



Denver Employees Retirement Plan  
Purchase of Service Cost Factor

Tier 1 - 2.0% Benefit Multiplier (Hired Before September 1, 2004)

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
25	9.66%	9.37%	9.10%																		
26	10.05%	9.75%	9.47%	9.23%																	
27	10.46%	10.14%	9.85%	9.60%	9.37%																
28	10.88%	10.55%	10.25%	9.99%	9.75%	9.54%															
29	11.32%	10.98%	10.67%	10.39%	10.14%	9.93%	9.75%														
30	11.78%	11.42%	11.10%	10.81%	10.56%	10.33%	10.14%	9.98%													
31	12.26%	11.88%	11.55%	11.25%	10.98%	10.75%	10.55%	10.39%	10.25%												
32	12.75%	12.36%	12.01%	11.70%	11.43%	11.18%	10.98%	10.81%	10.66%	10.52%											
33	13.27%	12.86%	12.50%	12.18%	11.89%	11.64%	11.42%	11.24%	11.09%	10.95%	10.83%										
34	13.80%	13.38%	13.01%	12.67%	12.37%	12.11%	11.89%	11.70%	11.54%	11.39%	11.27%	11.16%									
35	14.36%	13.93%	13.53%	13.18%	12.87%	12.60%	12.37%	12.17%	12.01%	11.85%	11.72%	11.61%	11.53%								
36	14.94%	14.49%	14.08%	13.72%	13.39%	13.11%	12.87%	12.66%	12.49%	12.33%	12.20%	12.08%	11.99%	11.93%							
37	15.55%	15.08%	14.65%	14.27%	13.93%	13.64%	13.39%	13.18%	13.00%	12.83%	12.69%	12.57%	12.48%	12.41%	12.36%						
38	16.17%	15.69%	15.24%	14.85%	14.50%	14.19%	13.93%	13.71%	13.53%	13.35%	13.20%	13.08%	12.98%	12.91%	12.86%	12.82%					
39	16.80%	16.31%	15.86%	15.45%	15.09%	14.76%	14.50%	14.27%	14.07%	13.89%	13.74%	13.61%	13.51%	13.43%	13.38%	13.34%	13.31%				
40	17.43%	16.94%	16.49%	16.08%	15.70%	15.36%	15.08%	14.85%	14.64%	14.46%	14.30%	14.16%	14.06%	13.98%	13.92%	13.88%	13.85%	13.82%			
41	17.25%	17.59%	17.13%	16.72%	16.33%	15.99%	15.70%	15.45%	15.24%	15.04%	14.88%	14.73%	14.63%	14.55%	14.49%	14.44%	14.41%	14.38%	14.37%		
42	17.89%	17.40%	17.79%	17.37%	16.98%	16.64%	16.33%	16.08%	15.86%	15.66%	15.48%	15.33%	15.22%	15.14%	15.08%	15.03%	14.99%	14.97%	14.96%	14.96%	14.96%
43	17.68%	18.05%	17.59%	18.03%	17.65%	17.30%	17.00%	16.73%	16.50%	16.29%	16.11%	15.96%	15.84%	15.75%	15.69%	15.64%	15.60%	15.58%	15.56%	15.56%	15.56%
44	18.33%	17.84%	18.25%	17.83%	18.32%	17.97%	17.68%	17.41%	17.17%	16.96%	16.77%	16.61%	16.49%	16.39%	16.28%	16.24%	16.21%	16.20%	16.20%	16.20%	16.20%
45	18.10%	18.49%	18.04%	18.50%	18.12%	18.66%	18.37%	18.11%	17.87%	17.65%	17.45%	17.28%	17.16%	17.06%	16.99%	16.94%	16.90%	16.87%	16.86%	16.86%	16.86%
46	18.73%	18.26%	18.70%	18.29%	18.80%	18.46%	19.07%	18.82%	18.59%	18.37%	18.16%	17.99%	17.86%	17.76%	17.69%	17.63%	17.59%	17.56%	17.55%	17.55%	17.55%
47	18.48%	18.90%	18.47%	18.96%	18.58%	19.15%	18.87%	19.54%	19.32%	19.10%	18.91%	18.73%	18.59%	18.49%	18.41%	18.35%	18.31%	18.28%	18.27%	18.27%	18.27%
48	19.10%	18.65%	19.12%	18.73%	19.27%	18.93%	19.58%	19.33%	20.07%	19.86%	19.67%	19.49%	19.35%	19.25%	19.17%	19.11%	19.06%	19.02%	19.02%	19.02%	19.02%
49	18.83%	19.27%	18.87%	19.38%	19.03%	19.63%	19.35%	20.06%	19.85%	20.62%	20.44%	20.28%	20.15%	20.04%	19.96%	19.89%	19.85%	19.81%	19.80%	19.80%	19.80%
50	19.42%	19.00%	19.50%	19.13%	19.70%	19.39%	20.07%	19.83%	20.60%	20.40%	21.24%	21.08%	20.97%	20.87%	20.78%	20.72%	20.67%	20.63%	20.62%	20.62%	20.62%
51	19.13%	19.60%	19.23%	19.77%	19.45%	20.08%	19.82%	20.57%	20.37%	21.18%	21.01%	21.91%	21.80%	21.71%	21.64%	21.57%	21.52%	21.49%	21.47%	21.47%	21.47%
52	19.69%	19.30%	19.83%	19.50%	20.10%	19.82%	20.53%	20.32%	21.13%	20.94%	21.81%	21.67%	22.65%	22.58%	22.53%	22.47%	22.42%	22.38%	22.36%	22.36%	22.36%
53	19.38%	19.88%	19.53%	20.11%	19.83%	20.49%	20.26%	21.04%	20.87%	21.73%	21.57%	22.51%	22.42%	23.47%	23.43%	23.39%	23.35%	23.32%	23.30%	23.30%	23.30%
54	19.92%	19.56%	20.12%	19.82%	20.45%	20.21%	20.96%	20.77%	21.62%	21.47%	22.38%	22.26%	23.28%	23.22%	24.35%	24.33%	24.31%	24.29%	24.27%	24.27%	24.27%
55	19.58%	20.11%	19.80%	20.41%	20.15%	20.85%	20.67%	21.49%	21.35%	22.24%	22.12%	23.10%	23.02%	24.12%	24.10%	25.29%	25.29%	25.29%	25.29%	25.29%	25.29%

Assumptions:

7.25% discount rate

2018 salary increase assumptions based on service

Form of benefit is a life annuity

2.0% benefit multiplier

Factor applied to current annual Highest Average Salary (HAS)

5% increase in HAS at retirement due to conversion of unused sick and vacation hours into pay

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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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	20.12%	19.78%	20.36%	20.09%	20.76%	20.55%	21.33%	21.19%	22.08%	21.96%	22.92%	22.83%	23.90%	23.86%	25.04%	25.04%	25.04%	25.04%	25.04%	25.04%	
57	19.76%	20.32%	20.02%	20.67%	20.44%	21.17%	21.02%	21.88%	21.79%	22.72%	22.63%	23.66%	23.62%	24.77%	24.77%	24.77%	24.77%	24.77%	24.77%	24.77%	
58	20.26%	19.96%	20.58%	20.32%	21.03%	20.85%	21.67%	21.56%	22.49%	22.42%	23.42%	23.37%	24.49%	24.49%	24.49%	24.49%	24.49%	24.49%	24.49%	24.49%	24.49%
59	19.88%	20.47%	20.22%	20.90%	20.68%	21.45%	21.34%	22.23%	22.18%	23.15%	23.12%	24.19%	24.19%	24.19%	24.19%	24.19%	24.19%	24.19%	24.19%	24.19%	24.19%
60	20.34%	20.09%	20.74%	20.53%	21.27%	21.10%	21.96%	21.89%	22.87%	22.83%	23.88%	23.88%	23.88%	23.88%	23.88%	23.88%	23.88%	23.88%	23.88%	23.88%	23.88%
61	20.76%	20.57%	20.35%	21.07%	20.90%	21.71%	21.61%	22.55%	22.53%	23.55%	23.55%	23.55%	23.55%	23.55%	23.55%	23.55%	23.55%	23.55%	23.55%	23.55%	23.55%
62	21.14%	20.99%	20.85%	20.68%	21.46%	21.34%	22.24%	22.19%	23.21%	23.21%	23.21%	23.21%	23.21%	23.21%	23.21%	23.21%	23.21%	23.21%	23.21%	23.21%	23.21%
63	21.49%	21.39%	21.29%	21.19%	21.07%	21.92%	21.87%	22.85%	22.85%	22.85%	22.85%	22.85%	22.85%	22.85%	22.85%	22.85%	22.85%	22.85%	22.85%	22.85%	22.85%
64	21.81%	21.75%	21.70%	21.65%	21.60%	21.53%	22.47%	22.47%	22.47%	22.47%	22.47%	22.47%	22.47%	22.47%	22.47%	22.47%	22.47%	22.47%	22.47%	22.47%	22.47%
65	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%	22.08%
66	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%
67	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%	21.25%
68	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%	20.81%
69	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%	20.36%
70	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%	19.89%
71	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%	19.40%
72	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%	18.90%
73	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%	18.38%
74	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%	17.85%
75	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%	17.31%
76	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%	16.76%
77	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%	16.19%
78	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%	15.61%
79	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%	15.02%
80	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%	14.42%

Assumptions:

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