

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

	(1)	(2)	(3)		(4)	
Company Name	20-Year Risk Free Rate	Beta	Market Risk Premiums		CAPM Cost of Common Equity Range	
American States Water Company	4.60%	0.7173	5.00%	6.00%	8.19%	8.91%
American Water Works Company, Inc.	4.60%	0.8942	5.00%	6.00%	9.07%	9.97%
California Water Service Group	4.60%	0.7889	5.00%	6.00%	8.55%	9.34%
Essential Utilities, Inc.	4.60%	0.8339	5.00%	6.00%	8.77%	9.61%
Middlesex Water Company	4.60%	0.7604	5.00%	6.00%	8.41%	9.17%
SJW Group	4.60%	0.6887	5.00%	6.00%	8.05%	8.74%
Average		<u>0.781</u>			<u>8.51%</u>	<u>9.29%</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 Line approach. However, instead of using five years of data, I used four years of data. I then adjusted the raw beta using the following Blume formula:
Adjusted Beta = 0.35 + 0.67 * Unadjusted Beta

Column 3 = The market risk premium is similar to historical spreads and estimates provided by sources, such as Kroll.

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

**CAPITAL ASSET PRICING MODEL (CAPM) COST OF COMMON EQUITY ESTIMATES
FOR WATER UTILITY PEER GROUP BASED ON 30-YEAR US TREASURY**

	(1)	(2)	(3)		(4)	
Company Name	30-Year Risk Free Rate	Beta	Market Risk Premiums		CAPM Cost of Common Equity Range	
American States Water Company	4.51%	0.72	5.00%	6.00%	8.09%	8.81%
American Water Works Company, Inc.	4.51%	0.89	5.00%	6.00%	8.98%	9.87%
California Water Service Group	4.51%	0.79	5.00%	6.00%	8.45%	9.24%
Essential Utilities, Inc.	4.51%	0.83	5.00%	6.00%	8.68%	9.51%
Middlesex Water Company	4.51%	0.76	5.00%	6.00%	8.31%	9.07%
SJW Group	4.51%	0.69	5.00%	6.00%	7.95%	8.64%
Average		<u>0.78</u>			<u>8.41%</u>	<u>9.19%</u>

Column 1 = Average of last 3 Months of 30-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 Line approach. However, instead of using five years of data, I used four years of data. I then adjusted the raw beta using the following Blume formula:
Adjusted Beta = 0.35 + 0.67 * Unadjusted Beta

Column 3 = The market risk premium is similar to historical spreads and estimates provided by sources, such as Kroll.

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

**CAPITAL ASSET PRICING MODEL (CAPM) COST OF COMMON EQUITY ESTIMATES FOR WATER UTILITY
PEER GROUP BASED ON KROLL RECOMMENDED RISK-FREE RATE AND RISK PREMIUM**

	(1)	(2)	(3)	(4)
Company Name	Kroll Recommended Risk-free Rate	Beta	Kroll Market Risk Premium	CAPM Cost of Common Equity
American States Water Company	4.56%	0.717	5.00%	8.15%
American Water Works Company, Inc.	4.56%	0.894	5.00%	9.03%
California Water Service Group	4.56%	0.789	5.00%	8.50%
Essential Utilities, Inc.	4.56%	0.834	5.00%	8.73%
Middlesex Water Company	4.56%	0.760	5.00%	8.36%
SJW Group	4.56%	0.689	5.00%	8.00%
Average		<u>0.78</u>		<u>8.46%</u>

Column 1 = Kroll Most Recent Guidance on Normalized Risk-free Rate as of June 16, 2022
[Recommended U.S. Equity Risk Premium and Corresponding Risk-Free Rates \(kroll.com\)](#)

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 Line approach. However, instead of using five years of data, I used four years of data. I then adjusted the raw beta using the following Blume formula:
Adjusted Beta = 0.35 + 0.67 * Unadjusted Beta

Column 3 = Kroll's guidance as of June 6, 2024 on equity risk premium to be used in conjunction with normalized risk-free rate.
[Kroll Lowers its Recommended U.S. Equity Risk Premium to 5.0%, Effective June 5, 2024](#)

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