

Chester Willcox & Saxbe, LLP 65 East State Street, Suite 1000 Columbus, OH 43215 MAIN: 614.221.4000

FAX: 614.221.4012

MARK S. YURICK Direct 614,334,7197 myurick@cwslaw.com

RECEIVED-DOCKETING DIV

Renee Jenkins Chief of Docketing The Public Utilities Commission of Ohio 180 East Broad Street Columbus, Ohio 43266-0573

Re: In the Matter of the Application of Aqua Ohio, Inc. For Authority to Increase its Rates and Charges in its Masury Division PUCO Case No. 09-0560-WW-AIR

March 5, 2010

Dear Ms. Jenkins:

Please find enclosed Attachments 1 and 2 to the testimony of Pauline M. Ahern submitted on behalf of Aqua Ohio, Inc. These Attachments were referenced in Aqua Ohio's Objections to the Public Utilities Commission of Ohio Staff Report of Investigations in the Aqua Ohio, Inc. Masury Division Rate Case filed on February 22, 2010. For ease of reference, please supplement Aqua Ohio's Objections with these Attachments. My apologies for the inconvenience and any confusion this may have caused.

Very truly yours,

Mark S. Wurick

MSY/cls cc: All Parties

ND: 4811-8063-0533, v. 1

This is to certify that the images appearing are an accurate and complete reproduction of a case file document delivered in the regular course of business Technician ______ Date Protected _______ NAR 052010

	bbotson Associa	Agua O Derivation of finves ties Size Premia fr	hio, Inc Masury Di sment Risk Adjustm or the Decile Portfoli 1	<u>vision</u> ant Bassed upon os of the NYSE/AME) Applicable Decile of the	UNASDAQ 3	Some 4 from
Line No.		<u>Market Cepi</u> (millions)	talization (1) (times larger)	NYSEJAMEX/ NASDAQ (2)	Applicable Size Premium (3)	Applicable Size Premium for (4)
÷	Aqua Ohio, Inc Mesury Division					
w	a. Based Upon PUCO Staff Water Utility Group	\$ 83.960		10	6.28%	
ભં	PUCO Staff Weller Utkilly Group	\$ 1,735.421	19.3 x	5 - 6	1.71%	4.57%
		(¥)	(8)	(c)	ê	Û
			Smallest Company in Decile	Largest Company in Devia	A (Eddarov) in t	Size Premium (Return in Excess of Coban (2)
		All the second s	(millions)	(millions)	(mitions)	
		1 • Largest	\$ 14,692.016	\$ 329,725.255	\$ 172,203,636	-0.37%
		N 07	3,428,570	14,591,568 5,936,147	10,333.75 4,682.36	0.74%
		ষ	2,386.985	3,414.634	2,900.81	1.15%
		ۍ د. ا	1,602.429	2,384.026	1,993.23	1.69%
		0 r	1,000.000 685 129	1,000.103	57100'I	1.73%
		. დ	432,175	684.790	558.48	2.49%
		57	214.194	431.256	322.73	2.85%
		10 - Smallest	1.007	214.111	107.56	6.28%

٠

۰.

Source: 2010 Ibbotson Risk Premia Over Time Report - Estimates for 1926-2009

Notes:

From page 2.
 Gleaned from Column (D) on the bottom of this page. The appropriate decile (Column (A)) corresponds to the market capitalization of the PUCO Staff Waler Utility Group, which is found in Column 1.

(3) Corresponding risk premium to the decile is provided on Column (E) on the bottom of this page.
(4) Line No. 1a Column 3 – Line No. 2 Column 3. For example, the 4.57% in Column 4, Line No. 2 is derived as tollows 4.57% = 6.28% - 1.71%.

			Aqua Ohio, I Markel CapRalizat PUCO Staff	<u>nc Masury Dhision</u> Son of Aqua Otilo, Inc. and L'Water Utility Gro <u>un</u>				
		Ħ	64	(7)	41	ומי	ات	Z
Company	Exchange	Total Permanent Capital June 30, 2009 (milions)	Common Stock Shares Outstanding at Fiscal Year Ending 2008 (millions)	Book Value per Share at Fiscar Year Ending 2008 (1)	Total Common Equity at Fiscal Year Ending 2003 (millions)	Average Daily Closing Stock (2)	Market-to-Book Ratio (3)	Market Capitatzation (4) (millions)
Aqua Ohio, Inc Masury Division		\$ 102.485 (S	¥	\$ 51.701 (AN NA		
Based Upon PUCO Staff Water Utility Group							174.0 % (6) \$ 89.960 (7)
PUCO Staff Water Utility Group American Water Works Company, Inc. American States Water Company Caffiornia Water Service Group Aque America, Inc.	NYSE NYSE NYSE MASDAQ	\$ 12,968,949 660,969 791,920 2,333,126	158.867 17.301 20.723 (36.053	\$ 25.843 17.947 19.445 7.780	\$ 4,102.001 310.503 402.949 1,068.446	\$ 19.3960 34.0183 38.8338 17.9758	75.6 % 199.5 199.7 231.1	3.102.720 588.551 804.553 2.445.652
Average		\$ 4,188,741	63.511	\$ 17.704	5 1,468.475	27.5560	174.0 %	\$ 1,735.421

•

•

NA = Not Avaitable

Notes: (1) Column 3 / Column 1.

From Schedule D-1.4, Page 7 of the Staff Report.
 Column 4. Column 2.
 Column 5 * Column 3.
 From Schedule D-1 of the Staff Report.
 From Schedule D-1 of the Staff Report.
 From Schedule D-1 of the Staff Report.
 The market-to-book ratio of Aqua Ohio, Inc. is assumed to be equal to the exerage market-to-book ratio of the PUCO Staff Water Utility Group.
 Aqua Ohio, Inc.'s common stock, if tradect, would trade at a market-to-book ratio equal to the average market-to-book ratio of the PUCO Staff Water Utility Group.
 Aqua Ohio, Inc.'s common stock, if tradect, would trade at a market-to-book ratio equal to the average market-to-book ratio of the PUCO Staff Water Utility Group. 174.0%, and Aqua Ohio, Inc.'s market capitalization would therefore have been \$59.960 million. (\$89.960 = \$51.701 * 174.0%).

Source of information: 2006 Avrual Forms 10K Quarterly Forms 10Q - 2nd quarter 2009. yahoo.finance.com

.

<u>Aqua Ohio, Inc Masury Division</u> Indicated Common Equity Cost Rate Through Use <u>of the Capital Asset Pricing Model</u>											
	1	2	<u>3</u>								
	Value Line Adjusted Beta	Company-Specific Risk Premium Based on Market Premium of 7.72% (1)	CAPM Result Including Risk-Free Rate of 4.85% (2)								
PUCO Staff Water Utility Group	0 7333	566 %	10.51 %								
Traditional Capital Asset Friding Model (5)	0.7555	5.00 %	(U,ST 76								
Empirical Capital Asset Pricing Model (4)	0.7333	6.18 %	11.03 %								
Average			<u> 10.77 </u> %								

See page 2 for notes.

•

ĸ

Agua Ohio, Inc. – Masury Division Development of the Market-Required Rate of Return on Common Equity Using the Capital Asset Pricing Model for PUCO Staff Water Utility Group Adjusted to Reflect a Forecasted Risk-Free Rate and Market Return

Notes:

(1) The equity risk premium is based on the <u>Value Line</u> forecasted equity risk premium and the lbbotson historical equity risk premium. In the Value Line forecasted equity risk premium was calculated using the three previous month-end (October 2009 – December 2009), as well as a then recently available (<u>December 25, 2009</u>). <u>Value Line Summary & Index</u>. A forecasted 3-5 year total annual market return of 13.68% can be derived by averaging the 3-month and spot forecasted total 3-5 year total appreciation, converting it into an annual market appreciation and adding the <u>Value Line</u> average forecasted annual dividend yield.

The 3-5 year average total market appreciation of 55% produces a four-year average annual return of 11.58% ((1.55^{025}) - 1). When the average annual forecasted dividend yield of 2.10% is added, a total average market return of 13.68% (2.10% + 11.58%) is derived. The 3-month and spot forecasted total market return of 13.68% minus the forecasted risk-free rate of 4.85% (developed in Note 2) is 8.83% (13.68% - 4.85%).

The Morningstar, Inc. (ibbotson Associates) calculated market premium of 6.60% for the period 1926-2008 results from a total market return of 11.80% less the average income return on long-term U.S. Government Securities of 5.20% (11.80% - 5.20% = 6.60%).

This is then averaged with the 8.83% <u>Value Line</u> market premium resulting in a 7.72% market premium. The 7.72% market premium is then multiplied by the PUCO Staff average water utility beta on of page 1.

(2) The average forecast based upon six quarterly estimates of 30-year Treasury Note yields per the consensus of nearly 50 economists reported in the <u>Blue Chip Financial Forecasts</u> dated January 1, 2010 (see page 3). The estimates are detailed below:

	<u>30-Year</u>
	Treasury Note Yield
First Quarter 2010	4.50
Second Quarter 2010	4.60
Third Quarter 2010	4.80
Fourth Quarter 2010	4,90
First Quarter 2011	5.10
Second Quarter 2011	5.20
Average	4.85%

-- . .

(3) The traditional Capital Asset Pricing Model (CAPM) is applied using the following formula:

 $R_{\rm S} = R_{\rm F} + \beta \left(R_{\rm M} - R_{\rm F} \right)$

Where $R_S = Return rate of common stock$ $R_F = Risk Free Rate$ $\beta = Value Line Adjusted Beta$ $R_M = Return on the market as a whole$

- (4) From Schedule D-1.3, page 8 of the Staff Report.
- (5) The empirical CAPM is applied using the following formula:

 $R_{s} = R_{F} + .25 (R_{M} - R_{F}) + .75 \beta (R_{M} - R_{F})$

Where $R_s = Return rate of common stock$ $<math>R_F = Risk-Free Rate$ $\beta = Value Line Adjusted Beta$ $R_M = Return on the market as a whole$

Source of Information: <u>Value Line Summary & Index</u> Blue Chip Financial Forecasts, January 1, 2010 2010 Ibbotson – Risk Premia Over Time Report – Estimates for 1926-2009, Morningstar, Inc., 2010.

Attachment 2 Page 3 of 3

2 BLUE CHIP FINANCIAL FORECASTS JANUARY 1, 2010

Consensus Forecasts Of U.S. Interest Rates And Key Assumptions¹

	History						Consensus Forecasts-Quarterly Avg.							
	A	verage Fo	or Week E	nd	Ave	rage For	Month	Latest Q*	∵1Q	2Q	3Q	4Q	1Q	2Q
Interest Rates	Dec.25	Dec.18	Dec.11	<u>Dec.4</u>	Nov.	Oct.	Sep.	<u>40 2009</u>	2010	<u>2010</u>	<u>2010</u>	<u>2010</u>	<u>2011</u>	<u>2011</u>
Federal Funds Rate	0.12	0.12	0.12	0.12	0.12	0.12	0.15	0.12	0.2	0.2	0. 4	0.8	1,3	1.6
Prime Rate	3,25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.2	3.3	3.5	3.9	4.3	4.7
LIBOR, 3-mo.	0.25	0.25	0.26	0.26	0.27	0.28	0.30	0.27	0.4	0.5	0.7	1.1	1.5	1.9
Commercial Paper, 1-mo.	0.12	0.13	0.14	0.13	0.13	0.12	0.14	0.13	0.2	0.3	0.6	1.0	1,5	1.8
Treasury bill, 3-mo.	0.06	0.04	0.03	0.06	0.05	0.07	0.12	0.06	0.1	0.3	0.5	0.9	1.3	1.7
Treasury bill, 6-mo.	0.17	0.16	0.15	0.16	0.15	0.16	0.21	0.16	0.3	0,4	0.7	1.1	1.6	1.9
Treasury bill, 1 yr.	0.38	0.37	0.32	0.29	0.31	0.37	0.40	0.34	0.4	0.6	1.0	1.4	1.8	2.1
Treasury note, 2 yr.	0.86	0.84	0.78	0.73	0.80	0.95	0.96	0.85	1.0	1.2	1.5	1.9	2.3	2.5
Treasury note, 5 yr.	2.37	2.31	2.18	2.10	2.23	2.33	2.37	2.27	:::2:4	2.6	2.9	3.1	3.4	3.5
Treasury note, 10 yr.	3.63	3.56	3.47	3.34	3.40	3.39	3.40	3.43	3.6	3.8	4.0	4.2	4.3	4.5
Treasury note, 30 yr.	4.51	4.48	4.44	4.29	4.31	4.19	4.19	4.3I	4.5	4.6	4.8	4.9	5.1	5.2
Corporate Aaa bond	5.25	5.26	5.25	5.11	5.19	5.15	5.13	5.19	5.3	5.4	5.5	5.7	5.8	5.9
Corporate Baa bond	6.33	6.33	6.37	6.29	6.32	6.29	6.31	6.31	6.5	6,6	6.7	6.8	6.9	7.0
State & Local bonds	4.17	4.18	4.19	4.24	4.37	4.20	4.24	4.26	4.5	4.6	4.7	4.8	4.9	5.1
Home mortgage rate	4,98	4.94	4.81	4.71	4.88	4.95	5.06	4.90	5.1	5.3	5.5	5.7	5.8	6. 0
•••							Consensus Forecasts-Quarterly							
	1Q	20	3Q	40	1Q	2Q	30	40*	10	20	30	40	10	20
Key Assumptions	2008	2008	<u>2008</u>	<u>2008</u>	2009	<u>2009</u>	2009	2009	2010	2010	2010	2010	2011	2011
Major Currency Index	72.0	70.9	73.5	81.3	82.7	79.4	75.4	73.4	74.1	73:9	74.1	74.3	74.9	75.1
Real GDP	-0.7	1.5	-2.7	-5.4	-6.4	-0.7	2.2	3.5	2.9	2.9	3.0	3.0	3.0	3.0
GDP Price Index	1.9	1.8	4.0	0.1	1.9	0.0	0.4	1.5	1.5	1.4	1.5	1.6	1.8	1.8
Consumer Price Index	4.5	4.5	6.2	-8.3	-2.4	1.3	3.6	2.9	1.8	1.6	2.0	1.9	2.0	2.1

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Interest rate definitions are the same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for the Fed' Major Currency Index is from FRSR H.10 and G.5. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS). *Interest rate data for 4Q 2009 Major Currency Index also is based on data through week ended December 25th*. *Data for 4Q 2009 Major Currency Index also is based on data through week ended December 25th*. *These for 4Q 2009 Major Currency Index also is based on data through week ended December 25th*. *State for 4Q 2009 Major Currency Index also is based on data through week ended December 25th*.







