May 27, 2008

Mr. Karl Paulson Manager of Strategic Innovation Public Employees' Retirement Association of Colorado 1300 Logan Street Denver, Colorado 80203-2386

Dear Mr. Paulson:

Enclosed are 1 unbound and 45 bound copies of the "Report on the Actuarial Valuation of the Public Employees' Retirement Association of Colorado prepared as of December 31, 2007".

Please let us know if you have any questions concerning the report.

Sincerely,

Thomas J. Cavanaugh, FSA, FCA, EA, MAAA Chief Executive Officer

TJC:kc

Enclosure

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Report on the Actuarial Valuation of the Public Employees' Retirement Association of Colorado

Prepared as of December 31, 2007

May 27, 2008

The Board of Trustees
Public Employees' Retirement Association of Colorado
1300 Logan Street
Denver, Colorado 80203-2386

#### Dear Trustees:

We are pleased to submit the results of the annual actuarial valuation of the Public Employees' Retirement Association of Colorado (PERA), prepared as of December 31, 2007.

The purpose of this report is to provide a summary of the funded status of PERA as of December 31, 2007, to recommend rates of contribution and to provide accounting information under Governmental Accounting Standards Board Statements No. 25, 27, 43 and 45 (GASB 25, 27, 43 and 45). While not verifying the data at source, the actuary performed tests for consistency and reasonability.

The valuation results indicate that the combined employer and member contribution rates are sufficient to fund the normal cost for all members and provide additional contributions to help finance the Health Care Trust Fund and each division's unfunded accrued liability. The resulting amortization periods for each division, with and without recognition of the Amortization Equalization Disbursement (AED) and the Supplemental Amortization Equalization Disbursement (SAED), are shown in the table below:

	· ·	Amortization Period			
	Basic	With AED	With AED & SAED		
State Division	Infinite	Infinite	69 years		
School Division	Infinite	Infinite	42 years		
Local Government Division	25 years	24 years	14 years		
Judicial Division	94 years	78 years	22 years		
Health Care Trust Fund (HCTF)*	38 years	38 years	38 years		

<sup>\*</sup> The HCTF amortization period shown is calculated based on future contributions equaling the statutory rate. If future expected Medicare Part D Retiree Drug Subsidy payments are also contributed to the fund, the amortization period is 24 years.

The promised benefits of PERA are included in the actuarially calculated contribution rates which are developed using the entry age normal cost method. Four-year smoothed market value of assets is used for actuarial valuation purposes (the value was marked to market as of December 31, 2004, with four year smoothing commencing from that point forward). Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions as a level percentage of payroll, on the assumption that payroll will increase by 4.5% annually. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the Fund and to reasonable expectations of anticipated experience under the Fund and meet the parameters for the disclosures under GASB 25, 27, 43 and 45.

We have prepared the Schedule of Funding Progress and Trend Information shown in the financial section of the Comprehensive Annual Financial Report, and all supporting schedules including the Schedule of Active Member Data, the Solvency Test and the Analysis of Financial Experience shown in the actuarial section of the Comprehensive Annual Financial Report. All historical information that references a valuation date prior to December 31, 2006 was prepared by the previous actuarial firm.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The employer contribution rate, together with the Medicare Part D Retiree Drug Subsidy, is sufficient to finance the Health Care Trust Fund benefits in accordance with GASB 43 and 45. Please note that the Local Government Division employer contribution rates are sufficient to finance the promised benefit under GASB 25 and 27. With the addition of the Amortization Equalization Disbursement (AED) and Supplemental Amortization Equalization Disbursement (SAED) contributions, the Judicial Division employer contribution rates are currently sufficient to finance the promised benefits and eventually meet the required contribution levels under GASB 25 and 27. The AED and SAED contributions, combined with previously projected reductions in liability due to benefit structure changes for future hires, are expected to improve the funded status of the State and School Divisions. However, if additional gains do not materialize in the future, increases in funding may be necessary to fund the State and School Divisions.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,

Thomas J. Cavanaugh, FSA, FCA, EA, MAAA Chief Executive Officer

Edward J. Koebel, EA, FCA, MAAA Senior Actuary

Richard Ward, FSA, FCA, MAAA Senior Health Actuary

TJC/EJK/RW:kc

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## REPORT ON THE ACTUARIAL VALUATION OF THE PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO PREPARED AS OF DECEMBER 31, 2007

## **SECTION I - SUMMARY OF PRINCIPAL RESULTS**

1. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results for State Division, School Division, Local Government Division, Judicial Division and the Health Care Trust Fund are summarized below:

# SUMMARY OF PRINCIPAL RESULTS FOR STATE DIVISION (\$ IN THOUSANDS)

VALUATION DATE	12/31/2007	12/31/2006
Number of Active Non-Troopers Annual Covered Payroll	52,522 \$2,182,829	52,096 \$2,050,760
Number of Active Troopers Annual Covered Payroll	802 \$53,689	770 \$48,565
Total Number of Active Members Total Annual Covered Payroll	53,324 \$2,236,518	52,866 \$2,099,325
Number of Retired Members and Survivors Annual Retirement Benefits	29,789 \$948,902	28,804 \$874,223
Total Assets: Actuarial Value Market Value	\$14,220,681 \$14,850,919	\$13,327,290 \$14,041,260
Actuarial Accrued Liability Unfunded Actuarial Accrued Liability (UAAL)	\$19,390,296 \$5,169,615	\$18,246,010 \$4,918,720
CONTRIBUTIONS FOR FISCAL YEAR ENDING	12/31/2009	12/31/2008
Employer Contribution Rate:  Normal  Accrued Liability  Annual Required Contribution  Reduction for AED and SAED  Total Employer Contribution Rate	5.62 % 12.29 % 17.91 % (5.50)% 12.41 %	5.99 % 12.46 % 18.45 % (5.26)% 13.19 %
Amortization Period	30 years	30 years

# SUMMARY OF PRINCIPAL RESULTS FOR SCHOOL DIVISION (\$ IN THOUSANDS)

VALUATION DATE	12/31/2007	12/31/2006
Number of Active Members Annual Covered Payroll	116,245 \$3,618,258	113,288 \$3,371,186
Number of Retired Members and Survivors Annual Retirement Benefits	44,064 \$1,373,427	42,127 \$1,256,884
Assets: Actuarial Value Market Value	\$22,070,769 \$23,042,078	\$20,535,733 \$21,635,957
Actuarial Accrued Liability Unfunded Actuarial Accrued Liability (UAAL)	\$29,241,428 \$7,170,659	\$27,708,682 \$7,172,949
CONTRIBUTION FOR FISCAL YEAR ENDING	12/31/2009	12/31/2008
Employer Contribution Rate:  Normal  Accrued Liability  Annual Required Contribution  Reduction for AED and SAED  Total Employer Contribution Rate	6.02 % <u>10.54 %</u> 16.56 % <u>(5.50)%</u> 11.06 %	5.87 % <u>11.31 %</u> 17.18 % <u>(5.26)%</u> 11.92 %
Amortization Period	30 years	30 years

# SUMMARY OF PRINCIPAL RESULTS FOR LOCAL GOVERNEMENT DIVISION (\$ IN THOUSANDS)

VALUATION DATE	12/31/2007	12/31/2006
Number of Active Members	16,977	15,959
Annual Covered Payroll	\$680,442	\$636,300
Number of Retired Members and Survivors	4,112	3,835
Annual Retirement Benefits	\$122,722	\$107,856
Assets:		
Actuarial Value	\$2,892,847	\$2,613,386
Market Value	\$3,013,807	\$2,751,071
Actuarial Accrued Liability	\$3,563,199	\$3,288,421
Unfunded Actuarial Accrued Liability (UAAL)	\$670,352	\$675,035
CONTRIBUTION FOR FISCAL YEAR ENDING	12/31/2009	12/31/2008
Employer Contribution Rate:		
Normal	5.90 %	6.31 %
Accrued Liability	<u>5.24 %</u>	<u>5.64 %</u>
Annual Required Contribution	11.14 %	11.95 %
Reduction for AED and SAED	<u>(5.50)%</u>	<u>(5.26)%</u>
Total Employer Contribution Rate	5.64 %	6.69 %
Amortization Period	30 years	30 years

# SUMMARY OF PRINCIPAL RESULTS FOR JUDICIAL DIVISION (\$ IN THOUSANDS)

VALUATION DATE	12/31/2007	12/31/2006
Number of Active Members	296	291
Annual Covered Payroll	\$31,150	\$29,151
Number of Retired Members and Survivors	279	258
Annual Retirement Benefits	\$12,850	\$11,095
Assets:		
Actuarial Value	\$231,228	\$210,633
Market Value	\$240,861	\$221,663
Actuarial Accrued Liability	\$264,210	\$247,491
Unfunded Actuarial Accrued Liability (UAAL)	\$32,982	\$36,858
CONTRIBUTION FOR FISCAL YEAR ENDING	12/31/2009	12/31/2008
Employer Contribution Rate:		
Normal	11.45 %	10.94 %
Accrued Liability	5.63 %	6.72 %
Annual Required Contribution	17.08 %	17.66 %
Reduction for AED and SAED	(5.50)%	(5.26)%
Total Employer Contribution Rate	11.58 %	12.40 %
Amortization Period	30 years	30 years

# SUMMARY OF PRINCIPAL RESULTS FOR HEALTH CARE TRUST FUND (\$ IN THOUSANDS)

VALUATION DATE	12/31/2007	12/31/2006
Number of Active Members Annual Covered Payroll	186,842 \$6,566,368	184,876 \$6,617,218
Number of Retired Members and Survivors	43,119	41,421
Assets: Actuarial Value Market Value	\$258,775 \$269,432	\$214,816 \$226,850
Actuarial Accrued Liability Unfunded Actuarial Accrued Liability (UAAL)	\$1,303,594 \$1,044,819	\$1,247,950 \$1,033,134
CONTRIBUTION FOR FISCAL YEAR ENDING	12/31/2009	12/31/2008
Employer Contribution Rate:  Normal  Accrued Liability  Annual Required Contribution	0.27 % <u>0.85 %</u> 1.12 %	0.26 % <u>0.85 %</u> 1.11 %
Amortization Period	30 years	30 years

- 2. Comments on the valuation results as of December 31, 2007 are given in Section IV and further discussion of the contribution levels is set out in Section V.
- 3. Schedule B shows the development of the actuarial value of assets. Schedule D of this report outlines the full set of actuarial assumptions and methods used in the current valuation. The following changes have been made to certain health care assumptions since the previous valuation:
  - Future plan election rates for retirees age 65 and older have been adjusted to reflect recent election patterns, incorporating the addition of the Secure Horizons (HMO) plan option.
  - Expected Inpatient Hospital claims costs for retirees age 65 and older that do not have Part A have been updated to better reflect anticipated changes in the various coverage categories, based on the most recent "no Part A" Report presented to the Board in March 2008.
- 4. The valuation takes into account the effect of amendments to PERA through the valuation date. The Main Provisions of PERA, as summarized in Schedule F, were taken into account in the current valuation. There were no changes to the provisions since the previous valuation.

## SECTION II - MEMBERSHIP DATA

1. Data regarding the membership of PERA for use as a basis of the valuation were furnished by PERA. The following table shows the number of active members and their annual compensation as of December 31, 2007 on the basis of which the valuation was prepared.

TABLE 1

THE NUMBER AND ANNUAL COMPENSATION OF ACTIVE MEMBERS AS OF DECEMBER 31, 2007
(\$ IN THOUSANDS)

GROUP	NUMBER	COMPENSATION
State Division	53,324	\$2,236,518
School Division	116,245	3,618,258
Local Government Division	16,977	680,442
Judicial Division	<u>296</u>	<u>31,150</u>
Total	186,842	\$6,566,368

2. The following table shows a six-year history of active member valuation data.

TABLE 2
SCHEDULE OF TOTAL ACTIVE MEMBER VALUATION DATA

VALUATION DATE	NUMBER	ANNUAL PAYROLL (\$ IN THOUSANDS)	ANNUAL AVERAGE PAY	% CHANGE IN AVERAGE PAY
12/31/2007	186,842	\$ 6,566,368	\$ 35,144	4.47 %
12/31/2006	182,404	6,135,962	33,639	2.29 %
12/31/2005	180,630	5,940,132	32,886	(1.09)%
12/31/2004	176,840	5,879,355	33,247	0.70 %
12/31/2003	170,991	5,645,468	33,016	(1.31)%
12/31/2002	172,761	5,779,704	33,455	4.92 %

3. The following table shows the number and annual retirement benefits payable to retired members and survivors on the roll of PERA as of the valuation date.

THE NUMBER AND ANNUAL RETIREMENT BENEFITS
OF RETIRED MEMBERS AND SURVIVORS OF DECEASED MEMBERS
ON THE ROLL AS OF DECEMBER 31, 2007

(\$ IN THOUSANDS)

**TABLE 3** 

	GROUP				
TYPE OF RETIREMENT	STATE DIVISION	SCHOOL DIVISION	LOCAL GOVERNMENT DIVISION	JUDICIAL DIVISION	TOTAL
Service:					
Number	25,122	39,889	3,253	242	68,506
Annual Benefits	\$855,858	\$1,300,377	\$106,246	\$11,559	\$2,274,040
Disability:					
Number	3,653	3,052	683	21	7,409
Annual Benefits	\$75,412	\$57,751	\$13,658	\$828	\$147,649
Survivors*:					
Number	1,014	1,123	176	16	2,329
Annual Benefits	\$17,632	\$15,299	\$2,818	\$463	\$36,212
Total:					
Number	29,789	44,064	4,112	279	78,244
Annual Benefits	\$948,902	\$1,373,427	\$122,722	\$12,850	\$2,457,901

<sup>\*</sup> Includes deferred survivors

4. Tables 1 through 4 of Schedule G show the distribution by age and service of the number and average annual compensation of active members for each division included in the valuation.

#### **SECTION III - ASSETS**

1. Schedule C shows the additions and deductions of PERA for the year preceding the valuation date and a reconciliation of the fund balances at market value. As of December 31, 2007, the market value of assets used to determine the actuarial value of assets for each division is shown below:

TABLE 4

COMPARISON OF MARKET VALUE OF ASSETS AT DECEMBER 31, 2007 AND DECEMBER 31, 2006 (\$ IN THOUSANDS)

GROUP	DECEMBER 31, 2007 MARKET VALUE	DECEMBER 31, 2006 MARKET VALUE
State Division	\$14,850,919	\$14,041,260
School Division	23,042,078	21,635,957
Local Government Division	3,013,807	2,751,071
Judicial Division	240,861	221,663
Health Care Trust Fund	269,432	226,850
Total Market Value of Assets	\$41,417,097	\$38,876,801

2. The four-year market related actuarial value of assets used for the current valuation was \$39,674,299,891. Schedule B shows the development of the actuarial value of assets as of December 31, 2007. The following table shows the actuarial value of assets allocated among all divisions.

TABLE 5

COMPARISON OF ACTUARIAL VALUE OF ASSETS AT DECEMBER 31, 2007 AND DECEMBER 31, 2006 (\$ IN THOUSANDS)

GROUP	DECEMBER 31, 2007 ACTUARIAL VALUE	DECEMBER 31, 2006 ACTUARIAL VALUE
State Division	\$14,220,681	\$13,327,290
School Division	22,070,769	20,535,733
Local Government Division	2,892,847	2,613,386
Judicial Division	231,228	210,633
Health Care Trust Fund	<u>258,775</u>	214,816
Total Market Value of Assets	\$39,674,300	\$36,901,858

#### **SECTION IV - COMMENTS ON VALUATION**

#### **State Division**

- 1. The total valuation balance sheet on account of benefits shows that the State Division has total prospective benefit liabilities of \$21,700,763,345, of which \$11,760,140,021 is for the prospective benefits payable on account of present retired members and survivors of deceased members, \$358,808,237 is for the prospective benefits payable on account of present inactive members, and \$9,581,815,087 is for the prospective benefits payable on account of present active members. Against these benefit liabilities the State Division has a total present actuarial value of assets of \$14,220,680,819 as of December 31, 2007. The difference of \$7,480,082,526 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of benefits. Of this amount, \$1,361,031,657 is the present value of future contributions expected to be made by members (at the rate of 8.0% of salary for non-state troopers and 10.0% of salary for state troopers), and the balance of \$6,119,050,869 represents the present value of future contributions payable by the employers.
- 2. The employers' contributions to the State Division on account of benefits consist of three amounts set by statute. The basic amount is 9.13% of salary for non-state troopers and 11.83% of salary for state troopers (after reduction for the Health Care Trust Fund Contribution of 1.02% of salary). For members hired on or after January 1, 2007, an allocation of the statutory rates of 1.00% of salary is made each year to an Annual Increase Reserve which will provide post-retirement increases for these members in the future. In addition, employers will make Amortization Equalization Disbursement (AED) and Supplemental Amortization Equalization Disbursement (SAED) contributions in the future at the following rates:

Year	AED	SAED
2007	1.00%	0.00%
2008	1.40	0.50
2009	1.80	1.00
2010	2.20	1.50
2011	2.60	2.00
2012	3.00	2.50
2013 and later	3.00	3.00

- 3. The valuation indicates that employer normal contributions at the rate of 5.62% of salary are required to provide the benefits for the State Division. Prospective employer normal contributions at this rate have a present value of \$949,435,885. When this amount is subtracted from \$6,119,050,869, which is the present value of the total future contributions to be made by the employers, there remains \$5,169,614,984 as the amount of future accrued liability contributions.
- 4. After recognizing the required employer normal contribution rates, the remaining basic contribution amounts to 6.29% of salary. Assuming the aggregate payroll of the State Division increases by 4.50% each year, contributions at this level will never amortize the unfunded accrued liability of \$5,169,614,984. After recognizing the value of future AED contributions, the amortization period remains infinite. However, after recognizing the value of both future AED and future SAED contributions, the amortization period is reduced to 69 years.
- 5. Effective July 1, 2005, Colorado PERA began receiving employer contributions on compensation paid to PERA retirees who are working at PERA affiliated employers. No amounts are received from the retirees who are performing the work for the employers. The employer rate is the total rate within the division, including both AED and SAED.

#### **School Division**

- 1. The total valuation balance sheet on account of benefits shows that the School Division has total prospective benefit liabilities of \$33,425,285,204, of which \$17,545,019,910 is for the prospective benefits payable on account of present retired members and survivors of deceased members, \$494,370,095 is for the prospective benefits payable on account of present inactive members, and \$15,385,895,199 is for the prospective benefits payable on account of present active members. Against these benefit liabilities the School Division has a total present actuarial value of assets of \$22,070,769,075 as of December 31, 2007. The difference of \$11,354,516,129 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of benefits. Of this amount, \$2,397,986,431 is the present value of future contributions expected to be made by members (at the rate of 8.0% of salary), and the balance of \$8,956,529,698 represents the present value of future contributions payable by the employers.
- 2. The employers' contributions to the School Division on account of benefits consist of three amounts set by statute. The basic amount is 9.13% of salary (after reduction for the Health Care Trust Fund Contribution of 1.02% of salary). This amount will be increased to 9.53% of salary in 2013. For members hired on or after January 1, 2007, an allocation of the statutory rates of 1.00% of salary is made each year to an Annual Increase Reserve which will provide post-retirement increases for these members in the future. In addition, employers will make Amortization Equalization Disbursement (AED) and Supplemental Amortization Equalization Disbursement (SAED) contributions in the future at the following rates:

Year	AED	SAED
2007	1.00%	0.00%
2008	1.40	0.50
2009	1.80	1.00
2010	2.20	1.50
2011	2.60	2.00
2012	3.00	2.50
2013 and later	3.00	3.00

- 3. The valuation indicates that employer normal contributions at the rate of 6.02% of salary are required to provide the benefits for the School Division. Prospective employer normal contributions at this rate have a present value of \$1,785,871,105. When this amount is subtracted from \$8,956,529,698, which is the present value of the total future contributions to be made by the employers, there remains \$7,170,658,593 as the amount of future accrued liability contributions.
- 4. After recognizing the required employer normal contribution rates, the remaining basic contribution amounts to 5.84% of salary. Assuming the aggregate payroll of the School Division increases by 4.50% each year, contributions at this level will never amortize the unfunded accrued liability of \$7,170,658,593. If the increase in basic contribution effective in 2013 is taken into account, the amortization period remains infinite. After recognizing the value of future AED contributions, the amortization period continues to remain infinite. However, if both the AED and SAED are taken into account, the amortization period is reduced to 42 years.
- 5. Effective July 1, 2005, Colorado PERA began receiving employer contributions on compensation paid to PERA retirees who are working at PERA affiliated employers. No amounts are received from the retirees who are performing the work for the employers. The employer rate is the total rate within the division, including both AED and SAED.

#### **Local Government Division**

- 1. The total valuation balance sheet on account of benefits shows that the Local Government Division has total prospective benefit liabilities of \$4,303,232,831, of which \$1,616,627,195 is for the prospective benefits payable on account of present retired members and survivors of deceased members, \$90,721,980 is for the prospective benefits payable on account of present inactive members, and \$2,595,883,656 is for the prospective benefits payable on account of present active members. Against these benefit liabilities the Local Government Division has a total present actuarial value of assets of \$2,892,846,938 as of December 31, 2007. The difference of \$1,410,385,893 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of benefits. Of this amount, \$428,542,715 is the present value of future contributions expected to be made by members (at the rate of 8.0% of salary), and the balance of \$981,843,178 represents the present value of future contributions payable by the employers.
- 1. The employers' contributions to the Local Government Division on account of benefits consist of three amounts set by statute. The basic amount is 8.98% of salary (after reduction for the Health Care Trust Fund Contribution of 1.02% of salary). For members hired on or after January 1, 2007, an allocation of the statutory rates of 1.00% of salary is made each year to an Annual Increase Reserve which will provide post-retirement increases for these members in the future. In addition, employers will make Amortization Equalization Disbursement (AED) and Supplemental Amortization Equalization Disbursement (SAED) contributions in the future at the following rates:

Year	AED	SAED
2007	1.00%	0.00%
2008	1.40	0.50
2009	1.80	1.00
2010	2.20	1.50
2011	2.60	2.00
2012	3.00	2.50
2013 and later	3.00	3.00

- 3. The valuation indicates that employer normal contributions at the rate of 5.90% of salary are required to provide the benefits for the Local Government Division. Prospective employer normal contributions at this rate have a present value of \$311,491,113. When this amount is subtracted from \$981,843,178, which is the present value of the total future contributions to be made by the employers, there remains \$670,352,065 as the amount of future accrued liability contributions.
- 4. After recognizing the required employer normal contribution rates, the remaining basic contribution amounts to 5.79% of salary. Contributions at this level will amortize the unfunded accrued liability of \$670,352,065 over 25 years, assuming the aggregate payroll of the Local Government Division increases by 4.50% each year. If the value of future AED contributions is taken into account, the amortization period is reduced to 24 years. If both the future AED and future SAED contributions are taken into account, the amortization period is further reduced to 14 years.
- 5. Effective July 1, 2005, Colorado PERA began receiving employer contributions on compensation paid to PERA retirees who are working at PERA affiliated employers. No amounts are received from the retirees who are performing the work for the employers. The employer rate is the total rate within the division, including both AED and SAED.

#### **Judicial Division**

- 1. The total valuation balance sheet on account of benefits shows that the Judicial Division has total prospective benefit liabilities of \$312,028,779, of which \$150,291,424 is for the prospective benefits payable on account of present retired members and survivors of deceased members, \$1,781,395 is for the prospective benefits payable on account of present inactive members, and \$159,955,960 is for the prospective benefits payable on account of present active members. Against these benefit liabilities the Judicial Division has a total present actuarial value of assets of \$231,228,304 as of December 31, 2007. The difference of \$80,800,475 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of benefits. Of this amount, \$20,003,288 is the present value of future contributions expected to be made by members (at the rate of 8.0% of salary), and the balance of \$60,797,187 represents the present value of future contributions payable by the employers.
- 2. The employers' contributions to the Judicial Division on account of benefits consist of three amounts set by statute. The basic amount is 12.64% of salary (after reduction for the Health Care Trust Fund Contribution of 1.02% of salary). For members hired on or after January 1, 2007, an allocation of the statutory rates of 1.00% of salary is made each year to an Annual Increase Reserve which will provide post-retirement increases for these members in the future. In addition, employers will make Amortization Equalization Disbursement (AED) and Supplemental Amortization Equalization Disbursement (SAED) contributions in the future at the following rates:

Year	AED	SAED
2007	1.00%	0.00%
2008	1.40	0.50
2009	1.80	1.00
2010	2.20	1.50
2011	2.60	2.00
2012	3.00	2.50
2013 and later	3.00	3.00

- 3. The valuation indicates that employer normal contributions at the rate of 11.45% of salary are required to provide the benefits for the Judicial Division. Prospective employer normal contributions at this rate have a present value of \$27,814,994. When this amount is subtracted from \$60,797,187, which is the present value of the total future contributions to be made by the employers, there remains \$32,982,193 as the amount of future accrued liability contributions.
- 4. After recognizing the required employer normal contribution rates, the remaining basic contribution amounts to 3.94% of salary. Contributions at this level will amortize the unfunded accrued liability of \$32,982,193 over 94 years, assuming the aggregate payroll of the Judicial Division increases by 4.50% each year. If the value of future AED contributions is taken into account, the amortization period is reduced to 78 years. If both the future AED and future SAED contributions are taken into account, the amortization period is further reduced to 22 years.
- 5. Effective July 1, 2005, Colorado PERA began receiving employer contributions on compensation paid to PERA retirees who are working at PERA affiliated employers. No amounts are received from the retirees who are performing the work for the employers. The employer rate is the total rate within the division, including both AED and SAED.

#### **Health Care Trust Fund**

- 1. The total valuation balance sheet on account of health care benefits shows that PERA has total prospective health care benefit liabilities of \$1,402,738,993, of which \$912,130,721 is for the prospective benefits payable on account of present benefit recipients enrolled in PERA Care and receiving a health care subsidy pursuant to law, \$14,049,246 is for the prospective benefits payable on account of present deferred vested members, and \$476,559,026 is for the prospective benefits payable on account of present active members. These amounts are net of any member premiums required during retirement for enrollment in the Health Care Plan. Against these health care benefit liabilities PERA has a total present actuarial value of assets of \$258,774,755 as of December 31, 2007. The difference of \$1,143,964,238 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of health care benefits. Of this amount, \$0 is the present value of future contributions expected to be made by members, and the balance of \$1,143,964,238 represents the present value of future contributions payable by the employers.
- 2. The employers' contributions to the Health Care Trust Fund consist of a statutory mandated 1.02% of salary plus an expected additional contribution resulting from PERA qualifying for the Retiree Drug Subsidy under Medicare Part D. The valuation indicates that employer normal contributions at the rate of 0.27% of salary are required to provide the health care benefits of PERA.
- 3. Prospective employer normal contributions at the rate noted in paragraph 2 have a present value of \$99,144,757. When this amount is subtracted from \$1,143,964,238, which is the present value of the total future contributions to be made by the employers, there remains \$1,044,819,481 as the amount of future accrued liability contributions.
- 4. After recognizing the required normal contribution rate, the remaining statutory contribution amounts to 0.75% of salary. Contributions at this level will amortize the unfunded accrued liability of \$1,044,819,481 over 38 years. If anticipated RDS payments are contributed to the HCTF, the amortization period will be 24 years.

#### **SECTION V - CONTRIBUTIONS PAYABLE BY EMPLOYERS**

1. The statutory employer contribution rates for each division are shown in the following table:

**TABLE 6** 

Division	Employer Contribution Rate
State	
Non-Troopers	10.15%
Troopers	12.85
School	10.15*
Local Government	10.00
Judicial	13.66

<sup>\* 10.55%</sup> on and after January 1, 2013

- 2. For each division, 1.02% of the statutory rates shown above are allocated to the Health Care Trust Fund. Additional contributions to the HCTF resulting from RDS payments are considered to be made on behalf of the employer(s).
- 3. In addition to the statutory rates shown in paragraph 1, Amortization Equalization Disbursements (AED) contributions and Supplemental Amortization Equalization Disbursement (SAED) contributions are to be made by all employers in amounts shown below:

Year	AED	SAED
2007	1.00%	0.00%
2008	1.40	0.50
2009	1.80	1.00
2010	2.20	1.50
2011	2.60	2.00
2012	3.00	2.50
2013 and later	3.00	3.00

These amounts are continued in each division until the division's actuarial funded ratio exceeds 100%. At that time, the amount of the AED and SAED is reduced in the following years to an amount necessary to maintain a 100% funded ratio.

4. The table below shows the development of the normal contribution rate, the unfunded accrued liability (UAL), amortization period and the actuarially required contribution rate with a 30-year amortization period for each division as well as for the Health Care Trust Fund.

Table 7
Employer Contribution Rate
Expressed as Percent of Active Member Payroll

	State Division	School Division	Local Government Division	Judicial Division	Health Care Trust Fund
Contribution For					
Normal Cost					
Service Retirement Benefits	8.38%	9.44%	8.17%	12.67%	0.21%
Disability Benefits	0.93%	0.40%	1.00%	1.67%	0.04%
Survivor Benefits	0.44%	0.36%	0.44%	1.21%	0.00%
Separation Benefits	3.92%	3.82%	4.29%	3.90%	<u>0.02%</u>
Total	13.67%	14.02%	13.90%	19.45%	0.27%
Member Current Contributions*	<u>8.05%</u>	<u>8.00%</u>	<u>8.00%</u>	<u>8.00%</u>	<u>0.00%</u>
Employer Normal Cost	5.62%	6.02%	5.90%	11.45%	0.27%
Employer Contribution Rate*	11.91%	11.86%	11.69%	15.39%	1.02%
Percent Available to Amortize Unfunded Actuarial Accrued Liability (UAAL)	6.29%	5.84%	5.79%	3.94%	0.75%
Number of Years to Amortize UAAL					
■ Without AED	Infinite	Infinite	25 years	94 years	38 years
■ With AED**	Infinite	Infinite	24 years	78 years	38 years
■ With AED & SAED**	69 years	42 years	14 years	22 years	38 years
Actuarially Required Employer Contribution Rate to pay Normal Cost and amortize UAAL over 30 years (assuming AED and SAED are paid throughout the amortization period)	12.41%	11.06%	5.64%	11.58%	1.12%

<sup>\*</sup> Weighted average for State Division.

<sup>\*\*</sup> Reflects value of increased statutory rate for School Division from 10.15% to 10.55% effective January 1, 2013.

## **SECTION VI - ACCOUNTING INFORMATION**

 Governmental Accounting Standards Board Statements 25, 27, 43 and 45 set forth certain items of required supplementary information to be disclosed in the financial statements of PERA and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

#### NUMBER OF ALL MEMBERS AS OF DECEMBER 31, 2007

GROUP	NUMBER				
	State Division	School Division	Local Government Division	Judicial Division	Health Care Trust Fund
Retirees and survivors currently receiving benefits	29,789	44,064	4,112	279	43,119
Terminated employees entitled to benefits but not yet receiving benefits	4,528	9,191	1,049	11	14,108
Inactive Members	48,266	71,520	13,674	5	N/A
Active Members Vested					
General employees	28,625	59,371	7,288	220	9000
State troopers	573	0	0	0	50000000000000000000000000000000000000
Non-vested General employees State troopers	23,897 <u>229</u>	56,874 0	9,689 <u>0</u>	76 0	
Total Active Members*	53,324	116,245	16,977	296	186,842
Totals	135,907	241,020	35,812	591	244,069

<sup>\*</sup> For current active employees, the liability only includes potential future health care benefits provided by PERA during the employees' retirement. The costs of any health care coverage during active employment are not included in this valuation.

2. Another such item is the schedule of funding progress as shown below.

# SCHEDULE OF FUNDING PROGRESS (\$ IN THOUSANDS)

	Actuarial	Actuarial				
	Value of	Accrued	Unfunded			UAAL as a
Actuarial	Plan	Liability (AAL)	AAL	Funded	Covered	Percentage of
Valuation	Assets	Entry Age	(UAAL)	Ratio	Payroll	Covered Payroll
Date	(a)	(b)	(b-a)	(a/b)	(c)	((b-a)/c)
		ST	ATE DIVISIO	<u>N*</u>		
12/31/2007	\$14,220,681	\$19,390,296	\$5,169,615	73.3 %	\$2,236,518	231.1 %
12/31/2006	13,327,290	18,246,010	4,918,720	73.0 %	2,099,325	234.3 %
12/31/2005	12,536,916	17,541,744	5,004,828	71.5 %	2,064,764	242.4 %
12/31/2004	28,594,699	40,783,531	12,188,832	70.1 %	5,303,439	229.8 %
12/31/2003	28,522,222	37,914,502	9,392,280	75.2 %	5,140,918	182.7 %
12/31/2002	28,551,607	32,463,918	3,912,311	87.9 %	5,278,586	74.1 %
		SCH	HOOL DIVISIO	<u> N*</u>		
12/31/2007	\$22,070,769	\$29,241,428	\$7,170,659	75.5 %	\$3,618,258	198.2 %
12/31/2006	20,535,733	27,708,682	7,172,949	74.1 %	3,371,186	212.8 %
12/31/2005	19,184,225	25,963,972	6,779,747	73.9 %	3,241,214	209.2 %
12/31/2004	28,594,699	40,783,531	12,188,832	70.1 %	5,303,439	229.8 %
12/31/2003	28,522,222	37,914,502	9,392,280	75.2 %	5,140,918	182.7 %
12/31/2002	28,551,607	32,463,918	3,912,311	87.9 %	5,278,586	74.1 %
	, ,		OVERNMENT	DIVISION	, ,	
12/31/2007	\$2,892,847	\$3,563,199	\$670,352	81.2 %	\$680,442	98.5 %
12/31/2007	φ2,692,64 <i>1</i> 2,613,386	3,288,421	675,035	79.5 %	636,300	106.1 %
12/31/2005	2,358,719	3,022,624	663,905	79.5 % 78.0 %	607,217	109.3 %
12/31/2004	1,990,652	2,576,988	586,336	77.2 %	549,607	106.7 %
12/31/2003	1,907,786	2,379,229	471,443	80.2 %	479,098	98.4 %
12/31/2002	1,839,632	1,966,143	126,511	93.6 %	474,760	26.6 %
12/01/2002	1,000,002				474,700	20.0 70
		JUE	ICIAL DIVISI			
12/31/2007	\$231,228	\$264,210	\$32,982	87.5 %	\$31,150	105.9 %
12/31/2006	210,633	247,491	36,858	85.1 %	29,151	126.4 %
12/31/2005	193,305	223,955	30,650	86.3 %	26,937	113.8 %
12/31/2004	170,111	209,954	39,843	81.0 %	26,309	151.4 %
12/31/2003	166,654	198,377	31,723	84.0 %	25,452	124.6 %
12/31/2002	162,901	165,672	2,771	98.3 %	26,357	10.5 %
		<u>HEALTH</u>	CARE TRUS	T FUND		
12/31/2007	\$258,775	\$1,303,594	\$1,044,819	19.9 %	\$6,566,368	15.9 %
12/31/2006	214,816	1,247,950	1,033,134	17.2 %	6,617,218	15.6 %
12/31/2005	191,264	1,116,627	925,363	17.1 %	5,940,132	15.6 %
12/31/2004	166,619	1,102,597	935,978	15.1 %	5,879,355	15.9 %
12/31/2003	160,416	897,461	737,045	17.9 %	5,645,468	13.1 %
12/31/2002	161,700	813,211	651,511	19.9 %	5,779,703	11.3 %

<sup>\*</sup> Results prior to 12/31/2005 are for the State and School Divisions combined.



3. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at December 31, 2007.

	State Division	School Division	Local Government Division	Judicial Division	Health Care Trust Fund
Valuation Date	12/31/2007	12/31/2007	12/31/2007	12/31/2007	12/31/2007
Actuarial cost method	Entry age				
Amortization method	Level percent Open				
Remaining amortization period	30 years				
Asset valuation method	4 year smoothed Market				
Actuarial assumptions:					
Investment rate of return*	8.50%	8.50%	8.50%	8.50%	8.50%
Projected salary increases*	4.50 – 10.17%	4.50 – 10.70%	4.50 – 11.47%	5.00 - 6.00%	4.50% in aggregate
Post-Retirement Benefit Increases:					
Members hired prior to 7/1/05	3.50% compounded annually	3.50% compounded annually	3.50% compounded annually	3.50% compounded annually	None
Members hired on or after 7/1/05 but before 1/1/07	3.00% compounded annually	3.00% compounded annually	3.00% compounded annually	3.00% compounded annually	None
Members hired on or after 1/1/07	None**	None**	None**	None**	None
Health Care Inflation Factor	N⁄Α	N⁄Α	N⁄Α	NΑ	4.50%, applicable to Medicare Part A costs

<sup>\*</sup> Includes inflation at 4.50%.
\*\* Post-Retirement Benefit Increases are provided by a separate fund subject to monies being available.

## **SCHEDULE OF EMPLOYER CONTRIBUTIONS**

Fiscal Year	Annual Required Contribution (ARC)*	Percent of ARC Contributed							
	State Division								
	State Division								
2007 2006 2005 2004 2003 2002	18.45 % 17.23 % 19.33 % 17.31 % 11.11 % 6.37 %	56 % 58 % 48 % 51 % 69 % 100 %							
	School Division								
2007 2006 2005 2004 2003 2002	17.18 % 16.06 % 19.33 % 17.31 % 11.11 % 6.37 %	60 % 62 % 48 % 51 % 69 % 100 %							
	Local Government Divis	sion							
2007 2006 2005 2004 2003 2002	11.95 % 11.21 % 14.11 % 13.98 % 9.53 % 5.02 %	84 % 85 % 64 % 62 % 69 % 100 %							
	Judicial Division								
2007 2006 2005 2004 2003 2002	17.66 % 15.33 % 17.21 % 16.22 % 3.98 % 1.55 %	77 % 84 % 74 % 64 % 100 % 100 %							

<sup>\*</sup> As a percentage of Covered Payroll without consideration of future increases in AED and SAED. The amortization period for 2007 is 30 years.

# SCHEDULE OF EMPLOYER CONTRIBUTIONS HEALTH CARE TRUST FUND

Fiscal Year	Annual Required Contribution (ARC) (a)	PERA Payroll Allocations (b)	Retiree Drug Subsidy (RDS) Contribution (c)	Total Contribution (d) = (b)+(c)	Percentage of ARC Contributed (e) = (d)/(a)
2007	\$73,345,970	\$68,507,982	\$12,396,777	\$80,904,759	110 %
2006	\$70,687,571	\$64,546,501	\$12,481,068	\$77,027,569	109 %

Beginning in 2006, the following changes were implemented to comply with GASB 43 and GASB Technical Bulletin 2006-1:

- All liabilities are determined without a reduction for expected future RDS payments.
- The unfunded accrued liability (UAL) is amortized over 30 years.
- The total HCTF contribution is determined to be the statutory employer contribution plus that year's actual RDS payments.

# HISTORICAL SCHEDULE OF EMPLOYER CONTRIBUTIONS HEALTH CARE TRUST FUND

Fiscal Year	Annual Required Contribution (ARC)	Percent of ARC Contributed
2005	1.13%	90 %
2004	1.02%	100 %
2003	1.16%	100 %
2002	1.71%	100 %

Note: ARCs through 2005 are determined in accordance with GASB 26 and are expressed as a percentage of pay. Beginning in 2006, ARCs are determined in accordance with GASB 43/45.

## SECTION VII - DERIVATION OF EXPERIENCE GAINS AND LOSSES

# Changes in Unfunded Actuarial Accrued Liabilities (UAAL) During Calendar Year 2007 (\$ in Millions)

	State Division	School Division	Local Government Division	Judicial Division	Health Care Trust Fund*
40 B			Division		T GITG
1) Beginning of Year:					
a) Unfunded Actuarial Accrued Liability	\$4,918.7	\$7,172.9	\$675.0	\$36.9	\$1,033.1
b) Normal Cost	308.0	488.8	95.1	5.8	17.7
c) Required Employer Contributions	592.7	911.1	135.7	8.0	73.3
d) Actual Employer Contributions	411.9	663.6	123.1	6.7	80.9
2) End of Year:					
a) Expected UAAL from previous valuation					
(1a) x 1.085 + (1b) x 1.0425 – (1c) x 1.0425	\$5,040.0	\$7,342.3	\$690.0	\$37.7	\$1,062.9
b) Expected UAAL on actual contributions					
(1a) x 1.085 + (1b) x 1.0425 – (1d) x 1.0425	5,228.5	7,600.4	703.2	39.1	1,055.0
c) Increase in UAAL due to Deficiency					
(2b) – (2a)	188.5	258.1	13.2	1.4	(7.9)
3) Gains (Losses) on Year's Activities					
a) Liability – Assumed vs. Actual	(\$241.3)	(\$37.5)	(\$25.5)	(\$1.5)	\$9.2
b) Assets – Assumed vs. Actual	300.2	467.2	58.3	7.6	5.2
c) Change in Plan Assumptions	0.0	0.0	0.0	0.0	(4.2)
d) Change in Plan Provisions	0.0	0.0	0.0	0.0	0.0
e) Change in Methods	0.0	0.0	<u>0.0</u>	0.0	0.0
f) Total	\$58.9	\$429.7	\$32.8	\$6.1	\$10.2
4) Actual UAAL at End of Year					
(2a) + (2c) – (3f)	\$5,169.6	\$7,170.7	\$670.4	\$33.0	\$1,044.8

<sup>\*</sup> Required Employer Contributions are based on the Annual Required Contribution (ARC). The ARC is based on amortizing the UAL over 30 years and reflects liabilities that are not reduced for future Medicare Part D Retiree Drug Subsidy payments to PERA. Actual Employer Contributions include 2007 RDS payments to PERA of \$12.4 million.

# Gains & Losses in Actuarial Accrued Liabilities During Calendar Year 2007 (\$ in Millions)

Type of Activity	State Division	School Division	Local Government Division	Judicial Division	Health Care Trust Fund
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	(\$18.2)	(\$28.7)	(\$7.2)	(\$2.8)	(\$1.5)
<b>Disability Retirements</b> . If disability claims are less than assumed, there is a gain. If more claims, a loss.	14.0	7.9	4.3	0.4	0.7
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(1.0)	(3.2)	(0.3)	0.1	(0.1)
Withdrawal from Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(31.1)	(68.1)	(7.5)	(1.0)	(2.8)
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(86.1)	(141.6)	6.7	(0.3)	0.0
New Members. Additional unfunded accrued liability will produce a loss.	(47.8)	(49.7)	(12.6)	(3.4)	(3.0)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	300.2	467.2	58.3	7.6	5.2
<b>Death after Retirement</b> . If retirants live longer than assumed, there is a loss. If not as long, a gain.	(6.0)	20.3	0.0	(0.5)	0.4
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(65.1)</u>	225.6	(8.9)	6.0	<u>15.5</u>
Gain (or Loss) During Year from Financial Experience	\$58.9	\$429.7	\$32.8	\$6.1	\$14.4

#### SECTION VIII - ADDITIONAL HEALTH CARE TRUST FUND INFORMATION

#### **Subsidy Analysis**

				PERA St	ubsidy
Year	Administrative Expenses	Claims & HMO Premiums	Total Costs (2)+(3)	Amount	Percentage (5)/(4)
(1)	(2)	(3)	(4)	(5)	(6)
2007	\$7,348,821	\$216,848,936	\$224,197,757	\$58,986,436	26%
2006	4,174,575	233,101,402	237,275,977	71,155,481	30%
2005	4,725,201	230,726,860	235,452,061	77,899,386	33%
2004	4,708,737	211,610,778	216,319,515	76,409,691	35%
2003	4,872,077	192,262,017	197,134,094	70,215,907	36%
2002	4,571,820	169,354,992	173,926,812	70,008,246	40%
2001	4,564,519	125,038,014	129,602,533	59,506,374	46%
2000	3,530,456	111,292,369	114,822,825	48,577,022	42%

#### Notes:

- Administrative Expenses total includes expenses associated with claims administration.
- Claims and HMO Premiums total reflects actual claims and premiums paid (net of any premium variance).
- The subsidy analysis schedule presented above was revised, beginning with the December 31, 2006 valuation report, for all years shown to include the premiums paid by retirees for HMOs in the claims and HMO premiums and in the total cost columns. The total cost includes all healthcare cost for retirees, beneficiaries and covered dependents. Also, claims experience gains and losses have been included in the actual PERA subsidy.

## **SCHEDULE A**

# VALUATION BALANCE SHEET SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF THE PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO AS OF DECEMBER 31, 2007

## **STATE DIVISION**

PRESENT AND PROSPECTIVE ASSETS				
Actuarial Value of Present Assets		\$14,220,680,819		
Present value of future members' contributions		1,361,031,657		
Present value of future employer contributions				
Normal contributions	\$949,435,885			
Unfunded accrued liability contributions	5,169,614,984			
Total prospective employer contributions		<u>6,119,050,869</u>		
Total Present and Prospective Assets		\$21,700,763,345		
ACTUARIAL LI	ABILITIES			
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		\$11,760,140,021		
Present value of prospective benefits payable on account of inactive members		358,808,237		
Present value of prospective benefits payable on account of present active members:				
Service retirement benefits	\$7,599,250,257			
Disability retirement benefits	383,822,409			
Survivor benefits	246,445,064			
Separation benefits	1,352,297,357			
Total		9,581,815,087		
Total Actuarial Liabilities		\$21,700,763,345		



# SCHEDULE A (Continued)

## **VALUATION BALANCE SHEET** SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF THE PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO AS OF DECEMBER 31, 2007

## **SCHOOL DIVISION**

PRESENT AND PROSPECTIVE ASSETS				
Actuarial Value of Present Assets		\$22,070,769,075		
Present value of future members' contributions		2,397,986,431		
Present value of future employer contributions				
Normal contributions	\$1,785,871,105			
Unfunded accrued liability contributions	7,170,658,593			
Total prospective employer contributions		8,956,529,698		
Total Present and Prospective Assets		<u>\$33,425,285,204</u>		
ACTUARIAL L	ABILITIES			
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		\$17,545,019,910		
Present value of prospective benefits payable on account of inactive members		494,370,095		
Present value of prospective benefits payable on account of present active members:				
Service retirement benefits	\$12,561,602,726			
Disability retirement benefits	281,546,173			
Survivor benefits	315,051,205			
Separation benefits	<u>2,227,695,095</u>			
Total		15,385,895,199		
Total Actuarial Liabilities		\$33,425,285,204		

# SCHEDULE A (Continued)

## **VALUATION BALANCE SHEET** SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF THE PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO AS OF DECEMBER 31, 2007

## **LOCAL GOVERNMENT DIVISION**

PRESENT AND PROSPECTIVE ASSETS				
Actuarial Value of Present Assets		\$2,892,846,938		
Present value of future members' contributions		428,542,715		
Present value of future employer contributions				
Normal contributions	\$311,491,113			
Unfunded accrued liability contributions	670,352,065			
Total prospective employer contributions		<u>981,843,178</u>		
Total Present and Prospective Assets		\$4,303,232,831		
ACTUARIAL LI	ABILITIES			
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		\$1,616,627,195		
Present value of prospective benefits payable on account of inactive members		90,721,980		
Present value of prospective benefits payable on account of present active members:				
Service retirement benefits	\$1,946,629,765			
Disability retirement benefits	121,837,308			
Survivor benefits	69,033,238			
Separation benefits	<u>458,383,345</u>			
Total		2,595,883,656		
Total Actuarial Liabilities		<u>\$4,303,232,831</u>		

#### **VALUATION BALANCE SHEET** SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF THE PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO AS OF DECEMBER 31, 2007

#### **JUDICIAL DIVISION**

PRESENT AND PROSE	ECTIVE ASSETS	
Actuarial Value of Present Assets		\$231,228,304
Present value of future members' contributions		20,003,288
Present value of future employer contributions		
Normal contributions Unfunded accrued liability contributions	\$27,814,994 <u>32,982,193</u>	
Total prospective employer contributions		60,797,187
Total Present and Prospective Assets		<u>\$312,028,779</u>
ACTUARIAL LI	ABILITIES	
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		\$150,291,424
Present value of prospective benefits payable on account of inactive members		1,781,395
Present value of prospective benefits payable on account of present active members:		
Service retirement benefits	\$130,416,237	
Disability retirement benefits	9,128,599	
Survivor benefits	8,840,512	
Separation benefits	11,570,612	
Total		159,955,960
Total Actuarial Liabilities		\$312,028,779

#### **VALUATION BALANCE SHEET** SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF THE PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO AS OF DECEMBER 31, 2007 **HEALTH CARE TRUST FUND**

PRESENT AND PROSP	ECTIVE ASSETS	
Actuarial Value of Present Assets		\$258,774,755
Present value of future members' contributions		0
Present value of future employer contributions		
Normal contributions Unfunded accrued liability contributions	\$99,144,757 1,044,819,481	
Total prospective employer contributions		1,143,964,238
Total Present and Prospective Assets		\$1,402,738,993
ACTUARIAL LIA	ABILITIES	
Present value of benefits payable on account of present benefit recipients enrolled in PERA Care and receiving a health care subsidy pursuant to the law		\$912,130,721
Present value of prospective benefits payable on account of inactive members		14,049,246
Present value of prospective benefits payable on account of present active members:  Service retirement benefits	¢402 427 422	
Disability retirement benefits	\$423,137,122 33,533,112	
Survivor benefits	1,099,884	
Separation benefits	18,788,908	
Total		476,559,026
Total Actuarial Liabilities		<u>\$1,402,738,993</u>

### **SOLVENCY TEST** (\$ IN THOUSANDS)

Aggregate Accrued Liabilities For*					Portion of Accrued Liabilities Covered by Reported Asset				
Valuation Date	(1) Active Member Contributions	(2) Retirees, Survivors and Inactive Members	(3) Active Members (Employer Financed Portion)	Reported Assets	(1)	(2)	(3)		
12/31/2007	\$6,834,261	\$32,017,760	\$13,607,112	\$39,415,525	100%	100%	4.1%		
12/31/2006	6,742,437	29,674,682	13,073,485	36,687,042	100%	100%	2.1%		
12/31/2005	5,755,118	26,382,911	14,614,267	34,273,165	100%	100%	14.6%		
12/31/2004	6,365,516	23,833,958	13,370,998	30,755,462	100%	100%	4.2%		
12/31/2003	6,316,579	20,844,058	13,291,470	30,596,662	100%	100%	25.9%		

<sup>\*</sup> Results do not include the Health Care Trust Fund.

## SCHEDULE B

### DEVELOPMENT OF THE DECEMBER 31, 2007 ACTUARIAL VALUE OF ASSETS

## **STATE DIVISION**

(1)	Actuarial Value Beginning of Year	\$	13,327,290,139
(2)	Market Value End of Year	\$	14,850,919,254
(3)	Market Value Beginning of Year	\$	14,041,260,113
(4)	Cash Flow		
	a. Contributions	\$	420,139,761
	b. Benefit Payments		(988,865,261)
	c. Administrative Expenses		(6,963,329)
	d. Net Transfers		(2,898,035)
	e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d]	\$	(578,586,864)
(5)	Investment Income		
	a. Market total: (2) – (3) – (4)e	\$	1,388,246,005
	b. Assumed Rate		8.50%
	c. Amount of Immediate Recognition		
	$[(3) \times (5)b] + [(4)e \times (5)b \times 0.5]$	\$	1,168,917,168
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$	219,328,837
(6)	Phased-In Recognition of Investment Income		
	a. Current Year: 0.25 x (5)d	\$	54,832,209
	b. First Prior Year		217,513,634
	c. Second Prior Year		30,714,533
	d. Third Prior Year		0
	e. Total Recognized Investment Gain	\$	303,060,376
(7)	Actuarial Value End of Year:		
	(1) + (4)e + (5)c + (6)e	\$	14,220,680,819
		0000	

# DEVELOPMENT OF THE DECEMBER 31, 2007 ACTUARIAL VALUE OF ASSETS

## **SCHOOL DIVISION**

(1)	Actuarial Value Beginning of Year	\$	20,535,732,606
(2)	Market Value End of Year	\$	23,042,077,727
(3)	Market Value Beginning of Year	\$	21,635,957,329
(4)	Cash Flow		
( ' '	a. Contributions	\$	677,948,090
	b. Benefit Payments	Ψ	(1,405,783,991)
	c. Administrative Expenses		(1,403,703,991)
	d. Net Transfers		(57,170)
		<u> </u>	
	e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d]	Ф	(739,834,663)
(5)	Investment Income		
	a. Market total: (2) – (3) – (4)e	\$	2,145,955,061
	b. Assumed Rate		8.50%
	c. Amount of Immediate Recognition		
	$[(3) \times (5)b] + [(4)e \times (5)b \times 0.5]$	\$	1,807,613,400
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$	338,341,661
(6)	Phased-In Recognition of Investment Income		
( )	a. Current Year: 0.25 x (5)d	\$	84,585,415
	b. First Prior Year	<b>T</b>	334,880,090
	c. Second Prior Year		47,792,227
	d. Third Prior Year		n ,. 32,227
	e. Total Recognized Investment Gain	\$	467,257,732
	Č		, ,
(7)	Actuarial Value End of Year:		
	(1) + (4)e + (5)c + (6)e	\$	22,070,769,075

# DEVELOPMENT OF THE DECEMBER 31, 2007 ACTUARIAL VALUE OF ASSETS

#### **LOCAL GOVERNMENT DIVISION**

		8	
(1)	Actuarial Value Beginning of Year	\$	2,613,386,001
	• •		
(2)	Market Value End of Year	\$	3,013,806,957
(3)	Market Value Beginning of Year	\$	2,751,070,678
(4)	Cash Flow		
(')	a. Contributions	\$	125,581,415
	b. Benefit Payments	Ψ	(135,865,832)
	c. Administrative Expenses		(1,917,808)
	d. Net Transfers		(53,411)
	e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d]	\$	(12,255,636)
	C. 14ct Oddit i low. [(4)d · (4)d · (4)d · (4)d]	Ψ	(12,200,000)
(5)	Investment Income		
	a. Market total: (2) – (3) – (4)e	\$	274,991,915
	b. Assumed Rate		8.50%
	c. Amount of Immediate Recognition		
	$[(3) \times (5)b] + [(4)e \times (5)b \times 0.5]$	\$	233,320,143
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$	41,671,772
(6)	Phased-In Recognition of Investment Income		
(0)	a. Current Year: 0.25 x (5)d	\$	10,417,943
	b. First Prior Year	•	41,727,704
	c. Second Prior Year		6,250,783
	d. Third Prior Year		0
	e. Total Recognized Investment Gain	\$	58,396,430
(7)			
(7)	Actuarial Value End of Year:		0.000.040.000
	(1) + (4)e + (5)c + (6)e	\$	2,892,846,938

# DEVELOPMENT OF THE DECEMBER 31, 2007 ACTUARIAL VALUE OF ASSETS

## **JUDICIAL DIVISION**

(1)	Actuarial Value Beginning of Year	\$	210,632,896
(2)	Market Value End of Year	\$	240,861,140
(3)	Market Value Beginning of Year	\$	221,663,432
(4)	Cash Flow		
	a. Contributions	\$	6,770,097
	b. Benefit Payments	۳	(12,526,242)
	c. Administrative Expenses		(19,087)
	d. Net Transfers		3,008,616
		<u> </u>	(2,766,616)
	e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d]	φ	(2,700,010)
(5)	Investment Income		
	a. Market total: (2) – (3) – (4)e	\$	21,964,324
	b. Assumed Rate		8.50%
	c. Amount of Immediate Recognition		
	$[(3) \times (5)b] + [(4)e \times (5)b \times 0.5]$	\$	18,723,811
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$	3,240,513
(6)	Phased-In Recognition of Investment Income		
(0)	a. Current Year: 0.25 x (5)d	\$	810,128
	b. First Prior Year	۳	3,374,369
	c. Second Prior Year		453,716
	d. Third Prior Year		100,710
	e. Total Recognized Investment Gain	\$	4,638,213
		*	.,,
(7)	Actuarial Value End of Year:		
	(1) + (4)e + (5)c + (6)e	\$	231,228,304

# DEVELOPMENT OF THE DECEMBER 31, 2007 ACTUARIAL VALUE OF ASSETS

#### **HEALTH CARE TRUST FUND**

(1)	Actuarial Value Beginning of Year	\$ 214,816,145
(2)	Market Value End of Year	\$ 269,432,145
(3)	Market Value Beginning of Year	\$ 226,849,686
(4)	Cash Flow	
( ' /	a. Contributions	\$ 79,695,881
	b. Benefit Payments	(58,986,437)
	c. Administrative Expenses	(1,994,693)
	d. Net Cash Flow: $[(4)a + (4)b + (4)c + (4)d]$	\$ 18,714,751
(5)	Investment Income	
	a. Market total: (2) – (3) – (4)e	\$ 23,867,708
	b. Assumed Rate	8.50%
	c. Amount of Immediate Recognition	
	$[(3) \times (5)b] + [(4)e \times (5)b \times 0.5]$	\$ 20,077,600
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$ 3,790,108
(6)	Phased-In Recognition of Investment Income	
	a. Current Year: 0.25 x (5)d	\$ 947,527
	b. First Prior Year	3,596,079
	c. Second Prior Year	622,653
	d. Third Prior Year	 0
	e. Total Recognized Investment Gain	\$ 5,166,259
(7)	Actuarial Value End of Year:	
	(1) + (4)e + (5)c + (6)e	\$ 258,774,755

#### **SCHEDULE C**

# SUMMARY OF CHANGES IN NET ASSETS FOR THE YEAR ENDING DECEMBER 31, 2007

#### **STATE DIVISION**

Additions for the Year			
Contributions:			
Members (including purchased service)	\$ 188,230,776		
Employers	 231,908,985		
Total		\$	420,139,761
Net Investment Income		_	1,388,246,005
TOTAL		\$	1,808,385,766
Deductions for the Year			
Benefit Payments (including refunds and disability insurance)	\$ 984,172,630		
Transfers	2,898,035		
Other deductions	4,692,631		
Administrative Expenses	 6,963,329		
TOTAL		\$	998,726,625
Excess of Additions Over Deductions		\$	809,659,141
Reconciliation of Asset Balances			
Market Value of Assets as of 12/31/2006		\$	14,041,260,113
Excess of Additions over Deductions			809,659,141
Market Value of Assets as of 12/31/2007*		\$	14,850,919,254

<sup>\*</sup> The Market Value of Assets shown above is used in the determination of the Actuarial Value of Assets (Schedule B). Final Market Value of Assets is \$14,852,029,092 and includes the amount in the Annual Increase Reserve of \$1,109,838 for post-retirement benefit increases for members hired on or after January 1, 2007.



#### **SUMMARY OF CHANGES IN NET ASSETS** FOR THE YEAR ENDING DECEMBER 31, 2007

#### **SCHOOL DIVISION**

Additions for the Year	
Contributions:	
Members (including purchased service) \$ 303,562,370	
Employers 374,385,720	
· ·	
Total	\$ 677,948,090
Net Investment Income	2,145,955,061
TOTAL	\$ 2,823,903,151
	, , , , , , , , , , , , , , , , , , , ,
Deductions for the Year	
Benefit Payments (including refunds and disability insurance) \$ 1,400,495,258	
Transfers 57,170	
Other deductions 5,288,733	
Administrative Expenses 11,941,592	
TOTAL	\$ 1,417,782,753
Excess of Additions Over Deductions	\$ 1,406,120,398
Reconciliation of Asset Balances	
Market Value of Assets as of 12/31/2006	\$ 21,635,957,329
Excess of Additions over Deductions	1,406,120,398
Market Value of Assets as of 12/31/2007*	\$ 23,042,077,727

<sup>\*</sup> The Market Value of Assets shown above is used in the determination of the Actuarial Value of Assets (Schedule B). Final Market Value of Assets is \$23,043,186,201 and includes the amount in the Annual Increase Reserve of \$1,108,474 for post-retirement benefit increases for members hired on or after January 1, 2007.

#### **SCHEDULE C**

(Continued)

## SUMMARY OF CHANGES IN NET ASSETS FOR THE YEAR ENDING DECEMBER 31, 2007

#### **LOCAL GOVERNMENT DIVISION**

Additions for the Year		
Contributions:		
Members (including purchased service)	\$ 57,326,973	
Employers	 68,254,442	
Total		\$ 125,581,415
Net Investment Income		 274,991,915
TOTAL		\$ 400,573,330
Deductions for the Year		
Benefit Payments (including refunds and disability insurance)	\$ 134,594,050	
Transfers	53,411	
Other deductions	1,271,782	
Administrative Expenses	 1,917,808	
TOTAL		\$ 137,837,051
Excess of Additions Over Deductions		\$ 262,736,279
Reconciliation of Asset Balances		
Market Value of Assets as of 12/31/2006		\$ 2,751,070,678
Excess of Additions over Deductions		262,736,279
Market Value of Assets as of 12/31/2007*		\$ 3,013,806,957

<sup>\*</sup> The Market Value of Assets shown above is used in the determination of the Actuarial Value of Assets (Schedule B). Final Market Value of Assets is \$3,014,273,587 and includes the amount in the Annual Increase Reserve of \$466,630 for post-retirement benefit increases for members hired on or after January 1, 2007.

#### **SCHEDULE C**

(Continued)

## SUMMARY OF CHANGES IN NET ASSETS FOR THE YEAR ENDING DECEMBER 31, 2007

#### **JUDICIAL DIVISION**

Additions for the Year		
Contributions:		
Members (including purchased service)	\$ 2,559,064	
Employers	4,211,033	
Total		\$ 6,770,097
Net Investment Income		 21,964,324
TOTAL		\$ 28,734,421
Deductions for the Year		
Benefit Payments (including refunds and disability insurance)	\$ 12,425,503	
Transfers	(3,008,616)	
Other deductions	100,739	
Administrative Expenses	 19,087	
TOTAL		\$ 9,536,713
Excess of Additions Over Deductions		\$ 19,197,708
Reconciliation of Asset Balances		
Market Value of Assets as of 12/31/2006		\$ 221,663,432
Excess of Additions over Deductions		19,197,708
Market Value of Assets as of 12/31/2007*		\$ 240,861,140

<sup>\*</sup> The Market Value of Assets shown above is used in the determination of the Actuarial Value of Assets (Schedule B). Final Market Value of Assets is \$240,872,539 and includes the amount in the Annual Increase Reserve of \$11,399 for post-retirement benefit increases for members hired on or after January 1, 2007.

### **SUMMARY OF CHANGES IN NET ASSETS** FOR THE YEAR ENDING DECEMBER 31, 2007

#### **HEALTH CARE TRUST FUND**

Additions for the Year		
Contributions:		
Members' Purchase Service Transfers	\$ 11,187,899	
Employers	 68,507,982	
Total		\$ 79,695,881
Net Investment Income		 23,867,708
TOTAL		\$ 103,563,589
Deductions for the Year		
Benefit Payments	\$ 58,986,437	
Other Income and Expenses	(1,707,341)	
PERA Internal Administrative Expenses	 3,702,034	
TOTAL		\$ 60,981,130
Excess of Additions Over Deductions		\$ 42,582,459
Reconciliation of Asset Balances		
Market Value of Assets as of 12/31/2006		\$ 226,849,686
Excess of Additions over Deductions		 42,582,459
Market Value of Assets as of 12/31/2007		\$ 269,432,145

#### **OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

**INVESTMENT RATE OF RETURN**: 8.50% per annum, compounded annually (net of administrative expenses).

**INFLATION ASSUMPTION**: 4.50% per year.

**PERCENT MARRIED**: 100% of employees are assumed to be married, with the wife 3 years younger than the husband.

**ACTUARIAL METHOD**: Entry age normal cost method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability. See Schedule E for a detailed explanation.

**ASSETS**: The method of valuing assets is intended to recognize a "smoothed" market value of assets. Under this method, the difference between actual return on market value from investment experience and the expected return on market value is recognized over a four-year period. The actuarial value of assets was reinitialized at Market Value as of December 31, 2004. There will be three years of smoothing in the December 31, 2007 valuation as the method is phased in.

**INTEREST CREDIT**: 5% per annum on member contribution account balances.

**WITHDRAWAL ASSUMPTION**: It was assumed that 35% of the vested members who terminate elect to withdraw their contributions and matching employer contributions while the remaining 65% elect to leave their contributions in the plan in order to be eligible for a benefit at their retirement date. The only exception to this is the Judicial Division, which assumes 100% elect to leave their contributions in the plan in order to be eligible for a benefit at their retirement date.

STATE DIVISION

## STATE DIVISION NON-TROOPERS

**SALARY INCREASES:** Representative values of the assumed annual rates of future salary increases are as follows and include inflation 4.50% per annum:

Sample	Merit &	Pay Increase Assumpti for an Individual Memb Inflation & Productivity	oer Total Increase
Ages	Seniority	(Economy)	(Next Year)
20	5.67%	4.50%	10.17%
25	3.75	4.50	8.25
30	2.80	4.50	7.30
35	2.05	4.50	6.55
40	1.50	4.50	6.00
45	0.85	4.50	5.35
50	0.50	4.50	5.00
55	0.10	4.50	4.60
60	0.00	4.50	4.50
65	0.00	4.50	4.50

**SEPARATIONS FROM ACTIVE SERVICE**: Representative values of the assumed annual rates of withdrawal, death and disability are shown in the following tables:

Sample		mate Irawal	Percent of Members Separating Within the Next Year Death <sup>1</sup>			Disability	
Ages	Males	Females	Males	Females	Males	Females	
20	21.00%	18.00%	0.025%	0.015%	0.01%	0.01%	
25	7.20	7.60	0.030	0.015	0.04	0.03	
30	6.30	6.90	0.040	0.025	0.05	0.05	
35	5.40	6.20	0.055	0.035	0.18	0.16	
40	4.40	5.60	0.095	0.058	0.24	0.22	
45	4.30	5.00	0.200	0.097	0.39	0.34	
50	4.20	5.00	0.383	0.158	0.55	0.50	
55	4.20	5.00	0.538	0.227	0.90	0.84	
60	4.20	5.00	0.680	0.345	1.06	0.94	
65	4.20	5.00	1.061	0.603	1.08	0.96	

<sup>&</sup>lt;sup>1</sup>Rates are shown for healthy members. Separate disability mortality tables are used for disabled retirees.

## STATE DIVISION NON-TROOPERS

The select withdrawal assumptions for members with less than five years of service are shown in the following table:

	Completed Years of Service	Males	Females
_	0	40.0%	40.0%
	1	18.0	20.0
	2	12.0	14.0
	3	9.0	11.0
	4	8.0	10.0

**RETIREMENT**: Representative values of the assumed annual rates of service retirement are shown in the following table:

Retirement Ages	Who Are Eligil	f Members ble for Reduced ring Next Year	Who Are Eligib	f Members le for Unreduced ring Next Year
	Males	Females	Males	Females
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64	10% 10 10 10 15 15 15 15 15 15 25 25	10% 10 10 10 15 15 15 15 15 15 15 15 15	40% 35 30 30 30 20 20 20 20 20 18 20 17 17	40% 35 30 25 25 25 20 20 20 20 16 20 16 16
66 67 68	0 0 0	0 0 0	25 25 25	22 22 22
69	0	0	25 25	22
70 & over	0	0	100	100

(Continued)

## STATE DIVISION TROOPERS

**SALARY INCREASES:** Representative values of the assumed annual rates of future salary increases are as follows and include inflation at 4.50% per annum:

Sample Ages	Merit & Seniority	Pay Increase Assumpti for an Individual Memb Inflation & Productivity (Economy)	
20	5.50%	4.50%	10.00%
25	3.75	4.50	8.25
30	2.80	4.50	7.30
35	2.05	4.50	6.55
40	1.50	4.50	6.00
45	1.20	4.50	5.70
50	0.80	4.50	5.30
55	0.40	4.50	4.90
60	0.00	4.50	4.50
65	0.00	4.50	4.50

**SEPARATIONS FROM ACTIVE SERVICE**: Representative values of the assumed annual rates of withdrawal, death and disability are shown in the following tables:

Sample		Se mate rawal <sup>1</sup>		Members in the Next Yea th <sup>2</sup>		bility
Ages	Males	Females	Males	Females	Males	Females
20	5.00%	5.00%	0.025%	0.015%	0.02%	0.02%
25	5.00	5.00	0.030	0.015	0.08	0.08
30	3.80	3.80	0.040	0.025	0.12	0.12
35	2.50	2.50	0.055	0.035	0.40	0.40
40	1.60	1.60	0.095	0.058	0.54	0.54
45	1.10	1.10	0.200	0.097	0.86	0.86
50	1.00	1.00	0.383	0.158	1.28	1.28
55	1.00	1.00	0.538	0.227	1.85	1.85
60	1.00	1.00	0.680	0.345	2.00	2.00
65	1.00	1.00	1.061	0.603	2.00	2.00

<sup>&</sup>lt;sup>1</sup>There are no select withdrawal assumptions for the State Troopers.

<sup>&</sup>lt;sup>2</sup>Rates are shown for healthy members. Separate disability mortality tables are used for disabled retirees.

# $\frac{\text{SCHEDULE D}}{(\text{Continued})}$

### STATE DIVISION **TROOPERS**

RETIREMENT: Representative values of the assumed annual rates of service retirement are shown in the following table:

Retirement Ages	Percent of Members Who Are Eligible for Reduced Benefits Retiring Next Year	Percent of Members Who Are Eligible for Unreduced Benefits Retiring Next Year
50	20%	30%
51	20	30
52	20	30
53	20	30
54	20	25
55	10	25
56	10	15
57	10	15
58	10	35
59	10	35
60	25	35
61	25	35
62	25	50
63	25	50
64	25 25	50
65 & over	0	100

(Continued)

#### **SCHOOL DIVISION**

**SALARY INCREASES**: Representative values of the assumed annual rates of future salary increases are as follows and include inflation at 4.50% per annum:

		Pay Increase Assumption for an Individual Member Inflation &	
Sample Ages	Merit & Seniority	Productivity (Economy)	Increase (Next Year)
20	6.20%	4.50%	10.70%
25	4.10	4.50	8.60
30	2.95	4.50	7.45
35	2.50	4.50	7.00
40	1.95	4.50	6.45
45	1.35	4.50	5.85
50	0.80	4.50	5.30
55	0.35	4.50	4.85
60	0.00	4.50	4.50
65	0.00	4.50	4.50

**SEPARATIONS FROM ACTIVE SERVICE**: Representative values of the assumed annual rates of withdrawal, death and disability are shown in the following tables:

	Liltin		Percent of eparating With	Members in the Next Yea	r	
Sample	Ultimate <u>Withdrawal</u>				<u>Disa</u>	bility
Ages	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
20	21.00%	18.00%	0.025%	0.015%	0.01%	0.01%
25	7.63	8.99	0.030	0.015	0.01	0.02
30	5.24	7.79	0.040	0.025	0.01	0.03
35	4.36	6.80	0.055	0.035	0.04	0.05
40	3.59	5.40	0.095	0.058	0.11	0.08
45	3.27	5.00	0.200	0.097	0.18	0.11
50	3.90	4.60	0.383	0.158	0.30	0.20
55	3.90	4.60	0.538	0.227	0.55	0.36
60	3.90	4.60	0.680	0.345	0.70	0.40
65	3.90	4.60	1.061	0.603	0.70	0.40

<sup>&</sup>lt;sup>1</sup>Rates are shown for healthy members. Separate disability mortality tables are used for disabled retirees.

# $\frac{\text{SCHEDULE D}}{(\text{Continued})}$

#### **SCHOOL DIVISION**

The select withdrawal assumptions for members with less than five years of service are shown in the following table:

Completed Years of Service	Males	Females
0	40.0%	40.0%
1	16.0	16.5
2	12.0	12.5
3	9.0	10.5
4	8.0	10.0

RETIREMENT: Representative values of the assumed annual rates of service retirement are shown in the following table:

Retirement	Who Are Eligi	of Members ble for Reduced iring Next Year	duced Who Are Eligible for Unred	
Ages	Males	Females	Males	Females
50 51 52 53 54	10% 10 10 10 18	12% 12 12 12 20	40% 40 35 35 35	40% 40 35 35 35
55 56 57 58 59	18 18 18 18 18	20 20 20 20 20 20	25 25 25 25 25	25 25 22 22 22
60 61 62 63 64	14 14 14 14 14	15 15 15 15 15	25 22 22 22 22 22	22 17 17 17 17
65 66 67 68 69	0 0 0 0	0 0 0 0	30 19 19 19 19	25 17 17 17 17
70 & over	0	0	100	100

#### **LOCAL GOVERNMENT DIVISION**

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases are as follows and include inflation at 4.50% per annum:

		ay Increase Assumpti for an Individual Memb	
Sample Ages	Merit & Seniority	Inflation & Productivity (Economy)	Total Increase (Next Year)
20	6.97%	4.50%	11.47%
25	4.31	4.50	8.81
30	2.65	4.50	7.15
35	1.72	4.50	6.22
40	1.23	4.50	5.73
45	0.99	4.50	5.49
50	0.79	4.50	5.29
55	0.60	4.50	5.10
60	0.25	4.50	4.75
65	0.00	4.50	4.50

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of withdrawal, death and disability are shown in the following tables:

		S mate drawal	Percent of eparating With Dea	in the Next Yea		Disability	
Sample Ages	Males	Females	Males	Females	Males	Females	
20	12.00%	15.00%	0.025%	0.015%	0.01%	0.01%	
25	9.50	12.35	0.030	0.015	0.04	0.04	
30	7.20	9.58	0.040	0.025	0.07	0.07	
35	4.40	8.00	0.055	0.035	0.18	0.18	
40	3.90	7.10	0.095	0.058	0.27	0.24	
45	3.40	6.30	0.200	0.097	0.41	0.39	
50	3.40	6.30	0.383	0.158	0.61	0.65	
55	3.40	6.30	0.538	0.227	1.02	0.90	
60	3.40	6.30	0.680	0.345	1.10	1.03	
65	3.40	6.30	1.061	0.603	1.10	1.03	

<sup>&</sup>lt;sup>1</sup>Rates are shown for healthy members. Separate disability mortality tables are used for disabled retirees.

# $\frac{\text{SCHEDULE D}}{(\text{Continued})}$

#### **LOCAL GOVERNMENT DIVISION**

The select withdrawal assumptions for members with less than five years of service are shown in the following table:

Completed Years of Service	Males	Females
0	40.0%	40.0%
1	16.0	18.0
2	12.0	12.0
3	9.0	9.0
4	7.0	7.0

RETIREMENT: Representative values of the assumed annual rates of service retirement are shown in the following table:

Retirement	Percent of Members Who Are Eligible for Reduced Benefits Retiring Next Year		Percent of Members Who Are Eligible for Unreduced Benefits Retiring Next Year	
Ages	Males	Females	Males	Females
50 51 52 53 54	12% 12 12 12 12	15% 15 15 15 15	15% 15 15 15 15	15% 15 15 15 25
55 56 57 58 59	12 15 15 15 15	15 15 15 15 15	15 25 25 25 25	25 25 25 25 25 25
60 61 62 63 64	15 15 15 15 15	10 10 12 12 12	20 20 20 20 20 20	12 12 15 15 15
65 66 67 68 69	0 0 0 0	0 0 0 0	25 30 30 30 30 30	30 25 25 25 25 25
70 & over	0	0	100	100

(Continued)

#### **JUDICIAL DIVISION**

**SALARY INCREASES:** Representative values of the assumed annual rates of future salary increases are as follows and include inflation at 4.50% per annum:

Sample Ages	Merit & Seniority	Pay Increase Assumption for an Individual Member Inflation & Productivity (Economy)	
30	1.50%	4.50%	6.00%
35	1.50	4.50	6.00
40	0.67	4.50	5.17
45	0.50	4.50	5.00
50	0.50	4.50	5.00
55	0.50	4.50	5.00
60	0.50	4.50	5.00
65	0.50	4.50	5.00

**SEPARATIONS FROM ACTIVE SERVICE**: Representative values of the assumed annual rates of withdrawal, death and disability are shown in the following tables:

Sample		Se mate <u>Irawal</u> 1	Percent of eparating With <u>Dea</u>	in the Next Year		<u>Disability</u>	
Ages	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>	
30	2.70%	2.70%	0.040%	0.025%	0.06%	0.06%	
35	2.70	2.70	0.055	0.035	0.07	0.07	
40	2.70	2.70	0.095	0.058	0.10	0.10	
45	2.70	2.70	0.200	0.097	0.17	0.17	
50	2.70	2.70	0.383	0.158	0.31	0.31	
55	2.70	2.70	0.538	0.227	0.63	0.63	
60	2.70	2.70	0.680	0.345	1.22	1.22	
65	2.70	2.70	1.061	0.603	1.48	1.48	

<sup>&</sup>lt;sup>1</sup>There are no select withdrawal assumptions for the Judicial Division.

<sup>&</sup>lt;sup>2</sup>Rates are shown for healthy members. Separate disability mortality tables are used for disabled retirees.

## JUDICIAL DIVISION

RETIREMENT: Representative values of the assumed annual rates of service retirement are shown in the following table:

Retirement Ages	Percent of Members Who Are Eligible for Reduced Benefits Retiring Next Year	Percent of Members Who Are Eligible for Unreduced Benefits Retiring Next Year
50	10%	10%
51	10	10 /6
52	10	10
53		
	10	10
54	10	10
55	10	10
56	10	10
57	10	10
58	10	10
59	10	10
60	10	10
61	10	10
62	10	10
63	10	10
64	10	10
65	10	10
66	10	10
67	10	10
68	15	15
69	20	20
70	40	40
71	40	40
72 & over	100	100

## SINGLE LIFE RETIREMENT VALUES

Campula	Present Value of \$1.00 Monthly for Life		Present Value of \$1.00 Monthly Increasing 3.5% Annually		Future Life Expectancy (Years)	
Sample Ages	Males	Females	Males	Females	Males	Females
40	\$138.39	\$141.51	\$206.81	\$214.96	41.93	45.71
45	134.80	139.02	197.32	207.10	37.19	40.86
50	130.42	135.64	186.57	197.55	32.65	36.09
55	125.29	131.12	174.65	186.07	28.35	31.41
60	118.37	124.79	160.31	171.98	24.11	26.78
65	109.07	116.45	143.22	155.38	19.98	22.32
70	98.28	105.86	125.02	136.43	16.62	18.08
75	86.47	93.08	106.56	115.73	12.91	14.19
80	74.16	79.29	88.65	95.06	10.08	10.82
85	62.15	63.82	72.23	73.84	7.76	7.84

(Continued)

#### Methods and Assumptions Specific to the Health Care Trust Fund

Current PERA benefit recipients age 65 and older are assumed to maintain current benefit elections in perpetuity. Current PERA benefit recipients not yet age 65 are assumed to maintain current elections until age 65, with 70% of all PERA benefit recipients assumed to participate age 65 and older. For deferred vested members, 20% are assumed to elect coverage upon commencement of their PERA monthly benefit. For active members retiring directly from PERA, the following participation rates are assumed:

Not yet Age 65: 50% Age 65 and older: 70%

Plan elections for future members are assumed as follows:

Self Funded Plans: 60%
Kaiser Permanente: 25%
Rocky Mountain Health Plans (RMHP): 10%
Secure Horizons: 5%

#### **Health Care Cost Trend Rates:**

	Self Fun	ded Plans	Kaiser		
Year	"Part A" Claims	Part A Deductible	No Part A Premiums	With Part A Premiums	
2008	11.00%	4.50%	10.00%	7.75%	
2009	10.00%	4.50%	9.00%	7.50%	
2010	9.00%	4.50%	8.00%	7.25%	
2011	8.00%	4.50%	7.00%	7.00%	
2012	7.00%	4.50%	6.50%	6.75%	
2013+	6.50%	4.50%	6.50%	6.50%	

	RMHP		Secure	Horizons		
Year	No Part A Premiums	With Part A Premiums	No Part A Premiums	With Part A Premiums	Part A Premiums	RDS Payments
2008	7.75%	6.50%	13.00%	6.50%	5.50%	6.50%
2009	7.50%	6.50%	11.00%	6.50%	5.50%	6.50%
2010	7.25%	6.50%	9.00%	6.50%	5.50%	6.50%
2011	7.00%	6.50%	8.00%	6.50%	5.50%	6.50%
2012	6.75%	6.50%	7.00%	6.50%	5.50%	6.50%
2013+	6.50%	6.50%	6.50%	6.50%	5.50%	6.50%

The service-based PERA subsidy is assumed to remain constant.

(Continued)

The following monthly costs are assumed for 2007, and subject to the Health Care Cost Trend Rates:

	ded Plans ' Claims	Kaiser Permanente		
Members	Members	Premiums for Members	Premiums for Members	
without Part A	with Part A	without Part A	with Part A	
\$289	\$40	\$524	\$138	

Rocky Mountain Health Plans		Secure I		
Premiums	Premiums	Premiums	Premiums	
for Members	for Members	for Members	for Members	
without	with	without	with	Part A
Part A	Part A	Part A	Part A	Premiums
\$536	\$223	\$447	\$152	\$423

#### **Monthly Retiree Drug Subsidy Payments**

Medicare Supplement Plan #1:	\$48.90
Medicare Supplement Plan #2:	\$33.16
Rocky Mountain Health Plan	\$37.40
Kaiser*	\$ 0.00
Secure Horizons*	\$ 0.00

<sup>\*</sup> Members eligible for Medicare Part D that are enrolled in Kaiser Permanente or Secure Horizons receive prescription drug benefits in a Medicare Prescription Drug Plan and do not qualify to generate an RDS for PERA.

#### **Morbidity**

Under GASB Statements 43 and 45, liabilities for medical and drug post-employment benefits are to be based, in most circumstances, on assumed claims costs that vary by age. This is generally accomplished using a morbidity, or aging, curve that models the growth in assumed claims as a member ages. Benefits funded by the Health Care Trust Fund are defined to be the service based monthly subsidy, which does not result in annually changing costs to the Trust as a member ages (not counting the subsidy reduction at age 65 or disability Medicare eligibility), and the "no-Part A" and RDS subsidies, which are assumed to not vary materially as a member ages. Therefore, no morbidity assumptions are utilized in the determination of Health Care Trust Fund liabilities.

(Continued)

#### Assumptions Specific to the "no-Part A" subsidy:

For retired members currently age 65 and older, Part A eligibility status is provided by PERA and is assumed to be maintained in perpetuity. For current retirees not yet age 65, and for active employees hired prior to April 1, 1986, 20% are assumed to not qualify for Medicare Part A; thus qualifying for the "no-Part A" subsidy from the Health Care Trust Fund.

The 20% assumption is based on the results of a survey, conducted by PERA of its membership in 2007, designed specifically to measure the portion of its membership that will not be eligible for Medicare Part A coverage either through their own work history or that of their spouse or ex-spouse.

100% of members receiving health care benefits as a result of disability retirement are assumed to qualify for Medicare Part A.

100% of vested, but deferred, retirements, are assumed to pay the 40 quarters of Medicare taxes required by CMS for free Part A coverage as a result of subsequent employment.

Members that qualify for the "no-Part A" subsidy are assumed to drop coverage at a rate of 7.5% annually in all years.

Costs for the "no-Part A" subsidy are currently less than the costs of PERA paying the Part A premium on behalf of its members that do not qualify for free Part A coverage. However, future increases in the "no-Part A" subsidy may result in it becoming more cost effective in the future for PERA to pay the Part A premium as an alternative to continuing the "no-Part A" subsidy in its current configuration. This valuation assumes PERA will make the decision to pay the Part A premium (on a "whole group basis") when and if it becomes cost effective to do so.

At that time, it is assumed PERA will also pay any premium penalties associated with enrollment of its members after first eligibility, which is 10% of the Part A premium and is payable for a period that is twice as long as the delay in enrollment. For example, someone enrolling at age 70 would need to pay the premium penalty for 10 years, assuming first eligibility at age 65.

#### Retiree Drug Subsidy (RDS) under Medicare Part D:

Due to the service-based premium subsidy not increasing over time, retirees are required to pay the entire increase in annual costs each year, resulting in monthly contributions that increase more rapidly over time than the total costs of coverage. This is expected to result in the prescription drug benefit provided to those members eligible for Medicare Part D to cease being Actuarially Equivalent (by failing the net test component of the Actuarial Equivalency Attestation) at some point in the future, resulting in a termination of the RDS. This valuation is based on the assumption that PERA will last qualify for an RDS payment in 2017, assuming no changes in plan design are made.

#### **SCHEDULE E**

#### **ACTUARIAL COST METHOD**

- 1. The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 8.50%). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.
- 2. The employer contributions required to support the benefits of PERA are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
- 3. The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for pension benefits to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf. For health care benefits, the calculation of the normal contribution is similar but is determined based on total expected career service and is independent of compensation.
- 4. The unfunded accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from the PERA. The accrued liability contribution amortizes the balance of the unfunded accrued liability over a period of years from the valuation date.

#### **SCHEDULE F**

## SUMMARY OF MAIN PERA PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES

**Effective Date** 

Pension: Established in 1931, most recently amended during 2006.

Health Care Trust Fund (HCTF): On July 1, 1985, employer contributions to the HCTF commenced. Plan coverage and premium subsidy payments began July 1, 1986.

#### **DEFINITIONS**

**Affiliated Employers** 

State agencies and institutions of higher education, political subdivisions of the state, all school districts except Denver, courts, cities and municipalities and any other public entities which affiliate with PERA.

**Covered Members** 

Employees of Affiliated Employers who work in a position subject to membership and for whom contributions are made.

Division

One of four separate divisions which include: State, School, Local Government and Judicial. Upon affiliation, employers are assigned to one of these divisions. The financial activities of each division are accounted for in separate trust funds.

Highest Average Salary (HAS)

For members, not in the Judicial Division, who were hired prior to January 1, 2007 one-twelfth of the average of the highest annual salaries upon which contributions were made during three periods of twelve consecutive months of Service Credit; or for a member with less than three years of Service Credit, one-twelfth of the average of the annual salaries upon which contributions were made. Annual salary increases recognized in the determination of HAS are limited to 15% a year.

For members, not in the Judicial Division, who were hired on and after January 1, 2007, one-twelfth of the average of the highest annual salaries upon which contributions were made during three periods of twelve consecutive months of Service Credit; or for a member with less than three years of Service Credit, one-twelfth of the average of the annual salaries upon which contributions were made. Annual salary increases recognized in the determination of HAS are limited to 8% a year.

For Judicial Division members, one-twelfth of the highest annual salary upon which contributions were made during one period of twelve consecutive months of Service Credit.

Service Credit The total of all earned, purchased, (disability) projected, and military service

credit which is used to determine benefit eligibility and amounts.

Vested Members who accrue five or more years of Service Credit are vested for

benefits. If these members leave service they may leave their Member Contribution Accounts with the Plan for a future benefit when reaching

eligibility (deferred vested in this report).

#### CONTRIBUTIONS

#### **Member Contributions**

Members, except for State Troopers, contribute 8.0% of salary. State Troopers contribute 10.0% of salary. Member contributions, together with any purchased service credit payments and interest, are credited to individual Member Contribution Accounts.

#### **Employer Contributions**

State Division (except State Troopers): 10.04% of salary through 6/30/2003, 10.15% after 7/1/2003

School Division: 10.04% of salary through 6/30/2003, 10.15% after 7/1/2003 and further increased to 10.55% on 1/1/2013

State Troopers: 12.74% of salary through 6/30/2003, 12.85% after 7/1/2003

Local Government Division: 9.60% of salary through 12/31/2003, 10.00% on and after 1/1/2004

Judicial Division: 11.82% of salary through 6/30/2003, 12.66% from 7/1/2003 to 6/30/2004, 13.66% after 7/1/2004

These contribution rates include the contributions allocated to the Health Care Trust Fund for all divisions as follows:

Before 7/1/2004 1.10% On and after 7/1/2004 1.02%

For members hired on or after January 1, 2007, these contribution rates also include the 1.00% of payroll contribution earmarked for the Annual Increase Reserve.

Employer contributions are credited to the employer reserve of each division.

## Amortization Equalization Disbursement (AED)

Beginning January 1, 2006, each employer shall pay to PERA a disbursement equal to a percent of total payroll in accordance with the following schedule:

Year	Percent of Total Payroll
2006	0.50%
2007	1.00%
2008	1.40%
2009	1.80%
2010	2.20%
2011	2.60%
2012 & after	3.00%

If, at any time, the actuarial funded ratio for a division is 100% or more, then the amount of the disbursement is reduced in the following year to an amount necessary to maintain the 100% funded ratio.

#### Supplemental Amortization Equalization Disbursement (SAED)

Beginning January 1, 2008, each employer shall pay to PERA a supplemental disbursement equal to a percent of total payroll in accordance with the following schedule:

Year	Percent of Total Payroll
2008	0.50%
2009	1.00%
2010	1.50%
2011	2.00%
2012	2.50%
2013 & after	3.00%

If, at any time, the actuarial funded ratio for a division is 100% or more, then the amount of the disbursement is reduced in the following year to an amount necessary to maintain the 100% funded ratio.

#### **Matching Contributions**

A match applied to individual Member Contribution Accounts when a refund is made or when a money purchase benefit is calculated. The match is applied to the account balance less:

- 1. Any amount paid for the purchase of service credit,
- 2. Any payments in lieu of member contributions, and
- 3. Any interest accrued on 1 and 2.

For members who meet the requirements for a service or reduced service retirement at the time the match is applied, or for payments made to survivors or beneficiaries of members who die before retirement, the match is 100% of eligible amounts.

For members who receive a refund or retire prior to meeting the requirements for a service or reduced service retirement, the match is 50% of eligible amounts.

#### **ELIGIBILITY FOR BENEFITS**

## Refund of Member Contributions

In the event a member leaves service for a reason other than death or retirement, member contribution accounts including interest plus matching employer contributions with interest are refunded upon request.

#### **Service Retirement**

The Age and Service Credit requirements to be eligible for a full Service Retirement are listed below:

- Members, except State Troopers, hired before 7/1/2005

Age	Service Credit
50	30
55	Age and Service = 80 years or more
60	20
65	5
65	Less than 5 but 60 payroll postings

Members, except State Troopers, hired on and after 7/1/2005 but before 1/1/2007

Age	Service Credit
Any Age	35
55	30
55	Age and Service = 85 years or more
60	20
65	5
65	Less than 5 but 60 payroll postings

- Members, except State Troopers, hired on and after 1/1/2007

Age	Service Credit
Any Age	35
55	30
60	25
65	5
65	Less than 5 but 60 payroll postings

- State Troopers, regardless of date of hire

Age	Service Credit
Any Age	30
50	25
55	20
65	5
65	Less than 5 but 60 payroll postings



## Reduced Service Retirement

The Age and Service Credit requirements to be eligible for a Reduced Service Retirement are listed below:

- Members, except State Troopers, regardless of date of hire

Age	Service Credit
50	25
55	20
60	5

State Troopers, regardless of date of hire

Age	Service Credit	
50	20	
60	5	

#### **Disability Retirement**

Active members with five or more years of earned service credit, with at least 6 months of this time earned in the most recent period of membership are covered (vested) for disability retirement. To be eligible, the member must be found to be totally and permanently disabled (mentally ore physically) from regular and gainful employment. The service credit requirement is waived for state troopers injured in the line of duty and for judges found disabled by the Colorado Supreme Court.

#### **Survivor Benefits**

The qualified survivors of members who die before retirement with at least one year of service credit are eligible for monthly survivor benefits. The service credit requirement is waived if the death was job related.

### **MONTHLY BENEFIT CALCULATIONS**

#### **Service Retirement Benefit**

State including state troopers, School and Local Government Divisions and Members of the Judicial Division who were on the bench on and after July 1, 1973:

The greater of a) or b)

- a) 2.5% of HAS times years of Service Credit up to 40
- b) The money purchase benefit which is actuarially determined based on the value of the member contribution account and matching employer contributions on the effective date of retirement.

Members age 65 with less than 5 years and less than 60 payroll postings are eligible for the money purchase benefit only.

Members of the Judicial Division who were on the bench prior to July 1, 1973:

The greater of c) or d)

- c) The greater of a) or b) above
- d) 1. 4% of HAS times years of Service Credit up to 10, plus
  - 2. 1 2/3% of HAS times years of Service Credit in excess of 10 up to 16, <u>plus</u>
  - 3. 1.5% of HAS times years of Service Credit in excess of 16 up to 20, plus
  - 4. 2.5% of HAS times years of Service Credit in excess of 20, the total not to exceed 100% of HAS.

In all cases, the benefit is limited to 100% of HAS.

#### Reduced Service Retirement Benefit

For all members, except State Troopers:

The service retirement benefit calculated above reduced 4% for each year after age 60, 3% for each year from age 55 to age 60, 6% for each year prior to 55, and proportionately for fractions of a year, from the effective date of reduced service retirement to the date the member would have been eligible for a service retirement benefit.

For State Troopers:

The service retirement benefit calculated above reduced 4% for each year after age 60, 3% for each year from age 50 to age 60, and proportionately for fractions of a year, from the effective date of reduced service retirement to the date the member would have been eligible for a service retirement benefit.



## Disability Retirement Benefit

If years of Service Credit at disability are greater than 20, the disability retirement benefit is calculated based on actual Service Credit at disability; otherwise, the disability retirement benefit is calculated based on actual Service Credit at disability plus Service Credit projected to age 65, but not to exceed a total of 20 years of Service Credit.

Benefits for disability retirees with an effective disability retirement date on or after July 1, 1988 and before January 1, 1999, who work after retirement will be reduced by 1/3 of the amount, if any, by which the initial annual PERA benefit plus earned income exceeds the annualized HAS.

Disability benefits are payable for as long as the disability retiree is disabled. Benefits cease upon recovery.

#### **Survivor Benefits**

#### If the deceased was not Eligible for Reduced Service Retirement at the time of Death

Benefits are payable in the following order:

- a) Qualified Children Under Age 23: 40% of HAS for one child, an equal share of 50% of HAS if there are two or more children.
- b) Spouse: If no qualified children in (a) exist: i) less than 10 years of Service Credit, 25% of HAS, benefits begin at age 60; ii) 10 or more years of Service Credit, the greater of 25% of HAS or the benefit which would have been payable as a 100% joint and survivor option if the deceased member had been eligible for service retirement and retired on the date of death, benefits begin immediately.
- c) Qualified Children Age 23 or Over: If no persons in (a) or (b) exist, 40% of HAS for one child, an equal share of 50% of HAS if there are two or more children.
- d) Dependent Parents: If no persons in (a) to (c) exist, 25% of HAS for one dependent parent or 40% of HAS for two dependent parents (minimum of \$100 per month for each dependent parent). Benefits begin immediately and continue until the death of the parent(s).
- e) Named Beneficiary: If no persons in (a) to (d) exist, single payment equal to the member contribution account plus the appropriate matching contribution, plus interest.
- f) Estate of Deceased Member: If no persons in (a) to (e) exist, single payment equal to the member contribution account plus the appropriate matching contribution, plus interest.

#### > If the deceased was eligible for Reduced or Service Retirement at the time of Death

The co-beneficiary is eligible for the amount that would have been payable had the member retired on the date of death and elected the 100% joint and survivor option. The order of payment is:

- a) Co-beneficiary If the deceased member designated a cobeneficiary prior to death, that individual takes precedence in payment of benefits.
- b) Surviving Spouse
- c) Qualified Children
- d) Dependent Parents
- e) Named beneficiary
- f) Estate

#### **Benefit Options**

Retirement and disability benefits are payable for the life of the retired member. Optional reduced benefits may be elected at the time of retirement to provide for continuation of 50% or 100% of a reduced benefit amount to a designated co-beneficiary. If the member retires any time after the date on which service retirement eligibility is first met, the reduction for 50% or 100% continuation option will be actuarially determined as of the date the member first became eligible for service retirement.

## Post-Retirement Benefit Increases

For members hired prior to January 1, 2007, each year on March 1, benefits which have been paid for at least three months preceding March 1 are increased. The increase is 3.5% compounded annually for each year of retirement for members hired before July 1, 2005 and 3.0% compounded annually for each year of retirement for members hired on or after July 1, 2005.

For members hired on or after January 1, 2007, each year on July 1, benefits which have been paid for at least the full preceding calendar year and who retired on disability, survivor benefits, the rule of 85 service retirement or has attained age 60 as of the previous January 1 are increased. The increase shall be determined by valuations of the Annual Increase Reserve and only to the extent such increases can be funded through transfers from that Reserve.

#### OTHER PROVISIONS SPECIFIC TO THE HEALTH CARE TRUST FUND

## Eligibility for Health Care Coverage

Anyone receiving a monthly PERA benefit, spouses, and unmarried, dependent children under age 25.

Members receiving short-term disability payments.

Guardians of children receiving PERA survivor benefits if children are receiving health care benefits.

Retirees temporarily not receiving PERA benefits.

Surviving spouses of deceased retirees who are not receiving PERA benefits but were receiving health care benefits at the time when death occurred.

Divorced spouses of retirees who are not receiving PERA benefits, but were receiving health care benefits, when the divorce occurred.

#### **Enrollment**

Enrollment is voluntary, with annual open enrollment for coverage effective each January 1.

#### **Premium Subsidy**

A monthly subsidy is allocated to each benefit recipient only electing health care coverage. The following monthly amounts are allocated per year of credited service, up to a maximum of 20 years of service:

- \$ 5.75 if age 65 and older or eligible for Medicare hospital insurance benefits
- \$11.50 if not yet age 65 or eligible for Medicare hospital insurance benefits

This subsidy is used to determine member premiums, which are projected full costs of coverage less the premium subsidy. The full costs for claims, administration, premiums, etc. are paid by the Trust.

Historically, this has resulted in net costs to the Trust being very close to the premium subsidy, with all costs of coverage above this subsidy paid by the member. For those age 65 or older, the full cost of coverage is considered to be based on the full cost of coverage assuming Medicare Part A eligibility. This is independent of actual Medicare Part A eligibility.

Members not receiving a PERA monthly benefit do not qualify for this subsidy and bear the full cost of coverage.

This premium subsidy is only available to those electing health care coverage.



#### Special Note on those Members not qualifying for Medicare Part A:

The Fund pays an implicit subsidy for members without Medicare Part A. For members in fully-insured HMOs, this amount is the difference in premiums charged for those without Part A and for those with Part A. For the self-funded plans, this amount is the assumed difference in claims costs for services covered under Part A between members without Part A coverage and those with Part A coverage.

#### **Special Note on those Members eligible for Medicare Part D:**

For members electing coverage in a plan option that produces a Retiree Drug Subsidy (RDS), which is payable to PERA, under Part D of the Medicare Modernization Act of 2003 (MMA), PERA has reduced the full cost of coverage by the estimated RDS. GASB Statements 43 and 45 do not allow for future assumed RDS payments to be used as a direct offset for future liabilities. Therefore, a liability for these payments has been included in the total Health Care Trust Fund liability. Plan options producing an RDS for PERA in 2007 are the self-funded Medicare Supplement plans and the Rocky Mountain Health Plan HMO.



## SCHEDULE OF ACTIVE MEMBER DATA AS OF DECEMBER 31, 2007

#### **STATE DIVISION**

Attained	Completed Years of Service									
Age	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	Total		Payroll
Under 20	402	0	0	0	0	0	0	402	\$	3,136,962
20 to 24	1,740	18	0	0	0	0	0	1,758	\$	34,181,805
25 to 29	3,287	497	10	0	0	0	0	3,794	\$	113,158,952
30 to 34	2,995	1,469	265	11	0	0	0	4,740	\$	172,349,431
35 to 39	2,913	1,706	1,061	326	15	0	0	6,021	\$	251,183,810
40 to 44	2,412	1,563	1,015	811	444	47	0	6,292	\$	279,411,205
45 to 49	5,021	1,671	1,145	1,007	861	736	106	10,547	\$	454,771,115
50 to 54	2,231	1,519	1,097	1,092	987	935	418	8,279	\$	401,399,509
55 to 59	1,682	1,222	908	916	859	589	451	6,627	\$	318,294,172
60	279	200	125	155	121	93	68	1,041	\$	48,813,759
61	221	182	121	105	102	75	53	859	\$	38,756,733
62	162	130	76	64	71	68	55	626	\$	30,168,261
63	115	89	74	78	47	39	44	486	\$	23,583,055
64	123	60	67	61	42	30	34	417	\$	18,203,905
65	93	69	51	54	29	25	41	362	\$	15,862,608
66	67	38	26	22	23	19	21	216	\$	8,401,326
67	61	31	18	18	13	12	6	159	\$	5,872,483
68	62	13	21	15	8	8	12	139	\$	4,756,077
69	60	30	12	16	4	4	9	135	\$	4,100,148
70 & Over	200	91	43	36	23	16	15	424	\$	10,112,512
Total	24,126	10,598	6,135	4,787	3,649	2,696	1,333	53,324	\$	2,236,517,828

Average Age (Non-Trooper): 45.52
Average Service (Non-Trooper): 8.95
Average Age (Trooper): 39.57
Average Service (Trooper): 10.68

# SCHEDULE OF ACTIVE MEMBER DATA AS OF DECEMBER 31, 2007

### **SCHOOL DIVISION**

Attained	Completed Years of Service									
Age	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	Total		Payroll
Under 20	1,352	0	0	0	0	0	0	1,352	\$	8,102,893
20 to 24	4,756	82	0	0	0	0	0	4,838	\$	83,483,794
25 to 29	9,488	1,621	28	0	0	0	0	11,137	\$	305,237,835
30 to 34	6,867	4,326	635	17	0	0	0	11,845	\$	376,131,193
35 to 39	7,183	3,763	2,553	512	16	0	0	14,027	\$	443,732,959
40 to 44	8,604	3,766	2,087	1,715	529	39	0	16,740	\$	494,212,917
45 to 49	6,759	4,409	2,490	1,807	1,747	893	67	18,172	\$	595,076,134
50 to 54	4,662	3,444	2,425	2,049	1,797	1,778	573	16,728	\$	608,087,093
55 to 59	3,473	2,138	1,560	1,785	1,501	1,184	686	12,327	\$	462,554,822
60	603	347	224	219	208	153	89	1,843	\$	62,286,646
61	509	281	164	181	171	137	61	1,504	\$	48,400,488
62	355	199	125	102	117	89	45	1,032	\$	32,701,723
63	339	160	85	76	83	72	33	848	\$	24,590,954
64	322	141	80	82	60	52	31	768	\$	20,538,329
65	241	128	67	48	37	32	23	576	\$	14,082,902
66	227	95	50	37	33	19	14	475	\$	9,092,845
67	197	44	32	32	22	20	12	359	\$	6,758,934
68	163	68	21	21	13	9	9	304	\$	5,153,791
69	154	63	18	21	13	9	12	290	\$	4,971,406
70 & Over	620	242	86	59	30	29	14	1,080	\$	13,060,710
Total	56,874	25,317	12,730	8,763	6,377	4,515	1,669	116,245	\$	3,618,258,368

Average Age: 43.87 Average Service: 7.83

# SCHEDULE OF ACTIVE MEMBER DATA AS OF DECEMBER 31, 2007

### LOCAL GOVERNMENT DIVISION

Attained	Completed Years of Service								
Age	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	Total	Payroll
Under 20	553	0	0	0	0	0	0	553	\$ 2,853,251
20 to 24	1,012	28	0	0	0	0	0	1,040	\$ 18,671,034
25 to 29	1,275	187	13	0	0	0	0	1,475	\$ 43,580,258
30 to 34	1,213	348	78	1	0	0	0	1,640	\$ 59,612,348
35 to 39	1,203	458	220	77	8	0	0	1,966	\$ 81,922,581
40 to 44	1,397	478	307	147	96	18	0	2,443	\$ 98,395,433
45 to 49	1,025	515	332	272	233	208	34	2,619	\$ 130,823,980
50 to 54	791	418	283	273	211	186	106	2,268	\$ 114,279,945
55 to 59	610	281	205	191	157	132	97	1,673	\$ 84,621,132
60	96	38	16	37	22	16	17	242	\$ 11,212,934
61	85	39	18	23	14	13	14	206	\$ 8,567,450
62	56	29	22	11	12	9	7	146	\$ 6,275,636
63	57	31	8	12	6	9	13	136	\$ 5,148,029
64	53	32	14	11	7	8	4	129	\$ 5,329,337
65	40	14	6	5	10	7	6	88	\$ 3,066,485
66	37	3	4	5	2	0	0	51	\$ 1,166,086
67	22	9	9	6	1	1	0	48	\$ 1,151,203
68	21	9	3	2	1	2	0	38	\$ 657,080
69	21	2	2	2	3	0	0	30	\$ 475,272
70 & Over	122	36	14	7	1	1	5	186	\$ 2,632,646
Total	9,689	2,955	1,554	1,082	784	610	303	16,977	\$ 680,442,121

Average Age: 42.94 Average Service: 7.14

# SCHEDULE OF ACTIVE MEMBER DATA AS OF DECEMBER 31, 2007

### **JUDICIAL DIVISION**

Attained Age	Completed Years of Service									
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+	Total	Payroll	
Under 20	0	0	0	0	0	0	0	0	\$	0
20 to 24	0	0	0	0	0	0	0	0	\$	0
25 to 29	0	0	0	0	0	0	0	0	\$	0
30 to 34	3	0	0	0	0	0	0	3	\$	180,014
35 to 39	6	2	0	1	0	0	0	9	\$	779,850
40 to 44	16	4	2	1	1	0	0	24	\$	2,552,241
45 to 49	14	9	12	6	3	1	0	45	\$	4,736,047
50 to 54	13	9	6	10	5	4	1	48	\$	5,057,295
55 to 59	15	15	14	19	16	14	6	99	\$	10,422,677
60	1	0	0	3	2	2	1	9	\$	1,028,838
61	5	3	1	2	2	2	0	15	\$	1,549,460
62	0	1	1	0	4	0	4	10	\$	1,163,023
63	1	2	2	0	0	0	0	5	\$	480,303
64	0	2	1	2	2	1	1	9	\$	979,506
65	2	0	0	2	0	1	2	7	\$	715,176
66	0	1	0	1	2	0	3	7	\$	813,902
67	0	0	0	0	2	0	1	3	\$	324,704
68	0	0	0	0	0	0	0	0	\$	0
69	0	0	0	1	0	0	1	2	\$	241,129
70 & Over	0	0	1	0	0	0	0	1	\$	126,063
Total	76	48	40	48	39	25	20	296	\$	31,150,228

Average Age: 54.65 Average Service: 13.77