

BEFORE THE
WASHINGTON UTILITIES & TRANSPORTATION COMMISSION

UW-240151

CASCADIA WATER, LLC

September 26, 2024

Direct Exhibit of Matthew J. Rowell

CAPITAL STRUCTURE AND COST OF CAPITAL

Exh. MJR-10

Cascadia Water, LLC Docket 240151
Exhibit MJR 10
Cost of Capital Schedule 1
Calcualtion of WACC

Weighted Average Cost of Capital (WACC)

	Cost	Weight	Weighted Cost
Equity	10.90%	66%	7.19%
Debt	5.22%	34%	1.77%
WACC			8.97%

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Cost of Capital Schedule 2
Calculation of Cost of Equity

Model	Range	Average
Comparable Earnings	8.2% to 13.8%	10.57%
DCF	7.2% to 13%	10.14%
CAPM	9.8% to 12.29%	10.83%
Average		10.51%
Cost of Equity		10.90%

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Cost of Capital Schedule 3
Comparable Earnings Analysis

PROXY GROUP -- COMPARABLE EARNINGS ANALYSIS

**Line
No**

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		Historical ROEs					Projected ROEs			5-Year Historical Average 2019-2023	5-Year Projected Average* 2024-2029	5-Year Combined Historical & Projected Average
<u>Company</u>		<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2027- 2029</u>			
AWR	American State	14.0%	13.5%	13.8%	11.0%	16.1%	13.5%	14.0%	14.0%	13.7%	13.8%	13.8%
AWK	American Wate	10.1%	11.0%	17.3%	10.7%	9.6%	10.0%	10.0%	11.0%	11.7%	10.3%	11.0%
WTRG	Essential Utiliti	5.8%	6.1%	8.3%	8.7%	8.5%	8.5%	9.0%	9.5%	7.5%	9.0%	8.2%
ARTNA	Artesian Resou	9.3%	9.9%	9.5%	9.6%	7.20%	NA	NA	NA			
CWT	California Wate	8.1%	10.5%	8.6%	7.3%	3.6%	13.0%	10.5%	9.5%	7.6%	11.0%	9.3%
MSEX	Middlesex Wat	10.4%	11.0%	9.9%	10.5%	7.4%	10.5%	10.5%	12.5%	9.8%	11.2%	10.5%
YORW	York Water	10.7%	11.6%	11.1%	9.5%	10.7%	NA	NA	NA			
	Average	9.8%	10.5%	11.2%	9.6%	9.0%	11.1%	10.8%	11.3%	10.1%	11.1%	10.6%

Source: Value Line Investment Survey July, 2024

*Projected ROEs are no longer available for ARTNA and YORW from Value Line.

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Discounted Cash Flow: Dividend Yield

PROXY GROUP -- DIVIDEND YIELD

Line No	Proxy Group Companies	DPS	June 18, 2024 September 18, 2024 - April 2023			Yield
			High	Low	Average	
1	AWR American States Water Co.	\$1.72	\$85.38	\$70.42	\$79.21	2.17%
2	AWK American Water Works Co., Inc.	\$3.06	\$149.90	\$127.76	\$139.81	2.19%
3	WTRG Essential Utilities, Inc.	\$1.23	\$41.49	\$36.74	\$39.19	3.13%
4	ARTNA Artesian Resources Corp.	\$1.18	\$40.86	\$34.52	\$37.35	3.17%
5	CWT California Water Service Gp.	\$1.12	\$55.50	\$47.83	\$52.36	2.14%
6	MSEX Middlesex Water	\$1.30	\$67.59	\$51.40	\$60.38	2.15%
7	YORW York Water Company	\$0.84	\$38.58	\$33.33	\$36.00	2.34%
8	Average					2.47%
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10	<u>References:</u>					
11	Column (A) - Value Line Investment Survey (July 2024)					
12	(Reflects annualization of most recent quarterly dividend)					
13	Columns (B), (C), and (D) - Yahoo Finance					
14						

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Discounted Cash Flow: Growth Rates

PROXY GROUP -- PER SHARE GROWTH RATES

Line No	<u>Proxy Group Companies</u>	5-Year Compound Average Annual Historical Growth			
		<u>EPS</u>	<u>DPS</u>	<u>BVPS</u>	<u>Average</u>
1	AWR American States Water Co.	9.0%	9.0%	6.5%	8.2%
2	AWK American Water Works Co.	15.0%	9.5%	7.5%	10.7%
3	WTRG Essential Utilities, Inc.	7.0%	7.0%	14.0%	9.3%
4	ARTNA Artesian Resources Corp.	3.5%	3.5%	5.0%	4.0%
5	CWT California Water Service Gp.	4.0%	6.5%	10.0%	6.8%
6	MSEX Middlesex Water	5.5%	6.5%	9.5%	7.2%
7	YORW York Water Company	8.0%	4.0%	8.5%	6.8%
8	<u>Average</u>				<u>7.57%</u>

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Reference:

11

Value Line Investment Survey (July 2024)

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DCF Results

<u>PROXY GROUP -- DCF ANALYSIS</u>						
<u>Line No</u>	<u>Proxy Group Companies</u>		<u>Current Dividend Yield (D_0/P_0)</u>	<u>Historical Per Share Growth Rates</u>	<u>Dividend Yield (D_1/P_0)</u>	<u>DCF Rates</u>
1	AWR	American States Water Co.	2.17%	8.2%	2.3%	10.4%
2	AWK	American Water Works Co., Inc	2.19%	10.7%	2.3%	13.0%
3	WTRG	Essential Utilities, Inc.	3.13%	9.3%	3.3%	12.6%
4	ARTNA	Artesian Resources	3.17%	4.0%	3.2%	7.2%
5	CWT	California Water Service Group	2.14%	6.8%	2.2%	9.0%
6	MSEX	Middlesex Water	2.15%	7.2%	2.2%	9.4%
7	YORW	York Water Company	2.34%	6.8%	2.4%	9.3%
8		Mean	2.47%	7.57%	2.56%	10.14%
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CAPM Risk Premium

**STANDARD & POOR'S 500 COMPOSITE
20-YEAR U.S. TREASURY BOND YIELDS
RISK PREMIUMS**

<u>Line</u>		<u>[A]</u>	<u>[B]</u>	<u>[C]</u>	<u>[D]</u>	<u>[E]</u>
<u>No.</u>	<u>Year</u>	<u>EPS</u>	<u>BVPS</u>	<u>ROE</u>	<u>T-BOND</u>	<u>RISK PREMIUM</u>
1	1977		\$79.07			
2	1978	\$12.33	\$85.35	15.00%	7.90%	7.10%
3	1979	\$14.86	\$94.27	16.55%	8.86%	7.69%
4	1980	\$14.82	\$102.48	15.06%	9.97%	5.09%
5	1981	\$15.36	\$109.43	14.50%	11.55%	2.95%
6	1982	\$12.64	\$112.46	11.39%	13.50%	-2.11%
7	1983	\$14.03	\$116.93	12.23%	10.38%	1.85%
8	1984	\$16.64	\$122.47	13.90%	11.74%	2.16%
9	1985	\$14.61	\$125.20	11.80%	11.25%	0.55%
10	1986	\$14.48	\$126.82	11.49%	8.98%	2.51%
11	1987	\$17.50	\$134.07	13.42%	7.92%	5.50%
12	1988	\$23.75	\$141.32	17.25%	8.97%	8.28%
13	1989	\$22.87	\$147.26	15.85%	8.81%	7.04%
14	1990	\$21.73	\$153.01	14.47%	8.19%	6.28%
15	1991	\$16.29	\$158.85	10.45%	8.22%	2.23%
16	1992	\$18.86	\$149.74	12.22%	7.26%	4.96%
17	1993	\$21.89	\$180.88	13.24%	7.17%	6.07%
18	1994	\$30.60	\$193.06	16.37%	6.59%	9.78%
19	1995	\$33.96	\$216.51	16.58%	7.60%	8.98%
20	1996	\$38.73	\$237.08	17.08%	6.18%	10.90%
21	1997	\$39.72	\$249.52	16.33%	6.64%	9.69%
22	1998	\$37.71	\$266.40	14.62%	5.83%	8.79%
23	1999	\$48.17	\$290.68	17.29%	5.57%	11.72%
24	2000	\$50.00	\$325.80	16.22%	6.50%	9.72%
25	2001	\$24.70	\$338.37	7.44%	5.53%	1.91%
26	2002	\$27.59	\$321.72	8.36%	5.59%	2.77%
27	2003	\$48.73	\$367.17	14.15%	4.80%	9.35%
28	2004	\$58.55	\$414.75	14.98%	5.02%	9.96%
29	2005	\$69.93	\$453.06	16.12%	4.69%	11.43%
30	2006	\$81.51	\$504.39	17.03%	4.68%	12.35%
31	2007	\$66.18	\$529.59	12.80%	4.86%	7.94%
32	2008	\$14.88	\$451.37	3.03%	4.45%	-1.42%
33	2009	\$50.97	\$513.58	10.56%	3.47%	7.09%
34	2010	\$77.35	\$579.14	14.16%	4.25%	9.91%
35	2011	\$86.95	\$613.14	14.59%	3.82%	10.77%
36	2012	\$86.51	\$666.97	13.52%	2.46%	11.06%
37	2013	\$100.20	\$715.84	14.49%	2.88%	11.61%
38	2014	\$102.31	\$726.96	14.18%	3.41%	10.77%
39	2015	\$86.53	\$740.29	11.79%	2.55%	9.24%
40	2016	\$94.55	\$768.98	12.53%	2.30%	10.23%
41	2017	\$109.88	\$826.52	13.77%	2.65%	11.12%
42	2018	\$132.39	\$851.62	15.78%	3.11%	12.67%
43	2019	\$139.47	\$914.49	15.79%	2.40%	13.39%
44	2020	\$94.13	\$927.52	10.22%	1.35%	8.87%
45	2021	\$197.84	\$1,008.02	20.44%	1.98%	18.46%
45	2022	\$172.75	\$1,024.56	17.00%	3.30%	13.70%
46	2023	\$192.43	\$1,106.21	18.06%	4.26%	13.80%
Average				13.90%	5.88%	8.02%

[A]: Diluted earnings per share on the S&P 500 Composite Index.

[B]: Book value per share on the S&P 500 Composite Index.

[C]: Average of current- and prior year [B] / current year [A].

[D]: Annual income returns on 20-year U.S. Treasury bonds.

[E]: [C] - [D]

Sources for [A] and [B]:

Standard & Poor's 500 Earnings and Book Value Per Share:

https://ycharts.com/indicators/reports/sp_500_earnings

Quarterly data is annualized

https://ycharts.com/indicators/sandp_500_book_value_per_share

Source for [D]: U.S. Department of the Treasury

<https://www.treasury.gov/Pages/default.aspx>

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CAPM Results

CAPITAL ASSET PRICING MODEL -- PROXY COMPANY COST RATES

Line No	Proxy Group Companies	Risk Free Rate	BETA	Risk Premium	Beta X Risk Premium	CAPM Rates
1	AWR American States Water Co.	4.27%	0.70 X	8.02%	= 5.61%	9.89%
2	AWK American Water Works Co., Inc.	4.27%	0.95 X	8.02%	= 7.62%	11.89%
3	WTRG Essential Utilities, Inc.	4.27%	1.00 X	8.02%	= 8.02%	12.29%
4	ARTNA Artesian Resources Corp.	4.27%	0.75 X	8.02%	= 6.01%	10.29%
5	CWT California Water Service Gp.	4.27%	0.75 X	8.02%	= 6.01%	10.29%
6	MSEX Middlesex Water	4.27%	0.75 X	8.02%	= 6.01%	10.29%
7	YORW York Water Company	4.27%	0.82 X	8.02%	= 6.59%	10.86%
8	Average					10.83%
9						
10	<u>Risk Free Rate: 20 year Treasury Bonds</u>					
11	18-Sep-24	4.08%				
12	19-Aug-24	4.23%				
13	18-Jul-24	4.51%				
14	Average	4.27%				
15	20 Year T Bonds Source					
16	https://home.treasury.gov/resource-center/data-chart-center/interest-rates/TextView?type=daily_treasury_long_term_rate&field=tdr_date&value=2024					
17	Beta: Value Line Reports July 2024					