

**Denver Employees Retirement Plan**  
**Purchase of Service Cost Factor**

**Tier 3 - 1.5% Benefit Multiplier (Hired on or after July 1, 2011)**

| Age at Purchase | Service at Time of Purchase |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                 | 5                           | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     |
| 23              | 5.16%                       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 24              | 5.37%                       | 5.15%  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 25              | 5.59%                       | 5.36%  | 5.18%  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 26              | 5.81%                       | 5.58%  | 5.39%  | 5.24%  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 27              | 6.04%                       | 5.80%  | 5.61%  | 5.45%  | 5.31%  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 28              | 6.29%                       | 6.03%  | 5.83%  | 5.67%  | 5.52%  | 5.40%  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 29              | 6.54%                       | 6.28%  | 6.07%  | 5.90%  | 5.75%  | 5.61%  | 5.50%  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 30              | 6.80%                       | 6.53%  | 6.31%  | 6.13%  | 5.98%  | 5.84%  | 5.72%  | 5.61%  |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 31              | 7.07%                       | 6.79%  | 6.56%  | 6.38%  | 6.22%  | 6.07%  | 5.95%  | 5.84%  | 5.74%  |        |        |        |        |        |        |        |        |        |        |        |        |
| 32              | 7.36%                       | 7.06%  | 6.83%  | 6.64%  | 6.47%  | 6.31%  | 6.18%  | 6.07%  | 5.97%  | 5.89%  |        |        |        |        |        |        |        |        |        |        |        |
| 33              | 7.65%                       | 7.34%  | 7.10%  | 6.90%  | 6.73%  | 6.57%  | 6.43%  | 6.31%  | 6.21%  | 6.12%  | 6.05%  |        |        |        |        |        |        |        |        |        |        |
| 34              | 7.96%                       | 7.64%  | 7.39%  | 7.18%  | 6.99%  | 6.83%  | 6.69%  | 6.57%  | 6.46%  | 6.37%  | 6.29%  | 6.22%  |        |        |        |        |        |        |        |        |        |
| 35              | 8.28%                       | 7.95%  | 7.68%  | 7.47%  | 7.28%  | 7.10%  | 6.96%  | 6.83%  | 6.72%  | 6.63%  | 6.54%  | 6.47%  | 6.41%  |        |        |        |        |        |        |        |        |
| 36              | 8.61%                       | 8.26%  | 7.99%  | 7.77%  | 7.57%  | 7.39%  | 7.24%  | 7.11%  | 6.99%  | 6.89%  | 6.81%  | 6.73%  | 6.67%  | 6.62%  |        |        |        |        |        |        |        |
| 37              | 8.96%                       | 8.60%  | 8.31%  | 8.08%  | 7.87%  | 7.69%  | 7.53%  | 7.39%  | 7.27%  | 7.17%  | 7.08%  | 7.00%  | 6.94%  | 6.89%  | 6.85%  |        |        |        |        |        |        |
| 38              | 9.31%                       | 8.94%  | 8.65%  | 8.40%  | 8.19%  | 8.00%  | 7.83%  | 7.69%  | 7.56%  | 7.46%  | 7.36%  | 7.28%  | 7.22%  | 7.16%  | 7.12%  | 7.09%  |        |        |        |        |        |
| 39              | 9.69%                       | 9.30%  | 8.99%  | 8.74%  | 8.52%  | 8.32%  | 8.15%  | 8.00%  | 7.87%  | 7.76%  | 7.66%  | 7.58%  | 7.51%  | 7.45%  | 7.41%  | 7.38%  | 7.35%  |        |        |        |        |
| 40              | 10.08%                      | 9.67%  | 9.35%  | 9.09%  | 8.86%  | 8.65%  | 8.47%  | 8.32%  | 8.18%  | 8.07%  | 7.97%  | 7.88%  | 7.81%  | 7.75%  | 7.71%  | 7.67%  | 7.65%  | 7.63%  |        |        |        |
| 41              | 9.93%                       | 10.06% | 9.73%  | 9.46%  | 9.21%  | 9.00%  | 8.81%  | 8.65%  | 8.51%  | 8.39%  | 8.29%  | 8.20%  | 8.12%  | 8.06%  | 8.02%  | 7.98%  | 7.96%  | 7.94%  | 7.93%  |        |        |
| 42              | 10.32%                      | 9.91%  | 10.12% | 9.84%  | 9.59%  | 9.36%  | 9.17%  | 9.00%  | 8.86%  | 8.73%  | 8.62%  | 8.53%  | 8.45%  | 8.39%  | 8.34%  | 8.30%  | 8.28%  | 8.26%  | 8.25%  | 8.24%  |        |
| 43              | 10.16%                      | 10.31% | 9.97%  | 10.24% | 9.74%  | 9.54%  | 9.36%  | 9.21%  | 9.08%  | 8.97%  | 8.87%  | 8.79%  | 8.73%  | 8.68%  | 8.64%  | 8.61%  | 8.59%  | 8.58%  | 8.57%  | 8.57%  |        |
| 44              | 10.56%                      | 10.14% | 10.37% | 10.08% | 10.37% | 10.13% | 9.92%  | 9.74%  | 9.58%  | 9.45%  | 9.33%  | 9.23%  | 9.15%  | 9.08%  | 9.03%  | 8.99%  | 8.96%  | 8.94%  | 8.92%  | 8.92%  | 8.91%  |
| 45              | 10.38%                      | 10.54% | 10.20% | 10.48% | 10.22% | 10.54% | 10.32% | 10.13% | 9.97%  | 9.83%  | 9.71%  | 9.60%  | 9.52%  | 9.44%  | 9.39%  | 9.35%  | 9.32%  | 9.30%  | 9.28%  | 9.28%  | 9.27%  |
| 46              | 10.78%                      | 10.36% | 10.60% | 10.32% | 10.63% | 10.38% | 10.74% | 10.54% | 10.38% | 10.23% | 10.10% | 9.99%  | 9.90%  | 9.83%  | 9.77%  | 9.73%  | 9.70%  | 9.67%  | 9.66%  | 9.65%  | 9.65%  |
| 47              | 10.58%                      | 10.76% | 10.42% | 10.72% | 10.46% | 10.80% | 10.58% | 10.97% | 10.80% | 10.64% | 10.51% | 10.40% | 10.30% | 10.23% | 10.17% | 10.12% | 10.09% | 10.07% | 10.05% | 10.04% | 10.04% |
| 48              | 10.98%                      | 10.57% | 10.83% | 10.54% | 10.87% | 10.62% | 11.00% | 10.81% | 11.24% | 11.08% | 10.94% | 10.82% | 10.72% | 10.64% | 10.58% | 10.50% | 10.48% | 10.46% | 10.45% | 10.45% | 10.45% |
| 49              | 10.77%                      | 10.97% | 10.63% | 10.95% | 10.68% | 11.05% | 10.83% | 11.24% | 11.07% | 11.53% | 11.38% | 11.26% | 11.16% | 11.08% | 11.01% | 10.97% | 10.93% | 10.90% | 10.89% | 10.88% | 10.87% |
| 50              | 11.16%                      | 10.75% | 11.03% | 10.75% | 11.10% | 10.86% | 11.26% | 11.06% | 11.51% | 11.36% | 11.85% | 11.72% | 11.62% | 11.53% | 11.46% | 11.41% | 11.38% | 11.35% | 11.33% | 11.32% | 11.32% |
| 51              | 11.57%                      | 11.15% | 10.82% | 11.16% | 10.90% | 11.28% | 11.07% | 11.50% | 11.33% | 11.81% | 11.67% | 12.20% | 12.09% | 12.00% | 11.93% | 11.88% | 11.84% | 11.81% | 11.80% | 11.79% | 11.78% |
| 52              | 11.97%                      | 11.55% | 11.22% | 10.94% | 11.32% | 11.08% | 11.50% | 11.31% | 11.78% | 11.63% | 12.15% | 12.02% | 12.59% | 12.50% | 12.42% | 12.37% | 12.33% | 12.30% | 12.28% | 12.27% | 12.27% |
| 53              | 12.36%                      | 11.96% | 11.63% | 11.35% | 11.10% | 11.50% | 11.29% | 11.76% | 11.58% | 12.09% | 11.96% | 12.51% | 12.40% | 13.01% | 12.94% | 12.88% | 12.84% | 12.81% | 12.79% | 12.78% | 12.77% |
| 54              | 12.75%                      | 12.35% | 12.04% | 11.77% | 11.51% | 11.28% | 11.73% | 11.54% | 12.04% | 11.89% | 12.44% | 12.31% | 12.91% | 12.82% | 13.48% | 13.42% | 13.37% | 13.34% | 13.32% | 13.31% | 13.30% |
| 55              | 13.13%                      | 12.75% | 12.44% | 12.18% | 11.93% | 11.70% | 11.50% | 11.99% | 11.83% | 12.36% | 12.23% | 12.81% | 12.71% | 13.35% | 13.28% | 13.98% | 13.93% | 13.90% | 13.88% | 13.87% | 13.86% |

**Assumptions:**

7.25% discount rate

2018 salary increase assumptions based on service

Form of benefit is a life annuity

1.5% benefit multiplier

Factor applied to current annual Highest Average Salary (HAS)

**Mortality**

50/50 blend of the RP-2014 Combined Mortality Table for males with a multiplier of 110% projected with the Ultimate rates from MP-2018, fully generational from 2014, based on attained age in 2022 and the RP-2014 Combined Mortality Table for females with a multiplier of 105% projected with the Ultimate rates from MP-2018, fully generational from 2014, based on attained age in 2022



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**Denver Employees Retirement Plan**  
**Purchase of Service Cost Factor**

**Tier 3 - 1.5% Benefit Multiplier (Hired on or after July 1, 2011)**

| Age at Purchase | Service at Time of Purchase |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                 | 5                           | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     |
| 56              | 13.51%                      | 13.13% | 12.83% | 12.59% | 12.36% | 12.14% | 11.94% | 11.76% | 12.29% | 12.14% | 12.72% | 12.60% | 13.23% | 13.14% | 13.83% | 13.77% | 14.51% | 14.48% | 14.46% | 14.45% | 14.44% |
| 57              | 13.87%                      | 13.50% | 13.22% | 12.99% | 12.77% | 12.57% | 12.38% | 12.20% | 12.05% | 12.62% | 12.49% | 13.11% | 13.01% | 13.68% | 13.61% | 14.35% | 14.30% | 15.09% | 15.07% | 15.05% | 15.05% |
| 58              | 14.22%                      | 13.87% | 13.60% | 13.39% | 13.19% | 12.99% | 12.82% | 12.66% | 12.51% | 12.37% | 12.98% | 12.87% | 13.53% | 13.45% | 14.17% | 14.13% | 14.90% | 14.87% | 15.71% | 15.69% | 15.68% |
| 59              | 14.54%                      | 14.22% | 13.97% | 13.78% | 13.59% | 13.42% | 13.26% | 13.12% | 12.98% | 12.85% | 12.74% | 13.38% | 13.29% | 14.00% | 13.94% | 14.71% | 14.68% | 15.50% | 15.48% | 16.36% | 16.35% |
| 60              | 14.85%                      | 14.55% | 14.33% | 14.16% | 13.99% | 13.84% | 13.70% | 13.57% | 13.46% | 13.34% | 13.23% | 13.13% | 13.83% | 13.75% | 14.51% | 14.47% | 15.29% | 15.27% | 16.14% | 16.13% | 17.06% |
| 61              | 15.12%                      | 14.86% | 14.67% | 14.53% | 14.38% | 14.25% | 14.13% | 14.02% | 13.92% | 13.83% | 13.74% | 13.65% | 13.57% | 14.31% | 14.26% | 15.07% | 15.04% | 15.91% | 15.90% | 16.82% | 16.82% |
| 62              | 15.36%                      | 15.14% | 14.99% | 14.87% | 14.76% | 14.65% | 14.56% | 14.47% | 14.39% | 14.32% | 14.25% | 14.17% | 14.11% | 14.05% | 14.84% | 14.82% | 15.67% | 15.66% | 16.58% | 16.58% | 16.58% |
| 63              | 15.58%                      | 15.39% | 15.27% | 15.20% | 15.12% | 15.04% | 14.97% | 14.91% | 14.86% | 14.81% | 14.76% | 14.71% | 14.66% | 14.61% | 14.57% | 15.43% | 15.41% | 16.32% | 16.32% | 16.32% | 16.32% |
| 64              | 15.73%                      | 15.62% | 15.54% | 15.50% | 15.46% | 15.42% | 15.38% | 15.35% | 15.32% | 15.29% | 15.27% | 15.24% | 15.22% | 15.19% | 15.17% | 15.15% | 16.05% | 16.05% | 16.05% | 16.05% | 16.05% |
| 65              | 15.77%                      | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% | 15.77% |
| 66              | 15.48%                      | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% | 15.48% |
| 67              | 15.18%                      | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% | 15.18% |
| 68              | 14.87%                      | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% | 14.87% |
| 69              | 14.54%                      | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% | 14.54% |
| 70              | 14.21%                      | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% | 14.21% |
| 71              | 13.86%                      | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% | 13.86% |
| 72              | 13.50%                      | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% | 13.50% |
| 73              | 13.13%                      | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% | 13.13% |
| 74              | 12.75%                      | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% | 12.75% |
| 75              | 12.37%                      | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% | 12.37% |
| 76              | 11.97%                      | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% | 11.97% |
| 77              | 11.56%                      | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% | 11.56% |
| 78              | 11.15%                      | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% | 11.15% |
| 79              | 10.73%                      | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% | 10.73% |
| 80              | 10.30%                      | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% | 10.30% |

**Assumptions:**

7.25% discount rate

2018 salary increase assumptions based on service

Form of benefit is a life annuity

1.5% benefit multiplier

Factor applied to current annual Highest Average Salary (HAS)

**Mortality**

50/50 blend of the RP-2014 Combined Mortality Table for males with a multiplier of 110% projected with the Ultimate rates from MP-2018, fully generational from 2014, based on attained age in 2022 and the RP-2014 Combined Mortality Table for females with a multiplier of 105% projected with the Ultimate rates from MP-2018, fully generational from 2014, based on attained age in 2022



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