

**PUBLIC EMPLOYEES'  
RETIREMENT ASSOCIATION  
OF COLORADO**

*Actuarial Report  
As of December 31, 2005  
June 2006*

**buckconsultants**   
an ACS company A C S

1200 Seventeenth Street, Suite 1200  
Denver, CO 80202

June 1, 2006

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

Dear Trustees:

**Subject: Actuarial Valuation for the Public Employees' Retirement Association of Colorado (PERA) as of December 31, 2005**

This report summarizes the results of the December 31, 2005 actuarial valuation for the Public Employees' Retirement Association of Colorado (PERA) as well as the results of the December 31, 2005 actuarial valuation of the postretirement health care program (HCTF).

These valuations are based on the financial and member data provided by PERA and the plan provisions, actuarial assumptions and methods in effect on the valuation date.

No material changes in the PERA pension plan provisions were made during 2005. No material changes in the Health Care Program plan provisions for PERA were made in 2005. Please see page 14 for a summary of the PERA plan provisions. There were changes made to the assumptions since the last actuarial valuation was performed. In July 2005, the Board approved the assumptions from the experience analysis. Please see page 23 for a summary of these assumptions.

The valuations were completed in accordance with generally accepted actuarial methods. Our analysis indicates the funded position for the plans has improved since last year's valuation, but without strong investment returns, future contribution increases will be necessary to maintain the long-term viability of the State and School Divisions.

Respectfully submitted,



David H. Sliskinsky, A.S.A., E.A.  
Principal and Consulting Actuary



Michelle DeLange, F.S.A., E.A.  
Senior Consultant, Actuary

The undersigned are responsible for all assumptions related to the average annual per capita health claims cost and the health care cost trend rates. The undersigned actuary hereby affirms his qualification to render opinions in such matters, in accordance with the qualification standards of the American Academy of Actuaries.



Chris Hulla  
Principal, Health & Welfare



Trey Sarsfield, A.S.A.  
Senior Consultant, Health & Welfare

Enclosure

PUBLIC EMPLOYEES' RETIREMENT  
ASSOCIATION OF COLORADO

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Actuarial Report as of December 31, 2005

submitted to  
The Board of Trustees  
Public Employees' Retirement Association of Colorado

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June 2006

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# MANAGEMENT SUMMARY OF VALUATION RESULTS

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# VALUATION HIGHLIGHTS

The December 31, 2005 actuarial valuation indicates the following:

1. Due to recognition of investment losses experienced in prior years, the unfunded liability (UAAL) has increased in all Divisions.
2. Changes in the actuarial assumptions were approved by the PERA Board in July 2005 based on the results of an experience analysis, effective for the December 31, 2005 valuation. Generally, the change in assumptions had the effect of decreasing normal cost rates and increasing accrued liabilities. Also, the actuarial asset valuation method was changed effective December 31, 2005. The Actuarial Value of Assets was re-initialized to Market Value as of December 31, 2004, and the asset smoothing method is being phased-in over the four-year period beginning January 1, 2005.
3. For the State Division, the School Division, the Judicial Division, and the Local Government (Municipal) Division, the combined employer and member contribution rates are sufficient to fund the costs of the benefit commitments being made to the members for their service currently being rendered (normal cost) of the system, but are not sufficient to fully fund the normal cost and amortize the unfunded actuarial accrued liability over 40 years. By considering the AED during the entire amortization period, the funding period for the Local Government (Municipal) Division is reduced to 35 years.
4. In accordance with SB 04-257, the State and School Divisions are separated into two separate divisions effective January 1, 2006, and have been separated for this valuation. Assets on Market Value have been maintained separately by division, and were used to re-initialize the actuarial value of assets for both divisions as of December 31, 2004.
5. For the Health Care Trust Fund, the employer contribution rate is sufficient to fully fund the costs of the benefit commitments being made to members for their service currently being rendered and amortize the unfunded actuarial accrued liability over 35 years.

Key valuation results are summarized below.

## Member Information

	Active Members			Retired Members	
	Number	Annual Payroll (\$ Millions)	Normal Cost Rate <sup>1</sup>	Number	Annual Benefits (\$ Millions)
State	53,351	\$ 2,179.8	14.19%	27,692	\$ 801.4
School	111,449	3,438.0	14.53%	39,896	1,139.3
Local Government (Municipal)	15,555	642.6	14.22%	3,562	94.7
Judicial	<u>275</u>	<u>28.3</u>	18.09%	<u>251</u>	<u>10.1</u>
Totals	180,630	\$ 6,288.7	14.40%	71,401	\$ 2,045.5

<sup>1</sup> Cost of the accruing benefits allocated to the current year, expressed as a percent of total salary.

# VALUATION HIGHLIGHTS

## Actuarial Information

	Asset Value Basis					
	Actuarial Value			Market Value		
	Employer Contribution Rate <sup>2</sup>	UAAL (\$ Millions)	Funded Ratio	Employer Contribution Rate <sup>2</sup>	UAAL (\$ Millions)	Funded Ratio
State	14.86%	\$ 5,004.8	71.5%	14.65%	\$ 4,912.6	72.0%
School	13.37%	6,779.7	73.9%	13.15%	6,636.4	74.4%
Local Government (Municipal)	8.70%	663.9	78.0%	8.56%	645.1	78.7%
Judicial	12.77%	<u>30.7</u>	86.3%	12.53%	<u>29.3</u>	86.9%
Totals	13.38%	\$ 12,479.1	73.3%	13.18%	\$ 12,223.4	73.9%

*Overall Condition:* Based upon this December 31, 2005 valuation, the Public Employees' Retirement Association of Colorado funded ratio has increased from 70.6 to 73.3% (based on the actuarial value of assets). Although the current funding is sufficient to pay expected benefit payments for decades, the contribution rates are not currently sufficient to support all the current benefit structures of the System. If there is not a significant recovery in the investment markets in the near future, the long-term ability of the System to support the benefits will be challenged in the absence of a significant increase in the contribution rates.

<sup>2</sup> Employer portion of cost to pay normal cost and amortize UAAL over 40 years, expressed as a percent of total salary.

# VALUATION HIGHLIGHTS

## Allocation of Statutory Contribution Rates (State Division)

	<b>Percent of Covered Payroll</b>	
	<b>2007 Rates</b>	<b>2006 Rates<sup>3</sup></b>
1. Statutory Employer Contribution Rate <sup>4</sup>	10.21%	10.17%
2. Amortization Equalization Disbursement	1.00%	0.50%
3. Less: Statutory HCTF Allocation	<u>(1.02)%</u>	<u>(1.02)%</u>
4. Contribution Available for PERA Pre-Funded Benefits 1 + 2 + 3	10.19%	9.65%
5. Normal Cost of Pre-Funded Benefits		
a) Service Retirement Benefits	8.92%	11.80%
b) Disability Retirement Benefits	0.95%	0.96%
c) Survivor Benefits	0.41%	0.46%
d) Separation Benefits	<u>3.91%</u>	<u>3.02%</u>
e) Total Normal Cost	14.19%	16.24%
6. Member Contributions <sup>3</sup>	<u>8.05%</u>	<u>8.02%</u>
7. Employer Normal Cost	6.14%	8.22%
8. Percent Available to Amortize UAAL	4.05%	1.43%
9. Number of Years to Amortize UAAL <sup>5</sup>	Infinite	Infinite

## Determination of Employer Contribution Rates (State Division) (\$ in Thousands)

	<b>December 31</b>	
	<b>2005</b>	<b>2004<sup>3</sup></b>
<b><u>Valuation Results:</u></b>		
Actuarial Accrued Liability	\$17,541,744	\$40,783,531
Actuarial Value of Assets	<u>\$12,536,916</u>	<u>\$28,594,699</u>
Unfunded/(Overfunded) Actuarial Accrued Liability (UAAL)	\$5,004,828	\$12,188,832
Forty-Year Amortization of UAAL	\$241,832	\$588,961
Valuation Payroll	\$2,179,762	\$5,303,439
Amortization Rate	11.09%	11.11%
Employer Normal Cost Rate	<u>6.14%</u>	<u>8.22%</u>
Annual Required Contribution	17.23%	19.33%
Reduction for AED	<u>(2.37)%</u>	<u>(2.42)%</u>
Total Employer Contribution Rate	14.86%	16.91%

<sup>3</sup> Based on State and School Divisions, combined.

<sup>4</sup> Weighted average of more than one statutory rate.

<sup>5</sup> Includes Amortization Equalization Disbursement scheduled during the respective year.



# VALUATION HIGHLIGHTS

## Allocation of Statutory Contribution Rates (School Division)

	Percent of Covered Payroll	
	2007 Rates	2006 Rates <sup>6</sup>
1. Statutory Employer Contribution Rate	10.15%	10.17% <sup>7</sup>
2. Amortization Equalization Disbursement	1.00%	0.50%
3. Less: Statutory HCTF Allocation	<u>(1.02)%</u>	<u>(1.02)%</u>
4. Contribution Available for PERA Pre-Funded Benefits 1 + 2 + 3	10.13%	9.65%
5. Normal Cost of Pre-Funded Benefits		
a) Service Retirement Benefits	9.98%	11.80%
b) Disability Retirement Benefits	0.41%	0.96%
c) Survivor Benefits	0.34%	0.46%
d) Separation Benefits	<u>3.80%</u>	<u>3.02%</u>
e) Total Normal Cost	14.53%	16.24%
6. Member Contributions	<u>8.00%</u>	<u>8.02%</u> <sup>7</sup>
7. Employer Normal Cost	6.53%	8.22%
8. Percent Available to Amortize UAAL	3.60%	1.43%
9. Number of Years to Amortize UAAL <sup>8</sup>	Infinite	Infinite

## Determination of Employer Contribution Rates (School Division) (\$ in Thousands)

	December 31	
	2005	2004 <sup>6</sup>
<b><u>Valuation Results:</u></b>		
Actuarial Accrued Liability	\$25,963,972	\$40,783,531
Actuarial Value of Assets	<u>\$19,184,225</u>	<u>\$28,594,699</u>
Unfunded/(Overfunded) Actuarial Accrued Liability (UAAL)	\$6,779,747	\$12,188,832
Forty-Year Amortization of UAAL	\$327,595	\$588,961
Valuation Payroll	\$3,437,979	\$5,303,439
Amortization Rate	9.53%	11.11%
Employer Normal Cost Rate	<u>6.53%</u>	<u>8.22%</u>
Annual Required Contribution	16.06%	19.33%
Reduction for AED	<u>(2.69)%</u>	<u>(2.42)%</u>
Total Employer Contribution Rate	13.37%	16.91%

<sup>6</sup> Based on State and School Divisions, combined.

<sup>7</sup> Weighted average of more than one statutory rate.

<sup>8</sup> Includes Amortization Equalization Disbursement scheduled during the respective year.

## VALUATION HIGHLIGHTS

### Allocation of Statutory Contribution Rates (Local Government (Municipal) Division)

	<u>Percent of Covered Payroll</u>	
	<u>2007 Rates</u>	<u>2006 Rates</u>
1. Statutory Employer Contribution Rate	10.00%	10.00%
2. Amortization Equalization Disbursement	1.00%	0.50%
3. Less: Statutory HCTF Allocation	<u>(1.02)%</u>	<u>(1.02)%</u>
4. Contribution Available for PERA Pre-Funded Benefits 1 + 2 + 3	9.98%	9.48%
5. Normal Cost of Pre-Funded Benefits		
a) Service Retirement Benefits	8.71%	11.08%
b) Disability Retirement Benefits	1.01%	1.67%
c) Survivor Benefits	0.41%	0.58%
d) Separation Benefits	<u>4.09%</u>	<u>3.62%</u>
e) Total Normal Cost	14.22%	16.95%
6. Member Contributions	<u>8.00%</u>	<u>8.00%</u>
7. Employer Normal Cost	6.22%	8.95%
8. Percent Available to Amortize UAAL	3.76%	0.53%
9. Number of Years to Amortize UAAL <sup>9</sup>	Infinite	Infinite

### Determination of Employer Contribution Rates (Local Government (Municipal) Division) (\$ in Thousands)

	<u>December 31</u>	
	<u>2005</u>	<u>2004</u>
<b><u>Valuation Results:</u></b>		
Actuarial Accrued Liability	\$3,022,624	\$2,576,988
Actuarial Value of Assets	<u>\$2,358,719</u>	<u>\$1,990,652</u>
Unfunded/(Overfunded) Actuarial Accrued Liability (UAAL)	\$663,905	\$586,336
Forty-Year Amortization of UAAL	\$32,080	\$28,332
Valuation Payroll	\$642,574	\$549,607
Amortization Rate	4.99%	5.15%
Employer Normal Cost Rate	<u>6.22%</u>	<u>8.95%</u>
Annual Required Contribution	11.21%	14.10%
Reduction for AED	<u>(2.51)%</u>	<u>(2.37)%</u>
Total Employer Contribution Rate	8.70%	11.73%

<sup>9</sup> Includes Amortization Equalization Disbursement scheduled during the respective year.

# VALUATION HIGHLIGHTS

## Allocation of Statutory Contribution Rates (Judicial Division)

	Percent of Covered Payroll	
	2007 Rates	2006 Rates
1. Statutory Employer Contribution Rate	13.66%	13.66%
2. Amortization Equalization Disbursement	1.00%	0.50%
3. Less: Statutory HCTF Allocation	<u>(1.02)%</u>	<u>(1.02)%</u>
4. Contribution Available for PERA Pre-Funded Benefits 1 + 2 + 3	13.64%	13.14%
5. Normal Cost of Pre-Funded Benefits		
a) Service Retirement Benefits	12.18%	13.07%
b) Disability Retirement Benefits	1.30%	2.30%
c) Survivor Benefits	1.08%	1.14%
d) Separation Benefits	<u>3.53%</u>	<u>1.38%</u>
e) Total Normal Cost	18.09%	17.89%
6. Member Contributions	<u>8.00%</u>	<u>8.00%</u>
7. Employer Normal Cost	10.09%	9.89%
8. Percent Available to Amortize UAAL	3.55%	3.25%
9. Number of Years to Amortize UAAL <sup>10</sup>	Infinite	Infinite

## Determination Of Employer Contribution Rates (Judicial Division) (\$ in Thousands)

	December 31	
	2005	2004
<b><u>Valuation Results:</u></b>		
Actuarial Accrued Liability	\$223,955	\$209,954
Actuarial Value of Assets	<u>\$193,305</u>	<u>\$170,111</u>
Unfunded/(Overfunded) Actuarial Accrued Liability (UAAL)	\$30,650	\$39,843
Forty-Year Amortization of UAAL	\$1,481	\$2,214
Valuation Payroll	\$28,290	\$26,309
Amortization Rate	5.24%	7.32%
Employer Normal Cost Rate	<u>10.09%</u>	<u>9.89%</u>
Annual Required Contribution	15.33%	17.21%
Reduction for AED	<u>(2.56)%</u>	<u>(2.34)%</u>
Total Employer Contribution Rate	12.77%	14.87%

<sup>10</sup> Includes Amortization Equalization Disbursement scheduled during the respective year.

## SUMMARY OF RETIRED AND INACTIVE DATA INCLUDED IN VALUATION

Benefit recipients on rolls included in the December 31, 2005 valuation totaled 71,401 with annual benefits of \$2,045,457,012 distributed as follows (\$ in thousands):

<u>Divisions</u>	<u>Retirement Benefits</u>		<u>Survivor Benefits</u>		<u>Total</u>	
	<u>Number</u>	<u>Annual Benefits</u>	<u>Number</u>	<u>Annual Benefits</u>	<u>Number</u>	<u>Annual Benefits</u>
State	26,814	\$786,618	878	\$14,783	27,692	\$801,401
School	38,952	1,126,497	944	12,757	39,896	1,139,254
Local Government (Municipal)	3,428	92,863	134	1,883	3,562	94,746
Judicial	<u>237</u>	<u>9,713</u>	<u>14</u>	<u>343</u>	<u>251</u>	<u>10,056</u>
Totals	69,431	\$2,015,691	1,970	\$29,766	71,401	\$2,045,457

Inactive members and deferred survivor beneficiaries totaled 13,289 as follows:

<u>Divisions</u>	<u>Inactive Members</u>	<u>Deferred Survivors</u>	<u>Total</u>
State	4,166	128	4,294
School	7,869	169	8,038
Local Government (Municipal)	926	16	942
Judicial	<u>14</u>	<u>1</u>	<u>15</u>
Totals	12,975	314	13,289

## RETIREMENT SYSTEM TOTALS

(\$ in Millions)

Division	Actuarial Accrued Liabilities			Actuarial Value of Assets	Unfunded (Overfunded) Accrued Liabilities	Ratio of Assets/Liabilities
	Active Members	Retired Lives <sup>11</sup>	Totals			
State	\$7,034.9	\$10,506.8	\$17,541.7	\$12,536.9	\$5,004.8	0.71
School	10,649.1	15,314.9	25,964.0	19,184.2	6,779.7	0.74
Local Government (Municipal)	1,693.2	1,329.4	3,022.6	2,358.7	663.9	0.78
Judicial	<u>104.3</u>	<u>119.7</u>	<u>224.0</u>	<u>193.3</u>	<u>30.7</u>	0.86
Totals	\$19,481.5	\$27,270.8	\$46,752.3	\$34,273.1	\$12,479.1	0.73

Divisions	UAAL/Active Member Payroll December 31									
	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996
State and School	N/A	2.30	1.83	.74	.11	*	*	.21	.44	.19
State	2.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	.42
School	1.97	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	.02
Local Government (Municipal)	1.03	1.07	.98	.27	*	*	*	.003	.07	*
Judicial	1.08	1.51	1.25	.11	*	*	*	*	.10	*

\*Division was in surplus this year.

<sup>11</sup> Includes deferred benefits for inactive members and survivors.

# ANALYSIS OF CHANGES IN THE UNFUNDED ACTUARIAL ACCRUED LIABILITIES DURING 2005

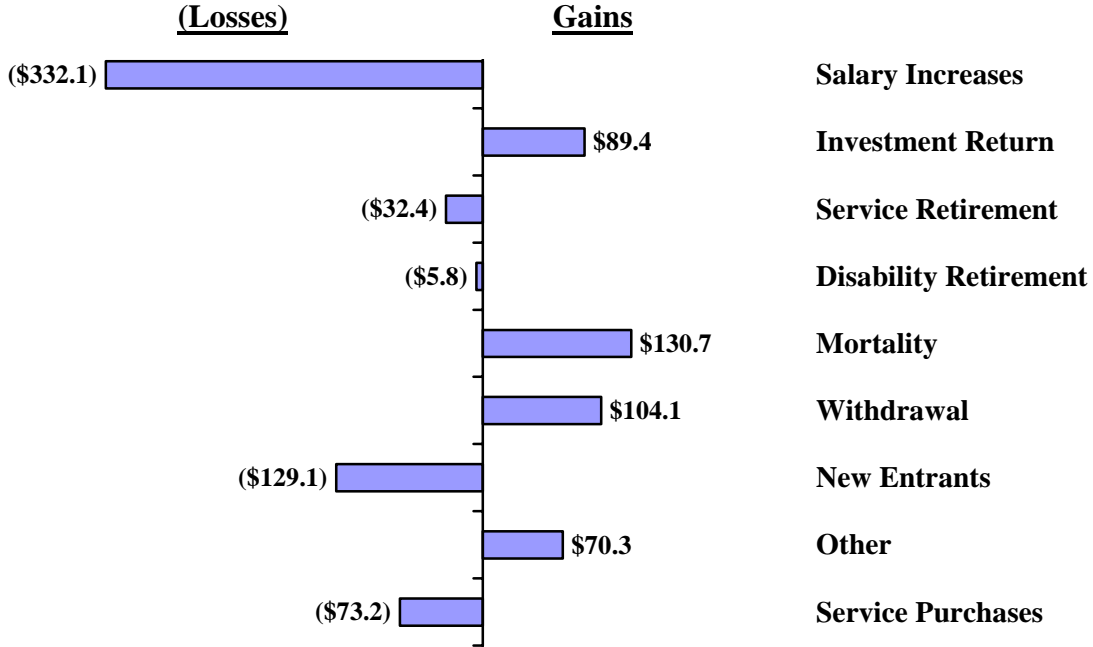
(\$ in Millions)

	State	School	Local Government (Municipal)	Judicial	Total
<b>1. Beginning of Year:</b>					
a) Unfunded actuarial accrued liabilities (UAAL)	\$ 5,062.7	\$ 7,126.1	\$ 586.3	\$ 39.8	\$ 12,814.9
b) Normal Cost	334.6	526.5	93.2	4.7	959.0
c) Total contribution required to pay Normal Cost and amortize the UAAL over 40 years	579.2	871.0	121.5	6.6	1,578.3
d) Actual Total Contribution (excluding service purchases)	357.8	558.9	102.8	5.6	1,025.1
<b>2. Unfunded actuarial accrued liabilities, end of year:</b>					
a) Expected UAAL, from last year's valuation: (1a) x 1.085 + (1b) x 1.0425 - (1c) x 1.0425	\$ 5,238.0	\$ 7,372.8	\$ 606.6	\$ 41.2	\$ 13,258.6
b) Expected UAAL based on actual contribution (1a) x 1.085 + (1b) x 1.0425 - (1d) x 1.0425	5,468.8	7,698.1	626.2	42.3	13,835.4
c) Increase in UAAL due to contribution deficiency (2b)-(2a)	230.8	325.3	19.6	1.1	576.8
<b>3. Gains (Losses) on year's activities:</b>					
a) From differences between assumed and actual experience on liabilities	\$ (46.6)	\$ 4.9	\$ (153.8)	\$ 1.2	\$ (194.3)
b) From differences between assumed and actual experience on assets	34.0	48.7	5.4	1.3	89.4
c) From service purchases	(23.6)	(44.9)	(4.7)	0.0	(73.2)
d) From change in plan assumptions	(112.9)	(23.5)	10.1	0.0	(126.3)
e) From change in asset method	<u>613.1</u>	<u>933.2</u>	<u>105.3</u>	<u>9.1</u>	<u>1,660.7</u>
f) Total (a) + (b) + (c) + (d)	\$ 464.0	\$ 918.4	\$ (37.7)	\$ 11.6	\$ 1,356.3
<b>4. Actual UAAL at end of year (2a) + (2c) - (3f)</b>	<b>\$ 5,004.8</b>	<b>\$ 6,779.7</b>	<b>\$ 663.9</b>	<b>\$ 30.7</b>	<b>\$ 12,479.1</b>

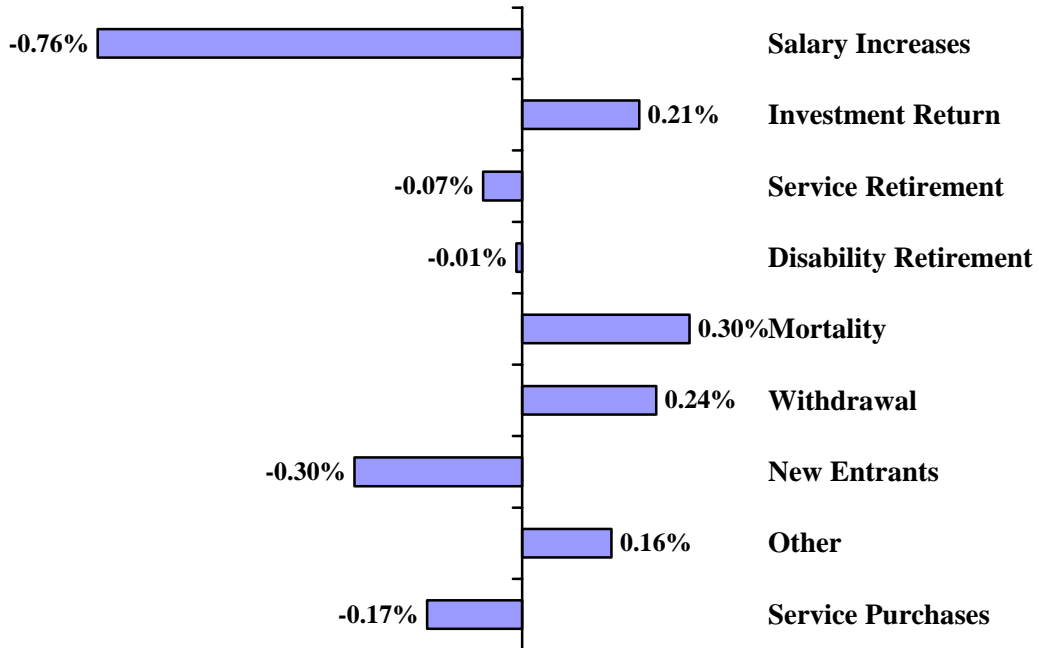
# GAIN/(LOSS) ANALYSIS

## 2005 Experience: Divisions Combined

(\$ in Millions)



### % of Beginning of Year Accrued Liabilities



## SUPPLEMENTAL INFORMATION

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## **BENEFIT PROVISIONS EVALUATED**

# BENEFIT PROVISIONS EVALUATED

## PENSION PLAN

<b>Effective Date</b>	Established in 1931, most recently amended during 2004.				
<b>Definitions</b>					
Affiliated Employers	State agencies, political subdivisions of the state, school districts, courts, cities and municipalities and any other public entities which affiliate with PERA.				
Covered Members	Employees of Affiliated Employers who work in a position subject to membership and for whom contributions are made.				
Division	One of four separate divisions which include: State, School, Local Government (Municipal), and Judicial. Upon affiliation, employers are assigned to one of these divisions. The financial activities of each division are accounted for in separate trust funds.				
Highest Average Salary (HAS)	For members not in the Judicial Division, 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 Judicial Division members, one-twelfth of the highest annual salary upon which contributions were made during one period of twelve consecutive months of Service Credit.				
Service Credit	The total of all earned, purchased, (disability) projected, and military service credit.				
<b>Contributions</b>					
Member Contributions	Members, except for State Troopers, contribute 8.0% of salary. State Troopers contribute 10.0% of salary.				
Employer Contributions	<p>State Division (except State Troopers): 10.04% of salary through 6/30/2003, 10.15% after 7/1/2003</p> <p>School Division: 10.04% of salary through 6/30/2003, 10.15% after 7/1/2003 and further increased to 10.55% on 1/1/2013</p> <p>State Troopers: 12.74% of salary through 6/30/2003, 12.85% after 7/1/2003</p> <p>Local Government (Municipal) Division: 9.60% of salary through 12/31/2003, 10.00% on and after 1/1/2004</p> <p>Judicial Division: 11.82% of salary through 6/30/2003, 12.66% from 7/1/2003 to 6/30/2004, 13.66% after 7/1/2004</p> <p>These contribution rates include the contributions allocated to the Health Care Trust Fund for all divisions as follows:</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 80%;">Before 7/1/2004</td> <td style="text-align: right;">1.10%</td> </tr> <tr> <td>On and after 7/1/2004</td> <td style="text-align: right;">1.02%</td> </tr> </table>	Before 7/1/2004	1.10%	On and after 7/1/2004	1.02%
Before 7/1/2004	1.10%				
On and after 7/1/2004	1.02%				

## BENEFIT PROVISIONS EVALUATED PENSION PLAN

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Matching Employer  
Contributions

A percentage of the member contribution account less:

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

For members who meet the requirements for a service or reduced service retirement at the time the refund is paid, or for payments made to survivors or beneficiaries of members who die before retirement, the percentage is 100%.

For members who receive a refund prior to meeting the requirements for a service or reduced service retirement, the percentage is 50%.

Amortization  
Equalization  
Disbursement (AED)

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

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

If, at any time, the amortization period of the liabilities for a division is less than 40 years, then the amount of the disbursement is reduced in the following year to an amount necessary to meet the 40-year amortization standard.

# BENEFIT PROVISIONS EVALUATED PENSION PLAN

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## Eligibility for Benefits or Other Payments

### Service Retirement

Retire with one of the following age and Service Credit requirements:

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

<u>Age</u>	<u>Service Credit</u>
50	30
55	Age and Service = 80 years or more
65	5

**-- Members except State Troopers hired on or after 7/1/2005**

<u>Age</u>	<u>Service Credit</u>
55	Age and Service = 80 years or more
65	5

**-- State Troopers**

<u>Age</u>	<u>Service Credit</u>
Any Age	30
50	25
55	20
65	5

### Reduced Service Retirement

Retire with one of the following age and Service Credit requirements:

**-- Members except State Troopers**

<u>Age</u>	<u>Service Credit</u>
50	25
55	20
60	5

**-- State Troopers**

<u>Age</u>	<u>Service Credit</u>
50	20
60	5

## BENEFIT PROVISIONS EVALUATED PENSION PLAN

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Vested Benefit	Terminate with five or more years of Service Credit and leave member contributions in the plan.
Disability Retirement	Become permanently disabled prior to being eligible for service retirement with five or more years of Service Credit (at least 6 months being earned during the last period of membership). The five-year service requirement is waived for State Troopers disabled because of job-related injuries and for members of the Judicial Division who are found to be permanently disabled by the Colorado Supreme Court.
Survivor Benefits	Die prior to retirement with at least one year of Service Credit. (The one-year Service Credit requirement is waived if death is job-related.)

### Monthly Benefit Amounts

#### Service Retirement

	The greater of a or b
– State, School and Local Government (Municipal) Divisions and Members of the Judicial Division with no Service Credit prior to July 1, 1973	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.
	The greater of c or d
– Members of the Judicial Division with Service Credit prior to July 1, 1973	c) The greater of a or b above d) 1. 4% of HAS times years of Service Credit up to 10, <u>plus</u> 2. 1 2/3% of HAS times years of Service Credit in excess of 10 up to 16, <u>plus</u> 3. 1.5% of HAS times years of Service Credit in excess of 16 up to 20, <u>plus</u> 4. 2.5% of HAS times years of Service Credit in excess of 20, the total not to exceed 100% of HAS.

## **BENEFIT PROVISIONS EVALUATED PENSION PLAN**

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### **Reduced Service Retirement**

For 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.

### **Vested Benefit**

The greater of the benefit calculated based on Service Credit and HAS at the date of termination or the money purchase benefit based on the value of the member contribution account and the matching employer contribution account on the date payments begin. The vested benefit is payable upon reaching the age required for a reduced service retirement benefit. If the member elects to begin receiving payments prior to reaching the age required for a service retirement benefit, the benefit calculated based on Service Credit and HAS will be reduced in accordance with the reduced service retirement provisions.

### **Disability Retirement**

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.

# BENEFIT PROVISIONS EVALUATED

## PENSION PLAN

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### Survivor Benefits

- Not Eligible for Reduced Service Retirement

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 matching employer 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 matching employer contribution, plus interest.

- Eligible for Reduced or Service Retirement

The benefit that would have been payable had the member retired on the date of death and elected the 100% joint and survivor option. If there is no designated co-beneficiary or surviving spouse, then qualified children, dependent parents, named beneficiary or estate are eligible for the same benefits payable on behalf of a deceased member who was not eligible for reduced service retirement.

### Refund of Member Contributions

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

## **BENEFIT PROVISIONS EVALUATED PENSION PLAN**

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### **Benefit Options**

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**

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

### **Changes in Plan Provisions Since Prior Year**

No material changes.



## BENEFIT PROVISIONS EVALUATED POSTRETIREMENT HEALTH CARE PROGRAM

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Effective Date	On July 1, 1985, employer contributions to the Program commenced. Premium subsidy payments began July 1, 1986.	
Type of Program	Partially pre-funded postretirement health care plan covering PERA benefit recipients and other eligible persons.	
Eligibility for Health Care Program Coverage	<p>Anyone receiving a monthly PERA benefit, spouses, and unmarried, dependent children under age 19 (under age 24 if enrolled in school full-time).</p> <p>Members receiving short-term disability payments.</p> <p>Guardians of children receiving PERA survivor benefits if children are enrolled in Program.</p> <p>Retirees temporarily not receiving PERA benefits.</p> <p>Surviving spouses of deceased retirees who are not receiving PERA benefits but were enrolled in the Program when death occurred.</p> <p>Divorced spouses of retirees who are not receiving PERA benefits, but were enrolled in the Program when the divorce occurred.</p>	
Employer Contributions to Health Care Trust Fund (HCTF)	Before 7/1/2004	1.10%
	On and after 7/1/2004	1.02%
Enrollment	Enrollment in the Program is voluntary. Open enrollment is held annually for coverage effective January 1.	
Program Premium Subsidy	<p>The Program pays a portion or all of the monthly premium for health care coverage up to \$5.75 times the benefit recipient's years of service credit, with a maximum subsidy of \$115 per month if the benefit recipient is over age 65, or \$11.50 times the service credit, with a maximum of \$230 per month, if the benefit recipient is under age 65. The subsidy, known as the fixed subsidy, is paid from the HCTF. Any additional cost of the health insurance coverage, except for members not fully covered by Medicare Part A, is paid by the benefit recipient. Eligible persons not receiving a monthly benefit from PERA do not receive the subsidy. They pay the entire cost of the health insurance coverage.</p>	

## **BENEFIT PROVISIONS EVALUATED POSTRETIREMENT HEALTH CARE PROGRAM**

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For members not fully covered by Medicare Part A, the HCTF pays an implicit subsidy. Under the self-insured program, the implicit subsidy is equal to the difference between claims paid for Part A services and what Medicare would have paid had such retirees been enrolled in Part A. For retirees participating in an HMO, the additional subsidy paid by the HCTF for members not covered by Part A is equal to the difference in the premiums the HMO's charge for retirees without Part A coverage, and those covered by Part A.

### **Health Care Plans Offered**

Eligible persons are offered choices of health plans and plan designs. All plans include comprehensive prescription drug benefits. Premiums are established annually for each plan, and vary based upon geographic region for some plans. Premiums for Medicare plans generally are lower than premiums for pre-Medicare plans, as all benefit recipients age 65 or older must be enrolled in Medicare Part B.

Note: All actuarial calculations and analyses made in this report assume no future fixed subsidy increases. Increases in Medicare Part A costs for members not fully covered by Part A are assumed to increase at 5.50% per annum.

### **Changes in Plan Provisions Since Prior Year**

No material changes.

## ACTUARIAL METHODS AND ASSUMPTIONS

# SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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## ACTUARIAL METHODS

The ultimate cost of a retirement plan (such as PERA) is equal to the benefits paid plus the expenses resulting from the administration and financing of the plan. These plan costs are paid for through contributions to the plan as well as through investment earnings on the plan's assets.

Using the plan's schedule of benefits, the member data and a carefully selected set of actuarial assumptions, the plan's actuary estimates the cost of the benefits which will be paid from the plan. Then using a particular actuarial funding method, the actuary will allocate these costs and determine a systematic manner to fund for future plan benefits.

In the case of PERA (as well as most other public sector plans), the objective is to fund in a manner which keeps contribution rates approximately level from generation to generation. The funding method best designed to keep annual costs level (as a percentage of pay) is the Entry Age Actuarial Cost Method. This method is described briefly below.

### Entry Age Actuarial Cost Method

Under the Entry Age Actuarial Cost Method, projected pension, termination, disability and death benefits are determined for all active members. Cost factors, which are developed to produce level annual costs in each year from the age at hire (entry age) to the assumed retirement age are applied to the projected benefits to determine the "normal cost." The normal cost is the portion of the total cost of the plan allocated to the current year. The normal cost for contribution refunds is assumed to end in the last year of assumed eligibility, and is spread over all years of service.

The "actuarial accrued liability" for active members is then calculated as the portion of the total cost of the plan allocated to prior years, i.e., the value of the prior years' normal cost amounts. The actuarial accrued liability for members currently receiving benefits, deferred members, and for active members beyond the assumed retirement age is equal to the present value of the benefits expected to be paid. No accrued benefits are available for members entitled to deferred benefits. The present value of the benefits expected to be paid to deferred vested members is calculated as of the valuation date on termination basis using the credited service and salary history as of member's date of termination. No normal costs are now payable for these participants.

The excess of the total actuarial accrued liability over the value of the plan assets is called the "unfunded actuarial accrued liability." Funding requirements under the Entry Age Actuarial Cost Method are determined as the sum of a) the normal cost and b) an amortization of the unfunded liability.

The actuarial assumptions discussed below are used in determining the projected benefits and cost factors. The effect of differences between these assumptions and the actual experience of the plan is calculated each year when the annual actuarial valuation is performed. These

## SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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differences produce either actuarial gains or losses which result in adjusting the unfunded liability discussed above.

### Asset Valuation Method

The method for valuing assets is intended to recognize a “smoothed” market value of assets. Under this method, the difference between actual return on market value from investment experience and the expected return on market value is recognized over a four-year period. The actuarial value of assets was reinitialized at Market Value as of December 31, 2004. There will be one year of smoothing in the December 31, 2005 valuation as the method is phased in.

### ACTUARIAL ASSUMPTIONS

The following actuarial assumptions were adopted in 2005 by the Board of Trustees based on advice from the actuary and the results of an experience analysis. The assumptions, which are reviewed in depth every four or five years, are used to project the Plan’s future experience.

#### Economic Assumptions

The investment return rate used in the valuations is 8.50 percent per year compounded annually (net of administrative expenses). The inflation assumption is 3.75 percent per year.

The overall member payroll is assumed to increase 4.50 percent annually. Beginning in 2006, newly hired members of the State Division will have the choice of participating in PERA or the State Defined Contribution Plan. Once credible experience is available, we will review the appropriateness of the annual payroll increase assumption for the State Division and recommend changes, if necessary. Pay increase assumptions for individual members are shown for sample ages in Exhibits I, II, and III. Judicial Division pay increases are determined by the State Legislature.

The interest credit rate assumed on member contribution balances is 5 percent per annum.

#### Non-Economic Assumptions

The mortality table is based on PERA experience. The table is used to estimate the value of benefits expected to be paid. Related values are shown in Exhibit IV. For disability retirement, impaired longevity is recognized by basing benefit values on an adjusted age midway between attained age and normal retirement age.

The probabilities of withdrawal from service, disability and death-in-service are shown for sample ages in Exhibits I, II, III, and IV. It was assumed that 35 percent of the vested members who terminate elect to withdraw their contributions and matching employer contributions while the remaining 65 percent elect to leave their contributions in the plan in order to be eligible for a benefit at their retirement date, except for Judicial.

100% of members are assumed to be married. Husbands are assumed to be 3 years older than their wives.

## SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

### Other Assumptions for the Postretirement Health Care Program

Percent of Members electing to participate in Health Care Program:

Member	Assumption
Current PERA benefit recipients under age 65	Current participants to age 65 plus 70% of all PERA benefit recipients at age 65.
Current PERA benefit recipients over age 65	Current participants
Active Members under age 65	50% of eligible to age 65, and 70% over age 65
Vested Deferred Members	20% of eligible members before and after age 65

Percent of Active Members electing Option 2 or Option 3: 42%

For purposes of this report, the no-Part A subsidy is valued using 2005 census information, standard valuation assumptions and methods from the December 31, 2005 HCTF valuation, and additional statistics and assumptions as follows:

- **Base Claim Cost Rates**

Additional base-year medical claims paid by the HCTF attributable to the absence of Part A coverage are projected forward with Health Care Cost Trend (HCCTR) for each no-Part A plan member. For 2006, this base claim cost rate under self-funded plans equals \$445.83 per month for gross Part A type claims less \$30.35 per month in average Part A deductibles, etc., not paid by Medicare. For HMOs, the difference between 2006 insured rates applicable to no-Part A members and full-Medicare members is used. The 2006 Medicare Part A premium prior to a 10% late-enrollment penalty is \$393.00 per month. Note that 10% late-enrollment penalty is not applied to current active and pre-Medicare members projected to enroll in the self-funded plan, as PERA is assumed to begin paying Part A premiums on behalf of these members upon their first eligibility for Medicare.

## SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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- **Health Care Cost Trend Rates**

The set of HCCTR assumptions used grades down from recent experience for each plan to an ultimate level 200 basis points below the assumed discount rate, as follows:

Year	Self-Funded Plans		Kaiser		RMHP	
	Part A Type Claims	Part A Deductibles, Etc.	No-Part A Premiums	A & B Premiums	No-Part A Premiums	A & B Premiums
2006	12.80%	6.28%	10.10%	8.57%	5.15%	1.73%
2007	12.10%	6.30%	9.70%	8.34%	5.30%	2.26%
2008	11.40%	6.33%	9.30%	8.11%	5.45%	2.79%
2009	10.70%	6.35%	8.90%	7.88%	5.60%	3.32%
2010	10.00%	6.38%	8.50%	7.65%	5.75%	3.85%
2011	9.30%	6.40%	8.10%	7.42%	5.90%	4.38%
2012	8.60%	6.43%	7.70%	7.19%	6.05%	4.91%
2013	7.90%	6.45%	7.30%	6.96%	6.20%	5.44%
2014	7.20%	6.48%	6.90%	6.73%	6.35%	5.97%
2015+	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%

Medicare Part A premiums are projected to increase at 5.50% per annum for all years.

- **Morbidity**

Morbidity assumptions account for the growth in average claims as a population ages. Morbidity is typically applied to each covered member for self-funded groups and may or may not be applied in the case of insured plans, depending on the rating mechanisms used by the insurer for the coverage included in the valuation. Because it is assumed that PERA will pay Part A premiums at the point in time when Part A premiums are less than net no-Part A type claims, no morbidity has been assumed. In relation to PERA, Medicare may be thought of as a fully insured, community-rated plan.

- **HCTF Participation and Plan Election**

Participation in the HCTF is a function of premiums paid by retirees, net of the fixed subsidy based on years of service. Over time, no-Part A retirees are assumed to drop coverage as their share of premium and out-of-pocket hospital bill costs increase. On average, 7.5% of no-Part A retirees are assumed to drop PERA coverage in all years. Current benefit recipients are assumed to remain in the self-funded or HMO plan currently elected. Pre-Medicare retirees and active employees projected to be no-Part A HCTF members are assumed to enroll in self-funded and HMO plans in the same ratio as current no-Part A retirees.

- **Active Members Included**

Active membership included in our valuation of PERA's no-Part A subsidy is limited to members with dates of PERA-covered employment prior to March 31, 1986 and who did not have the potential employment prior to joining PERA sufficient to obtain future Medicare Part A coverage free of charge. Determination of hire date for each member is based on earned service reported. Members with at least 10 years between age 20 and their date of PERA-covered employment are assumed to have 40 quarters of Social Security coverage and are therefore excluded from the valuation. Members with at least 7.5 years between age 20 and their date of PERA-covered employment are assumed to have 30-39 quarters of Social Security coverage and are therefore eligible for Medicare Part A coverage at premiums 45%

## SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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lower than required of active members with less than 30 quarters of coverage. Actual Social Security payroll tax records for active members are required to replace these assumptions with corresponding data elements.

- **Active Member Transfers**

30% of employees hired prior to March 31, 1986 are assumed to transfer between employers or subgroups within PERA and begin Social Security-covered employment. Thus, 30% of active members otherwise ineligible for free or partial Part A coverage from PERA are assumed to attain 40 quarters of Social Security coverage.

- **Inactive Members with Vested Rights to Deferred PERA Pensions**

Inactive membership is excluded from this valuation on the assumption that, between potential employment prior to and after their PERA-covered careers, they will obtain at least 40 quarters of coverage. Actual Social Security payroll tax records for inactive members are required to replace these assumptions with corresponding data elements.

- **Pre-Medicare PERA Pensioners**

7.5% of HCTF benefit recipients enrolled in pre-Medicare coverage are assumed to ultimately qualify for the no-Part A subsidy. This assumption reflects the current percentage of Medicare-eligible benefit recipients enrolled in no-Part A coverage categories. Actual Social Security payroll tax records for benefit recipients are required to replace these assumptions with corresponding data elements.

- **Medicare Assumptions for Current Benefit Recipients**

25% of both pre-Medicare pensioners and benefit recipients enrolled in no-Part A coverage categories are assumed to have 30-39 quarters of coverage for Medicare purposes and thereby qualify for Part A premiums that are 45% lower than required of retirees with less than 30 quarters of coverage. This assumption reflects the current percentage of active members assumed eligible for “partial Part A coverage” as derived from census data and described above. Actual Social Security payroll tax records for benefit recipients are required to replace these assumptions with corresponding data elements.

- **Spousal Medicare Coverage**

30% of all members otherwise ineligible for free or partial Part A are assumed to obtain Medicare coverage through a spouse.



# SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

## Exhibit I – State Division

### Separations from Employment Before Retirement and Individual Pay Increase Assumptions

Sample Ages	Percent of Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Member		
	Ultimate Withdrawal <sup>12</sup>		Death <sup>13</sup>		Disability		Merit & Seniority	Inflation & Productivity (Economy)	Increase (Next Year)
	Men	Women	Men	Women	Men	Women			
<b>MEMBERS CONTRIBUTING 8%</b>									
20	21.00	18.00	0.025	0.015	0.01	0.01	5.67%	4.50%	10.17%
25	7.20	7.60	0.030	0.015	0.04	0.03	3.75	4.50	8.25
30	6.30	6.90	0.040	0.025	0.05	0.05	2.80	4.50	7.30
35	5.40	6.20	0.055	0.035	0.18	0.16	2.05	4.50	6.55
40	4.40	5.60	0.095	0.058	0.24	0.22	1.50	4.50	6.00
45	4.30	5.00	0.200	0.097	0.39	0.34	0.85	4.50	5.35
50	4.20	5.00	0.383	0.158	0.55	0.50	0.50	4.50	5.00
55	4.20	5.00	0.538	0.227	0.90	0.84	0.10	4.50	4.60
60	4.20	5.00	0.680	0.345	1.06	0.94	0.00	4.50	4.50
65	4.20	5.00	1.061	0.603	1.08	0.96	0.00	4.50	4.50

#### MEMBERS CONTRIBUTING 10.0% (STATE TROOPERS)

20	5.00	5.00	0.025	0.015	0.02	0.02	5.50%	4.50%	10.00%
25	5.00	5.00	0.030	0.015	0.08	0.08	3.75	4.50	8.25
30	3.80	3.80	0.040	0.025	0.12	0.12	2.80	4.50	7.30
35	2.50	2.50	0.055	0.035	0.40	0.40	2.05	4.50	6.55
40	1.60	1.60	0.095	0.058	0.54	0.54	1.50	4.50	6.00
45	1.10	1.10	0.200	0.097	0.86	0.86	1.20	4.50	5.70
50	1.00	1.00	0.383	0.158	1.28	1.28	0.80	4.50	5.30
55	1.00	1.00	0.538	0.227	1.85	1.85	0.40	4.50	4.90
60	1.00	1.00	0.680	0.345	2.00	2.00	0.00	4.50	4.50
65	1.00	1.00	1.061	0.603	2.00	2.00	0.00	4.50	4.50

## Exhibit II – School Division

20	21.00	18.00	0.025	0.015	0.01	0.01	6.20%	4.50%	10.70%
25	7.63	8.99	0.030	0.015	0.01	0.02	4.10	4.50	8.60
30	5.24	7.79	0.040	0.025	0.01	0.03	2.95	4.50	7.45
35	4.36	6.80	0.055	0.035	0.04	0.05	2.50	4.50	7.00
40	3.59	5.40	0.095	0.058	0.11	0.08	1.95	4.50	6.45
45	3.27	5.00	0.200	0.097	0.18	0.11	1.35	4.50	5.85
50	3.90	4.60	0.383	0.158	0.30	0.20	0.80	4.50	5.30
55	3.90	4.60	0.538	0.227	0.55	0.36	0.35	4.50	4.85
60	3.90	4.60	0.680	0.345	0.70	0.40	0.00	4.50	4.50
65	3.90	4.60	1.061	0.603	0.70	0.40	0.00	4.50	4.50

<sup>12</sup> There are no select withdrawal assumptions for the State Troopers.

<sup>13</sup> Rates are shown for healthy members. Separate disability mortality tables are used for disabled retirees.

# SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

## Exhibit III – Local Government (Municipal) Division

Sample Ages	Percent of Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Member		
	Ultimate Withdrawal		Death <sup>14</sup>		Disability		Merit & Seniority	Inflation & Productivity (Economy)	Increase (Next Year)
	Men	Women	Men	Women	Men	Women			
20	12.00	15.00	0.025	0.015	0.01	0.01	6.97%	4.50%	11.47%
25	9.50	12.35	0.030	0.015	0.04	0.04	4.31	4.50	8.81
30	7.20	9.58	0.040	0.025	0.07	0.07	2.65	4.50	7.15
35	4.40	8.00	0.055	0.035	0.18	0.18	1.72	4.50	6.22
40	3.90	7.10	0.095	0.058	0.27	0.24	1.23	4.50	5.73
45	3.40	6.30	0.200	0.097	0.41	0.39	0.99	4.50	5.49
50	3.40	6.30	0.383	0.158	0.61	0.65	0.79	4.50	5.29
55	3.40	6.30	0.538	0.227	1.02	0.90	0.60	4.50	5.10
60	3.40	6.30	0.680	0.345	1.10	1.03	0.25	4.50	4.75
65	3.40	6.30	1.061	0.603	1.10	1.03	0.00	4.50	4.50

## Exhibit IV – Judicial Division

Sample Ages	Percent of Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Member		
	Withdrawal		Death <sup>14</sup>		Disability		Seniority	Inflation & Productivity (Economy)	Increase (Next Year)
	Men	Women	Men	Women	Men	Women			
30	2.70	2.70	0.040	0.025	0.06	0.06	1.50%	4.50%	6.00%
35	2.70	2.70	0.055	0.035	0.07	0.07	1.50	4.50	6.00
40	2.70	2.70	0.095	0.058	0.10	0.10	0.67	4.50	5.17
45	2.70	2.70	0.200	0.097	0.17	0.17	0.50	4.50	5.00
50	2.70	2.70	0.383	0.158	0.31	0.31	0.50	4.50	5.00
55	2.70	2.70	0.538	0.227	0.63	0.63	0.50	4.50	5.00
60	2.70	2.70	0.680	0.345	1.22	1.22	0.50	4.50	5.00
65	2.70	2.70	1.061	0.603	1.48	1.48	0.50	4.50	5.00

## Exhibit V

Percent of Members With Less Than Five Years  
of Service Withdrawing from Employment Next Year<sup>15</sup>

Completed Years of Service	State Division Non-State Troopers		School Division		Local Government (Municipal) Division	
	Men	Women	Men	Women	Men	Women
	0	40.0	40.0	40.0	40.0	40.0
1	18.0	20.0	16.0	16.5	16.0	18.0
2	12.0	14.0	12.0	12.5	12.0	12.0
3	9.0	11.0	9.0	10.5	9.0	9.0
4	8.0	10.0	8.0	10.0	7.0	7.0

<sup>14</sup> Rates are shown for healthy members. Separate disability mortality tables are used for disabled retirees.

<sup>15</sup> There are no select withdrawal assumptions for the State Troopers or the Judicial Division.

# SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

## Exhibit VI – State, School, Local Government (Municipal), and Judicial Divisions

### Single Life Retirement Values

Sample Attained Ages	Present Value of \$1.00 Monthly for Life		Present Value of \$1.00 Monthly Increasing 3.5% Annually		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women
	40	\$138.39	\$141.51	\$206.81	\$214.96	41.93
45	134.80	139.02	197.32	207.10	37.19	40.86
50	130.42	135.64	186.57	197.55	32.65	36.09
55	125.29	131.12	174.65	186.07	28.35	31.41
60	118.37	124.79	160.31	171.98	24.11	26.78
65	109.07	116.45	143.22	155.38	19.98	22.32
70	98.28	105.86	125.02	136.43	16.22	18.08
75	86.47	93.08	106.56	115.73	12.91	14.19
80	74.16	79.29	88.65	95.06	10.08	10.82
85	62.15	63.82	72.23	73.84	7.76	7.84

## Exhibit VII

### Percent of Members Who Are Eligible for Reduced Benefits Retiring Next Year

Retirement Ages	State Division							
	State Members		State Troopers	School Division		Local Government (Municipal) Division		Judicial Division
	Men	Women		Men	Women	Men	Women	
50	10	10	20	10	12	12	15	10
51	10	10	20	10	12	12	15	10
52	10	10	20	10	12	12	15	10
53	10	10	20	10	12	12	15	10
54	15	15	20	18	20	12	15	10
55	15	15	10	18	20	12	15	10
56	15	15	10	18	20	15	15	10
57	15	15	10	18	20	15	15	10
58	15	15	10	18	20	15	15	10
59	15	15	10	18	20	15	15	10
60	12	15	25	14	15	15	10	10
61	12	12	25	14	15	15	10	10
62	15	18	25	14	15	15	12	10
63	25	12	25	14	15	15	12	10
64	25	12	25	14	15	15	12	10
65	0	0	0	0	0	0	0	10
66	0	0	0	0	0	0	0	10
67	0	0	0	0	0	0	0	10
68	0	0	0	0	0	0	0	15
69	0	0	0	0	0	0	0	20
70	0	0	0	0	0	0	0	40
71	0	0	0	0	0	0	0	40
72	0	0	0	0	0	0	0	100
73	0	0	0	0	0	0	0	100
74	0	0	0	0	0	0	0	100
75	0	0	0	0	0	0	0	100

# SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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## Exhibit VIII

### Percent of Members Who Are Eligible for Unreduced Benefits Retiring Next Year

Retirement Ages	State Division		State Troopers	School Division		Local Government (Municipal) Division		Judicial Division
	State Members			Men	Women	Men	Women	
	Men	Women						
50	40	40	30	40	40	15	15	10
51	35	35	30	40	40	15	15	10
52	30	30	30	35	35	15	15	10
53	30	25	30	35	35	15	15	10
54	30	25	25	35	35	15	25	10
55	20	25	25	25	25	15	25	10
56	20	20	15	25	25	25	25	10
57	20	20	15	25	22	25	25	10
58	20	20	35	25	22	25	25	10
59	20	20	35	25	22	25	25	10
60	20	20	35	25	22	20	12	10
61	18	16	35	22	17	20	12	10
62	20	20	50	22	17	20	15	10
63	17	16	50	22	17	20	15	10
64	17	16	50	22	17	20	15	10
65	30	25	100	30	25	25	30	10
66	25	22	100	19	17	30	25	10
67	25	22	100	19	17	30	25	10
68	25	22	100	19	17	30	25	15
69	25	22	100	19	17	30	25	20
70	100	100	100	100	100	100	100	40

**NOTE:** The actuarial assumptions have been changed as of December 31, 2005 based on the 2005 experience analysis to more accurately reflect expected experience.

# SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

## Notes to Required Supplementary Information Under GASB No. 25 and 26

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows.

	<b>State Division Trust Fund</b>	<b>School Division Trust Fund</b>	<b>Local Government (Municipal) Division Trust Fund</b>	<b>Judicial Division Trust Fund</b>	<b>Health Care Trust Fund</b>
Valuation date	12/31/05	12/31/05	12/31/05	12/31/05	12/31/05
Actuarial cost method	Entry age normal	Entry age normal	Entry age normal	Entry age normal	Entry age normal
Amortization method	Level percent, Open	Level percent, Open	Level percent, Open	Level percent, Open	Level percent, Open
Remaining amortization period used in ARC calculation	40	40	40	40	40
Asset valuation method <sup>16</sup>	4-year smoothed market	4-year smoothed market	4-year smoothed market	4-year smoothed market	4-year smoothed market
2006 Annual Required Contribution (ARC)	14.86%	13.37%	8.70%	12.77%	0.99%
Actuarial assumptions					
Investment rate of return	8.50%	8.50%	8.50%	8.50%	8.50%
Projected salary increases <sup>17</sup>	4.5-10.17%	4.5-10.70%	4.5-11.47%	5.0-6.00%	Not applicable
Cost-of-living adjustments	3.5%	3.5%	3.5%	3.5%	None
	compounded annually	compounded annually	compounded annually	compounded annually	
Health care inflation factor	Not applicable	Not applicable	Not applicable	Not applicable	5.5% per annum applicable to Medicare Part A costs

<sup>16</sup> Asset values were re-initialized at Market Value effective December 31, 2004, with phase-in.

<sup>17</sup> Includes inflation at 3.75 percent.

## SUMMARY OF STATE DIVISION RESULTS

## SUMMARY OF STATE DIVISION RESULTS

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### Summary of Data Used in Valuation

<u>Group</u>	<u>Number</u>	<u>Annual Payroll/Benefits</u>	
		<u>Total</u> <u>(\$ in Thousands)</u>	<u>Average</u>
Active Members			
Other Than State Troopers	52,576	\$2,129,003	\$40,494
State Troopers	<u>775</u>	<u>50,759</u>	\$65,495
Total	53,351	\$2,179,762	\$40,857
Retirees and Beneficiaries*	27,820	\$802,995	\$28,864
Inactive Deferred	4,166		
Nonvested Inactive Due Refunds	<u>40,919</u>		
Total	126,256		

\*Includes deferred beneficiaries.

## SUMMARY OF STATE DIVISION RESULTS

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### Development of Actuarial Value of Assets

	<u>(\$ Thousands)</u>
1. Actuarial Value December 31, 2004 (old method)	\$11,338,114
2. Market Value December 31, 2004	\$11,903,221
3. Actuarial Value December 31, 2004 (new method, re-initialized to market value)	\$11,903,221
4. Market Value December 31, 2005	\$12,629,060
5. Cash Flow During 2005:	
a. Employer contributions	\$191,629
b. Employee contributions (including service purchase)	262,912
c. Benefit payments and other deductions	(841,944)
d. Expenses and fees	(6,740)
e. Transfers In / (Out)	<u>2,016</u>
f. Net Cash Flow	\$(392,127)
6. Expected Return on Market Value During 2005 (2) x .085 + (5f) x .0425	\$995,108
7. Actual Return on Market Value During 2005	\$1,117,967
8. Phase-In Amount	
– 2005 (7)-(6)	\$122,859
9. Unrecognized Amounts to be Phased-In	
– 2005 [(8) x 75%]	\$92,144
10. Actuarial Value of Assets December 31, 2005 (4)-(9)	\$12,536,916



## SUMMARY OF STATE DIVISION RESULTS

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### Allocation of Actuarial Present Values

(\$ in Thousands)

Actuarial Present Value, December 31, of (1)	Actuarial Present Value of Future Benefits (2)	Portion Covered by Future Normal Cost Contributions (3)	Actuarial Accrued Liabilities (2)-(3) (4)
<b>Active Members</b>			
Service Retirement Benefits	\$7,389,016	\$1,412,036	\$5,976,980
Disability Benefits	364,051	155,322	208,729
Survivor Benefits	224,574	63,975	160,599
Separation Benefits	<u>1,328,508</u>	<u>639,901</u>	<u>688,607</u>
Active Member Totals	\$9,306,149	\$2,271,234	\$7,034,915
Retirees and Beneficiaries on Rolls	10,146,650	0	10,146,650
<b>Inactive Deferred Benefits</b>			
Vested Inactives	279,164	0	279,164
Nonvested Inactives—Refunds Due	<u>81,015</u>	<u>0</u>	<u>81,015</u>
Total	\$19,812,978	\$2,271,234	\$17,541,744
Assets Used in Valuation			<u>12,536,916</u>
Unfunded/(Overfunded) Actuarial Accrued Liabilities			\$5,004,828

# SUMMARY OF STATE DIVISION RESULTS

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## Employer Contribution Rate

### Expressed as Percent of Active Member Payroll

<u>Contribution For</u>	<u>Contributions Expressed as Percent of Payroll</u>
Normal Cost	
Service Retirement Benefits	8.92%
Disability Benefits	0.95
Survivor Benefits	0.41
Separation Benefits	<u>3.91</u>
Total	14.19%
Member Current Contributions <sup>18</sup>	<u>8.05</u>
Employer Normal Cost	6.14%
Employer Contribution Rate <sup>18</sup>	10.19%
Percent Available to Amortize Unfunded Actuarial Accrued Liabilities (UAAL)	4.05%
Number of Years to Amortize UAAL	
– Without AED	Infinite
– With AED	Infinite
Actuarially Required Employer Contribution Rate to pay Normal Cost and amortize UAAL over 40 years (assuming AED is paid throughout the amortization period)	14.86%

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<sup>18</sup> Weighted average of more than one statutory rate.

## SUMMARY OF STATE DIVISION RESULTS

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### Actuarial Present Value of Accumulated Plan Benefits

	<u>\$ in Thousands</u>
Vested Benefits	
For retired lives	\$10,146,650
For others	4,682,295
Non-Vested Benefits	<u>597,669</u>
Actuarial Present Value of Accumulated Plan Benefits	\$15,426,614

The actuarial present value of accumulated plan benefits as of December 31, 2004, was \$15,101.0 million. During the year, the plan experienced a net increase of \$326.0 million in the actuarial present value of accumulated plan benefits.

The actuarial present values presented above were determined using the following assumptions:

- a) Future salary increases were not considered.
- b) Future service was considered only to the extent that it would permit active plan participants to become eligible for benefits attributable to service rendered prior to the date of determination.
- c) Regular valuation assumptions were used as to mortality, withdrawal, retirement ages, disability and investment return.

### Active Member Counts

Vested	
Other Than State Troopers	28,722
State Troopers	563
Non-Vested	
Other Than State Troopers	23,854
State Troopers	<u>212</u>
Total	53,351

## SUMMARY OF STATE DIVISION RESULTS

### **GASB-25** **Schedule of Funding Progress** (in thousands)

Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Covered Payroll	UAAL/ Covered Payroll
(1)	(2)	(3)	(4)	(5)	(6)	(7)
12-31-05	\$12,536,916	\$17,541,744	\$5,004,828	71.5%	\$2,064,764	242.4%
12-31-04	\$28,594,699	\$40,783,531	\$12,188,832	70.1%	\$5,303,439	229.8%
12-31-03	\$28,522,222	\$37,914,502	\$9,392,280	75.2%	\$5,140,918	182.7%
12-31-02	\$28,551,607	\$32,463,918	\$3,912,311	87.9%	\$5,278,586	74.1%
12-31-01	\$28,947,935	\$29,469,608	\$521,673	98.2%	\$4,954,605	10.5%
12-31-00	\$27,749,435	\$26,492,574	(\$1,256,861)	104.7%	\$4,561,133	(27.6%)

### **Schedule of Employer Contributions**

Fiscal Year	Annual Required Contribution* (ARC)	% ARC Contributed
(1)	(2)	(3)
2005	19.33%	48%
2004	17.31%	51%
2003	11.11%	69%
2002	6.37%	100%
2001	6.84%	100%
2000	9.82%	100%

\*As a percent of covered payroll and without consideration of future increases in AED. The amortization period for 2005 is 40 years.

#### Notes to Schedules

For these schedules, the State and School Divisions have been combined for years prior to December 31, 2005.

Actuarial Method: Individual Entry Age Normal.

Actuarial Assumptions: Please see pages 25 through 33 for a description of the current assumptions.

Trend Factors: There was no significant change in the population size during 2005. There were no material plan changes since the last valuation.

# SUMMARY OF STATE DIVISION RESULTS

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## Changes in Unfunded Actuarial Accrued Liabilities

During Calendar 2005

\$ in Millions

1. Beginning of Year:	
a) Unfunded Actuarial Accrued Liabilities (UAAL)	\$5,062.7
b) Normal Cost	334.6
c) Total Contribution required to pay Normal Cost and amortize the UAAL over 40 years	579.2
d) Actual Total Contribution (excluding service purchases)	357.8
2. End of Year:	
a) Expected UAAL, from last year's valuation: (1a) x 1.085 + (1b) x 1.0425 - (1c) x 1.0425	\$5,238.0
b) Expected UAAL based on actual contribution (1a) x 1.085 + (1b) x 1.0425 - (1d) x 1.0425	5,468.8
c) Increase in UAAL due to Contribution Deficiency (2b)-(2a)	230.8
3. Gains (Losses) on year's activities:	
a) From differences between assumed and actual experience on liabilities	\$(46.6)
b) From differences between assumed and actual experience on assets and transfers in or out	34.0
c) From service purchases	(23.6)
d) From change in plan assumptions	(112.9)
e) From change in asset method	<u>613.1</u>
f) Total (a) + (b) + (c) + (d) + (e)	\$464.0
4. Actual UAAL at end of year (2a) + (2c) - (3f)	\$5,004.8

## SUMMARY OF STATE DIVISION RESULTS

### Gains & Losses in Actuarial Accrued Liabilities During Calendar Year 2005

<u>Type of Activity</u>	Gain (Loss) For Year	
	<u>\$ in Millions</u>	<u>% of Beginning of Year Accrued Liabilities</u>
<b>-----Decrement Risk Areas-----</b>		
<u>Service Retirements.</u> If members retire at older ages than assumed, there is a gain. If younger ages, a loss. Service purchases at less than full actuarial cost also produce a loss.	\$(9.1)	(0.05)%
<u>Disability Retirements.</u> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(2.3)	(0.01)%
<u>Deaths.</u> If survivor claims are less than assumed, there is a gain. If more claims, a loss. If retirees live longer than assumed, there is a loss; if they die sooner than assumed, there is a gain.	11.1	0.07%
<u>Withdrawal.</u> If more actuarial liabilities are released by terminations than assumed, there is a gain. If smaller releases, a loss.	89.5	0.54%
<u>New Entrants.</u> New members enter the plan will create a loss.	(59.5)	(0.36)%
<u>Other.</u> Change in group size, service credit reinstatements, actuarial systems, data adjustments and miscellaneous unidentified changes in the UAAL.	25.9	0.16%
<b>-----Economic Risk Areas-----</b>		
<u>Salary Increases.</u> If there are smaller salary increases than assumed, there is a gain. If greater increases, a loss.	(102.2)	(0.62)%
<u>Investment Income.</u> If there is greater investment income than assumed, there is a gain. If less income, a loss.	<u>34.0</u>	<u>0.21%</u>
Experience Gain (or Loss) During Year	\$(12.6)	(0.06)%

## SUMMARY OF SCHOOL DIVISION RESULTS

## SUMMARY OF SCHOOL DIVISION RESULTS

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### Summary of Data Used in Valuation

<u>Group</u>	<u>Number</u>	<u>Annual Payroll/Benefits</u>	
		<u>Total</u> <u>(\$ in Thousands)</u>	<u>Average</u>
Active Members	111,449	\$3,437,979	\$30,848
Retirees and Beneficiaries*	40,065	\$1,140,981	\$28,478
Inactive Deferred	7,869		
Nonvested Inactive Due Refunds	<u>60,533</u>		
Total	219,916		

\*Includes deferred beneficiaries.



## SUMMARY OF SCHOOL DIVISION RESULTS

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### Development of Actuarial Value of Assets

	<u>(\$ Thousands)</u>
1. Actuarial Value December 31, 2004 (old method)	\$17,256,585
2. Market Value December 31, 2004	\$18,116,675
3. Actuarial Value December 31, 2004 (new method, re-initialized to market value)	\$18,116,675
4. Market Value December 31, 2005	\$19,327,602
5. Cash Flow During 2005:	
a. Employer contributions	\$299,402
b. Employee contributions (including service purchase)	375,716
c. Benefit payments and other deductions	(1,160,923)
d. Expenses and fees	(12,070)
e. Transfers In / (Out)	<u>(1,078)</u>
f. Net Cash Flow	\$(498,953)
6. Expected Return on Market Value During 2005 (2) x .085 + (5f) x .0425	\$1,518,712
7. Actual Return on Market Value During 2005	\$1,709,880
8. Phase-In Amount	
– 2005 (7)-(6)	\$191,168
9. Unrecognized Amounts to be Phased-In	
– 2005 [(8) x 75%]	\$143,376
10. Actuarial Value of Assets December 31, 2005 (4)-(9)	\$19,184,225

## SUMMARY OF SCHOOL DIVISION RESULTS

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### Allocation of Actuarial Present Values

(\$ in Thousands)

Actuarial Present Value, December 31, of	Actuarial Present Value of Future Benefits	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued Liabilities (2)-(3)
(1)	(2)	(3)	(4)
Active Members			
Service Retirement Benefits	\$12,001,823	\$2,688,737	\$9,313,086
Disability Benefits	258,340	112,535	145,805
Survivor Benefits	274,957	89,514	185,443
Separation Benefits	<u>2,057,674</u>	<u>1,052,886</u>	<u>1,004,788</u>
Active Member Totals	\$14,592,794	\$3,943,672	\$10,649,122
Retirees and Beneficiaries on Rolls	14,848,336	0	14,848,336
Inactive Deferred Benefits			
Vested Inactives	332,637	0	332,637
Nonvested Inactives—Refunds Due	<u>133,877</u>	<u>0</u>	<u>133,877</u>
Total	\$29,907,644	\$3,943,672	\$25,963,972
Assets Used in Valuation			<u>19,184,225</u>
Unfunded/(Overfunded) Actuarial Accrued Liabilities			\$6,779,747

## SUMMARY OF SCHOOL DIVISION RESULTS

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### Employer Contribution Rate

#### Expressed as Percent of Active Member Payroll

<u>Contribution For</u>	<u>Contributions Expressed as Percent of Payroll</u>
Normal Cost	
Service Retirement Benefits	9.98%
Disability Benefits	0.41
Survivor Benefits	0.34
Separation Benefits	<u>3.80</u>
Total	14.53%
Member Current Contributions	<u>8.00</u>
Employer Normal Cost	6.53%
Employer Contribution Rate	9.13%
Percent Available to Amortize Unfunded Actuarial Accrued Liabilities (UAAL)	2.60%
Number of Years to Amortize UAAL	
– Without AED	Infinite
– With AED	Infinite
Actuarially Required Employer Contribution Rate to pay Normal Cost and amortize UAAL over 40 years (assuming AED is paid throughout the amortization period)	13.37%

## SUMMARY OF SCHOOL DIVISION RESULTS

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### Actuarial Present Value of Accumulated Plan Benefits

	<u>\$ in Thousands</u>
Vested Benefits	
For retired lives	\$14,848,336
For others	6,697,051
Non-Vested Benefits	<u>890,983</u>
Actuarial Present Value of Accumulated Plan Benefits	\$22,436,370

The actuarial present value of accumulated plan benefits as of December 31, 2004, was \$22,033.6 million. During the year, the plan experienced a net increase of \$403.0 million in the actuarial present value of accumulated plan benefits.

The actuarial present values presented above were determined using the following assumptions:

- d) Future salary increases were not considered.
- e) Future service was considered only to the extent that it would permit active plan participants to become eligible for benefits attributable to service rendered prior to the date of determination.
- f) Regular valuation assumptions were used as to mortality, withdrawal, retirement ages, disability and investment return.

### Active Member Counts

Vested	55,344
Non-Vested	<u>56,105</u>
Total	111,449

# SUMMARY OF SCHOOL DIVISION RESULTS

## **GASB-25** **Schedule of Funding Progress** (in thousands)

Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Covered Payroll	UAAL/ Covered Payroll
(1)	(2)	(3)	(4)	(5)	(6)	(7)
12-31-05	\$19,184,225	\$25,963,972	\$6,779,747	73.9%	\$3,241,214	209.2%
12-31-04	\$28,594,699	\$40,783,531	\$12,188,832	70.1%	\$5,303,439	229.8%
12-31-03	\$28,522,222	\$37,914,502	\$9,392,280	75.2%	\$5,140,918	182.7%
12-31-02	\$28,551,607	\$32,463,918	\$3,912,311	87.9%	\$5,278,586	74.1%
12-31-01	\$28,947,935	\$29,469,608	\$521,673	98.2%	\$4,954,605	10.5%
12-31-00	\$27,749,435	\$26,492,574	(\$1,256,861)	104.7%	\$4,561,133	(27.6%)

## **Schedule of Employer Contributions**

Fiscal Year	Annual Required Contribution* (ARC)	% ARC Contributed
(1)	(2)	(3)
2005	19.33%	48%
2004	17.31%	51%
2003	11.11%	69%
2002	6.37%	100%
2001	6.84%	100%
2000	9.82%	100%

\*As a percent of covered payroll and without consideration of future increases in AED. The amortization period for 2005 is 40 years.

### Notes to Schedules

For these schedules, the State and School Divisions have been combined for years prior to December 31, 2005.

Actuarial Method: Individual Entry Age Normal.

Actuarial Assumptions: Please see pages 25 through 33 for a description of the current assumptions.

Trend Factors: There was no significant change in the population size during 2005. There were no material plan changes since the last valuation.

# SUMMARY OF SCHOOL DIVISION RESULTS

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## Changes in Unfunded Actuarial Accrued Liabilities

During Calendar 2005

\$ in Millions

1. Beginning of Year:	
a) Unfunded Actuarial Accrued Liabilities (UAAL)	\$7,126.1
b) Normal Cost	526.5
c) Total Contribution required to pay Normal Cost and amortize the UAAL over 40 years	871.0
d) Actual Total Contribution (excluding service purchases)	558.9
2. End of Year:	
a) Expected UAAL, from last year's valuation: (1a) x 1.085 + (1b) x 1.0425 - (1c) x 1.0425	\$7,372.8
b) Expected UAAL based on actual contribution (1a) x 1.085 + (1b) x 1.0425 - (1d) x 1.0425	7,698.1
c) Increase in UAAL due to Contribution Deficiency (2b)-(2a)	325.3
3. Gains (Losses) on year's activities:	
a) From differences between assumed and actual experience on liabilities	\$4.9
b) From differences between assumed and actual experience on assets and transfers in or out	48.7
c) From service purchases	(44.9)
d) From change in plan assumptions	(23.5)
e) From change in asset method	<u>933.2</u>
f) Total (a) + (b) + (c) + (d) + (e)	\$918.4
4. Actual UAAL at end of year (2a) + (2c) - (3f)	\$6,779.7

## SUMMARY OF SCHOOL DIVISION RESULTS

### Gains & Losses in Actuarial Accrued Liabilities During Calendar Year 2005

<u>Type of Activity</u>	Gain (Loss) For Year	
	<u>\$ in Millions</u>	<u>% of Beginning of Year Accrued Liabilities</u>
<b>-----Decrement Risk Areas-----</b>		
<u>Service Retirements.</u> If members retire at older ages than assumed, there is a gain. If younger ages, a loss. Service purchases at less than full actuarial cost also produce a loss.	\$(19.6)	(0.08)%
<u>Disability Retirements.</u> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(3.1)	(0.01)%
<u>Deaths.</u> If survivor claims are less than assumed, there is a gain. If more claims, a loss. If retirees live longer than assumed, there is a loss; if they die sooner than assumed, there is a gain.	111.1	0.46%
<u>Withdrawal.</u> If more actuarial liabilities are released by terminations than assumed, there is a gain. If smaller releases, a loss.	9.0	0.04%
<u>New Entrants.</u> New members enter the plan will create a loss.	(53.1)	(0.22)%
<u>Other.</u> Change in group size, service credit reinstatements, actuarial systems, data adjustments and miscellaneous unidentified changes in the UAAL.	40.1	0.16%
<b>-----Economic Risk Areas-----</b>		
<u>Salary Increases.</u> If there are smaller salary increases than assumed, there is a gain. If greater increases, a loss.	(79.5)	(0.33)%
<u>Investment Income.</u> If there is greater investment income than assumed, there is a gain. If less income, a loss.	<u>48.7</u>	<u>0.20%</u>
Experience Gain (or Loss) During Year	\$53.6	0.22%

## **SUMMARY OF LOCAL GOVERNMENT (MUNICIPAL) DIVISION RESULTS**



# SUMMARY OF LOCAL GOVERNMENT (MUNICIPAL) DIVISION RESULTS

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## Summary of Data Used in Valuation

<u>Group</u>	<u>Number</u>	<u>Annual Payroll/Benefits</u>	
		<u>Total</u> <u>(\$ in Thousands)</u>	<u>Average</u>
Active Members	15,555	\$642,574	\$41,310
Retirees and Beneficiaries*	3,578	\$94,963	\$26,541
Inactive Deferred	926		
Nonvested Inactives Due Refunds	<u>11,079</u>		
Total	31,138		

\*Includes deferred beneficiaries.

# SUMMARY OF LOCAL GOVERNMENT (MUNICIPAL) DIVISION RESULTS

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## Development of Actuarial Value of Assets

	<u>(\$ Thousands)</u>
1. Actuarial Value December 31, 2004 (old method)	\$1,990,652
2. Market Value December 31, 2004	\$2,087,710
3. Actuarial Value December 31, 2004 (new method, re-initialized to market value)	\$2,087,710
4. Market Value December 31, 2005	\$2,377,471
5. Cash Flow During 2005:	
a. Employer contributions	\$54,357
b. Employee contributions (including service purchase)	140,421
c. Benefit payments and other deductions	(107,445)
d. Expenses and fees	(1,848)
e. Transfers In / (Out)	<u>(1,742)</u>
f. Net Cash Flow	\$83,743
6. Expected Return on Market Value During 2005 (2) x .085 + (5f) x .0425	\$181,014
7. Actual Return on Market Value During 2005	\$206,017
8. Phase-In Amount	
– 2005 (7)-(6)	\$25,003
9. Unrecognized Amounts to be Phased-In	
– 2005 [(8) x 75%]	\$18,752
10. Actuarial Value of Assets December 31, 2005 (4)-(9)	\$2,358,719

# SUMMARY OF LOCAL GOVERNMENT (MUNICIPAL) DIVISION RESULTS

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## Allocation of Actuarial Present Values

(\$ in Thousands)

Actuarial Present Value, December 31, of (1)	Actuarial Present Value of Future Benefits (2)	Portion Covered by Future Normal Cost Contributions (3)	Actuarial Accrued Liabilities (2)-(3) (4)
Active Members			
Service Retirement Benefits	\$1,798,531	\$420,725	\$1,377,806
Disability Benefits	110,165	50,557	59,608
Survivor Benefits	59,525	20,118	39,407
Separation Benefits	421,310	204,950	216,360
Active Member Totals	\$2,389,531	\$696,350	\$1,693,181
Retirees and Beneficiaries on Rolls	1,269,602	0	1,269,602
Inactive Deferred Benefits			
Vested Inactives	36,460	0	36,460
Nonvested Inactives – Refunds Due	23,381	0	23,381
Total	\$3,718,974	\$696,350	\$3,022,624
Assets Used in Valuation			2,358,719
Unfunded/(Overfunded) Actuarial Accrued Liabilities			\$663,905

# SUMMARY OF LOCAL GOVERNMENT (MUNICIPAL) DIVISION RESULTS

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## Employer Contribution Rate

### Expressed as Percent of Active Member Payroll

<u>Contribution For</u>	<u>Contributions Expressed as Percent of Payroll</u>
Normal Cost	
Service Retirement Benefits	8.71%
Disability Benefits	1.01
Survivor Benefits	0.41
Separation Benefits	<u>4.09</u>
Total	14.22%
Member Current Contributions	<u>8.00</u>
Employer Normal Cost	6.22%
Employer Contribution Rate	8.98%
Percent Available to Amortize Unfunded Actuarial Accrued Liabilities (UAAL)	2.76%
Number of Years to Amortize UAAL	
– Without AED	Infinite
– With AED	35 years
Actuarially Required Employer Contribution Rate to pay Normal Cost and amortize UAAL over 40 years (assuming AED is paid throughout the amortization period)	8.70%

## SUMMARY OF LOCAL GOVERNMENT (MUNICIPAL) DIVISION RESULTS

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### Actuarial Present Value of Accumulated Plan Benefits

	<u>\$ in Thousands</u>
Vested Benefits	
For retired lives	\$1,269,602
For others	1,032,721
Non-Vested Benefits	<u>147,173</u>
Actuarial Present Value of Accumulated Plan Benefits	\$2,449,496

The actuarial present value of accumulated plan benefits as of December 31, 2004, was \$2,281.4 million. During the year, the plan experienced a net increase of \$168.1 million in the actuarial present value of accumulated plan benefits.

The actuarial present values presented above were determined using the following assumptions:

- a) Future salary increases were not considered.
- b) Future service was considered only to the extent that it would permit active plan participants to become eligible for benefits attributable to service rendered prior to the date of determination.
- c) Regular valuation assumptions were used as to mortality, withdrawal, retirement ages, disability and investment return.

### Active Member Counts

Vested	6,865
Non-Vested	<u>8,690</u>
Total	15,555

# SUMMARY OF LOCAL GOVERNMENT (MUNICIPAL) DIVISION RESULTS

## GASB-25 Schedule of Funding Progress (in thousands)

Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Covered Payroll	UAAL/ Covered Payroll
(1)	(2)	(3)	(4)	(5)	(6)	(7)
12-31-05	\$2,358,719	\$3,022,624	\$663,905	78.0%	\$607,217	109.3%
12-31-04	\$1,990,652	\$2,576,988	\$586,336	77.2%	\$549,607	106.7%
12-31-03	\$1,907,786	\$2,379,229	\$471,443	80.2%	\$479,098	98.4%
12-31-02	\$1,839,632	\$1,966,143	\$126,511	93.6%	\$474,760	26.6%
12-31-01	\$1,822,413	\$1,746,761	(\$75,652)	104.3%	\$436,582	(17.3%)
12-31-00	\$1,717,017	\$1,541,014	(\$176,003)	111.4%	\$399,737	(44.0%)

## Schedule of Employer Contributions

Fiscal Year	Annual Required Contribution* (ARC)	% ARC Contributed
(1)	(2)	(3)
2005	14.11%	64%
2004	13.98%	62%
2003	9.53%	69%
2002	5.02%	100%
2001	6.26%	100%
2000	8.90%	100%

\*As a percent of covered payroll and without consideration of future increases in AED. The amortization period for 2005 is 40 years.

### Notes to Schedules

Actuarial Method: Individual Entry Age Normal.

Actuarial Assumptions: Please see Pages 25 through 33 for a description of the current assumptions.

Trend Factors: There was no significant change in the population size during 2005. There were no significant plan changes since the last valuation.

# SUMMARY OF LOCAL GOVERNMENT (MUNICIPAL) DIVISION RESULTS

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## Changes in Unfunded Actuarial Accrued Liabilities

During Calendar 2005

	<u>\$ in Millions</u>
1. Beginning of Year:	
a) Unfunded Actuarial Accrued Liabilities (UAAL)	\$586.3
b) Normal Cost	93.2
c) Total Contribution required to pay Normal Cost and amortize the UAAL over 40 years	121.5
d) Actual Total Contribution (excluding service purchases)	102.8
2. End of Year:	
a) Expected UAAL, from last year's valuation: (1a) x 1.085 + (1b) x 1.0425 - (1c) x 1.0425	\$606.6
b) Expected UAAL based on actual contribution (1a) x 1.085 + (1b) x 1.0425 - (1d) x 1.0425	<u>626.2</u>
c) Increase in UAAL due to Contribution Deficiency (2b)-(2a)	\$19.6
3. Gains (Losses) on year's activities:	
a) From differences between assumed and actual experience on liabilities	\$(153.8)
b) From differences between assumed and actual experience on assets and transfers in or out	5.4
c) From service purchases	(4.7)
d) From change in plan assumptions	10.1
e) From change in asset method	<u>105.3</u>
f) Total (a) + (b) + (c) + (d) + (e)	\$(37.7)
4. Actual UAAL at end of year (2a) + (2c) - (3f)	\$663.9

## SUMMARY OF LOCAL GOVERNMENT (MUNICIPAL) DIVISION RESULTS

### Gains & Losses in Actuarial Accrued Liabilities During Calendar Year 2005

<u>Type of Activity</u>	<u>Gain (Loss) For Year</u>	
	<u>\$ in Millions</u>	<u>% of Beginning of Year Accrued Liabilities</u>
<b>-----Decrement Risk Areas-----</b>		
<u>Service Retirements.</u> If members retire at older ages than assumed, there is a gain. If younger ages, a loss. Service purchases at less than full actuarial cost also produce a loss.	\$(2.8)	(0.11)%
<u>Disability Retirements.</u> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(0.5)	(0.02)%
<u>Deaths.</u> If survivor claims are less than assumed, there is a gain. If more claims, a loss. If retirees live longer than assumed, there is a loss; if they die sooner than assumed, there is a gain.	8.4	0.33%
<u>Withdrawals.</u> If more actuarial liabilities are released by terminations than assumed, there is a gain. If smaller releases, a loss.	3.2	0.12%
<u>New Entrants.</u> New members enter the plan will create a loss.	(15.3)	(0.59)%
<u>Other.</u> Change in group size, service credit reinstatements, actuarial systems, data adjustments and miscellaneous unidentified changes in the UAAL.	2.5	0.10%
<b>-----Economic Risk Areas-----</b>		
<u>Salary Increases.</u> If there are smaller salary increases than assumed, there is a gain. If greater increases, a loss.	(149.3)	(5.79)%
<u>Investment Income.</u> If there is greater investment income than assumed, there is a gain. If less income, a loss.	<u>5.4</u>	<u>0.21%</u>
Experience Gain (or Loss) During Year	\$(148.4)	(5.75)%



**SUMMARY OF JUDICIAL DIVISION RESULTS**

# SUMMARY OF JUDICIAL DIVISION RESULTS

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## Summary of Data Used in Valuation

<u>Group</u>	<u>Number</u>	<u>Annual Payroll/Benefits</u>	
		<u>Total</u> <u>(\$ in Thousands)</u>	<u>Average</u>
Active Members	275	\$28,290	\$102,873
Retirees and Beneficiaries*	252	\$10,078	\$39,992
Inactive Deferred	14		
Nonvested Inactives Due Refunds	<u>3</u>		
Total	544		

\*Includes deferred beneficiaries.

## SUMMARY OF JUDICIAL DIVISION RESULTS

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### Development of Actuarial Value of Assets

	<u>(\$ Thousands)</u>
1. Actuarial Value December 31, 2004 (old method)	\$170,111
2. Market Value December 31, 2004	\$178,504
3. Actuarial Value December 31, 2004 (new method, re-initialized to market value)	\$178,504
4. Market Value December 31, 2005	\$194,665
5. Cash Flow During 2005:	
a. Employer contributions	\$3,408
b. Employee contributions (including service purchase)	5,147
c. Benefit payments and other deductions	(10,131)
d. Expenses and fees	(20)
e. Transfers In / (Out)	<u>804</u>
f. Net Cash Flow	\$(792)
6. Expected Return on Market Value During 2005 (2) x .085 + (5f) x .0425	\$15,139
7. Actual Return on Market Value During 2005	\$16,954
8. Phase-In Amount	
– 2005 (7)-(6)	\$1,815
9. Unrecognized Amounts to be Phased-In	
– 2005 [(8) x 75%]	\$1,360
10. Actuarial Value of Assets December 31, 2005 (4)-(9)	\$193,305

# SUMMARY OF JUDICIAL DIVISION RESULTS

## Allocation of Actuarial Present Values

(\$ in Thousands)

Actuarial Present Value, December 31, of (1)	Actuarial Present Value of Future Benefits (2)	Portion Covered by Future Normal Cost Contributions (3)	Actuarial Accrued Liabilities (2)-(3) (4)
Active Members			
Service Retirement Benefits	\$117,075	\$25,754	\$91,321
Disability Benefits	7,718	2,792	4,926
Survivor Benefits	7,879	2,226	5,653
Separation Benefits	<u>9,888</u>	<u>7,513</u>	<u>2,375</u>
Active Member Totals	\$142,560	\$38,285	\$104,275
Retirees and Beneficiaries on Rolls	118,324	0	118,324
Inactive Deferred Benefits			
Vested Inactives	1,192	0	1,192
Nonvested Inactives-Refunds Due	<u>164</u>	<u>0</u>	<u>164</u>
Total	\$262,240	\$38,285	\$223,955
Assets Used in Valuation			<u>193,305</u>
Unfunded/(Overfunded) Actuarial Accrued Liabilities			\$30,650

# SUMMARY OF JUDICIAL DIVISION RESULTS

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## Employer Contribution Rate

### Expressed as Percent of Active Member Payroll

<u>Contribution For</u>	<u>Contributions Expressed as Percent of Payroll</u>
Normal Cost	
Service Retirement Benefits	12.18%
Disability Benefits	1.30
Survivor Benefits	1.08
Separation Benefits	<u>3.53</u>
Total	18.09%
Member Current Contributions	<u>8.00</u>
Employer Normal Cost	10.09%
Employer Contribution Rate	12.64%
Percent Available to Amortize Unfunded Actuarial Accrued Liabilities (UAAL)	2.55%
Number of Years to Amortize UAAL	
– Without AED	Infinite
– With AED	43 years
Actuarially Required Employer Contribution Rate to pay Normal Cost and amortize UAAL over 40 years (assuming AED is paid throughout the amortization period)	12.77%

## SUMMARY OF JUDICIAL DIVISION RESULTS

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### Actuarial Present Value of Accumulated Plan Benefits

	<u>\$ in Thousands</u>
Vested Benefits	
For retired lives	\$118,324
For others	80,021
Non-vested Benefits	<u>7,008</u>
Actuarial Present Value of Accumulated Plan Benefits	\$205,353

The actuarial present value of accumulated plan benefits as of December 31, 2004 was \$195.5 million. During the year, the plan experienced a net increase of \$9.9 million in the actuarial present value of accumulated plan benefits.

The actuarial present values presented above were determined using the following assumptions:

- a) Future salary increases were not considered.
- b) Future service was considered only to the extent that it would permit active plan participants to become eligible for benefits attributable to service rendered prior to the date of determination.
- c) Regular valuation assumptions were used as to mortality, withdrawal, retirement ages, disability and investment return.

### Active Member Counts

Vested	221
Non-Vested	<u>54</u>
Total	275

## SUMMARY OF JUDICIAL DIVISION RESULTS

### GASB-25 Schedule of Funding Progress (in thousands)

Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Covered Payroll	UAAL/ Covered Payroll
(1)	(2)	(3)	(4)	(5)	(6)	(7)
12-31-05	\$193,305	\$223,955	\$30,650	86.3%	\$26,937	113.8%
12-31-04	\$170,111	\$209,954	\$39,843	81.0%	\$26,309	151.4%
12-31-03	\$166,654	\$198,377	\$31,723	84.0%	\$25,452	124.6%
12-31-02	\$162,901	\$165,672	\$2,771	98.3%	\$26,357	10.5%
12-31-01	\$165,130	\$150,943	(\$14,187)	109.4%	\$24,140	(58.8%)
12-31-00	\$159,426	\$132,653	(\$26,773)	120.2%	\$21,673	(123.5%)

### Schedule of Employer Contributions

Fiscal Year	Annual Required Contribution* (ARC)	% ARC Contributed
(1)	(2)	(3)
2005	17.21%	74%
2004	16.22%	64%
2003	3.98%	100%
2002	1.55%	100%
2001	1.79%	100%
2000	13.40%	100%

\*As a percent of covered payroll and without consideration of future increases in AED. The amortization period for 2005 is 40 years.

#### Notes to Schedules

Actuarial Method: Individual Entry Age Normal.

Actuarial Assumptions: Please see pages 25 through 33 for a description of the current assumptions.

Trend Factors: There was no significant change in the population size during 2005. There were no significant plan changes since the last valuation.

# SUMMARY OF JUDICIAL DIVISION RESULTS

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## Changes in Unfunded Actuarial Accrued Liabilities During Calendar 2005

	<u>\$ in Millions</u>
1. Beginning of Year:	
a) Unfunded Actuarial Accrued Liabilities (UAAL)	\$ 39.8
b) Normal Cost	4.7
c) Total Contribution required to pay Normal Cost and amortize the UAAL over 40 years	6.6
d) Actual Total Contribution (excluding service purchases)	5.6
2. End of Year:	
a) Expected UAAL, from last year's valuation: (1a) x 1.085 + (1b) x 1.0425 - (1c) x 1.0425	\$ 41.2
b) Expected UAAL based on actual contribution (1a) x 1.085 + (1b) x 1.0425 - (1d) x 1.0425	42.3
c) Increase in UAAL due to Contribution Deficiency (2b)-(2a)	1.1
3. Gains (Losses) on year's activities:	
a) From differences between assumed and actual experience on liabilities	\$ 1.2
b) From differences between assumed and actual experience on assets and transfers in or out	1.3
c) From service purchases	0.0
d) From change in plan assumptions	0.0
e) From change in asset method	<u>9.1</u>
f) Total (a) + (b) + (c) + (d) + (e)	\$11.6
4. Actual UAAL at end of year (2a) + (2c) - (3f)	\$30.7



## SUMMARY OF JUDICIAL DIVISION RESULTS

### Gains & Losses in Actuarial Accrued Liabilities During Calendar Year 2005

<u>Type of Activity</u>	Gain (Loss) For Year	
	<u>\$ in Millions</u>	<u>% of Beginning of Year Accrued Liabilities</u>
<b>-----Decrement Risk Areas-----</b>		
<u>Service Retirements.</u> If members retire at older ages than assumed, there is a gain. If younger ages, a loss. Service purchases at less than full actuarial cost also produce a loss.	\$(0.9)	(0.43)%
<u>Disability Retirements.</u> If disability claims are less than assumed, there is a gain. If more claims, a loss.	0.1	0.05%
<u>Deaths.</u> If survivor claims are less than assumed, there is a gain. If more claims, a loss. If retirees live longer than assumed, there is a loss; if they die sooner than assumed, there is a gain.	0.1	0.05%
<u>Withdrawals.</u> If more actuarial liabilities are released by terminations than assumed, there is a gain. If smaller releases, a loss.	2.4	1.14%
<u>New Entrants.</u> New members enter the plan will create a loss.	(1.2)	(0.57)%
<u>Other.</u> Change in group size, service credit reinstatements, actuarial systems, data adjustments and miscellaneous unidentified changes in the UAAL.	1.8	0.86%
<b>-----Economic Risk Areas-----</b>		
<u>Salary Increases.</u> If there are smaller salary increases than assumed, there is a gain. If greater increases, a loss.	(1.1)	(0.52)%
<u>Investment Income.</u> If there is greater investment income than assumed, there is a gain. If less income, a loss.	<u>1.3</u>	<u>0.62%</u>
Experience Gain (or Loss) During Year	\$2.5	1.20%

## **POSTRETIREMENT HEALTH CARE PROGRAM**

# SUMMARY OF POSTRETIREMENT HEALTH CARE PROGRAM

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## Valuation Highlights

### Fixed Dollar Subsidy

The December 31, 2005 actuarial valuation of the postretirement Health Care Trust Fund (HCTF) indicates that the contribution rate is sufficient to fully fund the costs of benefit commitments for fixed-dollar subsidies being made to members and benefit recipients. After satisfying normal cost requirements, the remainder of the employer rate is sufficient to fund the unfunded portion of the actuarial accrued liabilities over 35 years.

### No-Part A Subsidy

PERA retirees who have not participated in Social Security are generally not covered by Medicare Part A for hospital-related services. Per section 24-51-1206(4) of the Colorado Revised Statutes, PERA may not charge premiums to retirees without Part A that are any greater than premiums charged to retirees with Part A, for the same plan option and coverage level. Presently, PERA interprets this mandate to require that total premiums for Medicare coverage be determined assuming plan participants have both Medicare Parts A and B. Retirees then pay the difference between the total premium and their service-related fixed-dollar subsidy from the HCTF. Implicit in this process is an additional subsidy paid by the HCTF on behalf of retirees who are not covered for Part A. Under the self-insured program, the implicit subsidy is equal to the difference between claims paid for Part A services and what Medicare would have paid had such retirees enrolled in Part A. For retirees participating in an HMO, the additional subsidy paid by the HCTF for no Part A members is equal to the difference in the premiums the HMO's charge for retirees without Part A coverage, and those covered by Part A. This implicit subsidy has been included in this actuarial valuation. The contribution rate is sufficient to fully fund the costs of the subsidy for members not covered by Medicare Part A.

# SUMMARY OF POSTRETIREMENT HEALTH CARE PROGRAM

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## Summary of Data Used in Valuation

<u>Group</u>	<u>Total Number</u>	<u>No Part A Member Number</u>
Active Members	179,675	11,029 <sup>19</sup>
Inactive Members	12,972	0 <sup>20</sup>
Benefit Recipients	<u>40,530</u>	<u>3,161</u> <sup>21</sup>
Total	233,177	14,190
Average Age – Active Members	44.0 years	51.2 years
Average Service – Active Members	8.3 years	27.3 years
Average Age – Benefit Recipients	69.9 years	73.4 years
Average Age – Pre-Medicare Retirees	N/A	59.5 years <sup>22</sup>

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<sup>19</sup> Active no-Part A membership is limited to employees with earned service that implies hire date prior to March 31, 1986 and who could not have earned 40 quarters of coverage between age 20 and their PERA date of hire and who do not transfer among PERA employers nor obtain Medicare coverage from their spouse.

<sup>20</sup> Inactive members are assumed to attain Medicare eligibility prior to becoming Benefit Recipients.

<sup>21</sup> Includes 2,151 benefit recipients enrolled in a “No-Part A” coverage category and 1,010 benefit recipients enrolled in pre-Medicare coverage who are assumed to ultimately enroll in “No-Part A” coverage.

<sup>22</sup> Includes retirees over age 65 who are members of a health plan but for whom no medical status code was provided.

# SUMMARY OF POSTRETIREMENT HEALTH CARE PROGRAM

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## Development of Actuarial Value of Assets

	<u>(\$ Thousands)</u>
1. Actuarial Value December 31, 2004 (old method)	\$166,619
2. Market Value December 31, 2004	\$181,559
3. Actuarial Value December 31, 2004 (new method, re-initialized to market value)	\$181,559
4. Market Value December 31, 2005	\$193,132
5. Cash Flow During 2005:	
a. Employer contributions	\$61,193
b. Employee contributions (including service purchase)	12,420
c. Benefit payments and other deductions	(77,899)
d. Expenses and fees	(1,806)
e. Transfers In / (Out)	<u>0</u>
f. Net Cash Flow	\$(6,092)
6. Expected Return on Market Value During 2005 (2) x .085 + (5f) x .0425	\$15,174
7. Actual Return on Market Value During 2005	\$17,664
8. Phase-In Amount	
– 2005 (7)-(6)	\$2,490
9. Unrecognized Amounts to be Phased-In	
– 2005 [(8) x 75%]	\$1,868
10. Actuarial Value of Assets December 31, 2005 (4)-(9)	\$191,264

## SUMMARY OF POSTRETIREMENT HEALTH CARE PROGRAM

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### Allocation of Actuarial Present Values (\$ in Thousands)

Actuarial Present Value, December 31, of (1)	Actuarial Present Value of Future Benefits (2)	Portion Covered by Future Normal Cost Contributions (3)	Actuarial Accrued Liabilities (2)-(3) (4)
Active Members	\$545,569	\$95,451	\$450,118
Benefit Recipients	659,244	0	659,244
Inactive Members	<u>7,265</u>	<u>0</u>	<u>7,265</u>
Total	\$ 1,212,078	\$95,451	\$1,116,627
Assets Used in Valuation			<u>191,264</u>
Unfunded Actuarial Accrued Liabilities			\$925,363
Ratio of Assets to Liabilities			17.1%

# SUMMARY OF POSTRETIREMENT HEALTH CARE PROGRAM

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## Changes in Unfunded Actuarial Accrued Liabilities

### During Calendar Year 2005

\$ in Millions

1. Beginning of Year:	
a) Unfunded Actuarial Accrued Liabilities (UAAL)	\$ 936.0
b) Normal Cost	21.0
c) Total Contribution required to pay Normal Cost and amortize the UAAL over 40 years	66.2
d) Actual Total Contribution (excluding service purchases)	61.2
2. End of Year:	
a) Expected UAAL, from last year's valuation: (1a) x 1.085 + (1b) x 1.0425 - (1c) x 1.0425	\$ 968.4
b) Expected UAAL based on actual contribution (1a) x 1.085 + (1b) x 1.0425 - (1d) x 1.0425	973.7
c) Increase in UAAL due to Contribution Deficiency (2b)-(2a)	5.3
3. Gains (Losses) on year's activities:	
a) From differences between assumed and actual experience on liabilities	\$ (41.8)
b) From differences between assumed and actual experience on assets	0.6
c) From service purchases	6.4
d) From change in plan assumptions	66.9
e) From change in asset method	<u>16.2</u>
f) Total (a) + (b) + (c) + (d) + (e)	\$48.3
4. Actual UAAL at end of year (2a) + (2c) - (3f)	\$925.4

## SUMMARY OF POSTRETIREMENT HEALTH CARE PROGRAM

### Gains & Losses in Actuarial Accrued Liabilities During Calendar Year 2005

<u>Type of Activity</u>	Gain (Loss) For Year	
	<u>\$ in Millions</u>	<u>% of Beginning of Year Accrued Liabilities</u>
<b>-----Decrement Risk Areas-----</b>		
<u>Service Retirements.</u> If members retire at older ages than assumed, there is a gain. If younger ages, a loss.	\$(9.9)	(0.90)%
<u>Disability Retirements.</u> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(1.0)	(0.09)%
<u>Deaths.</u> If survivor claims are less than assumed, there is a gain. If more claims, a loss. If retirees live longer than assumed, there is a loss; if they die sooner than assumed, there is a gain.	1.1	0.10%
<u>Withdrawal.</u> If more actuarial liabilities are released by terminations than assumed, there is a gain. If smaller releases, a loss.	0.5	0.05%
<u>New Entrants.</u> New members enter the plan will create a loss.	(4.7)	(0.43)%
<u>Claims Experience.</u> If actual costs for members without Medicare Part A are greater than expected, there is a loss.	(17.8)	(1.61)%
<u>Other.</u> Change in group size, participation changes, change in actuarial systems, data adjustments and miscellaneous unidentified changes in the UAAL.	(10.0)	(0.91)%
<b>-----Economic Risk Areas-----</b>		
<u>Investment Income.</u> If there is greater investment income than assumed, there is a gain. If less income, a loss.	<u>0.6</u>	<u>0.05%</u>
Experience Gain (or Loss) During Year	\$(41.2)	(3.74)%



# SUMMARY OF POSTRETIREMENT HEALTH CARE PROGRAM

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## Employer Contribution Rate

### Expressed as Percent of Active Member Payroll

<u>Contribution For</u>	<u>Contributions Expressed as Percent of Payroll</u>
Normal Cost	0.28%
Member Current Contributions	<u>0.00%</u>
Employer Normal Cost	0.28%
Employer Statutory Contribution Rate	1.02%
Percent Available to Amortize Unfunded Actuarial Accrued Liabilities (UAAL)	0.74%
Number of Years to Amortize UAAL	35
Actuarially Required Employer Contribution Rate to Pay Normal Cost and Amortize UAAL Over 40 Years	0.99%

## SUMMARY OF POSTRETIREMENT HEALTH CARE PROGRAM

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### Actuarial Present Value of Accumulated Plan Benefits

	<u>\$ in Thousands</u>
Vested Benefits	
For retired lives	\$659,244
For others	210,814
Non-vested Benefits	<u>199,457</u>
Actuarial Present Value of Accumulated Plan Benefits	\$1,069,515

The actuarial present value of accumulated plan benefits as of December 31, 2004, was \$1,071.7 million. During the year, the plan experienced a net decrease of \$2.1 million in the actuarial present value of accumulated plan benefits.

The actuarial present values presented above were determined using the following assumptions:

- a) Future salary increases were not considered.
- b) Future service was considered only to the extent that it would permit active plan participants to become eligible for benefits attributable to service rendered prior to the date of determination.
- c) Regular valuation assumptions were used as to mortality, withdrawal, retirement ages, disability and investment return.

### Active Member Counts

Vested	91,715
Non-Vested	<u>88,915</u>
Total	180,630

# SUMMARY OF POSTRETIREMENT HEALTH CARE PROGRAM

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### Schedule of Funding Progress

(in thousands)

Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Covered Payroll	UAAL/ Covered Payroll
(1)	(2)	(3)	(4)	(5)	(6)	(7)
12-31-05	\$191,264	\$1,116,627	\$925,363	17.1%	\$5,940,132	15.6%
12-31-04	\$166,619	\$1,102,597	\$935,978	15.1%	\$5,879,355	15.9%
12-31-03	\$160,416	\$897,461	\$737,045	17.9%	\$5,645,468	13.1%
12-31-02	\$161,700	\$813,211	\$651,511	19.9%	\$5,779,703	11.3%
12-31-01	\$138,198	\$782,961	\$644,763	17.7%	\$5,415,327	11.9%
12-31-00	\$116,034	\$809,709	\$693,675	14.3%	\$4,982,543	13.9%

### Schedule of Employer Contributions

<u>Fiscal Year</u>	<u>Annual Required Contribution* (ARC)</u>	<u>% ARC Contributed</u>
2005	1.13%	90%
2004	1.02%	100%
2003	1.16%	100%
2002	1.71%	100%
2001	1.48%	100%
2000	1.10%	100%

\*As a percent of covered payroll. The amortization period for 2005 is 35 years.

#### Notes to Schedules

Actuarial Method: Individual Entry Age Normal.

Actuarial Assumptions: Please see pages 25 through 33 for a description of the assumptions.

Trend Factors: There was no significant change in the population size during 2005. There were no significant plan changes since the last valuation.

No Part A liability: The subsidy for No Part A members was first reflected in the December 31, 2004 valuation.

Future HCTF purchase service cost credits: Credit for purchase of service that is transferred at retirement was first reflected in the December 31, 2004 valuation.

## SUMMARY OF POSTRETIREMENT HEALTH CARE PROGRAM

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### Subsidy Analysis

Year	Administration Expenses	Claims & HMO Premiums	Total Costs (2+3)	PERA Subsidy	
				Amount	Percentage (5 ÷ 4)
(1)	(2)	(3)	(4)	(5)	(6)
2005	\$4,725,201	\$135,549,735	\$140,274,935	\$80,001,511	57%
2004	\$4,708,737	\$130,917,403	\$135,626,140	\$79,198,231	58%
2003	\$4,872,077	\$120,813,632	\$125,685,709	\$67,275,292	54%
2002	\$4,571,820	\$113,897,967	\$118,469,787	\$62,727,337	53%
2001	\$4,564,519	\$98,907,833	\$103,472,352	\$58,476,718	57%
2000	\$3,530,456	\$73,800,252	\$77,330,708	\$47,101,648	61%
1999	\$3,317,163	\$61,661,514	\$64,978,677	\$38,532,513	59%
1998	\$3,191,006	\$59,203,630	\$62,394,636	\$37,406,245	60%
1997	\$3,153,438	\$56,497,909	\$59,651,347	\$36,532,399	61%

The table above illustrates the portion of total retiree health care costs subsidized by payments from the Health Care Trust Fund. As health care trend inflates the claims and HMO premiums shown, PERA's fixed-dollar subsidy amount declines as a percentage of total costs. This decline means that retirees pay a greater share of premium over time. The trend toward greater retiree share of premium is dampened, but not reversed, by two factors:

- As Part A hospital costs attributable to retirees without Medicare Part A coverage grow in proportion to total costs, PERA's subsidy percentage also increases.
- As the Medicare eligible portion of the total covered population increases, PERA's subsidy percentage also increases.