

**CAPITAL ASSET PRICING MODEL (CAPM) COST OF COMMON EQUITY ESTIMATES  
FOR WATER PEER GROUP, INCLUDING AMERICAN WATER, BASED ON 20-YEAR US TREASURY**

	(1)	(2)	(3)	(4)
Company Name	20-Year Risk Free Rate	Beta	Market Risk Premium	CAPM Cost of Common Equity
<b>American Water Works Company</b>	<b>3.82%</b>	<b>0.81</b>	<b>6.00%</b>	<b>8.70%</b>
American States Water Company	3.82%	0.66	6.00%	7.77%
California Water Service Group	3.82%	0.68	6.00%	7.89%
Essential Utilities, Inc.	3.82%	0.81	6.00%	8.65%
Middlesex Water Company	3.82%	0.73	6.00%	8.20%
SJW Group	3.82%	0.76	6.00%	8.36%
<b>Average</b>		<u>0.741</u>		<u>8.26%</u>

Column 1 = Average of last 3 Months of 20-Year Treasuries obtained from the St. Louis Federal Reserve website at <https://fred.stlouisfed.org/series/GS20>

Column 2 = Beta is a measure of the movement and relative risk of an individual stock to the market as a whole. I used a template provided by S&P Market Intelligence that calculates raw betas based on the Value Linen approach. This approach measures the covariance of the company's weekly returns with that of the S&P 500 divided by the variance of the S&P 500 returns over an historical 5 year period. This raw beta is then adjusted by the Blume formula, which is the following:  
Adjusted Beta = 0.35 + 0.67 \* Unadjusted Beta

Column 3 = The market risk premium selected is based on consideration of historical achieved earned return spreads and risk premiums market risk premiums typical of those recommended by various authoritative sources.

Column 4 = (Column 1 + (Column 2 \* Column 3)).