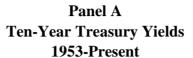
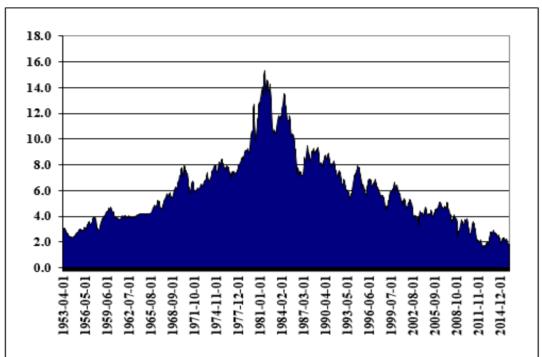
Kentucky-American Water Company Cost of Capital

	Capitalization	Cost	Weighted
Capital Source	Ratio	Rate	Cost Rate
Short-Term Debt	1.49%	1.00%	0.01%
Long-Term Debt	50.59%	6.02%	3.05%
Preferred Stock	0.56%	8.52%	0.05%
Common Equity	47.36%	8.50%	4.03%
Total Capital	100.00%		7.13%

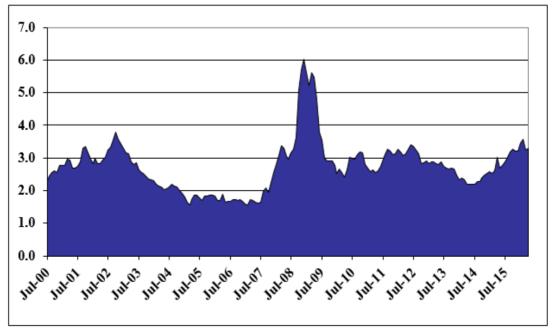
Docket No. 2015-00418 Exhibit JRW-2 Capital Cost Indicators Page 1 of 1

Exhibit JRW-2





Panel B Long-Term Moody's Baa Yields Minus Ten-Year Treasury Yields 2000-Present



Source: Federal Reserve Bank of St. Louis, FRED Database.

Docket No. 2015-00418 Exhibit JRW-3 Capital Cost Indicators Page 1 of 2

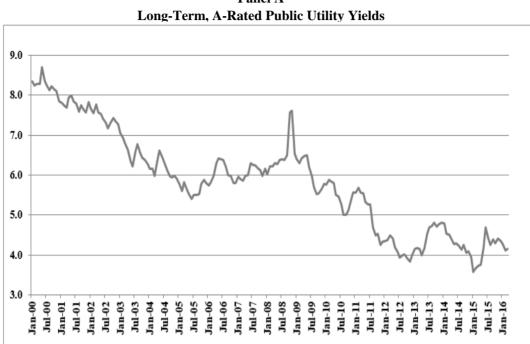
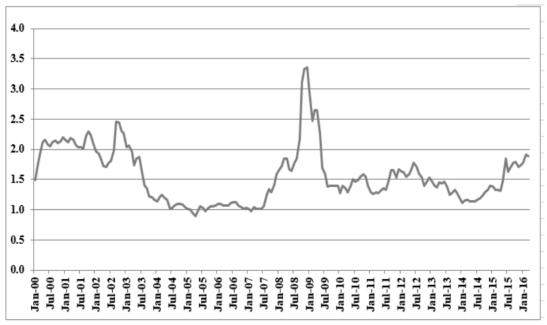


Exhibit JRW-3 Panel A Long-Term, A-Rated Public Utility Yields

Panel B Long-Term, A-Rated Public Utility Yields minus -Twenty-Year Treasury Yields



Source: Mergent Bond Record, Federal Reserve Bank of St. Louis, FRED Database.

Kentucky-American Water Company Summary Financial Statistics

Panel A

Water Proxy Group

	Operating	Percent			Moody's		Common		
	Revenue	Water	Net Plant	S&P Bond	Bond	Primary Service	Equity	Return on	Market to
Company	(\$mil)	Revenue	(\$mil)	Rating	Rating	Area	Ratio*	Equity	Book Ratio
American States Water Co. (NYSE-AWR)	458.6	72	1,049.8	A+	A2	CA, AZ	56.8	12.4	3.05
American Water Works Co., Inc. (NYSE-AWK)	3,159.4	87	13,933.0	Α	A3	30 States	43.5	9.6	2.47
Aqua America, Inc. (NYSE-WTR)	814.2	96	4,688.9	A+	NR	13 States	49.0	11.9	3.24
California Water Service Group (NYSE-CWT)	588.4	100	1,680.5	A+	NR	CA,WA,NM	53.8	7.1	1.92
Connecticut Water Service, Inc. (NDQ-CTWS)	97.9	100	529.0	Α	NR	СТ	53.9	10.5	2.14
Middlesex Water Company (NDQ-MSEX)	126.0	86	481.9	Α	NR	NJ, DE	58.4	9.8	2.38
SJW Corporation (NYSE-SJW)	305.1	96	1,014.1	Α	NR	CA,TX	47.8	10.2	1.91
York Water Company (NDQ-YORW)	47.1	100	261.4	A-	NR	PA	55.5	11.7	4.04
Mean	699.6	92.1	2954.8	Α	NR		52.3	10.4	2.64
Median	381.9	96.0	1032.0	Α	NR		53.9	10.4	2.43

Data Source: AUS Utility Reports, April, 2016; Primary Service Territory are from Value Line Investment Survey, 2016.

			Panel Gas Proxy	_					
	Operating	Percent			Moody's		Common		
	Revenue	Gas	Net Plant	S&P Bond	Bond	Primary Service	Equity	Return on	Market to
Company	(\$mil)	Revenue	(\$mil)	Rating	Rating	Area	Ratio	Equity	Book Ratio
						LA,KY,TX,MS,			
Atmos Energy Corporation (NYSE-ATO)	3,789.6	71	7,653.3	A-	A2	CO,KS,KY	50.4	10.1	2.25
Chesapeake Utilities Corporation (NYSE-CPK)	459.2	54	855.0	NR	NR	DE,MD,FL	51.9	12.5	2.44
Laclede Group, Inc. (NYSE-LG)	1,756.2	97	2,953.3	A-	A1	MO,AL	41.8	8.7	1.80
New Jersey Resources Corp. (NYSE-NJR)	2,354.1	31	2,196.1	Α	Aa2	NJ	51.7	9.5	2.62
Northwest Natural Gas Co. (NYSE-NWN)	723.8	97	2,182.7	A+	A3	OR,WA	47.3	6.9	1.80
South Jersey Industries, Inc. (NYSE-SJI)	959.6	56	2,448.1	BBB+	A2	NJ	41.4	10.7	1.84
Southwest Gas Corporation (NYSE-SWX)	2,463.6	59	3,891.1	BBB+	A3	AZ,NV,CA	50.1	9.0	1.92
WGL Holdings, Inc. (NYSE-WGL)	2,524.0	49	3,746.6	A+	A3	DC,MD,VA	45.8	10.7	2.72
Mean	2,013.7	64	3,156.4	A-	A3		44.5	10.5	1.81
Median	2,191.2	59	2,619.5	A-	A3		47.9	10.2	1.61

Data Source: AUS Utility Reports, April, 2016; Primary Service Territory are from Value Line Investment Survey, 2016.

Docket No. 2015-00418 Exhibit JRW-4 Summary Financial Statistics for Proxy Group Page 2 of 2

Exhibit JRW-4 Kentucky-American Water Company *Value Line* Risk Metrics

Panel A Water Proxy Group

Company	Beta	Safety	Financial Strength	Earnings Predictability	Stock Price Stability
American States Water Co. (NYSE-AWR)	0.75	2	Α	90	90
American Water Works Co., Inc. (NYSE-AWK)	0.70	3	B +	35	100
Aqua America, Inc. (NYSE-WTR)	0.75	2	Α	95	95
California Water Service Group (NYSE-CWT)	0.75	3	B ++	85	95
Connecticut Water Service, Inc. (NDQ-CTWS)	0.60	3	B +	85	90
Middlesex Water Company (NDQ-MSEX)	0.70	2	B ++	80	95
SJW Corporation (NYSE-SJW)	0.75	3	B +	50	85
York Water Company (NDQ-YORW)	0.70	3	B ++	95	90
Mean	0.71	2.6	B++	77	93

Data Source: Value Line Investment Survey, 2016.

Ga	as Proxy Gi	roup			
Company	Beta	Safety	Financial Strength	Earnings Predictability	Stock Price Stability
Atmos Energy Corporation (NYSE-ATO)	0.80	1	Α	95	95
Chesapeake Utilities Corporation (NYSE-CPK)	0.65	2	B ++	95	85
Laclede Group, Inc. (NYSE-LG)	0.70	2	B ++	80	100
New Jersey Resources Corp. (NYSE-NJR)	0.80	1	A +	60	85
Northwest Natural Gas Co. (NYSE-NWN)	0.65	1	Α	95	100
South Jersey Industries, Inc. (NYSE-SJI)	0.85	2	Α	80	90
Southwest Gas Corporation (NYSE-SWX)	0.80	3	B ++	80	90
WGL Holdings, Inc. (NYSE-WGL)	0.80	1	Α	75	90
Mean	0.76	1.6	Α	83	92

Panel B

Data Source: Value Line Investment Survey, 2016.

Docket No. 2015-00418 Exhibit JRW-5 Capital Structure Ratios and Senior Capital Cost Rates Page 1 of 2

Exhibit JRW-5

Kentucky-American Water Company Capital Structure Ratios and Senior Capital Cost Rates

Panel A - KAWC's Proposed Capitalization Ratios and Senior Capital Cost Rates

	Capitalization	Cost
Capital Source	Ratio	Rates
Short-Term Debt	1.49%	1.37%
Long-Term Debt	50.59%	6.05%
Preferred Stock	0.56%	8.52%
Common Equity	47.36%	
Total Capital	100.00%	

Panel B - AG's Proposed Capitalization Ratios and Senior Capital Cost Rates

	Capitalization	Cost
Capital Source	Ratio	Rates
Short-Term Debt	1.49%	1.00%
Long-Term Debt	50.59%	6.02%
Preferred Stock	0.56%	8.52%
Common Equity	47.36%	
Total Capital	100.00%	

Exhibit JRW-5 Kentucky-American Water Company Capital Structure Ratios and Cost of Capital

Panel A - Short-Term Interest Rates

			52-W	EEK
Libor Rates (USD)	Latest	Wk ago	High	Low
Libor Overnight	0.38270	0.37920	0.38310	0.11200
Libor 1 Week	0.40210	0.39700	0.40210	0.14400
Libor 1 Month	0.44115	0.43715	0.44185	0.18025
Libor 2 Month	0.52650	0.52075	0.52650	0.22375
Libor 3 Month	0.63485	0.62960	0.64195	0.27390
Libor 6 Month	0.90365	0.89415	0.91740	0.40490
Libor 1 Year	1.22470	1.20905	1.24470	0.69600

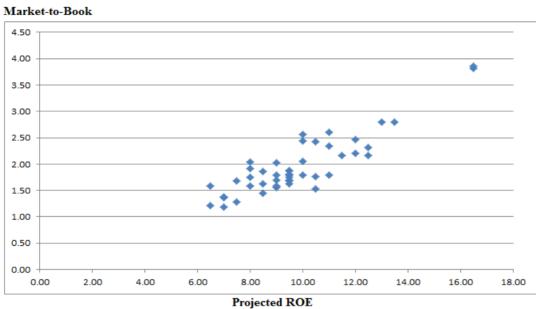
Source: http://online.wsj.com/mdc/public/page/2_3020-libor.html

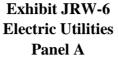
Panel B - Long-Term Debt Cost Rate

							merican Wate No. 2015-004							
							Cost of Long-1							
							of August 31, 2							
						A3	Ji August 51, 2							
Data:	Base Period X Fore	casted Period											Exhibit	37, Schedule J-
	of Filing: X Original		Revised										2	#VALUE
	paper Reference No(s): W											Witne	ss Responsible	Scott Rungre
	super nererence no(s).													Page 1 of
										Annual Amort.	Unamortized			
Line	Debt Issue	Issue	Maturity	Amount	Cost Rate	Cost Rate	Bond Rating	Annualized	Principal	of Issue	Discount or	Unamortized	Unamortized	Carrying
No.	Type & Rate	Date	Date	Outstanding	at Issue	at Maturity	at Issue	Interest	Amount	Expense	Premium	Debt Expense	Gain/Loss	Value
1						, ,								
2														
3	General Mortgage Bond	5:												
4														
5	Series 6.96% GMB	12/01/93	12/01/23	\$7,000,000	6.960%	7.006%	N/A	\$490,420	\$7,000,000	\$3,226	\$0	\$20,169	\$0	\$6,979,831
6	Series 7.15% GMB	02/01/97	02/01/27	7,500,000	7.150%	7.182%	N/A	538,650	7,500,000	2,428	0	22,870	0	7,477,130
7	Series 6.99% GMB	06/01/98	06/01/28	9,000,000	6.990%	7.026%	N/A	632,340	9,000,000	3,261	0	35,061	0	8,964,939
8	Series 6.593% Note	10/22/2007	10/15/2037	47,000,000	6.593%	6.628%	N/A	3,115,160	47,000,000	16,599	0	334,060	0	46,665,940
9	Series 6.25% Note	6/23/2009	6/1/2039	45,390,000	6.250%	6.295%	N/A	2,857,301	45,390,000	20,386	0	443,449	0	44,946,551
10	Series 5.625% Note	09/10/09	09/01/39	26,000,000	5.625%	5.675%	N/A	1,475,500	26,000,000	13,005	0	286,157	0	25,713,843
11	Series 5.375% Note	06/24/10	06/01/40	26,000,000	5.375%	5.417%	N/A	1,408,420	26,000,000	10,863	0	247,172	0	25,752,828
12	Series 5.05% Note	11/21/11	10/15/37	20,000,000	5.050%	5.050%	N/A	1,010,000	20,000,000	0	0	0	0	20,000,000
13	Series 4.00% Note	05/15/13	10/15/37	7,859,000	4.000%	4.000%	N/A	314,360	7,859,000	0	0	0	0	7,859,000
14	Proposed 4.70% Note	06/15/16	06/15/46	7,250,000	4.050%	4.083%	N/A	296,018	7,250,000	2,417	0	69,580	0	7,180,420
15														
16														
17														
18	Total Long-Ter	m Debt and Annual	ized Cost	\$202,999,000				\$12,138,169	\$202,999,000	\$72,185	\$0	\$1,458,516	\$0	\$201,540,484
19														
20														
21		Annualized Cost I	Rate	6.020%										

Source: KAW_R_AGDR1_NUM026_032416_Attachment_1, Exhibit 37, Schedule J-4.

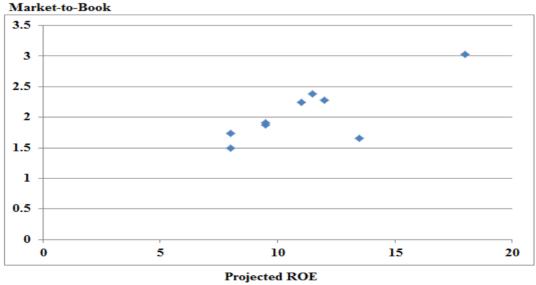
Docket No. 2015-00418 Exhibit JRW-6 The Relationship Between Estimated ROE and Market-to-Book Ratios Page 1 of 2





R-Square = .78, N=46

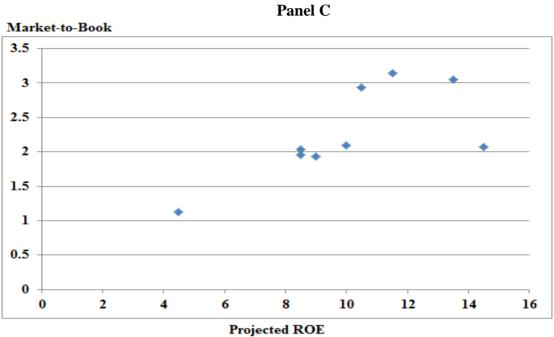
Panel B Gas Companies

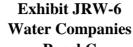


Value Line Investment Survey, 2015

Value Line Investment Survey, 2015

R-Square = .63, N=9





Value Line Investment Survey, 2015

R-Square = .49, N=9

Docket No. 2015-00418 Exhibit JRW-7 Utility Capital Cost Indicators Page 1 of 3

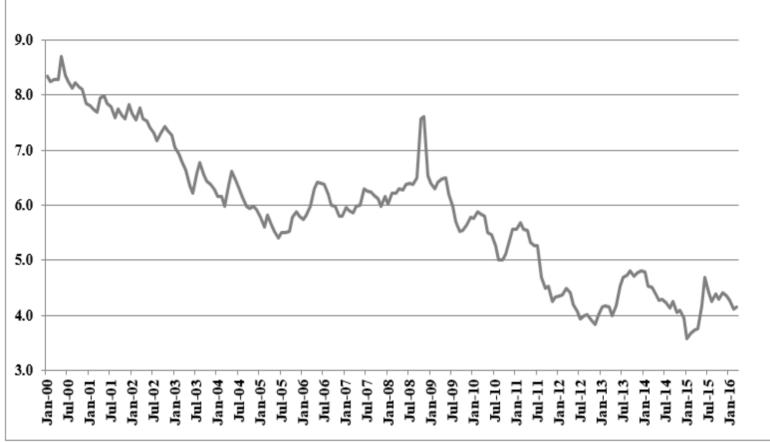


Exhibit JRW-7 Long-Term 'A' Rated Public Utility Bonds

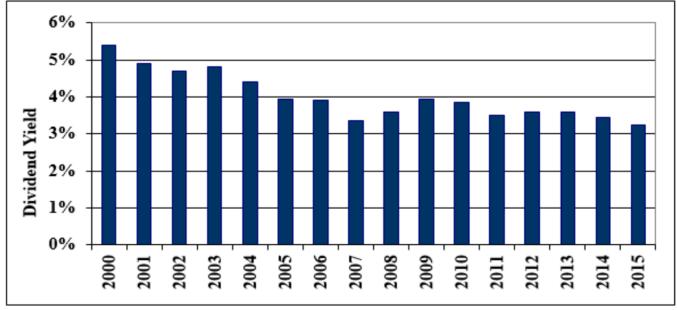
Source: Mergent Bond Record

Docket No. 2015-00418 Exhibit JRW-7 Utility Capital Cost Indicators Page 2 of 3



Exhibit JRW-7 Panel A Water Proxy Group Average Dividend Yield

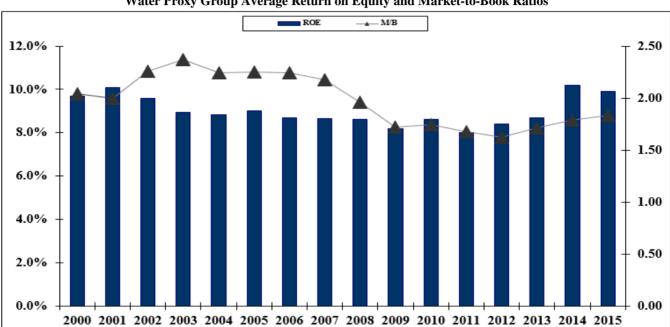
Panel B Gas Proxy Group Average Dividend Yield



Data Source: Value Line Investment Survey.

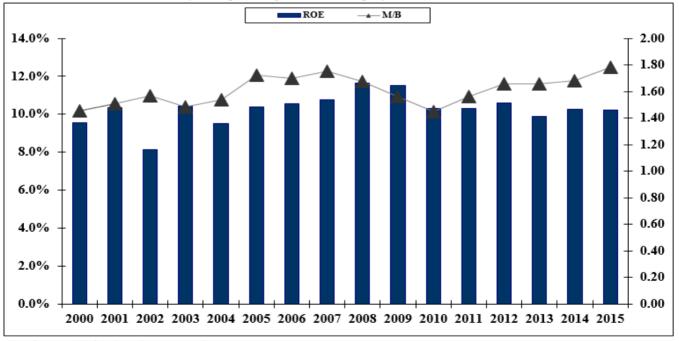
Docket No. 2015-00418 Exhibit JRW-7 Utility Capital Cost Indicators Page 3 of 3

Exhibit JRW-7



Panel A Water Proxy Group Average Return on Equity and Market-to-Book Ratios

Panel B Gas Proxy Group Average Return on Equity and Market-to-Book Ratios

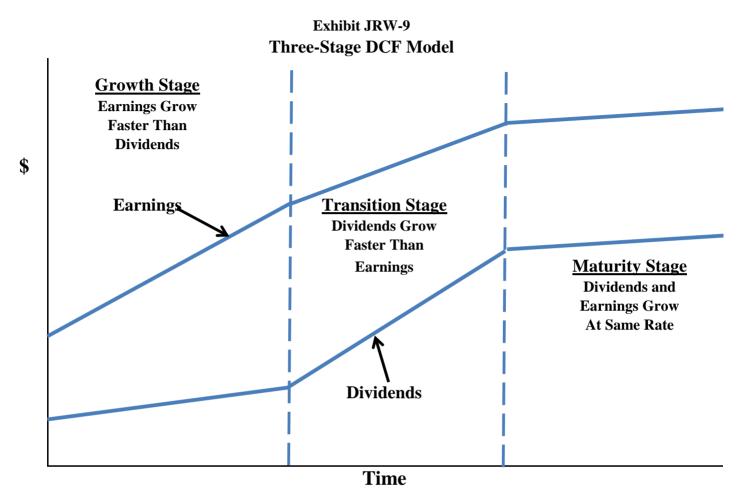


Data Source: Value Line Investment Survey.

Industry Average Betas

Industry Name	Beta	Industry Name	Beta	Industry Name	Beta
Homebuilding	1.47	Chemical (Basic)	1.17	Retail Building Supply	1.01
Heavy Truck & Equip	1.44	Diversified Co.	1.16	Investment Co.(Foreign)	1.01
Metals & Mining (Div.)	1.43	Educational Services	1.16	Toiletries/Cosmetics	1.01
Petroleum (Producing)	1.38	Advertising	1.16	Med Supp Non-Invasive	1.00
Oilfield Svcs/Equip.	1.38	Automotive	1.16	Shoe	0.98
Steel	1.38	Computers/Peripherals	1.15	Retail Automotive	0.98
Metal Fabricating	1.37	Trucking	1.15	Retail (Softlines)	0.98
Auto Parts	1.37	Financial Svcs. (Div.)	1.15	Telecom. Utility	0.96
Building Materials	1.33	Entertainment Tech	1.14	R.E.I.T.	0.95
Maritime	1.33	Retail (Hardlines)	1.13	Information Services	0.95
Hotel/Gaming	1.30	Publishing	1.12	Med Supp Invasive	0.95
Electrical Equipment	1.29	Internet	1.12	Drug	0.94
Semiconductor Equip	1.28	Entertainment	1.12	Precious Metals	0.93
Semiconductor	1.28	Apparel	1.12	Environmental	0.93
Insurance (Life)	1.27	Newspaper	1.12	Restaurant	0.92
Public/Private Equity	1.27	Wireless Networking	1.10	Thrift	0.92
Engineering & Const	1.27	Industrial Services	1.09	Funeral Services	0.92
Railroad	1.27	Bank	1.09	Pharmacy Services	0.91
Human Resources	1.25	Computer Software	1.09	Retail Store	0.89
Natural Gas (Div.)	1.25	Recreation	1.09	Beverage	0.87
Chemical (Diversified)	1.24	Biotechnology	1.08	Reinsurance	0.86
Chemical (Specialty)	1.23	Paper/Forest Products	1.07	Pipeline MLPs	0.85
Power	1.23	Bank (Midwest)	1.06	Insurance (Prop/Cas.)	0.85
Petroleum (Integrated)	1.23	Oil/Gas Distribution	1.06	Household Products	0.84
Electronics	1.21	Medical Services	1.05	Food Processing	0.84
Machinery	1.21	Telecom. Services	1.05	Investment Co.	0.80
Precision Instrument	1.21	Healthcare Information	1.04	Natural Gas Utility	0.80
Coal	1.21	Air Transport	1.04	Retail/Wholesale Food	0.78
Telecom. Equipment	1.19	IT Services	1.04	Electric Utility (West)	0.77
Securities Brokerage	1.19	Foreign Electronics	1.02	Tobacco	0.77
Furn/Home Furnishings	1.19	Aerospace/Defense	1.02	Electric Util. (Central)	0.76
Office Equip/Supplies	1.19	Cable TV	1.02	Water Utility	0.73
E-Commerce	1.18	Packaging & Container	1.02	Electric Utility (East)	0.68

Source: ValueLine Investment Survey, October, 2015.



Source: William F. Sharpe, Gordon J. Alexander, and Jeffrey V. Bailey, Investments (Prentice-Hall, 1995), pp. 590-91.

DCF Model Consensus Earnings Estimates American Water Works (AWK)

<u>www.reuters.com</u> 4/15/2016

Line	Date	# of Estimates	Mean	High	Low
1	Quarter Ending Jun-16	11	0.74	0.79	0.65
2	Quarter Ending Sep-16	11	1.02	1.08	0.92
3	Year Ending Dec-16	16	2.82	2.85	2.75
4	Year Ending Dec-17	14	3.04	3.10	2.95
5	LT Growth Rate (%)	3	7.60	8.20	7.00

Kentucky-American Water Company Discounted Cash Flow Analysis

Panel A

Water	Proxy	Group
-------	-------	-------

Dividend Yield*	2.40%
Adjustment Factor (1 + 1/2g)	<u>1.03</u>
Adjusted Dividend Yield	2.47%
Growth Rate**	<u>6.00%</u>
Equity Cost Rate	8.5%

* Page 2 of Exhibit JRW-10

** Based on data provided on pages 3, 4, 5, and 6 of Exhibit JRW-10

Panel B Gas Proxy Group

Dividend Yield*	3.00%
Adjustment Factor (1 + 1/2g)	1.02625
Adjusted Dividend Yield	3.08%
Growth Rate**	<u>5.25%</u>
Equity Cost Rate	8.3%

* Page 2 of Exhibit JRW-10

** Based on data provided on pages 3, 4, 5, and 6 of Exhibit JRW-10

Docket No. 2015-00418 Exhibit JRW-10 DCF Study Page 2 of 6

Exhibit JRW-10

Kentucky-American Water Company Dividend Yields

Panel A Water Proxy Group

	_	D 1	D	D I I
		Dividend	Dividend	Dividend
Α	nnual	Yield	Yield	Yield
Di	vidend	30 Day	90 Day	180 Day
\$	0.90	2.3%	2.2%	2.2%
\$	1.36	2.0%	2.1%	2.3%
\$	0.71	2.2%	2.3%	2.5%
\$	0.69	2.6%	2.8%	3.0%
\$	1.07	2.4%	2.6%	2.8%
\$	0.80	2.6%	2.8%	3.1%
\$	0.81	2.2%	2.4%	2.6%
\$	0.62	2.1%	2.3%	2.5%
		2.3%	2.4%	2.6%
		2.3%	2.4%	2.6%
	Di \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 1.36 \$ 0.71 \$ 0.69 \$ 1.07 \$ 0.80 \$ 0.81	Annual Dividend Yield 30 Day \$ 0.90 2.3% \$ 1.36 2.0% \$ 0.71 2.2% \$ 0.69 2.6% \$ 1.07 2.4% \$ 0.80 2.6% \$ 0.81 2.2% \$ 0.81 2.2%	Dividend 30 Day 90 Day \$ 0.90 2.3% 2.2% \$ 1.36 2.0% 2.1% \$ 0.71 2.2% 2.3% \$ 0.69 2.6% 2.8% \$ 1.07 2.4% 2.6% \$ 0.80 2.6% 2.8% \$ 0.81 2.2% 2.4% \$ 0.62 2.1% 2.3%

Data Sources: http://quote.yahoo.com, April 15, 2016.

Gas Proxy G	Group				
			Dividend	Dividend	Dividend
	Annu	ıal	Yield	Yield	Yield
Company	Divide	end	30 Day	90 Day	180 Day
Atmos Energy Corporation (NYSE-ATO)	\$ 1	.68	2.3%	2.5%	2.7%
Chesapeake Utilities Corporation (NYSE-CPK)	\$ 1	.15	1.9%	1.9%	2.1%
Laclede Group, Inc. (NYSE-LG)	\$ 1	.96	2.9%	3.1%	3.4%
New Jersey Resources Corp. (NYSE-NJR)	\$ 0	.96	2.7%	2.8%	3.1%
Northwest Natural Gas Co. (NYSE-NWN)	\$ 1	.87	3.6%	3.7%	3.9%
South Jersey Industries, Inc. (NYSE-SJI)	\$ 1	.05	3.8%	4.2%	4.3%
Southwest Gas Corporation (NYSE-SWX)	\$ 1	.80	2.8%	3.0%	3.1%
WGL Holdings, Inc. (NYSE-WGL)	\$ 1	.95	2.8%	3.0%	3.2%
Mean			2.9%	3.0%	3.2%
Median			2.8%	3.0%	3.2%

Panel B Gas Proxy Group

Data Sources: http://quote.yahoo.com, April 15, 2016.

Kentucky-American Water Company DCF Equity Cost Growth Rate Measures Value Line Historic Growth Rates

Panel A Water Proxy Group

	Value Line Historic Growth					
Company	I	Past 10 Years	5	Past 5 Years		
	Earnings	Dividends	Book Value	Earnings	Dividends	Book Value
American States Water Co. (NYSE-AWR)	12.0%	6.5%	5.5%	12.0%	10.0%	6.0%
American Water Works Co., Inc. (NYSE-AWK)				13.0%	10.0%	2.5%
Aqua America, Inc. (NYSE-WTR)	8.5%	8.0%	7.0%	13.0%	7.5%	7.0%
California Water Service Group (NYSE-CWT)	5.0%	1.5%	5.5%	4.0%	2.0%	5.0%
Connecticut Water Service, Inc. (NDQ-CTWS)	4.0%	2.0%	6.5%	9.0%	2.0%	9.5%
Middlesex Water Company (NDQ-MSEX)	5.0%	1.5%	4.5%	5.5%	1.5%	3.0%
SJW Corporation (NYSE-SJW)	6.5%	4.0%	6.0%	15.0%	2.5%	5.0%
York Water Company (NDQ-YORW)	5.5%	4.0%	6.5%	6.0%	2.5%	4.5%
Mean	6.6%	3.9%	5.9%	9.7%	4.8%	5.3%
Median	5.5%	4.0%	6.0%	10.5%	2.5%	5.0%
Data Source: Value Line Investment Survey, 2013.	Average of	f Median Fig	ures =	5.6%		

Gas Proxy Group Value Line Historic Growth Company Past 10 Years Past 5 Years Book Book Value Value Earnings Dividends Earnings Dividends 5.0% 1.5% 6.0% 5.0% 2.0% 4.5% Atmos Energy Corporation (NYSE-ATO) Chesapeake Utilities Corporation (NYSE-CPK) 8.5% 3.0% 8.5% 10.5% 4.5% 8.5% 4.0% 2.5% 7.0% -2.0% 3.0% 7.5% Laclede Group, Inc. (NYSE-LG) 6.5% 6.5% 8.0% 5.5% 4.5% New Jersey Resources (NYSE-NJR) 8.5% Northwest Natural Gas Co. (NYSE-NWN) 2.5% 3.5% 3.5% -4.0% 3.5% 3.0% South Jersey Industries, Inc. (NYSE-SJI) 8.0% 8.5% 8.5% 6.5% 10.0% 8.0% Southwest Gas Corporation (NYSE-SWX) 8.5% 5.0% 5.0% 11.0% 8.0% 5.0% WGL Holdings, Inc. (NYSE-WGL) 3.5% 2.5% 4.0% 1.5% 3.0% 3.0% 5.3% Mean 5.8% 4.1% 6.3% 4.3% 5.5% Median 5.8% 3.3% 6.5% 5.3% 4.0% 4.8% Data Source: Value Line Investment Survey, 2013. Average of Median Figures = 4.9%

Panel B

Kentucky-American Water Company DCF Equity Cost Growth Rate Measures Value Line Projected Growth Rates

Panel A Water Proxy Group

	water 1	Proxy Group					
	Value Line				Value Line		
	P	rojected Grov	vth	Sustainable Growth			
Company	Est	'd. '13-'15 to '1	19-'21	Return on	Retention	Sustainable	
	Earnings	Dividends	Book Value	Equity	Rate	Growth	
American States Water Co. (NYSE-AWR)	6.0%	7.0%	4.0%	13.5%	44.0%	5.9%	
American Water Works Co., Inc. (NYSE-AWK)	8.0%	10.5%	4.0%	10.5%	45.0%	4.7%	
Aqua America, Inc. (NYSE-WTR)	7.0%	9.0%	6.0%	13.5%	40.0%	5.4%	
California Water Service Group (NYSE-CWT)	6.0%	6.5%	4.0%	10.0%	38.0%	3.8%	
Connecticut Water Service, Inc. (NDQ-CTWS)	4.5%	4.5%	2.5%	10.5%	43.0%	4.5%	
Middlesex Water Company (NDQ-MSEX)	3.5%	3.0%	4.0%	9.0%	35.0%	3.2%	
SJW Corporation (NYSE-SJW)	1.5%	6.0%	6.0%	9.0%	40.0%	3.6%	
York Water Company (NDQ-YORW)	6.0%	6.5%	3.5%	12.5%	32.0%	4.0%	
Mean	5.3%	6.6%	4.3%	11.1%	39.6%	4.4%	
Median	6.0%	6.5%	4.0%	10.5%	40.0%	4.3%	
Average of Median Figures =	-	5.5%	•		Median =	4.3%	

Data Source: Value Line Investment Survey, 2016.

	Gas Pi	oxy Group				
	Value Line				Value Line	
	P	rojected Grov	vth	Su	ıstainable Grov	vth
Company	Est	d. '13-'15 to '1	19-'21	Return on	Retention	Internal
	Earnings	Dividends	Book Value	Equity	Rate	Growth
Atmos Energy Corporation (NYSE-ATO)	6.0%	6.5%	3.5%	11.0%	46.0%	5.1%
Chesapeake Utilities Corporation (NYSE-CPK)	8.5%	6.0%	7.0%	13.0%	62.0%	8.1%
Laclede Group, Inc. (NYSE-LG)	9.0%	3.5%	4.5%	9.5%	48.0%	4.6%
New Jersey Resources (NYSE-NJR)	1.5%	3.0%	6.5%	11.5%	47.0%	5.4%
Northwest Natural Gas Co. (NYSE-NWN)	5.0%	1.5%	3.5%	9.0%	35.0%	3.2%
South Jersey Industries, Inc. (NYSE-SJI)	5.5%	6.5%	5.5%	11.5%	36.0%	4.1%
Southwest Gas Corporation (NYSE-SWX)	7.0%	7.5%	3.0%	13.0%	52.0%	6.8%
WGL Holdings, Inc. (NYSE-WGL)	5.0%	2.5%	4.5%	11.0%	43.0%	4.7%
Mean	5.9%	4.6%	4.8%	11.2%	46.1%	5.2%
Median	5.8%	4.8%	4.5%	11.3%	46.5%	4.9%
Average of Median Figures =	-	5.0%	-		Median =	4.9%

Panel B Gas Proxy Group

Data Source: Value Line Investment Survey, 2016.

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Exhibit JRW-10

Kentucky-American Water Company DCF Equity Cost Growth Rate Measures Analysts Projected EPS Growth Rate Estimates

Panel A

Water Proxy Group

Yahoo	Reuters	Zack's	Average
3.9%	3.9%	3.9%	3.9%
7.6%	7.6%	7.4%	7.5%
5.9%	5.9%	6.2%	6.0%
9.1%	9.1%	9.1%	9.1%
5.0%	5.0%	5.0%	5.0%
2.7%	NA	NA	2.7%
14.0%	NA	NA	14.0%
4.9%	NA	NA	4.9%
6.6%	6.3%	6.3%	6.6%
5.4%	5.9%	6.2%	5.5%
	3.9% 7.6% 5.9% 9.1% 5.0% 2.7% 14.0% 4.9% 6.6%	3.9% 3.9% 7.6% 7.6% 5.9% 5.9% 9.1% 9.1% 5.0% 5.0% 2.7% NA 14.0% NA 4.9% NA 6.6% 6.3%	3.9% 3.9% 3.9% 7.6% 7.6% 7.4% 5.9% 5.9% 6.2% 9.1% 9.1% 9.1% 5.0% 5.0% 5.0% 2.7% NA NA 14.0% NA NA 4.9% NA NA 6.6% 6.3% 6.3%

Data Sources: www.reuters.com, www.zacks.com, http://quote.yahoo.com, April 15, 2016

Panel B Gas Proxy Group

Company	Yahoo	Reuters	Zack's	Average
Atmos Energy Corporation (NYSE-ATO)	6.4%	6.4%	6.4%	6.4%
Chesapeake Utilities Corporation (NYSE-CPK)	3.0%	NA	NA	3.0%
Laclede Group, Inc. (NYSE-LG)	4.7%	4.4%	4.8%	4.6%
New Jersey Resources (NYSE-NJR)	6.5%	NA	6.5%	6.5%
Northwest Natural Gas Co. (NYSE-NWN)	4.0%	NA	4.0%	4.0%
South Jersey Industries, Inc. (NYSE-SJI)	6.0%	NA	6.0%	6.0%
Southwest Gas Corporation (NYSE-SWX)	4.0%	NA	5.0%	4.5%
WGL Holdings, Inc. (NYSE-WGL)	8.0%	NA	7.3%	7.7%
Mean	5.3%	5.4%	5.7%	5.3%
Median	5.4%	5.4%	6.0%	5.3%

Data Sources: www.reuters.com, www.zacks.com, http://quote.yahoo.com, April 15, 2016

Kentucky-American Water Company DCF Growth Rate Indicators

Summary Growth Rates

Growth Rate Indicator	Water Proxy Group	Gas Proxy Group
Historic Value Line Growth		
in EPS, DPS, and BVPS	5.6%	4.9%
Projected Value Line Growth		
in EPS, DPS, and BVPS	5.5%	5.0%
Sustainable Growth		
ROE * Retention Rate	4.3%	4.9%
Projected EPS Growth from Yahoo, Zacks,		
and Reuters - Mean/Median	6.6%/5.5%	5.3%/5.3%

4.00%

Exhibit JRW-11

Kentucky-American Water Company Capital Asset Pricing Model

Water Proxy Group	
Risk-Free Interest Rate	4.00%
Beta*	0.73
Ex Ante Equity Risk Premium**	<u>5.50%</u>
CAPM Cost of Equity	8.0%

* See page 3 of Exhibit JRW-11

** See pages 5 and 6 of Exhibit JRW-11

Panel B	
Gas Proxy Group	
Risk-Free Interest Rate	
D - 4 - ¥	

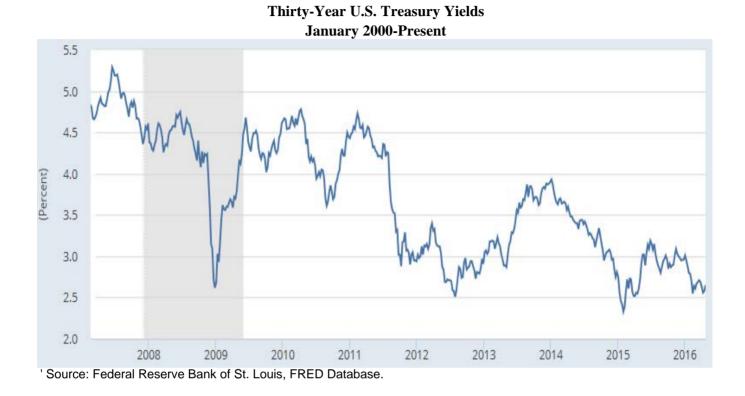
Beta*	0.80
Ex Ante Equity Risk Premium**	<u>5.50%</u>
CAPM Cost of Equity	8.4%

* See page 3 of Exhibit JRW-11

** See pages 5 and 6 of Exhibit JRW-11

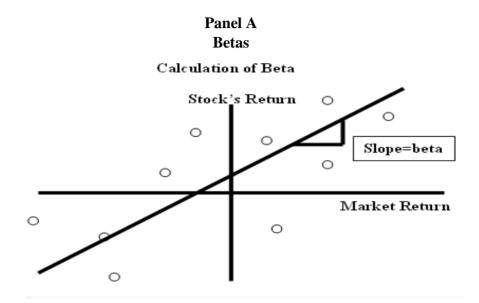
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Exhibit JRW-11



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Exhibit JRW-11



Water Proxy Group

Company	Beta
American States Water Co. (NYSE-AWR)	0.75
American Water Works Co., Inc. (NYSE-AWK)	0.70
Aqua America, Inc. (NYSE-WTR)	0.75
California Water Service Group (NYSE-CWT)	0.75
Connecticut Water Service, Inc. (NDQ-CTWS)	0.60
Middlesex Water Company (NDQ-MSEX)	0.70
SJW Corporation (NYSE-SJW)	0.75
York Water Company (NDQ-YORW)	0.70
Mean	0.71
Median	0.73

Data Source: Value Line Investment Survey, 2016.

Company	Beta
Atmos Energy Corporation (NYSE-ATO)	0.80
Chesapeake Utilities Corporation (NYSE-CPK)	0.65
Laclede Group, Inc. (NYSE-LG)	0.70
New Jersey Resources Corp. (NYSE-NJR)	0.80
Northwest Natural Gas Co. (NYSE-NWN)	0.65
South Jersey Industries, Inc. (NYSE-SJI)	0.85
Southwest Gas Corporation (NYSE-SWX)	0.80
WGL Holdings, Inc. (NYSE-WGL)	0.80
Mean	0.76
Median	0.80

Gas Proxy Group

Data Source: Value Line Investment Survey, 2016.

	Historical Ex Post Returns	Surveys	Expected Return Models and Market Data
Means of Assessing	Historical Average	Surveys of CFOs,	Use Market Prices and
The Market Risk	Stock Minus	Financial Forecasters,	Market Fundamentals (such as
Premium	Bond Returns	Companies, Analysts on	Growth Rates) to Compute
		Expected Returns and	Expected Returns and Market
	Market Risk Premiums		Risk Premiums
Problems/Debated	Time Variation in	Questions Regarding Survey	Assumptions Regarding
Issues	Required Returns,	Histories, Responses, and	Expectations, Especially
	Measurement and	Representativeness	Growth
	Time Period Issues,		
	and Biases such as	Surveys may be Subject	
	Market and Company	to Biases, such as	
	Survivorship Bias	Extrapolation	

Exhibit JRW-11 **Risk Premium Approaches**

Source: Adapted from Antti Ilmanen, Expected Returns on Stocks and Bonds," Journal of Portfolio Management, (Winter 2003).

Kentucky-American Water Company Capital Asset Pricing Model Equity Risk Premium

Proper Product Product Matematic Matematic Notation Product Notation <					Risk Premium						
Kate Note Source					Methodology					Mean	Median
Image: Section of the sectin of the section of the section	Historical Risk Pre Histor		2015	1928-2014	Historical Stock Returns - Bond Returns						
Image: State State Image: State State State Image: State		Damodaran	2015	1928-2014	Historical Stock Returns - Bond Returns	Arithmetic				6.25%	
Bate 2006 1900 2007 Hisorical Stock Remans - Boal Remans Generative (Control Second		Dimson, Marsh, Staunton	2015	1900-2014	Historical Stock Returns - Bond Returns	Arithmetic					
Siggl Siggl Open Siggl		Bate	2008	1900-2007	Historical Stock Returns - Bond Returns						
Singel 2005 1925-2000 Historical Stock Returns - Boall Returns Anti- Generation Generation Antihantic		Shiller	2006	1926-2005	Historical Stock Returns - Bond Returns						
Damon, March, and Staumen Que Horical Stock Returns Anthenecis S. S. Ne A data Que 1372-200 Historical Stock Returns. S. S. Ne S. S. Ne S. Ante Models F Amota and Benesion Que 1372-200 Peadameentals- Der Viel-Growth S. S. Ne S. S. Ne <t< td=""><td></td><td>Siegel</td><td>2005</td><td>1926-2005</td><td>Historical Stock Returns - Bond Returns</td><td>Arithmetic</td><td></td><td></td><td></td><td>6.10%</td><td></td></t<>		Siegel	2005	1926-2005	Historical Stock Returns - Bond Returns	Arithmetic				6.10%	
Main St. Ant. Model: (PE 5. Ante. Model: (Parzia Reserch) Source (PE 5. Ante. Model: (Parzia Reserch)) Source (PE 5. Ante. Model: (Parzia Reserch)) Source (PE 5. Ante. Model: Parzia Reserch) Source (PE 5. Ante. Model: Parzia Reserch) Source (PE 5. Ante. Model: Parzia Reserch) Constrained: 2002 1810-2001 Financental: -DV 14 - Growth Source (PE 5. Ante. Model: Parzia Reserch) Source (PE 5. Ante. Mode: Parzia Reserch) Source (PE 5. Ante. Parzia Reserch)		Dimson, Marsh, and Staunton	2006	1900-2005	Historical Stock Returns - Bond Returns						
X Aate Models (Pizzle Research) 5.00% 4.00% Class Thomas 2001 1985-1993 Abnormal Earnings Model 5.00% Constatinition 2002 1810-2010 Finadamentals -DD Y14 - Growth 6.00% Constatinition 2002 1812-2010 Finadamentals -DD Y14 - Growth 2.00% Eastern Typics et al 2002 1981-1993 Residual Encore Model 2.55% 4.55% 4.55% Harris & Manton 2001 1983-1998 Residual Encore Model 7.14% 7.4% Best & Byrne 2001 Finadamental CP wite PE3 and DF Growth 2.5% 4.35% 7.5% Staged 2005 1810-2001 Finadamental CP wite PE3 and Coroth 2.5% 4.00% 2.5% 4.25% 4.25% 4.25% 4.25% 4.25% 2.0% <t< td=""><td></td><td>Goyal & Welch</td><td>2006</td><td>1872-2004</td><td>Historical Stock Returns - Bond Returns</td><td></td><td></td><td></td><td></td><td>4.77%</td><td></td></t<>		Goyal & Welch	2006	1872-2004	Historical Stock Returns - Bond Returns					4.77%	
Amort and Bernstein 2001 1983-1998 Absort and Barnings Model 3.00% 2.0% Amort and Bernstein 2002 1810-230 Historical Reurns & Fundamental CDP Harnings 3.50% 5.50% 4.50% Constantinúes 2002 1981-1998 Residual Income Model 2.55% 4.2% 5.50% 4.50% 5.50%		Median									5.14
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siegel 2005 1802-2001 Historical and Projected Geometric 2.50% Maheu & McCurdy 2006 1885-2003 Historical and Projected 3.50% 6.00% 4.75% 4.75% Bakshi & Chen 2005 1982-1098 Fundamental. Historical Excers Returns, Structural Breaks, 4.02% 5.10% 4.56% 4.56% Domalskon, Kanstra, & Kmmer 2006 1982-1098 Fundamental. Divided Viel, Returns, & Volitily 3.00% 4.00% 3.50% 6.00% 7.31% Campbell 2008 1982-2007 Historical & Projection (DP & Earnings Growth) 4.10% 5.40% 3.50% 2.00% Fernandez 2007 Projection Required Equity Risk Premium 5.10% 3.20% 4.00% Siegel - Rethink ERP 2011 Projection Realized Exprive 5.50% 5.00% 3.50% 3.00% 4.00% American Apraisal Quiterly EBI 2016 Projection Fundamentals - Exprete Meturn Minsi D-Year Treasury Rate 5.50% 5.00% 5.50% 5.00% 5.00% 5.00% </td <td></td> <td>Best & Byrne</td> <td>2001</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		Best & Byrne	2001								
siegel 2005 1802-2001 Historical and Poyceted Geometric 2.50% 4.75% Maheu & McCurdy 2006 1885-2003 Historical and Poyceted 3.50% 6.00% 4.75% 4.75% Bostock 2006 1982-1998 Fundamental- Invicated Rares, Structural Breaks, A 4.02% 5.10% 4.56% 6.26% Donalksko, Kamstra, & Kramer 2005 1982-1998 Fundamental- Invicated Rares, Structural Breaks, Collisity 3.00% 4.00% 5.50% 5.75% Campbell 2008 1982-2007 Historical Rares, Structural Reseaw, Structural Breaks, Collisity 3.00% 4.00% 5.20% 5.40% </td <td></td> <td>McKinsey</td> <td>2002</td> <td>1962-2002</td> <td>Fundamental (P/E, D/P, & Earnings Growth)</td> <td></td> <td>3.50%</td> <td>4.00%</td> <td></td> <td>3.75%</td> <td></td>		McKinsey	2002	1962-2002	Fundamental (P/E, D/P, & Earnings Growth)		3.50%	4.00%		3.75%	
arrowski 2006 1927-2005 Historical McPicett, Structural Breaks, Structural Breaks, Au202 5,00% 4,75% 4,75% 4,75% 4,75% 4,75% 4,75% 4,75% 4,75% 4,75% 4,75% 4,75% 4,75% 4,75% 4,02% 5,00% 4,02% 5,00% 4,00% 5,05% 2,00% 2,00% 2,00% 2,00% 2,00% 3,00% 3,0%			2005			Geometric					
Malee & McCundy 2006 1885 2003 Historical Excess Returns, Structural Breaks, Main Lone Volatility 3.00% 1.00% 2.60% 2.60% Bakshi & Chen 2005 1982 1989 Fundamental, Livided QL, Returns, & Volatility 3.00% 4.00% 3.00% 2.00% 2.00% Campbell 2006 1982 2007 Historical Excess Returns, Structural Breaks, Main Lone Volatility 3.00% 4.00% 3.00% 4.00% 3.00% 3.00% 3.00% 7.05% 3.50% 3.00% 7.05% 3.50% 3.00% 7.05% 3.00% 7.05% 3.00% 7.05% 3.00% 7.05% 3.00% 7.05% 3.00% 7.05% 3.00% 7.05% 3.00% 7.05% 3.00% <td< td=""><td></td><td>-</td><td></td><td></td><td></td><td></td><td>3 50%</td><td>6.00%</td><td>4 75%</td><td></td><td></td></td<>		-					3 50%	6.00%	4 75%		
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Woolridge 2015 Current Supply Model (D/P & Earnings Growth) 4.50% Median Mean		Ormoid, Kroner, Siegei - Kethink F	2011	riojection	Current Supply Model (D/r & Earnings Growin)					4.12%	
Median Mean		W/l-id		2015	Comment Secondar Model (D/D) & Formin or Conv. (1)	Geometric			3.60%	4.50%	
Vean Mean				2015	Current Supply Model (D/P & Earnings Growth)					4.50%	4.14
											4.12
											4.669
Iedian Median	fedian Media	an									4.63

Kentucky-American Water Company Capital Asset Pricing Model Equity Risk Premium

	Publication	Time Period	10-16 Equity Risk Premium Studies	Return	Da	nge	Midpoint		Averag
Study Authors	Date	Of Study	Methodology	Measure	Low	High	of Range	Mean	Avera
•		•							
Ibbotson	2015	1928-2014	Historical Stock Returns - Bond Returns	Arithmetic				6.00%	
				Geometric				4.40%	
Damodaran	2015	1928-2014	Historical Stock Returns - Bond Returns	Arithmetic				6.25%	
				Geometric				4.60%	
Dimson, Marsh, Staunton	2015	1900-2014	Historical Stock Returns - Bond Returns	Arithmetic					
				Geometric				4.40%	
Median									5.13
Siegel - Rethink ERP	2011	Projection	Real Stock Returns and Components					5.50%	
Duff & Phelps	2016	Projection	Normalized with 4.0% Long-Term Treasury Yield					5.50%	
Mschchowski - VL - 2014	2014	Projection	Fundamentals - Expected Return Minus 10-Year Treasury	Rate				5.50%	
American Appraisal Quarterly ERP	2015	Projection	Fundamental Economic and Market Factors					6.00%	
Damodaran	2016	Projection	Fundamentals - Implied from FCF to Equity Model					5.61%	
Median									5.50
Duarte & Rosa - NY Fed	2015	Projection	Projections from 29 Models					5.70%	
Survey of Financial Forecasters	2016	10-Year Projection	About 20 Financial Forecastsers					1.90%	
Duke - CFO Magazine Survey	2016	10-Year Projection	Approximately 500 CFOs					4.62%	
Fernandez - Academics, Analysts, a	2015	Long-Term	Survey of Academics, Analysts, and Companies					5.50%	
Median									5.06
Ibbotson and Chen	2015	Projection	Historical Supply Model (D/P & Earnings Growth)	Arithmetic			6.22%	5.21%	
				Geometric			4.20%		
Chen - Rethink ERP	2010	20-Year Projection	Combination Supply Model (Historic and Projection)	Geometric				4.00%	
Ilmanen - Rethink ERP	2010	Projection	Current Supply Model (D/P & Earnings Growth)	Geometric				3.00%	
Grinold, Kroner, Siegel - Rethink E	2011	Projection	Current Supply Model (D/P & Earnings Growth)	Arithmetic			4.63%	4.12%	
_		-		Geometric			3.60%		
Woolridge	2015	Projection	Current Supply Model (D/P & Earnings Growth)	Geometric				4.50%	
Median									4.12
									4.959
									5.10%

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Authorized ROEs for Publicly-Held Water Companies

	Authorized	
	ROE	Date
American States Water	9.43%	Jan-13
American Water Works	9.75%	Dec-12
Aqua America, Inc.	9.79%	May-14
Artesian Resources Corp.	10.00%	May-14
California Water Service Group	9.43%	Jan-13
Connecticut Water Services, Inc.	9.63%	Aug-14
Middlesex Water Company	9.75%	Mar-14
SJW Corp.	9.43%	Nov-11
York Water Company	NM	
Average	9.65%	

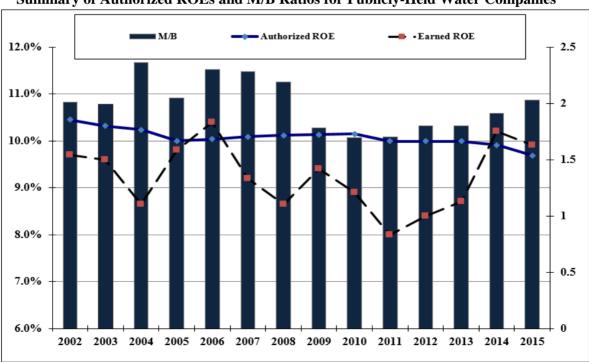
Data Source: AUS Utility Reports, April, 2016

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	Authorized	Earned	
Year	ROE	ROE	M/B
2002	10.45%	9.70%	2.01
2003	10.32%	9.60%	1.99
2004	10.24%	8.65%	2.36
2005	10.00%	9.80%	2.05
2006	10.04%	10.40%	2.30
2007	10.09%	9.20%	2.29
2008	10.12%	8.65%	2.19
2009	10.13%	9.40%	1.78
2010	10.15%	8.90%	1.70
2011	9.99%	8.00%	1.70
2012	9.99%	8.40%	1.80
2013	9.99%	8.70%	1.80
2014	9.91%	10.20%	1.91
2015	9.69%	9.90%	2.03

Panel A Authorized and Earned ROEs and M/B Ratios for Publicly-Held Water Companies

Data Source: AUS Utilities Report, Value Line Investment Survey



Panel B Summary of Authorized ROEs and M/B Ratios for Publicly-Held Water Companies

Data Source: AUS Utilities Report, Value Line Investment Survey

Cost of Capital

	Capitalization	Cost	Weighted
Capital Source	Ratio	Rate	Cost Rate
Short-Term Debt	1.49%	1.37%	0.02%
Long-Term Debt	50.59%	6.05%	3.06%
Preferred Stock	0.56%	8.52%	0.05%
Common Equity	47.36%	10.75%	5.09%
Total Capital	100.00%		8.22%

Panel A

Dr. Vander Weide's Equity Cost Rate Approaches and Results

Di. valuer welde s Equity Cost Ka	e Appi baches and Results
Approach	Cost of Equity
DCF - Water	9.50%
DCF - LDC	10.10%
Ex Ante Risk Premium	11.20%
Ex Post Risk Premium	10.60%
CAPM - Historical	10.70%
CAPM - DCF Based	<u>10.10%</u>
Equity Cost Rate Range	9.5%-11.2%

Panel B

Dr. Vander Weide's DCF - Water Results

	Utility Proxy Group		
Average Adjusted Dividend Yield*	3.24%		
Growth**	6.26%		
DCF Result 9.50%			

** Expected EPS Growth from IBES and Value Line

Dr. Vander Weide's DCF - Gas Results

	Utility Proxy Group
Average Adjusted Dividend Yield*	4.04%
Growth**	6.06%
DCF Result	10.10%

* Includes adjustments for quarterly payments and flotation costs

** Expected EPS Growth from IBES and and not Value Line

Panel C

Dr. Vander Weide's Ex Ante Risk Premium Results				
Ex Ante Risk Prem				
'A' Rated PU Yield	6.27%			
Ex Ante Risk Premium*	4.93%			
Equity Cost Rate 11.20%				

* Flotation Cost included in risk premium

Panel D Dr. Vander Weide's Ex Post Risk Premium Results

Ex Ante Risk Premium	
6.27%	
4.23%	
10.50%	
0.15%	
10.65%	

* Midpoint of 3.9% and 4.5%

Panel E Dr. Vander Weide's Historical CAPM Results

	Utility Proxy Group
Risk-Free Rate	4.24%
Beta	0.73
Equity Risk Premium	<u>7.00%</u>
CAPM Result	9.35%
Flotation Cost Adjustment	<u>0.15%</u>
Adjusted CAPM Result	9.50%
Size Adjustment	<u>2.40%</u>
Size Adjusted CAPM Result*	11.90%
verage CAPM Result 10.70%	

* Includes size adjustment

Panel F		
Dr. Vander Weide's Expected CAPM Results		

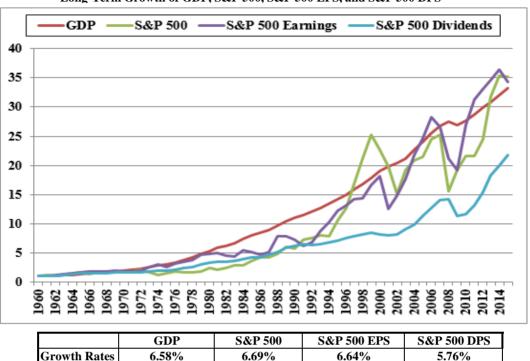
	Utility Proxy Group
Risk-Free Rate	4.24%
Beta	0.73
Equity Risk Premium	<u>7.76%</u>
CAPM Result	9.90%
Flotation Cost Adjustment	<u>0.15%</u>
Adjusted CAPM Result	10.05%

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Growth Rates					
		, S&P 500 Price			I
	GDP	S&P 500	S&P 500 Earnings	S&P 500 Dividends	
1960	535.1	58.11	3.10	1.98	
1961	547.6	71.55	3.37	2.04	
1962	586.9	63.10	3.67	2.15	
1963	619.3	75.02	4.13	2.35	
1964	662.9	84.75	4.76	2.58	
1965	710.7	92.43	5.30	2.83	
1966	781.9	80.33	5.41	2.88	
1967	838.2	96.47	5.46	2.98	
1968	899.3	103.86	5.72	3.04	
1969	982.3	92.06	6.10	3.24	
1970	1049.1	92.15	5.51	3.19	
1971	1119.3	102.09	5.57	3.16	
1972	1219.5	118.05	6.17	3.19	
1973	1356.0	97.55	7.96	3.61	
1974	1486.2	68.56	9.35	3.72	
1975	1610.6	90.19	7.71	3.73	
1976	1790.3	107.46	9.75	4.22	
1977	2028.4	95.10	10.87	4.86	
1978	2278.2	96.11	11.64	5.18	
1978	2570.0	107.94	14.55	5.97	
1979	2796.8	135.76	14.99	6.44	
1981	3138.4	122.55	15.18	6.83	
1982	3313.9	140.64	13.82	6.93	
1983	3541.1	164.93	13.29	7.12	
1984	3952.8	167.24	16.84	7.83	
1985	4270.4	211.28	15.68	8.20	
1986	4536.1	242.17	14.43	8.19	
1987	4781.9	247.08	16.04	9.17	
1988	5155.1	277.72	24.12	10.22	
1989	5570.0	353.40	24.32	11.73	
1990	5914.6	330.22	22.65	12.35	
1991	6110.1	417.09	19.30	12.97	
1992	6434.7	435.71	20.87	12.64	
1993	6794.9	466.45	26.90	12.69	
1994	7197.8	459.27	31.75	13.36	
1995	7583.4	615.93	37.70	14.17	
1996	7978.3	740.74	40.63	14.89	
1997	8483.2	970.43	44.09	15.52	
1998	8954.8	1229.23	44.27	16.20	
1999	9510.5	1469.25	51.68	16.71	
2000	10148.2	1320.28	56.13	16.27	
2001	10564.6	1148.09	38.85	15.74	
2002	10876.9	879.82	46.04	16.08	
2002	11332.4	1111.91	54.69	17.88	
2003	12088.6	1211.92	67.68	19.41	
2005	12888.9	1248.29	76.45	22.38	
2005	13684.7	1418.30	87.72	25.05	
2000	14322.9	1468.36	82.54	27.73	
2007	14752.4	903.25	65.39	28.05	
2008	14732.4	1115.10	59.65	28.05	
2010	14798.5	1257.64	83.66	23.12	
2011	15379.2	1257.60	97.05	26.02	Average
2012	16027.2	1426.19	102.47	30.44	
2013	16498.1	1848.36	107.45	36.28	<u> </u>
2014	17183.5	2058.90	113.01	39.44	
2015	17803.4	2043.94	106.32	43.16	
rowth Rates	6.58	6.69	6.64	5.76	6.42

Growth Rates

Growth Rates6.586.696.64Data Sources: GDPA -http://research.stlouisfed.org/fred2/series/GDPA/downloaddataS&P 500, EPS and DPS - http://pages.stern.nyu.edu/~adamodar/



6.69%

6.64%

5.76%

Growth Rates

Long-Term Growth of GDP, S&P 500, S&P 500 EPS, and S&P 500 DPS

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Panel A		
Historic GDP Growth Rates		

10-Year Average	3.28%
20-Year Average	4.36%
30-Year Average	4.87%
40-Year Average	6.19%
50-Year Average	6.65%

Calculated using GDP data on Page 1 of Exhibit JRW-14

Panel B Projected GDP Growth Rates

		Projected
		Nominal GDP
	Time Frame	Growth Rate
Congressional Budget Office	2015-2040	4.3%
Survey of Financial Forecasters	Ten Year	4.4%
Social Security Administration	2015-2090	4.5%
Energy Information Administration	2013-2040	4.2%

Sources:

http://www.cbo.gov/topics/budget/budget-and-economic-outlook

http://www.eia.gov/forecasts/aeo/tables_ref.cfm Table 20

http://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/2016/ http://www.ssa.gov/oact/tr/2015/X1_trLOT.html