

Idaho Public Utilities Commission
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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION
OF UNITED WATER IDAHO INC. FOR
AUTHORITY TO INCREASE ITS RATES
AND CHARGES FOR WATER SERVICE IN
THE STATE OF IDAHO

Case No. UWI-W-04-04

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

DIRECT TESTIMONY OF PAULINE M. AHERN

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Appendix A to the Direct Testimony of Pauline M. Ahern

1 I. INTRODUCTION

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

3 A. My name is Pauline M. Ahern and I am a Vice President of AUS
4 Consultants - Utility Services. My business address is 155
5 Gaither Drive, P.O. Box 1050, Moorestown, New Jersey 08057.

6 Q. Please summarize your educational background and
7 professional experience.

8 A. I am a graduate of Clark University, Worcester, MA, where I
9 received a Bachelor of Arts degree with honors in Economics in
10 1973. In 1991, I received a Master of Business Administration
11 with high honors from Rutgers University.

12 In June 1988, I joined AUS Consultants - Utility Services as a
13 Financial Analyst and am now a Vice President. I am
14 responsible for the preparation of all fair rate of return and capital
15 structure exhibits for AUS Consultants - Utility Services. I have
16 offered expert testimony on behalf of investor-owned utilities
17 before nineteen state regulatory commissions. The details of
18 these appearances, as well as details of my educational
19 background, are shown in Appendix A supplementing this
20 testimony.

21 I am also the Publisher of C. A. Turner Utility Reports,
22 responsible for the production, publication, distribution and
23 marketing of these reports. C. A. Turner Utility Reports provides
24 financial data and related ratios covering approximately 150
25 public utility companies on a monthly, quarterly, and annual

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United Water Idaho Inc.

1 basis. Coverage includes electric, combination gas and electric,
2 gas distribution, gas transmission, telephone, water and
3 international utilities. The Reports are distributed to about 1,000
4 subscribers, which include utilities, state utility commissions,
5 federal agencies, individuals, brokerage firms, attorneys and
6 public and collegiate libraries.

7 I also calculate and maintain the A.G.A. Index under contract
8 with the American Gas Association (A.G.A.). The A.G.A. Index
9 is a market capitalization weighted index of the common stocks
10 of about 70 corporate members of the A.G.A.

11 I have co-authored an article with Frank J. Hanley, President,
12 AUS Consultants - Utility Services entitled "Comparable
13 Earnings: New Life for an Old Precept" which was published in
14 the American Gas Association's Financial Quarterly Review,
15 Summer 1994. I also assisted in the preparation of an article
16 authored by Frank J. Hanley and A. Gerald Harris entitled "Does
17 Diversification Increase the Cost of Equity Capital?" published in
18 the July 15, 1991 issue of Public Utilities Fortnightly.

19 I am a member of the Society of Utility and Regulatory Financial
20 Analysts, formerly the National Society of Rate of Return
21 Analysts, serving as Secretary/Treasurer for 2004-2006. In
22 1992, I was awarded the professional designation "Certified Rate
23 of Return Analyst" (CRRRA) by the National Society of Rate of
24 Return Analysts. This designation is based upon education,

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United Water Idaho Inc.

1 experience and the successful completion of a comprehensive
2 written examination.

3 I am an associate member of the National Association of Water
4 Companies (NAWC), serving on its Finance Committee and a
5 member of the Energy Association of Pennsylvania, formerly the
6 Pennsylvania Gas Association.

7 Q. What is the purpose of your testimony?

8 A. The purpose is to provide testimony on behalf of United Water
9 Idaho, Inc. (United or the Company) as to the appropriate
10 common equity cost rate which it should be afforded the
11 opportunity to earn on the common equity financed portion of its
12 jurisdictional rate base.

13 Q. What is your recommended common equity cost rate?

14 A. I recommend that the Idaho Public Utilities Commission (IPUC or
15 the Commission) authorize the Company the opportunity to earn
16 an overall rate of return based upon the consolidated capital
17 structure of United Waterworks, Inc., United's parent, consisting
18 of 55.10% long-term debt, 0.13% minority interest (preferred
19 stock) and 44.77% common equity at cost rates of 7.10%, 5.00%
20 and 11.20%, respectively.

21 Q. Have you prepared an exhibit which supports your overall
22 recommended fair rate of return?

23 A. Yes, I have. It has been marked for identification as Exhibit No.
24 12 and consists of 11 schedules, labeled (PMA-1) through (PMA-

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11). Hereinafter, references to Schedules within this testimony will be from this Exhibit, unless otherwise noted.

II. SUMMARY

Q. Please summarize your recommended common equity cost rate of 11.2%.

A. I assessed the market-based cost rates of similar risk companies, i.e., proxy groups, for insight into a recommended common equity cost rate applicable to United and suitable for cost of capital purposes. Because United's common stock is not publicly traded, market-based common equity cost rates cannot be determined directly for United. Consequently, it is appropriate to look to a proxy group or groups of similar risk companies whose common stocks are actively traded for insight into an appropriate common equity cost rate applicable to United and then adjust the results upward to reflect United's greater risk (vis-à-vis the proxy groups). Using other utilities of comparable risk as proxies is consistent with the principles of fair rate of return established in the Hope¹ and Bluefield² cases and adds reliability to the informed expert judgment used in arriving at a recommended common equity cost rate. Therefore, I have evaluated the market data of two proxy groups of water

¹ Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944).

² Bluefield Water Works Improvement Co. v. Public Serv. Comm'n, 262 U.S. 679 (1922).

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companies in arriving at my recommended common equity cost rate. The bases of selection are described below. One group consists of six C.A. Turner water companies, while the other group consists of the three water companies included in Value Line Investment Survey's Standard Edition (Value Line water companies).

My analysis reflects current capital market conditions and results from the application of four well-tested market-based cost of common equity models, the Discounted Cash Flow (DCF) approach, the Risk Premium Model (RPM), the Capital Asset Pricing Model (CAPM), and the Comparable Earnings Model (CEM).

The results derived from each are summarized on page 2 of Schedule (PMA-1) and are as follows:

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| | <u>Table 1</u> | |
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| | Proxy Group of Six Standard Edition <u>Water Cos.</u> | Proxy Group of Three <u>Value Line</u> <u>Water Cos.</u> |
| C.A. Turner | | |
| Discounted Cash Flow Model | 10.8% | 11.2% |
| Risk Premium Model | 11.0 | 11.2 |
| Capital Asset Pricing Model | 10.5 | 10.8 |
| Comparable Earnings Model | 14.2 | 14.1 |
| Range of Common Equity Cost Rate | 10.8% | - 11.2% |
| Business Risk Adjustment | <u>0.15</u> | <u>0.25</u> |
| Range of Common Equity Cost Rate After Adjustment for Business Risk | <u>10.95%</u> | <u>11.45%</u> |
| Midpoint | 11.2% | |
| Recommended Common Equity Cost Rate | <u>11.2%</u> | |

After reviewing the cost rates based upon the four models, I conclude that a common equity cost rate range of 10.8% - 11.2% before adjustment for United's greater business risk is indicated based upon the application of all four models to both proxy groups.

As will be discussed subsequently, United is smaller than the average company in either proxy group. All else equal, small size means greater business risk. After applying business risk adjustments of 0.15% and 0.25% to the indicated common equity

1 cost rates based upon the much larger, less business risky proxy
2 groups, a range of common equity cost rate of 10.95% - 11.45%
3 is indicated. My recommended common equity cost rate is
4 11.2% based upon the midpoint of this range, and is applicable
5 to the common equity financed portion of United's rate base.

6 III. GENERAL PRINCIPLES

7 Q. What general principles have you considered in arriving at your
8 recommended common equity cost rate of 11.2%.

9 A. In unregulated industries, marketplace competition is the
10 principal determinant of the price of a product or service. In the
11 case of regulated public utilities, regulation must act as a
12 substitute for marketplace competition. Consequently,
13 marketplace data must be relied upon to assure that the utility
14 can fulfill its obligations to the public and provide adequate
15 service at all times. This requires a level of earnings sufficient to
16 maintain the integrity of presently invested capital and permit the
17 attraction of needed new capital at a reasonable cost in
18 competition with other comparable-risk firms. These standards
19 for a fair rate of return have been established by the U.S.
20 Supreme Court in the Hope and Bluefield cases cited previously.
21 Consequently, in my determination of a fair rate of return, I have

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United Water Idaho Inc.

1 made every effort to also evaluate data gathered from the
2 marketplace for water utilities similar in risk to United.

3 IV. BUSINESS RISK

4 Q. Please define business risk and explain why it is important to the
5 determination of a fair rate of return?

6 A. Business risk incorporates all of the risks of a firm other than
7 financial risk, which will be discussed subsequently. Examples
8 of business risk include specific aspects of the operational and
9 regulatory environment which have a direct bearing on earnings
10 such as taxes and other cost increases, construction
11 requirements, litigation and the potential for growth in revenue.
12 Business risk is important to the determination of a fair rate of
13 return because the greater the level of risk, the greater the rate
14 of return investors demand, consistent with the basic financial
15 precept of risk and return.

16 Q. Please discuss the business risks facing the water industry in
17 general.

18 A. Regarding the business risks facing the water industry, Value
19 Line Investment Survey³ observes:

20 The Safe Drinking Water Act (SDWA) of 1974 remains

³ Value Line Investment Survey, July 30, 2004.

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the authority related to the safety and purity of drinking water. Its amendment in 1996 authorized the Environmental Protection Agency EPA) to step up local compliance levels. However, the regulatory environment has only grown more onerous of late. With security measures being tightened in the wake of recent terrorist activity, governing law makers have insisted that the EPA work with local and state governments to test for impurities in drinking water and to regulate the levels of contaminants that are acceptable. And, with these standards only likely to become more stern in the years ahead, as the threat of bioterrorism against our water pipelines increases, capital budgets are likely to be increased. It is estimated that it will take hundreds of billions of dollars to renovate existing pipelines. Unfortunately, tight federal budgets are inhibiting the government from helping fund the needed improvements.

Moody's⁴ also notes that:

We expect that the credit quality of the investor-owned U.S. water utilities will likely deteriorate over the next several years, due to ongoing large capital spending requirements in the industry. Larger capital expenditures facing the water utility industry result from the following factors:

- Continued federal and state environmental compliance requirements;
- Higher capital investments for constructing modern water treatment and filtration facilities;
- Ongoing improvement of maturing distribution and delivery infrastructure; and
- Heightened security measures for emergency preparedness designed to prevent potential terrorist acts.

Given the overwhelming importance of protecting the

⁴ Moody's Investors Service, Global Credit Research, "The Water Utility Industry: Risks Rise for Last U.S. Regulated Monopoly", Special Comment, February 1998, pp. 1 and 6.

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public health, the water utility industry remains regulated by the federal and state regulatory agencies. As a result of this importance, the level of state regulators' responsiveness is critical in enabling the water utilities to maintain their financial integrity. In addition, when utilities are permitted a fair rate of return and timely rate adjustments to reflect the costs of providing this essential service, they will be more able to implement the necessary safeguards to protect the public health.

In addition, because the water industry is much more capital-intensive than the electric, natural gas or telephone industries, the investment required to produce a dollar of revenue is greater. Thus, the challenge to water utilities is significant.

In addition, the water utility industry, as well as the electric and natural gas utility industries, faces the need for increased funds to finance the increasing security costs required to protect the water supply and infrastructure from potential terrorist attacks in the post-September 11, 2001 world.

In view of the foregoing, it is clear that the water utility industry's high degree of capital intensity coupled with the need for substantial infrastructure capital spending and increased anti-terrorism security spending, require regulatory support in the form of adequate and timely rate relief so water utilities will be able to successfully meet the challenges they face.

Q. Does United face additional extraordinary business risk?

1 A. Yes. The Company faces four specific risk factors. The first is
2 due to the uncertainty surrounding its future supply portfolio due
3 to water rights issues. The second is due to the substantial
4 variations in weather conditions in Idaho. The third is due to the
5 Company's smaller size vis-à-vis the companies in my two proxy
6 groups. Finally, the fourth is due to the significant growth in
7 United's customer base, necessitating significant additions to
8 rate base.

9 Q. Please discuss the uncertainty surrounding United's supply
10 portfolio.

11 A. The Company's supply portfolio consists of both surface water
12 and ground water rights which are difficult and increasingly
13 expensive to acquire or modify. The Company continually
14 struggles to protect these rights all the time. Currently the
15 Company is attempting to bring security to its water rights
16 through regulatory activity, such as its Integrated Municipal
17 Application Package (IMAP). In addition, the Snake Rive Basin
18 Watershed Adjudication presents increased uncertainty, and
19 hence, risk to United because of the risk of the potential loss of
20 existing water rights in the Basin once the Adjudication process
21 is complete. Exacerbating the risk to United's supply portfolio is

1 the issue of conjunctive management, whereby certain ground
2 water rights may be deemed linked to surface water rights and
3 therefore potentially unavailable to supply water to United under
4 certain conditions. Consequently, the Company faces the
5 potential of spending a significant, but uncertain amount of
6 dollars in the near future to realign its water rights portfolio.
7 Coupled with the significant customer growth in its service
8 territory and United's obligation to provide water service when
9 requested, this poses a risk to United for water supply planning
10 purposes and hence pressures United's revenues and cash
11 flows.

12 Q. Please discuss the weather conditions faced by United.

13 A. The Company's service territory enjoys an arid desert climate
14 which has a significant effect upon United's revenues. The
15 majority of its annual revenues are realized during the summer
16 months due to customer's dependence upon United for their
17 summer irrigation supply. Average monthly production in the
18 summer climbs to four times that of the winter months. In
19 addition, because the service territory receives only
20 approximately 11-12 inches of annual precipitation, United's
21 annual revenues are particularly sensitive to unusually cool or

1 wet weather in the summer. As new customers draw less water,
2 conservation efforts become increasingly successful, and high
3 flow fixtures in older residences are being replaced by low flow
4 fixtures. Even without summer weather fluctuations, average
5 winter consumption is down when compared with history and the
6 Company expects that it will continue to decline. Nevertheless,
7 United must continue to manage its water rights and build new
8 rate base to meet its increasing number of customers and
9 anticipated summer loads, furthering pressuring revenues and
10 cash flows.

11 Q. Please explain why size has a bearing on business risk.

12 A. United's smaller size, i.e., total capital of \$120.665 million at
13 June 30, 2004 (see page 3 of Schedule (PMA-1) vis-à-vis
14 average total capital of \$502.690 million and \$865.130 million in
15 2003 for the proxy group of six C.A. Turner water companies and
16 proxy group of three Value Line water companies (see page 3 of
17 Schedule (PMA-1) indicates greater relative business risk
18 because all else equal, size has a bearing on risk.

19 Smaller companies are less capable of coping with
20 significant events which affect sales, revenues and earnings.

21 The loss of revenues from a few larger customers, or from

1 declining consumption due to conservation or weather, for
2 example, would have a greater effect on a small company than
3 on a much larger company with a larger customer base.
4 Because United is the regulated utility to whose rate base the
5 Commission's ultimately allowed overall cost of capital and fair
6 rate of return will be applied, the relevant risk reflected in the
7 cost of capital must be that of United, including the impact of its
8 small size on common equity cost rate. Size is an important
9 factor which affects common equity cost rate, and United is
10 significantly smaller than the average company in the proxy
11 group based upon total investor-provided capital as shown
12 below:

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Table 2

| | 2003 Total Capital (\$ millions) | Times Greater than The Company | Market Capitalization(1) (\$ Millions) | Times Greater than the Company |
|--|---|--------------------------------------|--|--------------------------------------|
| Proxy Group of Six C.A. Turner Water Companies | \$502.690 | 4.2x | \$559.824 | 4.6x |
| Proxy Group of Three <u>Value Line</u> Water Cos. | 865.130 | 7.3 | 980.864 | 8.2 |
| United Water Idaho, Inc. | 119.049 | | 121.982(2) 120.154(3) | |

- (1) From Schedule (PMA-1), page 3.
- (2) Based upon the proxy group of six C.A. Turner water companies.
- (3) Based upon the proxy group of three Value Line water companies.

I have also performed a study of the market capitalization of the proxy groups of six C.A. Turner water companies and three Value Line water companies. The results are shown on page 5 of Schedule (PMA-1) which summarizes the market capitalizations as of October 7, 2004.

United's common stock is not publicly traded. Consequently, I have assumed that if it were publicly traded, its consolidated common shares would be selling at the same market-to-book ratios as the average market-to-book ratios for the two proxy groups, or 225.8% and 222.4%, respectively (at October 7, 2004). Because all of United's capital is carried on its books as common equity, its ratemaking capital structure is based upon its parent's, United Waterworks, capital structure as shown on page 1 of Schedule (PMA-1). Therefore, I have allocated United's

1 total capital at June 30, 2004 by United Waterworks' common
2 equity ratio (based upon total investor-provided capital) at June
3 30, 2004 as detailed in Note 4 on page 5 of Schedule (PMA-1),
4 to arrive at an allocated common equity balance at June 30,
5 2004 of \$54.022 million. Based upon estimated common equity
6 of \$54.022 million, United's market capitalization is estimated at
7 \$121.982 million based upon the six C.A. Turner water
8 companies and \$120.154 million based upon the three Value
9 Line water companies as of October 7, 2004. In contrast, the
10 market capitalizations of the average C.A. Turner water company
11 were \$559.824 million and \$980.864 million on October 7, 2004,
12 respectively, or 4.6 and 8.2 times larger than United estimated
13 market capitalization. It is conventional wisdom, supported by
14 actual returns over time, and a general premise contained in
15 basic finance textbooks, that smaller companies tend to be more
16 risky causing investors to expect greater returns as
17 compensation for that risk.

18 Q. Does the financial literature affirm a relationship between size
19 and common equity cost rate?

20 A. Yes. Brigham⁵ states that:

21
22 A number of researchers have observed that portfolios
23 of small-firms have earned consistently higher average

⁵ Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition, The Dryden Press, 1989, p. 623.

1 returns than those of large-firms stocks; this is called
2 "small-firm effect." On the surface, it would seem to be
3 advantageous to the small firms to provide average
4 returns in a stock market that are higher than those of
5 larger firms. In reality, it is bad news for the small firm;
6 what *the small-firm effect means is that the capital*
7 *market demands higher returns on stocks of small firms*
8 *than on otherwise similar stocks of the large firms.*
9 (italics added)

10
11 Q. Please discuss the risk which United faces due to the significant
12 growth in its customer base.

13 A. United serves approximately 75,000 customers in the city of
14 Boise and surrounding areas in Ada and Canyon counties.
15 United has recently experienced significant growth in its
16 customer base, growing at an annual rate of 2.0%-2.5% or 1,600
17 to 1,800 new residential customers annually. In addition, rate
18 base will have grown more than 41% since the last rate case in
19 2000, from \$99 million in 2000 to \$140 million in 2005, due in
20 large part to the construction of the Columbia Water Treatment
21 Plant as well as several other projects during 2000 to 2004.
22 Also, operating expenses, excluding depreciation and property
23 taxes, have increased 25% from \$11 million to 13.8 million. In
24 addition, the Company's future capital plans call for an
25 expansion in its source of supply to meet continued customer
26 growth by implementing Aquifer Storage and Recovery (ASR),

1 the drilling of new wells and increasing the capacity of the
2 Columbia Water Treatment Plant.

3 The uncertainty surrounding United's supply portfolio, significant
4 variations in weather conditions and system demands,
5 continuing growth in customer base, United's aggressive capital
6 plan and increasing operating expenses, all contribute to the
7 uncertainty and pressure on revenues, earnings and cash flows,
8 which when combined with its small size create a greater
9 business risk compared to the two proxy groups.

10 V. FINANCIAL RISK

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

13 A. Financial risk is the additional risk created by the introduction of
14 senior capital, i.e., debt and preferred stock, into the capital
15 structure. In other words, the higher the proportion of senior
16 capital in the capital structure, the higher the financial risk.

17 Utilities formerly were considered to have much less
18 business risk vis-a-vis unregulated enterprises, and, as a result,
19 a larger percentage of debt capital was acceptable to investors.
20 In June 2004, S&P revised its utility financial guidelines and
21 assigned new business profile scores to U.S. utility and power

1 companies to better reflect the relative business risk among
2 companies in the sector. S&P's revised financial guidelines to
3 the bond rating process for utilities can be found in Schedule
4 (PMA-2), page 14, while pages 1 through 9 describe the utility
5 bond rating process. As shown on page 14, S&P's revised
6 financial guidelines to utilities establish financial target ratios for
7 ten levels of business position/profile with "1" being considered
8 lowest risk and "10" being highest risk.

9 As shown on Schedule (PMA-9), page 2, the average S&P
10 credit ratings (issuer credit rating) and business profiles of the six
11 C.A. Turner water companies and three Value Line water
12 companies are A+ and "2.6" and A and "2.7", respectively.

13 Q. How can one measure the combined business and financial
14 risks, i.e., investment risk of an enterprise?

15 A. Similar bond ratings/issuer credit reflect similar combined
16 business and financial risks, i.e., total risk. Although the specific
17 business or financial risks may differ between companies, the
18 same bond rating indicates that the combined risks are similar as
19 the bond rating process reflects acknowledgment of all
20 diversifiable business and financial risks. For example, S&P
21 expressly states that the bond rating process encompasses a

1 qualitative analysis of business and financial risks (see pages 3
2 through 10 of Schedule (PMA-2)). There is no perfect single
3 proxy, such as bond rating or common stock ranking, by which
4 one can differentiate common equity risk between companies.
5 However, the bond rating provides a useful means to
6 compare/differentiate common equity risk between companies
7 because it is the result of a thorough and comprehensive
8 analysis of all diversifiable business and financial risks, i.e.,
9 investment risk.

10 VI. PROXY GROUPS

11 Q. Please explain how you chose the proxy group of six C.A. Turner
12 water companies.

13 A. The basis of selection for the proxy group of six C.A. Turner
14 water companies is that those companies meet the following
15 criteria: 1) they are included in the Water Company Group of
16 C.A. Turner Public Utility Reports (October 2004); 2) they have
17 Value Line or Thomson FN/First Call consensus projected
18 growth rates in earnings per share; and 3) they have more than
19 70% of their 2003 operating revenues derived from water
20 operations. Six companies met all of these criteria.

21 Q. Please describe Schedule (PMA-3).

1 A. Schedule (PMA-3) contains comparative capitalization and
2 financial statistics for the six C.A. Turner water companies for the
3 years 1999 through 2003. The schedule consists of three pages.
4 Page 1 contains a summary of the comparative data for the
5 years 1999-2003, while page 2 contains notes relevant to page
6 1, as well as the basis of selection and names of the individual
7 companies in the proxy group. Page 3 contains the capital
8 structure ratios based upon total capital (including short-term
9 debt) by company and on average for the years 1999-2003.

10 During the five-year period ending 2003, the achieved
11 average earnings rate on book common equity for this group
12 ranged between 8.97% in 2003, and 10.82% in 1999, and
13 averaged 10.16%. The five-year average market/book ratio
14 ending 2003 was 212.98%. The five-year ending 2003 average
15 common equity ratio based upon total investor-provided capital
16 (including short-term debt) was 43.09%, while the five-year
17 average dividend payout ratio was 80.17%.

18 Funds from operations/interest coverage, excluding all
19 AFUDC ranged between 3.10 and 3.38 times and averaged 3.26
20 times during the five-year period.

1 Q. Please explain how you chose the proxy group of three Value
2 Line water companies.

3 A. The basis of selection for the proxy group of three Value Line
4 water companies was to include those companies which are part
5 of Value Line's (Standard Edition) Water Utility Industry Group.

6 Q. Please describe Schedule (PMA-4).

7 A. Schedule (PMA-4) contains comparative capitalization and
8 financial statistics for the three Value Line water companies for
9 the years 1999 through 2003. The schedule consists of three
10 pages. Page 1 contains a summary of the comparative data for
11 the years 1999-2003, while page 2 contains notes relevant to
12 page 1, as well as the basis of selection and names of the
13 individual companies in the proxy group. Page 3 contains the
14 capital structure ratios based upon total capital (including short-
15 term debt) by company and on average for the years 1999-2003.

16 During the five-year period ending 2003, the achieved
17 average earnings rate on book common equity for this group
18 ranged between 8.86% in 2003, and 11.37% in 2000, and
19 averaged 10.60%. The five-year average market/book ratio
20 ending 2003 was 219.34%. The five-year ending 2003 average
21 common equity ratio based upon total investor-provided capital

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(including short-term debt) was 43.01%, while the five-year average dividend payout ratio was 75.16%.

Funds from operations/interest coverage, excluding all AFUDC ranged between 3.40 and 3.63 times and averaged 3.54 times during the five-year period.

VII. COMMON EQUITY COST RATE MODELS

A. The Efficient Market Hypothesis (EMH)

Q. Are the cost of common equity models you use market-based models, and hence based upon the EMH?

A. Yes. The DCF model is market-based in that market prices are utilized in developing the dividend yield component of the model. The RPM is market-based in that the bond ratings and expected bond yields used in the application of the RPM reflect the market's assessment of risk. In addition, the use of betas to determine the equity risk premium also reflects the market's assessment of risk as betas are derived from regression analyses of market prices. The CAPM is market-based for many of the same reasons that the RPM is market-based i.e., the use of expected bond (Treasury bond) yields and betas. The CEM is market-based in that the process of selecting the comparable risk non-utility companies is based upon statistics which result from regression analyses of market prices. Therefore, all the cost of common equity models I utilize are market-based models,

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and hence based upon the EMH.

Q. Please describe the conceptual basis of the EMH.

A. The Efficient Market Hypothesis (EMH), which is the foundation of modern investment theory, was pioneered by Eugene F. Fama⁶ in 1970. An efficient market is one in which security prices reflect all relevant information all the time. This implies that prices adjust instantaneously to new information, thus reflecting the intrinsic fundamental economic value of a security.⁷

The generally-accepted "semistrong" form of the EMH asserts that all publicly available information is fully reflected in securities prices i.e., fundamental analysis cannot enable an investor to "outperform the market". This means that all perceived risks are taken into account by investors in the prices the pay for securities. Investors are aware of all publicly-available information, including bond ratings, discussions about companies by bond rating agencies and investment analysts as well as the various cost of common equity methodologies (models) discussed in the financial literature. In an attempt to emulate investor behavior, no single common equity cost rate model should be relied upon in determining a cost rate of common equity and the results of multiple cost of common equity

⁶ Fama, Eugene F., "Efficient Capital Markets: A Review of Theory and Empirical Work". Journal of Finance, May 1970, pp. 383-417.

⁷ Morin, Roger A., Regulatory Finance - Utilities' Cost of Capital. Public Utility Reports, Inc., Arlington, VA, 1994, p. 136.

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models should be taken into account. In addition, there is substantial support in the academic literature for the need to rely upon more than one cost of common equity model in arriving at a recommended common equity cost rate.

In view of the foregoing, it is clear that investors are aware of all of the models available for use in determining a common equity cost rate. The EMH requires the assumption that, collectively, investors use them all.

B. Discounted Cash Flow Model (DCF)

1. Theoretical Basis

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

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

1 Schedule (PMA-5) have been adjusted upward to reflect one-half
2 the growth rates shown in Column 4.

3 c. Selection of Growth Rates for Use in the DCF Model

4 Q. Please explain the basis of the growth rates for the proxy groups
5 of six C.A. Turner water companies and three Value Line water
6 companies which you use in your application of the DCF model.

7 A. Schedule (PMA-7) indicates that about 79.0% and 70.0% of the
8 common shares of the proxy groups of six C.A. Turner water
9 companies and three Value Line water companies, respectively
10 are held by individuals as opposed to institutional investors.
11 Individual investors are particularly likely to place great
12 significance on the opinions expressed by financial information
13 services, such as Value Line which is readily accessible in most
14 public libraries and Thomson FN/First Call which is easily
15 accessible via the Internet.

16 Forecasts by analysts, including Value Line, are typically
17 limited to five years. Thus, it is appropriate to use five-year
18 historical growth rates in earnings per share (EPS) and dividends
19 per share (DPS) as well as the sum of internal and external
20 growth in per share value (BR + SV) in conjunction with analysts'
21 five-year projected growth in EPS and five-year projected growth
22 in BR + SV when determining a growth rate for use in the DCF
23 model. The historical growth rates in EPS and DPS are from
24 Value Line or calculated in a manner similar to Value Line, while

1 the projected growth rates in earnings are from Value Line and
2 Thomson FN/First Call forecasts. Thomson FN/First Call growth
3 rate estimates are not available for DPS and internal growth, and
4 they do not include the Value Line projections.

5 All of these growth rates are summarized for the companies
6 in the proxy group on page 1, Schedule (PMA-8). Supporting
7 growth rate data are detailed on pages 2 through 8 of Schedule
8 (PMA-8). Pages 8 through 12 of Schedule (PMA-8) contain all of
9 the most current Value Line Investment Survey data for the
10 companies in the proxy groups.

11 Q. Please summarize the DCF model results.

12 A. As shown on Schedule (PMA-5), the results of the application of
13 the DCF model are 10.8% for the proxy group of six C.A. Turner
14 water companies and 11.2% for the proxy group of three Value
15 Line water companies. In arriving at conclusions of indicated
16 common equity cost rates for the proxy groups, I included only
17 those DCF results which are greater than 200 basis points above
18 the average prospective yield on Moody's A rated public utility
19 bonds of 6.8%, or 8.8%, based upon Blue Chip Financial
20 Forecasts' October 1, 2004 consensus forecast of about 50
21 economists of the expected yield on Aaa rated corporate bonds
22 of 6.3% as discussed subsequently and derived in Note 3 on
23 page 6 of Schedule (PMA-9). It is necessary to adjust the
24 average Aaa rated corporate bond yield to be equivalent to a

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Moody's A2 rated public utility bond. As detailed in Note 2 on page 1 of Schedule (PMA-9), an adjustment to the average prospective yield on Aaa rated corporate bonds of 0.5% was required. Thus, the average prospective yield on Moody's A rated public utility bonds is 6.8%.

Based upon a review of recent authorized returns on common equity (ROE) in New York vis-à-vis concurrent estimates of the forecasted average yield on A rated public utility bonds, I determined that the equity risk premium implicit in recent IPUC authorized ROEs is between approximately 335 and 361 basis points. In accordance with the EMH, investors are aware of these implicit equity risk premia and, in my opinion, would not consider returns providing an equity risk premium of only 200 basis points above the prospective average yield on A rated public utility bonds of 6.8% or 8.8%.

C. The Risk Premium Model (RPM)

1. Theoretical Basis

- Q. Please describe the theoretical basis of the RPM.
- A. Risk Premium theory indicates that the cost of common equity capital is greater than the prospective company-specific cost rate for long-term debt capital. In other words, the cost of common equity equals the expected cost rate for long-term debt capital plus a risk premium to compensate common shareholders for the added risk of being unsecured and last-in-line for any claim on

1 the corporation's assets and earnings.

2 Q. Have you performed RPM analyses of common equity cost rate
3 for the proxy groups of six C.A. Turner water companies and
4 three Value Line water companies?

5 A. Yes. The results of my applications of the RPM are summarized
6 on page 1 of Schedule (PMA-9). On Line No. 3, page 1,
7 Schedule (PMA-9), I show the average expected yield on A rated
8 public utility bonds of 6.8%. On Line No. 4, I show the
9 adjustments, if necessary, that need to be made to the average
10 6.8% expected A rated utility bond yield so that the expected
11 yield of 6.8% in Line No. 5 is reflective of the average Moody's
12 bond rating of A2 for the two proxy groups of water companies
13 as shown on page 2 of Schedule (PMA-9). On Line No. 6 of
14 page 1, my conclusions of an equity risk premia applicable to
15 each proxy group are shown, while the total risk premium
16 common equity cost rates are shown on Line No. 7.

17 2. Estimation of Expected Bond Yield

18 Q. Please explain the basis of the expected bond yield of 6.8%
19 applicable to the average company in each proxy group.

20 A. Because the cost of common equity is prospective, a prospective
21 yield on similarly-rated long-term debt is essential. As shown on
22 Schedule (PMA-9), page 2, the average Moody's bond rating for
23 both proxy groups of water companies is A2. I relied upon a
24 consensus forecast of about 50 economists of the expected yield

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on Aaa rated corporate bonds for the six calendar quarters ending with the first calendar quarter of 2006 as derived from the October 1, 2004 Blue Chip Financial Forecasts (shown on page 7 of Schedule (PMA-9). As shown on Line No. 1 of page 1 of Schedule (PMA-9), the average expected yield on Moody's Aaa rated corporate bonds is 6.3%. It is necessary to adjust that average yield to be equivalent to a Moody's A2 rated public utility bond. Consequently, an adjustment to the average prospective yield on Aaa rated corporate bonds of 0.5% was required. It is shown on Line No. 2, page 1 of Schedule (PMA-9) and explained in Note 2 at the bottom of the page. After adjustment, the expected bond yield applicable to a Moody's A rated public utility bond is 6.8% as shown on Line No. 3, page 1 of Schedule (PMA-9).

Because the average Moody's bond rating for the two proxy groups of water companies is A2, no adjustment to the 6.8% prospective yield on A rated public utility bonds is necessary. Therefore, the expected proxy group specific bond yield is 6.8%.

3. Estimation of the Equity Risk Premium

- Q. Please explain the method utilized to estimate the equity risk premium.
- A. I evaluated the results of two different historical equity risk premium studies, as well as Value Line's forecasted total annual market return in excess of the prospective yield on high grade

1 corporate bonds, as detailed on pages 5, 6 and 8 of Schedule
2 (PMA-9). As shown on Line No. 3, page 5 of Schedule (PMA-9),
3 the mean equity risk premia based on both of the studies are
4 4.2% applicable to the proxy group of six C.A. Turner water
5 companies and 4.4% applicable to the proxy group of three
6 Value Line water companies. These estimates are the result of
7 an average of beta-derived historical equity risk premia and
8 forecasted total market equity risk premia as well as the mean
9 historical equity risk premium applicable to public utilities with
10 bonds rated A based upon holding period returns.

11 The basis of the beta-derived equity risk premia applicable
12 to the proxy group is shown on page 6 of Schedule (PMA-9).
13 Beta-determined equity risk premia should receive substantial
14 weight because betas are derived from the market prices of
15 common stocks over a recent five-year period and are a
16 meaningful measure of prospective risk relative to the market as
17 a whole.

18 The total market equity risk premium utilized is 6.4% and is
19 based upon an average of both the long-term historical and
20 forecasted market risk premia of 6.3% and 6.4%, respectively,
21 as shown on page 6 of Schedule (PMA-9). To derive the
22 historical market equity risk premium, I used the most recent
23 Ibbotson Associates' data on holding period returns for the S&P
24 500 Composite Index and the average annual yield on Moody's

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Aaa and Aa corporate bonds covering the period 1926-2003. The use of holding period returns over a very long period of time is useful in the beta approach because it is consistent with the long-term investment horizon presumed by the DCF model. Consequently, the long-term arithmetic mean total return rates on the market as a whole of 12.4% and arithmetic mean yield (income return) on corporate bonds of 6.1% were used, as shown at Line Nos. 1 and 2 of page 6 of Schedule (PMA-9). As shown on Line No. 3 of page 6, the resultant long-term historical equity risk premium on the market as a whole is 6.3%.

I used arithmetic mean return rates and yields (income returns) because they are appropriate for cost of capital purposes because ex-post (historical) total returns and equity risk premium spreads differ in size and direction over time. The arithmetic mean provides insight into the variance and standard deviation of such returns as it captures the prospect for variance in returns, thus providing the valuable insight needed by investors to estimate future risk when making a current investment. Absent such valuable insight into the potential variance of returns, investors cannot meaningfully evaluate prospective risk.

The basis of the forecasted market equity risk premium can be found on Line Nos. 4 through 6 on page 6 of Schedule (PMA-9). It is derived from an average of the most recent 3 months

1 (using the months of July 2004 through August 2004) and a
2 recent spot (October 1, 2000) median market price appreciation
3 potentials by Value Line as explained in detail in Note 1 on page
4 3 of Schedule (PMA-10). The average expected price
5 appreciation is 52% which translates to 11.04% per annum and,
6 when added to the average (similarly calculated) dividend yield
7 of 1.70% equates to a forecasted annual total return rate on the
8 market as a whole of 12.74%, rounded to 12.7%. Thus, this
9 methodology is consistent with the use of the 3-month and spot
10 dividend yields in my application of the DCF model. To derive
11 the forecasted total market equity risk premium of 6.4% shown
12 on Schedule (PMA-9), page 6, Line No. 6, the October 1, 2004
13 forecast of about 50 economists of the expected yield on
14 Moody's Aaa rated corporate bonds for the six calendar quarters
15 ending with the first calendar quarter 2006 of 6.3% from Blue
16 Chip Financial Forecasts was deducted from the Value Line total
17 market return of 12.7%. The calculation resulted in an expected
18 market risk premium of 6.4%.

19 The average of the historical and projected market equity
20 risk premia of 6.3% and 6.4% is 6.45%, rounded to 6.4%.

21 On page 9 of Schedule (PMA-9), the most current Value
22 Line betas for the companies in the two proxy groups are shown.
23 Applying the average betas to the average market equity risk
24 premium of 6.4% for the six C.A. Turner water companies and

1 the three Value Line water companies results in beta adjusted
2 equity risk premia of 4.4% and 4.5%, respectively, as shown on
3 Schedule (PMA-9), page 6, Line No. 9.

4 A mean equity risk premium of 4.2% applicable to
5 companies with A rated public utility bonds was calculated based
6 upon holding period returns from a study using public utilities, as
7 shown on Line No. 2, page 5 of Schedule (PMA-9), and detailed
8 on page 8 of the same schedule.

9 The equity risk premia applicable to the two proxy groups of
10 water companies are the average of the proxy group-specific
11 beta-derived premium and that based upon the holding period
12 returns of public utilities with A rated bonds, as summarized on
13 Schedule (PMA-9), page 5, i.e., 4.2% and 4.4% for the three
14 Value Line water companies, respectively.

15 Q. What are the RPM calculated common equity cost rates ?

16 A. They are 11.0% for the six C.A. Turner water companies and
17 11.2% for the three Value Line water companies as shown on
18 Schedule (PMA-9), page 1.

19 D. The Capital Asset Pricing Model (CAPM)

20 1. Theoretical Basis

21 Q. Please explain the theoretical basis of the CAPM.

22 A. CAPM theory defines risk as the covariability of a security's
23 returns with the market's returns. This covariability is measured
24 by beta (" β "), an index measure of an individual security's

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variability relative to the market. A beta less than 1.0 indicates lower variability while a beta greater than 1.0 indicates greater variability than the market.

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

$$R_s = R_f + \beta(R_m - R_f)$$

- Where:
- R_s = Return rate on the common stock
 - R_f = Risk-free rate of return
 - R_m = Return rate on the market as a whole
 - β = Adjusted beta (volatility of the security relative to the market as a whole)

1 Numerous tests of the CAPM have confirmed its validity. These
2 tests have measured the extent to which security returns and
3 betas are related as predicted by the CAPM. However, Morin
4 observes that while the results support the notion that beta is
5 related to security returns, it has been determined that the
6 empirical Security Market Line (SML) described by the CAPM is
7 not as steeply sloped as the predicted SML. Morin⁸ states:

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

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14 * * *

15 Therefore, the empirical evidence suggests that the
16 expected return on a security is related to its risk by the following
17 approximation:

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19
$$K = R_F + x \beta(R_M - R_F) + (1-x) \beta(R_M - R_F)$$

20
21 where x is a fraction to be determined empirically. ...the
22 value of x that best explains the observed relationship is
23 between 0.25 and 0.30. If x = 0.25, the equation
24 becomes:

25
26
$$K = R_F + 0.25(R_M - R_F) + 0.75 \beta(R_M - R_F)$$
⁹

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28 In view of theory and practical research, I have applied both the
29 traditional CAPM and the empirical CAPM to the companies in

⁸ Id., at p. 321.
⁹ Id., at pp. 335-336.

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the proxy group and averaged the results.

2. Risk-Free Rate of Return

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

A. My applications of the traditional and empirical CAPM are summarized on Schedule (PMA-10), page 1. As shown on Line Nos. 1 and 4, the risk-free rate adopted for both applications is 5.5%. It is based upon the average consensus forecast of the reporting economists in the October 1, 2004 of Blue Chip Financial Forecasts as shown in Note 2, page 4, of the expected yields on long-term U.S. Treasury bonds for the six quarters ending with the first calendar quarter 2006.

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

A. The yield on long-term T-Bonds is almost risk-free and its term is consistent with the long-term cost of capital to public utilities measured by the yields on A rated public utility bonds, and is consistent with the long-term investment horizon inherent in utilities' common stocks. Therefore, it is consistent with the long-term investment horizon presumed in the standard DCF model employed in regulatory ratemaking.

3. Market Equity Risk Premium

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

A. After estimating investors' expected total return rate for the

1 market, I subtract the expected risk-free rate to arrive at an
2 expected equity risk premium for the market, some proportion of
3 which must be allocated to the companies in the proxy group
4 through the use of beta. As shown on Schedule (PMA-10), page
5 1, Line No. 2, the proportional market equity risk premium, based
6 on the traditional CAPM, is 4.7% for the proxy group of six C.A.
7 Turner water companies and 5.0% for the proxy group of three
8 Value Line water companies. Applying the empirical CAPM
9 results in an equity risk premium of 5.3% for the six C.A. Turner
10 water companies and 5.8% for the three Value Line water
11 companies as shown on Line No. 5 on page 1 of Schedule
12 (PMA-10). The total market equity risk premium utilized was
13 7.2% and is based upon an average of the long-term historical
14 and projected market risk premia.

15 The basis of the projected median market equity risk
16 premium is explained in detail in Note 1 on page 3 of Schedule
17 (PMA-10). As previously discussed, it is derived from an
18 average of the most recent 3 months (using the months of July
19 2004 through August 2004) and a recent spot (October 1, 2004)
20 3 - 5 year median total market price appreciation projections
21 from Value Line, and the long-term historical average from
22 Ibbotson Associates. The appreciation projections by Value Line
23 plus average dividend yield equate to a forecasted annual total
24 return rate on the market of 12.7%. The long-term historical

1 return rate of 12.4% on the market as a whole is from Ibbotson
2 Associates' Stocks, Bonds, Bills and Inflation - Valuation Edition
3 2004 Yearbook. In each instance, the relevant risk-free rate was
4 deducted from the total market return rate. For example, from
5 the Value Line projected total market return of 12.7%, the
6 forecasted average risk-free rate of 5.5% was deducted
7 indicating a forecasted market risk premium of 7.2%. From the
8 Ibbotson Associates' long-term historical total return rate of
9 12.4%, the long-term historical income return rate on long-term
10 U.S. Government Securities of 5.2% was deducted indicating an
11 historical equity risk premium of 7.2%. Thus, the average of the
12 projected and historical total market risk premia of 7.2% and
13 7.2%, respectively, is 7.2%.

14 Q. What are the results of your applications of the traditional and
15 empirical CAPM to the proxy group?

16 A. As shown on Schedule (PMA-10), Line No. 3 of page 1, the
17 traditional CAPM cost rates are 10.2% for the proxy group of six
18 C.A. Turner water companies and 10.5% for the proxy group of
19 three Value Line water companies. And, as shown on Line No. 6
20 of page 1, the empirical CAPM cost rates are 10.8% for the
21 proxy group of six C.A. Turner water companies and 11.1% for
22 the three Value Line water companies. The traditional and
23 empirical CAPM cost rates are shown individually by company
24 on pages 2 and 3 of Schedule (PMA-10). As shown on Line No.

1 7, the CAPM cost rate applicable to the proxy group of six water
2 companies is 10.5% and an 10.8% CAPM cost rate is applicable
3 to the proxy group of three Value Line water companies based
4 upon the traditional and empirical CAPM results.

5 E. Comparable Earnings Model (CEM)

6 1. Theoretical Basis

7 Q. Please describe your application of the Comparable Earnings
8 Model and how it is used to determine common equity cost rate.

9 A. My applications of the CEM are summarized on Schedule (PMA-
10 11) which consists of six pages. Pages 1 and 2 show the CEM
11 results for the proxy group of six C.A. Turner water companies,
12 while pages 3 and 4 show the CEM results for the proxy group of
13 three Value Line water companies. Pages 5 and 6 contain the
14 notes related to pages 1 through 4.

15 The comparable earnings approach is derived from the
16 "corresponding risk" standard of the landmark cases of the U.S.
17 Supreme Court. Therefore, it is consistent with the Hope
18 doctrine that the return to the equity investor should be
19 commensurate with returns on investments in other firms having
20 corresponding risks.

21 The CEM is based upon the fundamental economic concept
22 of opportunity cost which maintains that the true cost of an
23 investment is equal to the cost of the best available alternative
24 use of the funds to be invested. The opportunity cost principle is

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United Water Idaho Inc.

1 also consistent with one of the fundamental principles upon
2 which regulation rests: that regulation is intended to act as a
3 surrogate for competition and to provide a fair rate of return to
4 investors.

5 The CEM is designed to measure the returns expected to be
6 earned on the book common equity, in this case net worth, of
7 similar risk enterprises. Thus, it provides a direct measure of
8 return, since it translates into practice the competitive principle
9 upon which regulation rests. In my opinion, it is inappropriate to
10 use the achieved returns of regulated utilities of similar risk
11 because to do so would be circular and inconsistent with the
12 principle of equality of risk with non-price regulated firms.

13 The difficulty in application of the CEM is to select a proxy
14 group of companies which are similar in risk, but are not price
15 regulated utilities. Consequently, the first step in determining a
16 cost of common equity using the comparable earnings model is
17 to choose an appropriate proxy group of non-price regulated
18 firms which is broad-based in order to obviate any company-
19 specific aberrations but excludes utilities.

20 2. Application of the CEM

21 Q. Please describe your application of the CEM.

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23 A. My application of the CEM is market-based in that the selection
24 of non-price regulated firms of comparable risk is based upon

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statistics derived from the market prices paid by investors.

I have chosen proxy groups of eighty-one and ninety-nine domestic, non-price regulated firms to reflect both the systematic and unsystematic risks of each proxy group, respectively. The proxy group of eighty-one non-utility companies is listed on pages 1 and 2 of Schedule (PMA-11), while the companies in the proxy group of ninety-nine non-utility companies are listed on pages 3 and 4. The criteria used in the selection of these proxy companies were that they be domestic non-utility companies and have a meaningful rate of return on net worth, common equity or partners' capital reported in Value Line (Standard Edition) for each of the five years ended 2003, or projected for 2007-2009. Value Line betas were used as a measure of systematic risk. The residual standard error, or the standard error of the estimate from the regression equation from which each company's beta was derived, was used as a measure of each firm's specific, i.e., unsystematic risk. The residual standard error reflects the extent to which events specific to a company's operations will affect its stock price and, therefore, is a measure of diversifiable, unsystematic, company-specific risk. *In essence, companies which have similar betas and residual standard errors, have similar investment risk, i.e., the sum of systematic (market) risk as reflected by beta and unsystematic (business and financial) risk, as reflected by the residual standard error, respectively.*

1 *Those statistics are derived from regression analyses using*
2 *market prices which, under the EMH reflect all relevant risks.*
3 *The application of these criteria results in a proxy group of non-*
4 *price regulated firms similar in risk to the average company in*
5 *the proxy group.*

6 Using a Value Line, Inc. database dated September 16,
7 2004, the proxy groups of eighty-one and ninety-nine non-price
8 regulated companies were chosen based upon ranges of
9 unadjusted beta and residual standard error. The ranges were
10 based upon the average standard deviations of the unadjusted
11 beta and the average residual standard errors for the proxy
12 groups of six C.A. Turner water companies and three Value Line
13 water companies as explained in Notes 1 and 9 on page 5 of
14 Schedule (PMA-11).

15 Once proxy groups of non-price regulated companies are
16 selected, it is then necessary to derive returns on book common
17 equity, net worth or partners' capital for the companies in the
18 groups. I have measured these returns using the rate of return
19 on net worth, common equity or partners' capital reported by
20 Value Line (Standard Edition). It is reasonable to measure these
21 returns over both the most recent historical five-year period as
22 well as those projected over the ensuing five-year period,
23 consistent with the use of historical and projected growth rates in
24 the DCF model.

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United Water Idaho Inc.

1 Q. What are your conclusions of CEM cost rate?

2 A. The CEM cost rate is 16.2% for the proxy group of six C.A.
3 Turner water companies as shown on page 2 of Schedule (PMA-
4 11) and 16.0% for the proxy group of three Value Line water
5 companies as shown on page 4 of Schedule (PMA-11). Note
6 that I have applied a test of significance (Student's t-statistic) to
7 determine whether any of the historical or projected returns are
8 significantly different from their respective means at the 95%
9 confidence level. As a result, the historical and projected means
10 of several companies have been excluded.

11 I have also eliminated from the total group of eighty-one and
12 ninety-nine companies, all those rates of return which are greater
13 than 20.0% or less than 200 basis points above the current
14 prospective yield of 6.8% on Moody's A rated public utility bonds
15 (see page 1 of Schedule (PMA-9)), or 8.8%. Such elimination
16 results in an arithmetic mean return rate of 15.0% on an
17 historical five-year basis and 13.5% on a projected five-year
18 basis for the six C.A. Turner water companies and 14.4% and
19 13.6%, respectively, for the three Value Line water companies. I
20 rely upon the midpoint of the arithmetic mean historical five-year
21 and projected five-year rates of return of 14.2% and 14.1% for
22 each proxy group, respectively, excluding those rates of return in
23 excess of 20.0% or less than 8.8% as my CEM conclusion.

Pauline M. Ahern, Di 45
United Water Idaho Inc.

1 VIII. RECOMMENDED COMMON EQUITY COST RATE

2 Q. What is your recommended common equity cost rate?

3 A. It is 11.2%, based upon a range of common equity cost rates of
4 10.8% - 11.2% before business risk adjustment based upon the
5 common equity cost rates resulting from all four cost of common
6 equity models consistent with the EMH which logically mandates
7 the use of multiple cost of common equity models.

8 In formulating the range of common equity cost rate of 10.8%
9 - 11.2%, I reviewed the results of the application of four different
10 cost of common equity models, namely, the DCF, RPM, CAPM,
11 and CEM for the proxy groups. I employ all four cost of common
12 equity models as primary tools in arriving at my recommended
13 common equity cost rate because no single model is so
14 inherently precise that it can be relied upon solely, to the
15 exclusion of other theoretically sound models. As discussed
16 above, all four models are based upon the Efficient Market
17 Hypothesis (EMH), and therefore, have application problems
18 associated with them. The EMH, as also previously discussed,
19 requires the assumption that investors rely upon multiple cost of
20 common equity models. Moreover, as demonstrated in this
21 testimony, the prudence of using multiple cost of common equity
22 models is supported in the financial literature. Therefore, none
23 should be relied upon exclusively to estimate investors' required
24 rate of return on common equity.

Pauline M. Ahern, Di 46
United Water Idaho Inc.

1 These cost rates are applicable to the much larger, less
2 business risky, proxy groups. However, as discussed previously,
3 United bears more business risk than the average proxy group
4 company because of its small size vis-à-vis the proxy groups,
5 and the particular risk factors affecting the Company, as
6 previously discussed. Therefore, it is necessary to upwardly
7 adjust the range of common equity cost rate of 10.8% - 11.2%
8 based upon the proxy groups. Therefore, based upon United's
9 small relative size, I have added business risk adjustments of
10 0.15% (15 basis points) relative to the indicated common equity
11 cost rate of 10.8% for the six C.A. Turner water companies and
12 0.25% (25 basis points) relative to the indicated common equity
13 cost rate of 11.2% for the three Value Line water companies,
14 which are conservatively realistic. The adjustments are based
15 upon data contained in Chapter 7 entitled, "Firm Size and
16 Return" from Ibbotson Associates' Stocks, Bonds, Bills and
17 Inflation-Valuation Edition 2004 Yearbook. The determinations
18 are based on the size premia for decile portfolios of New York
19 Stock Exchange (NYSE), American Stock Exchange (AMEX)
20 and NASDAQ listed companies for the 1926-2003 period and
21 related data shown on pages 6 through 18 of Schedule (PMA-1).
22 The average size premium for the 7th and 8th deciles, between
23 which the proxy group of six water companies falls, and for the
24 6th decile in which the proxy group of three Value Line water

1 companies falls, have been compared to the average size
2 premium for the 9th and 10th deciles between which United falls,
3 if its stock were traded and sold at the October 7, 2004 average
4 market/book ratios of 226.1% experienced by the six C.A. Turner
5 water companies and 222.4% experienced by the three Value
6 Line water companies. As shown on page 2 of Schedule (PMA-
7 1), the size premium spreads between the six C.A. Turner water
8 companies and United is 2.71% and 3.03% between the three
9 Value Line water companies and United. Thus, 0.15% and
10 0.25% are extremely conservative and reasonable estimates of
11 the magnitude of the adjustments needed to reflect the business
12 risk differential between United and each proxy group,
13 respectively, based upon United's increased business risk
14 relative to that of the proxy groups due to United's small relative
15 size, negligible customer growth and extraordinarily large
16 expected capital expenditures over the next four years.
17 Consequently, as shown on page 3 of Schedule (PMA-1) at Line
18 No. 9 and Table 3 above, the indicated common equity cost rate
19 range based upon the total proxy groups, including the business
20 risk adjustment based upon United's greater relative business
21 risk is 10.95% - 11.45%, with a midpoint of 11.2%, which is also
22 my recommended common equity cost rate. In my opinion, such
23 a cost rate is both reasonable and conservative, given United's
24 small size and extraordinary business risk as previously

Pauline M. Ahern, Di 49
United Water Idaho Inc.

1 discussed.

2 Q. Does that conclude your direct testimony?

3 A. Yes.

APPENDIX A

PROFESSIONAL QUALIFICATIONS

OF

**PAULINE M. AHERN, CRRA
VICE PRESIDENT**

AUS CONSULTANTS – UTILITY SERVICES

**PROFESSIONAL QUALIFICATIONS
OF
PAULINE M. AHERN, CRRRA
VICE PRESIDENT
AUS CONSULTANTS – UTILITY SERVICES**

PROFESSIONAL EXPERIENCE

1996-Present

As a Vice President, I continue to prepare fair rate of return and cost of capital exhibits, as well as submitting testimony on same before state public utility commissions. I continue to provide assistance and support throughout the entire ratemaking litigation process.

As the Publisher of C.A. Turner Utility Reports, I am responsible for the production, publishing, and distribution of the reports. C.A. Turner Utility Reports provides financial data and related ratios for about 200 public utilities, i.e., electric, combination gas and electric, natural gas distribution, natural gas transmission, telephone, and water utilities, on a monthly, quarterly and annual basis. C.A. Turner Utility Reports has about 1,000 subscribers including utilities, many state regulatory commissions, federal agencies, individuals, brokerage firms, attorneys, as well as public and academic libraries. The publication has continuously provided financial statistics on the utility industry since 1930.

As the Publisher of C.A. Turner Utility Reports, I supervise the production, publishing, and distribution of the AGA Rate Service publications under license from the American Gas Association. I am also responsible for maintaining and calculating the performance of the AGA Index, a market capitalization weighted index of the common stocks of the approximately 90 corporate members of the AGA. In addition, I supervise the production of a quarterly survey of investor-owned water company rate case activity on behalf of the National Association of Water Companies.

1994-1996

As an Assistant Vice President, I prepared fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies. These supporting exhibits include the determination of an appropriate ratemaking capital structure and the development of embedded cost rates of senior capital. The exhibits also support the determination of a recommended return on common equity through the use of various market models, such as, but not limited to, Discounted Cash Flow analysis, Capital Asset Pricing Model and Risk Premium Methodology, as well as an assessment of the risk characteristics of the client utility. I also assisted in the preparation of responses to any interrogatories received regarding such testimonies filed on behalf of client utilities. Following the filing of fair rate of return testimonies, I assisted in the evaluation of opposition testimony in order to prepare interrogatory questions, areas of cross-examination, and rebuttal testimony. I also evaluated and assisted in the preparation of briefs and exceptions following the hearing process. I have submitted testimony before state public utility commissions regarding appropriate capital structure ratios and fixed capital cost rates.

1990-1994

As a Senior Financial Analyst, I supervised two analysts in the preparation of fair rate of return and cost of capital exhibits which are filed along with expert testimony before various state and federal public utility regulatory bodies. The team also assisted in the preparation of interrogatory responses.

I evaluated the final orders and decisions of various commissions to determine whether further actions are warranted and to gain insight which may assist in the preparation of future rate of return studies.

I assisted in the preparation of an article authored by Frank J. Hanley and A. Gerald Harris entitled "Does Diversification Increase the Cost of Equity Capital?" published in the July 15, 1991 issue of Public Utilities Fortnightly.

I co-authored an article with Frank J. Hanley entitled "Comparable Earnings: New Life for an Old Precept" which was published in the American Gas Association's Financial Quarterly Review, Summer 1994.

I was awarded the professional designation "Certified Rate of Return Analyst" (CRRRA) by the National Society of Rate of Return Analysts (now the Society of Utility and Regulatory Financial Analysts (SURFA)). This designation is based upon education, experience and the successful completion of a comprehensive examination.

As Administrator of Financial Analysis for C. A. Turner Utility Reports, which reports financial data for over 200 utility companies and has approximately 1,000 subscribers, I oversee the preparation of this monthly publication, as well as the annual publication, Financial Statistics - Public Utilities.

1988-1990

As a Financial Analyst, I assisted in the preparation of fair rate of return studies including capital structure determination, development of senior capital cost rates, as well as the determination of an appropriate rate of return on equity. I also assisted in the preparation of interrogatory responses, interrogatory questions of the opposition, areas of cross-examination and rebuttal testimony. I also assisted in the preparation of the annual publication C.A. Turner Utility Reports - Financial Statistics -Public Utilities.

1973-1975

As a research assistant in the Research Department of the Regional Economics Division of the Federal Reserve Bank of Boston, I was involved in the development and maintenance of econometric models to simulate regional economic conditions in New England in order to study the effects of, among other things, the energy crisis of the early 1970's and property tax revaluations on the economy of New England. I was also involved in the statistical analysis and preparation of articles for the New England Economic Review. Also, I acted as assistant editor for New England Business Indicators.

1972

As a research assistant in the Office of the Assistant Secretary for International Affairs, U.S. Treasury Department, Washington, D.C., I developed and maintained econometric models which simulated the economy of the United States in order to study the results of various alternate foreign trade policies so that national trade policy could be formulated and recommended.

I am also a member of the Society of Utility and Regulatory Financial Analysts (formerly the National Society of Rate of Return Analysts).

Clients Served

I have offered expert testimony before the following commissions:

| | |
|------------|----------------|
| Arkansas | Missouri |
| California | New Jersey |
| Delaware | New York |
| Florida | North Carolina |
| Hawaii | Ohio |
| Illinois | Pennsylvania |
| Indiana | South Carolina |
| Maine | Virginia |
| Maryland | Washington |
| Michigan | |

I have sponsored testimony on the rate of return and capital structure effects of merger and acquisition issues for:

California-American Water Company

New Jersey-American Water Company

I have sponsored testimony on fair rate of return and related issues for:

Audubon Water Company
Carolina Pines Utilities, Inc.
Carolina Water Service, Inc.
Consumers Illinois Water Company
Consumers Maine Water Company
Consumers New Jersey Water Company
Elizabethtown Water Company
Emporium Water Company
GTE Hawaiian Telephone Inc.
Greenridge Utilities, Inc.
Long Neck Water Company
Middlesex Water Company
Missouri-American Water Company
Mt. Holly Water Company
Nero Utility Services, Inc.
New Jersey-American Water Company

Pinelands Waste Water Company
Pittsburgh Thermal
Sussex Shores Water Company
Thames Water Americas
Tidewater Utilities, Inc.
Transylvania Utilities, Inc.
Twin Lakes Utilities, Inc.
United Utility Companies
United Water Arkansas, Inc.
United Water Delaware, Inc.
United Water Indiana, Inc.
United Water Virginia, Inc.
United Water West Lafayette, Inc.
Utilities, Inc. of Florida
Wellsboro Electric Company
Western Utilities, Inc.

I have sponsored testimony on capital structure and senior capital cost rates for the

following clients:

Alpena Power Company
Arkansas-Western Gas Company
Associated Natural Gas Company

PG Energy Inc.
United Water Delaware, Inc.
Washington Natural Gas Company

I have assisted in the preparation of rate of return studies on behalf of the following clients:

Algonquin Gas Transmission Company
Arkansas-Louisiana Gas Company
Arkansas Western Gas Company
Artesian Water Company
Associated Natural Gas Company
Atlantic City Electric Company
Bridgeport-Hydraulic Company
Cambridge Electric Light Company
Carolina Power & Light Company
Citizens Gas and Coke Utility
City of Vernon, CA
Columbia Gas/Gulf Transmission Cos.
Commonwealth Electric Company
Commonwealth Telephone Company
Rate of Return Study Clients, Continued

Conestoga Telephone & Telegraph Co.
Connecticut Natural Gas Corporation
Consolidated Gas Transmission Company
Consumers Power Company
CWS Systems, Inc.
Delmarva Power & Light Company
East Honolulu Community Services, Inc.
Equitable Gas Company
Equitrans, Inc.
Florida Power & Light Company
Gary Hobart Water Company
Gasco, Inc.
GTE Alaska, Inc.
GTE Arkansas, Inc.

GTE California, Inc.
GTE Florida, Inc.
GTE Hawaiian Telephone
GTE North, Inc.
GTE Northwest, Inc.
GTE Southwest, Inc.
Great Lakes Gas Transmission L.P.
Hawaiian Electric Company
Hawaiian Electric Light Company
IES Utilities Inc.
Illinois Power Company
Interstate Power Company
Iowa Electric Light and Power Company
Iowa Southern Utilities Company
Kentucky-West Virginia Gas Company
Lockhart Power Company
Middlesex Water Company
Milwaukee Metropolitan Sewer District
Mountaineer Gas Company
National Fuel Gas Distribution Corp.
National Fuel Gas Supply Corp.
Newco Waste Systems of NJ, Inc.
New Jersey-American Water Company
New Jersey Natural Gas Company
New York-American Water Company
North Carolina Natural Gas Corp.

Northumbrian Water Company
Ohio-American Water Company
Oklahoma Natural Gas Company
Orange and Rockland Utilities
Paiute Pipeline Company
PECO Energy Company
Penn-York Energy Corporation
Pennsylvania-American Water Co.
PG Energy Inc.
Philadelphia Electric Company
South Carolina Pipeline Company
Southwest Gas Corporation
Stamford Water Company
Tesoro Alaska Petroleum Company
United Telephone of New Jersey
United Utility Companies
United Water Arkansas, Inc.
United Water Delaware, Inc.
United Water Idaho, Inc.
United Water Indiana, Inc.
United Water New Jersey, Inc.
United Water New York, Inc.
United Water Pennsylvania, Inc.
United Water Virginia, Inc.
United Water West Lafayette, Inc.
Vista-United Telecommunications Corp.

Valley Energy, Inc. – PA Division
Washington Natural Gas Company
Washington Water Power Corporation
Waste Management of New Jersey –

Transfer Station A
Wellsboro Electric Company
Western Reserve Telephone Company
Western Utilities, Inc.

EDUCATION:

1973 – Clark University – B.A. – Honors in Economics
1991 – Rutgers University – M.B.A. – High Honors

PROFESSIONAL AFFILIATIONS:

Society of Utility and Regulatory Financial Analysts (serve as Secretary/Treasurer from 2004-2006)
Energy Association of Pennsylvania
National Association of Water Companies – Member of the Finance Committee