester and Mr. Cicchetti should be applied. A constant growth DCF model rather than the two-stage DCF model should be applied to the water and gas groups employed by Mr. Lester. (T. Vol. 1, p. 98). Dr. Morin has performed multiple DCF analyses that produce significantly higher results than obtained by Mr. Lester.

In sum, the "end result" of this Commission's decision should be to establish a range of returns that will allow the average Florida water and wastewater utility the opportunity to earn a return on equity that is: (1) commensurate with returns on investments in other firms having corresponding risks; (2) sufficient to assure confidence in the company's financial integrity; and (3) sufficient to maintain the company's creditworthiness and ability to attract capital on reasonable terms. Because it is not possible to get a broad sample of water and wastewater utilities for financial modeling purposes, estimation of the cost of equity for this industry necessitates a more complicated and careful analysis than might be needed for determination of the cost of equity for electric and gas

⁷Analysts' growth forecasts influence investor growth expectations and provide a sound basis for estimating the cost of equity with the DCF model. (T. Vol. 1, p. 47; Ex. 2, Depo. of Dr. Morin, Vol. 2, pp. 28-29, 31-32).

utilities. There are simply not enough publically traded water companies in the country, let alone Florida, to provide a reliable study for market analysis and modeling. Any financial modeling unavoidably has to utilize utilities located out of state who operate in markets and circumstances which do not reflect the water and wastewater industry in Florida. (T. Vol. 2, pp. 216-218). Even then, the sample of water utilities is very small. Because of these severe limitations, financial modeling for the water and wastewater industry must be approached very cautiously and multiple cross-checks should be applied.

Mixed Issue of Law and Policy

Issue No. 2: Should the Commission, as a matter of law or policy, establish a leverage formula that systematically results in an allowed equity return that is either higher or lower than the actual measured cost of equity for an average water or wastewater utility at the corresponding equity ratio?

Summary of Position:

****Section 367.081(4)(f), Florida Statutes, does not limit the Commission to consideration of any single model for determining the cost of equity. The Commission should consider and evaluate the testimony and evidence regarding various approaches for estimating the cost of equity in determining the appropriate range of returns.****

Analysis and Argument:

There is no “actual measured cost of equity” against which allowed equity returns can be evaluated. As discussed in Issue 1 above, the cost of equity is a subjective determination which requires an evaluation of the reasonableness of the assumptions and the reasonableness of the proxies used to validate the methods. (T. Vol. 1, p. 132; Vol. 2, p. 210). Estimating the cost of equity for water and wastewater companies is complicated by the scarcity of available companies and the thin trading margins for the few companies that are available. (T. Vol.

1, pp. 29-31, 48). Because the number of publicly traded water utilities is so small, there is an undeniable need to apply the methodologies to other comparable utility groups. (T. Vol. 1, p. 48). The relatively small size of Florida water and wastewater utilities necessitates further subjective adjustments. (T. Vol. 1, pp. 38-41; Vol. 2, p. 204).

The Commission's current leverage formula produces the lowest cost of equity estimate from among all the various conceptual frameworks available. (T. Vol. 1, p. 69). Since at least 1997, the Commission's leverage formula has produced returns on common equity generally below the authorized returns on equity for water utilities in other states. (T. Vol. 1, pp. 62, 81; Vol. 2, p. 189, 212-213; Ex. 6, PL-4). The average allowed return in the electric utility industry, as reported by C.A. Turner Reports dated September 2001, was 11.8%, 11.70%, and 10.6% for electric, natural gas, and water utilities, respectively. (T. Vol. 1, p. 81).⁸ Adoption of the PAA Order would perpetuate an approach that has left Florida water and wastewater utility companies at a competitive disadvantage in the capital markets.

Issue No. 3: Is there justification for utilizing a leverage formula methodology that yields a lower return on equity for water and wastewater utilities as compared to other rate-based regulated industries in Florida and elsewhere?

Summary of Position:

****The PAA Order produces returns on equity that are significantly less than the composite authorized rate of return for Commission regulated electric and gas utilities. There is no reasonable or justified basis for this difference and this result does not appropriately reflect the risks and issues facing the water and wastewater industry.****

⁸It should be noted that the data with respect to water utility regulatory decisions is very limited and does not provide a high level of statistical reliability. (T. Vol. 1, p. 41; Ex. 2, Depo. of Dr. Morin, Vol. 1, pp. 18-20).

Analysis and Argument: As noted in the primary staff recommendation issued in connection with the PAA Order, the Commission in two recent dockets involving gas distribution utilities approved returns on equity of 11.5%. The PAA Order would establish significantly lower returns for water and wastewater utilities and consequently make investment in those utilities much less appealing. The only basis for this disparate result is the application of the fragile financial models that are discussed in Issue 1 above. The Commission should refrain from elevating the subjective application of financial models for which there are no directly comparable proxies to conclusive status for determining the reasonable range of ROEs for the average Florida water and wastewater utility. No evidence has been presented in this docket that water and wastewater utilities face less risks or are entitled to a lower return than other Commission regulated industries. The only basis for the lower ROEs for the water industry are the peculiarities of the financial modeling for an industry that lacks much of the typical market data available for modeling purposes.

Standard comparative measures of market valuation for the water utility industry (such as the pre-tax interest coverage ratios, market-to-book ratios, and price-earnings ratios) have been at or below those for the other utilities. (T. Vol. 1, p. 63). Both realized returns on average equity and authorized returns on equity for the water industry are lower than for the gas and electric industries, even though water utilities have become as risky if not more risky than energy utilities. (T. Vol. 1, p. 64; Ex. 2, Depo. of Dr. Morin, Vol. 2, pp. 13, 19, 20, 21). Because of inadequate authorized returns, rising operating expenses and low internal cash generation, the water industry's operating income has been gradually eroding, in spite of a growing rate base. (T. Vol. 1, p. 64). As a result of declining earning power, deteriorating cash flow relative to capital expenditures, falling pre-tax interest coverage ratios and falling realized returns on equity, stock prices relative to book value have

declined relative to electric utilities. (T. Vol. 1, p. 64). This comparative financial profile demonstrates clearly that the risks of water utilities are at least equal to those of the energy utilities and that ROE awards should reflect those circumstances. (T. Vol. 1, p. 64; Ex. 2, Depo. of Dr. Morin, Vol. 2, pp. 13, 19, 21).

The water and wastewater industry is a rising cost industry facing uncertain and continually changing environmental regulations and conditions. (T. Vol. 1, p. 63; Ex. 2, Depo. of Dr. Morin, Vol. 1, p. 8). The Commission's proposed continuation of the current formula jeopardizes the financial viability of the utilities and potentially compromises their ability to provide adequate, safe and reliable service.

Compliance with evolving environmental problems and regulations and securing added sources of water supply will necessitate large additional capital requirements and will also result in significant increases in operating expenses for the industry. (T. Vol. 1, p. 63). Investor-owned water utilities are much more dependent on external financing than are gas and electric utilities, and this dependence will increase as water companies increase their capital investments to comply with new water standards. (T. Vol. 1, p. 63). A large portion of these supplementary capital needs will have to be financed externally, thus increasing the industry's financial exposure and financial risks. (T. Vol. 1, p. 63).

In addition to the increased risks for the water industry generally, Florida water and wastewater utilities are subject to significantly greater risks than the national industry. (T. Vol. 1, p. 61). Florida water and wastewater utilities are different than those in other states because they are, as a rule, much smaller. (T. Vol. 1, p. 61; Vol. 2, p. 193, 203). Because of their small size, water and wastewater utilities in Florida are at a greater risk of bankruptcy or abandonment than electric

or gas companies. (Ex. 2, Depo. Dr. Morin, Vol. 2, p. 10). Many Florida utilities lack funds for water quality and structural improvements as well as infrastructure replacement. (T. Vol. 2, p. 204, 207). The on-going obligation to serve in light of changing environmental regulations which often necessitate infrastructure replacement, mandates that Florida water and wastewater utilities be afforded with the ability to raise capital in the competitive market.

There are several significant risk factors which Florida water and wastewater utilities face that other commission regulated industries do not. For example, many Florida water and wastewater utilities have relied on contributions in aid of construction to finance a portion of the original cost of the plant and lines. Thus, their rate base is reduced which can make raising capital more expensive. (T. Vol. 2, p. 207). Similarly, Florida water utilities are also subject to used and useful reductions which is a regulatory risk factor not applicable to electric and gas utilities. (Ex. 2, Depo. Dr. Morin, Vol. 2, pp. 9-10).

In a workshop held on February 23, 1995, Dr. Morin provided the Commission with an overview of the relative investment risks of the water and electric-gas utility industries in a paper entitled Return on Common Equity Determination for Florida Water & Wastewater Utilities. (T. Vol. 1, p. 62). The paper described how changes in the operating environment of Florida water and wastewater utilities have increased their investment risk and their cost of capital, both in absolute terms and relative to other utilities. (T. Vol. 1, p. 62-63). The changing investment risk of water utilities relative to other utilities was analyzed. (T. Vol. 1, p. 63). His study revealed that water utilities are riskier than in prior years, both in absolute terms and relative to energy utilities. (T. Vol. 1, p. 63). Therefore, rate of return awards should reflect the divergent trends of the water and energy

utility industry. The conclusions of that report remain valid today. (Ex. 2, Depo. Dr. Morin, Vol. 1, p. 18).

The major reasons why the investment risks of Florida water and wastewater utilities have increased, and will continue to increase, include the following:

1. Water quality regulations. Evolving water quality regulations have generated additional substantial capital and operational costs. These compliance costs increase the utility's operating and financial leverage, which in turn increase the utility's risk and cost of capital. The final financial effects of the Safe Drinking Water Act (SDWA) on water utilities remain uncertain. Water companies will need to continue upgrading their facilities to comply with evolving environmental standards. Because the standards are still evolving and are yet to be fully determined, there are uncertainties related to upgrading and compliance costs. Some plants presently in use do not comply with newly implemented or enacted contaminant levels. Consequently, additional plants may have to be installed to comply with the new standards. (T. Vol. 1, p. 64).

2. Uncertainty regarding future demand. In earlier years, when water supplies were abundant, the conservation ethic was absent and rates were stable. Accordingly, forecasting demand for water was straightforward. Now, there is far greater uncertainty about future demand. Higher service rates resulting from supply adjustment charges and from increased water regulation compliance costs will cause customers to curtail the consumption of water, compounding the forecasting risk. Moreover, the Commission, Water Management Districts, and the Department of Environmental Protection are all strongly encouraging and even requiring implementation of conservation rate structures and other programs focused on the conservation of water. (T. Vol. 1, p. 65).

3. Uncertainty regarding future supply. Water supply issues and shortages are noteworthy in Florida. Uncertainty about availability and reliability of water supplies abounds. Fears of water shortages and uncertainty about rates are also problems. Recent and continuing questions about the availability and costs of water supplies suggest that this uncertainty will continue. (T. Vol. 1, p. 65).

4. Earnings erosion. Water utilities are exposed to the risk of long term earnings decline. The predictability of reported earnings will deteriorate due to the volatility of earnings over time increasing the probability of a permanent erosion of earning power. Increased financial leverage from financing the capital required by more stringent water quality requirements compounds the problem. Significantly, even a minimal decline in operating income can cause low earnings and impact the cost of capital. (T. Vol. 1, p. 65).

5. Water Safety. The issues of water quality, facility closings and environmental accidents have heightened investors' awareness of water safety. Contamination of drinking water from salt water intrusion, toxic waste dumping, pesticides, and agricultural fertilizers are major concerns. Compliance with evolving water quality standards will make licensure of new plants more difficult and existing facilities may be closed permanently or for prolonged modifications. Water utilities typically have construction programs disproportionately large relative to their small size. The significant compliance capital expenditure programs over the next several years, relative to size, will increase the water industry's dependence on capital markets which have become volatile and more unpredictable. (T. Vol. 1, p. 66).

6. Construction Risk. Florida water utilities will be facing substantial external financing in the near future and it is imperative that these companies have access to needed capital

funds on reasonable terms and conditions. (T. Vol. 1, p. 67). These companies must secure funds from capital markets in order to fund new construction commitments irrespective of capital market conditions, interest rates conditions, and quality consciousness of market participants. (T. Vol. 1, p. 67; Vol. 2, p. 207). The return allowed on common equity will play a crucial role in determining those terms and conditions. (T. Vol. 1, p. 67).

Construction is one of several key determinants of credit quality and, hence, of capital costs for debt markets. (T. Vol. 1, p. 67). Future construction plans are scrutinized by lenders before assessing credit quality of a company. (T. Vol. 1, p. 67). The construction budget in relation to internal cash generation is a key quantitative determinant of credit quality, along with construction expenditures as a proportion of capitalization. (T. Vol. 1, p. 67).

Construction risk is also related to regulatory risk. (T. Vol. 1, p. 67). Regulatory risks include approval risks, lags and delays, potential rate base exclusions and potential disallowances. (T. Vol. 1, p. 67). Regulatory risks will increase because of large new construction programs over the next few years. The potential need for rate relief creates additional uncertainty. (T. Vol. 1, p. 67).

All of these enumerated financial trends and socio-political and economic forces reflect the higher risks and, therefore, higher costs of capital that Florida water and wastewater utilities are confronting. (T. Vol. 1, p. 68).

While water and wastewater utilities are allowed to pass through certain cost increases (i.e., for purchased water, purchased wastewater treatment, property taxes, purchase power and required testing for environmental compliance), these are relatively minor cost items that do not reduce the risks faced by water utilities as compared to other regulated industries. For example, under Section

366.8255, Florida Statutes, electric utilities have an automatic pass through for environmental compliance costs. (T. Vol. 2, pp. 226-227). Water utilities, by contrast, do not have automatic pass throughs for capital improvements. While the Florida statutes allow for full recovery of certain environmental compliance costs, the recovery of those costs is subject to regulatory lag and, therefore, is an example of the riskier nature of water and wastewater utilities as compared to electric and gas utilities which have been allowed higher returns on equity.

Another significant business risk that is not confronted by other regulated industries relates to growth opportunities for investor owned utilities into new service areas. Competition with other private utilities and governmental utilities for new service areas significantly clouds the growth options for water and wastewater utilities. Water and wastewater utilities in Florida are also subject to uncertainty regarding regulation due to the statutory right of counties to assume the role of regulator. (T. Vol. 2, p. 196).

The results produced by the current formula are unrealistically low and are not responsive to the risks of the water utility industry, both in an absolute sense and relative to other Florida utilities. For the last several years, the ROEs authorized under the leverage formula have been below those authorized for the much larger and financially viable electric, gas, and telephone utilities despite the substantial increase in the risk of the water utility industry. For 2001, the ROE authorized range under the PAA Order would be only 9.14% to 10.24%, at 100% and 40% common equity ratio, respectively. This is significantly lower than the Commission approved returns of 11.5% in two recent dockets for gas companies. There is no rationale, basis or reason for such a divergence.

The Commission's allowed returns for the gas industry provide a useful check of the appropriate range of ROEs that should be approved in this docket. While allowed returns are not a precise indication of the cost of equity capital, they are nevertheless important determinants of investor growth perceptions and investor expected returns. (T. Vol. 1, p. 81; Vol. 2, p. 189). The allowed returns for the gas companies are an important barometer of the capital markets in which the water industry must compete for funds. Water and wastewater utility's operations possess an investment risk profile comparable to the natural gas distribution utility business. (T. Vol. 1, p. 32). Natural gas utility companies possess economic characteristics similar to those of water utilities. (T. Vol. 1, p. 32). Both industries are involved in the transmission-distribution of regulated infrastructure commodity products at regulated rates in a cyclical and weather-sensitive market. They both employ a capital-intensive network with comparable physical characteristics. They are both subject to rate of return regulation.

Unless the range of ROEs reflects the Florida utilities small size and the relatively illiquid nature of their stock and bond offerings, they will not be able to raise the capital necessary to continue in business. (T. Vol. 1, pp. 67-68; Vol. 2, pp. 204-205). As noted above, water and wastewater utilities in Florida and elsewhere in the country have generally earned lower rates of return on equity than other regulated industries. These lower returns are an historical aberration and have become self-perpetuating. The lower returns do not accurately reflect the respective risks faced by the industries. The Commission should consider the allowed returns approved for other regulated industries in order to evaluate the ability of water and wastewater utilities to effectively compete in the capital markets. Continuing the significantly lower returns for water and wastewater utilities will preclude them from attracting the capital necessary to meet their service obligations.

Mixed Issues of Fact, and Law and Policy

Issue No. 4: What is the appropriate range of returns on common equity for water and wastewater utilities pursuant to Section 367.081(4), Florida Statutes?

Summary of Position: **The reasonable range of return on common equity to be used as part of the leverage formula methodology is 10.2% to 12.7% with the mid-point of 11.5% for a typical Florida water and wastewater utility with an average capital structure. The range of return set forth in the PAA Order is too low and would place Florida water and wastewater utilities at a competitive disadvantage in the capital markets.**

Analysis and Argument: The reasonable range of return on common equity to be used as part of the leverage formula methodology for ratemaking purposes on a company's common equity capital is 10.2 to 12.7% with a midpoint of 11.5%. (Ex. 2, Depo. of Dr. Morin, late filed Exhibit 2). As set forth in Issue 1 above, Dr. Morin has provided a thorough and objective analysis utilizing multiple tests and cross-checks applied across a series of comparable risk companies. This comprehensive and diversified financial study is the best estimate of the cost of equity capital for the average Florida water and wastewater utility. While Dr. Morin's analysis produces a higher range of returns than the PAA Order proposes, his results are consistent with recently Commission approved ROEs for regulated gas companies. Dr. Morin's results more closely track allowed returns for the utility industry as a whole. The range of ROEs recommended by Dr. Morin will allow Florida utilities to compete in the capital markets.

As detailed in Issue 1 above, the extremely limited market data available regarding the water and wastewater industry, particularly in Florida, renders development of a fair and reasonable range of ROEs problematic. Considerable caution and cross-checking is necessary in order to ensure a reliable and appropriate result. "Mr. Lester and Mr. Cicchetti have sponsored testimony in this

docket recommending lower ranges of ROEs. The financial models that are the basis for their recommendations are lacking in dependable, objective cross-checks and do not correlate to allowed returns for comparable companies in Florida and nationwide.

To estimate the cost of common equity, Mr. Lester utilized a retention growth variant of the DCF model applied to an index of large, publically traded water utilities and to an index of natural gas distribution utilities. (T. Vol. 2, p. 197). He also applied a CAPM to the same indices of companies. Mr. Cicchetti utilized the same DCF retention growth variant, but only applied it to the index of large, publically traded water utilities. Mr. Cicchetti's only other analysis was a risk premium study conducted on gas companies which incorporated a DCF retention growth component. A review of some of the frailties of the financial models utilized by Mr. Lester and Mr. Cicchetti confirms that further analysis and cross-checking should be conducted in order to develop a reasonably reliable cost of equity estimate.

The traditional DCF formula states that, under certain assumptions, the equity investor's expected return can be viewed as the sum of an expected dividend yield plus the expected growth rate of future dividends and stock price. (T. Vol. 1, p. 44).⁹ The idea of this market value approach is to infer the investor's expected return from the observed share price, the observed dividend, and from an estimate of investors' expected future growth. (T. Vol. 1, p. 44). The returns anticipated at a given market price are not directly observable and must be estimated from statistical market information. The principal difficulty in calculating the required return by the DCF approach is in

⁹The assumptions underlying this valuation formulation are well known and are discussed in detail in Chapter 4 of Dr. Morin's book, Regulatory Finance. (T. Vol. 1, p. 44).

ascertaining the growth rate that investors currently expect. (T. Vol. 1, p. 46). Since no explicit estimate of expected growth is observable, proxies must be employed. (T. Vol. 1, p. 46).

There are at least four techniques to estimate expected growth in the DCF model: (1) historical growth rates in earnings per share, dividends per share, and book value per share: (2) analysts' growth forecasts: (3) growth implied in investors' required return: and (4) the retention-growth method. As a proxy for expected growth in his DCF analyses, Dr. Morin relied mainly on growth estimates developed by professional analysts employed by large investment brokerage institutions. (T. Vol. 1, p. 46). The empirical finance literature has shown that such consensus analysts' growth forecasts are reflected in stock prices, possess a high explanatory power of equity values and are used by investors. (T. Vol. 1, p. 88). Averages of analysts' growth forecasts such as those contained in IBES or Zacks are the most reliable estimates of the investors' consensus expectations likely to be impounded in stock prices. (T. Vol. 1, p. 88).

Mr. Cicchetti and Mr Lester both relied on a two-stage DCF model which they implemented with the retention growth approach. (T. Vol. 1, p. 81). In this method, the growth rate is based on the equation $g = b \times \text{ROE}$, where b is the percentage of earnings retained and ROE is the expected earned rate of return on equity. (T. Vol. 1, p. 81). (This is sometimes referred to as the “ $b \times r$ ” approach). In their DCF analyses, both Mr. Lester and Mr. Cicchetti estimate the long-term growth component using only the retention growth method. This approach is the least valid, both empirically and theoretically. Moreover, a single technique to estimate investor growth expectations is likely to contain a high degree of measurement error and may be distorted by short-term aberrations. (T. Vol. 1, p. 82). Heavy reliance on the retention growth variant in the current context

would not be consistent with the practices of investment analysts, finance experts, corporate analysts, and finance professionals. (T. Vol. 1, pp. 76, 82, 85, 86).

In their DCF analysis, Mr. Cicchetti and Mr. Lester estimate the intermediate growth term component of their two-stage DCF model using Value Line's forecast dividends for the next four years. They estimate the second stage long-term growth component using the retention growth method.

Under the DCF variation used by Mr. Lester and Mr. Cicchetti, the retention growth estimate exerts a large influence on the final result because it captures the effects of growth into perpetuity. (T. Vol. 1, pp. 82, 94). It is therefore imperative that the retention growth estimate be accurate if the DCF results are to be reliable. However, there are several fundamental problems with the retention growth methodology they utilized. (T. Vol. 1, pp. 81-88).

The retention growth method contains a fatal logical flaw in the context of a regulated industry since the method requires an ROE estimate before it can be implemented. In effect, the method requires an assumption of the ROE answer as a starting point but ends up with a recommendation of a different rate. (T. Vol. 1 pp. 84, 94).¹⁰ In other words, this approach assumes that the regulated companies in their analysis will earn a ROE exceeding the recommended cost of equity forever. While this scenario may be imaginable for an unregulated company with substantial market power that can earn more than its cost of capital, it is implausible for a regulated company

¹⁰For example, in Mr. Cicchetti's analysis, the average expected ROE of 12.25% is well above his recommended 9.7% return. Likewise, Mr. Lester's average expected ROE of 12.4% and 12.6% for the water and gas group respectively, is approximately 200 basis points in excess of his recommended return. (T. Vol. 1, p. 95). The only way that the utilities in their analyses could earn an ROE each and every year at the rates they assumed would be if the rates were set so that they would in fact earn that rate. However, the rate would not be justified under the model they used.

whose rates are set so that they will earn a return equal to their cost of capital. For regulated utilities, the return on equity is set equal to the cost of capital by virtue of the regulatory ratemaking process itself. The inherent circularity of the retention growth approach makes it particularly ill-suited for use with regulated companies. (T. Vol. 1, p. 82).

One problem with this approach is that it assumes that investors obtain all their data from Value Line since the investor's expected ROE is only proxied by Value Line's forecast of ROE for 2004-2006. (T. Vol. 1, pp. 86, 94). Sole reliance on Value Line forecasts runs the risk that such forecasts are not representative of investors' consensus forecast. (T. Vol. 1, p. 88). Indeed, it is obvious that the Value Line dividend projections are dramatically lower than the investors' consensus growth forecasts. (T. Vol. 1, pp. 86, 95). Investors expect substantially higher growth rates for utilities than what Mr. Lester and Mr. Cicchetti utilize in their DCF analyses. (T. Vol. 1, pp. 86-87, 95). For example, investors are expecting growth rates above both Mr. Lester's intermediate-term growth estimate of about 2.83% for the next four years and his long-term growth estimate of 6.3%. (T. Vol. 1, p. 95). In fact, investors expected growth rates are much higher. (T. Vol. 1, p. 95).

Published studies in the academic literature demonstrate that growth forecasts made by security analysts are a better indicator of investor expectations. (T. Vol. 1, pp. 86-87; Ex. 2, Depo. of Dr. Morin, Vol. 2, pp. 27-28, 31-32). Detailed empirical evidence supports Dr. Morin's claim that the average analysts' expectation represents the best possible source for DCF growth rates. (T. Vol. 1, p. 87). The averages of analysts' growth forecasts such as those contained in IBES or Zacks are more reliable estimates of the investors' consensus expectations likely to be impounded in stock

prices. (T. Vol. 1, p. 96). The DCF results are significantly higher if the consensus analysts' growth forecasts are used. (T. Vol. 1, pp. 87-88).

Mr. Cicchetti and Mr. Lester claim that, because a DCF model is based on cash flows, it is appropriate to rely exclusively on Value Line as the source of growth projections since Value Line is the only source for dividend projections. However, in the long-run, dividends and earnings will be equal under the DCF theory. (T. Vol. 1, pp. 46-47; Vol. 2, pp. 216; Ex. 2 Depo. of Dr. Morin, Vol. 2, pp. 31-32). There are also indications of changes in corporate strategy regarding dividend payouts. (Ex. 2, Depo. of Dr. Morin, Vol. 1, p. 37; Vol. 2, p. 29). Mr. Lester's and Mr. Cicchetti's exclusive reliance on Value Line as the only source of growth forecasts for their DCF analyses raises questions regarding the results they obtained. (T. Vol. 1, p. 96).

The inherent bias of the DCF models utilized by Mr. Lester and Mr. Cicchetti is reflected by their incorporation of anemic growth rates for the water utilities in their sample over the next four years followed by a sudden quantum increase in growth profile thereafter¹¹. (T. Vol. 1, pp. 86, 95). Such a drastic shift in retention policy (dividend policy) is unrealistic and completely unjustified by the economics of the water utility industry. (T. Vol. 1, p. 86).

The end result is that by utilizing a single, particular variant of the DCF model and excluding all growth forecasts other than Value Line dividend forecasts, the range of ROEs is significantly skewed to produce lower results. Simply using a conservative average of long term growth forecasts results in a 70 to 80 basis point increase in the range of ROEs. (T. Vol. 1, pp. 88, 95).

¹¹ From Mr. Cicchetti's Exhibit MAC-3, water utility dividends are assumed to grow from \$1.00 to \$1.11 from 2001 to 2005. The implied compound growth rate is 2.83%.

As noted above, Mr. Lester utilized “plain vanilla” CAPM analyses of large water utilities and gas distribution companies in addition to his DCF models. (Mr. Cicchetti did not perform a CAPM analysis.) It is well established in the academic finance literature that the CAPM produces a downward-biased estimate of equity cost for companies with a beta of less than 1.00. Water utility stocks have become increasingly disconnected from overall stock market movements and have been increasingly driven by industry-specific factors in recent years, including consolidation, corporate restructurings, mergers, and environmental compliance burdens. The net result of this “distancing” between the water utility industry and the overall equity market is a downward effect on utility betas, as water utility stocks increasingly reflect factors unique to the industry. (T. Vol. 1, pp. 30-31). The “plain vanilla” version of the CAPM underestimates water utilities’ equity costs by about 50-60 basis points from this bias alone. (T. Vol. 1, p. 98).

Dr. Morin developed a 7.8% market risk premium based on the results of both forward-looking and historical studies of long-term risk premiums. (T. Vol. 1, p. 32). As with all market-based methodologies, there are assumptions and limitations involved with his approach. Nonetheless, statistically, a good estimate of the future risk premium is the historical mean. (T. Vol. 1, pp. 33-34). It is important to employ returns realized over long time periods rather than returns realized over more recent time periods when estimating the market risk premium with historical returns. (T. Vol. 1, p. 33). Therefore, Dr. Morin used results over periods of enough length to smooth out short-term aberrations and to encompass several business and interest rate cycles. (T. Vol. 1, p. 33). Over long time periods, investor return expectations and realizations converge. Short-term periods during which investors earned a lower risk premium than they expected are offset by short-term periods during which investors earned a higher risk premium than they expected. (T.

Vol. 1, p. 33). The use of the entire study period in estimating the appropriate market risk premium minimizes subjective judgment and encompasses many diverse regimes of inflation, interest rate cycles, and economic cycles.

Mr. Lester's estimate of the market risk premium of approximately 5.2% (Exhibit PL-18) rather than the more conventional 8% estimate reported by Ibbotson Associates in their 2001 Yearbook is too low. (T. Vol. 1, p. 97). Substituting a more realistic market risk premium of 7% for the 5.2% used in Mr. Lester's CAPM estimate increases the cost of equity by approximately 50 basis points. (T. Vol. 1, p. 97).

In sum, based on the various factors discussed above, it is clear that Mr. Lester understates the cost of equity capital by a minimum of 100 basis points. (T. Vol. 1, p. 92).

As noted in Issue 1, the only cross-check offered by Mr. Cicchetti to his DCF analysis of the four publically traded water utilities was a DCF-based risk premium test of a sample of natural gas distribution utilities. (T. Vol. 1, pp. 78, 88-89). The DCF component of his analysis is based on the same "retention growth" variant of the DCF discussed above and does not constitute an independent stand-alone confirmation of his results. (T. Vol. 1, p. 78). His second method is subject to all the same issues and concerns. (T. Vol. 1, p. 91).

It is significant to note that simply applying a full DCF analysis to the index of gas utilities Mr. Cicchetti used in his a risk premium test produces a cost of equity that is approximately 150 basis points higher than Mr. Cicchetti recommends. (T. Vol. 2, p. 260). There is no reasonable justification to disregard the DCF results for the natural gas utilities. (T. Vol. 1, p. 90). This DCF

result for the natural gas utilities casts doubt on the reliability of the DCF results obtained from Mr. Cicchetti's very small sample of large water utilities.¹²

Mr. Cicchetti did not implement any of the traditional risk premium methodologies, such as the CAPM or ECAPM, or any historical Risk Premium analysis. (T. Vol. 1, p. 78). Because his rate of return recommendation relies almost exclusively on a single variant of the DCF method and that variant has significant limitations, Mr. Cicchetti's recommendation must be viewed with extreme caution and skepticism. (T. Vol. 1, p. 90). The bottom line is that there is simply no objective cross-check on his result. (T. Vol. 1, p. 78). He recommends a return of only 9.66% on common equity capital. (Ex. No. 5). The average allowed return for utilities nationwide is in excess of 11%. (T. Vol. 1, pp. 77, 81). Mr. Cicchetti's cost of equity recommendation of 9.66%, if ever adopted, would result in one of the lowest, if not the lowest, rate of return award for any utility in the country. (T. Vol. 1, pp. 76, 78, 81). The 9.66% cost of equity recommended by Mr. Cicchetti is unreasonably low and is not a reliable estimate of cost of equity capital for Florida water and wastewater utilities. (T. Vol. 1, p. 78).

Issue No. 5: Should this docket be closed?

Summary of Position:

This docket should remain open to allow staff to monitor the movement in capital costs and to readdress the reasonableness of the leverage formula as conditions warrant.

¹²There is no basis for the implicit assumption that Florida water and wastewater utilities are similar in risk to the national industry at large, as proxied by the index of water companies used by Mr. Cicchetti. As discussed above, Florida utilities are significantly riskier than the national industry because they are generally much smaller than utilities in other states, they have less access to capital markets and are subjected to additional regulatory risks in the form of used and useful adjustments, high levels of CIAC, and substantial concerns about future water supplies and deterioration of existing supplies.

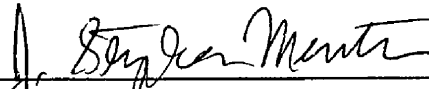
Analysis and Argument: (Ex. 2, Morin Depo. Vol. 2, pp. 7-9). The Commission's current leverage formula produces the lowest cost of equity estimate from among all the various conceptual frameworks available. (T. Vol. 1, p. 69). The Commission should consider alternate formulations of the formal relationship between the cost of capital and leverage. (T. Vol. 1, pp. 68-73).

In his testimony, Dr. Morin describes five formal relationships linking the cost of equity to leverage. Rather than choosing the approach that produces the lowest cost of equity, the Commission should adopt a more balanced approach. The leverage formula could be modified to allow for the rising cost of debt as leverage rises. The Commission could accomplish this result by adjusting the cost of common equity for the degree of leverage of the individual utility. (T. Vol. 1, p. 72). Until the Commission can conduct a formal re-examination of the leverage formula, the Commission should modify its current leverage formula to produce results that match the cost of equity as set forth in Issues 1 and 4 above. (T. Vol. 1, pp. 72-73).

In his rebuttal testimony, Dr. Morin noted some changed conditions that warrant monitoring as a result of the tragic events of September 11th, 2001. Short-term interest rates have declined markedly to the 2%-3% level in response to an expansive monetary policy by the Federal Reserve. (T. Vol. 1, pp. 99-100). The cost of long-term money for corporate issuers, however, has remained unchanged and has even escalated slightly. (T. Vol. 1, p. 99). Capital markets have become extremely quality conscious. (T. Vol. 1, p. 99). Corporate issuers rated less than single A have experienced difficulty in raising capital at any cost during this period. (T. Vol. 1, p. 99). This is a significant concern that the Commission should closely watch since the marginal cost of debt to a

Florida water and wastewater utility is assumed to equal the yield on Moody's bonds rated Baa3 plus 50 basis points.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing testimony has been furnished as set forth below this 21st day of November, 2001 to:

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