



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

**Prepared as of December 31, 2013**





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

June 11, 2014

The Board of Trustees  
Public Employees' Retirement Association of Colorado  
1301 Pennsylvania Street  
Denver, CO 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, 2013.

The purpose of this report is to provide a summary of the funded status of PERA as of December 31, 2013, 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 the source, the actuary performed tests for consistency and reasonability.

The valuation incorporates revised economic assumptions that were adopted by the Board of Trustees on November 15, 2013 and January 17, 2014. These assumption changes are as follows:

Assumption	Before Change	After Change
Investment Rate of Return	8.00%	7.50%
Price Inflation	3.50%	2.80%
Wage Inflation	4.25%	3.90%

The results of the valuation 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 both Health Care Trust Funds, each division's unfunded actuarial accrued liability and the Annual Increase Reserve (AIR) Fund. The resulting amortization periods for each division, with and without recognition of future increases to the Amortization Equalization Disbursement (AED) and the Supplemental Amortization Equalization Disbursement (SAED), are shown in the table on the next page:

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	Amortization Period	
	With Current AED & SAED	With Future Increases to AED & SAED
State Division	60 years	44 years
School Division	61 years	44 years
Local Government Division*	37 years	37 years
Judicial Division	Infinite	Infinite
Denver Public Schools Division	Infinite	Infinite**
PERA Health Care Trust Fund (PERA HCTF)*	40 years	40 years
DPS Health Care Trust Fund (DPS HCTF)	19 years	19 years

\*The actuarial valuation results reflect the disaffiliation of Memorial Health System which occurred on October 1, 2012. For purposes of the December 31, 2013 actuarial valuation, no additional incoming dollars were assumed added to the Local Government Division and the PERA Health Care Trust Funds as there is ongoing litigation regarding the potential dollars owed to these Trust Funds due to the disaffiliation. Valuation assets and results will be adjusted accordingly in subsequent years depending on the outcome of the litigation.

\*\* Considering anticipated reductions in the future offset to DPS contribution requirements to PERA for the cost of certain Pension Certificates of Participation (PCOP) as currently structured, the amortization period is expected to be below 30 years. Colorado statutes call for a “true-up” in 2015, and every five years following, with the expressed purpose of adjusting the total DPS Contribution rate to ensure equalization of the ratio of unfunded actuarial accrued liability over payroll between the DPS and School Divisions at the end of the 30-year period beginning January 1, 2010.

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. Gains and losses are reflected in the unfunded actuarial accrued liability that is being amortized by regular annual contributions as a level percentage of payroll, on the assumption that payroll will increase by 3.90% annually. We believe the assumptions are, in the aggregate, reasonably related to the experience and to 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 PERA historical information that references a valuation date prior to December 31, 2006 was prepared by the previous actuarial firm. All Denver Public School Retirement System (DPSRS) historical information that references a valuation date prior to December 31, 2010 was prepared by the previous actuarial firm.



June 11, 2014  
Board of Trustees  
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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 employer contribution rate, combined with anticipated future employee growth and service purchase transfers, is sufficient to eventually finance the PERA and DPS Health Care Trust Funds benefits in accordance with GASB 43 and 45.

Considering the offsets of PCOP Credits as a percentage of payroll, applicable to the DPS Division only, the Denver Public Schools Division employer contribution rate is currently sufficient to finance the promised benefits and eventually meet the required contribution levels under GASB 25 and 27. Considering the addition of the AED and SAED contributions and projected reductions in liability due to benefit structure changes for newer hires, the State and School Divisions' employer contribution rates are expected to be sufficient to finance the promised benefits. The total employer contributions, combined with projected reductions in liability due to benefit structure changes for newer hires, are expected to fund the Local Government and Judicial Divisions.

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

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Thomas J. Cavanaugh'.

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

A handwritten signature in blue ink, appearing to read 'Patrice Beckham'.

Patrice A. Beckham, FSA, FCA, EA, MAAA  
Principal and Consulting Actuary

A handwritten signature in blue ink, appearing to read 'Eric H. Gary'.

Eric H. Gary, FSA, FCA, MAAA  
Chief Health Actuary

A handwritten signature in blue ink, appearing to read 'Edward J. Koebel'.

Edward J. Koebel, FCA, EA, MAAA  
Principal and Consulting Actuary

TJC/PAB/EJK/EHG:kc



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**REPORT ON THE ACTUARIAL VALUATION OF  
THE PUBLIC EMPLOYEES' RETIREMENT ASSOCIATION OF COLORADO  
PREPARED AS OF DECEMBER 31, 2013**

**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, Denver Public Schools (DPS) Division, the PERA Health Care Trust Fund and the DPS Health Care Trust Fund are summarized below:

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

VALUATION DATE	12/31/2013	12/31/2012
Number of Active Non-Troopers	54,538	53,993
Annual Covered Payroll	\$ 2,414,307	\$ 2,328,360
Number of Active Troopers	816	811
Annual Covered Payroll	\$ 60,658	\$ 56,574
Total Number of Active Members	55,354	54,804
Total Annual Covered Payroll	\$ 2,474,965	\$ 2,384,934
Number of Retired Members and Survivors	34,981	34,125
Annual Retirement Benefits	\$ 1,318,306	\$ 1,261,435
Total Assets:		
Actuarial Value	\$ 13,129,460	\$ 12,538,675
Market Value	\$ 13,935,754	\$ 12,766,459
Actuarial Accrued Liability	\$ 22,843,725	\$ 21,191,495
Unfunded Actuarial Accrued Liability (UAAL)	\$ 9,714,265	\$ 8,652,820
<b>CONTRIBUTIONS FOR YEAR ENDING</b>	<b>12/31/2015</b>	<b>12/31/2014</b>
Employer Contribution Rate:		
Normal*	2.25%	1.64%
Actuarial Accrued Liability	<u>20.10%</u>	<u>18.81%</u>
Annual Required Contribution	22.35%	20.45%
Reduction for AED and SAED	<u>(9.92)%</u>	<u>(9.72)%</u>
Total Employer Contribution Rate	12.43%	10.73%
Amortization Period	30 years	30 years

\* Starting with the December 31, 2012 valuation, estimated budgeted administrative expenses are included in the normal rate.



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

<b>VALUATION DATE</b>	<b>12/31/2013</b>	<b>12/31/2012</b>
Number of Active Members	117,727	115,294
Annual Covered Payroll	\$ 3,938,650	\$ 3,819,066
Number of Retired Members and Survivors	55,986	53,952
Annual Retirement Benefits	\$ 1,976,445	\$ 1,878,147
Assets:		
Actuarial Value	\$ 21,369,380	\$ 20,266,574
Market Value	\$ 22,682,339	\$ 20,636,677
Actuarial Accrued Liability	\$ 35,437,312	\$ 32,619,033
Unfunded Actuarial Accrued Liability (UAAL)	\$ 14,067,932	\$ 12,352,459
<b>CONTRIBUTION FOR YEAR ENDING</b>	<b>12/31/2015</b>	<b>12/31/2014</b>
Employer Contribution Rate:		
Normal*	3.65%	2.88%
Actuarial Accrued Liability	<u>18.29%</u>	<u>16.77%</u>
Annual Required Contribution	21.94%	19.65%
Reduction for AED and SAED	<u>(9.87)%</u>	<u>(9.67)%</u>
Total Employer Contribution Rate	12.07%	9.98%
Amortization Period	30 years	30 years

\* Starting with the December 31, 2012 valuation, estimated budgeted administrative expenses are included in the normal rate.



**SUMMARY OF PRINCIPAL RESULTS FOR LOCAL GOVERNMENT DIVISION  
(\$ IN THOUSANDS)**

<b>VALUATION DATE</b>	<b>12/31/2013</b>	<b>12/31/2012</b>
Number of Active Members	11,954	12,097
Annual Covered Payroll	\$ 529,003	\$ 523,668
Number of Retired Members and Survivors	6,167	5,901
Annual Retirement Benefits	\$ 222,050	\$ 209,574
Assets:		
Actuarial Value	\$ 3,291,298	\$ 3,098,721
Market Value	\$ 3,493,355	\$ 3,154,897
Actuarial Accrued Liability	\$ 4,502,282	\$ 4,157,621
Unfunded Actuarial Accrued Liability (UAAL)	\$ 1,210,984	\$ 1,058,900
<b>CONTRIBUTIONS FOR YEAR ENDING</b>	<b>12/31/2015</b>	<b>12/31/2014</b>
Employer Contribution Rate:		
Normal*	1.90%	1.29%
Actuarial Accrued Liability	<u>11.72%</u>	<u>10.49%</u>
Annual Required Contribution	13.62%	11.78%
Reduction for AED and SAED	<u>(3.70)%</u>	<u>(3.70)%</u>
Total Employer Contribution Rate	9.92%	8.08%
Amortization Period	30 years	30 years

\* Starting with the December 31, 2012 valuation, estimated budgeted administrative expenses are included in the normal rate.





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

<b>VALUATION DATE</b>	<b>12/31/2013</b>	<b>12/31/2012</b>
Number of Active Members	332	329
Annual Covered Payroll	\$ 39,942	\$ 39,045
Number of Retired Members and Survivors	323	321
Annual Retirement Benefits	\$ 19,246	\$ 18,401
Assets:		
Actuarial Value	\$ 256,800	\$ 238,807
Market Value	\$ 272,160	\$ 242,877
Actuarial Accrued Liability	\$ 351,598	\$ 326,897
Unfunded Actuarial Accrued Liability (UAAL)	\$ 94,798	\$ 88,090
<b>CONTRIBUTIONS FOR YEAR ENDING</b>	<b>12/31/2015</b>	<b>12/31/2014</b>
Employer Contribution Rate:		
Normal*	9.30%	8.37%
Actuarial Accrued Liability	<u>12.15%</u>	<u>11.70%</u>
Annual Required Contribution	21.45%	20.07%
Reduction for AED and SAED	<u>(3.70)%</u>	<u>(3.70)%</u>
Total Employer Contribution Rate	17.75%	16.37%
Amortization Period	30 years	30 years

\* Starting with the December 31, 2012 valuation, estimated budgeted administrative expenses are included in the normal rate.



**SUMMARY OF PRINCIPAL RESULTS FOR DENVER PUBLIC SCHOOLS DIVISION  
(\$ IN THOUSANDS)**

VALUATION DATE	12/31/2013	12/31/2012
Number of Active Members with DPS Structure	5,186	5,831
Annual Covered Payroll	\$ 281,953	\$ 310,570
Number of Active Members with PERA Structure	9,630	8,080
Annual Covered Payroll	\$ 265,707	\$ 200,302
Total Number of Active Members	14,816	13,911
Total Annual Covered Payroll	\$ 547,660	\$ 510,872
Number of Retired Members and Survivors	6,564	6,415
Annual Retirement Benefits	\$ 242,866	\$ 233,009
Assets:		
Actuarial Value	\$ 3,075,895	\$ 2,936,695
Market Value	\$ 3,265,768	\$ 2,992,217
Actuarial Accrued Liability	\$ 3,785,872	\$ 3,495,549
Unfunded Actuarial Accrued Liability (UAAL)	\$ 709,977	\$ 558,854
<b>CONTRIBUTIONS FOR YEAR ENDING</b>	<b>12/31/2015</b>	<b>12/31/2014</b>
Employer Contribution Rate:		
Normal*	4.42%	4.00%
Actuarial Accrued Liability	<u>6.64%</u>	<u>5.67%</u>
Annual Required Contribution	11.06%	9.67%
Reduction for AED/SAED	<u>(9.87)%</u>	<u>(9.67)%</u>
Total Employer Contribution Rate	1.19%	0.00%
Amortization Period	30 years	30 years

\* Starting with the December 31, 2012 valuation, estimated budgeted administrative expenses are included in the normal rate.



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

<b>VALUATION DATE</b>	<b>12/31/2013</b>	<b>12/31/2012</b>
Number of Active Members	185,367	182,524
Annual Covered Payroll	\$6,982,560	\$6,766,713
Number of Retired Members and Survivors	53,041	51,681
Assets:		
Actuarial Value	\$293,556	\$285,097
Market Value	\$314,609	\$291,737
Actuarial Accrued Liability	\$1,557,406	\$1,723,495
Unfunded Actuarial Accrued Liability (UAAL)	\$1,263,850	\$1,438,398
<b>CONTRIBUTIONS FOR YEAR ENDING</b>	<b>12/31/2015</b>	<b>12/31/2014</b>
Employer Contribution Rate:		
Normal	0.22%	0.22%
Actuarial Accrued Liability	<u>0.93%</u>	<u>1.10%</u>
Annual Required Contribution	1.15%	1.32%
Amortization Period	30 years	30 years



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

VALUATION DATE	12/31/2013	12/31/2012
Number of Active Members	14,816	13,911
Annual Covered Payroll	\$547,660	\$510,872
Number of Retired Members and Survivors	3,995	3,963
Assets:		
Actuarial Value	\$15,482	\$14,443
Market Value	\$16,489	\$14,843
Actuarial Accrued Liability	\$76,636	\$77,669
Unfunded Actuarial Accrued Liability (UAAL)	\$61,154	\$63,226
<b>CONTRIBUTIONS FOR YEAR ENDING</b>	<b>12/31/2015</b>	<b>12/31/2014</b>
Employer Contribution Rate:		
Normal	0.24%	0.23%
Actuarial Accrued Liability	<u>0.57%</u>	<u>0.64%</u>
Annual Required Contribution	0.81%	0.87%
Amortization Period	30 years	30 years



2. Comments on the valuation results as of December 31, 2013 are given in Section IV and further discussion of the contribution levels is set out in Section V.
3. The valuation takes into account the effect of amendments to PERA and DPS benefit structures through the valuation date. The Main Provisions of PERA and DPS, as summarized in Schedule F, were taken into account in the current valuation. The following change was made to the main provisions since the previous valuation:

- Effective January 1, 2014, PERACare no longer participates in the Centers for Medicare & Medicaid Services' (CMS) Retiree Drug Subsidy Program. PERACare enrollees participating in the self-insured Medicare supplement plans and the Medicare HMO plan offered by Rocky Mountain Health Plans now receive their prescription drug benefits through a Medicare Prescription Drug Plan (PDP). As the Medicare Part D subsidies implicit in the lower costs for PDPs may be recognized in the liability under GASB Statements No. 43 and No. 45, the liability associated with the premium subsidies funded by estimated RDS receipts has been eliminated.

The following table shows the change in the Unfunded Actuarial Accrued Liability (UAAL), the decrease in the Annual Required Contribution (ARC) and the decrease in the amortization period as a result of the change in the main provisions, prior to other changes in assumptions:

Group	Change in UAAL (\$ in millions)	Change in ARC	Change in Amortization Period
PERA HCTF	(\$170.8)	(0.14%)	(17 years)
DPS HCTF	(\$5.0)	(0.05%)	(2 years)

4. Schedule D of this report outlines the full set of actuarial assumptions and methods used in the current valuation. The 2013 valuation results reflect the following changes which were adopted by the Board of Trustees on November 15, 2013 and January 17, 2014, to be effective with the December 31, 2013 actuarial valuation:

- The valuation interest rate assumption was lowered from 8.00% to 7.50%.
- The price inflation assumption was lowered from 3.50% to 2.80%.
- The wage inflation assumption was lowered from 4.25% to 3.90%.

The following table shows the change in the Unfunded Actuarial Accrued Liability (UAAL), the increase in the Annual Required Contribution (ARC) and the increase in the amortization period



(with future increases to AED and SAED) as a result of the change in the economic assumptions above:

Group	Change in UAAL (\$ in millions)	Change in ARC	Change in Amortization Period
State Division	\$1,034.8	2.67%	11 years
Schools Division	\$1,701.7	2.95%	13 years
Local Government Division	\$219.0	2.73%	13 years
Judicial Division	\$13.7	2.55%	N/A
DPS Division	\$171.1	2.47%	N/A

In addition, the following changes have been made to certain health care methods and assumptions since the previous valuation:

- Initial health care costs for PERACare enrollees who are age 65 and older, and do not have Medicare Part A have been updated to reflect the change in costs for the 2014 plan year.
- The assumed rates of inflation for health care costs for Medicare Part A premiums have been revised to reflect the current expectation of future increases.
- The utilization rates for the No Part A subsidy of both retirees and their spouses have been revised.

The following table shows the change in the Unfunded Actuarial Accrued Liability (UAAL), the increase in the Annual Required Contribution (ARC) and the increase in the amortization period as a result of the change in economic and health care assumptions above, after the change in the main provisions:

Group	Change in UAAL (\$ in millions)	Change in ARC	Change in Amortization Period
PERA HCTF	(\$2.6)	0.01%	0 years
DPS HCTF	\$3.2	0.04%	2 years



5. Schedule B shows the development of the actuarial value of assets. In aggregate, the actual investment return for 2013 on an actuarial value of assets basis was 11.09%, which can be compared to the investment return assumed for the period of 8.00% or the investment return assumed for future periods of 7.50%. The following table shows the gain in the Unfunded Actuarial Accrued Liability (UAAL) as a result of the return being higher than the assumed rate of 8.00%:

<b>Group</b>	<b>Gain in UAAL (\$ in millions)</b>
State Division	\$364.8
Schools Division	\$589.4
Local Government Division	\$90.3
Judicial Division	\$6.9
DPS Division	<u>\$87.7</u>
Total Pension Divisions	\$1,139.1
PERA HCTF	\$9.8
DPS HCTF	<u>\$0.5</u>
Total HCTFs	\$10.3

6. Other actual experience was a net actuarial loss with gains from lower salary increases than expected and losses on termination of employment, mortality, service retirements and new members.
7. Actual contributions to fund the pension benefits were less than the Annual Required Contribution for most divisions which resulted in an increase in the UAAL. Based on the valuation results, the total increase in the pension UAAL for 2013 due to contributions less than the ARC was \$301.7 million. All divisions, except the Local Government Division, reflected an increase from this source. The Health Care Trust Funds actually received contributions slightly higher than the ARC.
8. Actual employer contributions to the DPS Division are reduced by an amount equal to the principal payments plus interest necessary each year to finance the pension certificates of participation (PCOPs) issued in 1997 and 2008 and refinanced during each of the last three calendar years. The amount of the credit for the 2015 fiscal year is 16.21% of salary. This credit is expected to decline as a percentage of payroll, as currently structured, resulting in an expected amortization period to be below 30 years. Colorado statutes call for a “true-up” in 2015, and every five years following, with the expressed purpose of adjusting the total DPS Contribution rate to ensure equalization of the ratio of unfunded actuarial accrued liability over payroll between the DPS and School Divisions at the end of the 30-year period beginning January 1, 2010.



**SECTION II – MEMBERSHIP DATA**

- 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 covered payroll as of December 31, 2013 on the basis of which the valuation was prepared.

**THE NUMBER AND ANNUAL COVERED PAYROLL OF  
ACTIVE MEMBERS AS OF DECEMBER 31, 2013  
(\$ IN THOUSANDS)**

<b>GROUP</b>	<b>NUMBER</b>	<b>ANNUAL COVERED PAYROLL</b>
State Division	55,354	\$ 2,474,965
School Division	117,727	3,938,650
Local Government Division	11,954	529,003
Judicial Division	332	39,942
Denver Public Schools Division	<u>14,816</u>	<u>547,660</u>
Total	200,183	\$ 7,530,220

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

**SCHEDULE OF TOTAL ACTIVE MEMBER VALUATION DATA\***

<b>VALUATION DATE</b>	<b>NUMBER</b>	<b>ANNUAL COVERED PAYROLL (\$ IN THOUSANDS)</b>	<b>AVERAGE ANNUAL COVERED PAYROLL</b>	<b>% CHANGE IN AVERAGE PAYROLL</b>
12/31/2013	200,183	\$ 7,530,220	\$ 37,617	1.54%
12/31/2012	196,435	7,277,585	37,048	(0.86)%
12/31/2011	199,741	7,464,242	37,370	0.12%
12/31/2010	201,095	7,506,193	37,327	0.72%
12/31/2009	190,206	7,048,993	37,060	1.95%
12/31/2008	190,684	6,931,405	36,350	3.43%

\*Starting with the December 31, 2010 valuation, the numbers include the Denver Public Schools Division which was merged into PERA on January 1, 2010.





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, 2013  
(\$ IN THOUSANDS)**

TYPE OF RETIREMENT	GROUP					TOTAL
	STATE DIVISION	SCHOOL DIVISION	LOCAL GOVERNMENT DIVISION	JUDICIAL DIVISION	DENVER PUBLIC SCHOOLS DIVISION	
Service:						
Number	30,515	51,665	5,287	290	6,060	93,817
Annual Benefits	\$1,217,191	\$1,892,505	\$202,775	\$17,918	\$232,546	\$3,562,935
Disability:						
Number	3,455	3,076	704	19	349	7,603
Annual Benefits	\$81,073	\$65,188	\$16,089	\$ 906	\$7,505	\$170,761
Survivors*:						
Number	1,011	1,245	176	14	155	2,601
Annual Benefits	\$20,042	\$18,752	\$3,186	\$ 422	\$2,815	\$45,217
Total:						
Number	34,981	55,986	6,167	323	6,564	104,021
Annual Benefits	\$1,318,306	\$1,976,445	\$222,050	\$19,246	\$242,866	\$3,778,913

\* Includes deferred survivors

4. Tables in Schedule G show the distribution by age and service of the number and total annual compensation of active members for each division and the distribution by age of the number and total annual benefit of retired members, beneficiaries and deferred vested for each division included in the valuation.



**SECTION III - ASSETS**

- 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, 2013, the market value of assets for each division is shown below:

**COMPARISON OF MARKET VALUE OF ASSETS AT  
DECEMBER 31, 2013 AND DECEMBER 31, 2012  
(\$ IN THOUSANDS)**

<b>GROUP</b>	<b>DECEMBER 31, 2013 MARKET VALUE</b>	<b>DECEMBER 31, 2012 MARKET VALUE</b>
State Division	\$ 13,935,754	\$ 12,766,459
School Division	22,682,339	20,636,677
Local Government Division	3,493,355	3,154,897
Judicial Division	272,160	242,877
Denver Public Schools Division	3,265,768	2,992,217
PERA Health Care Trust Fund	314,609	291,737
DPS Health Care Trust Fund	<u>16,489</u>	<u>14,843</u>
Total Market Value of Assets	\$ 43,980,474	\$ 40,099,707

- The four-year market related actuarial value of assets used for the current valuation was \$41,431,870,788. Schedule B shows the development of the actuarial value of assets as of December 31, 2013. The following table shows the actuarial value of assets allocated among all divisions.

**COMPARISON OF ACTUARIAL VALUE OF ASSETS AT  
DECEMBER 31, 2013 AND DECEMBER 31, 2012  
(\$ IN THOUSANDS)**

<b>GROUP</b>	<b>DECEMBER 31, 2013 ACTUARIAL VALUE</b>	<b>DECEMBER 31, 2012 ACTUARIAL VALUE</b>
State Division	\$ 13,129,460	\$ 12,538,675
School Division	21,369,380	20,266,574
Local Government Division	3,291,298	3,098,721
Judicial Division	256,800	238,807
Denver Public Schools	3,075,895	2,936,695
Health Care Trust Fund	293,556	285,097
DPS Health Care Trust Fund	<u>15,482</u>	<u>14,443</u>
Total Actuarial Value of Assets	\$ 41,431,871	\$ 39,379,012



3. The estimated dollar-weighted historical returns for market value of assets and actuarial value of assets for the last five years as calculated by the actuaries are as follows:

YEAR ENDING	MARKET VALUE	ACTUARIAL VALUE
December 31, 2013	15.57%	11.09%
December 31, 2012	12.98%	10.94%
December 31, 2011	1.91%	(0.33)%
December 31, 2010	13.84%	0.94%
December 31, 2009	17.14%	0.85%



**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 \$24,726,325,508, of which \$14,798,308,504 is for the prospective benefits payable on account of present retired members and survivors of deceased members, \$498,059,204 is for the prospective benefits payable on account of present inactive members, and \$9,429,957,800 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 \$13,129,459,956 as of December 31, 2013. The difference of \$11,596,865,552 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, \$1,536,559,062 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 \$10,060,306,490 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 of the PERA benefit structure hired on or after January 1, 2007, an allocation of the statutory rates of 1.00% of salary is made each year to pre-fund the Annual Increase Reserve which provides post-retirement increases for these members in retirement. 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
2013	3.40%	3.00%
2014	3.80	3.50
2015	4.20	4.00
2016	4.60	4.50
2017 and later	5.00	5.00



3. The valuation indicates that employer normal contributions at the rate of 2.25% of salary are required to provide the benefits for the State Division. After adjusting for administrative expenses, prospective employer normal contributions at this rate have a present value of \$346,041,280. When this amount is subtracted from \$10,060,306,490, which is the present value of the total future contributions to be made by the employers, there remains \$9,714,265,210 as the amount of future actuarial accrued liability contributions.
4. After recognizing the required employer normal contribution rates, the remaining basic contribution amounts to 14.78% of salary. Contributions at this level will amortize the unfunded actuarial accrued liability of \$9,714,265,210 over 60 years, assuming the aggregate payroll of the State Division increases by 3.90% each year. After recognizing the value of both future AED and future SAED contributions, the amortization period is reduced to 44 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. The employer rate is the total rate within the division, including both AED and SAED. Effective January 1, 2011, Colorado PERA began receiving employee contributions on compensation paid to PERA retirees who are working at PERA affiliated employers. The working retiree does not accrue an additional benefit and is not eligible for a refund of these contributions.



**School Division**

1. The total valuation balance sheet on account of benefits shows that the School Division has total prospective benefit liabilities of \$39,200,677,180, of which \$22,543,218,503 is for the prospective benefits payable on account of present retired members and survivors of deceased members, \$758,422,351 is for the prospective benefits payable on account of present inactive members, and \$15,899,036,326 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 \$21,369,379,750 as of December 31, 2013. The difference of \$17,831,297,430 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, \$2,706,337,714 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 \$15,124,959,716 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). For members of the PERA benefit structure hired on or after January 1, 2007, an allocation of the statutory rates of 1.00% of salary is made each year to pre-fund the Annual Increase Reserve which provides post-retirement increases for these members in retirement. In addition, employers will make Amortization Equalization Disbursement (AED) and Supplemental Amortization Equalization Disbursement (SAED) contributions in the future at the following rates:

<b>Year</b>	<b>AED</b>	<b>SAED</b>
2013	3.40%	3.00%
2014	3.80	3.50
2015	4.20	4.00
2016	4.50	4.50
2017	4.50	5.00
2018 and later	4.50	5.50



3. The valuation indicates that employer normal contributions at the rate of 3.65% of salary are required to provide the benefits for the School Division. After adjusting for administrative expenses, prospective employer normal contributions at this rate have a present value of \$1,057,027,896. When this amount is subtracted from \$15,124,959,716, which is the present value of the total future contributions to be made by the employers, there remains \$14,067,931,820 as the amount of future actuarial accrued liability contributions.
4. After recognizing the required employer normal contribution rates, the remaining basic contribution amounts to 13.38% of salary. Contributions at this level will amortize the unfunded actuarial accrued liability of \$14,067,931,820 over 61 years, assuming the aggregate payroll of the School Division increases by 3.90% each year. After recognizing the value of both future AED and future SAED contributions, the amortization period is reduced to 44 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. The employer rate is the total rate within the division, including both AED and SAED. Effective January 1, 2011, Colorado PERA began receiving employee contributions on compensation paid to PERA retirees who are working at PERA affiliated employers. The working retiree does not accrue an additional benefit and is not eligible for a refund of these contributions.



**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 \$4,879,061,737, of which \$2,708,401,504 is for the prospective benefits payable on account of present retired members and survivors of deceased members, \$282,775,867 is for the prospective benefits payable on account of present inactive members, and \$1,887,884,366 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 \$3,291,297,571 as of December 31, 2013. The difference of \$1,587,764,166 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, \$321,934,605 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 \$1,265,829,561 represents the present value of future contributions payable by the employers.
2. 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 of the PERA benefit structure hired on or after January 1, 2007, an allocation of the statutory rates of 1.00% of salary is made each year to pre-fund the Annual Increase Reserve which provides post-retirement increases for these members in retirement. 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
2013 and later	2.20%	1.50%





3. The valuation indicates that employer normal contributions at the rate of 1.90% of salary are required to provide the benefits for the Local Government Division. After adjusting for administrative expenses, prospective employer normal contributions at this rate have a present value of \$54,845,214. When this amount is subtracted from \$1,265,829,561, which is the present value of the total future contributions to be made by the employers, there remains \$1,210,984,347 as the amount of future actuarial accrued liability contributions.
4. After recognizing the required employer normal contribution rates, the remaining basic contribution amounts to 10.41% of salary. Contributions at this level will amortize the unfunded actuarial accrued liability of \$1,210,984,347 over 37 years, assuming the aggregate payroll of the Local Government Division increases by 3.90% each year.
5. Effective July 1, 2005, Colorado PERA began receiving employer contributions on compensation paid to PERA retirees who are working at PERA affiliated employers. The employer rate is the total rate within the division, including both AED and SAED. Effective January 1, 2011, Colorado PERA began receiving employee contributions on compensation paid to PERA retirees who are working at PERA affiliated employers. The working retiree does not accrue an additional benefit and is not eligible for a refund of these contributions.
6. The actuarial valuation results reflect the disaffiliation of Memorial Health System which occurred on October 1, 2012. For purposes of the December 31, 2013 actuarial valuation, no additional incoming dollars were assumed added to the Local Government Trust Fund as there is ongoing litigation regarding the potential dollars owed to the Trust Fund due to the disaffiliation. Sufficient funds to discharge the liability in the amount of \$259 million have been placed in a court supervised escrow account pending resolution of the litigation. Valuation assets and results will be adjusted accordingly in subsequent years depending on the outcome of the litigation.



**Judicial Division**

1. The total valuation balance sheet on account of benefits shows that the Judicial Division has total prospective benefit liabilities of \$403,870,993, of which \$206,656,646 is for the prospective benefits payable on account of present retired members and survivors of deceased members, \$1,579,155 is for the prospective benefits payable on account of present inactive members, and \$195,635,192 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 \$256,800,478 as of December 31, 2013. The difference of \$147,070,515 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, \$24,654,518 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 \$122,415,997 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 of the PERA benefit structure hired on or after January 1, 2007, an allocation of the statutory rates of 1.00% of salary is made each year to pre-fund the Annual Increase Reserve which provides post-retirement increases for these members in retirement. 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
2013 and later	2.20%	1.50%



3. The valuation indicates that employer normal contributions at the rate of 9.30% of salary are required to provide the benefits for the Judicial Division. After adjusting for administrative expenses, prospective employer normal contributions at this rate have a present value of \$27,618,418. When this amount is subtracted from \$122,415,997, which is the present value of the total future contributions to be made by the employers, there remains \$94,797,579 as the amount of future actuarial accrued liability contributions.
4. After recognizing the required employer normal contribution rates, the remaining basic contribution amounts to 6.80% of salary. Contributions at this level will never amortize the unfunded actuarial accrued liability of \$94,797,579, assuming the aggregate payroll of the Judicial Division increases by 3.90% each year.
5. Effective July 1, 2005, Colorado PERA began receiving employer contributions on compensation paid to PERA retirees who are working at PERA affiliated employers. The employer rate is the total rate within the division, including both AED and SAED. Effective January 1, 2011, Colorado PERA began receiving employee contributions on compensation paid to PERA retirees who are working at PERA affiliated employers. The working retiree does not accrue an additional benefit and is not eligible for a refund of these contributions.



**Denver Public Schools Division**

1. The total valuation balance sheet on account of benefits shows that the Denver Public Schools Division has total prospective benefit liabilities of \$4,378,300,410, of which \$2,610,866,727 is for the prospective benefits payable on account of present retired members and survivors of deceased members, \$61,393,455 is for the prospective benefits payable on account of present inactive members, and \$1,706,040,228 is for the prospective benefits payable on account of present active members. Against these benefit liabilities the Denver Public Schools Division has a total present actuarial value of assets of \$3,075,894,894 as of December 31, 2013. The difference of \$1,302,405,516 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, \$398,656,067 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 \$903,749,449 represents the present value of future contributions payable by the employers.
  
2. The employers' contributions to the Denver Public Schools Division on account of benefits consist of three amounts set by statute. The basic amount is 12.73% of salary (after reduction for the Health Care Trust Fund Contribution of 1.02% of salary). For members of the PERA benefit structure hired on or after January 1, 2010, an allocation of the statutory rates of 1.00% of salary is made each year to pre-fund the Annual Increase Reserve which provides post-retirement increases for these members in retirement. 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
2013	3.40%	3.00%
2014	3.80	3.50
2015	4.20	4.00
2016	4.50	4.50
2017	4.50	5.00
2018 and later	4.50	5.50



3. The valuation indicates that employer normal contributions at the rate of 4.42% of salary are required to provide the benefits for the Denver Public Schools Division. After adjusting for administrative expenses, prospective employer normal contributions at this rate have a present value of \$193,772,351. When this amount is subtracted from \$903,749,449, which is the present value of the total future contributions to be made by the employers, there remains \$709,977,098 as the amount of future actuarial accrued liability contributions.
4. Actual employer contributions are reduced by an amount equal to the principal payments plus interest necessary each year to finance the pension certificates of participation (PCOPs) issued in 1997 and 2008 and refinanced the last three calendar years. The amount of the credit for the 2014 fiscal year is 16.89% of salary and for the 2015 fiscal year is 16.21% of salary, not considering any refinancing that may happen in the future.
5. After recognizing the required employer normal contribution rates and the PCOP credit, the remaining basic contribution amounts to 0.00% of salary. Contributions at this level will never amortize the unfunded actuarial accrued liability of \$709,977,098, assuming the aggregate payroll of the Denver Public Schools Division increases by 3.90% each year. The PCOP credit is expected to decline as a percentage of payroll as currently structured, resulting in an expected amortization period of less than 30 years. Colorado statutes call for a “true-up” in 2015, and every five years following, with the expressed purpose of adjusting the total DPS Contribution rate to ensure equalization of the ratio of unfunded actuarial accrued liability over payroll between the DPS and School Divisions at the end of the 30-year period beginning January 1, 2010.
6. Effective January 1, 2010, Colorado PERA began receiving employer contributions on compensation paid to DPS benefit structure retirees who are working at PERA affiliated employers. The employer rate is the total rate within the division, including both AED and SAED. Effective January 1, 2011, Colorado PERA began receiving employee contributions on compensation paid to PERA retirees who are working at PERA affiliated employers. The working retiree does not accrue an additional benefit and is not eligible for a refund of these contributions.



### **PERA Health Care Trust Fund (PERA HCTF)**

1. The total valuation balance sheet on account of health care benefits shows the PERA HCTF has total prospective health care benefit liabilities of \$1,645,139,566, of which \$1,063,066,447 is for the prospective benefits payable on account of present PERACare enrollees receiving a health care subsidy pursuant to law, \$29,371,535 is for the prospective benefits payable on account of present eligible inactive members, and \$552,701,584 is for the prospective benefits payable on account of present active members. These amounts are net of any PERACare enrollee premiums required for enrollment in PERACare. Against these health care benefit liabilities, the PERA HCTF has a total present actuarial value of assets of \$293,556,476 as of December 31, 2013. The difference of \$1,351,583,090 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 \$1,351,583,090 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the PERA HCTF consist of a statutorily mandated 1.02% of salary. The valuation indicates that employer normal contributions at the rate of 0.22% of salary are required to provide the health care benefits funded by the PERA HCTF.
3. Prospective employer normal contributions at the rate noted in paragraph 2 have a present value of \$87,733,751. When this amount is subtracted from \$1,351,583,090, which is the present value of the total future contributions to be made by the employers, there remains \$1,263,849,339 as the amount of future actuarial accrued liability contributions.
4. After recognizing the required normal contribution rate, the remaining contribution amounts to 0.80% of salary. Contributions at this level will amortize the unfunded actuarial accrued liability of \$1,263,849,339 over 40 years.
5. The actuarial valuation results reflect the disaffiliation of Memorial Health System as of October 1, 2012. For purposes of the December 31, 2013 actuarial valuation, no additional incoming dollars were assumed added to the PERA HCTF, as there is ongoing litigation regarding the potential dollars owed to the PERA HCTF due to the disaffiliation. Sufficient funds to discharge the liability in the amount of \$259 million have been placed in a court supervised escrow account pending resolution of the litigation. Valuation assets and results will be adjusted accordingly in subsequent years depending on the outcome of the litigation.



### **DPS Health Care Trust Fund (DPS HCTF)**

1. The total valuation balance sheet on account of health care benefits shows the DPS HCTF has total prospective health care benefit liabilities of \$84,752,517, of which \$51,643,141 is for the prospective benefits payable on account of present PERACare enrollees receiving a health care subsidy pursuant to law, \$463,078 is for the prospective benefits payable on account of present deferred vested members, and \$32,646,298 is for the prospective benefits payable on account of present active members. These amounts are net of any PERACare enrollee premiums required for enrollment in PERACare. Against these health care benefit liabilities, the DPS HCTF has a total present actuarial value of assets of \$15,481,663 as of December 31, 2013. The difference of \$69,270,854 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 \$69,270,854 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the DPS HCTF consist of a statutorily mandated 1.02% of salary. The valuation indicates that employer normal contributions at the rate of 0.24% of salary are required to provide the health care benefits funded by the DPS HCTF.
3. Prospective employer normal contributions at the rate noted in paragraph 2 have a present value of \$8,116,207. When this amount is subtracted from \$69,270,854, which is the present value of the total future contributions to be made by the employers, there remains \$61,154,647 as the amount of future actuarial accrued liability contributions.
4. After recognizing the required normal contribution rate, the remaining contribution amounts to 0.78% of salary. Contributions at this level will amortize the unfunded actuarial accrued liability of \$61,154,647 over 19 years.



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

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

<b>Division</b>	<b>Employer Contribution Rate</b>
State	
Non-Troopers	10.15%
Troopers	12.85
School	10.15
Local Government	10.00
Judicial	13.66
Denver Public Schools	13.75

2. For each division, 1.02% of the statutory rates shown above are allocated to the Health Care Trust Funds. Additional contributions to the HCTFs resulting from RDS payments for Medicare Part D benefits prior to January 1, 2014 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 in the tables from Section IV. Those amounts are continued in each division until the division's actuarial funded ratio exceeds 103%. At that time, the amount of the AED and SAED will be reduced by 0.5% of pay each.
4. For the DPS Division, the statutory rates, including AED and SAED contributions are being offset annually by an amount equivalent to that which Denver Public Schools pays to finance principal and interest payments on Pension Certificates of Participation (PCOPs) issued in 1997 and 2008 and refinanced the last three calendar years.
5. The following tables show the development of the normal contribution rate, the unfunded actuarial accrued liability (UAAL), 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 Funds.





**Employer Contribution Rate  
Expressed as Percent of Active Member Payroll**

	State Division	School Division	Local Government Division	Judicial Division	Denver Public Schools Division
<u>Contribution For</u>					
Normal Cost					
Service Retirement Benefits	7.64%	8.94%	7.20%	14.53%	8.99%
Disability Benefits	0.24%	0.15%	0.16%	0.57%	1.48%
Survivor Benefits	0.13%	0.11%	0.13%	0.40%	0.24%
Separation Benefits	1.94%	2.10%	2.06%	1.45%	1.36%
Administrative Expense Load	<u>0.35%</u>	<u>0.35%</u>	<u>0.35%</u>	<u>0.35%</u>	<u>0.35%</u>
Total	10.30%	11.65%	9.90%	17.30%	12.42%
Member Current Contributions*	<u>8.05%</u>	<u>8.00%</u>	<u>8.00%</u>	<u>8.00%</u>	<u>8.00%</u>
Employer Normal Cost	2.25%	3.65%	1.90%	9.30%	4.42%
Employer Contribution Rate*	17.03%	17.03%	12.31%	16.10%	3.81%**
Percent Available to Amortize Unfunded Actuarial Accrued Liability (UAAL)	14.78%	13.38%	10.41%	6.80%	0.00%
Number of Years to Amortize UAAL					
▪ Current Contributions	60 years	61 years	37 years	Infinite	Infinite
▪ With Future Increases to AED and SAED	44 years	44 years	37 years	Infinite	Infinite***
Actuarially Required Employer Contribution Rate to pay Normal Cost and amortize UAAL over 30 years (in addition to assumed AED and SAED payments throughout the amortization period)	12.43%	12.07%	9.92%	17.75%	1.19%

\* Weighted average for State Division and Employer Contribution Rate is adjusted by contributions to the AIR for all divisions.

\*\* For DPS Division:

Employer Statutory	12.84%	(weighted)
AED and SAED	8.20	
DPS HCTF	(1.02)	
PCOP Credit	<u>(16.21)</u>	
Net	3.81%	

\*\*\* With anticipated reductions in the future offset to DPS contribution requirements to PERA for the cost of certain Pension Certificates of Participation (PCOP) as currently structured, the amortization period is expected to be below 30 years. Colorado statutes call for a "true-up" in 2015, and every five years following, with the expressed purpose of adjusting the total DPS Contribution rate to ensure equalization of the ratio of unfunded actuarial accrued liability over payroll between the DPS and Schools Division at the end of the 30-year period beginning January 1, 2010.



**Employer Contribution Rate  
Expressed as Percent of Active Member Payroll**

	<b>PERA Health Care Trust Fund</b>	<b>DPS Health Care Trust Fund</b>
<u>Contribution For</u>		
Normal Cost		
Service Retirement Benefits	0.18%	0.21%
Disability Benefits	0.01%	0.01%
Survivor Benefits	0.00%	0.00%
Separation Benefits	<u>0.03%</u>	<u>0.02%</u>
Total	0.22%	0.24%
Member Current Contributions	<u>0.00%</u>	<u>0.00%</u>
Employer Normal Cost	0.22%	0.24%
Employer Contribution Rate	1.02%	1.02%
Percent Available to Amortize Unfunded Actuarial Accrued Liability (UAAL)	0.80%	0.78%
Number of Years to Amortize UAAL		
▪ Current Contributions	40 years	19 years
Actuarially Required Employer Contribution Rate to pay Normal Cost and amortize UAAL over 30 years	1.15%	0.81%



**SECTION VI - ACCOUNTING INFORMATION**

1. 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 employers. 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, 2013**

GROUP	NUMBER					Total
	State Division	School Division	Local Government Division	Judicial Division	Denver Public Schools Division	
Retirees and survivors currently receiving benefits	34,981	55,986	6,167	323	6,564	104,021
Terminated employees entitled to benefits but not yet receiving benefits	5,340	12,854	2,868	6	759	21,827
Inactive Members	63,759	96,832	20,286	5	5,501	186,383
Active Members						
Vested						
General employees	31,632	68,242	6,494	281	5,384	112,033
State troopers	637	0	0	0	0	637
Non-vested						
General employees	22,906	49,485	5,460	51	9,432	87,334
State troopers	<u>179</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>179</u>
Total Active Members	55,354	117,727	11,954	332	14,816	200,183
Totals	159,434	283,399	41,275	666	27,640	512,414



**NUMBER OF ALL MEMBERS  
AS OF DECEMBER 31, 2013**

GROUP	NUMBER		Total
	PERA Health Care Trust Fund	DPS Health Care Trust Fund	
Retirees and survivors currently receiving benefits	53,041	3,995	57,036
Terminated employees entitled to benefits but not yet receiving benefits	21,068	759	21,827
Inactive Members	N/A	N/A	N/A
Active Members	185,367	14,816	200,183
Totals	259,476	19,570	279,046



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

**SCHEDULE OF FUNDING PROGRESS  
(\$ IN THOUSANDS)**

Actuarial Valuation Date	Actuarial Value of Plan Assets (a)	Actuarial Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
<b><u>STATE DIVISION</u></b>						
12/31/2013	\$ 13,129,460	\$ 22,843,725	\$ 9,714,265	57.5%	\$ 2,474,965	392.5%
12/31/2012	12,538,675	21,191,495	8,652,820	59.2%	2,384,934	362.8%
12/31/2011	12,010,045	20,826,543	8,816,498	57.7%	2,393,791	368.3%
12/31/2010	12,791,946	20,356,176	7,564,230	62.8%	2,392,080	316.2%
12/31/2009	13,382,736	19,977,217	6,594,481	67.0%	2,384,137	276.6%
12/31/2008	13,914,371	20,498,668	6,584,297	67.9%	2,371,639	277.6%
<b><u>SCHOOL DIVISION</u></b>						
12/31/2013	\$ 21,369,380	\$ 35,437,312	\$ 14,067,932	60.3%	\$ 3,938,650	357.2%
12/31/2012	20,266,574	32,619,033	12,352,459	62.1%	3,819,066	323.4%
12/31/2011	19,266,110	31,986,199	12,720,089	60.2%	3,821,603	332.8%
12/31/2010	20,321,736	31,339,754	11,018,018	64.8%	3,900,662	282.5%
12/31/2009	21,054,910	30,412,815	9,357,905	69.2%	3,922,175	238.6%
12/31/2008	21,733,329	31,000,202	9,266,873	70.1%	3,804,927	243.5%
<b><u>LOCAL GOVERNMENT DIVISION</u></b>						
12/31/2013	\$ 3,291,298	\$ 4,502,282	\$ 1,210,984	73.1%	\$ 529,003	228.9%
12/31/2012	3,098,721	4,157,621	1,058,900	74.5%	523,668	202.2%
12/31/2011	2,882,691	4,160,015	1,277,324	69.3%	718,169	177.9%
12/31/2010	2,926,045	4,005,566	1,079,521	73.0%	705,265	153.1%
12/31/2009	2,932,628	3,850,821	918,193	76.2%	705,097	130.2%
12/31/2008	2,933,296	3,838,083	904,787	76.4%	718,902	125.9%
<b><u>JUDICIAL DIVISION</u></b>						
12/31/2013	\$ 256,800	\$ 351,598	\$ 94,798	73.0%	\$ 39,942	237.3%
12/31/2012	238,807	326,897	88,090	73.1%	39,045	225.6%
12/31/2011	221,515	319,437	97,922	69.3%	39,033	250.9%
12/31/2010	227,814	303,839	76,025	75.0%	37,412	203.2%
12/31/2009	228,714	295,696	66,982	77.3%	37,583	178.2%
12/31/2008	230,967	288,058	57,091	80.2%	35,937	158.9%
<b><u>DENVER PUBLIC SCHOOLS DIVISION</u></b>						
12/31/2013	\$ 3,075,895	\$ 3,785,872	\$ 709,977	81.2%	\$ 547,660	129.6%
12/31/2012	2,936,695	3,495,549	558,854	84.0%	510,872	109.4%
12/31/2011	2,804,706	3,442,527	637,821	81.5%	491,646	129.7%
12/31/2010	2,961,720	3,332,814	371,094	88.9%	470,774	78.8%



**SCHEDULE OF FUNDING PROGRESS  
(\$ IN THOUSANDS)**

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Plan Assets ( a )</b>	<b>Actuarial Accrued Liability (AAL) Entry Age ( b )</b>	<b>Unfunded AAL (UAAL) ( b - a )</b>	<b>Funded Ratio ( a / b )</b>	<b>Covered Payroll ( c )</b>	<b>UAAL as a Percentage of Covered Payroll ( ( b - a ) / c )</b>
<b><u>PERA HEALTH CARE TRUST FUND</u></b>						
12/31/2013	\$ 293,556	\$1,557,406	\$1,263,850	18.8%	\$6,982,560	18.1%
12/31/2012	285,097	1,723,495	1,438,398	16.5%	6,766,713	21.3%
12/31/2011	282,228	1,710,790	1,428,562	16.5%	6,972,596	20.5%
12/31/2010	288,193	1,642,993	1,354,800	17.5%	7,035,419	19.3%
12/31/2009	260,341	1,763,241	1,502,900	14.8%	7,048,992	21.3%
12/31/2008	255,976	1,368,633	1,112,657	18.7%	6,931,405	16.1%
<b><u>DPS HEALTH CARE TRUST FUND</u></b>						
12/31/2013	\$ 15,482	\$76,636	\$61,154	20.2%	\$547,660	11.2%
12/31/2012	14,443	77,669	63,226	18.6%	510,872	12.4%
12/31/2011	14,448	77,475	63,027	18.6%	491,646	12.8%
12/31/2010	14,086	78,513	64,427	17.9%	470,774	13.7%



3. The information presented in the required supplementary schedules for pension was determined as part of the actuarial valuation at December 31, 2013.

	State Division	School Division	Local Government Division	Judicial Division	Denver Public Schools Division
Valuation date	12/31/2013	12/31/2013	12/31/2013	12/31/2013	12/31/2013
Actuarial cost method	Entry age	Entry age	Entry age	Entry age	Entry age
Amortization method	Level percent Open	Level percent Open	Level percent Open	Level percent Open	Level percent Open
Remaining amortization period	30 years	30 years	30 years	30 years	30 years
Asset valuation method	4 year smoothed Market	4 year smoothed Market	4 year smoothed Market	4 year smoothed Market	4 year smoothed Market
Actuarial assumptions:					
Investment rate of return*	7.50%	7.50%	7.50%	7.50%	7.50%
Projected salary increases*	3.90 – 9.57%	3.90 – 10.10%	3.90 – 10.85%	4.40 – 5.40%	3.90 – 10.10%
Post-Retirement Benefit Increases:					
Members hired prior to 1/1/2007	2.00% compounded annually	2.00% compounded annually	2.00% compounded annually	2.00% compounded annually	2.00% compounded annually
Members hired between 1/1/2007 and 1/1/2010	None**	None**	None**	None**	2.00% compounded annually
Members hired on or after 1/1/2010	None**	None**	None**	None**	None**

\* Includes inflation at 2.80%.

\*\* Post-Retirement Benefit Increases are provided by a separate fund subject to monies being available.



4. The information presented in the required supplementary schedules for health care was determined as part of the actuarial valuation at December 31, 2013.

	PERA Health Care Trust Fund	DPS Health Care Trust Fund
Valuation date	12/31/2013	12/31/2013
Actuarial cost method	Entry age (Level Dollar)	Entry age (Level Dollar)
Amortization method	Level percent Open	Level percent Open
Remaining amortization period	30 years	30 years
Asset valuation method	4 year smoothed Market	4 year smoothed Market
Actuarial assumptions:		
Investment rate of return*	7.50%	7.50%
Projected salary increases*	3.90% in aggregate	3.90% in aggregate
Health Care Inflation Factor		
Service-Based Premium Subsidy	0.00%	0.00%
Medicare Part A Premiums	0.00% Initial 4.25% Ultimate	n/a
Carrier Premiums	5.27% - 5.91% Initial 5.00% Ultimate	n/a

\* Includes inflation at 2.80%.





5.

**SCHEDULE OF EMPLOYER CONTRIBUTIONS**

<b>Calendar Year</b>	<b>Annual Required Contribution in Dollars (\$ in thousands)</b>	<b>Annual Required Contribution as a Percent of Pay</b>	<b>Percent Of ARC Contributed</b>
<b>State Division</b>			
2013	\$495,241	20.01%	79%
2012	393,991	16.52%*	83%
2011	326,274	13.63%*	85%
2010	452,821	18.93%*	62%
2009	426,999	17.91%	69%
2008	437,567	18.45%	61%
<b>School Division</b>			
2013	\$779,459	19.79%	79%
2012	672,156	17.60%	84%
2011	601,138	15.73%	89%
2010	731,374	18.75%	70%
2009	649,512	16.56%	73%
2008	653,686	17.18%	65%
<b>Local Government Division</b>			
2013	\$ 56,180	10.62%	116%
2012	51,267	9.79%	163%
2011	64,492	8.98%	139%
2010	86,818	12.31%	101%
2009	78,548	11.14%	106%
2008	85,909	11.95%	91%
<b>Judicial Division</b>			
2013	\$ 8,599	21.53%	76%
2012	7,137	18.28%*	82%
2011	6,362	16.30%*	84%
2010	6,970	18.63%*	80%
2009	6,419	17.08%	90%
2008	6,346	17.66%	80%
<b>Denver Public Schools Division</b>			
2013	\$ 63,145	11.53%	37%
2012	49,044	9.60%	27%
2011	58,260	11.85%**	20%
2010	68,780	14.61%***	8%

\* The State Division and the Judicial Division 2010, 2011 and 2012 ARCs have been adjusted to reflect the contribution rate swap of 2.5% of payroll for the period July 1, 2010 through June 30, 2012 decreasing the employer contribution rate.

\*\* Blended Rate for 2011 from 2008 and 2009 Annual Valuations from previous DPSRS actuary

\*\*\* Blended Rate for 2010 from 2007 and 2008 Annual Valuations from previous DPSRS actuary



## SCHEDULE OF EMPLOYER CONTRIBUTIONS

### PERA HEALTH CARE TRUST FUND

Calendar 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)
2013	\$86,583,744	\$72,785,209	\$15,731,044	\$88,516,253	102%
2012	\$79,847,213	\$72,556,763	\$14,197,649	\$86,754,412	109%
2011	\$89,249,242	\$73,448,775	\$14,151,366	\$87,600,141	98%
2010	\$78,796,693	\$74,047,581	\$14,168,745	\$88,216,326	112%
2009	\$78,948,710	\$74,072,676	\$13,633,368	\$87,706,044	111%
2008	\$76,938,596	\$72,599,167	\$13,742,749	\$86,341,916	112%

### DPS HEALTH CARE TRUST FUND

Calendar 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)
2013	\$4,709,876	\$5,557,244	\$562,761	\$6,120,005	130%
2012	\$4,700,022	\$5,243,219	\$488,054	\$5,731,273	122%
2011	\$4,523,143	\$5,029,151	\$498,974	\$5,528,125	122%
2010	\$4,465,261	\$4,761,581	\$536,814	\$5,298,395	119%

The ARCs shown above reflect a 12-month lag between the valuation date and the beginning of the applicable calendar year.

To comply with GASB 43, beginning with the results of the December 31, 2005 valuation, the unfunded actuarial accrued liability (UAAL) is amortized over 30 years in determining the ARC.

For the results of the valuations from December 31, 2005 through December 31, 2012, the following changes were implemented to comply with GASB 43 as clarified by GASB Technical Bulletin 2006-1:

- All liabilities were determined without a reduction for expected future RDS payments.
- The total HCTF contribution was determined to be the statutory employer contribution plus that year's actual RDS payments.

Effective January 1, 2014, PERACare no longer participates in the Centers for Medicare & Medicaid Services' (CMS) Retiree Drug Subsidy Program. PERACare enrollees participating in the self-insured Medicare supplement plans and the Medicare HMO plan offered by Rocky Mountain Health Plans now receive their prescription drug benefits through a Medicare Prescription Drug Plan (PDP). As the Medicare Part D subsidies implicit in the lower costs for PDPs may be recognized in the liability under GASB Statements No. 43 and No. 45, the liability associated with the premium subsidies funded by estimated RDS receipts has been eliminated and, therefore, is not included in the results of the December 31, 2013 valuation.



**SECTION VII – DERIVATION OF EXPERIENCE GAINS AND LOSSES**

**Pension Changes in Unfunded Actuarial Accrued Liabilities (UAAL)**

**During Calendar Year 2013**

**(\$ in Millions)**

	State Division	School Division	Local Government Division	Judicial Division	Denver Public Schools Division	Total Pension
1) Beginning of Year:						
a) Unfunded Actuarial Accrued Liability	\$8,652.8	\$12,352.5	\$1,058.9	\$ 88.1	\$ 558.9	\$22,711.2
b) Normal Cost	232.3	419.1	48.8	6.5	62.1	768.8
c) Total Required Contributions	694.5	1,094.6	98.5	11.8	107.0	2,006.4
d) Total Actual Contributions	596.0	936.0	108.0	9.7	66.7	1,716.4
2) End of Year:						
a) Expected UAAL from previous valuation [(1a) + 1(b)] x 1.08 – (1c) x 1.04	\$8,873.6	\$12,654.9	\$1,093.9	\$89.9	\$559.4	\$23,271.7
b) Expected UAAL on actual contributions [(1a) + 1(b)] x 1.08 – (1d) x 1.04	8,976.1	12,819.9	1,084.0	92.1	601.3	23,573.4
c) Increase in UAAL due to Deficiency (2b) – (2a)	102.5	165.0	(9.9)	2.2	41.9	301.7
3) Changes on this Year's Activities						
a) Liability Gain/(Loss)	\$(68.2)	\$(135.7)	\$1.7	\$4.1	\$(25.3)	\$(223.4)
b) Investment Gain/(Loss)	364.8	589.4	90.3	6.9	87.7	1,139.1
c) Change in Plan Assumptions	(1,034.8)	(1,701.7)	(219.0)	(13.7)	(171.1)	(3,140.3)
d) Change in Plan Provisions	0.0	0.0	0.0	0.0	0.0	0.0
e) Change in Methods	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
f) Total	\$(738.2)	\$(1,248.0)	\$(127.0)	\$(2.7)	\$(108.7)	\$(2,224.6)
4) Actual UAAL at End of Year						
(2a) + (2c) – (3f)	\$9,714.3	\$14,067.9	\$1,211.0	\$ 94.8	\$ 710.0	\$25,798.0



**SECTION VII – DERIVATION OF EXPERIENCE GAINS AND LOSSES**

**PERA HCTF and DPS HCTF Changes in Unfunded Actuarial Accrued Liabilities (UAAL)  
During Calendar Year 2013  
(\$ in Millions)**

	PERA HCTF	DPS HCTF
1) Beginning of Year:		
a) Unfunded Actuarial Accrued Liability (UAAL)	\$1,438.4	\$63.2
b) Normal Cost	15.2	1.3
c) Total Required Contributions	86.6	4.7
d) Total Actual Contributions*	97.0	6.3
2) End of Year:		
a) Expected UAAL from previous valuation [(1a) + 1(b)] x 1.08 – (1c) x 1.04	\$1,479.8	\$64.8
b) Expected UAAL on actual contributions [(1a) + 1(b)] x 1.08 – (1d) x 1.04	1,469.0	63.1
c) Increase in UAAL due to Deficiency (2b) – (2a)	(10.8)	(1.7)
3) Changes on this Year's Activities		
a) Liability Gain/(Loss)	\$22.0	(\$0.4)
b) Investment Gain/(Loss)	9.8	0.5
c) Change in Plan Assumptions	2.6	(3.2)
d) Change in Plan Provisions	170.8	5.0
e) Change in Methods	<u>0.0</u>	<u>0.0</u>
f) Total	\$205.2	\$1.9
4) Actual UAAL at End of Year		
(2a) + (2c) – (3f)	\$1,263.8	\$61.2

\* Includes members' purchased service transfers and net miscellaneous income.



**Pension Gains & Losses in Actuarial Accrued Liabilities**  
**During Calendar Year 2013**  
**(\$ in Millions)**

Type of Activity	State Division	School Division	Local Gov't Division	Judicial Division	Denver Public Schools Division	Total
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$25.3	(\$46.5)	\$0.8	\$3.4	(\$15.7)	(\$32.7)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(9.9)	(8.1)	(3.5)	0.0	(2.7)	(\$24.2)
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(0.4)	(0.8)	(0.2)	0.0	(0.4)	(\$1.8)
<b>Termination of Employment.</b> If more liabilities are released by terminations than assumed, there is a gain. If smaller releases, a loss.	(35.5)	(89.4)	(8.6)	(0.4)	11.5	(\$122.4)
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	49.5	145.4	20.0	3.4	11.9	\$230.2
<b>New Members.</b> Additional actuarial accrued liability will produce a loss.	(76.6)	(89.0)	(12.2)	(2.8)	(34.7)	(\$215.3)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	364.8	589.4	90.3	6.9	87.7	\$1,139.1
<b>Death after Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	(22.7)	(56.8)	8.0	(0.7)	3.6	(\$68.6)
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>2.1</u>	<u>9.5</u>	<u>(2.6)</u>	<u>1.2</u>	<u>1.2</u>	<u>\$11.4</u>
<b>Net Gain/(Loss) During Year from Experience</b>	\$296.6	\$453.7	\$92.0	\$11.0	\$62.4	\$915.7



**PERA HCTF and DPS HCTF Gains & Losses in Actuarial Accrued Liabilities**  
**During Calendar Year 2013**  
**(\$ in Millions)**

Type of Activity	PERA HCTF	DPS HCTF
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$(0.5)	\$(0.3)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(0.6)	(0.1)
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.0	0.0
<b>Termination of Employment.</b> If more liabilities are released by terminations than assumed, there is a gain. If smaller releases, a loss.	(4.0)	0.3
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	0.0	0.0
<b>New Members.</b> Additional actuarial accrued liability will produce a loss.	(5.3)	(0.8)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	9.8	0.5
<b>Death after Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	(2.1)	0.1
<b>Other.</b> Gains and losses resulting from claims experience, changes in plan participation/benefit utilization, changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>34.5</u>	<u>0.4</u>
<b>Net Gain/(Loss) During Year from Experience</b>	\$31.8	\$0.1



**Pension Gains & Losses as a Percentage of Actuarial Accrued Liabilities**  
**During Calendar Year 2013**  
**(\$ in Millions)**

Type of Activity	State Division	School Division	Local Government Division	Judicial Division	Denver Public Schools Division	Total Pension
<b>Actuarial Accrued Liability at the Beginning of the Year</b>	\$21,191.5	\$32,619.0	\$4,157.6	\$ 326.9	\$3,495.5	\$61,790.5
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	0.1 %	(0.1)%	0.0 %	1.0 %	(0.4)%	(0.1)%
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(0.0)%	(0.0)%	(0.1)%	0.0 %	(0.1)%	(0.0)%
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(0.0)%	(0.0)%	(0.0)%	0.0 %	(0.0)%	(0.0)%
<b>Termination from Employment.</b> If more liabilities are released by terminations than assumed, there is a gain. If smaller releases, a loss.	(0.2)%	(0.3)%	(0.2)%	(0.1)%	0.3 %	(0.2)%
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	0.2 %	0.4 %	0.5 %	1.0 %	0.3 %	0.4 %
<b>New Members.</b> Additional actuarial accrued liability will produce a loss.	(0.4)%	(0.3)%	(0.3)%	(0.9)%	(1.0)%	(0.3)%
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	1.7 %	1.8 %	2.2 %	2.1 %	2.5 %	1.8 %
<b>Death after Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	(0.1)%	(0.2)%	0.2 %	(0.2)%	0.1 %	(0.1)%
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>0.0%</u>	<u>0.0%</u>	<u>(0.1)%</u>	<u>0.4%</u>	<u>0.0%</u>	<u>0.0%</u>
<b>Gain (or Loss) During Year from Financial Experience</b>	1.4 %	1.4 %	2.2 %	3.4 %	1.8 %	1.5 %



**PERA HCTF and DPS HCTF Gains & Losses as a Percentage of Actuarial Accrued Liabilities  
During Calendar Year 2013  
(\$ in Millions)**

Type of Activity	PERA HCTF	DPS HCTF
<b>Actuarial Accrued Liability at the Beginning of the Year</b>	\$1,723.5	\$77.7
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	0.0%	(0.4)%
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	0.0%	(0.1)%
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.0%	0.0%
<b>Termination from Employment.</b> If more liabilities are released by terminations than assumed, there is a gain. If smaller releases, a loss.	(0.2)%	0.4%
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	0.0%	0.0%
<b>New Members.</b> Additional actuarial accrued liability will produce a loss.	(0.3)%	(1.0)%
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	0.6%	0.6%
<b>Death after Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	(0.1)%	0.1%
<b>Other.</b> Gains and losses resulting from claims experience, changes in plan participation/benefit utilization, changes in valuation software, data adjustments, timing of financial transactions, etc.	2.0%	0.5%
<b>Gain (or Loss) During Year from Financial Experience</b>	2.0%	0.1%





**SECTION VIII – ADDITIONAL HEALTH CARE TRUST FUND INFORMATION**

**PERA HCTF Subsidy Analysis**

Calendar Year (1)	Administrative Expenses (2)	Claims & HMO Premiums (3)	Total Costs (2)+(3) (4)	PERA Subsidy	
				Amount (5)	Percentage (5)/(4) (6)
2013	\$11,432,638	\$331,655,337	\$343,087,975	\$104,492,638	30%
2012	11,238,351	320,746,116	331,984,467	109,059,949	33%
2011	11,009,812	296,318,871	307,328,683	91,816,866	30%
2010	9,711,601	273,798,971	283,510,572	77,565,425	27%
2009	7,878,395	261,533,889	269,412,284	80,110,149	30%
2008	7,839,386	258,685,119	266,524,505	88,469,990	33%
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%

**DPS HCTF Subsidy Analysis**

Calendar Year (1)	Administrative Expenses (2)	Claims & HMO Premiums (3)	Total Costs (2)+(3) (4)	DPS Subsidy	
				Amount (5)	Percentage (5)/(4) (6)
2013	\$397,301	\$23,483,334	\$23,880,635	\$6,366,156	27%
2012	383,943	22,993,959	23,377,902	6,652,676	28%
2011	392,263	23,026,025	23,418,288	6,165,753	26%
2010	460,196	22,531,118	22,991,314	6,233,170	27%

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 health care costs for retirees, beneficiaries and actives. Also, claims experience gains and losses are now included in the actual PERA and DPS subsidies.



**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, 2013**

**STATE DIVISION**

<b>PRESENT AND PROSPECTIVE ASSETS</b>		
Actuarial Value of Present Assets		\$ 13,129,459,956
Present value of future members' contributions		1,536,559,062
Present value of future employer contributions		
Normal contributions	\$ 346,041,280	
Unfunded actuarial accrued liability contributions	<u>9,714,265,210</u>	
Total prospective employer contributions		<u>10,060,306,490</u>
Total Present and Prospective Assets		<u>\$ 24,726,325,508</u>
<b>ACTUARIAL LIABILITIES</b>		
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		
Retired members	\$ 14,632,800,813	
Survivors	<u>165,507,691</u>	
Total		\$ 14,798,308,504
Present value of prospective benefits payable on account of inactive members		498,059,204
Present value of prospective benefits payable on account of present active members:		
Service retirement benefits	\$ 8,262,530,006	
Disability retirement benefits	125,190,380	
Survivor benefits	92,254,003	
Separation benefits	<u>949,983,411</u>	
Total		<u>9,429,957,800</u>
Total Actuarial Liabilities		<u>\$ 24,726,325,508</u>



**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, 2013**

**SCHOOL DIVISION**

<b>PRESENT AND PROSPECTIVE ASSETS</b>		
Actuarial Value of Present Assets		\$ 21,369,379,750
Present value of future members' contributions		2,706,337,714
Present value of future employer contributions		
Normal contributions	\$ 1,057,027,896	
Unfunded actuarial accrued liability contributions	<u>14,067,931,820</u>	
Total prospective employer contributions		<u>\$ 15,124,959,716</u>
Total Present and Prospective Assets		<u>\$ 39,200,677,180</u>
<b>ACTUARIAL LIABILITIES</b>		
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		
Retired members	\$ 22,390,287,089	
Survivors	<u>152,931,414</u>	
Total		\$ 22,543,218,503
Present value of prospective benefits payable on account of inactive members		758,422,351
Present value of prospective benefits payable on account of present active members:		
Service retirement benefits	\$ 13,966,196,196	
Disability retirement benefits	129,713,616	
Survivor benefits	116,775,609	
Separation benefits	<u>1,686,350,905</u>	
Total		<u>\$ 15,899,036,326</u>
Total Actuarial Liabilities		<u>\$ 39,200,677,180</u>



**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, 2013**

**LOCAL GOVERNMENT DIVISION**

<b>PRESENT AND PROSPECTIVE ASSETS</b>		
Actuarial Value of Present Assets		\$ 3,291,297,571
Present value of future members' contributions		321,934,605
Present value of future employer contributions		
Normal contributions	\$ 54,845,214	
Unfunded actuarial accrued liability contributions	<u>1,210,984,347</u>	
Total prospective employer contributions		<u>\$ 1,265,829,561</u>
Total Present and Prospective Assets		<u>\$ 4,879,061,737</u>
<b>ACTUARIAL LIABILITIES</b>		
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		
Retired members	\$ 2,678,642,738	
Survivors	<u>29,758,766</u>	
Total		\$ 2,708,401,504
Present value of prospective benefits payable on account of inactive members		282,775,867
Present value of prospective benefits payable on account of present active members:		
Service retirement benefits	\$ 1,632,200,022	
Disability retirement benefits	17,695,721	
Survivor benefits	19,292,073	
Separation benefits	<u>218,696,550</u>	
Total		<u>\$ 1,887,884,366</u>
Total Actuarial Liabilities		<u>\$ 4,879,061,737</u>



**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, 2013**

**JUDICIAL DIVISION**

<b>PRESENT AND PROSPECTIVE ASSETS</b>		
Actuarial Value of Present Assets		\$ 256,800,478
Present value of future members' contributions		24,654,518
Present value of future employer contributions		
Normal contributions	\$ 27,618,418	
Unfunded actuarial accrued liability contributions	<u>94,797,579</u>	
Total prospective employer contributions		<u>\$ 122,415,997</u>
Total Present and Prospective Assets		<u><u>\$ 403,870,993</u></u>
<b>ACTUARIAL LIABILITIES</b>		
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		
Retired members	\$ 203,625,155	
Survivors	<u>3,031,491</u>	
Total		\$ 206,656,646
Present value of prospective benefits payable on account of inactive members		1,579,155
Present value of prospective benefits payable on account of present active members:		
Service retirement benefits	\$ 182,945,806	
Disability retirement benefits	3,167,094	
Survivor benefits	3,733,467	
Separation benefits	<u>5,788,825</u>	
Total		<u>\$ 195,635,192</u>
Total Actuarial Liabilities		<u><u>\$ 403,870,993</u></u>



**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, 2013**

**DENVER PUBLIC SCHOOLS DIVISION**

<b>PRESENT AND PROSPECTIVE ASSETS</b>		
Actuarial Value of Present Assets		\$ 3,075,894,894
Present value of future members' contributions		398,656,067
Present value of future employer contributions		
Normal contributions	\$ 193,772,351	
Unfunded actuarial accrued liability contributions	<u>709,977,098</u>	
Total prospective employer contributions		<u>\$ 903,749,449</u>
Total Present and Prospective Assets		<u>\$ 4,378,300,410</u>
<b>ACTUARIAL LIABILITIES</b>		
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits		
Retired members	\$ 2,587,194,903	
Survivors	<u>23,671,824</u>	
Total		\$ 2,610,866,727
Present value of prospective benefits payable on account of inactive members		61,393,455
Present value of prospective benefits payable on account of present active members:		
Service retirement benefits	\$ 1,470,797,618	
Disability retirement benefits	20,627,555	
Survivor benefits	14,632,104	
Separation benefits	<u>199,982,951</u>	
Total		<u>\$ 1,706,040,228</u>
Total Actuarial Liabilities		<u>\$ 4,378,300,410</u>



**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, 2013**

**PERA HEALTH CARE TRUST FUND**

<b>PRESENT AND PROSPECTIVE ASSETS</b>		
Actuarial Value of Present Assets		\$293,556,476
Present value of future members' contributions		\$0
Present value of future employer contributions		
Normal contributions	\$87,733,751	
Unfunded actuarial accrued liability contributions	<u>1,263,849,339</u>	
Total prospective employer contributions		<u>\$1,351,583,090</u>
Total Present and Prospective Assets		<u>\$1,645,139,566</u>
<b>ACTUARIAL LIABILITIES</b>		
Present value of benefits payable on account of present benefit recipients enrolled in PERA Care and receiving a health care subsidy pursuant to law		
Retired members	\$1,057,458,056	
Survivors	<u>5,608,391</u>	
Total		\$1,063,066,447
Present value of prospective benefits payable on account of eligible inactive members		29,371,535
Present value of prospective benefits payable on account of present active members:		
Service retirement benefits	\$500,097,517	
Disability retirement benefits	15,809,998	
Survivor benefits	1,909,025	
Separation benefits	<u>34,885,044</u>	
Total		<u>\$552,701,584</u>
Total Actuarial Liabilities		<u>\$1,645,139,566</u>



**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, 2013**

**DPS HEALTH CARE TRUST FUND**

<b>PRESENT AND PROSPECTIVE ASSETS</b>		
Actuarial Value of Present Assets		\$15,481,663
Present value of future members' contributions		\$0
Present value of future employer contributions		
Normal contributions	\$8,116,207	
Unfunded actuarial accrued liability contributions	<u>61,154,647</u>	
Total prospective employer contributions		<u>\$69,270,854</u>
Total Present and Prospective Assets		<u>\$84,752,517</u>
<b>ACTUARIAL LIABILITIES</b>		
Present value of benefits payable on account of present benefit recipients enrolled in PERA Care and receiving a health care subsidy pursuant to law		
Retired members	\$51,643,141	
Survivors	<u>0</u>	
Total		\$51,643,141
Present value of prospective benefits payable on account of deferred vested members		463,078
Present value of prospective benefits payable on account of present active members:		
Service retirement benefits	\$29,711,539	
Disability retirement benefits	1,275,472	
Survivor benefits	38,746	
Separation benefits	<u>1,620,541</u>	
Total		<u>\$32,646,298</u>
Total Actuarial Liabilities		<u>\$84,752,517</u>





**SCHEDULE A**

(continued)

**SOLVENCY TEST  
BY DIVISION AS OF DECEMBER 31, 2013  
(\$ IN THOUSANDS)**

Division	Aggregate Accrued Liabilities For*				Portion of Accrued Liabilities Covered by Valuation Assets		
	(1) Active Member Contributions	(2) Retirees, Survivors and Inactive Members	(3) Active Members (Employer Financed Portion)	Valuation Assets	(1)	(2)	(3)
	State	\$2,675,469	\$15,296,368	\$4,871,888	\$13,129,460	100%	68.3%
School	3,881,145	23,301,641	8,254,526	21,369,380	100%	75.1%	0.0%
Local	533,003	2,991,177	978,102	3,291,298	100%	92.2%	0.0%
Judicial	59,348	208,236	84,014	256,800	100%	94.8%	0.0%
DPS	364,126	2,672,260	749,486	3,075,895	100%	100%	5.3%
<b>TOTAL</b>	<b>\$7,513,091</b>	<b>\$44,469,682</b>	<b>\$14,938,016</b>	<b>\$41,122,833</b>	<b>100%</b>	<b>75.6%</b>	<b>0.0%</b>

**SOLVENCY TEST\*\*  
HISTORICAL TOTALS  
(\$ IN THOUSANDS)**

Valuation Date	Aggregate Accrued Liabilities For*				Portion of Accrued Liabilities Covered by Valuation Assets		
	(1) Active Member Contributions	(2) Retirees, Survivors and Inactive Members	(3) Active Members (Employer Financed Portion)	Valuation Assets	(1)	(2)	(3)
	12/31/2013	\$7,513,091	\$44,469,682	\$14,938,016	\$41,122,833	100%	75.6%
12/31/2012	7,426,820	41,081,983	13,281,792	39,079,472	100%	77.0%	0.0%
12/31/2011	7,468,008	39,328,881	13,937,832	37,185,067	100%	75.6%	0.0%
12/31/2010	7,377,837	37,530,979	14,429,335	39,229,261	100%	84.9%	0.0%
12/31/2009	7,068,660	33,621,499	13,846,390	37,598,988	100%	90.8%	0.0%
12/31/2008	6,992,382	34,524,824	14,107,805	38,811,962	100%	92.2%	0.0%

\* Results do not include the Health Care Trust Funds.

\*\* Results prior to 12/31/2010 do not include DPS Division.



**SCHEDULE A**

(continued)

**SOLVENCY TEST  
PERA HEALTH CARE TRUST FUND  
(\$ IN THOUSANDS)**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Valuation Assets		
	(1)	(2)	(3)	Valuation Assets	(1)	(2)	(3)
	Active Member Contributions	Retirees, Survivors and Inactive Members	Active Members (Employer Financed Portion)				
12/31/2013	\$0	\$1,092,438	\$464,968	\$293,556	N/A	26.9%	0.0%
12/31/2012	0	1,259,557	463,938	285,097	N/A	22.6%	0.0%
12/31/2011	0	1,251,580	459,210	282,228	N/A	22.5%	0.0%
12/31/2010	0	1,179,809	463,184	288,193	N/A	24.4%	0.0%
12/31/2009	0	1,241,349	521,892	260,341	N/A	21.0%	0.0%
12/31/2008	0	969,288	399,345	255,976	N/A	26.4%	0.0%

**SOLVENCY TEST  
DPS HEALTH CARE TRUST FUND  
(\$ IN THOUSANDS)**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Valuation Assets		
	(1)	(2)	(3)	Valuation Assets	(1)	(2)	(3)
	Active Member Contributions	Retirees, Survivors and Inactive Members	Active Members (Employer Financed Portion)				
12/31/2013	\$0	\$52,106	\$24,530	\$15,482	N/A	29.7%	0.0%
12/31/2012	0	54,727	22,942	14,443	N/A	26.4%	0.0%
12/31/2011	0	57,093	20,382	14,448	N/A	25.3%	0.0%
12/31/2010	0	58,432	20,081	14,086	N/A	24.1%	0.0%



**SCHEDULE B**

**DEVELOPMENT OF THE DECEMBER 31, 2013  
ACTUARIAL VALUE OF ASSETS**

**STATE DIVISION**

(1)	Actuarial Value Beginning of Year	\$ 12,538,675,449
(2)	Market Value End of Year	\$ 13,935,753,759
(3)	Market Value Beginning of Year	\$ 12,766,458,781
(4)	Cash Flow	
	a. Contributions	\$ 618,258,200
	b. Benefit Payments	(1,370,336,426)
	c. Administrative Expenses	(9,779,692)
	d. Net Transfers	<u>4,818,197</u>
	e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d]	\$ (757,039,721)
(5)	Investment Income	
	a. Market total: (2) – (3) – (4)e	\$ 1,926,334,699
	b. Assumed Rate	8.00%
	c. Amount of Immediate Recognition [(3) x (5)b] + [(4)e x (5)b x 0.5]	\$ 991,035,114
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$ 935,299,585
(6)	Phased-In Recognition of Investment Income	
	a. Current Year: 0.25 x (5)d	\$ 233,824,896
	b. First Prior Year	144,502,568
	c. Second Prior Year	(184,186,032)
	d. Third Prior Year	<u>162,647,682</u>
	e. Total Recognized Investment Gain	\$ 356,789,114
(7)	Actuarial Value End of Year: (1) + (4)e + (5)c + (6)e	\$ 13,129,459,956



**SCHEDULE B**

(Continued)

**DEVELOPMENT OF THE DECEMBER 31, 2013  
ACTUARIAL VALUE OF ASSETS**

**SCHOOL DIVISION**

(1)	Actuarial Value Beginning of Year	\$ 20,266,573,925
(2)	Market Value End of Year	\$ 22,682,339,114
(3)	Market Value Beginning of Year	\$ 20,636,677,134
(4)	Cash Flow	
	a. Contributions	\$ 955,240,310
	b. Benefit Payments	(2,017,292,039)
	c. Administrative Expenses	(18,522,707)
	d. Net Transfers	<u>(3,231,037)</u>
	e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d]	\$ (1,083,805,473)
(5)	Investment Income	
	a. Market total: (2) – (3) – (4)e	\$ 3,129,467,453
	b. Assumed Rate	8.00%
	c. Amount of Immediate Recognition [(3) x (5)b] + [(4)e x (5)b x 0.5]	\$ 1,607,581,952
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$ 1,521,885,501
(6)	Phased-In Recognition of Investment Income	
	a. Current Year: 0.25 x (5)d	\$ 380,471,375
	b. First Prior Year	233,111,082
	c. Second Prior Year	(294,676,926)
	d. Third Prior Year	<u>260,123,815</u>
	e. Total Recognized Investment Gain	\$ 579,029,346
(7)	Actuarial Value End of Year: (1) + (4)e + (5)c + (6)e	\$ 21,369,379,750



**SCHEDULE B**

(Continued)

**DEVELOPMENT OF THE DECEMBER 31, 2013  
ACTUARIAL VALUE OF ASSETS**

**LOCAL GOVERNMENT DIVISION**

(1)	Actuarial Value Beginning of Year	\$	3,098,721,347
(2)	Market Value End of Year	\$	3,493,354,525
(3)	Market Value Beginning of Year	\$	3,154,896,908
(4)	Cash Flow		
	a. Contributions	\$	115,319,671
	b. Benefit Payments		(252,003,970)
	c. Administrative Expenses		(2,020,798)
	d. Net Transfers		<u>(3,293,521)</u>
	e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d]	\$	(141,998,618)
(5)	Investment Income		
	a. Market total: (2) – (3) – (4)e	\$	480,456,235
	b. Assumed Rate		8.00%
	c. Amount of Immediate Recognition [(3) x (5)b] + [(4)e x (5)b x 0.5]	\$	246,711,808
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$	233,744,427
(6)	Phased-In Recognition of Investment Income		
	a. Current Year: 0.25 x (5)d	\$	58,436,107
	b. First Prior Year		35,229,636
	c. Second Prior Year		(43,710,640)
	d. Third Prior Year		<u>37,907,931</u>
	e. Total Recognized Investment Gain	\$	87,863,034
(7)	Actuarial Value End of Year: (1) + (4)e + (5)c + (6)e	\$	3,291,297,571



**SCHEDULE B**

(Continued)

**DEVELOPMENT OF THE DECEMBER 31, 2013  
ACTUARIAL VALUE OF ASSETS**

**JUDICIAL DIVISION**

(1)	Actuarial Value Beginning of Year	\$	238,806,614
(2)	Market Value End of Year	\$	272,159,709
(3)	Market Value Beginning of Year	\$	242,877,176
(4)	Cash Flow		
	a. Contributions	\$	9,957,222
	b. Benefit Payments		(19,094,113)
	c. Administrative Expenses		(69,291)
	d. Net Transfers		<u>1,449,806</u>
	e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d]	\$	(7,756,376)
(5)	Investment Income		
	a. Market total: (2) – (3) – (4)e	\$	37,038,909
	b. Assumed Rate		8.00%
	c. Amount of Immediate Recognition [(3) x (5)b] + [(4)e x (5)b x 0.5]	\$	19,119,919
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$	17,918,990
(6)	Phased-In Recognition of Investment Income		
	a. Current Year: 0.25 x (5)d	\$	4,479,748
	b. First Prior Year		2,649,219
	c. Second Prior Year		(3,378,447)
	d. Third Prior Year		<u>2,879,801</u>
	e. Total Recognized Investment Gain	\$	6,630,321
(7)	Actuarial Value End of Year: (1) + (4)e + (5)c + (6)e	\$	256,800,478



**SCHEDULE B**

(Continued)

**DEVELOPMENT OF THE DECEMBER 31, 2013  
ACTUARIAL VALUE OF ASSETS**

**DENVER PUBLIC SCHOOLS DIVISION**

(1)	Actuarial Value Beginning of Year	\$	2,936,695,129
(2)	Market Value End of Year	\$	3,265,768,053
(3)	Market Value Beginning of Year	\$	2,992,217,469
(4)	Cash Flow		
	a. Contributions	\$	68,501,248
	b. Benefit Payments		(245,141,932)
	c. Administrative Expenses		(2,239,708)
	d. Net Transfers		<u>256,554</u>
	e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d]	\$	(178,623,838)
(5)	Investment Income		
	a. Market total: (2) – (3) – (4)e	\$	452,174,422
	b. Assumed Rate		8.00%
	c. Amount of Immediate Recognition [(3) x (5)b] + [(4)e x (5)b x 0.5]	\$	232,232,444
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$	219,941,978
(6)	Phased-In Recognition of Investment Income		
	a. Current Year: 0.25 x (5)d	\$	54,985,495
	b. First Prior Year		34,078,954
	c. Second Prior Year		(43,241,231)
	d. Third Prior Year		<u>39,767,941</u>
	e. Total Recognized Investment Gain	\$	85,591,159
(7)	Actuarial Value End of Year: (1) + (4)e + (5)c + (6)e	\$	3,075,894,894



**SCHEDULE B**

(Continued)

**DEVELOPMENT OF THE DECEMBER 31, 2013  
ACTUARIAL VALUE OF ASSETS**

**PERA HEALTH CARE TRUST FUND**

(1)	Actuarial Value Beginning of Year	\$	285,096,629
(2)	Market Value End of Year	\$	314,609,446
(3)	Market Value Beginning of Year	\$	291,737,156
(4)	Cash Flow		
	a. Contributions	\$	211,049,921
	b. Benefit Payments		(222,860,115)
	c. Other Income and Expenses		2,350,458
	d. Administrative Expenses		<u>(13,766,466)</u>
	e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d]	\$	(23,226,202)
(5)	Investment Income		
	a. Market total: (2) – (3) – (4)e	\$	46,098,492
	b. Assumed Rate		8.00%
	c. Amount of Immediate Recognition [(3) x (5)b] + [(4)e x (5)b x 0.5]	\$	22,409,924
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$	23,688,568
(6)	Phased-In Recognition of Investment Income		
	a. Current Year: 0.25 x (5)d	\$	5,922,142
	b. First Prior Year		3,809,670
	c. Second Prior Year		(4,332,792)
	d. Third Prior Year		<u>3,877,105</u>
	e. Total Recognized Investment Gain	\$	9,276,125
(7)	Actuarial Value End of Year: (1) + (4)e + (5)c + (6)e	\$	293,556,476





**SCHEDULE B**

(Continued)

**DEVELOPMENT OF THE DECEMBER 31, 2013  
ACTUARIAL VALUE OF ASSETS**

**DPS HEALTH CARE TRUST FUND**

(1)	Actuarial Value Beginning of Year	\$	14,442,582
(2)	Market Value End of Year	\$	16,488,973
(3)	Market Value Beginning of Year	\$	14,842,667
(4)	Cash Flow		
	a. Contributions	\$	10,987,757
	b. Benefit Payments		(11,222,022)
	c. Other Income and Expenses		164,182
	d. Administrative Expenses		<u>(561,483)</u>
	e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d]	\$	(631,566)
(5)	Investment Income		
	a. Market total: (2) – (3) – (4)e	\$	2,277,872
	b. Assumed Rate		8.00%
	c. Amount of Immediate Recognition [(3) x (5)b] + [(4)e x (5)b x 0.5]	\$	1,162,151
	d. Amount for Phased-in Recognition: (5)a – (5)c	\$	1,115,721
(6)	Phased-In Recognition of Investment Income		
	a. Current Year: 0.25 x (5)d	\$	278,930
	b. First Prior Year		175,753
	c. Second Prior Year		(180,986)
	d. Third Prior Year		<u>234,799</u>
	e. Total Recognized Investment Gain	\$	508,496
(7)	Actuarial Value End of Year: (1) + (4)e + (5)c + (6)e	\$	15,481,663



**SCHEDULE C**

**SUMMARY OF CHANGES IN NET ASSETS  
FOR THE YEAR ENDING DECEMBER 31, 2013**

**STATE DIVISION**

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**Additions for the Year**

Contributions:		
Members (including purchased service)	\$ 225,040,335	
Employers	<u>393,217,865</u>	
Total		\$ 618,258,200
Net Investment Income		<u>1,926,334,699</u>
TOTAL		\$ 2,544,592,899

**Deductions for the Year**

Benefit Payments (including refunds and disability insurance)	\$ 1,366,743,754	
Transfers	(4,818,197)	
Other deductions	3,592,672	
Administrative Expenses	<u>9,779,692</u>	
TOTAL		\$ <u>1,375,297,921</u>

**Excess of Additions Over Deductions** \$ 1,169,294,978

**Reconciliation of Asset Balances**

Market Value of Assets as of 12/31/2012	\$ 12,766,458,781
Excess of Additions over Deductions	<u>1,169,294,978</u>
Market Value of Assets as of 12/31/2013*	<u>\$ 13,935,753,759</u>

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\* 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 \$13,980,459,994 and includes the amount in the Annual Increase Reserve of \$44,706,235 for post-retirement benefit increases for members of the PERA benefit structure hired on or after January 1, 2007.



**SCHEDULE C**

(Continued)

**SUMMARY OF CHANGES IN NET ASSETS  
FOR THE YEAR ENDING DECEMBER 31, 2013**

**SCHOOL DIVISION**

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Additions for the Year

Contributions:		
Members (including purchased service)	\$ 341,501,863	
Employers	<u>613,738,447</u>	
Total		\$ 955,240,310
Net Investment Income		<u>3,129,467,453</u>
TOTAL		\$ 4,084,707,763

Deductions for the Year

Benefit Payments (including refunds and disability insurance)	\$ 2,013,390,890	
Transfers	3,231,037	
Other deductions	3,901,149	
Administrative Expenses	<u>18,522,707</u>	
TOTAL		\$ <u>2,039,045,783</u>

Excess of Additions Over Deductions \$ 2,045,661,980

Reconciliation of Asset Balances

Market Value of Assets as of 12/31/2012	\$ 20,636,677,134
Excess of Additions over Deductions	<u>2,045,661,980</u>
Market Value of Assets as of 12/31/2013*	<u>\$ 22,682,339,114</u>

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\* 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 \$22,740,002,789 and includes the amount in the Annual Increase Reserve of \$57,663,675 for post-retirement benefit increases for members of the PERA benefit structure hired on or after January 1, 2007.



**SCHEDULE C**

(Continued)

**SUMMARY OF CHANGES IN NET ASSETS  
FOR THE YEAR ENDING DECEMBER 31, 2013**

**LOCAL GOVERNMENT DIVISION**

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Additions for the Year

Contributions:		
Members (including purchased service)	\$ 49,990,464	
Employers	<u>65,329,207</u>	
Total		\$ 115,319,671
Net Investment Income		<u>480,456,235</u>
TOTAL		\$ 595,775,906

Deductions for the Year

Benefit Payments (including refunds and disability insurance)	\$ 250,834,921	
Transfers	3,293,521	
Other deductions	1,169,049	
Administrative Expenses	<u>2,020,798</u>	
TOTAL		\$ <u>257,318,289</u>

Excess of Additions Over Deductions \$ 338,457,617

Reconciliation of Asset Balances

Market Value of Assets as of 12/31/2012	\$ 3,154,896,908
Excess of Additions over Deductions	<u>338,457,617</u>
Market Value of Assets as of 12/31/2013*	<u>\$ 3,493,354,525</u>

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\* 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 \$3,508,311,704 and includes the amount in the Annual Increase Reserve of \$14,957,179 for post-retirement benefit increases for members of the PERA benefit structure hired on or after January 1, 2007.



**SCHEDULE C**  
(Continued)

**SUMMARY OF CHANGES IN NET ASSETS  
FOR THE YEAR ENDING DECEMBER 31, 2013**

**JUDICIAL DIVISION**

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Additions for the Year

Contributions:		
Members (including purchase service)	\$ 3,463,456	
Employers	<u>6,493,766</u>	
Total		\$ 9,957,222
Net Investment Income		<u>37,038,909</u>
TOTAL		\$ 46,996,131

Deductions for the Year

Benefit Payments (including refunds and disability insurance)	\$ 19,041,063	
Transfers	(1,449,806)	
Other deductions	53,050	
Administrative Expenses	<u>69,291</u>	
TOTAL		\$ <u>17,713,598</u>

Excess of Additions Over Deductions \$ 29,282,533

Reconciliation of Asset Balances

Market Value of Assets as of 12/31/2012	\$ 242,877,176
Excess of Additions over Deductions	<u>29,282,533</u>
Market Value of Assets as of 12/31/2013*	<u>\$ 272,159,709</u>

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\* 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 \$272,652,763 and includes the amount in the Annual Increase Reserve of \$493,054 for post-retirement benefit increases for members of the PERA benefit structure hired on or after January 1, 2007.



**SCHEDULE C**  
(Continued)

**SUMMARY OF CHANGES IN NET ASSETS  
FOR THE YEAR ENDING DECEMBER 31, 2013**

**DENVER PUBLIC SCHOOLS DIVISION**

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Additions for the Year

Contributions:		
Members (including purchase service)	\$ 45,397,525	
Employers	<u>23,103,723</u>	
Total		\$ 68,501,248
Net Investment Income		<u>452,174,422</u>
TOTAL		\$ 520,675,670

Deductions for the Year

Benefit Payments (including refunds and disability insurance)	\$ 244,991,664	
Transfers	(256,554)	
Other deductions	150,268	
Administrative Expenses	<u>2,239,708</u>	
TOTAL		\$ <u>247,125,086</u>

Excess of Additions Over Deductions \$ 273,550,584

Reconciliation of Asset Balances

Market Value of Assets as of 12/31/2012	\$ 2,992,217,469
Excess of Additions over Deductions	<u>273,550,584</u>
Market Value of Assets as of 12/31/2013*	\$ <u>3,265,768,053</u>

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\* 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 \$3,272,439,313 and includes the amount in the Annual Increase Reserve of \$6,671,260 for post-retirement benefit increases for those who became members of the PERA benefit structure on or after January 1, 2010.



**SCHEDULE C**  
(Continued)

**SUMMARY OF CHANGES IN NET ASSETS  
FOR THE YEAR ENDING DECEMBER 31, 2013**

**PERA HEALTH CARE TRUST FUND**

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Additions for the Year

Contributions:		
Members' Purchased Service Transfer	\$	8,170,467
Employers		72,785,209
Retiree Health Care Premiums		114,363,201
Medicare Retiree Drug Subsidy		<u>15,731,044</u>
Total		\$ 211,049,921
Net Investment Income		<u>46,098,492</u>
TOTAL		\$ 257,148,413

Deductions for the Year

Benefit Payments	\$	222,860,115
Other Income and Expenses		(2,350,458)
Administrative Expenses		<u>13,766,466</u>
TOTAL		\$ 234,276,123

Excess of Additions Over Deductions \$ 22,872,290

Reconciliation of Asset Balances

Market Value of Assets as of 12/31/2012	\$ 291,737,156
Excess of Additions over Deductions	<u>22,872,290</u>
Market Value of Assets as of 12/31/2013	<u>\$ 314,609,446</u>

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**SCHEDULE C**  
(Continued)

**SUMMARY OF CHANGES IN NET ASSETS  
FOR THE YEAR ENDING DECEMBER 31, 2013**

**DPS HEALTH CARE TRUST FUND**

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Additions for the Year

Contributions:	
Members' Purchased Service Transfer	\$ 147,471
Employers	5,557,244
Retiree Health Care Premiums	4,720,281
Medicare Retiree Drug Subsidy	<u>562,761</u>
Total	\$ 10,987,757
Net Investment Income	<u>2,277,872</u>
TOTAL	\$ 13,265,629

Deductions for the Year

Benefit Payments	\$ 11,222,022
Other Income and Expenses	(164,182)
Administrative Expenses	<u>561,483</u>
TOTAL	\$ 11,619,323

Excess of Additions Over Deductions \$ 1,646,306

Reconciliation of Asset Balances

Market Value of Assets as of 12/31/2012	\$ 14,842,667
Excess of Additions over Deductions	<u>1,646,306</u>
Market Value of Assets as of 12/31/2013	<u>\$ 16,488,973</u>

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**SCHEDULE D**

**OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

**INVESTMENT RATE OF RETURN:** 7.50% per annum, compounded annually (net of investment expenses only).

**PRICE INFLATION ASSUMPTION:** 2.80% per year.

**WAGE INFLATION ASSUMPTION:** 3.90% per year.

**PERCENT MARRIED:** 100% of employees (80% of Denver Public Schools Division) are assumed to be married, with the wife 2 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.

**INTEREST CREDIT:** 3.00% 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. Current active members assumed to terminate service and leave their contributions in the plan in order to be eligible for a benefit at their retirement date are assumed to retire with a reduced benefit, if applicable, at an age based upon benefit structure, division, and/or service as shown in the following table:

Assumed Age of Initial Benefit Receipt	Benefit Structure, Division, and/or Service
50	PERA Structure Members (excluding Troopers) with 25 or More Years of Service
50	Troopers with 20 or More Years of Service
55	PERA Structure Members (excluding Troopers) with 20–25 Years of Service
60	PERA Structure Members with Less than 20 Years of Service
65	DPS Structure Members

**OPTIONAL BENEFIT LOADS:** 1.00% for active member retirement liability to reflect the availability of a pop-up option and 0.75% to reflect the value of the modified cash refund normal form.



**SCHEDULE D**  
(Continued)

**INACTIVE MEMBERS:** It was assumed that 100% of inactive members who terminated employment with less than five years of service elect to withdraw their contributions and matching employer contributions. Current inactive members in the PERA Structure who are assumed to leave their contributions in the plan in order to be eligible for a benefit at their retirement date are assumed to retire at age 62 with an unreduced pension benefit. Current inactive members in the DPS Structure who are assumed to leave their contributions in the plan in order to be eligible for a benefit at their retirement date are assumed to retire at age 65 with an unreduced pension benefit. For PERACare subsidies, the assumed age of initial benefit receipt is determined using the same approach used for terminating active members.

**DEATH AFTER RETIREMENT:** The mortality table, for post-retirement healthy mortality, used in evaluating allowances to be paid is the RP-2000 Combined Mortality Table projected with Scale AA to 2020 (set back 1 year for males and set back 2 years for females). The RP-2000 Disabled Mortality Table (set back 2 years for males and set back 2 years for females) was used for the period after disability retirement. These assumptions are used to measure the probabilities of each benefit payment being made after retirement. Mortality improvement is anticipated under these assumption as recent mortality experience shows actual deaths 4-12% greater than expected under the selected tables.



**SCHEDULE D**

(Continued)

**STATE DIVISION  
NON-TROOPERS**

**SALARY INCREASES:** Representative values of the assumed annual rates of future salary increases are as follows and include wage inflation 3.90% per annum:

Sample Ages	Pay Increase Assumptions for an Individual Member			Total Increase (Next Year)
	Merit & Seniority	Inflation & Productivity (Economy)		
20	5.67%	3.90%		9.57%
25	3.75	3.90		7.65
30	2.80	3.90		6.70
35	2.05	3.90		5.95
40	1.50	3.90		5.40
45	0.85	3.90		4.75
50	0.50	3.90		4.40
55	0.10	3.90		4.00
60	0.00	3.90		3.90
65	0.00	3.90		3.90

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

Sample Ages	Percent of Members Separating Within the Next Year					
	Ultimate Termination		Death <sup>1</sup>		Disability	
	Males	Females	Males	Females	Males	Females
20	21.00%	18.00%	0.0124%	0.0054%	0.01%	0.01%
25	9.00	14.00	0.0169	0.0059	0.01	0.01
30	6.00	9.00	0.0205	0.0077	0.02	0.02
35	5.50	7.00	0.0349	0.0126	0.03	0.03
40	4.50	5.75	0.0478	0.0177	0.06	0.06
45	4.00	5.00	0.0591	0.0271	0.10	0.10
50	4.00	5.00	0.0763	0.0407	0.17	0.17
55	4.00	5.00	0.1198	0.0752	0.25	0.25
60	4.00	5.00	0.2368	0.1420	0.35	0.35
65	4.00	5.00	0.4680	0.2767	0.45	0.45

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



**SCHEDULE D**  
(Continued)

**STATE DIVISION**  
**NON-TROOPERS**

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

Completed Years of Service	Males	Females
0	43.0%	43.0%
1	20.0	21.0
2	14.0	15.0
3	11.0	12.0
4	9.0	11.0

**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	
	Males	Females	Males	Females
50	10%	10%	55%	50%
51	10	10	48	40
52	10	10	42	38
53	10	10	38	30
54	10	10	32	30
55	10	10	27	30
56	10	10	25	24
57	10	10	22	22
58	10	10	21	22
59	10	10	20	22
60	10	10	21	22
61	10	10	18	18
62	10	10	25	25
63	10	10	21	22
64	10	10	21	22
65	0	0	24	22
66	0	0	26	28
67	0	0	24	24
68	0	0	19	20
69	0	0	22	22
70 & over	0	0	100	100



**SCHEDULE D**  
(Continued)

**STATE DIVISION**  
**TROOPERS**

**SALARY INCREASES:** Representative values of the assumed annual rates of future salary increases are as follows and include wage inflation at 3.90% per annum:

Sample Ages	Pay Increase Assumptions for an Individual Member		
	Merit & Seniority	Inflation & Productivity (Economy)	Total Increase (Next Year)
20	5.50%	3.90%	9.40%
25	3.75	3.90	7.65
30	2.80	3.90	6.70
35	2.05	3.90	5.95
40	1.50	3.90	5.40
45	1.20	3.90	5.10
50	0.80	3.90	4.70
55	0.40	3.90	4.30
60	0.00	3.90	3.90
65	0.00	3.90	3.90

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

Sample Ages	Percent of Members Separating Within the Next Year					
	Ultimate Termination <sup>1</sup>		Death <sup>2</sup>		Disability	
	Males	Females	Males	Females	Males	Females
20	10.00%	10.00%	0.0124%	0.0054%	0.02%	0.02%
25	8.00	8.00	0.0169	0.0059	0.04	0.04
30	4.25	4.25	0.0205	0.0077	0.06	0.06
35	3.75	3.75	0.0349	0.0126	0.10	0.10
40	3.50	3.50	0.0478	0.0177	0.18	0.18
45	3.50	3.50	0.0591	0.0271	0.28	0.28
50	3.50	3.50	0.0763	0.0407	0.40	0.40
55	3.50	3.50	0.1198	0.0752	0.56	0.56
60	3.50	3.50	0.2368	0.1420	0.80	0.80
65	3.50	3.50	0.4680	0.2767	1.20	1.20

<sup>1</sup>There are no select termination assumptions for the State Troopers.

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



**SCHEDULE D**

(Continued)

**STATE DIVISION  
TROOPERS**

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

<b>Retirement Ages</b>	<b>Percent of Members Who Are Eligible for Reduced Benefits Retiring Next Year</b>	<b>Percent of Members Who Are Eligible for Unreduced Benefits Retiring Next Year</b>
50	14%	45%
51	14	32
52	14	32
53	14	32
54	14	32
55	10	32
56	10	32
57	10	32
58	10	32
59	10	32
60	10	32
61	10	32
62	10	32
63	10	32
64	10	32
65 & over	0	100



**SCHEDULE D**

(Continued)

**SCHOOL DIVISION**

**SALARY INCREASES:** Representative values of the assumed annual rates of future salary increases are as follows and include wage inflation at 3.90% per annum:

Sample Ages	Pay Increase Assumptions for an Individual Member			Total Increase (Next Year)
	Merit & Seniority	Inflation & Productivity (Economy)		
20	6.20%	3.90%		10.10%
25	4.10	3.90		8.00
30	2.95	3.90		6.85
35	2.50	3.90		6.40
40	1.95	3.90		5.85
45	1.35	3.90		5.25
50	0.80	3.90		4.70
55	0.35	3.90		4.25
60	0.00	3.90		3.90
65	0.00	3.90		3.90

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

Sample Ages	Percent of Members Separating Within the Next Year					
	Ultimate Termination		Death <sup>1</sup>		Disability	
	Males	Females	Males	Females	Males	Females
20	12.00%	14.50%	0.0124%	0.0054%	0.01%	0.01%
25	9.00	11.00	0.0169	0.0059	0.01	0.01
30	5.50	7.50	0.0205	0.0077	0.01	0.01
35	4.25	6.25	0.0349	0.0126	0.02	0.02
40	4.00	4.50	0.0478	0.0177	0.04	0.04
45	4.00	4.50	0.0591	0.0271	0.06	0.06
50	4.00	4.50	0.0763	0.0407	0.09	0.09
55	4.00	4.50	0.1198	0.0752	0.15	0.15
60	4.00	4.50	0.2368	0.1420	0.22	0.22
65	4.00	4.50	0.4680	0.2767	0.32	0.32

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



**SCHEDULE D**

(Continued)

**SCHOOL DIVISION**

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

Completed Years of Service	Males	Females
0	38.0%	35.0%
1	20.0	19.0
2	15.0	14.5
3	11.0	11.5
4	10.0	10.0

**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	
	Males	Females	Males	Females
50	10%	10%	55%	55%
51	10	10	46	50
52	10	10	44	42
53	10	10	42	40
54	10	10	40	38
55	10	10	28	30
56	10	10	26	27
57	10	10	25	25
58	10	10	26	24
59	10	10	26	24
60	10	10	26	25
61	10	10	28	26
62	10	10	25	28
63	10	10	25	28
64	10	10	27	30
65	0	0	27	27
66	0	0	28	28
67	0	0	23	23
68	0	0	19	19
69	0	0	20	20
70 & over	0	0	100	100





**SCHEDULE D**

(Continued)

**LOCAL GOVERNMENT DIVISION**

**SALARY INCREASES:** Representative values of the assumed annual rates of future salary increases are as follows and include wage inflation at 3.90% per annum:

Sample Ages	Pay Increase Assumptions for an Individual Member			Total Increase (Next Year)
	Merit & Seniority	Inflation & Productivity (Economy)		
20	6.95%	3.90%		10.85%
25	4.30	3.90		8.20
30	2.64	3.90		6.54
35	1.72	3.90		5.62
40	1.23	3.90		5.13
45	0.99	3.90		4.89
50	0.79	3.90		4.69
55	0.60	3.90		4.50
60	0.25	3.90		4.15
65	0.00	3.90		3.90

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

Sample Ages	Percent of Members Separating Within the Next Year					
	Ultimate Termination		Death <sup>1</sup>		Disability	
	Males	Females	Males	Females	Males	Females
20	12.00%	20.00%	0.0124%	0.0054%	0.01%	0.01%
25	10.00	15.00	0.0169	0.0059	0.01	0.01
30	7.25	11.00	0.0205	0.0077	0.01	0.01
35	5.50	8.75	0.0349	0.0126	0.02	0.02
40	5.00	6.25	0.0478	0.0177	0.04	0.04
45	4.50	6.00	0.0591	0.0271	0.08	0.08
50	4.50	6.00	0.0763	0.0407	0.14	0.14
55	4.50	6.00	0.1198	0.0752	0.18	0.18
60	4.50	6.00	0.2368	0.1420	0.24	0.24
65	4.50	6.00	0.4680	0.2767	0.30	0.30

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



**SCHEDULE D**  
(Continued)

**LOCAL GOVERNMENT DIVISION**

The select termination 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%	38.0%
1	22.0	22.0
2	15.0	17.0
3	11.5	13.0
4	9.0	11.0

**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	
	Males	Females	Males	Females
50	10%	12%	60%	60%
51	10	12	45	50
52	10	12	35	45
53	10	12	32	42
54	10	12	30	35
55	10	12	30	33
56	10	12	25	25
57	10	12	25	22
58	10	12	20	22
59	10	12	20	25
60	10	12	25	22
61	10	12	25	20
62	10	12	22	24
63	10	12	22	24
64	10	12	28	25
65	0	0	28	25
66	0	0	28	25
67	0	0	18	25
68	0	0	25	12
69	0	0	27	20
70 & over	0	0	100	100



**SCHEDULE D**

(Continued)

**JUDICIAL DIVISION**

**SALARY INCREASES:** Representative values of the assumed annual rates of future salary increases are as follows and include wage inflation at 3.90% per annum:

Sample Ages	Pay Increase Assumptions for an Individual Member			Total Increase (Next Year)
	Merit & Seniority	Inflation & Productivity (Economy)		
30	1.50%	3.90%		5.40%
35	1.50	3.90		5.40
40	0.67	3.90		4.57
45	0.50	3.90		4.40
50	0.50	3.90		4.40
55	0.50	3.90		4.40
60	0.50	3.90		4.40
65	0.50	3.90		4.40

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

Sample Ages	Percent of Members Separating Within the Next Year					
	Ultimate Termination <sup>1</sup>		Death <sup>2</sup>		Disability	
	Males	Females	Males	Females	Males	Females
30	1.80%	1.80%	0.0205%	0.0077%	0.02%	0.02%
35	1.80	1.80	0.0349	0.0126	0.03	0.03
40	1.80	1.80	0.0478	0.0177	0.06	0.06
45	1.80	1.80	0.0591	0.0271	0.10	0.10
50	1.80	1.80	0.0763	0.0407	0.17	0.17
55	1.80	1.80	0.1198	0.0752	0.25	0.25
60	1.80	1.80	0.2368	0.1420	0.35	0.35
65	1.80	1.80	0.4680	0.2767	0.45	0.45

<sup>1</sup>There are no select termination assumptions for the Judicial Division.

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



**SCHEDULE D**

(Continued)

**JUDICIAL DIVISION**

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

<b>Retirement Ages</b>	<b>Percent of Members Who Are Eligible for Reduced Benefits Retiring Next Year</b>	<b>Percent of Members Who Are Eligible for Unreduced Benefits Retiring Next Year</b>
50	5%	5%
51	5	5
52	5	5
53	5	5
54	5	5
55	5	5
56	5	5
57	5	5
58	5	5
59	5	5
60	12	12
61	12	12
62	12	12
63	12	12
64	12	12
65	0	12
66	0	12
67	0	12
68	0	12
69	0	12
70 & over	0	100



**SCHEDULE D**

(Continued)

**ALL DIVISIONS (DPS STRUCTURE)**

**SALARY INCREASES:** Representative values of the assumed annual rates of future salary increases are as follows and include wage inflation at 3.90% per annum:

Sample Ages	Pay Increase Assumptions for an Individual Member			Total Increase (Next Year)
	Merit & Seniority	Inflation & Productivity (Economy)		
20	3.50%	3.90%		7.40%
25	3.50	3.90		7.40
30	3.20	3.90		7.10
35	2.76	3.90		6.66
40	2.12	3.90		6.02
45	1.34	3.90		5.24
50	0.80	3.90		4.70
55	0.42	3.90		4.32
60	0.20	3.90		4.10
65	0.00	3.90		3.90

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

Sample Ages	Percent of Members Separating Within the Next Year					
	Ultimate Termination		Death <sup>1</sup>		Disability	
	Males	Females	Males	Females	Males	Females
20	7.00%	10.00%	0.0124%	0.0054%	0.01%	0.01%
25	7.00	10.00	0.0169	0.0059	0.01	0.01
30	6.00	8.00	0.0205	0.0077	0.01	0.01
35	6.00	7.00	0.0349	0.0126	0.02	0.02
40	4.50	5.75	0.0478	0.0177	0.05	0.05
45	3.50	4.25	0.0591	0.0271	0.08	0.08
50	3.50	3.50	0.0763	0.0407	0.12	0.12
55	3.50	3.50	0.1198	0.0752	0.25	0.25
60	3.50	3.50	0.2368	0.1420	0.40	0.40
65	3.50	3.50	0.4680	0.2767	0.60	0.60

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



**SCHEDULE D**  
(Continued)

**ALL DIVISIONS (DPS STRUCTURE)**

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

Completed Years of Service	Males	Females
0	22.0%	23.0%
1	20.0	20.0
2	17.0	16.0
3	13.0	12.0
4	10.0	9.0

**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	
	Males	Females	Males	Females
50	10%	5%	30%	30%
51	10	5	30	30
52	10	5	30	30
53	10	5	30	30
54	10	5	30	30
55	10	5	30	25
56	10	5	20	25
57	10	5	20	20
58	11	9	20	20
59	12	9	20	20
60	13	9	20	22
61	14	9	20	30
62	15	9	30	25
63	15	9	35	25
64	15	15	25	25
65	0	0	25	30
66	0	0	30	25
67	0	0	25	30
68	0	0	30	30
69	0	0	30	20
70 & over	0	0	100	100



**SCHEDULE D**

(Continued)

**SINGLE LIFE RETIREMENT VALUES AND  
RATES OF POST-RETIREMENT MORTALITY**

Sample Ages	Present Value of \$1.00 Monthly for Life		Present Value of \$1.00 Monthly Increasing 2.0% Annually		Future Life Expectancy (Years)	
	Males	Females	Males	Females	Males	Females
40	\$155.90	\$157.66	\$200.67	\$204.32	43.24	46.22
45	152.14	154.30	193.19	197.49	38.43	41.34
50	146.95	149.70	183.71	188.89	33.65	36.49
55	139.83	143.51	171.74	178.17	28.91	31.71
60	130.59	135.53	157.29	165.29	24.30	27.07
65	119.22	125.64	140.61	150.30	19.94	22.65
70	105.96	114.14	122.21	133.77	15.92	18.56
75	90.31	100.84	101.78	115.65	12.20	14.80
80	73.19	85.83	80.63	96.30	8.95	11.39
85	56.61	69.49	61.07	76.32	6.32	8.40

Sample Ages	Rates of Post-Retirement Mortality	
	Males	Females
40	0.087%	0.044%
45	0.108	0.068
50	0.139	0.102
55	0.218	0.188
60	0.431	0.355
65	0.851	0.692
70	1.464	1.216
75	2.557	1.956
80	4.738	3.267
85	8.670	5.542



**SCHEDULE D**

(Continued)

**METHODS AND ASSUMPTIONS SPECIFIC TO THE PERA DIVISIONS, THE PERA STRUCTURE, AND THE PERA HCTF**

**PERA Divisions Health Care Participation Rates**

Current PERACare participants of the State, School (other than Denver Public Schools), Local Government, and the Judicial Division, are assumed to maintain their current health care benefit elections in perpetuity. For active members retiring directly from the State, School (other than Denver Public Schools), Local Government, and the Judicial Division, the following participation rates are assumed:

Attained Age(s)	Percent Electing Health Care Coverage
15-48	25%
49	30%
50-51	35%
52-53	40%
54-56	45%
57-58	50%
59-64	55%
65-73	60%
74+	65%

The participation of current PERACare enrollees and members retiring directly from active service is adjusted to reflect the increasing rate of participation with age, as described in the above table.

For eligible inactive members of the State, School (other than Denver Public Schools), Local Government, or the Judicial Division, 25% are assumed to elect health care coverage upon commencement of their monthly pension benefit.

For spousal participation, actual census data and current plan elections of current benefit recipients were used. For spouses of eligible inactive members and future retirees of the State, School (other than Denver Public Schools), Local Government, or the Judicial Division, 25% are assumed to elect coverage for their spouse. For current and future retirees, 70% are assumed to elect a joint and survivor benefit payment form. The age difference between covered male and female spouses is assumed to be 2 years.





**SCHEDULE D**

(Continued)

**PERA Divisions Health Care Plan Election Rates**

Plan elections for future, Medicare-eligible retirees of the State, School (other than Denver Public Schools), Local Government, and the Judicial Division who are not eligible for premium-free Medicare Part A, are assumed as follows:

Plan	Percent Electing Plan
Self-Funded Medicare Supplement Plans	60%
Kaiser Permanente Medicare Advantage HMO	25%
Rocky Mountain Health Plans Medicare HMO	10%
UnitedHealthcare Medicare HMO	5%

For those PERACare enrollees of the State, School (other than Denver Public Schools), Local Government, or the Judicial Division, who are assumed to be ineligible for premium-free Medicare Part A and participate in the self-funded plans, 83% are assumed to elect MS#1, 16% are assumed to elect MS#2, and 1% are assumed to elect MS#3.

**PERA Structure Initial Health Care Cost Rates**

In determining the additional liability for PERACare enrollees who are age sixty-five or older and who are not eligible for premium-free Medicare Part A, the following monthly costs/premiums were provided by PERA, and are assumed for 2014. All costs are subject to the Health Care Cost Trend Rates.

Self Funded Medicare Supplement Plans		Kaiser Permanente Medicare Advantage HMO	
Premium for Members without Medicare Part A	Premium for Members with Medicare Part A	Premium for Members without Medicare Part A	Premium for Members with Medicare Part A
\$655	\$286	\$591	\$211

Rocky Mountain Health Plans Medicare HMO		UnitedHealthcare Medicare HMO		Medicare Part A Premium
Premium for Members without Medicare Part A	Premium for Members with Medicare Part A	Premium for Members without Medicare Part A	Premium for Members with Medicare Part A	
\$592	\$217	\$603	\$158	\$426



**SCHEDULE D**  
(Continued)

**PERA Structure Health Care Cost Trend Rates**

Year	Self Funded Medicare Supplement Plans		Kaiser Permanente Medicare Advantage HMO	
	Premium for Members without Medicare Part A	Premium for Members with Medicare Part A	Premium for Members without Medicare Part A	Premium for Members with Medicare Part A
2014	5.91%	5.60%	5.73%	5.45%
2015	5.45%	5.25%	5.36%	5.23%
2016+	5.00%	5.00%	5.00%	5.00%

Year	Rocky Mountain Health Plans Medicare HMO		United Healthcare Medicare HMO	
	Premium for Members without Medicare Part A	Premium for Members with Medicare Part A	Premium for Members without Medicare Part A	Premium for Members with Medicare Part A
2014	5.45%	5.27%	5.70%	5.42%
2015	5.23%	5.14%	5.34%	5.21%
2016+	5.00%	5.00%	5.00%	5.00%

Year	Medicare Part A Premiums
2014	0.00%
2015	2.75%
2016	3.50%
2017	4.25%
2018	3.50%
2019	3.75%
2020	4.00%
2021+	4.25%

The service-based premium subsidy is assumed to remain constant at its current level.



**SCHEDULE D**

(Continued)

**PERA Structure Assumptions Specific to the “No Part A” Subsidy**

Under Colorado Revised Statute 24-51-1206(4), the premiums charged to a PERACare enrollee who is age sixty-five or older and who is not eligible for premium-free benefits under Medicare Part A shall be no greater than the premium charged to a PERACare enrollee eligible for premium-free benefits under Medicare Part A with the same plan option, coverage level, and service credit. As a result, an additional, “No Part A” subsidy is paid under the PERA Structure on behalf of those PERACare enrollees who are age sixty-five or older and are not eligible for premium-free benefits under Medicare Part A.

For those current PERACare enrollees who are age 65 and older, the premium-free Medicare Part A eligibility status is provided by PERA and is assumed to be maintained in perpetuity. For current PERACare enrollees not yet age 65, hired prior to April 1, 1986, and not assumed eligible for premium-free Medicare Part A coverage through their spouse, and for those active employees hired prior to April 1, 1986, the following percentage of PERACare enrollees are assumed to not qualify for premium-free Medicare Part A benefits; thus qualifying for the “No Part A” subsidy from the PERA Structure:

Hire Age	Percent Qualifying for “No Part A” Subsidy
0-24	18%
25-29	12%
30+	6%

Of those PERACare enrollees assumed not qualify for premium-free Medicare Part A benefits and receive the “No Part A” subsidy from the PERA Structure, 10% are assumed to cover a spouse.

The qualifying assumptions are based upon the experience of current, Medicare eligible, PERACare enrollees. Date of hire and hire age are estimated based upon service and date of retirement for current benefit recipients, or service and the valuation date for active members. As a result, those who are re-employed or transfer to another PERA employer may have accumulated the required quarters of Medicare-covered employment.

95% of PERACare enrollees receiving health care benefits as a result of disability retirement are assumed to qualify for premium-free Medicare Part A. 100% of eligible inactive members enrolled in PERACare are assumed to obtain the 40 or more quarters of Medicare-covered employment required for premium-free Medicare Part A coverage as a result of their subsequent employment.

Currently, the additional plan costs or premiums associated with those PERACare enrollees not eligible for premium-free Medicare Part A coverage are less than the costs of PERA paying the Medicare Part A premium on their behalf. However, future increases in the additional costs or premiums associated with PERACare enrollees not eligible for premium-free Medicare Part A coverage may exceed the Medicare Part A premium. As a result, it is assumed PERA will make the decision to pay the Medicare Part A premium when more cost-effective to do so. In making the decision to pay the Medicare Part A premium, it is assumed PERA’s decision will be based upon the level of additional plan costs, include the premium penalties associated with late enrollment in Medicare Part A, and be made when the additional cost, averaged across all plans, for all PERACare enrollees, exceeds the Medicare Part A premium.



## **SCHEDULE D**

(Continued)

### **PERA Structure Assumptions Specific to the “No Part A” Subsidy (continued)**

The premium penalty associated with enrollment in Medicare Part A after initial eligibility 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 initial eligibility at age 65.

### **PERA Structure 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 rates of morbidity, or, an aging curve, modeling the growth in assumed claims as a PERACare enrollee ages. The service-based premium subsidy for health care does not result in annually increasing costs to the PERA Structure as a PERACare enrollee ages (excluding the subsidy reduction at age 65 or the costs associated with Medicare disability eligibility). Under the assumption the Medicare Part A premium will be paid under the PERA Structure when less than the average “No Part A” claims cost, and the treatment of Medicare as a community-rated plan, no morbidity has been assumed in determining the “No Part A” liability.

### **PERA HCTF Dual Status Members and Retirees**

Some members and retirees may be represented under both the PERA Structure and the DPS Structure, and are considered as members or retirees in both structures due to their dual status. In calculating the PERA HCTF’s liabilities for members with a liability under both the PERA HCTF and the DPS HCTF, recognition is given to the choice of benefit structure, and the allocation of member contributions between the two HCTFs, as set forth in C.R.S. 24-51-1206.5. The choice of benefit structure is based upon what is assumed to be of the highest economic value to the benefit recipient. Current allocation percentages and member contribution account balances were provided by PERA for dual status members and retirees. For active members, member contribution account balances were projected assuming annual interest crediting of 3.00%, future salary increases of 3.90%, and member contributions of 8.00% of projected salary.



**SCHEDULE D**

(Continued)

**METHODS AND ASSUMPTIONS SPECIFIC TO THE DPS DIVISION, THE DPS STRUCTURE, AND THE DPS HEALTH CARE TRUST FUND**

**DPS Division Health Care Participation Rates**

Current PERACare enrollees of the Denver Public Schools (DPS) Division are assumed to maintain their current health care benefit elections in perpetuity. For active members retiring directly from the DPS Division, the following participation rates are assumed:

<b>Attained Age(s)</b>	<b>Percent Electing Health Care Coverage</b>
15-50	50%
51-59	60%
60-69	65%
70-71	70%
72+	75%

The participation of current PERACare enrollees and members retiring directly from active service is adjusted to reflect the increasing rate of participation with age, as described in the above table.

For deferred vested members of the DPS Division, 25% are assumed to elect health care coverage upon commencement of their monthly benefit.

For spousal participation, actual census data and current plan elections of current benefit recipients were used. For spouses of deferred vested members and future retirees of the DPS Division, 15% are assumed to elect coverage for their spouse. The age difference between covered male and female spouses is assumed to be 2 years.



**SCHEDULE D**

(Continued)

**DPS Structure Additional Premium Subsidy**

In determining the additional liability for retirees who are age sixty-five or older and who are not eligible for premium-free Medicare Part A, the following, additional monthly costs are assumed:

Years of Service	Subsidy for Members without Medicare Part A
20+	\$115.00
19	109.25
18	103.50
17	97.75
16	92.00
15	86.25
14	80.50
13	74.75
12	69.00
11	63.25
10	57.50
9	51.75
8	46.00
7	40.25
6	34.50
5	28.75
4	23.00
3	17.25
2	11.50
1	5.75

The additional premium subsidy for retirees who are age sixty-five or older and who are not eligible for premium-free Medicare Part A is assumed to remain constant at its current level.

**DPS Structure Assumptions Specific to the “No Part A” Subsidy**

For those retirees who are age 65 or older and are not eligible for premium-free benefits under Medicare Part A, an additional, “No Part A” premium subsidy is paid under the DPS Structure.

For those current retirees who are age 65 and older, the premium-free Medicare Part A eligibility status is provided by PERA and is assumed to be maintained in perpetuity. For current retirees not yet age 65, hired prior to April 1, 1986, and not assumed eligible for premium-free Medicare Part A coverage through their spouse, and for those active employees hired prior to April 1, 1986, the following percentage of retirees are assumed to not qualify for premium-free Medicare Part A benefits; thus qualifying for the “No Part A” subsidy from the DPS Structure:

Hire Age	Percent Qualifying for “No Part A” Subsidy
0-24	18%
25-29	12%
30+	6%



**SCHEDULE D**  
(Continued)

**DPS Structure Assumptions Specific to the “No Part A” Subsidy (continued)**

The qualifying assumptions are based upon the experience of current, Medicare eligible, PERACare enrollees. Date of hire and hire age are estimated based upon service and date of retirement for current benefit recipients, or service and the valuation date for active members. As a result, those who are re-employed or transfer to another PERA employer may have accumulated the required quarters of Medicare-covered employment.

95% of members enrolled in PERACare as a result of disability retirement are assumed to qualify for premium-free Medicare Part A.

100% of deferred vested members receiving health care benefits are assumed to obtain the 40 or more quarters of Medicare-covered employment required for premium-free Medicare Part A coverage as a result of their subsequent employment.

**DPS Structure 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 rates of morbidity, or, an aging curve, modeling the growth in assumed claims as a PERACare enrollee ages. As the service-based premium subsidies for health care do not result in annually increasing costs to the DPS Structure as a retiree ages (excluding the subsidy reduction at age 65 or the costs associated with Medicare disability eligibility), no morbidity assumptions are utilized in the determination of DPS Structure liabilities.

**DPS HCTF Dual Status Members and Retirees**

Some members and retirees may be represented under both the PERA Structure and the DPS Structure, and are considered as members or retirees in both structures due to their dual status. In calculating the DPS HCTF's liabilities for members with a liability under both the PERA HCTF and the DPS HCTF, recognition is given to the choice of benefit structure, and the allocation of member contributions between the two HCTFs, as set forth in C.R.S. 24-51-1206.5. The choice of benefit structure is based upon what is assumed to be of the highest economic value to the benefit recipient. Current allocation percentages and member contribution account balances were provided by PERA for dual status members and retirees. For active members, member contribution account balances were projected assuming annual interest crediting of 3.00%, future salary increases of 3.90%, and member contributions of 8.00% of projected salary.



## **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 7.50%). 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 actuarial 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 based upon total expected career service and is independent of compensation.
4. The unfunded actuarial accrued liability is determined by subtracting the actuarial value of assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from PERA. The actuarial accrued liability contribution amortizes the balance of the unfunded actuarial accrued liability over a period of years from the valuation date.





## **SCHEDULE F**

### **SUMMARY OF MAIN PLAN PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES**

#### **Effective Date**

Pension: Established in 1931, most recently amended during 2010. The Denver Public Schools Retirement System (DPSRS) was merged into PERA effective January 1, 2010. On that date all liabilities and assets of DPSRS were transferred to and became liabilities and assets of the DPS Division of PERA. The benefit provisions of DPSRS were incorporated into PERA as the DPS Benefit Structure. The benefit provisions of existing members of PERA on the merger date and all new hires post- merger date are identified as the PERA Benefit Structure.

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

DPS Health Care Trust Fund (DPS HCTF): On January 1, 2010, as part of the merger, the liabilities and assets of the Denver Public Schools health care trust fund were transferred into a newly created DPS Division Health Care Trust Fund and employer contributions from employers in the DPS Division commenced.

### **DEFINITIONS**

#### **Affiliated Employers**

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

#### **Annual Increase Reserve**

Applicable for PERA benefit structure members hired on or after January 1, 2007 and prior non-DPSRS members who became PERA members as of January 1, 2010, a portion of the employer contribution, currently equal to one percent of the salaries of affected members, is accumulated in the Annual Increase Reserve to be paid out in annual increases each July 1, to the extent affordable. The PERA Board is responsible for a separate annual actuarial valuation to determine affordability and the percentage of annual increases to the eligible members within the groups previously defined. The maximum annual increase awarded, if any, by the PERA Board is the least of:

- a) Two percent of current benefits,
- b) The average of the annual CPI-W increase determined each month published for the preceding calendar year, and
- c) An increase that will exhaust ten percent of the year-end market value of the Annual Increase Reserve.

#### **Covered Members**

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



**Division** One of five separate divisions which include: State, School, Local Government, Judicial and Denver Public Schools (DPS). Only local government entities can voluntarily affiliate with PERA and these entities are assigned to the local government division. The financial activities of each division are accounted for in separate trust funds.

**Highest Average Salary** For PERA benefit structure members, not in the Judicial Division, who are eligible for retirement as of January 1, 2011, 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 who began membership prior to January 1, 2007. For members who began membership on or after January 1, 2007, the annual salary increases recognized in the determination of HAS are limited to 8% a year.

For PERA benefit structure members, not in the Judicial Division, who are not eligible for retirement as of January 1, 2011, 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.

For DPS benefit structure members, who are eligible for retirement as of January 1, 2011, the greater of the average of the 36 months of highest annual salaries or the career average salary.

For DPS benefit structure members, who are not eligible for retirement as of January 1, 2011, 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.



<b>Interest Credit Rate</b>	3% per annum, on member contribution account balances.
<b>Service Credit</b>	The total of all earned, purchased, (disability) projected, and military service credit which is used to determine benefit eligibility and amounts.
<b>Vested</b>	DPS Structure: Members who accrue five or more years of Service Credit are vested for benefits.  PERA Structure: Members who accrue five or more years of Service Credit or attain age sixty-five are vested for benefits.



## 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): 10.15% of salary on and after 7/1/2003

School Division: 10.15% of salary on and after 7/1/2003

State Troopers: 12.85% of salary on and after 7/1/2003

Local Government Division: 10.00% of salary on and after 1/1/2004

Judicial Division: 13.66% of salary on and after 7/1/2004

DPS Division: 13.75% of salary on and after 1/1/2010. Actual employer contributions are reduced by an amount equal to the principal payments plus interest at 8.5% necessary each year to finance the pension certificates of participation (PCOPs) issued in 1997 and 2008 and refinanced thereafter. The amount of the credit for 2013 was 14.88% of salary. The net DPS Division employer contribution rate for 2013 was 3.67% when including the AED and SAED as described on the following page.

The employer contribution rates of the State, School, Local Government, and Judicial Divisions include the contribution of 1.02% allocated to the PERA Health Care Trust Fund.

The employer contribution rate of the DPS Division includes the contribution of 1.02% allocated to the DPS Health Care Trust Fund.

For PERA benefit structure 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 to the State and Judicial Divisions are reduced by 2.5% of payroll for the period July 1, 2010 through June 30, 2012 and member contributions are increased by a like amount during the same period.

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



**Amortization Equalization Disbursement (AED)**

Beginning January 1, 2006 (January 1, 2010 for DPS Division), each employer shall pay to PERA a disbursement equal to a percent of total payroll in accordance with the following schedule:

Year	State Division	Schools/DPS Division
2006	0.50%	0.50%
2007	1.00%	1.00%
2008	1.40%	1.40%
2009	1.80%	1.80%
2010	2.20%	2.20%
2011	2.60%	2.60%
2012	3.00%	3.00%
2013	3.40%	3.40%
2014	3.80%	3.80%
2015	4.20%	4.20%
2016	4.60%	4.50%
2017 & after	5.00%	4.50%

If, at any time, the actuarial funded ratio for a division is 103% or more, then the amount of the disbursement shall be reduced by 0.5% of pay.

**Supplemental Amortization Equalization Disbursement (SAED)**

Beginning January 1, 2008 (January 1, 2010 for DPS Division), each employer shall pay to PERA a supplemental disbursement equal to a percent of total payroll in accordance with the following schedule:

Year	State Division	Schools/DPS Division
2008	0.50%	0.50%
2009	1.00%	1.00%
2010	1.50%	1.50%
2011	2.00%	2.00%
2012	2.50%	2.50%
2013	3.00%	3.00%
2014	3.50%	3.50%
2015	4.00%	4.00%
2016	4.50%	4.50%
2017	5.00%	5.00%
2018 & after	5.00%	5.50%

If, at any time, the actuarial funded ratio for a division is 103% or more, then the amount of the disbursement shall be reduced by 0.5% of pay.

For the Local Government and Judicial Divisions, the AED and SAED contributions are frozen at the 2010 levels. If, at any time, the actuarial funded ratio for a division is 103% or more, then the amount of the disbursement shall be reduced by 0.5% of pay.



## **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 receive a refund and 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 PERA benefit structure members who receive a refund prior to meeting the requirements for a service or reduced service retirement, the match is 50% of eligible amounts. Effective January 1, 2011, members must have five years of earned service credit in order to receive the 50% match on a refund. Contributions received prior to January 1, 2011, are matched regardless if the member has five years of service credit on the refund date.

For DPS benefit structure members who receive a refund prior to meeting the requirements for a service or reduced service retirement, no match is provided.



## ELIGIBILITY FOR BENEFITS – PERA BENEFIT STRUCTURE

### 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 on eligible amounts 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 who have 5 or more years of service credit as of 1/1/2011**

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, and who have 5 or more years of service credit as of 1/1/2011**

Age	Service Credit
Any Age	35
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 1/1/2007 but before 1/1/2011, or who have less than 5 years of service credit as of 1/1/2011**

Age	Service Credit
Any Age	35
55	30
55	Age and Service = 85 years or more
60	25
65	5
65	Less than 5 but 60 payroll postings



- **Members, except State Troopers, hired on and after 1/1/2011 but before 1/1/2017 and Members, except State Troopers, hired on and after 1/1/2017 whose last 10 years of service credit are in either the School or DPS Division**

Age	Service Credit
Any Age	35
58	Age and Service = 88 years or more
65	5
65	Less than 5 but 60 payroll postings

- **Members, except State Troopers hired on and after 1/1/2017 whose last 10 years of service credit are not in either the School of DPS Divisions**

Age	Service Credit
Any Age	35
60	Age and Service = 90 years or more
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 eligible to apply for disability retirement. To be eligible, the member must be found to be totally and permanently disabled (mentally or 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 – PERA BENEFIT STRUCTURE**

**Service Retirement Benefit**

State including state troopers, School, Local Government, DPS 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, plus
  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.

Effective January 1, 2011, for all members that are not retirement eligible on January 1, 2011, the service retirement benefit calculated above shall be reduced using actuarial equivalent factors, 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 or 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 co-beneficiary 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 July 1, benefits which have been paid for at least twelve months preceding July 1 are increased.

For 2010 only, the increase equals the lesser of i) 2% compounded annually or, ii) the average of the annual CPI-W increases determined monthly, published for 2009.

For 2011 and beyond, the increase is 2.0% compounded annually for each year of retirement. If the investment return for the prior year is negative, then the increase will be an amount equal to the average of the annual CPI-W increases determined monthly for the prior year with a cap of 2%.

In addition, the increase will be first paid on the July 1 that is at least 12 months after retirement for those members who retire on or after January 1, 2011. Members not eligible to retire as of January 1, 2011 who retire with a reduced service retirement allowance must reach age 60 or the age and service requirements for unreduced service retirement to be eligible for the Post-Retirement Benefit Increases.

For PERA benefit structure service and disability retirees who were hired on or after January 1, 2007, and for PERA benefit structure survivor benefit recipients of deceased members who were hired on or after January 1, 2007:

- The increase is the lower of 2.0 percent or the average of the CPI-W for each of the months during the prior calendar year. Increases to all benefit recipients in this group are limited to 10 percent of the total funds available in the Annual Increase Reserve in the division from which they retired or were a member before death.
- Members must receive benefits for a full calendar year to be eligible for the increase.
- The increase for service retirees who retire with a reduced service retirement does not begin until the retiree has been receiving benefits for a full calendar year and has on January 1 of the year the increase is paid, either reached age 60, or years of service plus age equal 85, 88, or 90, whichever is applicable.
- No minimum age or service credit requirement shall apply for disability retirees or survivor benefit recipients.



## ELIGIBILITY FOR BENEFITS – DPS BENEFIT STRUCTURE

### 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 applicable 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, hired before 1/1/2010 who have 5 or more years of service credit on 1/1/2011**

Age	Service Credit
50	30
55	25 (must include 15 years of earned service)
65	5

- **Members, hired before 1/1/2010 who have less than 5 years of service credit as of 1/1/2011**

Age	Service Credit
Any Age	35
55	30 (must include 20 years of earned service)
55	Age and Service = 85 years or more
60	25
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, regardless of date of hire who have 5 or more years of service credit on 1/1/2011**

Age	Service Credit
55	15
Any Age	25

- **Members, regardless of date of hire who have less than 5 years of service credit on 1/1/2011**

Age	Service Credit
50	25
55	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 eligible to apply for disability retirement. To be eligible, the member must be found to be totally and permanently disabled (mentally or physically) from regular and gainful employment.

**Survivor Benefits**

The qualified survivors of members who die before retirement with at least five years of service credit and are active at time of death are eligible for monthly survivor benefits.

**MONTHLY BENEFIT CALCULATIONS – DPS BENEFIT STRUCTURE**

**Service Retirement Benefit** The greater of a) or b)

- a) 2.5% of HAS times years of Service Credit
- b) \$15 times first 10 years of service credit plus \$20 times service credit over 10 years plus an amount equal to annuitized member balance.\*

\* May include matching dollars if eligible.

**Reduced Service Retirement Benefit**

Age	Service	Reduction Amount
Under 50	30 years	4% for each year prior to age 50
Under 50	25 – 30 years	Greater of: <ul style="list-style-type: none"> <li>• 4% for each year of service below 30 years</li> <li>• 4% for each year below age 50</li> </ul>
Age 50 - 55	25 – 30 years	Lesser of: <ul style="list-style-type: none"> <li>• 4% for each year under age 50</li> <li>• 4% for each year of service below 30 years</li> </ul>
Over 55	15 years	Lesser of: <ul style="list-style-type: none"> <li>• 4% for each year under age 65</li> <li>• 4% for each year of service below 25 years</li> </ul>

The reduction factor in the table above equals 6% per year for those hired on or after 7/1/2005 but before 1/1/2010.

Effective 1/1/2011, for all members that are not retirement eligible on 1/1/2011, the service retirement benefit calculated above shall be reduced using actuarial equivalent factors, 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.

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

### **Survivor Benefits**

- a) Child: Greater of 10% of HAS for each child up to a limit of 30%; and \$160 (pro-rated) for each child up to a limit of \$480.
- b) Spouse with eligible children: The greater of the difference between the child benefit above and 30% (40% if 15 years of service plus 2% for each year of service beyond 25 years) of HAS, and \$480.
- c) Dependent Parents: The greater of 10% of HAS for each parent; and \$240 per parent.
- d) Spouse (less than 15 years of service): Lesser of 30% of HAS; and \$480, payable at later of age 60 or when last eligible child loses eligibility.
- e) Spouse (15 years of service or more): Greater of 30% of HAS, plus an additional 1% for each year of service over 15 years; and \$480, payable at later of age 50 or when last eligible child loses eligibility.

### **Benefit Options**

- Option A: Single life annuity (SLA) with residual refund of member contributions.
- Option B: Single life annuity with guarantee period determined based on accumulated employee contribution balance at retirement.
- Option C: 100% joint and survivor with 10 years certain. – Not available to members retiring post 1/1/2010
- Option D: Cash refund on annuity portion and SLA on pension portion. – Not available to members retiring post 1/1/2010
- Option E: 50% joint and survivor with 10 years certain. – Not available to members retiring post 1/1/2010



Option P2: 50% joint and survivor with pop-up and residual refund of member contributions.

Option P3: 100% joint and survivor with pop-up and residual refund of member contributions.

### **Post-Retirement Benefit Increases**

Each year on July 1, benefits which have been paid for at least twelve months preceding July 1 are increased.

For 2010 only, the increase equals the lesser of i) 2% compounded annually or, ii) the average of the annual CPI-W increases determined monthly, published for 2009.

For 2011 and beyond, the increase is 2.0% compounded annually for each year of retirement. If the investment return for the prior year is negative, then the increase will be an amount equal to the average of the annual CPI-W increases determined monthly for the prior year with a cap of 2%.

In addition, the increase will be first paid on the July 1 that is at least 12 months after retirement for those members who retire on or after January 1, 2011. Members not eligible to retire as of January 1, 2011 who retire with a reduced service retirement allowance must reach age 60 or the age and service requirements for unreduced service retirement to be eligible for the Post-Retirement Benefit Increases.





## OTHER PROVISIONS SPECIFIC TO THE HEALTH CARE TRUST FUNDS

### **Eligibility for Health Care Coverage**

The PERA Health Care Trust Fund (PERA HCTF) includes assets for the purpose of paying premium subsidies on behalf of PERA Structure benefit recipients and DPS Structure retirees who worked for an employer in the State, School, Local Government, and Judicial Divisions within PERA who enroll in PERACare.

The DPS Health Care Trust Fund (DPS HCTF) includes assets for the purpose of paying premium subsidies on behalf of PERA Structure benefit recipients and DPS Structure retirees who worked for employers of the DPS Division and who enroll in PERACare.

The following individuals are eligible to enroll in PERACare:

- Anyone receiving a monthly PERA benefit (benefit recipient). If the benefit recipient is enrolled in PERACare, the following dependents may be enrolled: spouses (including civil union partners recognized under Colorado law), domestic partners, unmarried dependent children under age 25, certain mentally or physically incapacitated adult children, and dependent parents.
- Guardians of children receiving PERA survivor benefits, if children are receiving health care benefits.
- PERA retirees temporarily not receiving PERA benefits.
- Surviving spouses of deceased retirees who are not receiving PERA benefits but were enrolled in PERACare 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 eligibility within 30 days of initial pension benefit payment, upon the occurrence of certain life events, and during an annual open enrollment for coverage effective each January 1. If a surviving spouse or divorced spouse discontinues coverage, re-enrollment is not allowed.



## Premium Subsidy

A monthly subsidy is allocated to each benefit recipient under the PERA Structure and each retiree under the DPS Structure electing health care coverage. Survivors of retirees under the PERA Structure are eligible to receive the subsidy. The following monthly amounts are based upon the benefit structure elected, date of retirement, Medicare eligibility, and/or credited service:

### DPS Structure Retirees Who Retired Prior to July 1, 1994:

- \$230 per month for retirees without Medicare Part A.
- \$115 per month for retirees with Medicare Part A.

### DPS Structure Retirees Who Retire On or After July 1, 1994:

- \$5.75 if age 65 or older and eligible for premium-free Medicare Part A.
- \$11.50 if not yet age 65, or if age 65 or older and not eligible for premium-free Medicare Part A.

The monthly amounts above are allocated per year of credited service up to a maximum of 20 years of service.

### PERA Structure Benefit Recipients:

- \$5.75 if age 65 or older or eligible for Medicare Part B.
- \$11.50 if not yet age 65 or not eligible for Medicare Part B.

The monthly amounts above are allocated per year of credited service up to a maximum of 20 years of service.

This subsidy is used to determine member premiums, which are the projected full cost of coverage less the premium subsidy. The full costs for claims, administration, premiums, etc., are allocated and paid by the PERA HCTF and the DPS HCTF.

Historically, this has resulted in net costs to the PERA HCTF and the DPS HCTF being very close to the premium subsidy, with all costs of coverage above this subsidy paid by the member. For those benefit recipients under the PERA Structure who are age 65 or older, the full cost of coverage is considered to be based on the full cost of coverage assuming eligibility for premium-free Medicare Part A. This is independent of actual eligibility for premium-free Medicare Part A.

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 enrolled in PERACare and meeting the requirements defined by the benefit structure under which they retire.



**Special Note on Members not qualifying for Medicare Part A:**

Under the PERA Structure, an implicit subsidy is paid for those members not eligible for premium-free Medicare Part A benefits. For members in the fully-insured HMOs, this amount is the difference in premiums charged for those without Medicare Part A and for those enrolled in Medicare Part A. For the self-funded plans, this amount is the assumed difference in claims costs for services covered under Medicare Part A between members without Medicare Part A coverage and those enrolled in Medicare Part A.

The DPS Structure pays an explicit subsidy for those members eligible to receive the premium subsidy and who are not eligible for premium-free Medicare Part A coverage. For these members an additional subsidy of \$5.75 per month for each year of credited service (up to a maximum of 20 years of service) is allocated.

**Special Note on Premium Subsidy Funding for Members in both the PERA HCTF and the DPS HCTF:**

For members covered under both the PERA HCTF and the DPS HCTF, the allocation of the subsidy amounts is done via an allocation method set forth in C.R.S. 24-51-1206.5.



**SCHEDULE G**

**SCHEDULE OF ACTIVE MEMBER DATA  
AS OF DECEMBER 31, 2013**

**STATE DIVISION**

Attained Age	Completed Years of Service							Total	Covered Payroll
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+		
Under 20	152	0	0	0	0	0	0	152	\$ 1,021,328
20 to 24	1,460	14	0	0	0	0	0	1,474	\$ 27,429,628
25 to 29	3,480	454	2	0	0	0	0	3,936	\$ 124,205,283
30 to 34	3,451	1,779	261	8	0	0	0	5,499	\$ 208,012,111
35 to 39	2,686	1,863	1,060	206	6	0	0	5,821	\$ 250,229,569
40 to 44	2,496	1,808	1,264	958	243	12	0	6,781	\$ 323,625,445
45 to 49	4,010	1,712	1,160	948	746	352	33	8,961	\$ 417,425,768
50 to 54	1,856	1,701	1,232	994	885	691	253	7,612	\$ 385,357,212
55 to 59	1,649	1,557	1,196	886	849	658	394	7,189	\$ 365,128,815
60	251	274	223	174	135	114	78	1,249	\$ 62,387,691
61	271	261	211	171	119	102	58	1,193	\$ 58,706,234
62	216	214	182	146	124	105	60	1,047	\$ 52,402,039
63	190	209	166	116	114	70	60	925	\$ 44,304,173
64	168	175	134	100	92	68	46	783	\$ 38,160,051
65	143	150	125	83	55	62	46	664	\$ 32,252,501
66	106	100	92	61	55	30	31	475	\$ 22,022,923
67	105	92	91	34	42	41	40	445	\$ 19,768,955
68	66	56	37	34	22	15	28	258	\$ 11,537,115
69	62	43	33	18	19	12	14	201	\$ 8,434,468
70 & Over	267	130	86	66	46	38	56	689	\$ 22,554,173
Total	23,085	12,592	7,555	5,003	3,552	2,370	1,197	55,354	\$ 2,474,965,482

Average Age (Non-Trooper): 46.18      Average Age (Trooper): 40.99  
Average Service (Non-Trooper): 8.96      Average Service (Trooper): 11.84



**SCHEDULE G**  
(Continued)

**SCHEDULE OF ACTIVE MEMBER DATA  
AS OF DECEMBER 31, 2013**

**SCHOOL DIVISION**

Attained Age	Completed Years of Service							Total	Covered Payroll
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+		
Under 20	853	0	0	0	0	0	0	853	\$ 4,873,171
20 to 24	4,257	94	0	0	0	0	0	4,351	\$ 70,536,226
25 to 29	8,719	1,339	33	0	0	0	0	10,091	\$ 266,867,709
30 to 34	6,414	5,042	842	15	0	0	0	12,313	\$ 400,059,438
35 to 39	5,615	3,945	3,572	441	10	0	0	13,583	\$ 487,083,055
40 to 44	5,860	3,893	3,136	2,373	377	12	0	15,651	\$ 577,077,162
45 to 49	6,667	3,797	2,928	2,008	1,619	419	19	17,457	\$ 618,798,754
50 to 54	4,111	3,603	3,319	2,186	1,642	1,491	317	16,669	\$ 621,490,639
55 to 59	3,025	2,633	2,665	2,082	1,526	1,062	597	13,590	\$ 494,203,554
60	510	385	404	372	277	147	83	2,178	\$ 75,671,312
61	465	360	342	313	218	158	84	1,940	\$ 67,786,999
62	407	335	296	212	237	121	75	1,683	\$ 59,417,750
63	361	295	244	184	157	111	50	1,402	\$ 46,668,483
64	346	230	202	159	121	74	56	1,188	\$ 38,742,156
65	279	206	165	123	91	72	40	976	\$ 30,130,404
66	268	174	127	87	60	62	30	808	\$ 21,794,079
67	255	152	112	63	43	36	30	691	\$ 17,586,378
68	165	84	54	34	31	21	11	400	\$ 9,610,575
69	157	85	43	29	13	14	10	351	\$ 6,697,959
70 & Over	752	389	186	79	57	39	50	1,552	\$ 23,554,015
Total	49,486	27,041	18,670	10,760	6,479	3,839	1,452	117,727	\$ 3,938,649,818

Average Age: 44.57  
Average Service: 8.38



**SCHEDULE G**  
(Continued)

**SCHEDULE OF ACTIVE MEMBER DATA  
AS OF DECEMBER 31, 2013**

**LOCAL GOVERNMENT DIVISION**

Attained Age	Completed Years of Service							Total	Covered Payroll
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+		
Under 20	393	0	0	0	0	0	0	393	\$ 1,787,943
20 to 24	676	7	0	0	0	0	0	683	\$ 8,456,866
25 to 29	717	124	8	0	0	0	0	849	\$ 26,180,881
30 to 34	686	336	75	7	0	0	0	1,104	\$ 43,144,594
35 to 39	566	383	177	51	0	0	0	1,177	\$ 55,215,237
40 to 44	469	476	245	143	46	3	0	1,382	\$ 72,791,560
45 to 49	582	386	231	162	89	55	4	1,509	\$ 76,691,228
50 to 54	436	417	273	218	156	139	63	1,702	\$ 94,655,967
55 to 59	378	374	206	189	147	113	71	1,478	\$ 79,262,696
60	45	57	44	27	24	13	7	217	\$ 11,681,850
61	81	51	38	23	35	17	6	251	\$ 12,364,160
62	61	57	29	22	23	10	13	215	\$ 10,780,289
63	50	44	23	19	15	11	10	172	\$ 7,866,239
64	36	56	30	13	15	3	7	160	\$ 7,471,539
65	38	35	16	10	11	4	5	119	\$ 5,402,701
66	37	28	13	8	9	4	2	101	\$ 4,280,872
67	31	22	13	7	5	5	2	85	\$ 3,329,602
68	18	16	7	3	3	3	0	50	\$ 1,875,445
69	19	11	5	6	1	1	1	44	\$ 1,137,097
70 & Over	141	66	31	10	7	1	7	263	\$ 4,626,670
Total	5,460	2,946	1,464	918	586	382	198	11,954	\$ 529,003,436

Average Age: 44.71  
Average Service: 8.02



**SCHEDULE G**  
(Continued)

**SCHEDULE OF ACTIVE MEMBER DATA  
AS OF DECEMBER 31, 2013**

**JUDICIAL DIVISION**

Attained Age	Completed Years of Service							Total	Covered Payroll
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+		
Under 20	0	0	0	0	0	0	0	0	\$ -
20 to 24	0	0	0	0	0	0	0	0	\$ -
25 to 29	0	0	0	0	0	0	0	0	\$ -
30 to 34	2	0	0	0	0	0	0	2	\$ 49,902
35 to 39	2	0	0	0	0	0	0	2	\$ 143,622
40 to 44	4	9	3	0	1	0	0	17	\$ 1,969,876
45 to 49	12	21	8	6	2	0	0	49	\$ 5,791,019
50 to 54	15	14	10	7	11	5	2	64	\$ 7,695,773
55 to 59	6	16	14	11	11	6	0	64	\$ 7,662,902
60	4	3	3	0	2	2	0	14	\$ 1,755,640
61	1	6	4	3	3	2	1	20	\$ 2,408,025
62	0	2	2	2	1	0	2	9	\$ 1,149,627
63	1	3	4	2	2	2	3	17	\$ 2,125,224
64	1	5	1	1	4	3	0	15	\$ 1,894,372
65	2	3	4	0	5	1	4	19	\$ 2,042,615
66	0	1	1	2	3	2	2	11	\$ 1,382,562
67	0	0	4	0	0	1	2	7	\$ 928,595
68	1	0	0	3	2	0	1	7	\$ 916,048
69	0	0	1	2	1	2	1	7	\$ 900,058
70 & Over	0	1	0	1	2	1	3	8	\$ 1,125,870
Total	51	84	59	40	50	27	21	332	\$ 39,941,730

Average Age: 56.40  
Average Service: 14.23



**SCHEDULE G**  
(Continued)

**SCHEDULE OF ACTIVE MEMBER DATA  
AS OF DECEMBER 31, 2013**

**DENVER PUBLIC SCHOOLS DIVISION**

Attained Age	Completed Years of Service							Total	Covered Payroll
	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30+		
Under 20	34	0	0	0	0	0	0	34	\$ 275,024
20 to 24	877	0	0	0	0	0	0	877	\$ 16,665,738
25 to 29	1,987	137	3	0	0	0	0	2,127	\$ 63,731,245
30 to 34	1,526	534	24	1	0	0	0	2,085	\$ 75,791,181
35 to 39	1,728	488	241	24	0	0	0	2,481	\$ 87,991,585
40 to 44	855	338	285	119	14	2	0	1,613	\$ 68,549,962
45 to 49	700	264	219	137	82	14	1	1,417	\$ 59,659,272
50 to 54	561	240	187	133	133	92	12	1,358	\$ 59,487,966
55 to 59	553	162	187	133	117	85	34	1,271	\$ 53,903,221
60	94	29	27	33	28	19	6	236	\$ 9,711,988
61	77	29	36	28	20	11	5	206	\$ 9,191,743
62	76	31	23	21	15	15	6	187	\$ 7,604,876
63	65	24	19	34	21	7	2	172	\$ 7,750,248
64	78	12	23	24	17	2	5	161	\$ 6,477,078
65	56	28	15	14	13	13	6	145	\$ 6,353,268
66	46	10	12	5	7	3	2	85	\$ 3,156,023
67	38	9	8	6	6	5	7	79	\$ 3,241,726
68	28	6	8	6	6	1	0	55	\$ 2,025,147
69	21	7	7	2	8	2	0	47	\$ 1,913,893
70 & Over	132	7	14	7	8	2	10	180	\$ 4,178,728
Total	9,532	2,355	1,338	727	495	273	96	14,816	\$ 547,659,912

Average Age: 41.49  
Average Service: 5.79