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IDAHO PUBLIC UTILITIES COMMISSION 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)
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CASE NO. UWI-W-04-4

DIRECT TESTIMONY OF TERRI CARLOCK
IDAHO PUBLIC UTILITIES COMMISSION
APRIL 6, 2005

1 Q. Please state your name and address for the
2 record.

3 A. My name is Terri Carlock. My business
4 address is 472 West Washington Street, Boise, Idaho.

5 Q. By whom are you employed and in what
6 capacity?

7 A. I am employed by the Idaho Public Utilities
8 Commission as the Accounting Section Supervisor.

9 Q. Please outline your educational background
10 and experience.

11 A. I graduated from Boise State University in
12 May 1980, with a B.B.A. Degree in Accounting and in
13 Finance. I have attended various regulatory, accounting,
14 rate of return, economics, finance and ratings programs.
15 I chaired the National Association of Regulatory
16 Utilities Commissioners (NARUC) Staff Subcommittee on
17 Economics and Finance for over 3 years. Under this
18 subcommittee, I also chaired the Ad Hoc Committee on
19 Diversification. I am currently a member of the NARUC
20 Staff Subcommittee on Accounting and Finance. I have
21 made presentations before the Institute of Public
22 Utilities at Michigan State University, NARUC Accounting
23 and Audit Seminars and for many other conferences. Since
24 joining the Commission Staff in May 1980, I have
25 participated in audits, performed financial analysis on

1 various companies and have presented testimony before
2 this Commission on numerous occasions.

3 Q. Please describe the scope of your
4 responsibilities in the preparation of this case.

5 A. My responsibilities were numerous but
6 generally fall in three basic categories. The first
7 category includes an analysis of all theories, policies
8 and ratemaking analysis. This responsibility ranges from
9 coordinating Staff witness testimonies to assure the
10 theories and policies used to establish rate base and the
11 revenue requirement are implemented appropriately and are
12 consistent with general ratemaking and accounting
13 theories. I support the position presented by Staff
14 witness Lobb to assure that no accounting requirements
15 are violated with this policy.

16 The second category of responsibility
17 encompasses the supervision of all accountants working on
18 this case. I discussed numerous adjustments with the
19 Staff and assisted in coordinating the positions and
20 testimonies.

21 The third category of responsibility relates
22 to the cost of capital. My testimony supports the Staff
23 recommendations for the 10% return on equity and the
24 development of the recommended 8.1% overall rate of
25 return.

1 Q. Please elaborate on the Staff's policy to
2 establish rate base levels based on the average of the
3 monthly averages.

4 A. Staff witness Lobb discusses this policy in
5 his testimony. I support this policy position and the
6 rationale he has presented and have assisted in
7 coordinating the numerous adjustments to assure
8 consistent treatment. As discussed by other witnesses,
9 the Columbia Water Treatment Plant is included in rate
10 base as if in place for the full year and the associated
11 costs and revenues are annualized. Other construction
12 projects are reflected in rate base using the average of
13 monthly averages rate base calculation. This is
14 consistent with other cases recently evaluated by Staff
15 and was determined by the Commission where only major
16 projects are included in rate base at a level greater
17 than the average of the monthly averages figure.
18 Inclusion by Staff witness Harms of the December 31, 2004
19 plant balances for proforma plant adjustments is
20 reasonable for many reasons. These reasons include the
21 availability of financial statements, consistency between
22 the reporting period used by United Water Idaho and
23 ratemaking adjustments, the ability to reconcile the
24 various adjustments, and the desire to reduce regulatory
25 lag where possible.

1 Q. Please move to the cost of capital analysis
2 and recommendations made by Staff in this case. Please
3 summarize the cost of capital recommendations.

4 A. I am recommending a return on common equity
5 in the range of 9.25% - 10.25% with a point estimate of
6 10.0%. The recommended overall weighted cost of capital
7 is in the range of 7.75% - 8.21% with a point estimate of
8 8.1% to be applied to the rate base for the test year.

9 Q. Are you sponsoring any exhibits to accompany
10 your testimony?

11 A. Yes, I am sponsoring Staff Exhibit No. 120.

12 Q. Have you reviewed the testimony and exhibits
13 of United Water Idaho (UWI, Company) witnesses,
14 particularly witness Ahern?

15 A. Yes. Much of the theoretical approach used
16 by UWI witness Ahern in her testimony and exhibits is
17 generally the same as I have used. My judgment in some
18 areas of application results in different outcomes and
19 recommendations.

20 Q. Please explain how Staff witness Hall's
21 testimony links with your testimony.

22 A. Staff witness Hall prepared, under my
23 direction, Exhibit Nos. 117, 118 and 119 along with
24 supporting testimony. I asked her to cover the legal
25 standards and basic explanation on how returns are

1 derived. She also makes the Staff's recommendations on
2 cost of debt, cost of minority interest (preferred stock)
3 and the capital structure used to calculate the revenue
4 requirement for UWI in this case.

5 Q. What approach have you used to determine the
6 cost of equity for United Water Idaho specifically?

7 A. I have primarily evaluated two methods: the
8 Discounted Cash Flow (DCF) method and the Comparable
9 Earnings method.

10 Q. Please explain the Comparable Earnings
11 method and how the cost of equity is determined using
12 this approach.

13 A. The Comparable Earnings method for
14 determining the cost of equity is based upon the premise
15 that a given investment should earn its opportunity
16 costs. In competitive markets, if the return earned by a
17 firm is not equal to the return being earned on other
18 investments of similar risk, the flow of funds will be
19 toward those investments earning the higher returns.
20 Therefore, for a utility to be competitive in the
21 financial markets, it should be allowed to earn a return
22 on equity equal to the average return earned by other
23 firms of similar risk. The Comparable Earnings approach
24 is supported by the *Bluefield Water Works and Hope*
25 *Natural Gas* decisions as a basis for determining those

1 average returns.

2 Industrial returns tend to fluctuate with
3 business cycles, increasing as the economy improves and
4 decreasing as the economy declines. Utility returns are
5 not as sensitive to fluctuations in the business cycle
6 because the demand for utility services generally tends
7 to be more stable and predictable.

8 Q. Please evaluate interest rate trends.

9 A. The prime interest rate ranges by year are
10 shown on Staff Exhibit No. 120, Schedule 1. Interest
11 rates are increasing but continue to be below the level
12 seen during the last two United Water Idaho rate cases,
13 UWI-W-00-1 and UWI-W-97-6.

14 Q. Please evaluate the recent price index
15 trends.

16 A. The trends for price indexes are shown on
17 Staff Exhibit No. 120, Schedule 2. Both the consumer
18 price index (CPI) and the producer price index (PPI) were
19 higher in 2004. The percent change in the CPI averaged
20 2.5% for 2002-2004. The average remains less than many
21 historical periods.

22 Q. Please provide the current index levels for
23 the Dow Jones Industrial Average and the Dow Jones
24 Utility Average.

25 A. The Dow Jones Industrial Average (DJIA)

1 closed at 10,458 on April 5, 2005. The DJIA high of
2 10,940 in February 2005 is the highest close since 2001.
3 The Dow Jones Utility Average closed at 363 on April 5,
4 2005.

5 Q. Please explain the risk differentials
6 between industrials and utilities.

7 A. Risk is a degree of uncertainty relative to
8 a company. The lower risk level associated with
9 utilities is attributable to many factors even though the
10 difference is not as great as it used to be. Utilities
11 continue to have limited competition for distribution of
12 utility services within the certificated area. With
13 limited competition for regulated services, there is less
14 chance of losses related to pricing practices, marketing
15 strategy and advertising policies. The competitive risks
16 for water utilities, including United Water Idaho are
17 less than for other utilities operating in Idaho. The
18 demand for utility services is relatively stable and
19 certain with customer growth increasing at about 3% for
20 the last two years.

21 The investment risk following this case for
22 UWI will be less since Staff proposes to include the
23 Columbia Water Treatment Plant as if it were in service
24 for the full year. This allows UWI the opportunity to
25 fully recover the used and useful costs invested in this

1 plant. The investment risk for UWI will still be lower
2 than for other utilities even though the Staff recommends
3 the average of monthly averages rate base instead of the
4 forecasted year-end rate base proposed by the Company.

5 Under regulation, utilities are generally
6 allowed to recover through rates, reasonable, prudent and
7 justifiable cost expenditures related to regulated
8 services. Unregulated firms have no such assurance.
9 Utilities in general are sheltered by regulation for
10 reasonable cost recovery risks, making the average
11 utility less risky than the average unregulated
12 industrial firm.

13 Considering all of these comparisons, I
14 believe a reasonable return on equity attributed to
15 United Water Idaho is 9.5% - 10.5% under the Comparable
16 Earnings method. United Waterworks, Inc. and United
17 Water Idaho continue to be able to obtain financing at a
18 reasonable cost.

19 Q. You indicated that the Discounted Cash Flow
20 method is utilized in your analysis. Please explain this
21 method.

22 A. The Discounted Cash Flow (DCF) method is
23 based upon the theory that (1) stocks are bought for the
24 income they provide (i.e., both dividends and/or gains
25 from the sale of the stock), and (2) the market price of

1 stocks equals the discounted value of all future incomes.
2 The discount rate, or cost of equity, equates the present
3 value of the stream of income to the current market price
4 of the stock. The formula to accomplish this goal is:

5

$$6 \quad P_o = PV = \frac{D_1}{(1+k_s)^1} + \frac{D_2}{(1+k_s)^2} + \dots + \frac{D_N}{(1+k_s)^N} + \frac{P_N}{(1+k_s)^N}$$

7

8 $P_o =$ Current Price

9 $D =$ Dividend

10 $k_s =$ Capitalization Rate, Discount Rate, or Required
Rate of Return

11 $N =$ Latest Year Considered

12

13 The pattern of the future income stream is
14 the key factor that must be estimated in this approach.
15 Some simplifying assumptions for ratemaking purposes can
16 be made without sacrificing the validity of the results.
17 Two such assumptions are: (1) dividends per share grow
18 at a constant rate in perpetuity and (2) prices track
19 earnings. These assumptions lead to the simplified DCF
20 formula, where the required return is the dividend yield
21 plus the growth rate (g):

22

$$23 \quad k_s = \frac{D}{P_o} + g$$

24

25

1 Staff witness Hall shows a basic DCF
2 analysis using the Value Line water utilities industry.
3 I have evaluated additional DCF analyses for other
4 groups, including those presented by UWI witness Ahern,
5 and expanded on the basic analysis to develop the Staff
6 recommended return on equity range.

7 Q. Have you factored flotation costs in with
8 your cost of capital analysis?

9 A. Yes, I have considered direct flotation
10 costs in my analysis by increasing the dividend yield
11 component of the DCF analysis. Since only direct costs
12 should be considered, I have used a flotation cost factor
13 of 2% that is consistent with that previously used for
14 United Water. Flotation costs should be company specific
15 so Staff witness Hall's Exhibit No. 119 does not reflect
16 the increase for flotation costs. I have adjusted the
17 DCF formula to include the direct flotation costs as
18 "df".

19

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$$k_s = \left[\frac{D}{P_0} (1 + df) \right] + g$$

23 Q. What is your estimate of the current cost of
24 capital for UWI using the Discounted Cash Flow method?

25 A. The current cost of equity capital for UWI,

1 using the Discounted Cash Flow method is between
2 8% - 10.5% during various time intervals. Due to ongoing
3 capital requirements, including refinancing requirements,
4 I believe a dividend yield of 3.4% to 3.5% with a growth
5 rate of 5% to 6% is the most representative for UWI.

6 Q. How is the growth rate (g) determined?

7 A. The growth rate is the factor that requires
8 the most extensive analysis in the DCF method. It is
9 important that the growth rate used in the model be
10 consistent with the dividend yield so that investor
11 expectations are accurately reflected and the growth rate
12 is not too large or too small.

13 I have used an expected growth rate of
14 5% to 6%. This expected growth rate was derived from an
15 analysis of various historical and projected growth
16 indicators, including growth in earnings per share,
17 growth in cash dividends per share, growth in book value
18 per share, growth in cash flow and the sustainable growth
19 for water utility industry groups.

20 Q. You indicated the cost of common equity
21 range for UWI is 9.5% - 10.5% under the Comparable
22 Earnings method and 8% - 10.5% under the Discounted Cash
23 Flow method. What is the cost of common equity capital
24 you are recommending?

25 A. The fair and reasonable cost of common

1 equity capital I am recommending for United Water Idaho
2 is in the range of 9.25% - 10.25%. Although any point
3 within this range is reasonable, the return on equity
4 granted would not normally be at either extreme of the
5 fair and reasonable range. I utilized a point estimate
6 of 10% in calculating the overall rate of return for the
7 revenue requirement.

8 Q. What is the basis for your point estimate
9 being 10% when your range is 9.25% - 10.25%?

10 A. The 10% return on equity point estimate
11 utilized is based on a review of the market data and
12 comparables, water utilities industry and UWI capital
13 structures and ratios, and average risk characteristics.

14 Q. What are the costs, the capital structure
15 and overall cost of capital recommended?

16 A. Staff witness Hall's Exhibit No. 117 shows
17 the capital structure and cost rates recommended in this
18 case. I support each of these components, as they are
19 consistent with my independent analysis.

20 The overall weighted cost of capital
21 recommended in this case is in the range of 7.75% -
22 8.21%. For use in calculating the revenue requirement, a
23 point estimate consisting of a return on equity of 10%
24 and a resulting overall rate of return of 8.1% was
25 utilized as shown on Staff Exhibit No. 117.

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Q. Does this conclude your direct testimony in this proceeding?

A. Yes, it does.