

**CAPITAL ASSET PRICING MODEL (CAPM) COST OF COMMON EQUITY ESTIMATES
FOR WATER PEER GROUP 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
American Water Works Company	3.90%	0.89	6.00%	9.22%
American States Water Company	3.90%	0.58	6.00%	7.38%
California Water Service Group	3.90%	0.60	6.00%	7.47%
Essential Utilities, Inc.	3.90%	0.85	6.00%	8.97%
Middlesex Water Company	3.90%	0.71	6.00%	8.18%
SJW Group	3.90%	0.74	6.00%	8.32%
Average		<u>0.727</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)).