

FILE

BEFORE

THE PUBLIC UTILITIES COMMISSION OF OHIO

PUCO

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In the Matter of the Application of  
Aqua Ohio, Inc. for Authority to  
Increase its Rates and Charges in its  
Lake Erie Division.

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Case No. 09-1044-WW-AIR

Prepared Testimony  
of  
Stephen R. Chaney

Capital Recovery and Financial Analysis Division  
Utilities Department

Staff Exhibit \_\_

to certify that the images appearing are an  
true and correct reproduction of a case file  
as it appears in the regular course of business.  
Date Processed 7/20/10  
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1 1. Q. Please state your name and business address.

2

3 A. My name is Stephen R. Chaney. My business address is 180 East Broad Street,  
4 Columbus, Ohio 43215.

5

6 2. Q. Who are you employed by?

7

8 A. I am employed by the Public Utilities Commission of Ohio (PUCO).

9

10 3. Q. What is your current position with the PUCO?

11

12 A. I am employed as a Utilities Specialist in the Capital Recovery and Financial  
13 Analysis Division of the Utilities Department.

14

15 4. Q. Would you briefly state your educational and occupational background?

16

17 A. I have received a Bachelor of Science Degree in Civil Engineering from Purdue  
18 University in December, 1978, and a Master's Degree in City and Regional  
19 Planning from Ohio State University in December, 1981. I have been employed  
20 by the Public Utilities Commission of Ohio since January, 1982. I have presented  
21 testimony supporting the Staff's rate of return recommendations in several rate  
22 proceedings before the Commission, including Cincinnati Bell Telephone  
23 Company's alternative regulation Case No. 96-899-TP-ALT.

1 5. Q. What are your responsibilities in this proceeding?

2  
3 A. I am responsible for the investigation of rate of return issues, forming analysis and  
4 recommendations, and producing the rate of return section of the Staff Report.

5  
6 6. Q. Are you able to respond to questions pertaining to this case?

7  
8 A. I can respond to questions posed with regard to the rate of return issues in this  
9 case.

10  
11 7. Q. Do you agree with Aqua Ohio's Objection Number 1 that states that Staff's  
12 recommended return on equity is not reflective of risk factors that Aqua believes  
13 they are subject to?

14  
15 A. No. Although Aqua poses this as a return on equity question, it is a list of factors  
16 having no bearing on Staff's recommendation of cost of equity. The Staff has  
17 derived a cost based on market measures through use of the CAPM (capital asset  
18 pricing model) and the DCF (discounted cash flow) model. The market has  
19 accounted for the factors listed by Aqua to the degree the market deems  
20 appropriate. The Staff, therefore, can make no explicit adjustment to the cost of  
21 equity for these factors.

22

1 8. Q. Do you agree with OCC Objections 27 and 28 that Staff should have incorporated  
2 2009 market data and the beta for American Water Works in the equity risk  
3 premium calculation?  
4

5 A. Yes. These objections support including information that has become available  
6 since the Staff Report was drafted. Objection 28 notes that Value Line has  
7 published a beta for American Water Works of .65. This changes the Staff's  
8 CAPM average beta from .7333 to .7125. As Objection 27 states, the CAPM  
9 equity risk premium can be updated to include 2009 data. Staff's premium is the  
10 difference of arithmetic means for large company stocks and long-term  
11 government bonds from Table 2-1 of the 2010 Ibbotson SBBI Valuation  
12 Yearbook. Staff's CAPM premium ( or "spread" ) increases from 5.6% to 6.0%.  
13 The net effect of these changes increases the Staff's recommended cost of equity  
14 range nine basis points to 8.98% - 9.99%, and the recommended rate of return  
15 range increases four basis points to 7.66% - 8.18%. The Staff Report Schedules  
16 that have changed are attached to my testimony.  
17

18 9. Q. Do you agree with OCC Objection 29, to Staff's incorporation of the Gross  
19 National Product (GNP) for the period 1929 to 2008 as a growth factor in the  
20 Staff's non-constant DCF analysis?  
21

22 A. No. Staff will not predict economic conditions for the rate period when  
23 formulating its DCF recommendation. Staff believes that growth rates

1 occur in a manner independent of the preceding growth rate. Short term forecasts  
2 involve arbitrarily selective guesses as to which conditions that have occurred  
3 before will be prevalent in the near-term. Staff admits that it cannot predict the  
4 future and, thus incorporates parameters that reflect broad general conditions in its  
5 analysis. Analysts formulate company-specific growth estimates for the next five  
6 years. Staff moderated these growth rates by merging them into the long term  
7 GNP growth rate. In the absence of company-specific growth rates for beyond  
8 five years, the long term GNP rate is a satisfactory proxy, as it would be an  
9 average rate that companies on the balance could not exceed. Because investment  
10 analysts' growth estimates as reported by Value Line, Reuters, Yahoo, and MSN  
11 are given for periods of up to five years, investors' expectations of longer period  
12 growth is reliant on the GNP growth rate.

13  
14 10. Q. Do you agree with OCC's Objection 26, which objects to the Staff's use of  
15 arithmetic means of total returns in determining CAPM estimated equity cost?  
16

17 A. No. Use of the CAPM spread based on the geometric mean, as advocated by  
18 OCC, would be misapplied. Instead, the Staff uses an arithmetic mean. Ibbotson,  
19 on page 56 of the 2010 SBBI Valuation Yearbook, states that because the CAPM  
20 is an additive model, the arithmetic mean should be used, and," the geometric  
21 mean is more appropriate for reporting past performance..." The CAPM  
22 estimates current cost of equity. It does not report past performance.  
23

1 11. Q. Do you agree with OCC's Objection 25, which objects to the Staff's equity  
2 issuance cost adjustment?  
3

4 A. First, it should be noted that Staff adjusts for issuance costs and not flotation  
5 costs. Staff assumes no prospective issuances by the company. And Staff's  
6 adjustment is generic; it is based on issuance costs to the utility industry as a  
7 whole.

8 It is not relevant if the Applicant or its parent or affiliates have plans to issue new  
9 equity. Staff makes its equity issuance adjustment to support the portion of the  
10 embedded balance of equity that was raised from equity issuance and not  
11 generated internally. Merely, the Staff's adjustment is structured to support this  
12 balance on an annual basis. The Staff has no intention on reflecting issuance  
13 costs as annual operating expense in the revenue requirement.  
14

15 12. Q. What are common stock issuance costs?  
16

17 A. Issuance costs include expenditures made directly by the company issuing stock,  
18 for the purpose of issuing stock. Some of these expenditures would be for filing  
19 with the SEC, accounting, legal representation, printing, and exchange listing.  
20 Issuance costs also include the underwriting spread, which is not an expenditure  
21 for the issuing company. Basically, the underwriting spread is the difference  
22 between the proceeds to the company and the price paid by the primary  
23 purchasers of an issue. Issuance costs are the difference between the amount paid

1 by the primary purchasers and the net proceeds, which is the amount available for  
2 investment by the company.

3  
4 13. Q. Why is an adjustment for issuance cost necessary?

5  
6 A. The cost of issuance is properly spread over the life of the stock issue. As long as  
7 stock has been issued, an equity adjustment is necessary. It does not matter what  
8 future financing plans have been prepared. The investor requires a full return as  
9 long as the investor owns the stock. The company issuing new equity, initially  
10 receives funds in the amount of the equity issued. The amount of equity issued  
11 less the issuance cost is the amount available to the company for investment, yet  
12 the investor is, as required, paid a return on the full amount of investment. A  
13 greater return, therefore, must be earned on the lesser amount that can be invested.  
14 This is made possible by the Staff's adjustment to the baseline cost of equity.

15  
16 14. Q. Why has the Staff applied its equity issuance adjustment to the common equity  
17 balance less retained earnings?

18  
19 A. A fraction of invested funds, issuance expense, cannot earn a return. The  
20 difference, total investment less issuance, is equity and is available for company  
21 operations. As retained earnings accumulate, the proportion of invested capital  
22 that can earn a return increases. By applying its equity issuance adjustment to the  
23 common equity balance less retained earnings, the Staff allows a premium to be

1           earned to compensate for invested funds the company could not commit to  
2           operations, but does not apply that premium to retained earnings, which are  
3           available in their entirety for reinvestment. As the proportion of investment,  
4           which can earn a return, increases, the adjustment commensurately decreases.  
5           Retained earnings increases the available pool of capital, but issuance expense,  
6           which is not available to the company, increases only with new stock issuance.  
7           The adjustment increases commensurately with the occurrence of new stock  
8           issuance, by virtue of the retained earnings' proportion of equity decreasing.

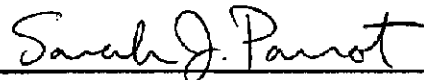
9  
10  
11   15.   Q.   Does this conclude your written testimony?

12  
13       A.   Yes.



## **CERTIFICATE OF SERVICE**

I hereby certify that a true copy of the foregoing **Prepared Testimony of Stephen R. Chaney** was served upon the following parties of record by regular U.S. mail, postage prepaid, this 20<sup>th</sup> day of July, 2010.



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Schedule D-1

Rate of Return Summary  
Aqua Ohio, Inc.  
Capital Structure as of June 30, 2009

	Amount \$	% of Total	% Cost	Weighted Cost %
Long Term Debt	\$49,914,801	48.57%	6.27%	3.04%
Preferred Stock	\$0	0.00%	0.00%	0.00%
Common Equity	<u>\$52,844,976</u>	<u>51.43%</u>	8.98% -9.99%	<u>4.62% -5.14%</u>
Total Capital	\$102,759,777	100.00%		7.66% -8.18%

Schedule D-1.1

Equity Issuance Cost Adjustment

Aqua Ohio, Inc.

June 30, 2009

(1) Retained Earnings <sup>1</sup>	\$38,407,637
(2) Total Common Equity <sup>2</sup>	\$52,844,976
(3) Ratio of (1) to (2)	0.72680
(4) Generic Issuance Cost, f	3.50%
(5) External Equity Ratio, w [1.0 - (3)]	0.27320
(6) Net Adjustment Factor, $(w/(1 - f)) + (1 - w)$	1.00991
(7) Low End Equity Cost [8.89% x (6)]	8.98%
(8) High End Equity Cost [9.89% x (6)]	9.99%

Sources:

1 Applicant's Workpaper WPD-1a

2 Applicant's Schedule D-1

Schedule D-1.3

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CAPM Cost of Equity Estimate

Averages:

Last 64days	3.7086	4.6250
Last 127 days	3.5688	4.4705
Last 190 days	3.5494	4.4247
Last 252 days	3.4880	4.3620

3.5787 4.4705

4.0246

CAPM Cost of  
Equity Estimate

8.2996

$$\begin{aligned}\text{CAPM} &= \text{risk free return} + \beta(\text{large company total return} - \text{risk free return}) \\ &= 4.0246\% + .7125(6.0\%) \end{aligned}$$

Source: Yahoo.com

## DCF Cost of Equity Estimate

AVERAGE (\$)	20.0895	34.2039	37.0892	17.1797
QUARTERLY DIV. <sup>2</sup> (\$)	0.2000	0.2500	0.2950	0.1350
	0.2100	0.2500	0.2950	0.1350
	0.2100	0.2600	0.2950	0.1350
	0.2100	0.2600	0.2950	0.1450
ANNUAL DIVIDEND (\$)	0.8300	1.0200	1.1800	0.5500
YIELD	4.13%	2.98%	3.18%	3.20%
REUTERS <sup>3</sup>	10.29%	4.00%	6.00%	8.60%
MSN <sup>4</sup>	8.40%	4.00%	6.70%	7.70%
YAHOO <sup>5</sup>	9.93%	4.00%	6.00%	8.33%
VALUE LINE <sup>6</sup> :	9.54%	4.00%	6.23%	8.21%
'09 EARNINGS (\$)	1.28	1.85	1.99	0.80
'13 EARNINGS (\$)	1.60	2.60	2.60	1.25
	5.58%	8.51%	6.68%	11.16%
VALUE LINE, "BOXED"	NA	9.50%	8.50%	10.00%
VALUE LINE	5.58%	9.00%	7.59%	10.58%
DCF GROWTH ESTIMATE	8.55%	5.25%	6.57%	8.80%
DCF COST OF EQUITY ESTIMATE	11.98%	9.40%	10.05%	10.94%
DCF AVERAGE				10.48%
CAPM COST OF EQUITY ESTIMATE				8.30%
COST OF EQUITY ESTIMATE				9.39%

## Sources:

- 1 MSN Investor
- 2 MSN Investor & Value Line Investment Guide
- 3 investor.reuters.com
- 4 moneycentral.msn.com
- 5 finance.yahoo.com
- 6 Value Line Investment Guide