# A.11-05-001 (Cost of Capital) 

## MJV Tables and Workpapers

(Marked for identification as a Cal Water exhibit during the October 17, 2011 Evidentiary Hearing)

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Index to Water Sample Tables for the Written Evidence of Michael J. Vilbert

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Table No. MJV-2

## Water Utility Sample

Classification of Companies by Assets

| Company | Company Category |
| :--- | :---: |
| California Water Service Group | R |
| Connecticut Water Service Inc | R |
| Middlesex Water Co | R |
| Aqua America Inc | R |
| SJW Corp | R |
| American States Water Co | R |
| York Water Co | R |
| American Water Works Co Inc | R |

## Sources and Notes:

Workpaper \#1 to Table No. MJV-2, Panels A-H.
$\mathrm{R}=$ Regulated (greater than 80 percent of total assets are regulated).
$M R=$ Mostly Regulated ( 50 to 80 percent of total assets are regulated).
$D=$ Diversified (less than 50 percent of total assets are regulated).

Workpaper \#1 to Table No. MJV-2
Water Utility Sample: Breakdown of Assets
Panel A: California Water Service Group (\$MM)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | 269,473 | $99.2 \%$ |
| Total | $[2]$ | 271,599 |  |

Sources and Notes:
[1]-[2]: California Water Service Group's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-2
Water Utility Sample: Breakdown of Assets
Panel B: Connecticut Water Service Inc (\$MM)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | 421,821 | $99.2 \%$ |
| Total | $[2]$ | 425,211 |  |

Sources and Notes:
[1]-[2]: Connecticut Water Service Inc's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-2
Water Utility Sample: Breakdown of Assets
Panel C: Middlesex Water Co (\$MM)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | 486,918 | $98.4 \%$ |
| Total | $[2]$ | 495,034 |  |

Sources and Notes:
[1]-[2]: Middlesex Water Co's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-2
Water Utility Sample: Breakdown of Assets
Panel D: Aqua America Inc (\$MM)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $3,991,493$ | $98.0 \%$ |
| Total | $[2]$ | $4,072,466$ |  |

Sources and Notes:
[1]-[2]: Aqua America Inc's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-2
Water Utility Sample: Breakdown of Assets
Panel E: SJW Corp (\$MM)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | 844,364 | $90.3 \%$ |
| Total | $[2]$ | 935,362 |  |

Sources and Notes:
[1]-[2]: SJW Corp's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-2
Water Utility Sample: Breakdown of Assets
Panel F: American States Water Co (\$MM)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | 851,367 | $99.6 \%$ |
| Total | $[2]$ | 854,956 |  |

Sources and Notes:
[1]-[2]: American States Water Co's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-2
Water Utility Sample: Breakdown of Assets
Panel G: York Water Co (\$MM)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $100.0 \%$ |  |
| Total | $[2]$ |  |  |

Sources and Notes:
[1]-[2]: York Water Co's 2010 Form 10-K, p. 2.

Workpaper \#1 to Table No. MJV-2
Water Utility Sample: Breakdown of Assets
Panel H: American Water Works Co Inc (\$MM)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $12,275,280$ | $87.2 \%$ |
| Total | $[2]$ | $14,079,773$ |  |

Sources and Notes:
[1]-[2]: American Water Works Co Inc's 2010 Form 10-K.

Table No. MJV-3
Market Value of the Water Utility Sample
Panel A: California Water Service Group
(SMM)

|  | DCF Capital Structure | Year End, 2010 | Year End, 2009 | Year End, 2008 | Year End, 2007 | Year End, 2006 | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$436 | \$436 | \$421 | \$403 | \$386 | \$378 | [a] |
| Shares Outstanding (in millions) - Common | 21 | 21 | 21 | 21 | 21 | 21 | [b] |
| Price per Share . Common | \$36 | \$37.71 | \$37.21 | \$43 | \$38 | \$40 | [c] |
| Market Value of Common Equity | \$743 | \$786 | \$773 | \$897 | \$788 | \$834 | $[\mathrm{d}]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 1.71 | 1.80 | 1.84 | 2.23 | 2.04 | 2.20 | $[\mathrm{c}]=[\mathrm{d}] / \mathrm{La}]$. |
| Market value of preferred equity |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$3 | \$3 | [f] |
| Market Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$3 | \$3 | $[\mathrm{g}]=[\mathrm{f}]$ ] |
| market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$126 | \$126 | \$92 | \$80 | \$60 | \$110 | [h] |
| Current Liabilities | \$107 | \$107 | \$110 | \$123 | \$70 | \$70 | [i] |
| Current Portion of Long-Term Debt | \$2 | \$2 | \$13 | \$3 | \$3 | \$2 | [j] |
| Net Working Capital | \$21 | \$21 | (\$5) | (\$41) | (\$7) | \$41 | $[\mathrm{K}]=[\mathrm{H}]-(\mathrm{I}]$ - [i] $)$. |
| Notes Payable (Short-Term Debt) | \$24 | \$24 | \$12 | \$40 | \$0 | so | [I] |
| Adjusted Short-Term Debt | so | so | 85 | \$40 | s0 | so | [m] $=$ See Sources and Notes. |
| Long-Term Debt | \$479 | \$479 | \$374 | \$287 | \$289 | \$292 | [n] |
| Book Value of Long-Term Debt | \$482 | \$482 | \$392 | \$330 | \$292 | \$294 | $[0]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | \$57 | \$57 | (\$7) | \$3 | \$69 | \$24 | $[\mathrm{p}]=$ See Sources and Notes. |
| Market Value of Long.Term Debt | 5539 | $\$ 539$ | \$385 | $\$ 333$ | \$361 | $\$ 318$ | $[q]=[p]+[0]$. |
| Market Value of Debt | \$539 | \$539 | \$385 | \$333 | \$361 | \$318 | $[\mathrm{r}]=[\mathrm{c}]$. |
| MARKET VALUE OF FiRm |  |  |  |  |  |  |  |
|  | \$1,282 | \$1,325 | \$1,158 | S1,231 | \$1,152 | 81,155 | $[\mathrm{s}]=[\mathrm{d}]+[\mathrm{g}]+[\mathrm{r}]$. |
| debt and equtty to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 57.95\% | 59.31\% | 66.72\% | 72.92\% | 68.37\% | 72.19\% | $[\mathrm{l}]=[\mathrm{d}] / \mathrm{[s]}$. |
| Preferred Equity - Market Value Ratio | - | - | - | - | 0.30\% | 0.30\% | $[\mathrm{u}]=[\mathrm{gl} / \mathrm{[s]}$. |
| Debt - Market Value Ratio | 42.05\% | 40.69\% | $33.28 \%$ | 27.08\% | 31.33\% | 27.51\% | $[\mathrm{v}]=[\mathrm{r}] / \mathrm{ss}]$. |

## Sources and Notes:

Bloomberg as of March 10, 2011
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending at period end
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closing price ending on $3 / 10 / 201$.
Prices are reported in Workpaper \#1 to Table No. M.N-6.
[ m$]=$
(1): 0 if $[\mathrm{k}]>0$.
(2): The absolute value of $[\mathrm{k}]$ if $[\mathrm{k}]<0$ and $\mid[\mathrm{k}]<[1]$.
(3): [1] if $[k]<0$ and $[\mathrm{k}] \mid>[1]$
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company $10-\mathrm{K}$. Data for adjustment is from $2006-2010$ 10-K.

Table No. MJV-3
Market Value of the Water Utility Sample
Panel B: Connecticut Water Service Inc
(SMM)

|  | DCF Capital Structure | Year End, 2010 | Year End, 2009 | Year End, 2008 | Year End, 2007 | Year End, 2006 | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$113 | \$113 | \$109 | \$103 | \$100 | \$96 | [a] |
| Shares Outstanding (in millions) - Common | 9 | 9 | 9 | 8 | 8 | 8 | [b] |
| Price per Share - Common | \$25 | \$27.13 | \$24.82 | \$23 | \$24 | \$23 | [c] |
| Market Value of Common Equity | \$216 | \$235 | \$213 | \$199 | \$200 | \$188 | $[\mathrm{d}]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 1.91 | 2.08 | 1.96 | 1.92 | 2.00 | 1.96 | $[\mathrm{e}]=[\mathrm{d}] / \mathrm{La}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$1 | \$1 | \$1 | \$1 | \$1 | \$ | [f] |
| Market Value of Preferred Equity | \$1 | \$1 | \$1 | \$1 | \$1 | \$1 | $[\mathrm{g}]=[\mathrm{f}]$. |
| market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$20 | \$20 | \$20 | \$16 | \$23 | \$14 | [h] |
| Current Liabilities | \$35 | \$35 | \$33 | \$19 | \$15 | \$13 | [ $]$ |
| Current Portion of Long-Term Debt | \$0 | \$0 | \$0 | \$0 | \$0 | so | [1] |
| Net Working Capital | (\$15) | (\$15) | (\$13) | (\$3) | \$8 | S1 | $[\mathrm{k}]=[\mathrm{h}]-$ ( i$]-$ [ j$]$ ). |
| Notes Payable (Short-Term Debt) | \$26 | \$26 | \$25 | \$12 | \$6 | \$5 | [1] |
| Adjusted Short-Term Debt | 515 | \$15 | 813 | $\$ 3$ | \$0 | so | [m] $=$ See Sources and Notes. |
| Long-Term Debt | \$112 | \$112 | \$112 | \$92 | $\$ 92$ | \$77 | [ n$]$ |
| Book Value of Long-Term Debt | \$126 | \$126 | \$125 | \$96 | \$92 | \$77 | $[0]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | (\$6) | (\$6) | (\$1) | (\$15) | (\$1) | \$1 | $[p]=$ Sce Sources and Notes. |
| Market Value of Long. Term Debt | \$120 | $\$ 120$ | \$124 | 381 | \$91 | 579 | $[q]=[p]+[0]$. |
| Market Value of Debt | \$120 | \$120 | S124 | \$81 | \$91 | \$79 | $[\mathrm{r}]=[\mathrm{q}]$. |
| market value of firm |  |  |  |  |  |  |  |
|  | \$337 | 3357 | 8337 | \$280 | \$292 | \$268 | $[\mathrm{s}]=[\mathrm{d}]+[\mathrm{g}]+[\mathrm{r}]$. |
| debt and equity to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 64.04\% | 66.02\% | 63.12\% | 70.98\% | 68.50\% | 70.34\% | $[\mathrm{l}]=[\mathrm{d}] / \mathrm{ss}]$. |
| Preferred Equity - Market Value Ratio | 0.23\% | 0.22\% | 0.23\% | 0.28\% | 0.26\% | 0.29\% | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 35.73\% | 33.77\% | 36.65\% | 28.74\% | 31.24\% | 29.37\% | $[\mathrm{v}]=[\mathrm{r}] / \mathrm{ss}]$. |

## Sources and Notes:

Bloomberg as of March 10, 2011
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The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closing price ending on 3/10/2011.
-Prices are reported in Workpaper fo to Table No. M.N-6.
[ m$]=$
(1): 0 if $[\mathrm{k}]>0$.
(2): The absolute value of $[k]$ if $[k]<0$ and $\mid[k]<[]$.
(3): $[1]$ if $[k]<0$ and $|[k]|>[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2006-2010 10-K.

Table No. MJV-3
Market Value of the Water Utility Sample
Panel C: Middlesex Water Co
(SMM)

|  | DCF Capital Structure | Year End, 2010 | Year End, 2009 | Year End, 2008 | Year End, 2007 | Year End, 2006 | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$173 | \$173 | \$140 | \$138 | \$133 | \$129 | [a] |
| Shares Outstanding (in millions) - Common | 16 | 16 | 14 | 13 | 13 | 13 | [b] |
| Price per Share - Common | \$18 | \$18.70 | \$17.04 | \$17 | \$19 | \$19 | [c] |
| Market Value of Common Equity | \$284 | \$291 | \$230 | \$226 | \$250 | \$245 | $[d]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 1.64 | 1.68 | 1.65 | 1.64 | 1.88 | 1.90 | $[\mathrm{c}]=[\mathrm{d}] /[\mathrm{a}]$. |
| Market value of preferred equity |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$3 | \$3 | \$3 | \$3 | \$4 | \$4 | [f] |
| Market Value of Preferred Equity | \$3 | \$3 | 83 | \$3 | \$4 | \$4 | $[\mathrm{g}]=[\mathrm{f}]$. |
| market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$23 | \$23 | \$22 | \$21 | \$17 | \$21 | [b] |
| Current Liabilities | \$41 | \$41 | \$61 | \$61 | \$27 | \$18 | [i] |
| Current Portion of Long-Term Debt | \$4 | \$4 | \$4 | \$18 | \$3 | \$3 | []] |
| Net Working Capital | (\$14) | (\$14) | (835) | (\$23) | (57) | \$5 | $[\mathrm{k}]=[\mathrm{h}]-$ ([i] - []] . |
| Notes Payable (Short-Term Debt) | S17 | \$17 | \$43 | \$26 | \$6 | so | [1] |
| Adjusted Short-Term Debt | \$14 | \$14 | $\$ 35$ | \$23 | \$6 | so | $[\mathrm{m}]=$ See Sources and Notes. |
| Long-Term Debt | \$134 | \$134 | \$125 | \$118 | \$132 | \$131 | [ ${ }^{\text {] }}$ |
| Book Value of Long-Term Debt | \$152 | \$152 | \$164 | \$159 | \$141 | \$133 | $[\mathrm{o}]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | (\$4) | (\$4) | (\$3) | (\$10) | \$1 | \$2 | $[\mathrm{p}]=$ Sce Sources and Notes. |
| Market Value of Long. Term Debt | \$148 | \$148 | \$161 | \$149 | \$142 | \$135 | $[q]=[p]+[0]$. |
| Market Value of Debt | $\$ 148$ | \$148 | \$161 | \$149 | \$142 | \$135 | $[\mathrm{r}]=[\mathrm{q}]$. |
| Market value of firm |  |  |  |  |  |  |  |
|  | S436 | 3443 | \$394 | 3378 | \$396 | \$385 | $[\mathrm{s}]=[\mathrm{d}]+[\mathrm{g}]+[\mathrm{r}]$. |
| debt and equtty to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 65.20\% | 65.76\% | 58.39\% | 59.74\% | 63.14\% | 63.81\% | $[1]=[d] /[s]$. |
| Preferred Equity - Market Value Ratio | 0.77\% | 0.76\% | 0.86\% | 0.89\% | 1.00\% | 1.03\% | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 34.03\% | 33.48\% | 40.75\% | 39.37\% | 35.86\% | 35.16\% | $[\mathrm{v}]=[\mathrm{rr} / \mathrm{[s]}$. |

## Sources and Notes:

Bloomberg as of March 10, 2011
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending at period end
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closing price ending on $3 / 10 / 201$.
Prices are reported in Workpaper \#1 to Table No. M.N-6.
[ m$]=$
(1): 0 if $[\mathrm{k}]>0$.
(2): The absolute value of $[k]$ if $[k]<0$ and $\mid[k]<[1]$
(3): [1] if $[k]<0$ and $[\mathrm{k}] \mid>[1]$
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from $2006-2010$ 10-K.

Table No. MJV-3
Market Value of the Water Utility Sample
Panel D: Aqua America Inc
(SMM)

|  | DCF Capital Structure | Year End, 2010 | Year End, 2009 | Year End, 2008 | Year End, 2007 | Year End, 2006 | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$1,174 | \$1,174 | \$1,109 | \$1,058 | \$976 | \$922 | [a] |
| Shares Outstanding (in millions) - Common | 138 | 138 | 136 | 135 | 133 | 132 | [b] |
| Price per Share - Common | \$23 | \$22.32 | \$17.44 | \$20 | \$22 | \$23 | [c] |
| Market Value of Common Equity | \$3,121 | \$3,076 | \$2,380 | \$2,669 | \$2,903 | \$3,097 | $[\mathrm{d}]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 2.66 | 2.62 | 2.15 | 2.52 | 2.97 | 3.36 | $[\mathrm{c}]=[\mathrm{d}] /[\mathrm{a}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | so | \$0 | \$0 | \$0 | so | [f] |
| Market Value of Preferred Equity | \$0 | s0 | $\$ 0$ | 50 | \$0 | so | $[\mathrm{g}]=[\mathrm{f}]$. |
| Market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$145 | \$145 | \$122 | \$121 | \$116 | \$135 | [b] |
| Current Liabilities | \$224 | \$224 | \$201 | \$193 | \$183 | \$256 | [i] |
| Current Portion of Long-Term Debt | \$28 | \$28 | \$60 | \$7 | \$24 | \$31 | []] |
| Net Working Capital | (550) | ( 550 ) | (\$20) | (865) | (\$44) | (590) | $[\mathrm{k}]=[\mathrm{h}]-$ ([i] $]$ [ [] ) |
| Notes Payable (Short-Term Debt) | \$90 | \$90 | \$27 | \$81 | \$57 | \$119 | [1] |
| Adjusted Short-Term Debt | 550 | \$50 | \$20 | \$65 | 544 | \$90 | [m] $=$ See Sources and Notes. |
| Long Term Debt | \$1,532 | \$1,532 | \$1,387 | \$1,248 | \$1,215 | \$952 | [n] |
| Book Value of Long-Term Debt | \$1,610 | \$1,610 | \$1,466 | \$1,320 | \$1,283 | \$1,073 | $[0]=[n]+[]]+[m]$. |
| Adjustment to Book Value of Long-Term Debt | (\$77) | (577) | (\$130) | (\$64) | (\$8) | \$4 | $[\mathrm{p}]=$ Sce Sources and Notes. |
| Market Value of Long-Term Debt | \$1,533 | \$1,533 | \$1,336 | \$1,257 | 51,275 | 81,076 | $[q]=[p]+[0]$. |
| Market Value of Debt | \$1,533 | \$1,533 | \$1,336 | \$1,257 | \$1,275 | \$1,076 | $[\mathrm{r}]=[\mathrm{q}]$. |
| MARKET VALUE OF FIRMS |  |  |  |  |  |  |  |
|  | \$4,654 | \$4,609 | \$3,716 | \$3,926 | \$4,177 | \$4,173 | $[s]=[d]+[g]+[r]$. |
| debt and equtty to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 67.06\% | 66.74\% | 64.05\% | 67.99\% | 69.49\% | 74.21\% | $[\mathrm{l}]=[\mathrm{d}] /[\mathrm{s}]$. |
| Preferred Equity - Market Value Ratio | - | - | - | - | - |  | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 32.94\% | 33.26\% | 35.95\% | 32.01\% | 30.51\% | 25.79\% | $[\mathrm{v}]=[\mathrm{r}] / \mathrm{sc}]$. |

## Sources and Notes:

Bloomberg as of March 10,2011
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending at period end
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closing price ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. M.N-6.
[ m$]=$
(1): 0 if $[\mathrm{k}]>0$.
(2): The absolute value of $[k]$ if $[k]<0$ and $[\mid k]<[1]$
(3): [1] if $[k]<0$ and $|[k]|>[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from $2006-2010$ 10-K.

Table No. MJV-3
Market Value of the Water Utility Sample
Panel E: SJW Corp
(SMM)

|  | DCF Capital Structure | Year End, 2010 | Year End, 2009 | Year End, 2008 | Year End, 2007 | Year End, 2006 | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$255 | \$255 | \$253 | \$254 | \$237 | \$228 | [a] |
| Shares Outstanding (in millions) - Common | 19 | 19 | 18 | 18 | 18 | 18 | [b] |
| Price per Share - Common | \$24 | \$26.73 | \$22.30 | \$27 | \$35 | \$36 | [c] |
| Market Value of Common Equity | \$450 | \$496 | 5412 | \$507 | \$642 | \$667 | $[\mathrm{d}]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 1.77 | 1.94 | 1.63 | 1.99 | 2.71 | 2.92 | $[\mathrm{c}]=[\mathrm{d}] /[\mathrm{a}]$. |
| Market value of preferred equity |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | s0 | \$0 | \$0 | \$0 | s0 | [f] |
| Market Value of Preferred Equity | \$0 | s0 | \$0 | \$0 | \$0 | so | $[g]=[f]$. |
| market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$38 | \$38 | \$28 | \$32 | \$32 | \$60 | [b] |
| Current Liabilities | \$29 | \$29 | \$32 | \$43 | \$33 | \$38 | [i] |
| Current Portion of Long-Term Debt | \$1 | \$1 | \$1 | \$1 | \$1 | S0 | [1] |
| Net Working Capital | 510 | $\$ 10$ | (83) | (\$11) | (\$1) | \$23 | $[\mathrm{k}]=[\mathrm{h}]-$ ( i$]-$ [ j$]$ ). |
| Notes Payable (Short-Term Debt) | \$4 | \$4 | \$6 | \$18 | \$5 | \$16 | [1] |
| Adjusted Short-Term Debt | s0 | so | \$3 | $\$ 11$ | $\$ 1$ | so | [ m$]=$ See Sources and Notes. |
| Long-Term Debt | \$296 | \$296 | \$247 | \$217 | \$216 | \$164 | [ n ] |
| Book Value of Long-Term Debt | \$297 | \$297 | \$251 | \$228 | \$218 | \$164 | $[0]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | \$48 | \$48 | \$39 | (\$10) | \$22 | (\$23) | $[\mathrm{p}]=$ Sce Sources and Notes. |
| Market Value of Long-Term Debt | \$345 | \$345 | \$290 | \$218 | \$239 | \$141 | $[q]=[p]+[0]$. |
| Market Value of Debt | \$345 | \$345 | \$290 | \$218 | \$239 | \$141 | $[\mathrm{r}]=[\mathrm{q}]$. |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| debt and equty to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 56.60\% | 58.96\% | 58.70\% | 69.89\% | 72.85\% | 82.55\% | $[\mathrm{l}]=[\mathrm{d}] / \mathrm{ss}]$. |
| Preferred Equity - Market Value Ratio | - | - | - | - | - | - | $[\mathrm{u}]=[\mathrm{gl} / \mathrm{[s]}$. |
| Debt - Market Value Ratio | 43.40\% | 41.04\% | 41.30\% | 30.11\% | 27.15\% | 17.45\% | $[\mathrm{v}]=[\mathrm{r}] / \mathrm{ss}]$. |

## Sources and Notes:

Bloomberg as of March 10,2011
Capita structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending at period end
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closing price ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. M.N-6.
[ m$]=$
(1): 0 if $[\mathrm{k}]>0$.
(2): The absolute value of $[k]$ if $[k]<0$ and $[\mid k]<[1]$
(3): [1] if $[k]<0$ and $[\mathrm{k}] \mid>[1]$
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company $10-\mathrm{K}$. Data for adjustment is from $2006-2010$ 10-K.

Table No. MJV-3
Market Value of the Water Utility Sample
Panel F: American States Water Co
(SMM)

|  | DCF Capital Structure | Year End, 2010 | Year End, 2009 | Year End, 2008 | Year End, 2007 | Year End, 2006 | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Market value of common equity |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$378 | \$378 | \$359 | \$311 | \$302 | \$284 | [a] |
| Shares Outstanding (in millions) - Common | 19 | 19 | 19 | 17 | 17 | 17 | [b] |
| Price per Share . Common | \$34 | \$34.76 | \$35.26 | \$31 | \$41 | \$38 | [c] |
| Market Value of Common Equity | \$627 | \$647 | 5653 | \$544 | \$699 | \$652 | $[\mathrm{d}]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 1.66 | 1.71 | 1.82 | 1.75 | 2.31 | 2.30 | $[\mathrm{c}]=[\mathrm{d}] /[\mathrm{a}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | so | \$0 | \$0 | \$0 | so | [f] |
| Market Value of Preferred Equity | \$0 | s0 | \$0 | \$0 | \$0 | s0 | $[g]=[f]$. |
| market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$205 | \$205 | \$145 | \$91 | \$63 | \$64 | [b] |
| Current Liabilities | \$179 | \$179 | \$126 | \$137 | \$94 | \$86 | [i] |
| Current Portion of Long-Term Debt | \$0 | \$0 | \$0 | \$1 | \$1 | \$1 | []] |
| Net Working Capital | \$27 | \$27 | 519 | (\$46) | (\$31) | (\$21) | $[\mathrm{k}]=[\mathrm{h}]-$ ([i] - [i] $)$. |
| Notes Payable (Short-Term Debt) | \$61 | \$61 | \$17 | \$75 | \$37 | \$32 | [1] |
| Adjusted Short-Term Debt | 50 | so | s0 | 346 | 331 | \$21 | [ m$]=$ See Sources and Notes. |
| Long-Term Debt | \$300 | \$300 | \$300 | \$267 | \$267 | \$268 | [ ${ }^{\text {] }}$ |
| Book Value of Long-Term Debt | \$300 | \$300 | \$301 | \$313 | \$298 | \$289 | $[0]=[n]+[]]+[m]$. |
| Adjustment to Book Value of Long-Term Debt | \$35 | \$35 | \$40 | \$43 | \$32 | \$38 | $[\mathrm{p}]=$ Sce Sources and Notes. |
| Market Value of Long.Term Debt | \$335 | \$335 | \$341 | 8356 | 8331 | $\$ 327$ | $[q]=[p]+[0]$. |
| Market Value of Debt | \$335 | \$335 | \$341 | \$356 | \$331 | \$327 | $[\mathrm{r}]=[\mathrm{q}]$. |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| debt and equtty to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 65.17\% | 65.88\% | 65.70\% | 60.41\% | 67.87\% | 66.60\% | $[\mathrm{l}]=[\mathrm{d}] / \mathrm{ss}]$. |
| Preferred Equity - Market Value Ratio |  | - |  | - |  | - | $[\mathrm{u}]=[\mathrm{gl} / \mathrm{[s]}$. |
| Debt - Market Value Ratio | 34.83\% | 34.12\% | 34.30\% | 39.59\% | 32.13\% | 33.40\% | $[\mathrm{v}]=[\mathrm{r}] / \mathrm{ss}]$. |

## Sources and Notes:

Bloomberg as of March 10, 2011
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending at period end
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closing price ending on $3 / 10 / 201$.
Prices are reported in Workpaper \#t to Table No. MJ-6.
[ m$]=$
(1): 0 if $[\mathrm{k}]>0$.
(2): The absolute value of $[k]$ if $[k]<0$ and $\mid[k]<[1]$
(3): [1] if $[\mathrm{k}]<0$ and $|[\mathrm{k}]|>[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from $2006-2010$ 10-K.

Table No. MJV-3
Market Value of the Water Utility Sample
Panel G: York Water Co
(SMM)

|  | DCF Capital Structure | Year End, 2010 | Year End, 2009 | Year End, 2008 | Year End, 2007 | Year End, 2006 | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$91 | \$91 | \$87 | \$70 | \$67 | \$65 | [a] |
| Shares Outstanding (in millions) - Common | 13 | 13 | 13 | 11 | 11 | 11 | [b] |
| Price per Share - Common | \$17 | \$17.56 | \$14.61 | \$12 | \$16 | $\$ 18$ | [c] |
| Market Value of Common Equity | \$212 | \$223 | \$183 | \$133 | \$178 | \$202 | $[\mathrm{d}]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 2.32 | 2.44 | 2.11 | 1.90 | 2.65 | 3.08 | $[\mathrm{c}]=[\mathrm{d}] / \mathrm{La}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | so | [f] |
| Market Value of Preferred Equity | \$0 | so | \$0 | \$0 | \$0 | so | $[g]=[f]$. |
| market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$9 | \$9 | \$7 | \$7 | \$7 | \$7 | [h] |
| Current Liabilities | \$5 | \$5 | \$15 | \$14 | \$21 | \$6 | [i] |
| Current Portion of Long-Term Debt | \$0 | so | \$4 | \$3 | \$12 | \$1 | [1] |
| Net Working Capital | \$4 | \$4 | (83) | (\$4) | (\$3) | \$2 | $[\mathrm{k}]=[\mathrm{h}]-$ ( i$]-$ [ l ) ) |
| Notes Payable (Short-Term Debt) | \$0 | so | \$5 | \$6 | \$3 | so | [1] |
| Adjusted Short-Term Debt | 50 | so | 83 | \$4 | $\$ 3$ | so | [ m$]=$ See Sources and Notes. |
| Long-Term Debt | \$85 | \$85 | 573 | \$84 | \$58 | \$61 | [ n ] |
| Book Value of Long-Term Debt | \$85 | \$85 | 581 | \$90 | $\$ 73$ | \$62 | $[0]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | \$9 | \$9 | \$13 | \$3 | \$9 | \$8 | $[\mathrm{p}]=$ See Sources and Notes. |
| Market Value of Long-Term Debt | S94 | 594 | 594 | 393 | 583 | 570 | $[q]=[p]+[0]$. |
| Market Value of Debt | \$94 | \$94 | \$94 | \$93 | \$83 | \$70 | $[\mathrm{r}]=[\mathrm{q}]$. |
| MARKET VALUE OF FIRM |  |  |  |  |  |  |  |
|  | \$306 | $\$ 317$ | \$278 | \$226 | \$261 | \$272 | $[\mathrm{s}]=[\mathrm{d}]+[\mathrm{g}]+[\mathrm{r}]$. |
| debt and equtty to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 69.24\% | 70.33\% | 66.09\% | 58.79\% | 68.36\% | 74.22\% | $[\mathrm{l}]=[\mathrm{d}] /[\mathrm{s}]$. |
| Preferred Equity - Market Value Ratio | - | - | - | * | - | - | $[\mathrm{u}]=[\mathrm{gl} /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 30.76\% | 29.67\% | $33.91 \%$ | 41.21\% | 31.64\% | 25.78\% | $\mathrm{fv}]=[\mathrm{r}] / \mathrm{sc}]$. |

## Sources and Notes:

Bloomberg as of March 10,2011
Capita stucture from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending at period end
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closing price ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. M.N-6.
[ m$]=$
(1): 0 if $[\mathrm{k}]>0$.
(2): The absolute value of $[k]$ if $[k]<0$ and $[\mid k]<[1]$
(3): [1] if $[k]<0$ and $[\mathrm{k}] \mid>[1]$
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from $2006-2010$ 10-K.

Table No. MJV-3
Market Value of the Water Utility Sample
Panel H: American Water Works Co Inc
(\$MM)

|  | DCF Capital Structure | Year End, 2010 | Year End, 2009 | Year End, 2008 | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$4,128 | \$4,128 | \$4,001 | \$4,102 | [a] |
| Shares Outstanding (in millions) - Common | 175 | 175 | 175 | 160 | [b] |
| Price per Share - Common | \$28 | \$25.25 | \$22.30 | \$21 | [c] |
| Market Value of Common Equity | \$4,831 | \$4,419 | \$3,895 | \$3,376 | $[\mathrm{d}]=[\mathrm{b}] \mathrm{x}[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 1.17 | 1.07 | 0.97 | 0.82 | $[\mathrm{e}]=[\mathrm{d}] /[\mathrm{a}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |
| Book Value of Preferred Equity | \$28 | \$28 | \$29 | \$29 | [f] |
| Market Value of Preferred Equity | \$28 | \$28 | \$29 | \$29 | $[\mathrm{g}]=[\mathrm{f}]$. |
| Market value of debt |  |  |  |  |  |
| Current Assets | \$534 | \$534 | \$499 | \$418 | [h] |
| Current Liabilities | \$775 | \$775 | \$607 | \$1,105 | [i] |
| Current Portion of Long-Term Debt Net Working Capital | $\begin{array}{r} \$ 45 \\ (\$ 195) \end{array}$ | $\begin{gathered} \$ 45 \\ (\$ 195) \end{gathered}$ | $\begin{gathered} \$ 54 \\ (\$ 54) \end{gathered}$ | $\begin{gathered} \$ 176 \\ (\$ 511) \end{gathered}$ | [j] $[k]=[h]-(i i]-[i])$. |
| Notes Payable (Short-Term Debt) | \$230 | \$230 | \$119 | \$479 |  |
| Adjusted Short-Term Debt | \$195 | \$195 | \$54 | \$479 | $[\mathrm{m}]=$ See Sources and Notes. |
| Long-Term Debt | \$5,410 | \$5,410 | \$5,288 | \$4,624 | [ n$]$ |
| Book Value of Long-Term Debt | \$5,650 | \$5,650 | \$5,396 | \$5,279 | $[\mathrm{o}]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | \$418 | \$418 | \$297 | (\$368) | $[\mathrm{p}]=$ See Sources and Notes. |
| Market Value of Long-Term Debt | \$6,069 | \$6,069 | \$5,693 | \$4,911 | $[q]=[p]+[0] .$ |
| Market Value of Debt | \$6,069 | \$6,069 | \$5,693 | \$4,911 | $[\mathrm{r}]=[\mathrm{q}]$. |
| Market value of firm |  |  |  |  |  |
|  | \$10,927 | \$10,515 | \$9,617 | \$8,316 | $[\mathrm{s}]=[\mathrm{d}]+\mathrm{gc}]+[\mathrm{r}]$. |
| debt and equity to market value ratios |  |  |  |  |  |
| Common Equity - Market Value Ratio | 44.21\% | 42.02\% | 40.50\% | 40.60\% | $[\mathrm{t}]=[\mathrm{d}] /[\mathrm{s}]$. |
| Preferred Equity - Market Value Ratio | 0.25\% | 0.26\% | 0.30\% | 0.35\% | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 55.54\% | $57.71 \%$ | 59.20\% | 59.06\% | $[\mathrm{v}]=[\mathrm{r}] /[\mathrm{s}]$. |

Sources and Notes:
Bloomberg as of March 10,2011
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending at period end.
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closing price ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. MJV-6.
$[\mathrm{m}]=$
1): 0 if $[\mathrm{k}]>0$.
(2): The absolute value of $[k]$ if $[k]<0$ and $|[k]|<[1]$
(3): [1] if $[\mathrm{k}]<0$ and $|[\mathrm{k}]|>[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from 2008-2010 10-K

Table No. MJV-4
Water Utility Sample
Capital Structure Summary

| Company | DCF Capital Structure |  |  | 5-Year Average Capital Structure |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Common <br> Equity - Value Ratio <br> [1] | Preferred <br> Equity - Value Ratio [2] | Debt - Value Ratio [3] | Common <br> Equity - Value Ratio <br> [4] | Preferred <br> Equity - Value Ratio [5] | Debt - Value Ratio [6] |
| California Water Service Group | 0.58 | 0.00 | 0.42 | 0.68 | 0.00 | 0.32 |
| Connecticut Water Service Inc | 0.64 | 0.00 | 0.36 | 0.68 | 0.00 | 0.32 |
| Middlesex Water Co | 0.65 | 0.01 | 0.34 | 0.62 | 0.01 | 0.37 |
| Aqua America Inc | 0.67 | 0.00 | 0.33 | 0.68 | 0.00 | 0.32 |
| SJW Corp | 0.57 | 0.00 | 0.43 | 0.69 | 0.00 | 0.31 |
| American States Water Co | 0.65 | 0.00 | 0.35 | 0.65 | 0.00 | 0.35 |
| York Water Co | 0.69 | 0.00 | 0.31 | 0.68 | 0.00 | 0.32 |
| American Water Works Co Inc | 0.44 | 0.00 | 0.56 | 0.41 | 0.00 | 0.59 |
| Average | 0.61 | 0.00 | 0.39 | 0.64 | 0.00 | 0.36 |

Sources and Notes:
[1], [4]:Workpaper \#1 to Table No. MJV-4.
[2], [5]:Workpaper \#2 to Table No. MJV-4.
[3], [6]:Workpaper \#3 to Table No. MJV-4.
Values in this table may not add up exactly to 1.0 because of rounding.

## Workpaper \#1 to Table No. MJV-4

Water Utility Sample
Calculation of the Average Common Equity - Market Value Ratio

| Company | DCF Capital Structure [1] | Year End, 2010 <br> [2] | $\begin{gathered} 2009 \\ {[3]} \end{gathered}$ | $\begin{gathered} 2008 \\ {[4]} \end{gathered}$ | $\begin{gathered} 2007 \\ {[5]} \end{gathered}$ | $\begin{gathered} 2006 \\ {[6]} \end{gathered}$ | 5-Year Average [7] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | 0.58 | 0.59 | 0.67 | 0.73 | 0.68 | 0.72 | 0.68 |
| Connecticut Water Service Inc | 0.64 | 0.66 | 0.63 | 0.71 | 0.68 | 0.70 | 0.68 |
| Middlesex Water Co | 0.65 | 0.66 | 0.58 | 0.60 | 0.63 | 0.64 | 0.62 |
| Aqua America Inc | 0.67 | 0.67 | 0.64 | 0.68 | 0.69 | 0.74 | 0.68 |
| SJW Corp | 0.57 | 0.59 | 0.59 | 0.70 | 0.73 | 0.83 | 0.69 |
| American States Water Co | 0.65 | 0.66 | 0.66 | 0.60 | 0.68 | 0.67 | 0.65 |
| York Water Co | 0.69 | 0.70 | 0.66 | 0.59 | 0.68 | 0.74 | 0.68 |
| American Water Works Co Inc | 0.44 | 0.42 | 0.41 | 0.41 | $\mathrm{n} / \mathrm{a}$ | n/a | 0.41 |

Sources and Notes:
[1] - [6]: Table No. MJV-3; Panels A - H, [t].
[7]: $\{([2]+[3]+[4]+[5]+[6]) / 5\}$. For American Water Works, the average is a 3-year average.

## Workpaper \#2 to Table No. MJV-4

Water Utility Sample
Calculation of the Average Preferred Equity - Market Value Ratio

| Company | DCF Capital <br> Structure <br> [1] | $\begin{gathered} \text { Year End, } \\ 2010 \\ {[2]} \end{gathered}$ | $\begin{gathered} 2009 \\ {[3]} \end{gathered}$ | $\begin{gathered} 2008 \\ {[4]} \end{gathered}$ | $\begin{gathered} 2007 \\ {[5]} \end{gathered}$ | $\begin{gathered} 2006 \\ {[6]} \end{gathered}$ | 5-Year <br> Average <br> [7] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | - | - | - | - | 0.00 | 0.00 | 0.00 |
| Connecticut Water Service Inc | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Middlesex Water Co | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Aqua America Inc | - | - | - | - | - | - | 0.00 |
| SJW Corp | - | - | - | - | - | - | 0.00 |
| American States Water Co | - | - | - | - | - | - | 0.00 |
| York Water Co | - | - | - | - | - | - | 0.00 |
| American Water Works Co Inc | 0.00 | 0.00 | 0.00 | 0.00 | n/a | n/a | 0.00 |

Sources and Notes:
[1]- [6]: Table No. MJV-3; Panels A - H, [u].
[7]: $\{([2]+[3]+[4]+[5]+[6]) / 5\}$. For American Water Works, the average is a 3-year average.

Workpaper \#3 to Table No. MJV-4
Water Utility Sample
Calculation of the Average Debt - Market Value Ratio

| Company | DCF Capital Structure [1] | $\begin{gathered} \text { Year End, } \\ 2010 \\ {[2]} \end{gathered}$ | $\begin{gathered} 2009 \\ {[3]} \end{gathered}$ | $\begin{gathered} 2008 \\ {[4]} \end{gathered}$ | $\begin{gathered} 2007 \\ {[5]} \end{gathered}$ | $\begin{gathered} 2006 \\ {[6]} \end{gathered}$ | 5-Year Average [7] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | 0.42 | 0.41 | 0.33 | 0.27 | 0.31 | 0.28 | 0.32 |
| Connecticut Water Service Inc | 0.36 | 0.34 | 0.37 | 0.29 | 0.31 | 0.29 | 0.32 |
| Middlesex Water Co | 0.34 | 0.33 | 0.41 | 0.39 | 0.36 | 0.35 | 0.37 |
| Aqua America Inc | 0.33 | 0.33 | 0.36 | 0.32 | 0.31 | 0.26 | 0.32 |
| SJW Corp | 0.43 | 0.41 | 0.41 | 0.30 | 0.27 | 0.17 | 0.31 |
| American States Water Co | 0.35 | 0.34 | 0.34 | 0.40 | 0.32 | 0.33 | 0.35 |
| York Water Co | 0.31 | 0.30 | 0.34 | 0.41 | 0.32 | 0.26 | 0.32 |
| American Water Works Co Inc | 0.56 | 0.58 | 0.59 | 0.59 | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | 0.59 |

Sources and Notes:
[1] - [6]: Table No. MJV-3; Panels A - H, [v].
[7]: $\{([2]+[3]+[4]+[5]+[6]) / 5\}$. For American Water Works, the average is a 3-year average.

Table No. MJV-5
Water Utility Sample
Combined Bloomberg Estimated and Value Line Estimated Growth Rates

| Company | Bloomberg Estimate |  | Value Line |  |  | Combined BEst and Value Line Growth Rate [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | BEst <br> Long-Term Growth Rate | Number of Estimates [2] | EPS Year 2010 <br> Estimate <br> [3] | EPS Year 20132015 Estimate* <br> [4] | Annualized Growth Rate [5] |  |
| California Water Service Group | 4.0\% | 1 | \$1.93 | \$2.65 | 8.2\% | 6.1\% |
| Connecticut Water Service Inc* | 3.0\% | 1 | \$1.20 | \$1.19 | -0.8\% | 1.1\% |
| Middlesex Water Co* | 3.0\% | 1 | \$0.94 | \$0.95 | 1.1\% | 2.0\% |
| Aqua America Inc | 6.5\% | 2 | \$0.90 | \$1.15 | 6.3\% | 6.4\% |
| SJW Corp* | 10.8\% | 2 | \$0.98 | \$1.05 | 7.1\% | 9.5\% |
| American States Water Co | 4.0\% | 1 | \$2.33 | \$2.70 | 3.8\% | 3.9\% |
| York Water Co* | 4.0\% | 1 | \$0.71 | \$0.76 | 7.0\% | 5.5\% |
| American Water Works Co Inc | 12.0\% | 5 | \$1.57 | \$2.00 | 6.2\% | 11.1\% |

Sources and Notes:
[1] - [2]: Bloomberg as of March 10, 2011.
[3] - [4]: Most recent Value Line Plus Edition, dated January 21, 2011.
[5]: ([4]/[3])^(1/4)-1.
[6]: $([1] \times[2]+[5]) /([2]+1)$.
*Value Line future EPS estimate for Connecticut Water Service Inc, Middlesex Water Co, SJW Corp and York Water Co is for 2011 instead of 2013 2015. Therefore the annualized growth rate is annualized for 1 year as opposed to 4 .

Table No. MJV-6
DCF Cost of Equity of the Water Utility Sample
Panel A: Simple DCF Method (Quarterly)

| Company | Stock <br> Price <br> [1] | Most Recent Dividend [2] | Quarterly Dividend Yield [3] | Combined BEst and Value Line Long-Term Growth Rate [4] | Quarterly Growth Rate [5] | DCF Cost of Equity [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | \$35.66 | \$0.31 | 0.86\% | 6.1\% | 1.5\% | 9.8\% |
| Connecticut Water Service Inc | \$24.87 | \$0.23 | 0.93\% | 1.1\% | 0.3\% | 4.9\% |
| Middlesex Water Co | \$18.24 | \$0.18 | 1.00\% | 2.0\% | 0.5\% | 6.2\% |
| Aqua America Inc | \$22.65 | \$0.16 | 0.68\% | 6.4\% | 1.6\% | 9.4\% |
| SJW Corp | \$24.27 | \$0.17 | 0.71\% | 9.5\% | 2.3\% | 12.7\% |
| American States Water Co | \$33.69 | \$0.26 | 0.77\% | 3.9\% | 1.0\% | 7.1\% |
| York Water Co | \$16.67 | \$0.13 | 0.79\% | 5.5\% | 1.4\% | 8.9\% |
| American Water Works Co Inc | \$27.60 | \$0.22 | 0.80\% | 11.1\% | 2.7\% | 14.6\% |

Sources and Notes:
[1]: Workpaper \#1 to Table No. MJV-6.
[2]: Workpaper \#2 to Table No. MJV-6.
[3]: [2]/ [1].
[4]: Table No. MJV-5, [6].
[5]: $\left\{(1+[4])^{\wedge}(1 / 4)\right\}-1$.
[6]: $\left\{(([2] /[1]) \times(1+[5])+[5]+1)^{\wedge} 4\right\}-1$.

Table No. MJV-6
DCF Cost of Equity of the Water Utility Sample
Panel B: Multi-Stage DCF (Using Blue Chip Long-Term GDP Growth Forecast as the Perpetual Rate)

| Company | Stock Price [1] | Most Recent Dividend [2] | Combined BEst and Value Line Long-Term Growth Rate [3] | Growth Rate: <br> Year 6 <br> [4] | Growth Rate: <br> Year 7 <br> [5] | Growth Rate: <br> Year 8 <br> [6] | Growth Rate: <br> Year 9 <br> [7] | Growth Rate: <br> Year 10 <br> [8] | GDP LongTerm Growth Rate [9] | DCF Cost of Equity [10] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Califormia Water Service Group | \$35.66 | \$0.31 | 6.1\% | 5.9\% | 5.6\% | 5.4\% | 5.2\% | 4.9\% | 4.7\% | 8.7\% |
| Connecticut Water Service Inc | \$24.87 | \$0.23 | 1.1\% | 1.7\% | 2.3\% | 2.9\% | 3.5\% | 4.1\% | 4.7\% | 7.8\% |
| Middlesex Water Co | \$18.24 | \$0.18 | 2.0\% | 2.5\% | 2.9\% | 3.4\% | 3.8\% | 4.3\% | 4.7\% | 8.3\% |
| Aqua America Inc | \$22.65 | \$0.16 | 6.4\% | 6.1\% | 5.9\% | 5.6\% | 5.3\% | 5.0\% | 4.7\% | 7.9\% |
| SJW Corp | \$24.27 | \$0.17 | 9.5\% | 8.7\% | 7.9\% | 7.1\% | 6.3\% | 5.5\% | 4.7\% | 8.8\% |
| American States Water Co | \$33.69 | \$0.26 | 3.9\% | 4.0\% | 4.2\% | 4.3\% | 4.4\% | 4.6\% | 4.7\% | 7.8\% |
| York Water Co | \$16.67 | \$0.13 | 5.5\% | 5.4\% | 5.2\% | 5.1\% | 5.0\% | 4.8\% | 4.7\% | 8.2\% |
| American Water Works Co Inc | \$27.60 | \$0.22 | 11.1\% | 10.0\% | 8.9\% | 7.9\% | 6.8\% | 5.8\% | 4.7\% | 9.7\% |

Sources and Notes:
[1]: Workpaper \#1 to Table No. MJV-6.
[2]: Workpaper \#2 to Table No. MJV-6.
[3]: Table No. MJV-5, [6].
[4]: [3]- $\{([3]-[9]) / 6\}$.
[5]: [4]- $\{([3]-[9]) / 6\}$.
[6]: [5]-\{([3]-[9])/6\}.
[7]: $[6]-\{([3]-[9]) / 6\}$.
[8]: [7]-\{([3]-[9])/6\}.
[9]: Blue Chip Economic Indicators published March 10, 2011. This number is assumed to be the perpetual growth rate. (See Appedix D).
[10]: Workpaper \#3 to Table No. MJV-6.

Workpaper \#1 to Table No. MJV-6
Water Utility Sample
Common Stock Prices from February 17, 2011 to March 10, 2011

| Company | 3/10/2011 | 3/9/2011 | 3/8/2011 | 3/7/2011 | 3/4/2011 | 3/3/2011 | 3/2/2011 | 3/1/2011 | 2/28/2011 | 2/25/2011 | 2/24/2011 | 2/23/2011 | 2/22/2011 | 2/18/2011 | 2/17/2011 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | \$35.04 | \$35.90 | \$35.74 | \$35.18 | \$35.43 | \$35.86 | \$35.12 | \$34.87 | \$35.28 | \$35.13 | \$35.34 | \$36.07 | \$36.70 | \$36.82 | \$36.46 | \$35.66 |
| Connecticut Water Service Inc | \$24.30 | \$25.04 | \$24.67 | \$24.26 | \$24.69 | \$25.06 | \$24.81 | \$24.71 | \$25.49 | \$25.16 | \$25.12 | \$24.73 | \$24.92 | \$25.17 | \$24.91 | \$24.87 |
| Middlesex Water Co | \$17.80 | \$18.05 | \$18.05 | \$18.02 | \$18.22 | \$18.53 | \$18.31 | \$18.14 | \$18.77 | \$18.55 | \$18.32 | \$17.96 | \$18.03 | \$18.43 | \$18.44 | \$18.24 |
| Aqua America Ine | \$22.25 | \$22.69 | \$22.68 | \$22.39 | \$22.58 | \$22.84 | \$22.36 | \$22.29 | \$22.52 | \$22.32 | \$22.31 | \$22.75 | \$23.24 | \$23.28 | \$23.24 | \$22.65 |
| SJW Corp | \$23.33 | \$24.79 | \$24.37 | \$23.89 | \$24.29 | \$24.86 | \$24.35 | \$24.36 | \$24.82 | \$24.53 | \$23.86 | \$23.93 | \$24.08 | \$24.27 | \$24.35 | \$24.27 |
| American States Water Co | \$33.24 | \$34.24 | \$34.20 | \$33.71 | \$34.09 | \$34.30 | \$33.51 | \$33.10 | \$33.54 | \$33.68 | \$33.04 | \$33.21 | \$34.01 | \$34.01 | \$33.48 | \$33.69 |
| York Water Co | \$16.44 | \$16.89 | \$16.38 | \$15.90 | \$16.27 | \$16.55 | \$16.16 | \$16.17 | \$16.97 | \$17.00 | \$16.98 | \$16.97 | \$16.86 | \$17.28 | \$17.24 | \$16.67 |
| American Water Works Co Inc | \$27.40 | \$27.87 | \$27.89 | \$27.65 | \$27.69 | \$28.20 | \$27.69 | \$27.46 | \$27.74 | \$27.37 | \$27.08 | \$27.40 | \$27.48 | \$27.83 | \$27.32 | \$27.60 |

Sources and Notes:
Bloomberg as of March 10, 2011
Daily prices for the 15 -trading day period ending March 10, 2011.

Workpaper \#2 to Table No. MJV-6
Water Utility Sample
Most Recent Paid Dividends

| Company | Most Recent <br> Dividend |
| :--- | :---: |
| California Water Service Group | $\$ 0.31$ |
| Connecticut Water Service Inc | $\$ 0.23$ |
| Middlesex Water Co | $\$ 0.18$ |
| Aqua America Inc | $\$ 0.16$ |
| SJW Corp | $\$ 0.17$ |
| American States Water Co | $\$ 0.26$ |
| York Water Co | $\$ 0.13$ |
| American Water Works Co Inc | $\$ 0.22$ |

Sources and Notes:
Bloomberg as of March 10, 2011.

Workpaper \#3 to Table No. MJV-6
DCF Cost of Equity of the Water Utility Sample
Multi - Stage DCF (using Blue Chip Economic Indicator Long-Term GDP Growth Forecast as the Perpetual Growth Rate)

| Year | Company | California Water Service Group | $\begin{array}{r} \text { Comnecticut } \\ \text { Water Service } \\ \text { Inc } \end{array}$ | Middlesex Water Co | Aqua America | SJW Comp | American States | York Water Co | $\begin{aligned} & \text { American Water } \\ & \text { Works Co Inc } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Curent Dividend | 80.31 | S0.23 | S0.18 | 50.16 | \$0.17 | 80.26 | 80.13 | 80.22 |
|  | Curent Stock Price | (835.66) | (\$24.87) | (818.24) | (\$22.65) | (\$24.27) | (833.69) | (s16.67) | (\$27.60) |
| YEAR 2011 | Dividend Q2 Estimate | 80.31 | \$0.23 | \$0.18 | \$0.16 | S0.18 | \$0.26 | \$0.13 | \$0.23 |
| YEAR 2011 | Dividend Q3 Estimate | \$0.32 | 50.23 | S0.18 | S0.16 | S0.18 | \$0.26 | \$0.13 | \$0.23 |
| YEAR 2011 | Dividend 04 Estimate | \$0.32 | 50.23 | S0.19 | S0.16 | 50.18 | \$0.27 | \$0.14 | \$0.24 |
| Year 2012 | Dividend Q1 Estimate | 80.33 | 50.24 | S0. 19 | 50.16 | S0.39 | \$0.27 | \$0.14 | \$0.24 |
| YEAR 2012 | Dividend Q2 Estimate | 80.33 | 50.24 | S0.19 | 50.17 | S0.19 | 80.27 | \$0.14 | \$0.25 |
| YEAR 2012 | Dividend Q3 Estimate | 80.34 | S0.24 | S0.19 | S0.17 | S0.20 | \$0.28 | \$0.14 | \$0.26 |
| Year 2012 | Dividend Q4 Estimate | \$0.34 | \$0.24 | \$0. 19 | 50.17 | \$0.20 | \$0.28 | \$0.14 | \$0.26 |
| Year 2013 | Dividend Q1 Estimate | \$0.35 | \$0.24 | s0.19 | S0.18 | S0.21 | 80.28 | \$0.15 | \$0.27 |
| YEAR 2013 | Dividend Q2 Estimate | 80.35 | S0.24 | \$0.19 | S0.18 | S0.21 | \$0.28 | \$0.15 | \$0.28 |
| YEAR 2013 | Dividend Q3 Estimate | 80.36 | \$0.24 | \$0.19 | S0.18 | so. 22 | \$0.29 | \$0.15 | \$0.29 |
| Year 2013 | Dividend Q4 Estimate | 80.36 | \$0.24 | \$0.19 | S0.18 | \$0.22 | \$0.29 | \$0.15 | \$0.29 |
| YEAR 2014 | Dividend Q1 Estimate | 90.37 | 50.24 | S0. 19 | S0. 19 | 50.23 | \$0.29 | \$0.35 | \$0.30 |
| Year 2014 | Dividend Q2 Estimate | \$0.37 | 50.24 | S0. 19 | \$0. 19 | 50.23 | \$0.29 | \$0.36 | 50.31 |
| YEAR 2014 | Dividend Q3 Estimate | 80.38 | \$0.24 | \$0.20 | S0. 19 | \$0.24 | \$0.30 | \$0.36 | \$0.32 |
| YEAR 2014 | Dividend Q4 Estimate | 80.38 | S0.24 | S0.20 | so.20 | S0.24 | \$0.30 | \$0.16 | \$0.33 |
| Year 2015 | Dividend Q1 Estimate | 80.39 | \$0.24 | so.20 | s0.20 | \$0.25 | \$0.30 | \$0.16 | \$0.33 |
| YEAR 2015 | Dividend Q2 Estimate | \$0.40 | S0.24 | S0.20 | S0.20 | S0.25 | \$0.31 | \$0.16 | \$0.34 |
| Year 2015 | Dividend Q3 Estimate | 80.40 | \$0.24 | \$0.20 | S0.21 | \$0.26 | 80.31 | \$0.17 | \$0.35 |
| Year 2015 | Dividend Q4 Estimate | 80.41 | 50.24 | S0.20 | S0.21 | 50.27 | \$0.31 | 80.17 | \$0.36 |
| YEAR 2016 | Dividend Q1 Estimate | 80.41 | s0.25 | \$0.20 | S0.21 | S0.27 | \$0.31 | \$0.17 | \$0.37 |
| Year 2016 | Dividend Q2 Estimate | \$0.42 | \$0.25 | S0.20 | S0.21 | 50.28 | \$0.32 | \$0.17 | \$0.38 |
| YEAR 2016 | Dividend Q3 Estimate | 80.43 | \$0.25 | S0.20 | \$0.22 | 50.28 | \$0.32 | \$0.18 | \$0.39 |
| Year 2016 | Dividend Q4 Estimate | \$0.43 | 50.25 | S0.21 | S0.22 | S0.29 | \$0.32 | \$0.18 | \$0.40 |
| Year 2017 | Dividend Q1 Estimate | \$0.44 | \$0.25 | S0.21 | 50.22 | \$0.30 | \$0.33 | \$0.38 | \$0.41 |
| Year 2017 | Dividend Q2 Estimate | 80.44 | \$0.25 | S0.21 | \$0.23 | S0.30 | \$0.33 | \$0.38 | \$0.42 |
| Year 2017 | Dividend Q3 Estimate | 80.45 | \$0.25 | S0.21 | S0.23 | S0.31 | \$0.33 | \$0.39 | \$0.43 |
| YEAR 2017 | Dividend Q4 Estimate | 80.46 | \$0.25 | \$0.21 | \$0.23 | \$0.31 | \$0.34 | \$0.19 | \$0.44 |
| Year 2018 | Dividend Q1 Estimate | 80.46 | 50.26 | 50.21 | S0.24 | \$0.32 | \$0.34 | \$0.19 | \$0.45 |
| YEAR 2018 | Dividend Q2 Estimate | \$0.47 | 50.26 | 50.21 | S0.24 | s0.32 | \$0.34 | \$0.19 | \$0.45 |
| Year 2018 | Dividend Q3 Estimate | \$0.48 | 50.26 | \$0.22 | \$0.24 | \$0.33 | \$0.35 | \$0.39 | \$0.46 |
| year 2018 | Dividend Q4 Estimate | \$0.48 | \$0.26 | \$0.22 | 50.25 | \$0.34 | \$0.35 | \$0.20 | \$0.47 |
| year 2019 | Dividend QI Estimate | 80.49 | \$0.26 | \$0.22 | S0.25 | \$0.34 | \$0.36 | \$0.20 | \$0.48 |
| Year 2019 | Dividend Q2 Estimate | 80.49 | S0.26 | S0.22 | S0.25 | \$0.35 | \$0.36 | \$0.20 | \$0.49 |
| Year 2019 | Dividend Q3 Estimate | \$0.50 | 50.27 | S0.22 | \$0.26 | \$0.35 | \$0.36 | \$0.20 | \$0.50 |
| Year 2019 | Dividend Q4 Estimate | \$0.51 | 50.27 | S0.23 | \$0.26 | S0.36 | \$0.37 | \$0.21 | \$0.50 |
| Year 2020 | Dividend Q1 Estimate | \$0.51 | 50.27 | \$0.23 | 50.26 | \$0.36 | \$0.37 | \$0.23 | \$0.51 |
| year 2020 | Dividend Q2 Estimate | 80.52 | 50.27 | \$0.23 | S0.27 | S0.37 | \$0.38 | \$0.21 | \$0.52 |
| YEAR 2020 | Dividend Q3 Estimate | 80.53 | S0.28 | S0.23 | S0.27 | S0.37 | \$0.38 | \$0.21 | \$0.53 |
| Year 2020 | Dividend Q4 Estimate | 80.53 | 50.28 | S0.24 | S0.27 | \$0.38 | \$0.38 | \$0.22 | \$0.54 |
| YEAR 202] | Dividend Q1 Estimate | \$0.54 | 50.28 | S0.24 | 50.28 | 50.38 | \$0.39 | \$0.22 | \$0.54 |
| YEAR 2021 Q2 | Year to Stock Price | \$58.39 | \$38.99 | \$28.76 | \$37.02 | \$40.89 | \$54.01 | \$27.09 | \$47.61 |
|  | Trial CoE: Quarterly Rate | 2.1\% | 1.9\% | 2.0\% | 1.9\% | 2.1\% | 1.9\% | 2.0\% | 2.3\% |
|  | Trial CoE: Anmual Rate | 8.7\% | 7.8\% | 8.3\% | 7.9\% | 8.8\% | 7.8\% | 8.2\% | 9.7\% |
|  | Cost of Equity | 8.7\% | 7.8\%\% | 8.3\% | 7.9\% | 8.8\%\% | 7.8\% | 8.2\% | 9.7\% |
|  | (Trial COE-COE) x 100 | 0.00 | ${ }^{0.00}$ | ${ }^{0.00}$ | ${ }^{0.00}$ | ${ }^{0.00}$ | 0.00 | 0.00 | 0.00 |

Sources and Notes:
All Growth Rate Estimates: Table No. MIV-6; Panel B.
Stock Prices and Dividends are from Bloomberg as of March 10,2011

1. Sce Workpaper \#i to Table No. MIV-6 for the average closing stock price obtained from Bloomberg
2. See Workpaper \#2 to Table No. M.JV-6 for the for the quarterly dividend obtained from Bloombers
(the (
(Triand Year 2021 Q2 Estimate) $\times($ ( $1+$ the Perpetual Growh Rate $)$ ^ (1/4) $\times(1+$ Trial COE - Quaterly Rate) $)$ ) (Trial COE - Quarterly Rate) - ((1 + the Perpetual Growth Rate) ^(1/4)-1)),

Table No. MJV-7
Overall Cost of Capital of the Water Utility Sample
Panel A: Simple DCF Method (Quarterly)

| Company |  | 4th Quarter, 2010 Bond Rating [1] | 4th Quarter, 2010 Preferred Equity Rating [2] | DCF Cost of Equity <br> [3] | DCF Common Equity to Market Value Ratio [4] | Cost of Preferred Equity [5] | DCF Preferred Equity to Market Value Ratio [6] | $\begin{aligned} & \text { DCF Cost of Debt } \\ & {[7]} \end{aligned}$ | DCF Debt to Market Value Ratio [8] | California Water Service Group's Income Tax Rate [9] | Overall After- Tax Cost of Capital [10] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | * | A | A | 9.8\% | 0.58 | 5.8\% | 0.00 | 5.6\% | 0.42 | 40.7\% | 7.1\% |
| Connecticut Water Service Inc |  | A | A | 4.9\% | 0.64 | 5.8\% | 0.00 | 5.6\% | 0.36 | 40.7\% | 4.3\% |
| Middlesex Water Co | * | A | A | 6.2\% | 0.65 | 5.8\% | 0.01 | 5.6\% | 0.34 | 40.7\% | 5.2\% |
| Aqua America Inc | * | A | A | 9.4\% | 0.67 | 5.8\% | 0.00 | 5.6\% | 0.33 | 40.7\% | 7.4\% |
| SJW Corp | * | A | A | 12.7\% | 0.57 | 5.8\% | 0.00 | 5.6\% | 0.43 | 40.7\% | 8.6\% |
| American States Water Co | * | A | A | 7.1\% | 0.65 | 5.8\% | 0.00 | 5.6\% | 0.35 | 40.7\% | 5.8\% |
| York Water Co | * | A | A | 8.9\% | 0.69 | 5.8\% | 0.00 | 5.6\% | 0.31 | 40.7\% | 7.2\% |
| American Water Works Co Inc | * | BBB | BBB | 14.6\% | 0.44 | 6.7\% | 0.00 | 6.0\% | 0.56 | 40.7\% | 8.5\% |
| Full Sample Average |  |  |  | 9.8\% | 0.61 | 6.0\% | 0.00 | 5.7\% | 0.39 | 40.7\% | 7.1\% |
| Sub-sample Average |  |  |  | 9.8\% | 0.61 | 6.0\% | 0.00 | 5.7\% | 0.39 | 40.7\% | 7.1\% |

## Sources and Notes:

[1]: Bloomberg as of March 10,2011
[2]: Preferred ratings were assumed equal to debt ratings.
[9]: Provided by California Water Service Group.
3]: Table No. MJV-6; Panel A, [6]
[10]: $([3] \times[4])+([5] \times[6])+\{[7] \times[8] \times(1-[9])\}$
[4]: Table No. MJV-4, [1]
[5]: Workpaper \#2 to Table No. MJV-11, Panel C
[6]: Table No. MJV-4, [2].
[7]: Workpaper \#2 to Table No. MJV-11, Panel B
[8): Table No. MJV-4, [3].

Table No. MJV-7
Overall Cost of Capital of the Water Utility Sample
Panel B: Multi-Stage DCF (Using Blue Chip Long-Term GDP Growth Forecast as the Perpetual Rate)

| Company |  | 4th Quarter, 2010 Bond Rating [1] | 4th Quarter, 2010 Preferred Equity Rating [2] | DCF Cost of Equity <br> [3] | DCF Common Equity to Market Value Ratio [4] | Cost of Preferred Equity [5] | DCF Preferred Equity to Market Value Ratio [6] | $\begin{aligned} & \text { DCF Cost of Debt } \\ & {[7]} \end{aligned}$ | DCF Debt to Market Value Ratio [8] | California Water Service Group's Income Tax Rate [9] | Overall After- Tax Cost of Capital [10] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | * | A | A | 8.7\% | 0.58 | 5.8\% | 0.00 | 5.6\% | 0.42 | 40.7\% | 6.4\% |
| Connecticut Water Service Inc |  | A | A | 7.8\% | 0.64 | 5.8\% | 0.00 | 5.6\% | 0.36 | 40.7\% | 6.2\% |
| Middlesex Water Co | * | A | A | 8.3\% | 0.65 | 5.8\% | 0.01 | 5.6\% | 0.34 | 40.7\% | 6.6\% |
| Aqua America Inc | * | A | A | 7.9\% | 0.67 | 5.8\% | 0.00 | 5.6\% | 0.33 | 40.7\% | 6.4\% |
| SJW Corp | * | A | A | 8.8\% | 0.57 | 5.8\% | 0.00 | 5.6\% | 0.43 | 40.7\% | 6.4\% |
| American States Water Co | * | A | A | 7.8\% | 0.65 | 5.8\% | 0.00 | 5.6\% | 0.35 | 40.7\% | 6.2\% |
| York Water Co | * | A | A | 8.2\% | 0.69 | 5.8\% | 0.00 | 5.6\% | 0.31 | 40.7\% | 6.7\% |
| American Water Works Co Inc | * | BBB | BBB | 9.7\% | 0.44 | 6.7\% | 0.00 | 6.0\% | 0.56 | 40.7\% | 6.3\% |
| Fuil Sample Average |  |  |  | 8.4\% | 0.61 | 5.9\% | 0.00 | 5.7\% | 0.39 | 40.7\% | 6.4\% |
| Sub-sample Average |  |  |  | 8.5\% | 0.61 | 6.0\% | 0.00 | 5.7\% | 0.39 | 40.7\% | 6.4\% |

Sources and Notes:
[1): Bloomberg as of March 10, 2011.
[2]: Preferred ratings were assumed equal to debt ratings.
[9]: Provided by California Water Service Group.
31. Table No. MJV-6; Panel B, [10].
[10]: $([3] \times[4])+([5] \times[6])+\{[7] \times[8] \times(1-[9])\}$
[4]: Table No. MJV-4, [1].
[5]: Workpaper \#2 to Table No. MJV-11, Panel C.
[6]: Table No. MJV-4, [2].
[7]: Workpaper \#2 to Table No. MJV-11, Panel B
[8]. Table No. MJV-4, [3].

Table No. MJV-8
DCF Cost of Equity at California Water Service Group Capital Structure
Water Utility Sample

|  | Overall Cost of Capital [1] | California Water <br> Service Group's Regulatory \% Debt [2] | Califormia Water Service Group's Cost of Debt [3] | California Water Service Group's Income Tax Rate [4] | California Water Service Group's Regulatory \% Preferred Equity [5] | Service Group's Cost of Preferred Equity [6] | Califomia Water <br> Service Group's Regulatory \% Equity <br> [7] | Estimated <br> Retum on Equity [8] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Full Sample |  |  |  |  |  |  |  |  |
| Simple DCF Quarterly | 7.1\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 10.5\% |
| Multi-Stage DCF - Using the Blue Chip Economic Indicator Long-Term GDP Growth Forecast as the Perpetual Rate | 6.4\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 9.1\% |
| Sub-Sample |  |  |  |  |  |  |  |  |
| Simple DCF Quarterly | 7.1\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 10.5\% |
| Multi-Stage DCF - Using the Blue Chip Economic Indicator Long-Term GDP Growth Forecast as the Perpetual Rate | 6.4\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 9.2\% |

Sources and Notes:
[1]: Table No. MJV-7; Panels A-B, [10].
[2]: Provided by California Water Service Group.
[3]: Based on an A rating. Yield from Bloomberg as of March 10, 2011.
[4]: Provided by California Water Service Group.
[5]: Provided by California Water Service Group.
[6]: From Mergent Bond Record, January 2011 Edition.
[7]: Provided by California Water Service Group.
[8]: $\{[1]-([2] \times[3] \times(1-[4])+[5] \times[6])\} /[7]$.

Table No. MJV-9 - Interest Rate Forecasts
Water Utility Sample
Panel A: US Interest Rate Series (All Constant Maturity Series)

|  | Trading Date | 30 Day | 90 Day | 180 Day | 1 Year | 2 Year | 3 Year | 5 Year | 7 Year | 10 Year | Long Term |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 3/10/2011 | 0.04\% | 0.08\% | 0.14\% | 0.25\% | 0.65\% | 1.13\% | 2.05\% | 2.74\% | $3.37 \%$ | 4.25\% |
|  | 3/9/2011 | 0.07\% | 0.10\% | 0.15\% | 0.26\% | 0.70\% | 1.21\% | 2.16\% | 2.86\% | 3.48\% | 4.35\% |
|  | 3/8/2011 | 0.07\% | 0.11\% | 0.16\% | 0.26\% | 0.73\% | 1.27\% | 2.22\% | 2.93\% | 3.56\% | 4.41\% |
|  | 3/7/2011 | 0.10\% | 0.11\% | 0.16\% | 0.25\% | 0.70\% | 1.22\% | 2.19\% | 2.90\% | 3.51\% | 4.36\% |
|  | 3/4/2011 | 0.11\% | 0.12\% | 0.16\% | 0.26\% | 0.68\% | 1.20\% | 2.17\% | 2.88\% | 3.49\% | 4.34\% |
|  | 3/3/2011 | 0.12\% | 0.13\% | 0.16\% | 0.29\% | 0.79\% | 1.32\% | 2.30\% | 3.00\% | 3.58\% | 4.40\% |
|  | 3/2/2011 | 0.12\% | 0.13\% | 0.17\% | 0.26\% | 0.69\% | 1.18\% | 2.16\% | 2.86\% | 3.46\% | 4.30\% |
|  | 3/1/2011 | 0.07\% | 0.14\% | 0.16\% | 0.25\% | 0.66\% | 1.15\% | 2.11\% | 2.81\% | $3.41 \%$ | 4.24\% |
|  | 2/28/2011 | 0.13\% | 0.15\% | 0.18\% | 0.25\% | 0.69\% | 1.18\% | 2.13\% | 2.82\% | 3.42\% | 4.25\% |
|  | 2/25/2011 | 0.12\% | 0.13\% | 0.16\% | 0.27\% | 0.72\% | 1.22\% | 2.16\% | 2.84\% | 3.42\% | 4.26\% |
|  | 2/24/2011 | 0.13\% | 0.13\% | 0.16\% | 0.26\% | 0.73\% | 1.24\% | 2.19\% | 2.87\% | 3.46\% | 4.29\% |
|  | 2/23/2011 | 0.12\% | 0.12\% | 0.16\% | 0.27\% | 0.74\% | 1.25\% | 2.21\% | 2.89\% | 3.49\% | 4.34\% |
|  | 2/22/2011 | 0.10\% | 0.12\% | 0.16\% | 0.28\% | 0.74\% | 1.22\% | 2.16\% | 2.85\% | 3.46\% | 4.35\% |
|  | 2/18/2011 | 0.08\% | 0.10\% | 0.15\% | 0.28\% | 0.78\% | 1.32\% | 2.30\% | 2.99\% | 3.59\% | 4.46\% |
|  | 2/17/2011 | 0.08\% | 0.09\% | 0.15\% | 0.27\% | 0.80\% | 1.33\% | 2.30\% | 2.99\% | 3.58\% | 4.44\% |
| [A] | Average: | 0.10\% | 0.12\% | 0.16\% | 0.26\% | 0.72\% | 1.23\% | 2.19\% | 2.88\% | $3.49 \%$ | 4.34\% |

Sources and Notes:
[A]: Average over the last 15 trading days.
Bloomberg as of March 10,2011 . The most recent 15 trading days are used.

Workpaper ty to Table No. MJV-9 - Risk Premium Forecast Water Colity Sample

Panel A: Historical Bond Yield Averages

|  | Treasury Bill Yield [1] | Intermediate-Tem Government Bond Yield [2] | Long-Term Government Bond Yield [3] | Long-Term Corporate Bonds (Total Retum) [4] |
| :---: | :---: | :---: | :---: | :---: |
| 1926 | 3.27\% | 3.61\% | 3.54\% | 7.37\% |
| 1927 | 3.12\% | 3.40\% | 3.17\% | 7.44\% |
| 1928 | 3.56\% | 4.01\% | 3. $40 \%$ | 2.84\% |
| 1929 | 4.75\% | 3.62\% | $3.40 \%$ | 3.27\% |
| 1930 | 2.41\% | 2.91\% | 3.30\% | 7.98\% |
| 1931 | 1.07\% | 4.12\% | 4.07\% | -1.85\% |
| 1932 | 0.96\% | $3.04 \%$ | 3.15\% | 10.82\% |
| 1933 | 0.30\% | 3.25\% | 3.36\% | 10.38\% |
| 1934 | 0.10\% | 2.49\% | 2.93\% | 13.84\% |
| 1935 | 0.17\% | 1.63\% | 2.76\% | 9.61\% |
| 1936 | 0.18\% | 1.29\% | 2.55\% | 6.74\% |
| 1937 | 0.31\% | 1.14\% | 2.73\% | 2.75\% |
| 1978 | -0.02\% | 1.52\% | 2.52\% | 6.13\% |
| 1939 | 0.02\% | 0.98\% | 2.26\% | 3.97\% |
| 1940 | 0.00\% | 0.57\% | 1.94\% | 3.39\% |
| 1941 | 0.00\% | 0.8.8\% | 2.04\% | 2.73\% |
| 1942 | 0.27\% | 0.72\% | 2.46\% | 2.60\% |
| 1943 | 0.35\% | 1.45\% | 2.48\% | 2.83\% |
| 1944 | 0.33\% | 1.40\% | 2.46\% | 4.73\% |
| 1945 | 0.33\% | 1.03\% | 1.99\% | 4.08\% |
| 1946 | 0.35\% | 1.12\% | 2.12\% | 1.72\% |
| 1947 | 0.50\% | 1.34\% | 2.43\% | -2.34\% |
| 1948 | 0.81\% | 1.51\% | 2.37\% | 4.14\% |
| 1949 | 1.10\% | 1.23\% | 2.09\% | 3.31\% |
| 1950 | 1.20\% | 1.62\% | 2.24\% | 2.12\% |
| 1951 | 1.49\% | 2.17\% | 2.69\% | -2.69\% |
| 1952 | 1.66\% | 2.35\% | 2.79\% | 3.52\% |
| 1953 | 1.82\% | 2.18\% | 2.74\% | 3.41\% |
| 1954 | 0.86\% | 1.72\% | 2.72\% | 5.30\% |
| 1955 | 1.57\% | 2.80\% | 2.95\% | 0.48\% |
| 1956 | 2.46\% | 3.63\% | 3.45\% | -6.81\% |
| 1957 | 3.14\% | 2.84\% | 3.23\% | 8.71\% |
| 1958 | 1.54\% | 3.81\% | 3.82\% | -2.22\% |
| 1959 | 2.95\% | 4.98\% | 4.47\% | -0.97\% |
| 1960 | 2.66\% | 3.31\% | 3. $80 \%$ | 9.07\% |
| 1961 | 2.13\% | $3.84 \%$ | 4.15\% | 4.82\% |
| 1962 | 2.73\% | 3.50\% | 3. $99 \%$ | 7.95\% |
| 1963 | 3.12\% | 4.04\% | 4.17\% | 2.19\% |
| 1964 | 3.54\% | 4.03\% | 4. $23 \%$ | 4.77\% |
| 1965 | 3.93\% | 4.90\% | 4. $50 \%$ | -0.46\% |
| 1966 | 4.76\% | 4.79\% | 4.59\% | 0.20\% |
| 1967 | 4.21\% | 5.77\% | 5. $56 \%$ | -4.95\% |
| 1968 | $5.21 \%$ | 5.96\% | 5.98\% | 2.57\% |
| 1969 | 6.58\% | 8.29\% | 6.87\% | -8.09\% |
| 1970 | 6.52\% | 5.90\% | 6.48\% | 18.37\% |
| 1971 | 4.39\% | 5.25\% | 5.97\% | 11.01\% |
| 1972 | 3.84\% | 5.85\% | 5.99\% | 7.26\% |
| 1973 | 6.93\% | 6.79\% | 7.26\% | 1.14\% |
| 1974 | 8.00\% | 7.12\% | 7.60\% | -3.06\% |
| 1975 | 5. $80 \%$ | 7.19\% | 8.05\% | 14.64\% |
| 1976 | 5.08\% | 6.00\% | 7.21\% | 18.65\% |
| 1977 | 5.12\% | 7.51\% | 8.03\% | 1.71\% |
| 1978 | 7.18\% | 8.83\% | 8.98\% | . $0.07 \%$ |
| 1979 | 10.38\% | 10.33\% | 10.12\% | -4.18\% |
| 1980 | 11.24\% | 12.45\% | 11.99\% | -2.62\% |
| 1981 | 14.71\% | 13.96\% | 13.34\% | -0.96\% |
| 1982 | 10.54\%\% | 9.90\% | 10.95\% | 43.79\% |
| 1983 | 8.80\% | 11.41\% | 11.97\% | 4.70\% |
| 1984 | 9.85\% | 11.04\% | 11.70\% | 16.39\% |
| 1985 | 7.72\% | 8.55\% | 9. $56 \%$ | 30.90\% |
| 1986 | 6.16\% | 6.85\% | 7.89\% | 19.85\% |
| 1987 | 5.47\% | 8.32\% | 9.20\% | -0.27\% |
| 1988 | 6.35\% | 9.17\% | 9.19\% | 10.70\% |
| 1989 | 8.37\% | 7.94\% | 8.16\% | 16.23\% |
| 1990 | 7.81\% | 7.70\% | 8.44\% | 6.78\% |
| 1991 | 5.60\% | 5.97\% | 7.30\% | 19.89\% |
| 1992 | $3.51 \%$ | 6.11\% | 7.26\% | 9.39\% |
| 1993 | 2.90\% | 5.22\% | 6.54\% | 13.19\% |
| 1994 | 3.90\% | 7.80\% | $7.99 \%$ | -5.76\% |
| 1995 | 5.60\% | 5.38\% | 6.03\% | 27.20\% |
| 1996 | 5.21\% | 6.16\% | 6.73\% | 1.40\% |
| 1997 | 5.26\% | 5.73\% | 6.02\% | 12.95\% |
| 1998 | 4.86\% | 4.68\% | 5.42\% | 10.76\% |
| 1999 | 4.68\% | 6.45\% | $6.82 \%$ | -7.45\% |
| 2000 | 5.89\% | 5.07\% | 5.58\% | 12.87\% |
| 2001 | 3. $83 \%$ | 4.42\% | 5.75\% | 10.65\% |
| 2002 | 1.65\% | 2.61\% | 4.84\% | 16.33\% |
| 2003 | 1.02\% | 2.97\% | 5.11\% | 5.27\% |
| 2004 | 1.20\% | 3.47\% | $4.84 \%$ | 8. $72 \%$ |
| 2005 | 2.98\% | 4.34\% | 4.61\% | 5.87\% |
| 2006 | 4.80\% | 4.65\% | $4.91 \%$ | 3.24\% |
| 2007 | 4.66\% | $3.28 \%$ | 4. $50 \%$ | 2.60\% |
| 2008 | 1.60\% | 1.26\% | 3.03\% | 8.78\% |
| 2009 | 0.10\% | 2.42\% | 4. $58 \%$ | 3.02\% |
| 2010 | 0.12\% | 1.70\% | 4.14\% | 12.44\% |

[1] - [4]: Ibbotson Associates Stocks Bonds Bills (SBBI) and Inflation monthly paper reports.

Workpaper \#1 to Table No. MJV-9
Water Utility Sample
Panel B: Calculation of Maturity Premia for Different Bond Series

|  | Annual Historical Average |  |  | Maturity Premium Calculation |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | T-Bill <br> Total Return <br> [1] | Intermediate Term Bond Yields [2] | Long-Term Government Bond Yield [3] | T-Bill Total Return [4] | Intermediate Term <br> Bond <br> Yields <br> [5] | Long-Term Government Bond Yield [6] |
| 1926-2010 | 3.67\% | 4.62\% | 5.23\% | 0.00\% | 0.95\% | 1.56\% |
| 1947-2010 | 4.53\% | 5.44\% | 6.03\% | 0.00\% | 0.92\% | 1.50\% |
| 1947-1966 | 2.20\% | 3.03\% | 3.37\% | 0.00\% | 0.83\% | 1.17\% |
| 1967-1986 | 7.41\% | 8.25\% | 8.57\% | 0.00\% | 0.83\% | 1.16\% |
| 1987-2010 | 4.06\% | 5.12\% | 6.12\% | 0.00\% | 1.06\% | 2.07\% |
| Current | 0.10\% | 2.19\% | 4.34\% | 0.00\% | 2.09\% | 4.24\% |

Sources and Notes:
[1] - [3] : Workpaper \#1 to Table No. MJV-9, Panel A.
Maturity Premium is defined as the Average Bond Yield (for each series) less Risk Free Total Return.
[4]: [1]-[1].
[5]: [2]-[1].
[6]: [3]-[1].
Current data from Table No. MJV-9, Panel A.

## Workpaper \#1 to Table No. MJV-9

Water Utility Sample
Panel C: Maturity Premium Graph and Calculations (Using Annual Series Data)


Sources and Notes:
[1]: The maturity of a bond in years.
[2]: Workpaper \#1 to Table No. MJV-9, Panel B; [4]-[6] and MJV Testimony.
[3]: MJV Testimony.

Table No. MJV-10

## Risk Positioning Cost of Equity of the Water Utility Sample

Using Brattle Betas
Panel A: Scenario 1 - Long-Term Risk Free Rate of 4.74\%, Long-Term Market Risk Premium of $6.50 \%$

|  | Long-Term <br> Risk-Free Rate | Brattle Betas <br> $[2]$ | Long-Term Market <br> Risk Premium <br> $[3]$ | CAPM Cost of <br> Equity <br> $[4]$ | ECAPM (0.5\%) <br> Cost of Equity | ECAPM (1.5\%) <br> Cost of Equity |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $[5]$ |  |  |  |  |  |  |

Sources and Notes:
[1]: Table No. MJV-9, Panel A, Row [A], plus adjustment factor.
[2]: Workpaper \# 1 to Table No. MJV-10, column [3].
[3]: Vilbert Direct Testimony, Appendix C.
[4]: [1] $+([2] \times[3])$.
$[5]:([1]+0.5 \%)+[2] \times([3]-0.5 \%)$.
$[6]:([1]+1.5 \%)+[2] \times([3]-1.5 \%)$.

Table No. MJV-10

## Risk Positioning Cost of Equity of the Water Utility Sample

Using Brattle Betas
Panel B: Scenario 2 - Long-Term Risk Free Rate of $4.61 \%$, Long-Term Market Risk Premium of $7.00 \%$

| Company | Long-Term Risk-Free Rate [1] | Brattle Betas [2] | Long-Term Market Risk Premium [3] | CAPM Cost of Equity [4] | ECAPM ( $0.5 \%$ ) <br> Cost of Equity [5] | ECAPM (1.5\%) <br> Cost of Equity [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | 4.61\% | 0.76 | 7.00\% | 9.9\% | 10.0\% | 10.3\% |
| Connecticut Water Service Inc | 4.61\% | 0.83 | 7.00\% | 10.4\% | 10.5\% | 10.7\% |
| Middlesex Water Co | 4.61\% | 0.85 | 7.00\% | 10.5\% | 10.6\% | 10.8\% |
| Aqua America Inc | 4.61\% | 0.70 | 7.00\% | 9.5\% | 9.7\% | 10.0\% |
| SJW Corp | 4.61\% | 1.09 | 7.00\% | 12.2\% | 12.2\% | 12.1\% |
| American States Water Co | 4.61\% | 0.80 | 7.00\% | 10.2\% | 10.3\% | 10.5\% |
| York Water Co | 4.61\% | 0.62 | 7.00\% | 9.0\% | 9.2\% | 9.5\% |
| American Water Works Co Inc | 4.61\% | 0.62 | 7.00\% | 9.0\% | 9.2\% | 9.5\% |

Sources and Notes:
[1]: Table No. MJV-9, Panel A, Row [A], plus adjustment factor.
[2]: Workpaper \# 1 to Table No. MJV-10, column [3].
[3]: Vilbert Direct Testimony, Appendix C.
[4]: [1] $+([2] \times[3])$.
$[5]:([1]+0.5 \%)+[2] \times([3]-0.5 \%)$.
$[6]:([1]+1.5 \%)+[2] \times([3]-1.5 \%)$.

Table No. MJV-10

## Risk Positioning Cost of Equity of the Water Utility Sample

Using Brattle Betas
Panel C: Scenario 3 - Long-Term Risk Free Rate of 4.49\%, Long-Term Market Risk Premium of $7.50 \%$

| Company | Long-Term Risk-Free Rate [1] | Brattle Betas [2] | Long-Term Market Risk Premium [3] | CAPM Cost of Equity [4] | ECAPM ( $0.5 \%$ ) <br> Cost of Equity [5] | ECAPM (1.5\%) <br> Cost of Equity [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | 4.49\% | 0.76 | 7.50\% | 10.2\% | 10.3\% | 10.5\% |
| Connecticut Water Service Inc | 4.49\% | 0.83 | 7.50\% | 10.7\% | 10.8\% | 11.0\% |
| Middlesex Water Co | 4.49\% | 0.85 | 7.50\% | 10.8\% | 10.9\% | 11.1\% |
| Aqua America Inc | 4.49\% | 0.70 | 7.50\% | 9.7\% | 9.9\% | 10.2\% |
| SJW Corp | 4.49\% | 1.09 | 7.50\% | 12.7\% | 12.6\% | 12.5\% |
| American States Water Co | 4.49\% | 0.80 | 7.50\% | 10.5\% | 10.6\% | 10.8\% |
| York Water Co | 4.49\% | 0.62 | 7.50\% | 9.2\% | 9.4\% | 9.7\% |
| American Water Works Co Inc | 4.49\% | 0.62 | 7.50\% | 9.2\% | 9.4\% | 9.7\% |

Sources and Notes:
[1]: Table No. MJV-9, Panel A, Row [A], plus adjustment factor.
[2]: Workpaper \# 1 to Table No. MJV-10, column [3].
[3]: Vilbert Direct Testimony, Appendix C.
[4]: [1] $+([2] \times[3])$.
$[5]:([1]+0.5 \%)+[2] \times([3]-0.5 \%)$.
$[6]:([1]+1.5 \%)+[2] \times([3]-1.5 \%)$.

Workpaper \# 1 to Table No. MJV-10
Water Utility Sample
Value Line Betas, Bloomberg Betas and Brattle Betas

|  |  | Value Line <br> Betas <br> $[1]$ | Bloomberg Betas <br> $[2]$ | Brattle <br> Betas <br> $[3]$ |
| :--- | :---: | :---: | :---: | :---: |
| Company | $*$ | 0.70 | 0.78 | 0.76 |
| California Water Service Group | $*$ | 0.80 | 0.84 | 0.83 |
| Connecticut Water Service Inc | $*$ | 0.75 | 0.78 | 0.85 |
| Middlesex Water Co | $*$ | 0.65 | 0.79 | 0.70 |
| Aqua America Inc | $*$ | 0.90 | 1.08 | 1.09 |
| SJW Corp | $*$ | 0.80 | 0.89 | 0.80 |
| American States Water Co | $*$ | 0.70 | 0.71 | 0.62 |
| York Water Co |  | 0.65 | 0.68 | 0.62 |
| American Water Works Co Inc |  | 0.74 | 0.82 | 0.78 |
|  |  |  |  |  |
| Average |  |  |  |  |

Sources and Notes:
[1]: Most recent Value Line Plus Edition, dated January 21, 2011.
[2]: Bloomberg five year weekly beta from March 10, 2006 to March 4, 2011.
[3]: Brattle estimates as of March 9, 2011.

Table No. MJV-11
Overall Cost of Capital of the Water Utility Sample
Using Brattle Betas
Panel A: CAPM Cost of Equity Scenario 1-Long-Term Risk Free Rate of 4.74\%, Long-Term Market Risk Premium of 6.50\%

| Company | CAPM Cost of Equity [1] | ECAPM ( $0.5 \%$ ) Cost of Equity [2] | ECAPM (1.5\%) Cost of Equily [3] | 5-Year Average Common Equity to Market Value Ratio [4] | Weighted - Average Cost of Preferred Equity [5] | 5-Year Average Preferred Equity to Market Value Ratio [6] | WeightedAverage Cost of Debt [7] | 5-Year Average Debt to Market Value Ratio [8] | California Wate Service Group's Income Tax Rate [9] | Overall After-Tax Cost of Capital (CAPM) [10] | Overall After-Tax Cost of Capital (ECAPM 0.5\%) [11] | Overall After-Tax Cost of Capital (ECAPM 1.5\%) [12] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | 9.7\% | 9.8\% | 10.0\% | 0.68 | 5.83\% | 0.00 | 5.6\% | 0.32 | 40.7\% | 7.6\% | 7.7\% | 7.9\% |
| Connecticut Water Service lnc | 10.1\% | 10.2\% | 10.4\% | 0.68 | 5.83\% | 0.00 | 5.6\% | 0.32 | 40.7\% | 7.9\% | 8.0\% | 8.1\% |
| Middiesex Water Co | 10.2\% | 10.3\% | 10.5\% | 0.62 | 5.83\% | 0.01 | 5.6\% | 0.37 | 40.7\% | 7.7\% | 7.7\% | 7.8\% |
| Aqua America Inc | 9.3\% | 9.4\% | 9.7\% | 0.68 | 5.83\% | 0.00 | 5.6\% | 0.32 | 40.7\% | 7.4\% | 7.5\% | 7.7\% |
| SJW Corp | 11.8\% | 11.8\% | 11.7\% | 0.69 | 5.83\% | 0.00 | 5.6\% | 0.31 | 40.7\% | 9.1\% | 9.1\% | 9.1\% |
| American States Water Co | 9.9\% | 10.0\% | 10.2\% | 0.65 | 5.83\% | 0.00 | 5.6\% | 0.35 | 40.7\% | 7.6\% | 7.7\% | 7.8\% |
| York Water Co | 8.8\% | 9.0\% | 9.4\% | 0.68 | 5.83\% | 0.00 | 5.6\% | 0.32 | 40.7\% | 7.0\% | 7.1\% | 7.4\% |
| American Water Works Co Inc | 8.8\% | 9.0\% | 9.4\% | 0.41 | 6.34\% | 0.00 | 5.9\% | 0.59 | 40.7\% | 5.7\% | 5.7\% | 5.9\% |
| Full Sample Average |  |  |  | 0.64 | 5.89\% | 0.00 | 5.6\% | 0.36 | 40.7\% | 7.5\% | 7.6\% | 7.7\% |
| Sub-Sample Average |  |  |  | 0.67 | 5.83\% | 0.00 | 5.6\% | 0.33 | 40.7\% | 7.8\% | 7.8\% | 8.0\% |

Sources and Notes:
[1]: Table No. MJV-10; Panel A, [4]
[2]: Table No. MJV-10; Panel A, [5]
[7]: Workpaper \#2 to Tabie No. MJV-11, Panel B.
[8]: Table No. MJV-4, [6].
[9]: Provided by Califormia Water Service Group.
3]: Table No. MIV-10; Panel A, [6].
4]: Table No. MJV-4, [4].
$[10]:([1] \times[4])+([5] \times[6])+\{[7] \times[8] \times(1-[9])\}$
$[11]:(22] \times(4])+(5) \times[6)+(17] \times[8] \times(1-[9])$
6]: Table No MJV-4 [5]

Table No. MJV-11
Overall Cost of Capital of the Water Utility Sample
Using Brattle Betas
Panel B: CAPM Cost of Equity Scenario 2 - Long-Term Risk Free Rate of 4.61\%, Long-Term Market Risk Premium of 7.00\%

| Company | CAPM Cost of Equity [1] | ECAPM (0.5\%) Cost of Equity [2] | ECAPM (1.5\%) Cost of Equity [3] | 5-Year Average Common Equity to Market Value Ratio [4] | Weighted - Average Cost of Preferred Equity [5] | 5-Year Average Preferred Equity to Market Value Ratio [6] | WeightedAverage Cost of Debt [7] | 5-Year Average Debt to Market Value Ratio [8] | Callfornia Water Service Group's Income Tax Rate [9] | Overall After-Tax Cost of Capital (CAPM) [10] | Overall After-Tax Cost of Capital (ECAPM 0.5\%) [11] | Overall After-Tax Cost of Capital (ECAPM 1.5\%) [12] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | 9.9\% | 10.0\% | 10.3\% | 0.68 | 5.83\% | 0.00 | $5.6 \%$ | 0.32 | 40.7\% | 7.8\% | 7.9\% | 8.0\% |
| Connecticut Water Service Inc | 10.4\% | 10.5\% | 10.7\% | 0.68 | 5.83\% | 0.00 | 5.6\% | 0.32 | 40.7\% | 8.1\% | 8.2\% | 8.3\% |
| Middlesex Water Co | 10.5\% | 10.6\% | 10.8\% | 0.62 | 5.83\% | 0.01 | 5.6\% | 0.37 | 40.7\% | 7.8\% | 7.9\% | 8.0\% |
| Aqua America lnc | 9.5\% | 9.7\% | 10.0\% | 0.68 | 5.83\% | 0.00 | 56\% | 0.32 | 40.7\% | 7.6\% | 7.7\% | 7.9\% |
| Ssw Corp | 12.2\% | 12.2\% | 12.1\% | 0.69 | 5.83\% | 0.00 | 5.6\% | 0.31 | 40.7\% | 9.4\% | 9.4\% | 9.3\% |
| American States Water Co | 10.2\% | 10.3\% | 10.5\% | 0.65 | 5.83\% | 0.00 | 5.6\% | 0.35 | 40.7\% | 7.8\% | 7.9\% | 8.0\% |
| York Water Co | 9.0\% | 9.2\% | 9.5\% | 0.68 | 5.83\% | 0.00 | 5.6\% | 0.32 | 40.7\% | 7.1\% | 7.3\% | 7.5\% |
| American Water Works Co Inc | 9.0\% | 9.2\% | 9.5\% | 0.41 | 6.34\% | 0.00 | 5.9\% | 0.59 | 40.7\% | 5.7\% | 5.8\% | 6.0\% |
| Full Sample Average |  |  |  | 0.64 | 5.89\% | 0.00 | 5.6\% | 0.36 | 40.7\% | 7.7\% | 7.8\% | 7.9\% |
| Sub-Sample Average |  |  |  | 0.67 | 5.83\% | 0.00 | 5.6\% | 0.33 | 40.7\% | 8.0\% | 8.0\% | 8.2\% |

Sources and Notes:
[1]: Table No MJV-10; Panel B, [4].
[2]: Table No. MJV- 10 ; Panel B, [5]
[7]: Workpaper \#2 to Table No. MJV-11, Pancl B.
[8]: Table No MJV-4, [6].
[9]: Provided by Califfornia Water Service Group.
[3] Table No. MJV-10; Panel B, [6]
$[10]:([1] \times[4])+([5] \times[6])+\{[7] \times[8] \times(1-[9])\}$
[4]: Table No. MJV-4, [4].
[5]: Workpaper \#2 to Table No. MJV- 11, Panel C.
$[11]:([2] \times[4])+([5] \times[6])+\{[7] \times[8] \times(1-[9])$
[6]: Table No. MJV-4, [5].
$[12]:(33] \times[4]+([5] \times[6])+\{[7] \times[8] \times(1-[99)\}$

Table No. MJV- 11
Overall Cost of Capital of the Water Utility Sample
Using Brattle Betas
Panel C: CAPM Cost of Equity Scenario 3-Long-Term Risk Free Rate of 4.49\%, Long-Term Market Risk Premium of 7.50\%

| Company | CAPM Cost of Equity [1] | ECAPM (0.5\%) Cost of Equity [2] | ECAPM (1.5\%) Cost of Equity [3] | 5-Year Average Common Equity to Market Value Ratio [4] | Weighted - Average Cost of Preferred Equity [5] | 5-Year Average Preferred Equity to Market Value Ratio [6] | WeightedAverage Cost of Debt [7] | 5-Year Average Debt to Market Value Ratio [8] | California Water Service Group's Income Tax Rate [9] | Overall After-Tax Cost of Capital (CAPM) [10] | Overall After-Tax Cost of Capital (ECAPM 0.5\%) [11] | Overall After-Tax Cost of Capital (ECAPM 1.5\%) [12] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | 10.2\% | 10.3\% | 10.5\% | 0.68 | 5.83\% | 0.00 | 5.6\% | 0.32 | 40.7\% | 8.0\% | 8.0\% | 8.2\% |
| Connecticut Water Service lnc | 10.7\% | 10.8\% | 11.0\% | 0.68 | 5.83\% | 0.00 | 5.6\% | 0.32 | 40.7\% | 8.3\% | 8.4\% | 8.5\% |
| Middlesex Water Co | 10.8\% | 10.9\% | 11.1\% | 0.62 | 5.83\% | 0.01 | 5.6\% | 0.37 | 40.7\% | 8.0\% | 8.1\% | 8.2\% |
| Aqua America Inc | 9.7\% | 9.9\% | 10.2\% | 0.68 | 5.83\% | 0.00 | 5.6\% | 0.32 | 40.7\% | 7.7\% | 7.8\% | 8.0\% |
| SJW Corp | 12.7\% | 12.6\% | 12.5\% | 0.69 | 5.83\% | 0.00 | 5.6\% | 0.31 | 40.7\% | 9.7\% | 9.7\% | 9.6\% |
| American States Water Co | 10.5\% | 10.6\% | 10.8\% | 0.65 | 5.83\% | 0.00 | 5.6\% | 0.35 | 40.7\% | 8.0\% | 8.1\% | 8.2\% |
| York Water Co | 9.2\% | 9.4\% | 9.7\% | 0.68 | 5.83\% | 0.00 | 5.6\% | 0.32 | 40.7\% | 7.3\% | 7.4\% | 7.7\% |
| American Water Works Co Inc | 9.2\% | 9.4\% | 9.7\% | 0.41 | 6.34\% | 0.00 | 5.9\% | 0.59 | 40.7\% | 5.8\% | 5.9\% | 6.0\% |
| Full Sample Average |  |  |  | 0.64 | 5.89\% | 0.00 | 5.6\% | 0.36 | 40.7\% | 7.9\% | 7.9\% | 8.1\% |
| Sub-Sample Average |  |  |  | 0.67 | 5.83\% | 0.00 | 5.6\% | 0.33 | 40.7\% | 8.1\% | 8.2\% | 8.3\% |

Sources and Notes:
[1]: Table No. MJV-10; Panel C, [4]
[2]: Table No. MJV-10; Panel C, [5]
[7]: Workpaper \#2 to Table No. MJV-11, Panel B.
[8]: Table No. MJV-4, [6].
[9]: Provided by Califormia Water Service Group.
3]: Table No. MIV-10; Panel C, [6]
[4]: Table No. MJV-4, [4].
51: Worknaper \#2 o Table No MV-11, Panel C.
$[10]:([1] \times[4])+(5] \times[6])+\{[7] \times[8] \times(1-[9])\}$
$[12]:([3] \times[4])+([5] \times[6])+\{(7] \times[8] \times(1-[9])$

Workpaper \#1 to Table No. MJV-11
Water Utility Sample
Panel A: Rating to Yield Conversion

| Rating | Bond Yield | Preferred Yield |
| :---: | :---: | :---: |
| A | $5.61 \%$ | $5.83 \%$ |
| BBB | $6.02 \%$ | $6.68 \%$ |

Sources and Notes:
Bond Yields from Bloomberg as of March 10, 2011.
Preferred Yields from Mergent Bond Record, January 2011
Edition.

Workpaper \#1 to Table No. MJV-11
Water Utility Sample
Panel B: Bond Rating Summary

|  | Year End, |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Company | 2010 | 2009 | 2008 | 2007 | 2006 |
|  | $[1]$ | $[2]$ | $[3]$ | $[4]$ | $[5]$ |
| California Water Service Group | A | A | A | A | A |
| Connecticut Water Service Inc | A | A | A | A | A |
| Middlesex Water Co | A | A | A | A | A |
| Aqua America Inc | A | A | A | A | A |
| SJW Corp | A | A | A | A | A |
| American States Water Co | A | A | A | A | A |
| York Water Co | A | A | A | A | A |
| American Water Works Co Inc | BBB | BBB | BBB | A | A |

Sources and Notes:
[1]-[5]: Bloomberg as of March 10, 2011.
The bond rating for Aqua America uses a subsidiary's rating.
SJW Corp has an assumed bond rating in the A range to be consistent with other companies.
The credit rating is the long-term issuer rating without a $+/$ - indication.

Workpaper \#1 to Table No. MJV-11
Water Utility Sample
Panel C: Preferred Equity Rating Summary

|  | Year End, <br> Company <br>  <br> 2010 <br> $[1]$ | 2009 <br> $[2]$ | 2008 <br> $[3]$ | 2007 <br> $[4]$ | 2006 |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | $[5]$ |  |  |  |  |
| California Water Service Group | A | A | A | A | A |
| Connecticut Water Service Inc | A | A | A | A | A |
| Middlesex Water Co | A | A | A | A | A |
| Aqua America Inc | A | A | A | A | A |
| SJW Corp | A | A | A | A | A |
| American States Water Co | A | A | A | A | A |
| York Water Co | A | A | A | A | A |
| American Water Works Co Inc | BBB | BBB | BBB | A | A |

## Sources and Notes:

[1] - [5]: Preferred equity ratings are assumed equal to the company's bond ratings reported in Workpaper \#1 to Table No. MJV-11, Panel B.
The credit rating is the long-term issuer rating without $a+/$ - indication

Workpaper \#2 to Table No. MJV-11
Water Utility Sample
Panel A: Day Average Utility Yields and Mergent Preferred Yields

| Date | A Rated Utility <br> $[1]$ | BBB Rated Utility <br> $[2]$ | A Preferred <br> $[3]$ | BBB Preferred <br> $[4]$ |
| ---: | ---: | ---: | ---: | ---: |
| $3 / 10 / 2011$ | 5.56 | 5.96 | - | - |
| $3 / 9 / 2011$ | 5.63 | 6.02 | - | - |
| $3 / 8 / 2011$ | 5.68 | 6.09 | - | - |
| $3 / 7 / 2011$ | 5.63 | 6.04 | - | - |
| $3 / 4 / 2011$ | 5.63 | 6.03 | - | - |
| $3 / 3 / 2011$ | 5.66 | 6.07 | - | - |
| $3 / 2 / 2011$ | 5.58 | 5.98 | - | - |
| $3 / 1 / 2011$ | 5.52 | 5.93 | - | - |
| $2 / 28 / 2011$ | 5.51 | 5.92 | - | - |
| $2 / 25 / 2011$ | 5.55 | 5.96 | - | - |
| $2 / 24 / 2011$ | 5.57 | 5.99 | - | - |
| $2 / 23 / 2011$ | 5.62 | 6.04 | - | - |
| $2 / 22 / 2011$ | 5.62 | 6.04 | - | - |
| $2 / 18 / 2011$ | 5.71 | 6.09 | - | - |
| $2 / 17 / 2011$ | 5.67 | 6.02 | 5.83 | - |
| Average | 5.61 |  |  | -6.68 |

Sources and Notes:
[1] - [2]: Bloomberg as of March 10, 2011.
[3] - [4]: Mergent Bond Record, January 2011 Edition.

Workpaper \#2 to Table No. MJV-11
Water Utility Sample
Panel B: Bond Yield Summary

| Company | Year End, 2010 <br> [1] | $\begin{gathered} 2009 \\ {[2]} \end{gathered}$ | $\begin{gathered} 2008 \\ {[3]} \end{gathered}$ | $\begin{gathered} 2007 \\ {[4]} \end{gathered}$ | $\begin{gathered} 2006 \\ {[5]} \end{gathered}$ | 5-Year <br> Average <br> [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% |
| Connecticut Water Service Inc | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% |
| Middlesex Water Co | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% |
| Aqua America Inc | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% |
| SJW Corp | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% |
| American States Water Co | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% |
| York Water Co | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% | 5.61\% |
| American Water Works Co Inc | 6.02\% | 6.02\% | 6.02\% | 5.61\% | 5.61\% | 5.86\% |

Sources and Notes:
[1] - [5]: Ratings based on Workpaper \#1 to Table No. MJV-11, Panel B. Bond yields from Bloomberg as of March 10, 2011. [6]: $\{([1]+[2]+[3]+[4]+[5]) / 5\}$

## Workpaper \#2 to Table No. MJV-11

Water Utility Sample
Panel C: Preferred Equity Yield Summary

| Company | Year End, 2010 <br> [1] | $\begin{gathered} 2009 \\ {[2]} \end{gathered}$ | $\begin{gathered} 2008 \\ {[3]} \end{gathered}$ | $\begin{gathered} 2007 \\ {[4]} \end{gathered}$ | $\begin{gathered} 2006 \\ {[5]} \end{gathered}$ | 5-Year <br> Average <br> [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| California Water Service Group | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% |
| Connecticut Water Service Inc | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% |
| Middlesex Water Co | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% |
| Aqua America Inc | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% |
| SJW Corp | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% |
| American States Water Co | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% |
| York Water Co | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% |
| American Water Works Co Inc | 6.68\% | 6.68\% | 6.68\% | 5.83\% | 5.83\% | 6.34\% |

Sources and Notes:
[1] - [5]: See Workpaper \#1 to Table No. MJV-11, Panels C. Preferred equity yields are from Mergent Bond Record, January 2011
[6]: $\{([1]+[2]+[3]+[4]+[5]) / 5\}$

Table No. MJV-12
Risk Positioning Cost of Equity at California Water Service Group's Capital Structure
Water Utility Sample
Using Brattle Betas

| Using Brattle Betas |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Overall Cost of Capital (Scenario 1) [1] | Overall Cost of Capital (Scenario 2) [2] | Overall Cost of Capital (Scenario 3) [3] | California Water Service Group's Regulatory \% Debt [4] | California <br> Water Service Group's Cost of Debt [5] | California <br> Water <br> Service <br> Group's <br> Income Tax Rate <br> [6] | California Water Service Group's Regulatory \% Preferred Equity [7] | California <br> Water <br> Service <br> Group's <br> Cost of <br> Preferred <br> Equity <br> [8] | California Water Service Group's Regulatory \% Equity [9] | Estimated Return on Equity (Scenario 1) [10] | Estimated Return on Equity (Scenario 2) [11] | Estimated Return on Equity (Scenario 3) [12] |
| Full Sample: |  |  |  |  |  |  |  |  |  |  |  |  |
| CAPM using Brattle Betas | 7.5\% | 7.7\% | 7.9\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 11.2\% | 11.6\% | 11.9\% |
| ECAPM ( $0.50 \%$ ) using Brattle Betas | 7.6\% | 7.8\% | 7.9\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 11.4\% | 11.7\% | 12.0\% |
| ECAPM (1.50\%) using Brattle Betas | 7.7\% | 7.9\% | 8.1\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 11.6\% | 11.9\% | 12.3\% |
| Sub-Sample: |  |  |  |  |  |  |  |  |  |  |  |  |
| CAPM using Brattle Betas | 7.8\% | 8.0\% | 8.1\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 11.7\% | 12.1\% | 12.4\% |
| ECAPM (0.50\%) using Brattle Betas | 7.8\% | 8.0\% | 8.2\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 11.8\% | 12.2\% | 12.6\% |
| ECAPM ( $1.50 \%$ ) using Brattle Betas | 8.0\% | 8.2\% | 8.3\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 12.1\% | 12.4\% | 12.8\% |

## sources and Notes

[1]: Table No. MJV-11; Panel A, [10] - [12].
[2]: Table No. MJV-11; Panel B, [10] - [12]
[3]: Table No. MJV-11; Panel C, [10] - [12].
4]: Provided by California Water Service Group.
[5]: Based on a A rating. Yield from Bloomberg as of March 10, 2011.
[6]: Provided by California Water Service Group.
[7]: Provided by California Water Service Group.
[8]: From Mergent Bond Record, January 2011 Edition.
[9]: Provided by California Water Service Group.
$[10]:\{[1]-([4] \times[5] \times(1-[6])+[7] \times[8])\} /[9]$
[11]: \{[2]-([4] $\times[5] \times(1-[6])+[7] \times[8])\} /[9]$
[12]: $\{[3]-([4] \times[5] \times(1-[6])+[7] \times[8])\} /[9]$.

Scenario 1: Long-Term Risk Free Rate of $4.74 \%$ Long-Term Market Risk Premium of $6.50 \%$. Scenario 2: Long-Term Risk Free Rate of 4.61\%, Long-Term Market Risk Premium of $7.00 \%$. Scenario 3: Long-Term Risk Free Rate of $4.49 \%$, Long-Term Market Risk Premium of 7.50\%.

Table No. MJV-13
Gas LDC Sample
Classification of Companies by Assets

| Company | Company Category |
| :--- | :---: |
| Atmos Energy Corp | R |
| Laclede Group Inc/The | R |
| New Jersey Resources Corp | MR |
| NiSource Inc | MR |
| Northwest Natural Gas Co | R |
| Piedmont Natural Gas Co | R |
| South Jersey Industries Inc | MR |
| Southwest Gas Corp | R |
| WGL Holdings Inc | R |

Sources and Notes:
Workpaper \#1 to Table No. MJV-13, Panels A-I.
$R=$ Regulated (greater than 80 percent of total assets are regulated).
$M R=$ Mostly Regulated ( 50 to 80 percent of total assets are regulated)

Workpaper \#1 to Table No. MJV-13
Gas LDC Sample: Percentage of Regulated Assets
Panel A: Atmos Energy Corp (thousands)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $6,586,130$ | $97.4 \%$ |
| Total | $[2]$ | $6,763,791$ |  |

Sources and Notes:
[1]-[2]: Atmos Energy Corp's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-13
Gas LDC Sample: Percentage of Regulated Assets
Panel B: Laclede Group Inc/The (thousands)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $1,657,530$ | $90.1 \%$ |
| Total | $[2]$ | $1,840,196$ |  |

Sources and Notes:
[1]-[2]: Laclede Group Inc/The's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-13
Gas LDC Sample: Percentage of Regulated Assets
Panel C: New Jersey Resources Corp (thousands)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $1,904,545$ | $74.3 \%$ |
| Total | $[2]$ | $2,563,133$ |  |

Sources and Notes:
[1]-[2]: New Jersey Resources Corp's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-13
Gas LDC Sample: Percentage of Regulated Assets
Panel D: NiSource Inc (thousands)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :--- | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $11,353,000$ | $56.9 \%$ |
| Total | $[2]$ | $19,938,800$ |  |

Sources and Notes:
[1]-[2]: NiSource Inc's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-13
Gas LDC Sample: Percentage of Regulated Assets
Panel E: Northwest Natural Gas Co (thousands)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $\mathrm{n} / \mathrm{a}$ | $90.0 \%$ |
| Total | $[2]$ | $\mathrm{n} / \mathrm{a}$ |  |

Sources and Notes:
[1]-[2]: Northwest Natural Gas Co's 2010 Form 10-K, p. 3 explicitly states the percentage of

## Workpaper \#1 to Table No. MJV-13

Gas LDC Sample: Percentage of Regulated Assets
Panel F: Piedmont Natural Gas Co (thousands)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $2,784,087$ | $97.2 \%$ |
| Total | $[2]$ | $2,864,895$ |  |

Sources and Notes:
[1]-[2]: Piedmont Natural Gas Co's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-13
Gas LDC Sample: Percentage of Regulated Assets
Panel G: South Jersey Industries Inc (thousands)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $1,468,635$ | $70.7 \%$ |
| Total | $[2]$ | $2,076,615$ |  |

Sources and Notes:
[1]-[2]: South Jersey Industries Inc's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-13
Gas LDC Sample: Percentage of Regulated Assets
Panel H: Southwest Gas Corp (thousands)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $3,845,111$ | $96.5 \%$ |
| Total | $[2]$ | $3,984,193$ |  |

Sources and Notes:
[1]-[2]: Southwest Gas Corp's 2010 Form 10-K.

Workpaper \#1 to Table No. MJV-13
Gas LDC Sample: Percentage of Regulated Assets
Panel I: WGL Holdings Inc (thousands)

|  |  | 2010 | $\%$ of Total Assets |
| :--- | :---: | :---: | :---: |
| Assets Attributed to Utility | $[1]$ | $3,277,651$ | $89.9 \%$ |
| Total | $[2]$ | $3,643,894$ |  |

Sources and Notes:
[1]-[2]: WGL Holdings Inc's 2010 Form 10-K.

Table No. MJV-14
Market Value of the Gas LDC Sample
Panel A: Atmos Energy Corp
(\$MM)

|  | DCF Capital Structure | $\begin{array}{r} \text { Year End, } \\ 2010 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2009 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2008 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2007 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2006 \\ \hline \end{array}$ | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$2,275 | \$2,275 | \$2,177 | \$2,052 | \$1,966 | \$1,648 | [a] |
| Shares Outstanding (in millions) - Common | 91 | 91 | 93 | 91 | 89 | 82 | [b] |
| Price per Share - Common | \$34.17 | \$31.29 | \$29.52 | \$23.29 | \$27.65 | \$32.04 | [c] |
| Market Value of Common Equity | \$3,097 | \$2,836 | \$2,732 | \$2,115 | \$2,470 | \$2,619 | $[\mathrm{d}]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 1.36 | 1.25 | 1.26 | 1.03 | 1.26 | 1.59 | $[\mathrm{e}]=[\mathrm{d}] /[\mathrm{a}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | S0 | [ $]$ |
| Market Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | [g] $=[\mathrm{f}]$. |
| market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$1,263 | \$1,263 | \$829 | \$1,285 | \$1,069 | \$1,118 | [h] |
| Current Liabilities | \$1,460 | \$1,460 | \$737 | \$1,207 | \$920 | \$1,119 | [i] |
| Current Portion of Long-Term Debt | \$352 | \$352 | \$0 | \$1 | \$4 | \$3 | [i] |
| Net Working Capital | \$155 | \$155 | \$92 | \$79 | \$153 | \$2 | $[\mathrm{k}]=[\mathrm{h}]$ - ([i] - [i]). |
| Notes Payable (Short-Term Debt) | \$248 | \$248 | \$73 | \$351 | \$151 | \$382 | [1] |
| Adjusted Short-Term Debt | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | $[\mathrm{m}]=$ See Sources and Notes. |
| Long-Term Debt | \$1,807 | \$1,807 | \$2,169 | \$2,120 | \$2,126 | \$2,180 | [ n$]$ |
| Book Value of Long-Term Debt | \$2,160 | \$2,160 | \$2,170 | \$2,121 | \$2,130 | \$2,184 | $[\mathrm{o}]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | \$267 | \$267 | \$145 | (\$168) | (\$100) | (\$126) | $[p]=$ See Sources and Notes. |
| Market Value of Long-Term Debt | \$2,426 | \$2,426 | \$2,314 | \$1,952 | \$2,030 | \$2,057 | $[\mathrm{q}]=[\mathrm{p}]+[\mathrm{o}]$. |
| Market Value of Debt | \$2,426 | \$2,426 | \$2,314 | \$1,952 | \$2,030 | \$2,057 | $[\mathrm{r}]=[\mathrm{q}]$. |
| MARKET VALUE OF FIRM |  |  |  |  |  |  |  |
|  | \$5,524 | \$5,262 | \$5,046 | \$4,068 | \$4,501 | \$4,676 | $[s]=[d]+[\mathrm{g}]+[\mathrm{r}]$. |
| debt and equity to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 56.07\% | 53.89\% | 54.14\% | 52.00\% | 54.88\% | 56.01\% | $[\mathrm{t}]=[\mathrm{d}] / \mathrm{s}]$ ]. |
| Preferred Equity - Market Value Ratio | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 43.93\% | 46.11\% | 45.86\% | 48.00\% | 45.12\% | 43.99\% | $[\mathrm{v}]=[\mathrm{r}] /[\mathrm{s}]$. |

Sources and Notes:
Bloomberg as of March 10, 2011
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending aperiod end.
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closingprice ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. MJV-17.
[ m$]=$
(2): The absolute value of $[\mathrm{k}]$ if $[\mathrm{k}]<0$ and $[\mathrm{k}]<[1]$.
(3): [1] if $[\mathrm{k}]<0$ and $[\mathrm{k}] \gg[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from company's annual reports (2006-2010).

Table No. MJV-14
Market Value of the Gas LDC Sample
Panel B: Laclede Group Inc/The
(\$MM)

|  | DCF Capital Structure | Year End, 2010 | Year End, 2009 | Year End, 2008 | Year End, 2007 | Year End, 2006 | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$549 | \$549 | \$517 | \$486 | \$428 | \$403 | [a] |
| Shares Outstanding (in millions) - Common | 22 | 22 | 22 | 22 | 22 | 21 | [b] |
| Price per Share - Common | \$38.49 | \$36.78 | \$34.11 | \$45.53 | \$34.43 | \$35.54 | [c] |
| Market Value of Common Equity | \$861 | \$823 | \$756 | \$985 | \$745 | \$759 | [ d$]=[\mathrm{b}] \times \mathrm{cc}]$. |
| Market to Book Value of Common Equity | 1.57 | 1.50 | 1.46 | 2.03 | 1.74 | 1.89 | $[\mathrm{e}]=[\mathrm{d}] /[\mathrm{a}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$1 | \$1 | [1] |
| Market Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$1 | \$1 | [g] $=[\mathrm{f}]$. |
| MARKET VALUE OF DEBT |  |  |  |  |  |  |  |
| Current Assets | \$438 | \$438 | \$369 | \$562 | \$467 | \$460 | [h] |
| Current Liabilities | \$315 | \$315 | \$299 | \$479 | \$474 | \$431 | [i] |
| Current Portion of Long-Term Debt | \$0 | \$0 | \$0 | \$0 | \$40 | \$0 | [j] |
| Net Working Capital | \$122 | \$122 | \$70 | \$83 | \$34 | \$29 | $[\mathrm{k}]=[\mathrm{h}]$ - ([i] - [i] ). |
| Notes Payable (Short-Term Debt) | \$97 | \$97 | \$130 | \$216 | \$211 | \$207 | [1] |
| Adjusted Short-Term Debt | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | $[\mathrm{m}]=$ See Sources and Notes. |
| Long-Term Debt | \$364 | \$364 | \$389 | \$389 | \$356 | \$395 | [ n$]$ |
| Book Value of Long-Term Debt | \$364 | \$364 | \$389 | \$389 | \$396 | \$396 | $[0]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | \$55 | \$55 | \$34 | (533) | \$8 | \$18 | $[p]=$ See Sources and Notes. |
| Market Value of Long-Term Debt | \$419 | \$419 | \$423 | \$357 | \$404 | \$414 | $[\mathrm{q}]=[\mathrm{p}]+[\mathrm{o}]$. |
| Market Value of Debt | \$419 | \$419 | \$423 | \$357 | \$404 | \$414 | $[\mathrm{r}]=[\mathrm{q}]$. |
| MARKET VALUE OF FIRM |  |  |  |  |  |  |  |
|  | \$1,280 | \$1,242 | \$1,180 | \$1,343 | \$1,149 | \$1,174 | $[\mathrm{s}]=[\mathrm{d}]+[\mathrm{g}]+[\mathrm{r}]$. |
| debt and equity to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 67.27\% | 66.26\% | 64.11\% | 73.40\% | 64.84\% | 64.66\% | $[\mathrm{t}]=[\mathrm{d}] /[\mathrm{s}]$. |
| Preferred Equity - Market Value Ratio | 0.00\% | 0.00\% | 0.00\% | 0.03\% | 0.05\% | 0.07\% | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 32.73\% | 33.74\% | 35.89\% | 26.56\% | 35.11\% | 35.27\% | $[\mathrm{v}]=[\mathrm{r}] /[\mathrm{s}]$. |

Sources and Notes:
Bloomberg as of March 10, 2011.
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending aperiod end.
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closingprice ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. MJV-17.
[ m$]=$
(2): The absolute value of $[\mathrm{k}]$ if $[\mathrm{k}]<0$ and $[\mathrm{k}]<[1]$.
(3): [1] if $[\mathrm{k}]<0$ and $[\mathrm{k}] \gg[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from company's annual reports (2006-2010).

Table No. MJV-14
Market Value of the Gas LDC Sample
Panel C: New Jersey Resources Corp
(\$MM)

|  | DCF Capital Structure | $\begin{array}{r} \text { Year End, } \\ 2010 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2009 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2008 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2007 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2006 \\ \hline \end{array}$ | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$738 | \$738 | \$690 | \$728 | \$645 | \$622 | [a] |
| Shares Outstanding (in millions) - Common | 41 | 41 | 44 | 43 | 42 | 41 | [b] |
| Price per Share - Common | \$41.98 | \$43.48 | \$37.58 | \$37.21 | \$33.46 | \$33.29 | [c] |
| Market Value of Common Equity | \$1,739 | \$1,801 | \$1,645 | \$1,616 | \$1,392 | \$1,380 | [ d$]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 2.36 | 2.44 | 2.38 | 2.22 | 2.16 | 2.22 | $[\mathrm{e}]=[\mathrm{d}] /[\mathrm{a}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | S0 | [1] |
| Market Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | $[\mathrm{g}]=[\mathrm{f}]$. |
| Market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$918 | \$918 | \$684 | \$1,120 | \$800 | \$966 | [h] |
| Current Liabilities | \$842 | \$842 | \$556 | \$902 | \$703 | \$897 | [i] |
| Current Portion of Long-Term Debt | \$12 | \$12 | \$7 | \$60 | \$4 | \$4 | [j] |
| Net Working Capital | \$88 | \$88 | \$135 | \$278 | \$101 | \$72 | $[\mathrm{k}]=[\mathrm{h}]-([\mathrm{i}]-[\mathrm{ij})$. |
| Notes Payable (Short-Term Debt) | \$341 | \$341 | \$143 | \$178 | \$256 | \$281 | [1] |
| Adjusted Short-Term Debt | \$0 | \$0 | $\$ 0$ | \$0 | \$0 | \$0 | $[\mathrm{m}]=$ See Sources and Notes. |
| Long-Term Debt | \$432 | \$432 | \$455 | \$455 | \$383 | \$332 | [ n ] |
| Book Value of Long-Term Debt | \$445 | \$445 | \$462 | \$515 | \$388 | \$336 | $[\mathrm{o}]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | \$33 | \$33 | \$16 | (\$48) | $\$ 6$ | \$2 | $[p]=$ See Sources and Notes. |
| Market Value of Long-Term Debt | \$478 | \$478 | \$478 | \$467 | \$394 | \$338 | $[\mathrm{q}]=[\mathrm{p}]+[\mathrm{o}]$. |
| Market Value of Debt | \$478 | \$478 | \$478 | \$467 | \$394 | \$338 | $[\mathrm{r}]=[\mathrm{q}]$. |
| MARKET VALUE OF FIRM |  |  |  |  |  |  |  |
|  | \$2,216 | \$2,278 | \$2,123 | \$2,083 | \$1,786 | \$1,718 | $[\mathrm{s}]=[\mathrm{d}]+[\mathrm{g}]+[\mathrm{r}]$. |
| debt and equity to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 78.46\% | 79.04\% | 77.49\% | 77.59\% | 77.95\% | 80.32\% | $[\mathrm{t}]=[\mathrm{d}] /[\mathrm{s}]$. |
| Preferred Equity - Market Value Ratio | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 21.54\% | 20.96\% | $22.51 \%$ | $22.41 \%$ | 22.05\% | 19.68\% | $[\mathrm{v}]=[\mathrm{r}] /[\mathrm{s}]$. |

Sources and Notes:
Bloomberg as of March 10, 2011.
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending aperiod end.
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closingprice ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. MJV-17.
[ m$]=$
(2): The absolute value of $[\mathrm{k}]$ if $[\mathrm{k}]<0$ and $|[\mathrm{k}]|<[1]$.
(3): [1] if $[\mathrm{k}]<0$ and $[\mathrm{k}] \gg[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from company's annual reports (2006-2010).

Table No. MJV-14

| Market Value of the Gas LDC Sample <br> Panel D: NiSource Inc <br> (\$MM) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | DCF Capital Structure | $\begin{array}{r} \text { Year End, } \\ 2010 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2009 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2008 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2007 \\ \hline \end{array}$ | Year End, $\qquad$ | Notes |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$4,923 | \$4,923 | \$4,854 | \$4,729 | \$5,077 | \$5,014 | [a] |
| Shares Outstanding (in millions) - Common | 279 | 279 | 277 | 274 | 274 | 275 | [b] |
| Price per Share - Common | \$19.04 | \$17.41 | \$15.54 | \$11.09 | \$18.81 | \$24.24 | [c] |
| Market Value of Common Equity | \$5,309 | \$4,854 | \$4,298 | \$3,042 | \$5,158 | \$6,660 | [ d$]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 1.08 | 0.99 | 0.89 | 0.64 | 1.02 | 1.33 | $[\mathrm{e}]=[\mathrm{d}] /[\mathrm{a}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | [1] |
| Market Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | S0 | $[\mathrm{g}]=[\mathrm{f}]$. |
| Market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$2,449 | \$2,449 | \$2,224 | \$3,411 | \$2,460 | \$2,783 | [ h$]$ |
| Current Liabilities | \$3,649 | \$3,649 | \$3,150 | \$4,583 | \$3,398 | \$3,821 | [i] |
| Current Portion of Long-Term Debt | \$34 | \$34 | \$720 | \$469 | \$34 | \$93 | [i] |
| Net Working Capital | $(\$ 1,166)$ | (\$1,166) | (\$206) | (\$703) | (\$904) | (\$945) | $[\mathrm{k}]=[\mathrm{h}]$ - ([i] - [j] . |
| Notes Payable (Short-Term Debt) | \$1,383 | \$1,383 | \$103 | \$1,164 | \$1,061 | \$1,193 | [1] |
| Adjusted Short-Term Debt | \$1,166 | \$1,166 | \$103 | \$703 | \$904 | \$945 | $[\mathrm{m}]=$ See Sources and Notes. |
| Long-Term Debt | \$5,936 | \$5,936 | \$5,969 | \$5,944 | \$5,594 | \$5,146 | [ n$]$ |
| Book Value of Long-Term Debt | \$7,137 | \$7,137 | \$6,792 | \$7,117 | \$6,532 | \$6,185 | $[\mathrm{o}]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | (\$206) | (\$206) | \$406 | $(\$ 1,484)$ | (\$119) | \$52 | $[p]=$ See Sources and Notes. |
| Market Value of Long-Term Debt | \$6,930 | \$6,930 | \$7,198 | \$5,632 | \$6,414 | \$6,237 | $[\mathrm{q}]=[\mathrm{p}]+[\mathrm{o}]$. |
| Market Value of Debt | \$6,930 | \$6,930 | \$7,198 | \$5,632 | \$6,414 | \$6,237 | $[\mathrm{r}]=[\mathrm{q}]$. |
| MARKET VALUE OF FIRM |  |  |  |  |  |  |  |
|  | \$12,239 | \$11,785 | \$11,496 | \$8,675 | \$11,571 | \$12,896 | $[\mathrm{s}]=[\mathrm{d}]+[\mathrm{g}]+[\mathrm{r}]$. |
| debt and equity to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 43.38\% | 41.19\% | 37.39\% | 35.07\% | 44.58\% | 51.64\% | $[\mathrm{t}]=[\mathrm{d}] /[\mathrm{s}]$. |
| Preferred Equity - Market Value Ratio | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 56.62\% | 58.81\% | 62.61\% | 64.93\% | 55.42\% | 48.36\% | $[\mathrm{v}]=[\mathrm{r}] /[\mathrm{s}]$. |

Sources and Notes:
Bloomberg as of March $10,2011$.
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending aperiod end.
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closingprice ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. MJV-17.
[ m$]=$
(2): The absolute value of $[\mathrm{k}]$ if $[\mathrm{k}]<0$ and $\mid[\mathrm{k}]<[1]$.
(3): [1] if $[\mathrm{k}]<0$ and $[\mathrm{k}] \gg[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from company's annual reports (2006-2010).

Table No. MJV-14
Market Value of the Gas LDC Sample
Panel E: Northwest Natural Gas Co
(\$MM)


Sources and Notes:
Bloomberg as of March 10, 2011.
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending aperiod end.
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closingprice ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. MJV-17.
[ m$]=$
(2): The absolute value of $[\mathrm{k}]$ if $[\mathrm{k}]<0$ and $[\mathrm{k}]<[1]$.
(3): [1] if $[\mathrm{k}]<0$ and $[\mathrm{k}] \gg[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from company's annual reports (2006-2010).

Table No. MJV-14
Market Value of the Gas LDC Sample
Panel F: Piedmont Natural Gas Co
(\$MM)

|  | DCF Capital Structure | $\begin{array}{r} \text { Year End, } \\ 2010 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2009 \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2008 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2007 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2006 \\ \hline \end{array}$ | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$965 | \$965 | \$928 | \$887 | \$878 | \$883 | [a] |
| Shares Outstanding (in millions) - Common | 72 | 72 | 73 | 73 | 74 | 75 | [b] |
| Price per Share - Common | \$29.56 | \$29.04 | \$26.34 | \$31.00 | \$26.73 | \$27.47 | [c] |
| Market Value of Common Equity | \$2,137 | \$2,099 | \$1,929 | \$2,271 | \$1,983 | \$2,049 | [ d$]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 2.21 | 2.18 | 2.08 | 2.56 | 2.26 | 2.32 | $[\mathrm{e}]=[\mathrm{d}] /[\mathrm{a}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | so | [1] |
| Market Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | S0 | $[\mathrm{g}]=[\mathrm{f}]$. |
| Market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$328 | \$328 | \$513 | \$623 | \$435 | \$476 | [ h$]$ |
| Current Liabilities | \$499 | \$499 | \$600 | \$704 | \$425 | \$400 | [i] |
| Current Portion of Long-Term Debt | \$60 | \$60 | \$60 | \$30 | \$0 | \$0 | [i] |
| Net Working Capital | (\$111) | (\$111) | (\$27) | (\$51) | \$11 | \$76 | $[\mathrm{k}]=[\mathrm{ch}]$ - ([i] - [i]). |
| Notes Payable (Short-Term Debt) | \$242 | \$242 | \$306 | \$407 | \$196 | \$170 | [1] |
| Adjusted Short-Term Debt | \$111 | \$111 | \$27 | \$51 | \$0 | \$0 | $[\mathrm{m}]=$ See Sources and Notes. |
| Long-Term Debt | \$672 | \$672 | \$733 | \$794 | \$825 | \$825 | [ n$]$ |
| Book Value of Long-Term Debt | \$843 | \$843 | \$820 | \$875 | \$825 | \$825 | $[\mathrm{o}]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | \$98 | \$98 | \$118 | (\$26) | \$68 | \$89 | $[\mathrm{p}]=$ See Sources and Notes. |
| Market Value of Long-Term Debt | \$940 | \$940 | \$937 | \$849 | \$893 | \$914 | $[\mathrm{q}]=[\mathrm{p}]+[\mathrm{o}]$. |
| Market Value of Debt | \$940 | \$940 | \$937 | \$849 | \$893 | \$914 | $[\mathrm{r}]=[\mathrm{q}]$. |
| MARKET VALUE OF FIRM |  |  |  |  |  |  |  |
|  | \$3,077 | \$3,040 | \$2,867 | \$3,119 | \$2,876 | \$2,963 | $[\mathrm{s}]=[\mathrm{d}]+[\mathrm{g}]+[\mathrm{r}]$. |
| debt and equity to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 69.44\% | 69.06\% | 67.30\% | 72.79\% | 68.97\% | 69.16\% | $[t]=[d] /[s]$. |
| Preferred Equity - Market Value Ratio | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 30.56\% | 30.94\% | 32.70\% | 27.21\% | 31.03\% | 30.84\% | $[\mathrm{v}]=[\mathrm{r}] /[\mathrm{s}]$. |

Sources and Notes:
Bloomberg as of March 10, 2011
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending aperiod end.
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closingprice ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. MJV-17.
[ m$]=$
(2): The absolute value of $[\mathrm{k}]$ if $[\mathrm{k}]<0$ and $\mid[\mathrm{k}]<[1]$.
(3): [1] if $[\mathrm{k}]<0$ and $[\mathrm{k}] \gg[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from company's annual reports (2006-2010).

Table No. MJV-14
Market Value of the Gas LDC Sample
Panel G: South Jersey Industries Inc
(\$MM)

|  | DCF Capital Structure | $\begin{array}{r} \text { Year End, } \\ 2010 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2009 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2008 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2007 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2006 \\ \hline \end{array}$ | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$570 | \$570 | \$544 | \$515 | \$481 | \$443 | [a] |
| Shares Outstanding (in millions) - Common | 30 | 30 | 30 | 30 | 30 | 29 | [b] |
| Price per Share - Common | \$55.03 | \$53.24 | \$38.23 | \$36.95 | \$36.29 | \$33.21 | [c] |
| Market Value of Common Equity | \$1,644 | \$1,591 | \$1,139 | \$1,098 | \$1,075 | \$974 | [ d$]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 2.88 | 2.79 | 2.10 | 2.13 | 2.23 | 2.20 | $[\mathrm{e}]=[\mathrm{d}] /[\mathrm{a}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | S0 | [ l ] |
| Market Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | $[\mathrm{g}]=[\mathrm{f}]$. |
| Market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$424 | \$424 | \$368 | \$435 | \$328 | \$372 | [h] |
| Current Liabilities | \$641 | \$641 | \$479 | \$500 | \$328 | \$423 | [i] |
| Current Portion of Long-Term Debt | \$111 | \$111 | \$35 | \$25 | \$0 | \$2 | [i] |
| Net Working Capital | (\$105) | (\$105) | (\$75) | (\$40) | \$0 | (\$49) | $[\mathrm{k}]=[\mathrm{h}]$ - ([i] - [i] $)$. |
| Notes Payable (Short-Term Debt) | \$251 | \$251 | \$197 | \$213 | \$118 | \$195 | [1] |
| Adjusted Short-Term Debt | \$105 | \$105 | \$75 | \$40 | \$0 | \$49 | $[\mathrm{m}]=$ See Sources and Notes. |
| Long-Term Debt | \$340 | \$340 | \$313 | \$333 | \$358 | \$358 | [ n ] |
| Book Value of Long-Term Debt | \$557 | \$557 | \$423 | \$398 | \$358 | \$409 | $[\mathrm{o}]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | \$169 | \$169 | \$47 | \$79 | \$33 | \$21 | $[p]=$ See Sources and Notes. |
| Market Value of Long-Term Debt | \$726 | \$726 | \$470 | \$476 | \$391 | \$430 | $[\mathrm{q}]=[\mathrm{p}]+[\mathrm{o}]$. |
| Market Value of Debt | \$726 | \$726 | \$470 | \$476 | \$391 | \$430 | $[\mathrm{r}]=[\mathrm{q}]$. |
| Market value of firm |  |  |  |  |  |  |  |
|  | \$2,370 | \$2,316 | \$1,609 | \$1,575 | \$1,466 | \$1,404 | $[\mathrm{s}]=[\mathrm{d}]+[\mathrm{g}]+[\mathrm{r}]$. |
| debt and equity to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 69.37\% | 68.67\% | 70.80\% | 69.75\% | 73.32\% | 69.38\% | $[\mathrm{t}]=[\mathrm{d}] /[\mathrm{s}]$. |
| Preferred Equity - Market Value Ratio | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 30.63\% | 31.33\% | 29.20\% | 30.25\% | 26.68\% | 30.62\% | $[\mathrm{v}]=[\mathrm{r}] /[\mathrm{s}]$. |

Sources and Notes:
Bloomberg as of March 10, 2011.
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending aperiod end.
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closingrice ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. MJV-17.
[ m$]=$
(2): The absolute value of $[\mathrm{k}]$ if $[\mathrm{k}]<0$ and $[\mathrm{k}]<[1]$.
(3): [1] if $[\mathrm{k}]<0$ and $[\mathrm{k}] \gg[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from company's annual reports (2006-2010).

Table No. MJV-14
Market Value of the Gas LDC Sample
Panel H: Southwest Gas Corp
(\$MM)

|  | DCF Capital Structure | Year End, 2010 | Year End, 2009 | Year End, 2008 | Year End, 2007 | Year End, 2006 | Notes |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$1,167 | \$1,167 | \$1,102 | \$1,038 | \$984 | \$901 | [a] |
| Shares Outstanding (in millions) - Common | 46 | 46 | 45 | 44 | 43 | 42 | [b] |
| Price per Share - Common | \$38.76 | \$36.49 | \$28.87 | \$24.33 | \$29.89 | \$38.33 | [c] |
| Market Value of Common Equity | \$1,767 | \$1,664 | \$1,302 | \$1,075 | \$1,280 | \$1,601 | $[\mathrm{d}]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 1.51 | 1.43 | 1.18 | 1.04 | 1.30 | 1.78 | $[e]=[d] /[a]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | S0 | [ $]$ |
| Market Value of Preferred Equity | \$0 | \$0 | \$0 | \$0 | \$0 | S0 | [g] $=$ [ f$]$. |
| MARKET VALUE OF DEBT |  |  |  |  |  |  |  |
| Current Assets | \$446 | \$446 | \$418 | \$438 | \$502 | \$502 | [h] |
| Current Liabilities | \$597 | \$597 | \$474 | \$510 | \$528 | \$496 | [i] |
| Current Portion of Long-Term Debt | \$75 | \$75 | \$1 | \$8 | \$38 | \$28 | [j] |
| Net Working Capital | (\$76) | (\$76) | (\$55) | (\$64) | \$13 | \$33 | $[\mathrm{k}]=[\mathrm{h}]$ - ([i] - [j]). |
| Notes Payable (Short-Term Debt) | $\$ 0$ | \$0 | $\$ 0$ | $\$ 55$ | $\$ 9$ | \$0 |  |
| Adjusted Short-Term Debt | $\$ 0$ | \$0 | \$0 | $\$ 55$ | \$0 | \$0 | $[\mathrm{m}]=$ See Sources and Notes. |
| Long-Term Debt | \$1,125 | \$1,125 | \$1,269 | \$1,285 | \$1,366 | \$1,386 | [ n$]$ |
| Book Value of Long-Term Debt | \$1,200 | \$1,200 | \$1,271 | \$1,348 | \$1,404 | \$1,414 | $[0]=[\mathrm{n}]+[\mathrm{j}]+[\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | $\$ 68$ | $\$ 68$ | $\$ 17$ | (\$52) | (\$89) | \$80 | $[p]=$ See Sources and Notes. |
| Market Value of Long-Term Debt | \$1,267 | \$1,267 | \$1,287 | \$1,297 | \$1,316 | \$1,494 | $[q]=[p]+[o] .$ |
| Market Value of Debt | \$1,267 | \$1,267 | \$1,287 | \$1,297 | \$1,316 | \$1,494 | $[\mathrm{r}]=[\mathrm{q}]$. |
| MARKET VALUE OF FIRM |  |  |  |  |  |  |  |
|  | \$3,035 | \$2,931 | \$2,589 | \$2,372 | \$2,595 | \$3,096 | $[s]=[d]+[g]+[r]$. |
| debt and equity to market value ratios |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 58.24\% | 56.76\% | 50.28\% | 45.33\% | 49.31\% | 51.73\% | $[t]=[d] /[s]$. |
| Preferred Equity - Market Value Ratio | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | 0.00\% | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 41.76\% | 43.24\% | 49.72\% | 54.67\% | 50.69\% | 48.27\% | $[\mathrm{r}]=[\mathrm{r}] /[\mathrm{s}]$. |

Sources and Notes:
Bloomberg as of March 10, 2011.
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending aperiod end.
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closingprice ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. MJV-17.
[ m$]=$
(2): The absolute value of $[\mathrm{k}]$ if $[\mathrm{k}]<0$ and $[\mathrm{k}]<[1]$.
(3): [1] if $[\mathrm{k}]<0$ and $[\mathrm{k}] \gg[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from company's annual reports (2006-2010).

Table No. MJV-14

| Market Value of the Gas LDC Sample Panel I: WGL Holdings Inc (\$MM) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | DCF Capital | $\begin{array}{r} \text { Year End, } \\ 2010 \\ \hline \end{array}$ | $\begin{array}{r} \text { Year End, } \\ 2009 \\ \hline \end{array}$ | Year End, 2008 | $\begin{array}{r} \text { Year End, } \\ 2007 \end{array}$ | Year End, 2006 | Notes |
| MARKET VALUE OF COMMON EQUITY |  |  |  |  |  |  |  |
| Book Value, Common Shareholder's Equity | \$1,202 | \$1,202 | \$1,098 | \$1,048 | \$981 | \$922 | [a] |
| Shares Outstanding (in millions) - Common | 51 | 51 | 50 | 50 | 49 | 49 | [b] |
| Price per Share - Common | \$37.98 | \$36.07 | \$33.75 | \$31.64 | \$33.08 | \$32.88 | [c] |
| Market Value of Common Equity | \$1,942 | \$1,844 | \$1,692 | \$1,579 | \$1,631 | \$1,607 | $[\mathrm{d}]=[\mathrm{b}] \times[\mathrm{c}]$. |
| Market to Book Value of Common Equity | 1.62 | 1.53 | 1.54 | 1.51 | 1.66 | 1.74 | $[\mathrm{c}]=[\mathrm{d}] /[\mathrm{a}]$. |
| MARKET VALUE OF PREFERRED EQUITY |  |  |  |  |  |  |  |
| Book Value of Preferred Equity | \$28 | \$28 | \$28 | \$28 | \$28 | \$28 | [ $]$ ] |
| Market Value of Preferred Equity | \$28 | \$28 | \$28 | \$28 | \$28 | \$28 | [g] $=[\mathrm{f}]$. |
| Market value of debt |  |  |  |  |  |  |  |
| Current Assets | \$1,025 | \$1,025 | \$684 | \$742 | \$574 | \$562 | [h] |
| Current Liabilities | \$787 | \$787 | \$635 | \$748 | \$557 | \$561 | [i] |
| Current Portion of Long-Term Debt | \$57 | \$57 | \$83 | \$76 | \$21 | \$61 | [j] |
| Net Working Capital | \$295 | \$295 | \$131 | \$70 | \$38 | \$62 | $[\mathrm{k}]=[\mathrm{h}]$ - ([i] - [i] $)$. |
| Notes Payable (Short-Term Debt) | $\$ 93$ | \$93 | \$184 | \$271 | \$184 | \$177 | [1] |
| Adjusted Short-Term Debt | \$0 | $\$ 0$ | \$0 | \$0 | \$0 | \$0 | $[\mathrm{m}]=$ See Sources and Notes. |
| Long-Term Debt | \$638 | \$638 | \$562 | \$604 | \$616 | \$576 | [ n$]$ |
| Book Value of Long-Term Debt | \$695 | \$695 | \$644 | \$680 | \$638 | \$637 | $[0]=[\mathrm{n}]+[\mathrm{j}]+\mathrm{m}]$. |
| Adjustment to Book Value of Long-Term Debt | \$155 | \$155 | \$66 | (\$39) | \$7 | \$17 | $[p]=$ See Sources and Notes. |
| Market Value of Long-Term Debt | \$850 | \$850 | \$710 | \$641 | \$645 | \$654 | $[q]=[p]+[o] .$ |
| Market Value of Debt | \$850 | \$850 | \$710 | \$641 | \$645 | \$654 | $[\mathrm{r}]=[\mathrm{q}]$. |
| MARKET VALUE OF FIRM |  |  |  |  |  |  |  |
|  | \$2,820 | \$2,722 | \$2,431 | \$2,248 | \$2,304 | \$2,289 | $[\mathrm{s}]=[\mathrm{d}]+[\mathrm{g}]+[\mathrm{r}]$. |
| DEBT AND EQUITY TO MARKET VALUE RATIOS |  |  |  |  |  |  |  |
| Common Equity - Market Value Ratio | 68.87\% | 67.75\% | 69.62\% | 70.25\% | 70.79\% | 70.19\% | $[t]=[d] /[s]$. |
| Preferred Equity - Market Value Ratio | 1.00\% | 1.03\% | 1.16\% | 1.25\% | 1.22\% | 1.23\% | $[\mathrm{u}]=[\mathrm{g}] /[\mathrm{s}]$. |
| Debt - Market Value Ratio | 30.13\% | $31.21 \%$ | 29.22\% | 28.49\% | 27.98\% | 28.58\% | $[\mathrm{v}]=[\mathrm{r}] /[\mathrm{s}]$. |

Sources and Notes:
Bloomberg as of March 10, 2011.
Capital structure from Year End, 2010 calculated using respective balance sheet information and 15 -day average prices ending aperiod end.
The DCF Capital structure is calculated using 4th Quarter, 2010 balance sheet information and a 15 -trading day average closingprice ending on 3/10/2011.
Prices are reported in Workpaper \#1 to Table No. MJV-17.
[ m$]=$
(2): The absolute value of $[\mathrm{k}]$ if $[\mathrm{k}]<0$ and $\mid[\mathrm{k}]<[1]$.
(3): [1] if $[\mathrm{k}]<0$ and $[\mathrm{k}] \gg[1]$.
[p]: Difference between fair value of Long-Term debt and carrying amount of Long-Term debt per company 10-K. Data for adjustment is from company's annual reports (2006-2010).

Table No. MJV-15
Gas LDC Sample
Capital Structure Summary

| Company | Sub <br> Sample | DCF Capital Structure |  |  | 5-Year Average Capital Structure |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Common <br> Equity - Value Ratio [1] | Preferred <br> Equity - Value Ratio [2] | Debt - Value Ratio [3] | Common <br> Equity - Value Ratio [4] | Preferred <br> Equity - Value Ratio [5] | Debt - Value Ratio [6] |
| Atmos Energy Corp |  | 0.56 | 0.00 | 0.44 | 0.54 | 0.00 | 0.46 |
| Laclede Group Inc/The | * | 0.67 | 0.00 | 0.33 | 0.67 | 0.00 | 0.33 |
| New Jersey Resources Corp |  | 0.78 | 0.00 | 0.22 | 0.78 | 0.00 | 0.22 |
| NiSource Inc |  | 0.43 | 0.00 | 0.57 | 0.42 | 0.00 | 0.58 |
| Northwest Natural Gas Co | * | 0.62 | 0.00 | 0.38 | 0.64 | 0.00 | 0.36 |
| Piedmont Natural Gas Co | * | 0.69 | 0.00 | 0.31 | 0.69 | 0.00 | 0.31 |
| South Jersey Industries Inc | * | 0.69 | 0.00 | 0.31 | 0.70 | 0.00 | 0.30 |
| Southwest Gas Corp | * | 0.58 | 0.00 | 0.42 | 0.51 | 0.00 | 0.49 |
| WGL Holdings Inc | * | 0.69 | 0.01 | 0.30 | 0.70 | 0.01 | 0.29 |
| Average |  | 0.64 | 0.00 | 0.36 | 0.63 | 0.00 | 0.37 |
| Sub-sample Average |  | 0.66 | 0.00 | 0.34 | 0.65 | 0.00 | 0.35 |

## Sources and Notes:

[1], [4]:Workpaper \#1 to Table No. MJV-15.
[2], [5]:Workpaper \#2 to Table No. MJV-15.
[3], [6]:Workpaper \#3 to Table No. MJV-15.
Values in this table may not add up exactly to 1.0 because of rounding.

Workpaper \#1 to Table No. MJV-15
Gas LDC Sample
Calculation of the Average Common Equity - Market Value Ratio

|  | DCF Capital |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | Year End, |  |  |  |

Sources and Notes:
[1]-[6]: Table No. MJV-14; Panels A - I, [t].
$[7]:\{([2]+[3]+[4]+[5]+[6]) / 5\}$

Workpaper \#2 to Table No. MJV-15
Gas LDC Sample
Calculation of the Average Preferred Equity - Market Value Ratio

| Company | DCF Capital <br> Structure <br> [1] | Year End, 2010 [2] | $\begin{gathered} 2009 \\ {[3]} \end{gathered}$ | $\begin{gathered} 2008 \\ {[4]} \end{gathered}$ | $\begin{gathered} 2007 \\ {[5]} \end{gathered}$ | $\begin{gathered} 2006 \\ {[6]} \end{gathered}$ | 5-Year <br> Average <br> [7] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Laclede Group Inc/The | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| New Jersey Resources Corp | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| NiSource Inc | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Northwest Natural Gas Co | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Piedmont Natural Gas Co | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| South Jersey Industries Inc | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Southwest Gas Corp | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| WGL Holdings Inc | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |

Sources and Notes:
[1]- [6]: Table No. MJV-14; Panels A - I, [u].
[7]: $\{([2]+[3]+[4]+[5]+[6]) / 5\}$

Workpaper \#3 to Table No. MJV-15
Gas LDC Sample
Calculation of the Average Debt - Market Value Ratio

|  | DCF Capital <br> Structure <br> $[1]$ | Year End, <br> 2010 <br> $[2]$ | 2009 | 2008 | 2007 | 2006 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | | $5-$ Pear |
| :---: |
| Average |
| Company |

Sources and Notes:
[1]- [6]: Table No. MJV-14; Panels A - I, [v].
$[7]:\{([2]+[3]+[4]+[5]+[6]) / 5\}$

Table No. MJV-16
Gas LDC Sample
Combined Bloomberg Estimated and Value Line Estimated Growth Rates

| Company | Bloomberg Estimate |  | Value Line |  |  | Combined BEst and Value Line Growth Rate [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | BEst <br> Long-Term Growth Rate [1] | Number of Estimates | EPS Year 2011 <br> Estimate <br> [3] | EPS Year 2014 2016 Estimate <br> [4] | Annualized Growth Rate [5] |  |
| Atmos Energy Corp | 5.0\% | 2 | \$2.30 | \$2.70 | 4.1\% | 4.7\% |
| Laclede Group Inc/The | n/a | n/a | \$2.55 | \$3.15 | 5.4\% | 5.4\% |
| New Jersey Resources Corp | 5.0\% | 1 | \$2.65 | \$3.15 | 4.4\% | 4.7\% |
| NiSource Inc | 8.0\% | 2 | \$1.30 | \$1.70 | 6.9\% | 7.6\% |
| Northwest Natural Gas Co | 4.0\% | 1 | \$2.80 | \$3.20 | 3.4\% | 3.7\% |
| Piedmont Natural Gas Co | 2.8\% | 2 | \$1.60 | \$1.90 | 4.4\% | 3.3\% |
| South Jersey Industries Inc | 7.0\% | 1 | \$2.95 | \$4.10 | 8.6\% | 7.8\% |
| Southwest Gas Corp | $\mathrm{n} / \mathrm{a}$ | n/a | \$2.30 | \$2.90 | 6.0\% | 6.0\% |
| WGL Holdings Inc | n/a | n/a | \$2.10 | \$2.70 | 6.5\% | 6.5\% |

Sources and Notes:
[1]-[2]: Bloomberg as of March 10, 2011.
[3] - [4]: Most recent Value Line Plus Edition, dated March 11, 2011.
[5]: ([4]/[3])^(1/4)-1.
[6]: $([1] \times[2]+[5]) /([2]+1)$.

Table No. MJV-17
DCF Cost of Equity of the Gas LDC Sample
Panel A: Simple DCF Method (Quarterly)

| Company | Stock <br> Price <br> [1] | Most Recent Dividend [2] | Quarterly Dividend Yield [3] | Combined BEst and Value Line Long-Term Growth Rate [4] | Quarterly Growth Rate [5] | DCF Cost of Equity [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp | \$34.17 | \$0.34 | 0.99\% | 4.7\% | 1.2\% | 8.9\% |
| Laclede Group Inc/The | \$38.49 | \$0.41 | 1.05\% | 5.4\% | 1.3\% | 9.9\% |
| New Jersey Resources Corp | \$41.98 | \$0.36 | 0.86\% | 4.7\% | 1.2\% | 8.3\% |
| NiSource Inc | \$19.04 | \$0.23 | 1.21\% | 7.6\% | 1.9\% | 12.9\% |
| Northwest Natural Gas Co | \$47.07 | \$0.23 | 0.49\% | 3.7\% | 0.9\% | 5.7\% |
| Piedmont Natural Gas Co | \$29.56 | \$0.28 | 0.95\% | 3.3\% | 0.8\% | 7.3\% |
| South Jersey Industries Inc | \$55.03 | \$0.37 | 0.66\% | 7.8\% | 1.9\% | 10.7\% |
| Southwest Gas Corp | \$38.76 | \$0.25 | 0.65\% | 6.0\% | 1.5\% | 8.7\% |
| WGL Holdings Inc | \$37.98 | \$0.38 | 0.99\% | 6.5\% | 1.6\% | 10.8\% |

Sources and Notes:
[1]: Workpaper \#1 to Table No. MJV-17.
[2]: Workpaper \#2 to Table No. MJV-17.
[3]: [2]/ [1].
[4]: Table No. MJV-16, [6].
[5]: $\left\{(1+[4])^{\wedge}(1 / 4)\right\}-1$.
[6]: $\left\{(([2] /[1]) \times(1+[5])+[5]+1)^{\wedge} 4\right\}-1$.

Table No. MJV-17
DCF Cost of Equity of the Gas LDC Sample
Panel B: Multi-Stage DCF (Using Blue Chip Long-Term GDP Growth Forecast as the Perpetual Rate)

| Company | Stock Price [1] | Most Recent Dividend [2] | Combined BEst and Value Line Long-Term Growth Rate [3] | Growth Rate: <br> Year 6 <br> [4] | Growth Rate: <br> Year 7 <br> [5] | Growth Rate: <br> Year 8 <br> [6] | Growth Rate: <br> Year 9 <br> [7] | Growth Rate: <br> Year 10 <br> [8] | GDP LongTerm Growth Rate [9] | DCF Cost of Equity [10] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp | \$34.17 | \$0.34 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 8.9\% |
| Laclede Group Inc/The | \$38.49 | \$0.41 | 5.4\% | 5.3\% | 5.2\% | 5.1\% | 4.9\% | 4.8\% | 4.7\% | 9.4\% |
| New Jersey Resources Corp | \$41.98 | \$0.36 | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 4.7\% | 8.3\% |
| NiSource Inc | \$19.04 | \$0.23 | 7.6\% | 7.1\% | 6.6\% | 6.2\% | 5.7\% | 5.2\% | 4.7\% | 10.8\% |
| Northwest Natural Gas Co | \$47.07 | \$0.23 | 3.7\% | 3.9\% | 4.0\% | 4.2\% | 4.4\% | 4.5\% | 4.7\% | 6.6\% |
| Piedmont Natural Gas Co | \$29.56 | \$0.28 | 3.3\% | 3.6\% | 3.8\% | 4.0\% | 4.2\% | 4.5\% | 4.7\% | 8.4\% |
| South Jersey Industries Inc | \$55.03 | \$0.37 | 7.8\% | 7.3\% | 6.8\% | 6.2\% | 5.7\% | 5.2\% | 4.7\% | 8.1\% |
| Southwest Gas Corp | \$38.76 | \$0.25 | 6.0\% | 5.8\% | 5.5\% | 5.3\% | 5.1\% | 4.9\% | 4.7\% | 7.6\% |
| WGL Holdings Inc | \$37.98 | \$0.38 | 6.5\% | 6.2\% | 5.9\% | 5.6\% | 5.3\% | 5.0\% | 4.7\% | 9.3\% |

Sources and Notes:
[1]: Workpaper \#1 to Table No. MJV-17.
[2]: Workpaper \#2 to Table No. MJV-17.
[3]: Table No. MJV-16, [6].
[4]: [3]-\{([3]-[9])/6\}.
[5]: [4]-\{([3]-[9])/6\}.
[6]: [5]-\{([3]-[9])/6\}.
[7]: [6]-\{([3]-[9])/6\}.
[8]: [7]-\{([3]-[9])/6\}.
[9]: Blue Chip Economic Indicators published March 10, 2011. This number is assumed to be the perpetual growth rate. (See Appendix D)
[10]: Workpaper \#3 to Table No. MJV-17.

Table No. MJV-18
Overall Cost of Capital of the Gas LDC Sample
Panel A: Simple DCF Method (Quarterly)

| Company |  | 4th Quarter, 2010 Bond Rating [1] | 4th Quarter, 2010 Preferred Equity Rating [2] | DCF Cost of Equity <br> [3] | DCF Common Equity to Market Value Ratio [4] | Cost of Preferred Equity [5] | DCF Preferred Equity to Market Value Ratio [6] | DCF Cost of Debt [7] | DCF Debt to Market Value Ratio [8] | California Water Service Group's Income Tax Rate [9] | Overall After- Tax Cost of Capital [10] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp |  | BBB | BBB | 8.9\% | 0.56 | 6.7\% | 0.00 | 6.0\% | 0.44 | 40.7\% | 6.6\% |
| Laclede Group Inc/The | * | A | A | 9.9\% | 0.67 | 5.8\% | 0.00 | 5.6\% | 0.33 | 40.7\% | 7.8\% |
| New Jersey Resources Corp |  | A | A | 8.3\% | 0.78 | 5.8\% | 0.00 | 5.6\% | 0.22 | 40.7\% | 7.3\% |
| NiSource Inc |  | BBB | BBB | 12.9\% | 0.43 | 6.7\% | 0.00 | 6.0\% | 0.57 | 40.7\% | 7.6\% |
| Northwest Natural Gas Co | * | A | A | 5.7\% | 0.62 | 5.8\% | 0.00 | 5.6\% | 0.38 | 40.7\% | 4.8\% |
| Piedmont Natural Gas Co | * | A | A | 7.3\% | 0.69 | 5.8\% | 0.00 | 5.6\% | 0.31 | 40.7\% | 6.1\% |
| South Jersey Industries Inc | * | BBB | BBB | 10.7\% | 0.69 | 6.7\% | 0.00 | 6.0\% | 0.31 | 40.7\% | 8.5\% |
| Southwest Gas Corp | * | BBB | BBB | 8.7\% | 0.58 | 6.7\% | 0.00 | 6.0\% | 0.42 | 40.7\% | 6.6\% |
| WGL Holdings Inc | * | AA | AA | 10.8\% | 0.69 | 5.4\% | 0.01 | 5.4\% | 0.30 | 40.7\% | 8.4\% |
| Full Sample Average |  |  |  | 9.7\% | 0.64 | 6.2\% | 0.00 | 5.8\% | 0.36 | 40.7\% | 7.4\% |
| Sub-sample Average |  |  |  | 9.5\% | 0.67 | 6.1\% | 0.00 | 5.7\% | 0.33 | 40.7\% | 7.5\% |

Sources and Notes:
1]: Bloomberg as of March 10, 2011.
[2]: Preferred ratings were assumed equal to debt ratings.
[9]: Provided by Califormia Water Service Group.
[3]: Table No. MJV-17; Panel A, [6].
[4]: Table No. MJV-15, [1]
55: Workpaper \#2 to Table No MJV-11 Panel A
[6]: Table No. MJV-15, [2].
[7].W Wh: Wiv 11, Pa
[8]: Table No. MJV-15, [3].

Table No. M.JV-18
Overall Cost of Capital of the Gas LDC Sample
Panel B: Multi-Stage DCF (Using Blue Chip Long-Term GDP Growth Forecast as the Perpetual Rate)

| Company |  | 4th Quarter, 2010 Bond Rating [1] | 4th Quarter, 2010 Preferred Equity Rating [2] | DCF Cost of Equity <br> [3] | DCF Common Equity to Market Value Ratio [4] | Cost of Preferred Equity [5] | DCF Preferred Equity to Market Value Ratio [6] | DCF Cost of Debt [7] | DCF Debt to Market Value Ratio [8] | California Water Service Group's Income Tax Rate [9] | Overall After- Tax Cost of Capital [10] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp |  | BBB | BBB | 8.9\% | 0.56 | 6.7\% | 0.00 | 6.0\% | 0.44 | 40.7\% | 6.6\% |
| Laclede Group Inc/The | * | A | A | 9.4\% | 0.67 | 5.8\% | 0.00 | 5.6\% | 0.33 | 40.7\% | 7.4\% |
| New Jersey Resources Corp |  | A | A | 8.3\% | 0.78 | 5.8\% | 0.00 | 5.6\% | 0.22 | 40.7\% | 7.3\% |
| NiSource Inc |  | BBB | BBB | 10.8\% | 0.43 | 6.7\% | 0.00 | 6.0\% | 0.57 | 40.7\% | 6.7\% |
| Northwest Natural Gas Co | * | A | A | 6.6\% | 0.62 | 5.8\% | 0.00 | 5.6\% | 0.38 | 40.7\% | 5.4\% |
| Piedmont Natural Gas Co | * | A | A | 8.4\% | 0.69 | 5.8\% | 0.00 | 5.6\% | 0.31 | 40.7\% | 6.8\% |
| South Jersey Industries Inc | * | BBB | BBB | 8.1\% | 0.69 | 6.7\% | 0.00 | 6.0\% | 0.31 | 40.7\% | 6.7\% |
| Southwest Gas Corp | * | BBB | BBB | 7.6\% | 0.58 | 6.7\% | 0.00 | 6.0\% | 0.42 | 40.7\% | 5.9\% |
| WGL Holdings Inc | * | AA | AA | 9.3\% | 0.69 | 5.4\% | 0.01 | 5.4\% | 0.30 | 40.7\% | 7.5\% |
| Full Sample Average |  |  |  | 8.6\% | 0.64 | 6.2\% | 0.00 | 5.8\% | 0.36 | 40.7\% | 6.7\% |
| Sub-sample Average |  |  |  | 8.2\% | 0.66 | 6.0\% | 0.00 | 5.7\% | 0.34 | 40.7\% | 6.6\% |

Sources and Notes:
[1]: Bloomberg as of March 10, 2011.
[2]: Preferred ratings were assumed equal to debt ratings.
[3]: Table No. MJV-17; Panel B, [10].
[4]: Table No. MJV-15, [1].
[5]:Workpaper \#2 to Table No. MJV-11, Panel A.
[6]: Table No. MJV-15, [2]
77. Workpaper \#2 to Table No MJV-11, Panel A
[8]: Table No. MJV-15, [3].

Workpaper \#1 to Table No. MJV-17
Gas LDC Sample
Common Stock Prices from February 17, 2011 to March 10, 2011

| Company | 3/10/2011 | 3/9/2011 | 3/8/2011 | 3/7/2011 | 3/4/2011 | 3/3/2011 | 3/2/2011 | 3/1/2011 | 2/28/2011 | 2/25/2011 | 2/24/2011 | 2/23/2011 | 2/22/2011 | 2/18/2011 | 2/17/2011 | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp | \$33.92 | \$34.79 | \$34.98 | \$34.83 | \$34.75 | \$34.85 | \$34.29 | \$33.86 | \$33.82 | \$33.73 | \$33.26 | \$33.37 | \$34.07 | \$34.13 | \$33.93 | \$34.17 |
| Laclede Group Inc/The | \$37.43 | \$38.35 | \$38.86 | \$38.40 | \$38.70 | \$38.94 | \$38.45 | \$38.30 | \$38.89 | \$38.78 | \$38.14 | \$38.08 | \$38.56 | \$38.83 | \$38.61 | \$38.49 |
| New Jersey Resources Corp | \$41.99 | \$43.15 | \$43.09 | \$42.46 | \$42.44 | \$42.73 | \$41.98 | \$41.73 | \$41.83 | \$41.86 | \$41.14 | \$40.97 | \$41.27 | \$41.71 | \$41.40 | \$41.98 |
| NiSource Inc | \$18.93 | \$19.52 | \$19.32 | \$19.09 | \$19.08 | \$19.23 | \$18.98 | \$18.86 | \$19.16 | \$18.95 | \$18.73 | \$18.67 | \$18.90 | \$19.10 | \$19.07 | \$19.04 |
| Northwest Natural Gas Co | \$47.01 | \$48.35 | \$48.47 | \$48.24 | \$48.15 | \$48.29 | \$47.19 | \$46.70 | \$47.00 | \$46.05 | \$45.52 | \$45.74 | \$46.33 | \$46.81 | \$46.20 | \$47.07 |
| Piedmont Natural Gas Co | \$29.87 | \$30.70 | \$30.71 | \$30.26 | \$30.14 | \$30.15 | \$29.63 | \$29.24 | \$29.30 | \$29.30 | \$28.85 | \$28.60 | \$28.93 | \$29.07 | \$28.69 | \$29.56 |
| South Jersey Industries Inc | \$54.76 | \$56.47 | \$56.56 | \$56.23 | \$56.39 | \$57.02 | \$55.71 | \$54.79 | \$54.86 | \$54.42 | \$53.27 | \$53.24 | \$53.79 | \$54.18 | \$53.83 | \$55.03 |
| Southwest Gas Corp | \$38.13 | \$39.48 | \$39.68 | \$39.05 | \$39.26 | \$39.40 | \$38.94 | \$38.71 | \$38.87 | \$38.93 | \$38.04 | \$37.81 | \$38.21 | \$38.58 | \$38.27 | \$38.76 |
| WGL Holdings Inc | \$37.72 | \$38.58 | \$38.53 | \$38.30 | \$38.65 | \$38.54 | \$38.07 | \$37.49 | \$38.00 | \$37.84 | \$37.20 | \$37.29 | \$37.76 | \$37.97 | \$37.80 | \$37.98 |

Sources and Notes:
Bloomberg as of March 10,2011
Daily prices for the 15 -trading day period ending March 10, 2011.

Workpaper \#2 to Table No. MJV-17
Gas LDC Sample
Most Recent Paid Dividends

| Company | Most Recent <br> Dividend |
| :--- | :---: |
| Atmos Energy Corp | $\$ 0.34$ |
| Laclede Group Inc/The | $\$ 0.41$ |
| New Jersey Resources Corp | $\$ 0.36$ |
| NiSource Inc | $\$ 0.23$ |
| Northwest Natural Gas Co | $\$ 0.23$ |
| Piedmont Natural Gas Co | $\$ 0.28$ |
| South Jersey Industries Inc | $\$ 0.37$ |
| Southwest Gas Corp | $\$ 0.25$ |
| WGL Holdings Inc | $\$ 0.38$ |

Sources and Notes:
Bloomberg as of March 10, 2011.

Workpaper \#3 to Table No. MJV-17
DCF Cost of Equity of the Gas LDC Sample
Multi - Stage DCF (using Blue Chip Economic Indicator Long-Term GDP Growth Forecast as the Perpetual Growth Rate)

| Year | Company | Atmos Energy Corp | Laclede Group hac/The | New Jersey <br> Resources Cotp | NiSource lne Na | Northwes: ral Gas Co | Piedmont Natural Gas Co | South Jersey Hdustries hac | Southwest Gas Corp | WGL Holdings linc |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Current Dividend | \$0.34 | \$0.41 | \$0.36 | \$0.23 | \$0.23 | \$0.28 | \$0.37 | \$0.25 | 80.38 |
|  | Curren Stock Price | (\$34.17) | (\$38.49) | (841.98) | (\$19.04) | (847.07) | (\$29.56) | (\$55.03) | ( $\$ 38.76$ ) | (\$37.98) |
| year 2011 | Dividend Q2 Estimate | \$0.34 | S0.41 | \$0.36 | \$0.23 | \$0.23 | \$0.28 | S0.37 | S0.25 | \$0.38 |
| YEAR 2011 | Dividend Q3 Estimate | 50.35 | S0.42 | \$0.37 | \$0.24 | \$0.23 | 50.28 | S0.38 | S0.25 | \$0.38 |
| YEAR 2011 | Dividend Q4 Estimate | S0.35 | S0.42 | \$0.37 | \$0.24 | \$0.24 | S0.29 | S0.39 | s0.26 | \$0.39 |
| Year 2012 | Dividend Q1 Estimate | S0.36 | \$0.43 | \$0.38 | \$0.25 | \$0.24 | 50.29 | 50.39 | S0.26 | \$0.40 |
| YEAR 2012 | Dividend Q2 Estimate | s0.36 | S0.43 | \$0.38 | \$0.25 | \$0.24 | S0.29 | S0.40 | S0.26 | \$0.40 |
| YEAR 2012 | Dividend Q3 Estimate | 50.36 | S0.44 | \$0.39 | \$0.26 | \$0.24 | S0.29 | S0.41 | S0.27 | \$0.41 |
| Year 2012 | Dividend Q 4 Estimate | \$0.37 | S0.44 | \$0.39 | \$0.26 | \$0.25 | 50.30 | \$0.42 | S0.27 | \$0.41 |
| year 2013 | Dividend Q1 Estimate | \$0.37 | S0.45 | \$0.39 | \$0.27 | \$0.25 | S0.30 | \$0.42 | \$0.28 | \$0.42 |
| year 2013 | Dividend Q2 Estimate | S0.38 | S0.46 | \$0.40 | 80.27 | 80.25 | s0.30 | \$0.43 | 50.28 | \$0.43 |
| Year 2013 | Dividend Q3 Estimate | \$0.38 | \$0.46 | 80.40 | \$0.28 | \$0.25 | S0.30 | S0.44 | \$0.28 | \$0.43 |
| YEAR 2013 | Dividend Q4 Estimate | S0.39 | S0.47 | \$0.41 | \$0.28 | \$0.25 | s0.31 | \$0.45 | S0.29 | \$0.44 |
| YEAR 2014 | Dividend Q1 Estimate | S0.39 | 50.47 | \$0.41 | \$0.29 | \$0.26 | s0.31 | s0.46 | S0.29 | \$0.45 |
| Year 2014 | Dividend Q2 Estimate | \$0.39 | 50.48 | \$0.42 | \$0.29 | \$0.26 | s0.31 | \$0.47 | \$0.30 | \$0.46 |
| year 2014 | Divident Q3 Estimate | \$0.40 | 50.49 | \$0.42 | \$0.30 | \$0.26 | S0.31 | \$0.47 | \$0.30 | \$0.46 |
| YEAR 2014 | Dividend Q4 Estimate | S0.40 | S0.49 | \$0.43 | \$0.30 | \$0.26 | S0.32 | S0.48 | S0.31 | \$0.47 |
| YEAR 2015 | Dividend Q1 Estimate | \$0.41 | \$0.50 | \$0.43 | \$0.31 | \$0.27 | S0.32 | \$0.49 | \$0.31 | \$0.48 |
| YEAR 2015 | Dividend Q2 Estimate | S0.41 | s0.51 | \$0.44 | \$0.31 | \$0.27 | S0.32 | s0.50 | S0.32 | \$0.49 |
| Year 2015 | Divident Q3 Estimate | \$0.42 | s0.51 | \$0.44 | \$0.32 | \$0.27 | S0.32 | \$0.51 | \$0.32 | \$0.49 |
| year 2015 | Dividend Q 4 Estimate | \$0.42 | \$0.52 | 80.45 | \$0.33 | 80.27 | \$0.33 | \$0.52 | \$0.32 | \$0.50 |
| Year 2016 | Dividend Q1 Estimate | \$0.43 | S0.53 | \$0.45 | \$0.33 | \$0.28 | S0.33 | S0.53 | S0.33 | \$0.5 |
| Year 2016 | Dividend Q2 Estimate | S0.43 | s0.53 | \$0.46 | \$0.34 | \$0.28 | \$0.33 | s0.54 | \$0.33 | \$0.52 |
| YEAR 2016 | Dividend Q3 Estimate | \$0.44 | s0.54 | \$0.46 | \$0.34 | \$0.28 | S0.34 | \$0.55 | S0.34 | \$0.52 |
| YEAR 2016 | Dividend Q 4 Estimate | s0.44 | so.55 | 80.47 | \$0.35 | \$0.28 | S0.34 | s0.56 | S0.34 | \$0.53 |
| YEAR 2017 | Dividend Q1 Estimate | \$0.45 | \$0.56 | \$0.47 | \$0.36 | \$0.29 | 50.34 | S0.57 | S0.35 | \$0.54 |
| Year 2017 | Dividend Q2 Estimate | \$0.45 | S0.56 | \$0.48 | \$0.36 | \$0.29 | S0.34 | \$0.58 | \$0.35 | \$0.55 |
| Year 2017 | Dividend Q3 Estimate | \$0.46 | S0.57 | \$0.49 | \$0.37 | \$0.29 | \$0.35 | \$0.59 | \$0.36 | \$0.56 |
| YEAR 2017 | Dividend Q4 Estimate | \$0.46 | \$0.58 | \$0.49 | \$0.37 | \$0.30 | S0.35 | \$0.60 | \$0.36 | \$0.56 |
| YEAR 2018 | Dividend Q1 Estimate | \$0.47 | \$0.58 | \$0.50 | \$0.38 | \$0.30 | \$0.35 | S0.61 | S0.37 | \$0.57 |
| YEAR 2018 | Dividend Q2 Estimate | \$0.47 | \$0.59 | \$0.50 | \$0.38 | \$0.30 | \$0.36 | \$0.62 | S0.37 | \$0.58 |
| Year 2018 | Divident Q3 Estimate | \$0.48 | \$0.60 | \$0.51 | \$0.39 | \$0.30 | \$0.36 | \$0.63 | \$0.38 | \$0.59 |
| Year 2018 | Dividend Q 4 Estimate | \$0.49 | S0.61 | \$0.51 | \$0.40 | \$0.31 | \$0.37 | \$0.64 | \$0.38 | \$0.60 |
| Year 2019 | Dividend Q1 Estimate | \$0.49 | S0.61 | \$0.52 | \$0.40 | \$0.31 | S0.37 | S0.65 | \$0.39 | \$0.60 |
| YEAR 2019 | Dividend Q2 Estimate | \$0.50 | \$0.62 | \$0.53 | \$0.41 | \$0.31 | \$0.37 | \$0.66 | \$0.39 | \$0.61 |
| YEAR 2019 | Dividend Q3 Estimate | \$0.50 | \$0.63 | \$0.53 | \$0.41 | \$0.32 | S0.38 | \$0.66 | \$0.40 | \$0.62 |
| Year 2019 | Dividend Q 4 Estimate | s0.51 | S0.64 | \$0.54 | \$0.42 | 80.32 | 50.38 | S0.67 | \$0.40 | \$0.63 |
| year 2020 | Dividend Q1 Estimate | s0.51 | \$0.64 | \$0.54 | \$0.43 | \$0.32 | 50.38 | \$0.68 | \$0.41 | \$0.64 |
| Year 2020 | Dividend Q2 Estimate | \$0.52 | \$0.65 | \$0.55 | \$0.43 | \$0.33 | \$0.39 | S0.69 | \$0.41 | \$0.64 |
| Year 2020 | Dividend Q3 Estimate | \$0.53 | S0.66 | \$0.56 | \$0.44 | \$0.33 | \$0.39 | s0.70 | S0.42 | \$0.65 |
| YEAR 2020 | Dividend Q4Estimate | \$0.53 | \$0.67 | \$0.56 | \$0.44 | \$0.34 | \$0.40 | s0.71 | \$0.42 | \$0.66 |
| YEAR 2021 | Dividend Q1 Estimate | \$0.54 | 50.68 | \$0.57 | \$0.45 | \$0.34 | S0.40 | \$0.72 | S0.43 | \$0.67 |
| year 2021 Q2 | Ycar 10 Stock Price | \$55.26 | \$62.78 | \$67.80 | \$32.08 | \$75.35 | \$47.17 | \$90.93 | \$66.02 | \$62.61 |
|  | Trial COE: Quarterly Rate | 2.2\% | 2.3\% | 2.0\% | 2.6\% | 1.6\% | 2.0\% | 2.0\% | 1.9\% | 2.3\% |
|  | Trial COE: Anmual Rate | 8.9\% | 9.4\% | 8.3\% | 10.8\% | 6.6\% | 8.4\% | 8.3\% | 7.6\% | 9.3\% |
|  | Cost of Equity | 8.9\% | 9.4\% | 8.3\% | 10.8\% | 6.6\% | 8.4\% | 8.3\% | 7.6\% | 9.3\% |
|  | (Trial COE - COE) x 100 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Sources and Notes:
All Growth Rate Estimates: Table No. MJV-17; Panel B.
Stock Prices and Dividends are from Bloomberg as of March 10, 201

- See Workpaper \#1 to Table No. MJV-17 for the average closing stock price obtained from Bloomber

2. See Workpaper $\$ 2$ to Table No. MNV-17 for the for the quaterly dividend obtained from Bloomherg
3. The Blue Chip Economic Indicator Longe-Term GDP Growth Rate is used to calculate the Year 10 Stock Price.
((the Dividend Year 2021 Q2 Estimate) $\times((1+$ the Perpetal Growth Rate) ^(1/4) x ( $1+$ Trial COE - Quarterly Rate)) $\left\{\right.$ (Trial COE - Quaterly Rate) - ( $\left.\left.(1+\text { the Perpetual Growth Rate) })^{\wedge}(1 / 4)-1\right)\right\}$

Table No. MJV-19
DCF Cost of Equity at California Water Service Group Capital Structure
Gas LDC Sample

|  | Overall Cost of Capital [1] | California Water Service Group's Regulatory \% Debt [2] | California Water Service Group's Cost of Debt [3] | California Water Service Group's Income Tax Rate [4] | California Water Service Group's Regulatory \% Preferred Equity [5] | Service Group's Cost of Preferred Equity [6] | Califomia Water Service Group's Regulatory \% Equity [7] | Estimated Retum on Equity [8] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Full Sample |  |  |  |  |  |  |  |  |
| Simple DCF Quarterly | 7.4\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 10.9\% |
| Multi-Stage DCF - Using the Blue Chip Economic Indicator Long-Term GDP Growth Forecast as the Perpetual Rate | 6.7\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 9.7\% |
| Sub-Sample |  |  |  |  |  |  |  |  |
| Simple DCF Quarterly | 7.5\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 11.2\% |
| Multi-Stage DCF - Using the Blue Chip Economic Indicator Long-Term GDP Growth Forecast as the Perpetual Rate | 6.6\% | 47.0\% | 5.6\% | 40.7\% | 0.0\% | 5.8\% | 53.0\% | 9.5\% |

Sources and Notes:
[1]: Table No. MJV-18; Panels A-B, [10].
[2]: Provided by California Water Service Group.
[3]: Based on an A rating. Yield from Bloomberg as of March 10, 2011.
[4]: Provided by California Water Service Group.
[5]: Provided by California Water Service Group.
[6]: From Mergent Bond Record, January 2011 Edition.
[7]: Provided by California Water Service Group.
[8]: $\{[1]-([2] \times[3] \times(1-[4])+[5] \times[6])\} /[7]$.

Table No. MJV-20
Risk Positioning Cost of Equity of the Gas LDC Sample
Using Brattle Betas
Panel A: Scenario 1 - Long-Term Risk Free Rate of 4.74\%, Long-Term Market Risk Premium of $6.50 \%$

| Company | Long-Term Risk-Free Rate [1] | Brattle Betas [2] | Long-Term Market Risk Premium [3] | CAPM Cost of Equity [4] | ECAPM ( $0.5 \%$ ) <br> Cost of Equity [5] | ECAPM (1.5\%) Cost of Equity [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp | 4.74\% | 0.71 | 6.50\% | 9.3\% | 9.5\% | 9.8\% |
| Laclede Group Inc/The | 4.74\% | 0.67 | 6.50\% | 9.1\% | 9.2\% | 9.6\% |
| New Jersey Resources Corp | 4.74\% | 0.69 | 6.50\% | 9.2\% | 9.4\% | 9.7\% |
| NiSource Inc | 4.74\% | 0.89 | 6.50\% | 10.5\% | 10.6\% | 10.7\% |
| Northwest Natural Gas Co | 4.74\% | 0.73 | 6.50\% | 9.5\% | 9.6\% | 9.9\% |
| Piedmont Natural Gas Co | 4.74\% | 0.77 | 6.50\% | 9.8\% | 9.9\% | 10.1\% |
| South Jersey Industries Inc | 4.74\% | 0.70 | 6.50\% | 9.3\% | 9.5\% | 9.8\% |
| Southwest Gas Corp | 4.74\% | 0.85 | 6.50\% | 10.2\% | 10.3\% | 10.5\% |
| WGL Holdings Inc | 4.74\% | 0.71 | 6.50\% | 9.3\% | 9.5\% | 9.8\% |

Sources and Notes:
[1]: Table No. MJV-9, Panel A, Computation of U.S. Long-Term Risk-Free Rate plus adjustment factor.
[2]: Workpaper \# 1 to Table No. MJV-20, column [3].
[3]: Vilbert Direct Testimony, Appendix C.
[4]: [1] $+([2] \times[3])$.
$[5]:([1]+0.5 \%)+[2] \times([3]-0.5 \%)$.
$[6]:([1]+1.5 \%)+[2] \times([3]-1.5 \%)$.

Table No. MJV-20
Risk Positioning Cost of Equity of the Gas LDC Sample
Using Brattle Betas
Panel B: Scenario 2 - Long-Term Risk Free Rate of 4.61\%, Long-Term Market Risk Premium of 7.00\%

| Company | Long-Term Risk-Free Rate [1] | Brattle Betas [2] | Long-Term Market Risk Premium [3] | CAPM Cost of Equity [4] | ECAPM (0.5\%) Cost of Equity [5] | ECAPM (1.5\%) Cost of Equity [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp | 4.61\% | 0.71 | 7.00\% | 9.6\% | 9.7\% | 10.0\% |
| Laclede Group Inc/The | 4.61\% | 0.67 | 7.00\% | 9.3\% | 9.5\% | 9.8\% |
| New Jersey Resources Corp | 4.61\% | 0.69 | 7.00\% | 9.4\% | 9.6\% | 9.9\% |
| NiSource Inc | 4.61\% | 0.89 | 7.00\% | 10.8\% | 10.9\% | 11.0\% |
| Northwest Natural Gas Co | 4.61\% | 0.73 | 7.00\% | 9.7\% | 9.8\% | 10.1\% |
| Piedmont Natural Gas Co | 4.61\% | 0.77 | 7.00\% | 10.0\% | 10.1\% | 10.4\% |
| South Jersey Industries Inc | 4.61\% | 0.70 | 7.00\% | 9.5\% | 9.7\% | 10.0\% |
| Southwest Gas Corp | 4.61\% | 0.85 | 7.00\% | 10.5\% | 10.6\% | 10.8\% |
| WGL Holdings Inc | 4.61\% | 0.71 | 7.00\% | 9.6\% | 9.7\% | 10.0\% |

Sources and Notes:
[1]: Table No. MJV-9, Panel A, Computation of U.S. Long-Term Risk-Free Rate plus adjustment factor.
[2]: Workpaper \# 1 to Table No. MJV-20, column [3].
[3]: Vilbert Direct Testimony, Appendix C.
[4]: [1] $+([2] \times[3])$.
$[5]:([1]+0.5 \%)+[2] \times([3]-0.5 \%)$.
$[6]:([1]+1.5 \%)+[2] \times([3]-1.5 \%)$.

Table No. MJV-20

## Risk Positioning Cost of Equity of the Gas LDC Sample <br> Using Brattle Betas

Panel C: Scenario 3 - Long-Term Risk Free Rate of 4.49\%, Long-Term Market Risk Premium of 7.50\%

| Company | Long-Term Risk-Free Rate [1] | Brattle Betas [2] | Long-Term Market Risk Premium [3] | CAPM Cost of Equity [4] | ECAPM $(0.5 \%)$ Cost of Equity [5] | ECAPM (1.5\%) Cost of Equity [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp | 4.49\% | 0.71 | 7.50\% | 9.8\% | 9.9\% | 10.2\% |
| Laclede Group Inc/The | 4.49\% | 0.67 | 7.50\% | 9.5\% | 9.7\% | 10.0\% |
| New Jersey Resources Corp | 4.49\% | 0.69 | 7.50\% | 9.6\% | 9.8\% | 10.1\% |
| NiSource Inc | 4.49\% | 0.89 | 7.50\% | 11.1\% | 11.2\% | 11.3\% |
| Northwest Natural Gas Co | 4.49\% | 0.73 | 7.50\% | 9.9\% | 10.1\% | 10.3\% |
| Piedmont Natural Gas Co | 4.49\% | 0.77 | 7.50\% | 10.3\% | 10.4\% | 10.6\% |
| South Jersey Industries Inc | 4.49\% | 0.70 | 7.50\% | 9.8\% | 9.9\% | 10.2\% |
| Southwest Gas Corp | 4.49\% | 0.85 | 7.50\% | 10.8\% | 10.9\% | 11.1\% |
| WGL Holdings Inc | 4.49\% | 0.71 | 7.50\% | 9.8\% | 9.9\% | 10.2\% |

Sources and Notes:
[1]: Table No. MJV-9, Panel A, Computation of U.S. Long-Term Risk-Free Rate plus adjustment factor.
[2]: Workpaper \# 1 to Table No. MJV-20, column [3].
[3]: Vilbert Direct Testimony, Appendix C.
[4]: [1] $+([2] \times[3])$.
$[5]:([1]+0.5 \%)+[2] \times([3]-0.5 \%)$.
$[6]:([1]+1.5 \%)+[2] \times([3]-1.5 \%)$.

Workpaper \# 1 to Table No. MJV-20
Gas LDC Sample
Value Line Betas, Bloomberg Betas and Brattle Betas

|  | Value Line <br> Betas <br> $[1]$ | Bloomberg Betas <br> $[2]$ | Brattle <br> Betas <br> $[3]$ |
| :--- | :---: | :---: | :---: |
| Company | 0.65 | 0.78 | 0.71 |
| Atmos Energy Corp | 0.60 | 0.72 | 0.67 |
| Laclede Group Inc/The | 0.65 | 0.72 | 0.69 |
| New Jersey Resources Corp | 0.85 | 0.90 | 0.89 |
| NiSource Inc | 0.60 | 0.69 | 0.73 |
| Northwest Natural Gas Co | 0.65 | 0.73 | 0.77 |
| Piedmont Natural Gas Co | 0.65 | 0.71 | 0.70 |
| South Jersey Industries Inc | 0.75 | 0.91 | 0.85 |
| Southwest Gas Corp | 0.65 | 0.74 | 0.71 |
| WGL Holdings Inc | 0.67 | 0.77 | 0.75 |
| Average |  |  |  |

Sources and Notes:
[2]: Brattle calculated beta using data from Bloomberg.
260-week beta as of March 9, 2011.
[3]: Bloomberg five year weekly beta from March 10, 2006 to March 4, 2011.

Table No. MJV-21
Overall Cost of Capital of the Gas LDC Sample
Using Brattle Betas
Panel A: CAPM Cost of Equity Scenario 1-Long-Term Risk Free Rate of 4.74\%, Long-Term Market Risk Premium of 6.50\%

| Company | CAPM Cost of Equity [1] | ECAPM (0.5\%) Cost of Equity [2] | ECAPM (1.5\%) Cost of Equity [3] | 5-Year Average Common Equity to Market Value Ratio [4] | Weighted - Average Cost of Preferred Equity [5] | 5-Year Average Preferred Equity to Market Value Ratio <br> [6] | WeightedAverage Cost of Debt [7] | 5-Year Average Debt to Market Value Ratio [8] | California Water Service Group's Income Tax Rate [9] | Overall After-Tax Cost of Capital (CAPM) [10] | Overall After-Tax Cost of Capital (ECAPM 0.5\%) [11] | Overall After-Tax Cost of Capital (ECAPM $1.5 \%$ ) <br> [12] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aimos Energy Corp | 9.3\% | 9.5\% | 9.8\% | 0.54 | 6.68\% | 0.00 | 6.0\% | 0.46 | 40.7\% | 6.7\% | 6.8\% | 6.9\% |
| Laclede Group Inc/The | 9.1\% | 9.2\% | 9.6\% | 0.67 | 5.83\% | 0.00 | 5.6\% | 0.33 | 40.7\% | 7.2\% | 7.3\% | 7.5\% |
| New Jersey Resources Corp | 9.2\% | 9.4\% | 9.7\% | 0.78 | 5.83\% | 0.00 | 5.6\% | 0.22 | 40.7\% | 7.9\% | 8.1\% | 8.3\% |
| NiSource Inc | 10.5\% | 10.6\% | 10.7\% | 0.42 | 6.68\% | 0.00 | 6.0\% | 0.58 | 40.7\% | 6.5\% | 6.5\% | 6.5\% |
| Northwest Natural Gas Co | 9.5\% | 9.6\% | 9.9\% | 0.64 | 5.49\% | 0.00 | 5.4\% | 0.36 | 40.7\% | 7.2\% | 7.3\% | 7.5\% |
| Piedmont Natural Gas Co | 9.8\% | 9.9\% | 10.1\% | 0.69 | 5.83\% | 0.00 | 5.6\% | 0.31 | 40.7\% | 7.8\% | 7.9\% | 8.0\% |
| South Jersey Industries Inc | 9.3\% | 9.5\% | 9.8\% | 0.70 | 6.68\% | 0.00 | 6.0\% | 0.30 | 40.7\% | 7.6\% | 7.7\% | 7.9\% |
| Southwest Gas Corp | 10.2\% | 10.3\% | 10.5\% | 0.51 | 6.68\% | 0.00 | 6.0\% | 0.49 | 40.7\% | 6.9\% | 7.0\% | 7.1\% |
| WGL Holdings Inc | 9.3\% | 9.5\% | 9.8\% | 0.70 | 5.41\% | 0.01 | 5.4\% | 0.29 | 40.7\% | 7.5\% | 7.6\% | 7.8\% |
| Full Sample Average |  |  |  | 0.63 | 6.12\% | 0.00 | 5.8\% | 0.37 | 40.7\% | 7.3\% | 7.3\% | 7.5\% |
| Sub-Sample Average |  |  |  | 0.65 | 5.99\% | 0.00 | 5.7\% | 0.35 | 40.7\% | 7.4\% | 7.5\% | 7.6\% |

Sources and Notes:
[1]: Table No. MJV-20; Panel A, [4]
2]: Table No. MJV-20; Pancl A, [5]
31: Table No. MJV-20; Panel A, [6]
[4]: Table No. MJV-15, [4].
7]: Workpaper \#2 to Table No. MJV-21, Panel B.
[8]: Table No. MJV-15, [6]
[9]: Provided by California Water Service Group.
[5]: Workpaper \#2 to Table No. MJV-21, Panef C.
91: Provided by Californa Water Service Group.
$10]:(1] \times[4])+([5] \times[6])+\{[7] \times[8] \times(1-[9])\}$
[6]: Table No. MJV-15, [5]
$11]:([2] \times[4])+([5] \times[6])+\{[7] \times[8] \times(1-[9]))$
121): $(3] \times[4])+([5] \times[6])+\{17] \times[8] \times(1-[9])$.

Table No. MJV-21
Overall Cost of Capital of the Gas LDC Sample
Using Brattle Betas
Panel B: CAPM Cost of Equity Scenario 2 - Long-Term Risk Free Rate of 4.61\%, Long-Term Market Risk Premium of 7.00\%

| Company | CAPM Cost of Equity [1] | ECAPM $(0.5 \%)$ Cost of Equity [2] | ECAPM (1.5\%) Cost of Equity [3] | 5-Year Average Common Equity to Market Value Ratio [4] | Weighted - Average Cost of Preferred Equity [5] | 5-Year Average Preferred Equity to Market Value Ratio [6] | WeightedAverage Cost of Debt [7] | 5-Year Average Debt to Market Value Ratio [8] | California Water Service Group's Income Tax Rate [9] | Overall After-Tax Cost of Capital (CAPM) [10] | Overall After-Tax Cost of Capital (ECAPM 0.5\%) [11] | Overall After-Tax Cost of Capital (ECAPM $1.5 \%$ ) <br> [12] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp | 9.6\% | 9.7\% | 10.0\% | 0.54 | 6.68\% | 0.00 | 6.0\% | 0.46 | 40.7\% | 6.8\% | 6.9\% | 7.1\% |
| Laclede Group Inc/The | 9.3\% | 9.5\% | 9.8\% | 0.67 | 5.83\% | 0.00 | 5.6\% | 0.33 | 40.7\% | 7.3\% | 7.4\% | 7.6\% |
| New Jersey Resources Corp | 9.4\% | 9.6\% | 9.9\% | 0.78 | 5.83\% | 0.00 | 5.6\% | 0.22 | 40.7\% | 8.1\% | 8.2\% | 8.5\% |
| NiSource Inc | 10.8\% | 10.9\% | 11.0\% | 0.42 | 6.68\% | 0.00 | 6.0\% | 0.58 | 40.7\% | 6.6\% | 6.6\% | 6.7\% |
| Northwest Natural Gas Co | 9.7\% | 9.8\% | 10.1\% | 0.64 | 5.49\% | 0.00 | 5.4\% | 0.36 | 40.7\% | 7.4\% | 7.5\% | 7.7\% |
| Piedmont Natural Gas Co | 10.0\% | 10.1\% | 10.4\% | 0.69 | 5.83\% | 0.00 | 5.6\% | 0.31 | 40.7\% | 8.0\% | 8.1\% | 8.2\% |
| South Jersey hidustries Inc | 9.5\% | 9.7\% | 10.0\% | 0.70 | 6.68\% | 0.00 | 6.0\% | 0.30 | 40.7\% | 7.8\% | 7.9\% | 8.1\% |
| Southwest Gas Corp | 10.5\% | 10.6\% | 10.8\% | 0.51 | 6.68\% | 0.00 | 6.0\% | 0.49 | 40.7\% | 7.1\% | 7.1\% | 7.2\% |
| WGL Holdings lic | 9.6\% | 9.7\% | 10.0\% | 0.70 | 5.41\% | 0.01 | 5.4\% | 0.29 | 40.7\% | 7.7\% | 7.8\% | 8.0\% |
| Full Sample Average |  |  |  | 0.63 | 6.12\% | 0.00 | 5.8\% | 0.37 | 40.7\% | 7.4\% | 7.5\% | 7.7\% |
| Sub-Sample Average |  |  |  | 0.65 | 5.99\% | 0.00 | 5.7\% | 0.35 | 40.7\% | 7.5\% | 7.6\% | 7.8\% |

Sources and Notes:
[1]: Table No. MJV-20; Panel B, [4]
[2]: Table No. MJV-20; Panel B, [5].
31: Table No MIV-20. Panel B, [6]
4]: Table No. MJV-15, [4]
[7]: Workpaper \#2 to Table No. MJV-21, Panel B.
[7]: Table No. MJV-15, [6
[8]: Table No. MDV-15, [6].
[9]: Provided by California Water Service Group.
[5]: Workpaper \#2 to Table No. MJV-21, Panel C.
$10]:([1] \times[4])+(55] \times[6])+\{[7] \times[8] \times(1-[9])\}$
[6]: Table No. MJV-15, [5]. $\quad[12]:(33] \times[4])+([5] \times[6])+[[7] \times[8] \times(1-[9])$

Table No. MJV-21
Overall Cost of Capital of the Gas LDC Sample
Using Brattle Betas
Panel C: CAPM Cost of Equity Scenario 3-Long-Term Risk Free Rate of 4.49\%, Long-Term Market Risk Premium of 7.50\%

| Company | CAPM Cost of Equity [1] | ECAPM ( $0.5 \%$ ) Cost of Equity [2] | ECAPM (1.5\%) Cost of Equity [3] | 5-Year Average Common Equity to Market Value Ratio [4] | Weighted - Average Cost of Preferred Equity [5] | 5-Year Average Preferred Equity to Market Value Ratio [6] | WeightedAverage Cost of Debt [7] | 5-Year Average Debt to Market Value Ratio [8] | California Water Service Group's Income Tax Rate [9] | Overall After-Tax Cost of Capital (CAPM) [10] | Overall After-Tax Cost of Capital (ECAPM 0.5\%) [11] | Overall After-Tax Cost of Capital (ECAPM <br> 1.5\%) <br> [12] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp | 9.8\% | 9.9\% | 10.2\% | 0.54 | 6.68\% | 0.00 | 6.0\% | 0.46 | 40.7\% | 6.9\% | 7.0\% | 7.2\% |
| Laclede Group Inc/The | 9.5\% | 9.7\% | 10.0\% | 0.67 | 5.83\% | 0.00 | 5.6\% | 0.33 | 40.7\% | 7.4\% | 7.5\% | 7.8\% |
| New Jersey Resources Corp | 9.6\% | 9.8\% | 10.1\% | 0.78 | 5.83\% | 0.00 | 5.6\% | 0.22 | 40.7\% | 8.3\% | 8.4\% | 8.6\% |
| NiSource Inc | 11.1\% | 11.2\% | 11.3\% | 0.42 | 6.68\% | 0.00 | 6.0\% | 0.58 | 40.7\% | 6.7\% | 6.8\% | 6.8\% |
| Northwest Natural Gas Co | 9.9\% | 10.1\% | 10.3\% | 0.64 | 5.49\% | 0.00 | 5.4\% | 0.36 | 40.7\% | 7.5\% | 7.6\% | 7.8\% |
| Fiedmont Natural Gas Co | 10.3\% | 10.4\% | 10.6\% | 0.69 | 5.83\% | 0.00 | 5.6\% | 0.31 | 40.7\% | 8.2\% | 8.2\% | 8.4\% |
| South Jersey Industries Inc | 9.8\% | 9.9\% | 10.2\% | 0.70 | 6.68\% | 0.00 | 6.0\% | 0.30 | 40.7\% | 7.9\% | 8.0\% | 8.2\% |
| Southwest Gas Corp | 10.8\% | 10.9\% | 11.1\% | 0.51 | 6.68\% | 0.00 | 6.0\% | 0.49 | 40.7\% | 7.3\% | 7.3\% | 7.4\% |
| WGL Holdings Inc | 9.8\% | 9.9\% | 10.2\% | 0.70 | 5.41\% | 0.01 | 5.4\% | 0.29 | 40.7\% | 7.8\% | 7.9\% | 8.1\% |
| Full Sample Average |  |  |  | 0.63 | 6.12\% | 0.00 | 5.8\% | 0.37 | 40.7\% | 7.6\% | 7.7\% | 7.8\% |
| Sub-Sample Average |  |  |  | 0.65 | 5.99\% | 0.00 | 5.7\% | 0.35 | 40.7\% | 7.7\% | 7.8\% | 8.0\% |

Sources and Notes:
[1]: Table No. MJV-20; Panel C, [4]
22]: Tabic No. MJV-20; Pancl C, [5]
[3]: Table No. MJV-20; Panel C, [6]
77: Workpaper \#2 to Table No. MJV-21, Panel B.
[8]: Table No. MJV-15, 16 ]
[9]: Provided by California Water Service Group.
4]: Table No. MJV-15, [4].
5orkpaper \#2 to Table No. MJV-21, Panel C.
10]: $([1] \times[4])+([5] \times[6])+\{[7] \times[8] \times(1-[9])$
[6]: Table No. MJV-15, [5]
10]: $([1] \times[4])+([1] \times[6])+\{[7] \times[8] \times(1-[9])$,
11]: $(2] \times[4])+([5] \times[6])+\{[7] \times[8] \times(1-[9])$,
$[12]:(3] \times[4])+([5] \times[6])+\{[7] \times[8] \times(1-[9])$

Workpaper \#1 to Table No. MJV-21

## Gas LDC Sample

Panel A: Rating to Yield Conversion

| Rating | Bond Yield | Preferred Yield |
| :---: | :---: | :---: |
| A | $5.61 \%$ | $5.83 \%$ |
| BBB | $6.02 \%$ | $6.68 \%$ |

Sources and Notes:
Bond Yields from Bloomberg as of March 10, 2011.
Preferred yields are from Mergent Bond Record, January
2011 Edition

Workpaper \#1 to Table No. MJV-21
Gas LDC Sample
Panel B: Bond Rating Summary

|  | Year End, |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Company | 2010 | 2009 | 2008 | 2007 | 2006 |
|  | $[1]$ | $[2]$ | $[3]$ | $[4]$ | $[5]$ |
| Atmos Energy Corp | BBB | BBB | BBB | BBB | BBB |
| Laclede Group Inc/The | A | A | A | A | A |
| New Jersey Resources Corp | A | A | A | A | A |
| NiSource Inc | BBB | BBB | BBB | BBB | BBB |
| Northwest Natural Gas Co | A | AA | AA | AA | AA |
| Piedmont Natural Gas Co | A | A | A | A | A |
| South Jersey Industries Inc | BBB | BBB | BBB | BBB | BBB |
| Southwest Gas Corp | BBB | BBB | BBB | BBB | BBB |
| WGL Holdings Inc | AA | AA | AA | AA | AA |

Sources and Notes:
[1]-[5]: Bloomberg as of March 10, 2011.
The credit rating is the long-term issuer rating without a $+/$ indication. New Jersey Resources and South Jersey Industries use a subsidiary rating.

Workpaper \#1 to Table No. MJV-21
Gas LDC Sample
Panel C: Preferred Equity Rating Summary

|  | Year End, |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Company | 2010 | 2009 | 2008 | 2007 | 2006 |
|  | $[1]$ | $[2]$ | $[3]$ | $[4]$ | $[5]$ |
| Atmos Energy Corp | BBB | BBB | BBB | BBB | BBB |
| Laclede Group Inc/The | A | A | A | A | A |
| New Jersey Resources Corp | A | A | A | A | A |
| NiSource Inc | BBB | BBB | BBB | BBB | BBB |
| Northwest Natural Gas Co | A | AA | AA | AA | AA |
| Piedmont Natural Gas Co | A | A | A | A | A |
| South Jersey Industries Inc | BBB | BBB | BBB | BBB | BBB |
| Southwest Gas Corp | BBB | BBB | BBB | BBB | BBB |
| WGL Holdings Inc | AA | AA | AA | AA | AA |

## Sources and Notes:

[1] - [5]: Preferred equity ratings are assumed equal to the company's bond ratings reported in Workpaper \#1 to Table No. MJV-21, Panel B.
The credit rating is the long-term issuer rating without a $+/$ - indication.
New Jersey Resources and South Jersey Industries use a subsidiary rating.

Workpaper \#2 to Table No. MJV-21
Gas LDC Sample
Panel B: Bond Yield Summary

|  | Year End, |  |  |  | $5-Y e a r$ <br> Average |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Company | 2010 | 2009 | 2008 | 2007 | 2006 | $[6]$ |
| [1] | $[2]$ | $[3]$ | $[4]$ | $[5]$ | $6.02 \%$ | $6.02 \%$ |
| Atmos Energy Corp | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ | $5.61 \%$ | $5.61 \%$ |
| Laclede Group Inc/The | $5.61 \%$ | $5.61 \%$ | $5.61 \%$ | $5.61 \%$ | $5.61 \%$ | $5.61 \%$ |
| New Jersey Resources Corp | $5.61 \%$ | $5.61 \%$ | $5.61 \%$ | $5.61 \%$ | $6.02 \%$ | $6.02 \%$ |
| NiSource Inc | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ | $5.40 \%$ | $5.45 \%$ |
| Northwest Natural Gas Co | $5.61 \%$ | $5.40 \%$ | $5.40 \%$ | $5.40 \%$ | $5.40 \%$ | $5.61 \%$ |
| Piedmont Natural Gas Co | $5.61 \%$ | $5.61 \%$ | $5.61 \%$ | $5.61 \%$ | $5.61 \%$ |  |
| South Jersey Industries Inc | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ |
| Southwest Gas Corp | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ | $6.02 \%$ |
| WGL Holdings Inc | $5.40 \%$ | $5.40 \%$ | $5.40 \%$ | $5.40 \%$ | $5.40 \%$ | $5.40 \%$ |

## Sources and Notes:

[1]- [5]: Ratings based on Workpaper \#1 to Table No. MJV-21, Panel B. Bond yields from Bloomberg as of March 10, 2011. [6]: $\{([1]+[2]+[3]+[4]+[5]) / 5\}$
The report does not publish yield data for AA-rated preferred bonds. Therefore, 1 assumed:
Yield on AA-rated debt $=$ Yield on A-rated bond $-\{(1 / 2) \times($ Yield on BBB-rated bond - Yield on A-rated bond $)\}$.

Workpaper \#2 to Table No. MJV-21
Gas LDC Sample
Panel C: Preferred Equity Yield Summary

| Company | $\begin{gathered} \text { Year End, } \\ 2010 \\ {[1]} \end{gathered}$ | $\begin{gathered} 2009 \\ {[2]} \end{gathered}$ | $\begin{gathered} 2008 \\ {[3]} \end{gathered}$ | $\begin{gathered} 2007 \\ {[4]} \end{gathered}$ | $\begin{gathered} 2006 \\ {[5]} \end{gathered}$ | 5-Year <br> Average <br> [6] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Atmos Energy Corp | 6.68\% | 6.68\% | 6.68\% | 6.68\% | 6.68\% | 6.68\% |
| Laclede Group Inc/The | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% |
| New Jersey Resources Corp | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% |
| NiSource Inc | 6.68\% | 6.68\% | 6.68\% | 6.68\% | 6.68\% | 6.68\% |
| Northwest Natural Gas Co | 5.83\% | 5.41\% | 5.41\% | 5.41\% | 5.41\% | 5.49\% |
| Piedmont Natural Gas Co | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% | 5.83\% |
| South Jersey Industries Inc | 6.68\% | 6.68\% | 6.68\% | 6.68\% | 6.68\% | 6.68\% |
| Southwest Gas Corp | 6.68\% | 6.68\% | 6.68\% | 6.68\% | 6.68\% | 6.68\% |
| WGL Holdings Inc | 5.41\% | 5.41\% | 5.41\% | 5.41\% | 5.41\% | 5.41\% |

Sources and Notes:
[1] - [5]: See Workpaper \#1 to Table No. MJV-21, Panels C. Preferred equity yields are from Mergent Bond Record, January 2011 Edition.
$[6]:\{([1]+[2]+[3]+[4]+[5]) / 5\}$
The report does not publish yield data for AA-rated preferred equity. Therefore, I assumed:
Yield on AA-rated preferred equity $=$ Yield on A-rated preferred $-\{(1 / 2) \times($ Yield on BBB-rated preferred - Yield on A-rated preferred $)\}$.

Table No. MJV-22
Risk Positioning Cost of Equity at California Water Service Group's Capital Structure
Gas LDC Sample
Panel A: Using Brattle Betas


Sources and Notes:
[1]: Table No. MIV-21; Panel A, [10] - [12].
[2]: Table No. MJV-21; Panel B, [10] - [12].
[3]: Table No. MJV-21; Panel C, [10]- [12].
[4]: Provided by California Water Service Group.
[5]: Based on a A rating. Yield from Bloomberg as of March 10, 2011.
[6]: Provided by Califomia Water Service Group.
[7]: Provided by California Water Service Group.
[8]: From Mergent Bond Record, January 2011 Edition.
[9]: Provided by Califomia Water Service Group
[10]: \{[1]- $([4] \times[5] \times(1-[6])+[7] \times[8])\} /[9]$
[11]: $\{[2]-([4] \times[5] \times(1-[6])+[7] \times[8])\} /[9]$
[12]: $\{[3] \times([4] \times[5] \times(1-[6])+[7] \times[8])\} /[9]$
Scenario 1: Long-Term Risk Free Rate of 4.74\%, Long-Term Maket Risk Premium of $6.50 \%$. Scenario 2: Long-Term Risk Free Rate of $4.61 \%$, Long-Term Market Risk Premium of $7.00 \%$. Scenario 3: Long-Term Risk Free Rate of 4.49\%, Long-Term Market Risk Premium of $7.50 \%$.

