Attachment 1

Exhibit No. 3
Docket No. 10-_____
Witness: H. Walker, III

AQUA ILLINOIS, INC.

KANKAKEE WATER DIVISION

DIRECT TESTIMONY

OF HAROLD WALKER, III

RATE OF RETURN

JANUARY 2010

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VALUATION AND RATE DIVISION

Valley Forge, Pennsylvania

DIRECT TESTIMONY
OF
HAROLD WALKER, III
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INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Harold Walker, III. My business mailing address is P. O. Box 80794, Valley Forge, Pennsylvania, 19484.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by Gannett Fleming, Inc. as Manager, Financial Studies of the Valuation and Rate Division.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND AND EMPLOYMENT EXPERIENCE?

A. My educational background, business experience and qualifications are provided in Appendix A.

SCOPE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to recommend an appropriate overall rate of return that Aqua Illinois, Inc. (AQUA or the Company) should be afforded an opportunity to earn on

their Kankakee Water Division (Kankakee or the Division) utility service rate base. My testimony is supported by Exhibit HW-1, which is composed of 21 Schedules.

SUMMARY OF RECOMMENDATION

Q. WHAT IS YOUR RECOMMENDED COST OF EQUITY?

A. My recommendation is that AQUA be permitted an 11.30% cost of common equity based upon the Company's future test period average 2011 capital structure. My recommended cost of common equity reflects AQUA's unique risk characteristics.

Q. HOW DID YOU DETERMINE YOUR RECOMMENDED COMMON EQUITY COST RATE?

A. I used several models to help me in formulating my recommended common equity cost rate including Discounted Cash Flow (DCF), Capital Asset Pricing Model (CAPM) and Risk Premium (RP).

Q. IS IT IMPORTANT TO USE MORE THAN ONE MARKET MODEL?

A. Yes. It is necessary to estimate common equity cost rates using a number of different models. At any given time, a particular model may understate or overstate the cost of equity. While any single investor may rely solely upon one model, different investors rely on different models and many investors use many models. Therefore, because the price of

common stock reflects a number of valuation models, it is appropriate to estimate the market-required common equity cost rate by applying a broad range of analytical models.

Q. PLEASE SUMMARIZE YOUR COMMON EQUITY COST RATE RECOMMENDATION.

A. There is no market data concerning AQUA's shares of common stock because AQUA's shares of common stock are not publicly traded. Accordingly, due to the lack of market data concerning AQUA's equity, I used two comparable groups of publicly traded companies to estimate the common equity cost rate. Based upon the results of my entire analysis, I conclude AQUA's current common equity cost rate is 11.30%. The current range of common equity cost for AQUA is 11.~~3%~~1% (DCF), 12.0% (CAPM), and 10.7% (RP). As a check on the reasonableness of my common equity cost rate recommendation, I reviewed Value Line's projected returns on common equity for comparable utilities. Value Line is relied upon by many investors and is the only investment advisory service of which I am aware that projects return on equity. Value Line's projected returns on common equity for my comparable utilities range from 11.8% to 12.2%. The range of the projected returns suggests that my recommendation that AQUA be permitted an opportunity to earn 11.30% is reasonable.

PRINCIPLES OF RATE REGULATION AND FAIR RATE OF RETURN

Q. WHAT ARE THE PRINCIPLES GUIDING FAIR RATE OF RETURN IN THE CONTEXT OF RATE REGULATION?

A. In a capitalistic or free market system, competition determines the price for all goods and services. Utilities are permitted to operate as monopolies or near monopolies as a tradeoff for a ceiling on the price of service because: (1) the services provided by utilities are considered necessities by society; and (2) capital-intensive and long-lived facilities are necessary to provide utility service. Generally, utilities are required to serve all customers in their service territory at reasonable rates determined by regulators. As a result, regulators act as a substitute for a competitive-free market system when they authorize a price for utility service.

Although utilities operate in varying degrees as regulated monopolies, they must compete with governmental bodies, non-regulated industries, and other utilities for labor, materials, and capital. Capital is provided by investors who seek the highest return commensurate with the perceived level of risk. The greater the perceived risk, the higher the required return rate. In order for utilities to attract the capital required to provide service, a fair rate of return should equal the investor-required, market-determined rate of return.

1 **Q. WHAT CONSTITUTES A FAIR RATE OF RETURN?**

2 A. Two noted Supreme Court cases define the benchmarks of a fair rate of return. In
3 *Bluefield*[1], a fair rate of return is defined as: (1) equal to the return on investments in other
4 business undertakings with the same level of risks (the comparable earnings standard); (2)
5 sufficient to assure confidence in the financial soundness of a utility (the financial integrity
6 standard); (3) will maintain and support its credit, enabling the utility to raise or attract
7 additional capital necessary to provide reliable service (the capital attraction standard). The
8 second case, *Hope*[2], determined a fair rate of return to be based upon guidelines found in
9 *Bluefield* as well as stating that: (1) allowed revenues must cover capital costs including
10 service on debt and dividends on stock; and (2) the Commission was not bound to use any
11 single formula or combination of formulae in determining rates. Utilities are not entitled
12 to a guaranteed return. However, the regulatory-determined price for service must allow
13 the utility a fair opportunity to recover all costs associated with providing the service,
14 including a fair rate of return for investors.

15

16 **INVESTMENT RISK**

17

18 **Q. PREVIOUSLY, YOU REFERRED TO RISK. PLEASE DEFINE THE TERM RISK.**

19 A. Risk is the uncertainty associated with a particular action. The greater the uncertainty of a
20 particular outcome, the greater the risk. Investors who invest in risky assets expose

[1] Bluefield Water Works & Improvement Company v. P.S.C. of West Virginia, 262 U.S. 679 (1923).

[2] Federal Power Commission v. Hope Natural Gas Company, 320 U.S. 391 (1944).

1 themselves to investment risk particular to that investment. Investment risk is the sum of
2 business risk and financial risk. Business risk is the risk inherent in the operations of a
3 business. Assuming a Company is financed with 100% common equity, business risk
4 includes all operating factors that affect the probability of receiving expected future income
5 such as: sales volatility, management actions, availability of product substitutes,
6 technological obsolescence, regulation, raw materials, labor, size and growth of the market
7 served, diversity of the customer base, economic activity of the area served, and other
8 similar factors.
9
10 **Q. WHAT IS FINANCIAL RISK?**
11 A. Financial risk reflects the manner in which an enterprise is financed. Financial risk arises
12 from the use of fixed cost capital (leverage) such as debt and/or preferred stock because of
13 the contractual obligations associated with the use of such capital. Because the fixed
14 contractual obligations must be serviced before earnings are available for common
15 stockholders, the introduction of leverage increases the potential volatility of the earnings
16 available for common shareholders and therefore increases common shareholder risks.
17
18 Although financial risk and business risk are separate and distinct, they are interrelated. In
19 order for a company to maintain a given level of investment risk, business risk and financial
20 risk should complement one another to the extent possible. For example, two firms may
21 have similar investment risks, while having different levels of business risk if the business

risk differences are compensated for by using more or less leverage (financial risk) thereby resulting in similar investment risk.

DESCRIPTION OF THE DIVISION

Q. PLEASE GIVE A BRIEF DESCRIPTION OF THE DIVISION.

A. Kankakee is an operating water division of AQUA that provide service to about 29,000 customers who are located in their franchise territory in the State of Illinois. The price of service of the Division is regulated by the Illinois Commerce Commission (ICC). The Division provides water service to portions of Kankakee County: City of Kankakee, Villages of Aroma Park, Bourbonnais, Bradley, Grant Park, Limestone, Manteno and Sun River Terrace as well as portions of Kankakee, Aroma, Bourbonnais, Limestone and Manteno townships.

AQUA is a regulated public utility that manages and operates ten water Division and six wastewater Division in Illinois. AQUA has a total customer base of approximately 70,000 water and wastewater customers, and provides service in 31 municipalities in their franchise territories in Illinois. The Company's service territory has an estimated population of over 200,000, or less than 2% of the population of the State of Illinois.

AQUA is a wholly-owned subsidiary of Aqua America, Inc. (Aqua America), a holding company for regulated utilities providing water or wastewater services to approximately

three million people in Pennsylvania, Ohio, North Carolina, Illinois, Texas, New Jersey, New York, Florida, Indiana, Virginia, Maine, Missouri and South Carolina. Additionally, Aqua America provides water and wastewater services through operating and maintenance contracts with municipal authorities and other parties, and septage hauling services, close to their utility companies' service territories. AQUA's revenues constituted 6% of Aqua America's regulated revenues and about 7% of total customers in 2008.

COMPARABLE GROUPS

Q. HOW DO YOU ESTIMATE THE COST OF COMMON EQUITY FOR AQUA?

A. AQUA's common stock is not traded since it is held by Aqua America. Accordingly, I employed two comparable groups of utility companies with actively traded stock, to determine a market-required cost rate of common equity capital for AQUA. Since there are no perfectly comparable companies to AQUA, it is reasonable to determine the market-required cost rate for a comparable group of utility companies and adjust, to the extent necessary, for investment risk differences between AQUA and the comparable groups.

Q. PLEASE GIVE A BRIEF OVERVIEW OF THE INDUSTRY IN WHICH THE COMPANY OPERATES.

A. AQUA operates in the water supply industry. All of the water supply industry has a Standard Industrial Classification (SIC) code of 4941, water utilities, and includes establishments primarily engaged in distributing water for sale for residential, commercial,

and industrial uses. Government-controlled establishments such as municipal service districts and public utilities dominate the industry. Private companies or investor owned utilities (IOU) are active in the construction and improvement of water supply facilities and infrastructure.

The water supply industry is the most fragmented of the major utility industries with more than 53,000 community water systems in the U.S. (83% of which serve less than 3,300 customers). The nation's water systems range in size from large municipally-owned systems, such as the New York City water system that serves approximately 9 million people, to small systems, where a few customers share a common well.

A comparative industry to the water supply industry is the wastewater utility industry. The wastewater utility industry is another fragmented industry, although not as fragmented as the water supply industry. According to the U.S. Environmental Protection Agency's (EPA) most recent survey of publicly-owned wastewater treatment facilities in 2004, there are approximately 16,600 such facilities in the nation serving approximately 75% of the U.S. population. Eighty percent of domestic wastewater systems are government-owned rather than IOUs. Currently, there are no wastewater utility companies that have actively traded stock.

An estimated 14% of all water supplies are managed or owned by IOUs. IOUs consist of both companies with common stock that is either actively traded or inactively traded and

1 companies that are closely held, or not publicly traded. Currently, there are only about 11
2 investor owned water utility companies with publicly traded stock in the U.S.
3
4 **Q. HOW DID YOU SELECT THE COMPARABLE GROUP USED TO DETERMINE**
5 **THE COST OF COMMON EQUITY FOR AQUA?**
6 A. I selected a comparable group of water utilities and a comparable group of gas utilities to
7 determine the cost of common equity for AQUA. Unlike the other utility industries, only
8 a portion of the IOU water companies with publicly traded stock in the U.S. are followed
9 by security analysts. Coverage by security analysts is important when determining a market
10 required cost of common equity. Accordingly, security analysts' coverage was considered
11 when selecting my comparable groups. I selected my water utility comparable group, Water
12 Group Followed by Analysts (Water Group), based upon a general criteria that includes: (1)
13 all U.S. water utilities who are covered by several security analysts as measured by the
14 existence of several sources of published projected five-year growth rates in EPS; (2) with
15 a Global Industry Classification System[3] (GICS) of 55104010 (i.e., Water Utility); (3) are
16 not the announced subject of an acquisition; (4) currently pay a common dividend and have
17 not reduced their common dividend within the past five years; and (5) have market
18 capitalization greater than $75.0 million.

[3]GICS are an eight-digit code that represents a company's Global Industry Classification Standard that was developed by Standard & Poor's and Morgan Stanley Capital International. The eight-digit code can be broken down according to a hierarchy of economic sectors, industry groups, industries and sub-industries: All Economic Sectors are represented by the leftmost two-digits; Industry Groups are represented by the combination of the leftmost four-digits; Industries are represented by the combination of the leftmost six-digits; and Sub-Industries are represented by the combination of the leftmost eight-digits.

I selected my gas utility comparable group, Gas Group Followed by Analysts (Gas Group), based upon a general criteria that includes: (1) all natural gas distribution utilities who are covered by Value Line Investment; (2) are covered by several security analysts as measure by the existence of several published projected five-year growth rates in earnings per share (EPS); (3) with a GICS of 55102010 (i.e., Gas Utility); (4) are not the announced subject of an acquisition; (5) currently pay a common dividend and have not reduced their common dividend within the past five years; and (6) have market capitalization greater than $75.0 million.

It should be noted that the Water Group and the Gas Group are collectively referred to as the Comparable Groups and/or the Comparable Companies. The names of the utilities that comprise the Comparable Groups are listed on page 1 of Schedule 8. Further, it should be noted that AQUA's parent company, Aqua America, passed the selection criteria and is included as part of the Water Group. Coverage by security analysts was measured by the existence of several published projected five-year growth rates in EPS shown on Schedule 15. The comparability in terms of risk between the Water Group and the Gas Group is discussed later in my testimony.

Q. WHY DID YOU INCLUDE A CRITERIA REGARDING BEING THE SUBJECT OF AN ACQUISITION?

A. To begin with, there are only about 11 investor owned water utility companies with publicly traded stock in the U.S., and some of these companies are very small. As stated previously, the IOU water industry receives only limited exposure on Wall Street.

Additionally, the merger activity in the water industry has resulted in abnormal or "tainted" stock prices in terms of a DCF analysis. Eight acquisitions of publicly traded water utility stocks have occurred or been announced since June 1998. This is a very large percentage (~50%) of available publicly traded water utility stocks. Typically, premiums are paid in corporate acquisitions. That is, when a tender offer is made for the purchase of all the outstanding stock of a company, the amount of that offer usually exceeds the price at which the stock was previously traded in the market. These large premiums are reflected in the prices of other water utilities that are not currently the announced subject of acquisition.[4] The merger activity in the water industry is still occurring as evidenced by the announced acquisitions of New York Service Co., Aquarion Water Company of Sea Cliff, Aquarion Water Company of New York and Birmingham Utilities over last two years.

The Water Group is my primary group for determining the cost of equity for AQUA. I utilized the results of the Gas Group as a check on the results of the Water Group.

[4]Multiple publications mention these impacts including numerous editions of the Value Line Investment Survey, Barron's - 3/01, and Utility Business - 6/02.

1 **CAPITAL STRUCTURE**

2

3 **Q. WHAT IS REQUIRED TO DEVELOP AN OVERALL RATE OF RETURN?**

4 A. The first step in developing an overall rate of return is the selection of capital structure
5 ratios to be employed. Next, the cost rate for each capital component is determined. The
6 overall rate of return is the product of weighting each capital component by its respective
7 capital cost rate. This procedure results in the Company's overall rate of return being
8 weighted proportionately to the amount of capital and cost of capital employed by each class
9 of investor.

10

11 **Q. WHAT CAPITAL STRUCTURE RATIOS DO YOU RECOMMEND TO BE USED**
12 **TO DEVELOP THE COMPANY'S OVERALL RATE OF RETURN?**

13 A. I recommend the adoption of the Company's future test period average 2011 capital
14 structure, that include 46.89% debt, 0.23% preferred stock and 52.88% common equity and
15 are shown on Schedule 1 and were developed on the Company's filing in Schedule D-1.
16 These ratios synchronize capitalization with rate base.

17

18 **Q. HOW DOES THE COMPANY'S RECOMMENDED COMMON EQUITY RATIO**
19 **COMPARE WITH RATIOS EMPLOYED BY OTHER INVESTOR-OWNED**
20 **COMPANIES?**

21 A. The Company's future test period average 2011 capital structure reflects a common equity
22 ratio of 52.9%. This ratio is similar to but slightly higher than ratios employed by other

investor-owned water companies shown on of Schedule 3 and summarized below in Table 1. A comparison of the Company's capital structure ratios to those recently employed and forecasted to be employed by the Comparison Groups is shown in Table 1.

TABLE 1

Capital Structure Ratios

		9/30/09		Projected 2013	
	AQUA	Water Group	Gas Group	Water Group	Gas Group
Debt	46.9	48.9	43.9	46.8	42.1
Preferred Stock	0.2	0.1	0.1	0.0	0.1
Common Equity	52.9	51.0	56.0	53.2	57.8
	100.0	100.0	100.0	100.0	100.0

AQUA's rate making capital structure ratios are reasonable based upon the above information. Moreover, AQUA's small size justifies the use of more equity capital than the Comparison Groups in order to counterbalance some of the risk associated with its size. The size of company is an indicator of risk and is discussed later in my testimony in more detail.

Q. IS THE COMPANY'S TOTAL AMOUNT OF CAPITAL OUTSTANDING EXPECTED TO INCREASE MUCH OVER THE NEXT SEVERAL YEARS?

A. Yes, due to capital expenditures. AQUA's plant additions are estimated to total $39,043 thousand for 2010 - 2012, averaging about $13,014 thousand annually. Historically, over the past five years (2004-2008), the Company's construction program has averaged $17,520 thousand annually.

Kankakee is estimated to have plant additions totaling $15,869 thousand for 2010 - 2012. Over the past five years (2004-2008), Kankakee's construction program has averaged $10,815 thousand annually.

Due to the magnitude of AQUA's future capital expenditures, it is imperative that the Company is afforded the opportunity to present a favorable financial profile.

EMBEDDED COST RATE

Q. WHAT EMBEDDED COST RATES DO YOU RECOMMEND BE USED TO CALCULATE AQUA'S OVERALL RATE OF RETURN?

A. I recommend using the Company's future test period average 2011 embedded debt cost rate and embedded preferred stock cost rate, of 6.58% and 5.47%, respectively, that are shown on Schedule 1 and were developed on the Company's filing in Schedule D-1.

1 **FINANCIAL ANALYSIS**

2

3 **Q. HAVE YOU REVIEWED HISTORICAL FINANCIAL INFORMATION OF AQUA**
4 **AS PART OF YOUR ANALYSIS?**

5 A. Yes. On page 1 of Schedule 4, I developed a five-year analysis, ending 2008, detailing
6 various financial ratios for AQUA. On Schedules 5 and 6, I performed a similar analysis
7 for the Water Group and the Gas Group, respectively. Schedule 7 reveals the results of
8 operations for a large broad-based group of utilities known as the S&P Utilities for the five
9 years ended 2008. This information is useful in determining relative risk differences
10 between different types of utilities.

11

12 **Q. WHAT DO YOU CONCLUDE FROM THE COMPARISON OF ALL THE**
13 **INFORMATION SHOWN ON PAGES 1 OF SCHEDULES 4 THROUGH 7?**

14 A. Taken together, these comparisons show that AQUA is exposed to risk that is similar in
15 nature but greater in degree compared with the Comparable Groups. This is evident in
16 particular when one considers the size and diversification of AQUA, or lack there of, as
17 compared to the Comparable Companies. Moreover, the evidence from the various
18 financial ratios, show AQUA's risks as being greater than the Comparable Companies' but
19 somewhat less than the larger S&P Utilities'. Prospectively, the magnitude of AQUA's
20 future construction expenditures will place downward pressure on AQUA's financial ratios
21 as measured by interest coverage and cash generation.

22

1 **Q. HAVE YOU REVIEWED HISTORICAL FINANCIAL INFORMATION OF THE**
2 **DIVISION AS PART OF YOUR ANALYSIS?**
3 A. Yes. On page 2 of Schedule 4, I developed five-year analyses, ending 2008, detailing
4 various financial ratios for Kankakee. Similar ratios were calculated for AQUA, on page
5 1 of Schedule 4, to determining relative risk differences between the Company and the
6 Division.
7
8 **Q. WHAT DO YOU CONCLUDE FROM THE COMPARISON OF THE**
9 **INFORMATION SHOWN ON SCHEDULE 4 FOR AQUA AND THE DIVISION?**
10 A. Taken together, these comparisons show that Kankakee have much greater risk compared
11 with AQUA and the Comparable Groups. This is evident in particular when one considers
12 the fact that the majority of the ratios show the Division is considerably riskier than AQUA.
13 Further, these ratios show that Kankakee is exposed to more risk compared with the
14 Comparable Companies and most other utilities as measured by the S&P Utilities.
15
16 **Q. WHAT INFORMATION IS SHOWN ON SCHEDULE 8?**
17 A. Schedule 8 lists the names, issuer credit ratings, common stock rankings, betas and market
18 values of the companies contained in the Comparable Groups (page 1) and the S&P
19 Utilities (page 2). As is evident from the information shown on Table 2, the Comparable
20 Groups are similar to each other in risk. The Water Group's average issuer credit ratings
21 and common stock rankings are the same as the Gas Groups's. The average beta of the
22 Comparable Groups, 0.73 and 0.67, is lower than the average beta of the S&P Utilities.

Beta is a measure of volatility or market risk, the higher the beta, the higher the market risk. The market values provide an indication of the relative size of each group. As a generalization, the smaller the average size of a group, the greater the risk.

Page 3 of Schedule 8 shows that AQUA has experienced the lowest return on equity (ROE) when compared to the Comparable Companies and the S&P Utilities. Moreover, AQUA's dividend payout ratio is lower than the Comparable Companies'.

TABLE 2

	S&P Issuer Credit Rating	S&P Common Stock Ranking	Value Line Beta	Recent Market Value (Mill $)	Market Quartile Name
Water Group	A	Above Average (A-)	0.73	434	Low-Cap
Gas Group	A	Above Average (A-)	0.67	1,838	Low-Cap
S&P Utilities	BBB	Below Average (B)	0.81	10,560	Mid-Cap

Further, the ROE and the dividend payout ratios, show that Kankakee has performed poorly as compared to AQUA, the Comparable Companies and most other utilities as measured by the S&P Utilities.

Standard & Poor's (S&P), the predominant bond rating agency, considers profit to be a fundamental determinant of credit protection. S&P states that a firm's profit level

> . . . is a critical determinant of credit protection. A company that generates higher operating margins and returns on capital has a greater ability to

> generate equity capital internally, attract capital externally, and withstand business adversity. Earnings power ultimately attests to the value of the company's assets, as well. In fact, a company's profit performance offers a litmus test of its fundamental health and competitive position. Accordingly, the conclusions about profitability should confirm the assessment of business risk.[5]

Q. WHAT INFORMATION IS SHOWN ON SCHEDULE 9?

A. Schedule 9 reveals the capital intensity and capital recovery for AQUA, Kankakee, the Comparable Companies and the S&P Utilities. Based upon the 2008 capital intensity ratio of plant to revenues, AQUA ($7.35) and Kankakee ($6.86) are the most capital intensive as compared to the Water Group ($5.78), the Gas Group ($1.15), and S&P Utilities ($2.37). In other words, AQUA must invest $7.35 in plant to produce a dollar of revenue or about 27% more than the amount of capital required in the Water Group just to produce the same level of revenue. The Division is less capital intensive than AQUA but more than the Water Group.

From a purely financial point of view, based on current accounting practices, the rate of capital recovery or depreciation rate is an indication of risk because it represents cash flow and the return of an investment. The Company's average rate of capital recovery is about 31% higher than the Water Group's, suggesting lower risk.

[5] *Standard & Poor's* Corporate Rating Criteria, 2006, pg 26.

RISK ANALYSIS

Q. PLEASE EXPLAIN THE INFORMATION SHOWN ON SCHEDULE 10.

A. Schedule 10 details the large size difference between AQUA and the Comparable Groups. Company size is an indicator of business risk and is summarized in Table 3.

TABLE 3

Number of Times Larger Than AQUA

	Water Group	Gas Group
Capitalization	4.6	15.1
Revenues	6.3	82.8
Number of Customers	5.6	19.8

As shown in Table 3, AQUA is smaller than the Water Group and substantially smaller than the Gas Group. Schedule 10 also details the fact that the Gas Group is several tens to several hundred times the size of Kankakee. The size of a company affects risk. A smaller company requires the employment of proportionately less financial leverage (i.e., debt and preferred capital) than a larger company to balance out investment risk. If investment risk is not balanced out, then a higher cost of capital is required.

Q. WHY IS SIZE SIGNIFICANT TO YOUR ANALYSIS?

A. The size of a company can be likened to ships on the ocean since a large ship has a much better chance of weathering a storm than a small ship. The loss of a large customer will

1 impact a small company much more than a large company because a large customer of a
2 small company usually accounts for a larger percentage of the small company's sales.
3
4 For example, on average, the average company in the Gas Group, provide utility service in
5 multiple states for 1,226,589 customers. These wide ranging operations provide the Gas
6 Group substantial geographic, economic, regulatory, weather and customer diversification.
7 Kankakee provides regulated water service to about 28,644 customers. The concentration
8 of the Division's business in north eastern Illinois, makes them very susceptible to any
9 adverse development in local regulatory, economic, demographic, competitive and weather
10 conditions.
11
12 The size of a company can be a barrier to fluid access to capital markets (i.e., liquidity risk).
13 Investors require compensation for the lack of marketability and liquidity of their
14 investments. If no compensation is provided, then investors, or at least sophisticated
15 investors, shy away.
16
17 As shown on Schedule 11, size plays a role in the composition of investors, and hence
18 liquidity. In 2008 only 122% of the Water Group and 222% Gas Group shares traded while
19 the larger companies comprising the S&P Utilities had much higher trading volume of
20 228%. Insiders[6] hold about half as much, as a percent to total, of the Water Group's shares

[6]An insider is a director or an officer who has a policy-making role or a person who is directly or indirectly the beneficial owner of more than 10% of a certain company's stock.

than the Gas Group and about 25% more, as a percent to total, of the S&P Utilities. Currently, only about 38% of the Water Group and 57% of Gas Group shares are held by institutions[7] while the larger companies comprising the S&P Utilities had much higher institutional holdings of 64%. Due to small size and less interest by financial institutions, fewer security analysts follow the Comparable Groups and none follow AQUA.

The lack of trading activity may affect the cost of equity estimates for small companies such as AQUA and the Water Group. When stock prices do not change because of inactive trading activity, estimates of dividend yield for use in a dividend cash flow model and beta estimates for use in the capital asset pricing model are affected. In a stock market that is generally up, the beta estimates for the Comparable Companies are understated due to thin trading.

Q. IS THE IMPACT OF SIZE COMMONLY RECOGNIZED?

A. Yes, the National Association of Regulatory Utility Commissioners (NARUC) recognizes that size affects relative business risk as do most good financial texts. Liquidity risk and the existence of the small firm effect relating to business risk of small firms are well-documented in financial literature.[8] Investors' expectations reflect the highly-publicized

[7]Institutional holders are those investment managers having a fair market value of equity assets under management of $100 million or more. Certain banks, insurance companies, investment advisers, investment companies, foundations and pension funds are included in this category.

[8]Banz, Rolf, W. "The Relationship Between Return and Market Value of Common Stocks," Journal of Financial Economics, 9:3-18 1981. For subsequent studies see Fama and French, etc.

existence of the small firm effect. For example, many mutual funds classify their investment strategy as small capitalization in an attempt to profit from the existence of the small firm effect.

Further, Standard & Poor's (S&P), a major credit rating agency, recognizes that size plays a role in credit ratings.

> Standard & Poor's has no minimum size criterion for any given rating level. However, size turns out to be significantly correlated to ratings. The reason: size often provides a measure of diversification, and/or affects competitive position. . . . Small companies are, almost by definition, more concentrated in terms of product, number of customers, or geography. In effect, they lack some elements of diversification that can benefit larger companies. To the extent that markets and regional economies change, a broader scope of business affords protection. This consideration is balanced against the performance and prospects of a given business. . . . In addition, lack of financial flexibility is usually an important negative factor in the case of very small companies. Adverse developments that would simply be a setback for companies with greater resources could spell the end for companies with limited access to funds.[9]

Q. IS THERE ANY SINGLE MEASURE THAT BEST SHOWS INVESTMENT RISK FROM A COMMON STOCKHOLDER'S PERSPECTIVE?

A. No. However, from a creditor's viewpoint, the best measure of investment risk is debt rating. The debt rating process generally provides a good measure of investment risk for common stockholders because the factors considered in the debt rating process are usually relevant factors that a common stock investor would consider in assessing the risk of an investment.

[9] *Standard & Poor's*, Corporate Ratings Criteria 2006; pg 22.

1

2 **Q. WHAT IS THE BOND RATING OF AQUA AND THE COMPARABLE GROUP?**

3 A. AQUA's bond are privately placed with insurance companies and have a rating equivalent
4 of A based on a NAIC[10] rating of 1.[11] The U.S. Securities and Exchange Commission and
5 insurance regulators equate the NAIC rating of 1 to S&P's A credit rating when assessing
6 strengths of investment reserves. It should be noted that AQUA's NAIC rating has
7 increased over the last two years from a rating of 2 to a rating of 1; I believe as a result of
8 maintaining a common equity ratio of about 53%. Page 1 of Schedule 12 shows the average
9 bond/credit rating and business position for the Comparable Groups. The Comparable
10 Groups have an A credit profile. Therefore, AQUA's credit profile is currently
11 comparable[12] to that of the Comparable Companies. If Kankakee issued their own stand
12 alone debt, their credit rating would clearly below AQUA's A credit.

13

14 S&P publishes financial benchmark criteria necessary to obtain a bond rating for different
15 types of utilities. As a generalization, the higher the perceived business risk, the more

[10]NAIC or National Association of Insurance Commissioners is an organization of the chief insurance regulatory officials of the 50 states, the District of Columbia and the five U.S. territories. The NAIC's objective is to assist state insurance regulators in protecting consumers and helping maintain the financial stability of the insurance industry by offering financial, actuarial, legal, computer, research, market conduct and economic expertise.

[11]NAIC rating designations range from 1 to 6. An NAIC designation of 1 denotes obligations of the highest quality in which credit risk is at its lowest and the issuer's credit profile is stable, whereas an NAIC designation of 6 is assigned to obligations that are in or near default. Classes 1 and 2 are investment grade, Class 3 is medium quality and Classes 4, 5 and 6 are non-investment grade.

[12]NAIC rating system does not utilize "+" or "-" as modifiers to their ratings as S&P does.

stringent the financial criteria so the sum of the two, investment risk and bond rating, remains the same.

Q. WHAT ARE SOME FINANCIAL BENCHMARKS APPLIED BY CREDIT RATING AGENCIES FOR RATING PUBLIC UTILITY DEBT?

A. S&P describes their range of financial benchmarks as

> Risk-adjusted ratio guidelines depict the role that financial ratios play in Standard & Poor's rating process, since financial ratios are viewed in the context of a firm's business risk. A company with a stronger competitive position, more favorable business prospects, and more predictable cash flows can afford to undertake added financial risk while maintaining the same credit rating. The guidelines displayed in the matrices make explicit the linkage between financial ratios and levels of business risk.[13]

Q. WHAT OTHER INFORMATION IS SHOWN ON SCHEDULE 12?

A. Page 2 of Schedule 12 summarizes the application of S&P's measures of financial risk for AQUA and the Comparable Groups. S&P's measures of financial risk are broader than the traditional measure of financial risk, leverage. Besides reviewing amounts of leverage employed, S&P also focuses on earnings protection and cash flow adequacy.

As is evident from the information shown on page 2 of Schedule 12, for the five years ended 2008, AQUA's ratios were below the Comparable Companies in most instances.

[13]Standard & Poor's Corporate Rating Criteria, 2000.

Prospectively, based upon the Company's large construction program, the Company's ratios are likely to worsen. Based solely upon AQUA's historical ratios, it is my opinion that AQUA's debt would be rated similar but lower than the comparable groups'.

As is plain from Kankakee's ratios shown on page 2 of Schedule 12, the four Division' credit profile is below AQUA's and the Comparable Companies credit profile. At best, the Division's credit profile is that of BBB rated company. Based on their small size, it is highly likely that their credit profile is below BBB. An analysis of corporate credit ratings indicates that there is a 92% chance that four Division' credit profile falls below BBB based on their small size alone. As S&P has stated, size is significantly correlated to credit ratings. An analysis of corporate credit ratings found The York Water Company to be the smallest utility with a credit rating. Their credit rating is only A- despite having a capitalization comprised of more than $126 million and a common equity ratio in excess of 50%.

In order to compete with the Comparable Group's for capital, in the future, it will be necessary for AQUA to achieve higher returns on equity, and increase cash flow just to maintain a similar credit quality.

S&P has stated:

> ... <u>low authorized returns</u> may affect the industry's <u>ability to attract necessary capital</u> to develop new water supplies and upgrade the quality of existing supplies . . . Traditional ratemaking policy has not provided sufficient credit

> support during the construction cycle of the electric industry over the past 15 years. To avoid a repeat in the water industry, regulators must be aware of the increased challenges the industry faces.[14] (Emphasis added)

Investors will not provide the equity capital necessary for increasing the amount of common equity in a capital structure unless the regulatory authority allows an adequate rate of return on the equity.[15]

Q. DO AQUA AND THE COMPARABLE COMPANIES HAVE SIMILAR RISKS?

A. Yes. From an operations standpoint, AQUA and Water Group are indistinguishable. Both are required to meet Clean Water Acts and Safe Drinking Water Act requirements and are also required to provide safe and reliable services to their customers and comply with public utility commission regulations.

AQUA and many of the Water Group companies are allowed to adjust their rates and charge water customers' "improvement charges"[16] as a means of lessening the burden of replacing aging infrastructure. These "improvement charges" allow immediate rate recovery of capital investments for new projects on a year-by-year basis. The "improvement charges" assist in providing the Water Group required capital and pro-long

[14]Standard & Poor's CreditWeek, May 25,1992.

[15]National Association of Regulatory Utility Commissioners, loc. cit.

[16]Within the water industry and their regulatory commissions, improvement charges are referred to in varying terms, including: DSIC or Distribution System Improvement Charge; DSR or Distribution System Replacement; AMRP or Accelerated Main Replacement Program; and PRP Pipeline Replacement Program.

1 the time period between required rate filings.

2

3 Replacement of aging infrastructure is a water industry problem. In the water industry, the
4 cost of replacing infrastructure is often more than 100 times the original installation cost.
5 For AQUA, the cost of infrastructure replacement is staggering. Replacing just 1% of
6 mains annually requires about $6.0 million be invested each year.

7

8 **Q. WHAT INFORMATION IS SHOWN ON SCHEDULE 13?**

9 A. Schedule 13 reviews long-term and short-term interest rate trends. Long-term and short-
10 term interest rate trends are reviewed to ascertain the "sub-flooring" or "basement" on
11 which the Comparable Companies' common equity market capitalization rate is built on.
12 Based upon the settled yields implied in the Treasury Bond future contracts and the long-
13 term and recent trends in spreads between long-term government bonds and A-rated public
14 utility available to me at the time Schedule 13 was prepared, I conclude that the market
15 believes that if the Comparable Companies issued new long-term bonds prospectively, they
16 would be priced to yield about 5.9% based upon a credit profile of "A." Further, its
17 reasonable to conclude the market anticipates that long-term government bonds will be
18 priced to yield about 4.5%, prospectively. It should be noted that the aforementioned long-
19 term capital yields are not adjusted for the 2008 capital market meltdown.

20

MARKET TURMOIL

Q. WHAT DID YOU MEAN WHEN YOU REFERRED TO THE 2008 MARKET MELTDOWN?

A. Over the last six months the financial markets have experienced extraordinary chaos. With hind sight, it is apparent the credit markets began to slowly tighten up at the end of 2007. Since 2007, many significant and extraordinary events occurred including:

- The collapse of The Bear Stearns Companies, a major investment bank, and its acquisition by JPMorgan Chase & Co., with the aid of the Federal Reserve Bank of New York;
- The third-largest banking failure, IndyMac, in U.S. history, after a "run on the bank" by depositors;
- The placement of the government-sponsored enterprises, or GSE, of Fannie Mae and Freddie Mac into conservatorship by the Federal Housing Finance Agency;
- The bankruptcy of Lehman Brothers Holding, Inc., the largest bankruptcy filing in history;
- The acquisition of the banking operations of Washington Mutual, the largest U.S. savings bank, by JPMorgan Chase;
- The rescue of Merrill Lynch & Co. by Bank of America, Inc., with assistance of the Federal government;
- The effective nationalization of the world's largest insurance company, American International Group, through the acquisition of its equity by the U.S. Treasury;
- The effective nationalization of General Motors and Chrysler by the U.S. Treasury; and
- Other international coordinated actions affecting financial markets throughout the world.

From June 2008 through December 2008 the Dow Jones Industrials fell 23%, from 11,350 to 8,776 and the Standard & Poor's 500 composite sank 29%, from 1,280 to 903. During the same time period, reflective of the economic turmoil, commodity prices imploded including:

- Framing lumber prices per 1,000 board feet fell 21%;
- Crude oil (petroleum); west Texas intermediate commodity prices dropped 69%;

- Commodity food price index commodity prices fell 33%;
- Commodity industrial inputs price index commodity prices dropped 39%;
- Commodity metals price index commodity prices fell 44%; and
- Natural gas commodity prices dropped 54%.

When there is a crisis in the markets, such as a financial meltdown, market participants usually sell off and move their money to a safer place; fleeing from illiquid, low quality investments to liquid, high quality investments. This flight to quality reflects a collapse of confidence in the financial system. Below is a summary of the change in various interest rates for June 2008 through December 2008 reflecting the flight to quality:

- Federal funds (effective) rate plunged 92% (rate went from 2.00% to 0.16%);
- 4-week T-bill rate plunged 98% (rate went from 1.69% to 0.03%);
- 1-year T-bond rate plunged 80% (rate went from 2.42% to 0.49%);
- 5-year T-bond rate plunged 56% (rate went from 3.49% to 1.52%);
- 20-year T-bond rate plunged 33% (rate went from 4.74% to 3.18%); and
- Moody's Baa Public Utility bonds rate increased 17% (rate went from 6.93% to 8.13%).

The flight to quality is most evident in short-term interest rates. It appears the combined efforts of the Treasury and the Federal Reserve have somewhat stabilized the capital markets, although volatility is still high. Prospectively, 2010-2011, the capital markets will be effected by the upcoming large residential and commercial real estate refinancings and the unprecedented large Treasury financings.

1 **COMMON EQUITY COST RATE ESTIMATE**

2

3 **Q. WHAT IS THE BEST METHOD OF ESTIMATING COMMON EQUITY COST**
4 **RATES?**

5 A. There is no single method (model) suitable for estimating the cost rate for common equity.
6 While a single investor may rely solely upon one model in evaluating investment
7 opportunities, other investors rely on different models. Most sophisticated investors who use
8 an equity valuation model rely on many models in evaluating their common equity
9 investment alternatives. Therefore, the average price of an equity security reflects the results
10 of the application of many equity models used by investors in determining their investment
11 decisions.

12

13 The application of any single model to estimate common equity cost rates is not appropriate
14 because the security price for which the equity cost rate is being estimated reflects the
15 application of many models used in the valuation of the investment. That is, the price of any
16 security reflects the collective application of many models. Accordingly, if only one model
17 is used to estimate common equity cost rates, that cost rate will most likely be different from
18 the collective market's cost rates because the collective valuation in the market reflects more
19 than one method.

20

21 Noted financial texts, investor organizations and professional societies all endorse the use
22 of more than one valuation method. "We endorse the dividend discount model, particularly

1 when used for establishing companies with consistent earnings power and when used along
2 with other valuation models. It is our view that, in any case, an investor should employ more
3 than one model."[17] (Emphasis added)
4
5 The American Association of Individual Investors state, "No one area of investment is
6 suitable for all investors and no single method of evaluating investment opportunities has
7 been proven successful all of the time."[18]
8
9 In their study guide, the National Society of Rate of Return Analysts state, "No cost of equity
10 model or other concept is recommended or emphasized, nor is any procedure for employing
11 any model recommended . . . it remains important to recognize that alternative methods exist
12 and have merit in cost of capital estimation. To this end, analysts should be knowledgeable
13 of a broad spectrum of cost of capital techniques and issues."[19]
14
15 Several different models should be employed to measure accurately the market-required cost
16 of equity reflected in the price of stock. Therefore, I used three recognized methods
17 including the Discounted Cash Flow or DCF shown on Schedules 14 and 17, the Capital

[17]Sidney Cottle, Roger F. Murray and Frank E. Block, Graham and Dodd's Securities Analysis 5th Edition, McGraw-Hill, Inc., 1988, p. 568.

[18]Editorial Policy, AAII Journal, American Association of Individual Investors, Volume 18, No. 1, January 1996, p. 1.

[19]David C. Parcell, The Cost of Capital - A Practitioners Guide, National Society of Rate of Return Analysts, 1995 Edition.

Asset Pricing Model or CAPM shown on Schedule 20, and the Risk Premium or RP shown on Schedule 21.

IMPACT OF MERGERS ON COST OF EQUITY ESTIMATES

Q. HAVE MERGERS IN THE WATER INDUSTRY AFFECTED COST OF EQUITY ESTIMATES FOR WATER UTILITIES?

A. Yes. Mergers in the water industry have greatly diminished the number of companies to draw from for estimating the cost of equity. Further, even the companies that have not been the subject of an announced merger have been affected. Specifically, the merger activity in the water industry has resulted in abnormal or "tainted" stock prices in terms of a market-based DCF analysis or even beta estimates.

Q. PLEASE EXPLAIN WHY THE MERGER ACTIVITY IN THE WATER INDUSTRY HAS RESULTED IN ABNORMAL OR TAINTED STOCK PRICES IN TERMS OF A DCF ANALYSIS.

A. More than eight acquisitions of publicly traded water utility stocks have occurred or been announced since June 1998. This is a very large percentage (~50%) of available publicly traded water utility stocks. Previously Value Line[20] stated:

> Investors who held shares of takeover targets in 1999 were well rewarded with prices in the neighborhood of three times book value. Consequently,

[20] February 4, 2000 edition

> potential takeover targets in the U.S. have seen their share prices rise in recent months.

Typically, premiums are paid in corporate acquisitions. The average acquisition premium of publicly traded water utility stocks has averaged 40%. That is, when a tender offer is made for the purchase of all the outstanding stock of a company, the amount of that offer usually exceeds the price at which the stock was previously traded in the market. These large premiums are reflected in the prices of other water utilities that are not currently the announced subject of acquisition.

Most water utility stocks that are not the targets of a merger have been affected by speculators. Specifically, the numerous announced mergers have resulted in speculators bidding up the price of stock of non-target companies in hopes of receiving an acquisition premium from a yet to be announced merger. A speculator's investment horizon is short-term and their growth expectation is based on capital gains and is equal to an expected acquisition premium, or about 40%. Under a DCF analysis, the investment horizon is usually longer-term and the growth rate reflects the fundamentals of the company, not a short-term acquisition premium of about 40%.

Based upon this, I recommend that the impact of mergers be considered when weight is given the DCF derived market capitalization cost rate since water utility stock prices have been greatly influenced by the speculation of acquisition.

1 **DISCOUNTED CASH FLOW**

2

3 **Q. PLEASE EXPLAIN THE DISCOUNTED CASH FLOW MODEL.**

4 A. The discounted cash flow model or DCF, is based upon the assumption that the price of a
5 share of stock is equal to a future stream of cash flows to which the holder is entitled. The
6 stream of cash flows is discounted at the investor-required cost rate (cost of capital).

7

8 Although the traditional DCF assumes a stream of cash flow into perpetuity, a termination,
9 or sale price can be calculated at any point in time. Therefore, the return rate to the
10 stockholder consists of cash flow (earnings or dividends) received and the change in the price
11 of a share of stock. The cost of equity is defined as:

12 ...the minimum rate of return that must be earned on equity finance
13 and investments <u>to keep the value of existing common equity</u>
14 <u>unchanged</u>. This return rate is the rate of return that investors expect
15 to receive on the Company's common stock . . . <u>the dividend yield</u>
16 <u>plus the capital gains yield</u> . . . [21](Emphasis added)
17

18 **Q. PLEASE EXPLAIN HOW YOU CALCULATED YOUR DIVIDEND YIELD IN THE**
19 **DCF SHOWN ON SCHEDULE 14.**

20 A. As shown on page 1 of Schedule 14, I used the average dividend yield of 3.6% for the Water
21 Group and 4.3% for the Gas Group. The individual dividend yields are shown on page 2 of
22 Schedule 14 and are based upon the most recent months' yield, December 2009, and the

[21] J. Fred Weston and Eugene F. <u>Brigham, Essentials of Managerial Finance</u>, 3rd ed. (The Dryden Press), 1974, p. 504.

1 twelve-month average yield, ending December 2009. The second input to a market DCF
2 calculation is the determination of an appropriate share price growth rate.
3
4 **Q. WHAT SOURCES OF GROWTH RATES DID YOU REVIEW?**
5 A. I reviewed both historical and projected growth rates. Schedule 15 shows the array of
6 projected growth rates for the Comparable Companies that are published. Specific historical
7 growth rates are not shown because the meaningful historical growth rates are already
8 considered when analysts arrive at their projected growth rates.
9
10 **Q. PLEASE EXPLAIN THE SOURCES OF THE PROJECTED GROWTH RATES**
11 **SHOWN ON SCHEDULE 15.**
12 A. I relied upon four sources for projected growth rates, First Call, Reuters, Zacks Investment
13 Research and Value Line.[22]
14
15 **Q. DID YOU REVIEW ANY OTHER GROWTH RATES THAN THOSE SHOWN ON**
16 **SCHEDULE 15?**
17 A. Yes. I reviewed earnings per share or EPS growth rate reflecting changes in return rates on
18 book common equity (ROE) over time. On page 1 of Schedule 16, I summarized recent
19 ROEs and compared those to the Water Group's higher levels projected to be achieved by

[22]With the exception of Value Line, the earnings growth rate projections are consensus estimates five-year EPS estimates. These consensus estimates are compiled from more than 1,700 financial analysts and brokerage firms nationwide. It should be noted that none of the consensus forecasts provides projected DPS estimates. Value Line publishes projected Cash flow, EPS and DPS five-year growth projections as well.

Value Line shown on page 2 of Schedule 16. ROEs increase when EPS grows at much higher/faster rates than book value.

I also reviewed industry specific average projected growth rates that are published by First Call and Zacks for the industries in which the Comparable Companies operate. On average, the Water Group's industry is projected to have EPS growth rates that average 7.0% to 7.1% over the next five years. The Gas Group's industry is projected to have EPS growth rates that average 5.8% to 9.8% over the next five years. The entire Comparable Companies sectors are projected to have EPS growth rates that average that average 6.4% to 7.0% over the next five years.

Q. WHAT DO YOU CONCLUDE FROM THE GROWTH RATES YOU HAVE REVIEWED?

A. Table 4 summarizes some of the various growth rates reviewed.

TABLE 4

Summary of Growth Rates

	Water Group	Gas Group
Projected 5 Year Growth in EPS	7.6	5.5
Projected 5 Year Growth in EPS, DPS & Cash Flow	7.3	5.0
Projected 5 Year Growth in EPS for the industry	7.1	7.8
Projected 5 Year Growth in EPS for utility sector	7.0	6.4

Academic studies suggest that growth rate conclusions should be tested for reasonableness against long-term interest rate levels. Further, the minimum growth rate must at least exceed

1 expected inflation levels. Otherwise, investors would experience decreases in the purchasing
2 power of their investment. Finally, the combined result of adding the growth rate to the
3 market value dividend yield must provide a sufficient margin over yields of public utility
4 debt.
5
6 **Q. WHAT METHOD DID YOU USE TO ARRIVE AT YOUR GROWTH RATE**
7 **CONCLUSION?**
8 A. No single method is necessarily the correct method of estimating share value growth. It is
9 reasonable to assume that investors anticipate that the Water Group's current ROE will
10 expand to higher levels (i.e., current ROE of 9.6% is projected to be 12.2%). Because there
11 is not necessarily any single means of estimating share value growth, I considered all of this
12 information in determining a growth rate conclusion for the Comparable Companies.
13
14 Moreover, while some rate of return practitioners would advocate that mathematical
15 precision should be followed when selecting a growth rate, the fact is that investors do not
16 behave in the same manner when establishing the market price for a firm. Rather, investors
17 consider both company-specific variables and overall market sentiment such as inflation
18 rates, interest rates and economic conditions when formulating their capital gains
19 expectations. This is especially true when one considers the relatively meaningless negative
20 growth rates. That is, use of a negative growth rate in a DCF implies that investors invest
21 with the expectation of losing money.
22

The range of growth rates previously summarized supports the reasonableness of an expected 7.3% growth rate for the Water Group based on the projected five-year growth in EPS. However, there is a striking difference between the projected EPS growth rates for the Water Group and the Gas Group considering the groups' similar risks discussed previously. It appears that the Gas Group's projected EPS growth may be reflective of a short-term decrease in their ROE from their current levels. Because of the similarities between the risk of Water Group and Gas Group, I gave the Gas Group's industry average projected growth primary weighting in selecting a growth rate for that group. Based on the aforesaid, the projected five-year growth in EPS for the Water Group has been considered and the projected 5-Year growth in EPS for the Gas Group's industry has been given weighting in determining a more logical 6.4% growth rate for the Gas Group.

Q. WHAT IS YOUR MARKET VALUE DCF ESTIMATE FOR THE COMPARABLE COMPANIES?

A. The market value DCF cost rate estimate for the Water Group is 11.0% and 10.8% for the Gas Group, as detailed on page 1 of Schedule 14.

Q. IS THE DCF MODEL YOU EMPLOYED ON SCHEDULE 14 A SINGLE STAGE CONSTANT GROWTH MODEL?

A. Yes. I believe the single-stage model is best suited for companies that operate in a mature long-standing industry, such as the industry that water utilities operate in. Currently, there are no major technological improvements that are likely to drastically shift the growth of the

water industry. As such, the constant-growth, or single-stage, DCF provides a reasonable DCF derived market cost rate.

I believe a multi-stage growth model is more appropriate for a company or industry characterized as being one in a developmental stage or one in a decaying stage of growth. For example, an industry in a development stage might be the solar-power industry and an industry in a decaying stage might be the newsprint industry. It has been my experience the single-stage model is the most widely utilized version of the DCF used in public utility rate regulation.

On Schedule 17 I used a multi-stage growth or three-stage growth model. It is my understanding that the Financial Analysis Division of the ICC uses a three-stage growth model in some instances.

Q. WHAT ARE THE THREE STAGES OF GROWTH IN THE THREE-STAGE GROWTH DCF?

A. The first-stage of growth, or stage-one, is the near term five-year growth rate. This is assumed to be equal to analysts five-year/long-tem growth in EPS, summarized on Schedule 15. The second-stage of growth, or stage-two, is the transitional growth between the first and the third stage. In this instance, the stage-two growth rate is the average of the first and the third stage. The third-stage of growth, or stage-three, is the steady state growth rate. This is assumed to be equal to the long-tem growth of the economy.

I estimated the long-tem growth of the economy, page 3 of Schedule 17, to be equal to the compound growth of the value of the economic output, or GDP, since 1929, published by the Federal Bureau of Economic Analysis. The Federal Bureau of Economic Analysis reports the value of the GDP in both nominal dollars and real, or inflation adjusted, dollars. The growth in the real GDP was converted to a projected nominal growth by adding the implied forward rate of inflation recently reflected in comparable long-term treasury securities, page 4 of Schedule 17. The growth rates used in a three-stage growth model are summarized on page 2 of Schedule 17.

Q. WHAT ARE THE RESULTS OF YOUR THREE-STAGE GROWTH DCF?

A. As shown on page 1 of Schedule 17, the Three-stage Growth DCF based on nominal growth in economy shows a market cost rate of 10.4% for the Water Group and 10.6% for the Gas Group. The Three-stage Growth DCF based on real growth in economy shows a market returns of 10.~~6%~~0% and 10.~~8%~~3% for the Water Group and Gas Group, respectively, as shown on page 1 of Schedule 17. Giving the results of both models equal weight, indicates a Three-stage Growth DCF market cost rate of 10.~~5%~~2% for the Water Group and 10.~~7%~~5% for the Gas Group.

Q. IS YOUR MARKET VALUE DCF ESTIMATE FOR THE COMPARABLE COMPANIES BASED ON THE RESULTS OF THE THREE-STAGE GROWTH DCF OR THE CONSTANT GROWTH DCF?

A. I gave equal weighting to the results of the market value constant growth DCF cost rate

estimate for the Water Group and the Gas Group and the results of Three-stage Growth DCF market cost rate estimate. Giving the results of both models equal weight, indicates a DCF market value cost rate of 10.~~8%~~6% for the Water Group and 10.~~8%~~7% for the Gas Group.

Q. ARE THERE OTHER CONSIDERATIONS THAT SHOULD BE TAKEN INTO ACCOUNT IN REVIEWING A MARKET VALUE CAPITALIZATION DCF COST RATE ESTIMATE?

A. Yes, it should be noted that although I recommend specific dividend yields for the Comparable Group, I recommend that less weight be given the resultant market value DCF cost rate due to the market's current market capitalization ratios and the impact that the market-to-book ratio has on the DCF results. The Water Group's current market-to-book ratios of 191% and low dividend yields are being affected by a short-term acquisition frenzy, worldwide market sentiment and not DCF fundamentals.

Although the DCF cost for common equity appears to be based upon mathematical precision, the derived result does not reflect the reality of the marketplace since the model proceeds from unconnected assumptions. The traditional DCF derived cost rate for common equity will continuously understate or overstate investors' return requirements as long as stock prices continually sell above or below book value. A traditional DCF model implicitly assumes that stock price will be driven to book value over time. However, such a proposition is not rational when viewed in the context of an investor purchasing stock above book value. It is <u>not</u> rational to assume that an investor would expect share price to <u>decrease</u>

48% (100%÷191%=52%-100%=48%) in value to equal book value.

Utility stocks do not trade in a vacuum. Utility stock prices, whether they are above or below book value, reflect worldwide market sentiment and are not reflective of only one element.

Q. WHAT DO YOU MEAN BY YOUR STATEMENT THAT UTILITY STOCKS ARE NOT TRADED IN A VACUUM?

A. Utility stocks cannot be viewed solely by themselves. They must be viewed in the context of the market environment. Table 5 summarizes recent market-to-book ratios ("M/B") for well-known measures of market value reported in the January 11, 2010 issue of Barron's and page 1 of Schedule 16.

TABLE 5

	M/B Ratios(%)
Dow Jones Industrials	471
Dow Jones Transportation	239
Dow Jones Utilities	165
S&P 500	254
S&P Industrials	317
Vs.	
Water Group	191
Gas Group	178

1 Utility stock investors view their investment decisions compared with other investment
2 alternatives, including those of the various market measures shown in Table 5.
3
4 **Q. HOW DOES A TRADITIONAL DCF IMPLICITLY ASSUME THAT MARKET**
5 **PRICE WILL EQUAL BOOK VALUE?**
6 A. Under traditional DCF theory, price will equal book value (M/B=1.00) only when a company
7 is earning its cost of capital. Traditional DCF theory maintains that a company is under-
8 earning its cost of capital when the market price is below book value (M/B<1.00), while a
9 company over-earning its cost of capital will have a market price above its book value
10 (M/B>1.00). If this were true, it would imply that the capitalistic free-market is not efficient
11 because the overwhelming majority of stocks would currently be earning more than their cost
12 of capital. Table 5 shows that most stocks sell at an M/B that is greater than 1.0.
13
14 **Q. PLEASE EXPLAIN WHY SUCH A PHENOMENON WOULD SHOW THAT THE**
15 **CAPITALISTIC FREE-MARKET IS NOT EFFICIENT.**
16 A. Historically, the S&P Industrials, which represented approximately 400 companies, have
17 sold at an M/B as low as 1.0 only one time out of the past 53 years (period 1947-1999).
18 Based upon the traditional DCF assumption, which suggests that companies with M/Bs
19 greater than 1.0 earn more than their cost of capital, this data would suggest that the S&P
20 Industrial companies have earned more than their cost of capital while competing in a
21 <u>competitive</u> environment over the past 53 years. In a competitive market, new companies
22 would continually enter the market up to the point that the earnings rate was at least equal

1 to their cost of capital.

2

3 During this period the S&P Industrials sold at an average M/B of 223.7% while experiencing
4 a ROE of 14.7% over a period in which interest rates averaged 7.2%. It is important to note
5 that the average ROE of 14.7% is relative to a common equity ratio of more than 60% for
6 the S&P Industrials over many years.

7

8 **Q. WHAT IS THE SIGNIFICANCE OF INDUSTRIAL COMPANIES' M/B AND THE**
9 **COST OF CAPITAL FOR A WATER UTILITY?**

10 A. As stated previously, utility stocks do not trade in a vacuum. They must compete for capital
11 with other firms including industrial stocks. Over time, there has been a relationship
12 between M/Bs of industrial stocks and utility stocks. Although industrial stocks have sold
13 at a higher multiple of book value than utility stocks, both have tracked in similar directions.
14 Because utility stocks' and industrial stocks' prices relative to book values' move in similar
15 directions, it is irrational to conclude that stock prices that are different from book value,
16 either above or below, suggests that a firm is over- or under-earning its cost of capital when
17 competitive free-markets exist.

18

19 **Q. DOES THE MARKET VALUE DCF PROVIDE A REASONABLE ESTIMATE OF**
20 **THE WATER GROUP'S COMMON EQUITY COST RATE?**

21 A. No, the DCF only provides a reasonable estimate of the Comparable Group's common equity

1 cost rate when their market price and book value are similar (M/B=100%).[23] A DCF will
2 overstate a common equity cost rate when M/Bs are below 100% and understate when they
3 are above 100%. Since the Comparable Group's current M/Bs averages range from 178%
4 to 191%, the DCF understates their common equity cost rate. Schedule 18 provides a
5 numerical illustration of the impact of M/Bs on investors' market returns and DCF returns.
6 The reason that DCF understates or overstates investors' return requirements depending
7 upon M/B levels is that a DCF derived equity cost rate is applied to a book value rate base
8 while investors' returns are measured relative to stock price levels. Based upon this, I
9 recommend that less weight be given to the market value DCF cost rate unless the increased
10 financial risk, resulting from applying a market value cost rate to a book value, is accounted
11 for.
12
13 **Q. HOW DO YOU RESOLVE THE FINANCIAL RISK DIFFERENCE BETWEEN**
14 **MARKET VALUE COST RATES AND BOOK VALUE COST RATES?**
15 A. The basic proposition of financial theory regarding economic value of a company is based
16 on market value. That is, a company's value is based on their market value weighted
17 average cost of capital.[24] Accordingly, the market value derived cost rate reflects the
18 financial risk or leverage associated with capitalization ratios based on market value, not
19 book value. As shown on page 1 of Schedule 19, for the Water Group there is a large

[23]Roger A Morin, Regulatory Finance - Utilities' Cost of Capital, Public Utility Reports, Inc., 1994, pp. 236-237.

[24]Shannon P. Pratt, Cost of Capital, John Wiley & Sons, Inc., 1998, pp. 45-46.

difference in leverage as a result of the average $357 million difference in market value common equity and book value common equity. This difference in market values and book values results in debt/equity ratios based on market value of 34%/66% (debt/equity) verses 49%/51% (debt/equity) based on book value. Similarly, for the Gas Group, the debt/equity ratios based on market value is 32%/68% (debt/equity) verses 44%/56% (debt/equity) based on book value as shown on page 1 of Schedule 19.

Differences in the amount of leverage employed can be quantified based upon the Comparable Groups' levered beta being "unlevered" through the application of the "Hamada Formula". The details of the model are shown on page 2 Schedule 19. For example, the inputs to the formula for the Water Group market value capitalization consist of their levered beta of .73, debt ratio of 33.7%, preferred stock ratio of 0.0%, common equity ratio of 66.3% and combined tax rate of 39.8%. The group's unlevered beta is determined to be .56 through the use of the following Hamada formula:

$$Bl = Bu\ (1 + (1 - t)\ D/E + P/E)$$

where:

Bl = observed, levered beta

Bu = calculated, unlevered beta

t = income tax rate

D = debt ratio

P = preferred stock ratio

E = common equity ratio

Applying the unlevered beta of .56 along with the Water Group's book value capitalization ratios of 48.9% long-term debt, 0.1 preferred stock and 51.0% common equity and combined tax rate of 39.8% results in a levered beta of 0.88 applicable to the group's book value capitalization. Based upon the Water Group's risk premium of 4.0% and the difference between Water Group's market value levered beta their book value levered beta of .15 (.88 - .73) indicates that the Water Group's common equity cost rate must be increased by 0.60% (.15 x 4.0% = 0.60%) in recognition of their book value's exposure to more financial risk.

Applying the Hamada model to the Gas Group's market value capitalization ratios, page 2 of Schedule 19, and to their book value capitalization ratios, indicates a financial risk adjustment in the range of 0.36% for the Gas Group's.

Q. IS THERE ANOTHER WAY TO REFLECT THE FINANCIAL RISK DIFFERENCE THAT EXISTS AS A RESULT OF MARKET CAPITALIZATION RATIOS BEING SIGNIFICANTLY DIFFERENT FROM BOOK VALUE CAPITALIZATION RATIOS?

A. Yes, generally speaking. Although it is possible to know the direction of a financial risk adjustment on common equity cost rate, a specific quantification of financial risk differences is very difficult. Although the end result of a financial risk adjustment is very subjective and specific quantification very difficult, the direction of the adjustment is clearly known. However, if the Comparable Groups' debt were rated based on market value debt ratios they would command an AAA rating. The Comparison Groups currently have bonds rated A based upon their book value debt ratios. The yield spread on a bond rated AAA verses A rated bonds averages 50 basis points or 0.50% as shown on page 3 of Schedule 19.

The end result of the application of the Hamada Model and the bond yield spread indicates that the Water Group and the Gas Group market value common equity cost rate equity cost rate should be adjusted upward by at least 0.50% (.60% hamada est. + 0.5% yield spread = 1.0% ÷ 2 = 0.50%) and 0.40% (0.36% hamada est. + 0.5% yield spread = 0.86% ÷ 2 = 0.43%, rounded to 0.4%), respectively, since it is going to be applied to a book value. Since Aqua's common equity ratio of 53% is in between the Water Group's and the Gas Group's common equity ratios, an average leverage adjustment of 0.45% is applied.

Accounting for the increased amount of leverage between market value derived DCF cost

rates and book value cost rates indicates a book value DCF cost rate of 11.~~3%~~1% for the Water Group and 11.~~3%~~2% for the Gas Group.

CAPITAL ASSET PRICING MODEL

Q. PLEASE BRIEFLY DESCRIBE THE THEORY OF THE CAPITAL ASSET PRICING MODEL.

A. The CAPM is based upon the assumption that investors hold diversified portfolios and that the market only recognizes or rewards non-diversifiable (or systematic) risk when determining the price of a security because company-specific risk (or non-systematic) is removed through diversification. Further, investors are assumed to require additional or higher returns for assuming additional or higher risk. This assumption is captured by using a beta that provides an incremental cost of additional risk above the base risk-free rate available to investors. The beta of a security reflects the market risk or systematic risk of the security relative to the market. The beta for the market is always equal to 1.00 and therefore, a company whose stock has a beta greater than 1.00 is considered riskier than the market and a company with a beta less than 1.00 is considered less risky than the market. The base risk-free rate is assumed to be a U.S. Government treasury security because they are assumed to be free of default risk.

Q. WHAT RISK-FREE RATE AND BETA HAVE YOU USED IN YOUR CAPM CALCULATION?

A. The risk-free rate used in CAPM should have approximately the same maturity as the life of the asset for which the cost rate is being determined. Because utility assets are long-lived, a long-term Treasury Bond yield serves as an appropriate proxy. Previously, I estimated an appropriate risk-free rate of 4.5% based upon the recent and forward long-term Treasury yields. I used the average beta of 0.73 for the Water Group and 0.67 for the Gas Group as shown on page 1 of Schedule 20. However, as stated previously, the Comparable Groups' betas are understated due to their small size affecting their stock price changes.

Q. AFTER DEVELOPING AN APPROPRIATE BETA AND RISK-FREE RATE, WHAT ELSE IS NECESSARY TO CALCULATE A CAPM DERIVED COST RATE?

A. A market premium is necessary to determine a traditional CAPM derived cost rate. The market return rate is the return expected for the entire market. The market premium is then multiplied by the company specific beta to capture the incremental cost of additional risk (market premium) above the base risk-free rate (long-term treasury securities) to develop a risk adjusted market premium. For example, if you conclude the expected return on the market as a whole is 15% and further assume that the risk-free rate is 8%, then the market premium is shown to be 7% (15% - 8% = 7%).

Further, if you assume there are two companies, one of which is considered less risky than the market and therefore has a beta of less than 1.00 or 0.80. The second company, which is considered riskier than the market and therefore has a beta that is greater than 1.00 or 1.20. By multiplying the hypothetical 7.0% market premium by the respective betas of 0.80 and

1.20, risk adjusted market premiums of 5.6% (7.0% x 0.80) and 8.4% (7.0% x 1.20) are shown for the company considered less risky than the market and for the company considered more risky than the market, respectively.

Adding the assumed risk-free rate of 8% to the risk adjusted market premiums results in the CAPM derived cost rates of 13.6% (5.6% + 8.0%) for the less risky company and 16.4% (8.4% + 8.0%) for the company considered of greater risk than the market. In fact, the result of this hypothetical CAPM calculation shows that the least risky company, with the beta of 0.80, has a cost rate of 13.6%, the market, with the beta of 1.00, has a cost rate of 15.0% and that the higher risk company, with a beta of 1.20, has a cost rate of 16.4%.

Q. HOW DID YOU DEVELOP A MARKET PREMIUM FOR YOUR CAPM?

A. The average projected market premium of 16.2% is developed on page 2 of Schedule 20. It is based upon Value Line's average projected total market return for the next three to five years of 20.7% less the risk free rate of 4.5%. I also reviewed market premiums derived from Ibbotson Associates' most recent publication concerning asset returns that show a market premium of 6.5%. The comparison shows that the Value Line market premium has been on the high side reflective of the recent market turmoil.

Q. HOW DID YOU ADJUST FOR THE IMPACT THAT SIZE HAS ON THE COMPARABLE GROUP'S BETA?

A. The adjustment is reflected in the CAPM size premium. The CAPM size premium is

developed on page 4 of Schedule 20. The size premium reflects the risks associated with the Comparable Groups' small size and its impact on the determination of their beta. This adjustment is necessary because beta (systematic risk) does not capture or reflect the Comparable Groups' small size. I reduced the size premium by the ratio of the Comparison Groups' beta to their respective market quartile's beta.

Q. WHAT IS THE COMPARISON GROUP'S MARKET COST OF EQUITY BASED UPON YOUR CAPM CALCULATION?

A. The CAPM based on historical market returns shows a market cost rate of 10.1% for the Water Group and 9.5% for the Gas Group. The CAPM based on projected market returns shows a 17.2% and 16.1% for the Water Group and Gas Group, respectively, as shown on page 1 of Schedule 20. The projected market returns has been impacted by unusual high projected market return for five of the past twelve months as show on page 2 of Schedule 20. Accordingly, the Comparable Groups' average market value CAPM 10.8% to 11.5% is based primarily, or 80%, on the results of the historical market returns. . Adjusting the market value CAPM to account for the difference in leverage between market value capitalization ratios indicates a cost rate of 12.0% for the Water Group and 11.3% for the Gas Group applicable to book value (11.5% + 0.45% = 12.0% and 10.8% + 0.45% = 11.3%).

RISK PREMIUM

Q. WHAT IS A RISK PREMIUM?

A. A risk premium is the common equity investors' required premium over the long-term debt cost rate for the same company, in recognition of the added risk to which the common stockholder is exposed versus long-term debtholders. Long-term debtholders have a stated contract concerning the receipt of dividend and principal repayment whereas common stock investors do not. Further, long-term debtholders have first claim on assets in case of bankruptcy. A risk premium recognizes the higher risk to which a common stock investor is exposed. The risk premium-derived cost rate for common equity is the simplest form of deriving the cost rate for common equity because it is nothing more than a premium above the prospective level of long-term corporate debt.

Q. WHAT IS THE APPROPRIATE ESTIMATED FUTURE LONG-TERM BORROWING RATE FOR THE COMPARABLE COMPANIES?

A. The estimated future long-term borrowing rate for the Comparable Companies is 5.9% based upon their credit profile that supports an "A" bond rating.

Q. WHAT IS THE APPROPRIATE RISK PREMIUM TO BE ADDED TO THE FUTURE LONG-TERM BORROWING RATE?

A. To determine a common equity cost rate, it is necessary to estimate a risk premium to be added to the Comparable Group's prospective long-term debt rate. Investors may rely upon published projected premiums and they also rely upon their experiences of investing in ultimately determining a probabilistic forecasted risk premium.

Projections of total market returns are shown on page 2 of Schedule 21. A projected risk premium for the market can be derived by subtracting the debt cost rate from the projected market return as shown on page 2 of Schedule 21. However, the derived risk premium for the market is not directly applicable to the Comparable Companies because they are less risky then the market. The use of 90% of the market's risk is a conservative estimation of their level of risk as compared to the market.

The midpoint of the risk premium range is 13.8% and the average for the past twelve months are 12.4% as shown on page 2 of Schedule 21. Based on this, a reasonable estimate of a longer term projected risk premiums is 13.8%.

Q. HOW DO INVESTORS' EXPERIENCES AFFECT THEIR DETERMINATION OF A RISK PREMIUM?

A. Returns on various assets are studied to determine a probabilistic risk premium. The most noted asset return studies and resultant risk premium studies are those performed by Ibbotson Associates. However, Ibbotson Associates has not performed asset return studies concerning public utility common stocks. Based upon Ibbotson Associates' methodology of computing asset returns, I calculated annual returns for the S&P utilities and bonds for the period 1928-08. The resultant annual returns were then compared to determine a recent risk premium from a recent 20-year period, 1979-08 and subsequent periods that were each increased by ten years until the entire study period was reviewed (pages 3 and 4 of Schedule 21).

A long-term analysis of rates of return is necessary because it assumes that investors' expectations are, on average, equal to realized long-run rates of return and resultant risk premium. Observing a single year's risk premium, either high or low, may not be consistent with investors' requirements. Studies show a mean reversion in risk premiums. In other words, over time, risk premiums revert to a longer-term average premium. The expected rate of return is defined as "the rate of return expected to be realized from an investment; the mean value of the probability distribution of possible results."[25]

Q. WHAT DO YOU CONCLUDE FROM THE INFORMATION SHOWN ON PAGES 3 AND 4 OF SCHEDULE 21?

A. The average of the absolute range of the S&P Utilities' appropriate average risk premium was 3.5% during the seven periods studied, as shown on page 3 of Schedule 21. The credit adjusted average longer term risk premiums, 1928-08, and averages 4.0%. The appropriate average longer term risk premiums, 1928-08, have an absolute range of 4.0% to 4.7%, and averages 4.3%.

The aforementioned premiums are based on total returns for bonds and hence, reflect their price risk. A bond's price risk is not related to their credit quality and is eliminated when a bond is held to maturity from time of purchase. Using the income returns for bonds eliminates price risk and better measures an investor's required return based on credit

[25]Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition, The Dryden Press, 1989, p. 106.

quality. The appropriate average risk premium based on income returns was 4.1% during the seven periods studied. The credit adjusted average longer term risk premiums, 1928-08, and averages 4.0%. The appropriate average longer term risk premiums, 1928-08, have an absolute range of 4.1% to 4.6%, and averages 4.4%.

Risk premiums are mean reverting. They constantly move toward a long-term average. That is, an above average risk premium will decrease toward a long-term average while a below average risk premium will increase toward a long-term average. In any single year, of course, investor-required rates of return may not be realized and in certain instances, a single years' risk premiums may be negative. Negative risk premiums are not indicative of investors' expectations and violate the basic premise of finance concerning risk and return. Negative risk premiums usually occur only in the stock market's down years, i.e., the years in which the stock markets' return was negative.

Therefore, based upon a reasonable probability distribution of risk premiums, its reasonable to conclude that investors would give the longer term year results, more weight than those from the most recent years. Based upon the published projected risk premium and the probabilistic forecasted risk premium, a reasonable estimate of investors risk premium is 4.3%[26]. Adding the risk premium of 4.3% for the Comparable Groups to the prospective cost of newly-issued long-term debt of 5.9% results in a market value risk premium derived

[26]The published projected risk premiums have been impacted by unusual high projected market return for the five of the past twelve months as show on page 2 of Schedule 21. Accordingly, the estimate of investors risk premium is based primarily on the results of the historical market returns.

cost rate for common equity of 10.2% as is shown on page 1 of Schedule 21. Adjusting the market value risk premium to account for the difference in leverage between market value capitalization ratios indicates a cost rate of 10.7% applicable to book value.

SUMMARY OF COMMON EQUITY COST RATE

Q. WHAT IS YOUR COMPARABLE GROUP' COMMON EQUITY COST RATE?

A. Based upon the results of the models employed, the Water Group's common equity cost rate is in the range of 10.7% to 12.0% and the Gas Group's common equity cost rate is in the range of 10.7% to 11.3% as shown on Schedule 2. Based upon the range of these data, the common equity cost rate for the Water Group is 11.3% and 11.1% for the Gas Group. My recommendation is based upon the Water Group's 11.3% common equity cost rate.

Q. DO YOU RECOMMEND A COST OF COMMON EQUITY OF 11.3% FOR AQUA?

A. Yes, AQUA's cost rate must be adjusted to reflect the risk differences of AQUA versus the Comparable Groups. Based upon the recommended capital structure ratios of almost 53% common equity, financial analysis, and risk analysis I conclude that AQUA is exposed to similar investment risk as the Water Group. AQUA investment risk is tempered by the recommended capital structure ratios which includes 53% common equity. It should be noted that I would recommend an investment risk adjustment to AQUA cost of common equity if more leverage was included in AQUA's capital structure ratios. However, because I am using AQUA 53% common equity ratio I did not make a risk adjustment to the various

results of the three models employed for the Water Group. Accordingly, the current range of common equity cost applicable to book value for AQUA of 11.~~3%~~1% (DCF), 12.0% (CAPM), and 10.7% (RP) as shown in Table 6.

TABLE 6

Summary of AQUA's Equity Cost Rates

DCF	11.~~3~~1
CAPM	12.0
RP	10.7

Q. WHAT IS YOUR COMMON EQUITY COST RATE RECOMMENDATION FOR AQUA?

A. As shown on Schedule 2, I recommend a 11.3% common equity cost rate for AQUA.

Q. HAVE YOU CHECKED THE REASONABLENESS OF YOUR RECOMMENDED COMMON EQUITY RATE FOR AQUA?

A. Yes. On page 2 of Schedule 16 the average projected return on average book common equity for the companies in comparable group for the period 2012-2014 is shown to range from 11.8% to 12.2%.

1 **OVERALL RATE OF RETURN RECOMMENDATION**

2

3 **Q. WHAT IS YOUR OVERALL FAIR RATE OF RETURN RECOMMENDATION**
4 **FOR AQUA?**

5 A. Based upon the recommended capital structure and my estimate of AQUA's common equity
6 cost rate, I recommend that an overall fair rate of return of 9.08%. The details of my
7 recommendation are shown on Schedule 1.

8

9 **Q. HAVE YOU TESTED THE REASONABLENESS OF YOUR OVERALL FAIR**
10 **RATE OF RETURN RECOMMENDATION?**

11 A. Yes. A comparison of the results of my recommend overall rate of return to S&P's financial
12 benchmarks is shown on page 1 of Schedule 1. If my recommendation is actually earned,
13 it will give Kankakee financial benchmark ratios that will allow AQUA to present a financial
14 profile that will enable it to attract the large amount of capital necessary to provide safe and
15 reliable water service, at reasonable terms.

16

17 **Q. DO YOU BELIEVE THAT AQUA CAN ACHIEVE THE BENCHMARK RATIOS**
18 **THAT YOU HAVE CALCULATED?**

19 A. No. As previously stated, AQUA requires about $39 million of additional or new capital
20 over the next two years, 2010-2012 and Kankakee requires about $16 million of additional
21 or new capital over the same period . This represents a 22% increase and/or turnover of
22 ratemaking related capital. Accordingly, prospectively, AQUA will most likely experience

1 attrition and therefore will not earn its cost of capital.

2

3 **Q. DOES THAT CONCLUDE YOUR DIRECT TESTIMONY?**

4 A. Yes, it does.

5

APPENDIX A

Professional Qualifications
of
Harold Walker, III
Manager, Financial Studies
Gannett Fleming, Inc.

EDUCATION

Mr. Walker graduated from Pennsylvania State University in 1984 with a Bachelor of Science Degree in Finance. His studies concentrated on securities analysis and portfolio management with an emphasis on economics and quantitative business analysis. He has also completed the regulation and the rate-making process courses presented by the College of Business Administration and Economics Center for Public Utilities at New Mexico State University. Additionally, he has attended programs presented by The Institute of Chartered Financial Analysts (CFA).

Mr. Walker was awarded the professional designation "Certified Rate of Return Analyst" (CRRA) by the Society of Utility and Regulatory Financial Analysts. This designation is based upon education, experience and the successful completion of a comprehensive examination. He is also a member of the Society of Utility and Regulatory Financial Analysts (SURFA) and has attended numerous financial forums sponsored by the Society. The SURFA forums are recognized by the Association for Investment Management and Research (AIMR) and the National Association of State Boards of Accountancy for continuing education credits.

BUSINESS EXPERIENCE

Prior to joining Gannett Fleming, Inc., Mr. Walker was employed by AUS Consultants - Utility Services. He held various positions during his eleven years with AUS, concluding his employment there as a Vice President. His duties included providing and supervising financial and economic studies on behalf of investor owned and municipally owned water, waste water, electric, natural gas distribution and transmission, oil pipeline and telephone utilities as well as resource recovery companies.

In 1996, Mr. Walker joined the Valuation and Rate division of Gannett Fleming, Inc. In his capacity as Manager, Financial Studies and for the past eighteen years, he has continuously studied rates of return requirements for regulated firms. In this regard, he supervised the preparation of rate of return studies in connection with his testimony and in the past, for other individuals. He also assisted and/or

developed dividend policy studies, nuclear prudence studies, calculated fixed charge rates for avoided costs involving cogeneration projects, financial decision studies for capital budgeting purposes and developed financial models for determining future capital requirements and the effect of those requirements on investors and ratepayers, valued utility property and common stock for acquisition and divestiture, and assisted in the private placement of fixed capital securities for public utilities.

Mr. Walker was also the Publisher of C.A. Turner Utility Reports from 1988 to 1996. C.A. Turner Utility Reports is a financial publication which provides financial data and related ratios and forecasts covering the utility industry. From 1993 to 1994, he became a contributing author for the Fortnightly, a utility trade journal. His column was the Financial News column and focused mainly on the natural gas industry.

In 2004, Mr. Walker was elected to serve on the Board of Directors of SURFA. Previously, he served as an ex-officio directors as an advisor to SURFA's existing President. In 2000, Mr. Walker was elected President of SURFA for the 2001-2002 term. Prior to that, he was elected to serve on the Board of Directors of SURFA during the period 1997-1998 and 1999-2000. Currently, he also serves on the Pennsylvania Municipal Authorities Association, Electric Deregulation Committee.

EXPERT TESTIMONY

Mr. Walker has submitted testimony before seventeen state public utility commissions including: Arizona, Colorado, Connecticut, Delaware, Illinois, Indiana, Kentucky, Michigan, Missouri, New Hampshire, New Jersey, New York, Oklahoma, Pennsylvania, Vermont, Virginia and West Virginia. His testimonies covered various subjects including: appropriate capital structure and fixed capital cost rates, depreciation, fair rate of return, synchronization of interest charges for income tax purposes, valuation, cash working capital, purchased water adjustments, financial analyses of investment alternatives and fair value. The following tabulation provides a listing of the electric power, natural gas distribution, telephone, wastewater, and water service utility cases in which he has been involved as a witness. Additionally, he has been involved in a number of rate proceedings involving small public utilities which were resolved by Option Orders and therefore, are not listed below.

Client	Docket No.
Alpena Power Company	U-10020
Armstrong Telephone Company - Northern Division	92-0884-T-42T
Armstrong Telephone Company - Northern Division	95-0571-T-42T
Artesian Water Company, Inc.	90-10
Artesian Water Company, Inc.	06-158
Aqua Illinois - Hawthorn Woods	

Wastewater Division	07-0620/07-0621/08-0067
Aqua Illinois - Hawthorn Woods Water Division	07-0620/07-0621/08-0067
Aqua Illinois - Vermilion Division	07-0620/07-0621/08-0067
Aqua Illinois - Willowbrook Wastewater Division	07-0620/07-0621/08-0067
Aqua Illinois - Willowbrook Water Division Docket	07-0620/07-0621/08-0067
Aqua Virginia - Alpha Water Corporation	Pue-2009-00059
Aqua Virginia - Blue Ridge Utility Company, Inc.	Pue-2009-00059
Aqua Virginia - Caroline Utilities, Inc. (Wastewater)	Pue-2009-00059
Aqua Virginia - Caroline Utilities, Inc. (Water)	Pue-2009-00059
Aqua Virginia - Earlysville Forest Water Company	Pue-2009-00059
Aqua Virginia - Heritage Homes of Virginia	Pue-2009-00059
Aqua Virginia - Indian River Water Company	Pue-2009-00059
Aqua Virginia - James River Service Corp.	Pue-2009-00059
Aqua Virginia - Lake Holiday Utilities, Inc. (Wastewater)	Pue-2009-00059
Aqua Virginia - Lake Holiday Utilities, Inc. (Water)	Pue-2009-00059
Aqua Virginia - Lake Monticello Services Co. (Wastewater)	Pue-2009-00059
Aqua Virginia - Lake Monticello Services Co. (Water)	Pue-2009-00059
Aqua Virginia - Lake Shawnee	Pue-2009-00059
Aqua Virginia - Land'or Utility Company (Wastewater)	Pue-2009-00059
Aqua Virginia - Land'or Utility Company (Water)	Pue-2009-00059
Aqua Virginia - Mountainview Water Company, Inc.	Pue-2009-00059
Aqua Virginia - Powhatan Water Works, Inc.	Pue-2009-00059
Aqua Virginia - Rainbow Forest Water Corporation	Pue-2009-00059
Aqua Virginia - Shawnee Land	Pue-2009-00059
Aqua Virginia - Sydnor Water Corporation	Pue-2009-00059
Aqua Virginia - Water Distributors, Inc.	Pue-2009-00059
Borough of Hanover	R-2009-2106908
Chaparral City Water Company	W-02113a-04-0616
California-American Water Company	CIVCV156413
Connecticut-American Water Company	99-08-32
Connecticut Water Company	06-07-08
Citizens Utilities Company Colorado Gas Division	-
Citizens Utilities Company Vermont Electric Division	5426
Citizens Utilities Home Water Company	R-901664
Citizens Utilities Water Company of Pennsylvania	R-901663
City of Bethlehem - Bureau of Water	R-00984375
City of Bethlehem - Bureau of Water	R-00072492

Continued:

Client	Docket No.
City of Lancaster Sewer Fund	R-00005109
City of Lancaster Sewer Fund	R-00049862
City of Lancaster Water Fund	R-00984567
City of Lancaster Water Fund	R-00016114
City of Lancaster Water Fund	R-00051167
Consumers Pennsylvania Water Company Roaring Creek Division	R-00973869
Consumers Pennsylvania Water Company Shenango Valley Division	R-00973972
Country Knolls Water Works, Inc.	90-W-0458
East Resources, Inc. - West Virginia Utility	06-0445-G-42T
Elizabethtown Water Company	WR06030257
Hampton Water Works Company	DW 99-057
Indian Rock Water Company	R-911971
Indiana Natural Gas Corporation	38891
Jamaica Water Supply Company	-
Kentucky-American Water Company, Inc.	2007-00134
Middlesex Water Company	WR-89030266J
Missouri-American Water Company	WR-2000-281
Missouri-American Water Company	SR-2000-282
Mount Holly Water Company	WR06030257
New Jersey-American Water Company	WR-89080702J
New Jersey-American Water Company	WR-90090950J
New Jersey-American Water Company	WR-03070511
New Jersey-American Water Company	WR-06030257
New Jersey-American Water Company	WR08010020
Newtown Artesian Water Company	R-911977
Newtown Artesian Water Company	R-00943157
Newtown Artesian Water Company	R-2009-2117550
Northern Indiana Fuel & Light Company	38770
Oklahoma Natural Gas Company	PUD-940000477
Pennichuck Water Works, Inc.	DW 04-048
Pennichuck Water Works, Inc.	DW 06-073
Pennichuck Water Works, Inc.	DW 08-073
Pennsylvania Gas & Water Company (Gas)	R-891261
Pennsylvania Gas & Water Co. (Water)	R-901726
Pennsylvania Gas & Water Co. (Water)	R-911966
Pennsylvania Gas & Water Co. (Water)	R-22404
Pennsylvania Gas & Water Co. (Water)	R-00922482

Continued:

Client	Docket No.
Pennsylvania Gas & Water Co. (Water)	R-00932667
Presque Isle Harbor Water Company	U-9702
St. Louis County Water Company	WR-2000-844
United Water New Rochelle	W-95-W-1168
United Water Toms River	WR-95050219
Valley Water Systems, Inc.	06-10-07
Wilmington Suburban Water Corporation	94-149
York Water Company	R-901813
York Water Company	R-922168
York Water Company	R-943053
York Water Company	R-963619
York Water Company	R-994605
York Water Company	R-00016236