

**FIRE AND POLICE PENSION ASSOCIATION**  
STATEWIDE DEFINED BENEFIT PLAN  
ACTUARIAL VALUATION REPORT  
FOR THE YEAR BEGINNING JANUARY 1, 2009

June 30, 2009

Board of Directors  
Fire and Police Pension Association  
5290 DTC Parkway, #100  
Greenwood Village, Colorado 80111

**Re: Actuarial Valuation of the FPPA Statewide Defined Benefit Plan (the Plan) as of January 1, 2009**

Dear Members of the Board:

We are pleased to present our Report on the actuarial valuation of the Statewide Defined Benefit Plan for the Fire and Police Pension Association (FPPA) as of January 1, 2009.

In addition to the actuarial valuation results, various accounting and statistical tables are also included which compare the results with prior years. Census data and all other information for retirees and beneficiaries, and active and vested terminated members was provided by the Fire and Police Pension Association's staff.

We certify that the information included herein and contained in our 2009 Actuarial Valuation Report is accurate and fairly presents the actuarial position of the FPPA Statewide Defined Benefit Plan as of January 1, 2009.

Our Report presents the results of the January 1, 2009 actuarial valuation of the FPPA Statewide Defined Benefit Plan (SWDB). The Report describes the current actuarial condition of the SWDB, determines required annual employer contribution rates, and analyzes changes in these required rates. In addition, the Report provides information required in connection with Governmental Accounting Standards Board Statement No. 25 (GASB 25) and No. 27 (GASB 27), and it provides various summaries of the data.

Valuations are prepared annually, as of January 1<sup>st</sup>, the first day of the FPPA plan year.

### ***Financing Objectives***

Contribution rates are established by law that, over time, are intended to remain level as a percentage of payroll. The employer contributions, when combined with the contributions made by members, are intended to provide for the Normal Cost and to amortize the Unfunded Actuarial Accrued Liability (UAAL) over a period not to exceed 30 years.

***Progress toward Realization of Financing Objectives***

The UAAL/(surplus) and the funded ratio (ratio of the actuarial value of assets to the actuarial accrued liability) illustrate the progress toward the realization of certain financing objectives. Based on our actuarial valuation as of January 1, 2009, the Plan's surplus status has decreased over the prior year and the surplus is now (\$8) million, assuming no cost-of-living adjustment (COLA).

As listed in the Executive Summary under Section I of our Report, the normal cost rate of the Plan is 12.64% of payroll under current law as of January 1, 2009. Since the employer contribution rate plus the member contribution rate totals 16.00% of payroll, an additional amount of 3.36% of payroll is available to amortize the UAAL and provide future COLAs. However, because the Plan is currently in a surplus position under current law, contribution amounts above the normal cost are applied towards increasing this existing surplus.

The contribution rate required to fund the current law benefits (assuming no COLAs) is 12.51%. This rate is the normal cost plus the amortization of the UAAL/(surplus) over 30 years. This amortization is a credit when the Plan is in a surplus position, and, therefore, because of the surplus, the annual required contribution is less than the normal cost. This also means that the ultimate cost of the Plan is the normal cost (e.g. when no surplus exists), or 12.64% of payroll.

For the valuation as of January 1, 2009, the cost of the Plan, including a permanent 3% COLA benefit (3% COLA for all), is 20.29% of payroll. This is greater than the current combined employer/member contribution rate of 16.00%. Therefore, a Stabilization Reserve Account contribution can not be made. The recommended annual Stabilization Reserve Account contribution is 0.00% effective July 1, 2009.

***Benefit provisions***

All of the benefit provisions reflected in this valuation are those which were in effect on January 1, 2009. There were no changes adopted since the previous actuarial valuation. The benefit provisions are summarized in Appendix B of our Report.

***Assumptions and methods***

There are no changes in actuarial methods and assumptions since the prior report. The methods and assumptions have been selected by the Board of Directors of FPPA based upon the actuary's analysis and recommendations from the 2008 Experience Study. These assumptions and methods are detailed in Appendix A of our Report. The Board of Directors has sole authority to determine the actuarial assumptions used for the Plan. The assumptions that are based upon the actuary's recommendations are internally consistent and are reasonably based on the actual past experience of the Plan. These assumptions are also in full compliance with all of the parameters established by GASB No. 25 and No. 27.

The results of any actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. The actuarial calculations presented in this Report are intended to provide information for rational decision making.

***Data***

FPPA supplied data for retired, active and inactive members as of January 1, 2009. We did not audit this data, but we did apply a number of tests to the data, and we have concluded that the data is reasonable and consistent with the prior year's data. FPPA also supplied asset data as of January 1, 2009.

***Certification***


All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of Colorado state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries. Both are Members of the Society of Actuaries and meet the Qualifications Standards of the American Academy of Actuaries, and they are experienced in performing valuations for large public retirement systems.

Respectfully submitted,  
**Gabriel, Roeder, Smith & Company**



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## **SECTION I**

### **EXECUTIVE SUMMARY**

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### Executive Summary

Item	January 1, 2009	January 1, 2008
	(1)	(2)
Membership		
• Number of:		
- Active members	5,197	4,988
- Retirees and beneficiaries	353	291
- Inactive members	<u>530</u>	<u>524</u>
- Total	6,080	5,803
• Annualized payroll supplied by FPPA	\$ 322,971	\$ 298,314
Calculated contribution rates		
• Current law	12.51%	9.98%
• With one 3% Ad Hoc COLA	12.56%	10.03%
• With permanent 3% COLA	20.29%	17.53%
Assets		
• Market value	\$ 713,408	\$ 967,883
• Actuarial value	856,090	950,114
• Rate of return on market value	-29.7%	8.8%
• Rate of return on actuarial value	-13.7%	10.6%
• Contribution for prior year	\$ 52,585	\$ 72,338
• Ratio of actuarial value to market value	120.0%	98.2%
Actuarial Information		
Current Law		
• Total normal cost %	12.64%	12.63%
• Unfunded actuarial accrued liability/(surplus)	\$ (8,269)	\$ (154,614)
• Amortization rate	(0.13%)	(2.65%)
• Total required contribution %	12.51%	9.98%
• GASB funded ratio	101.0%	119.4%
With Permanent 3% COLA		
• Total normal cost %	16.49%	16.47%
• Unfunded actuarial accrued liability/(surplus)	\$ 240,109	\$ 62,147
• Amortization rate	3.80%	1.06%
• Total required contribution %	20.29%	17.53%
• GASB funded ratio	78.1%	93.9%

Note: Dollar amounts in \$000, unless otherwise noted

## Executive Summary

1. The annual required contribution rate under Current Law increased from 9.98% to 12.51% as of January 1, 2009. This is mainly due to investment losses since the prior valuation.
2. The cost of the Plan including permanent 3% COLA benefits (3% Permanent COLA) increased from 17.53% to 20.29% as of January 1, 2009. This amount is above the current combined employer and member contribution rate of 16.00%. Therefore, a Stabilization Reserve Account contribution can not be made as of July 1, 2009.
3. Granting a 3% ad hoc COLA as of October 1, 2009 would increase the annual required contribution rate from 12.51% to 12.56%.
4. Assets earned -29.7% on a market basis and -13.7% on an actuarial basis in 2008, producing an actuarial loss of \$165 million. In addition, there are \$143 million in deferred asset losses as of the valuation date.
5. The funded ratio under Current Law decreased from 119.4% to 101.0% as of January 1, 2009. The funded ratio based on a permanent 3% COLA decreased from 93.9% to 78.1% as of January 1, 2009.

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**SECTION II**  
DISCUSSION

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### Contribution Requirements

The valuation of the Fire and Police Pension Association Statewide Defined Benefit Plan (SWDB) as of January 1, 2009, reflects a combined employer and member contribution rate of 16.00%.

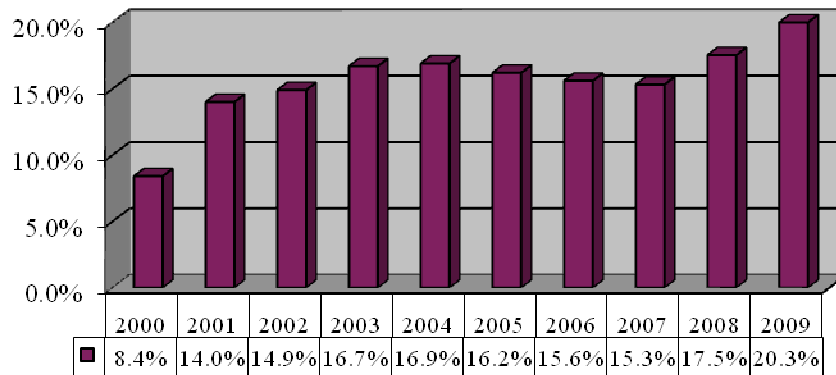
The valuation presents three sets of results:

1. The entire valuation run assuming no COLA for all benefits currently in payment status and all benefits that begin in the future (Current Law). This valuation is used for GASB reporting requirements and determines the annual required contribution rate.
2. The second valuation assumes the Board grants a one time ad hoc 3% COLA as of October 1, 2009 to all members currently in payment status. The COLAs granted each year are discretionary and require Board approval.
3. The third valuation assumes all future COLAs are granted at 3% and advance-funds for them. This valuation is used to determine the recommended annual contribution to the Stabilization Reserve Accounts (SRA). The contribution rate determined from this valuation is referred to as the cost of the Plan including permanent 3% COLA benefits.

A summary of all three valuations and the calculations to determine the annual calculated contribution rates for each is shown in Table 1 in the following Section III of our report.

The cost of the Plan including permanent 3% COLA benefits (3% COLA for all) increased from 17.53% of covered payroll to 20.29%. The following graph shows the historical costs of permanent 3% COLA benefits as a percentage of pay.

**Cost of Plan Including Permanent 3% COLA  
 as stated in the Valuation as of January 1,**



### Contribution Requirements (cont.)

Effective January 1, 2007, members currently covered under social security were transferred into the new FPPA supplemental social security program. The new plan is designed to give half the benefit when compared to the SWDB for half the cost.

The plan membership also includes a group of employers whose contribution rates differ from the main section of the populations. This valuation calculates what the contribution rate for those members needs to be for next fiscal year. The number of members in this group has increased significantly since the prior valuation.

These employers joined FPPA as a whole after the membership had matured. No prior service was granted for benefit purposes but prior service was granted for eligibility purposes. The membership does have the opportunity to purchase their prior service at an actuarial equivalent price. This group has a higher average entry age than the rest of the population and therefore a higher normal cost even though this difference has been decreasing each year (16.72% vs 16.54%). This normal cost was calculated based on permanent 3% COLA benefits. The appropriate contribution rate for this group is the 16% plus the difference in the normal cost when compared to the general population. Therefore, the cost of benefits for this group is 16.18%. Because the combined employer/member contribution rate of this group is 20%, the recommended additional SRA contribution for this group is 3.84%. This amount would be in addition to any SRA approved by the Board for all participants. This amount is necessary in order to properly reflect that the full cost of benefits for this group is not 20.00%, but 16.18%.

The following table presents the various costs for the three groups of SWDB participants:

	Ordinary Members	Members whose departments reentered
Normal Cost based on No COLA	12.67%	12.88%
Normal Cost based on 3% COLA	16.54%	16.72%
Total Contribution based on 3% COLA	16.00%	16.18%

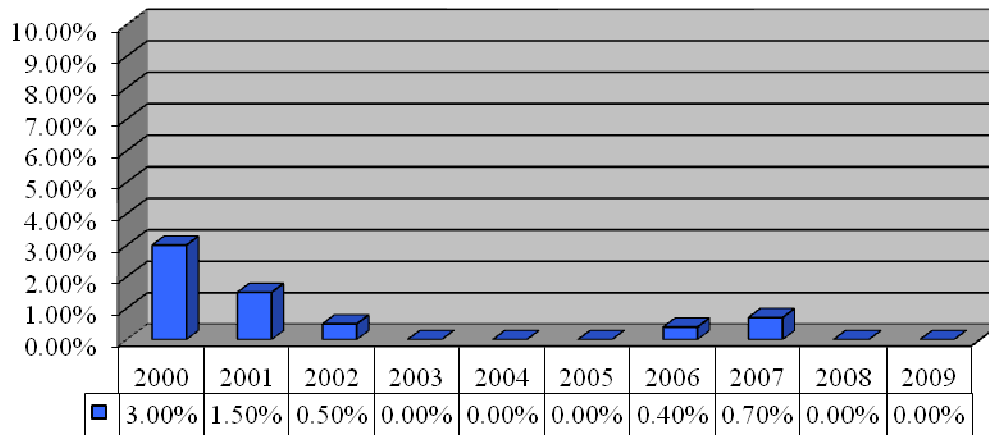
### Stabilization Reserve Account (SRA)

Annually, at the discretion of the Board of Directors, the difference between the combined member/employer contribution and the cost of the Plan including permanent 3% COLA benefits may be allocated to the stabilization reserve account (SRA). Amounts set aside in the SRA are allocated to individual accounts for each active plan member. A member may receive the amounts in the individual account only upon death or the election of normal, early, disability or vested retirement. If the cost of the defined benefit plan exceeds the combined member/employer contribution rate, funds from the SRA can be used to make up the shortfall.

For the valuation as of January 1, 2009, the cost of the Plan including permanent 3% COLA benefits (3% COLA for all) is 20.29%. This is greater than the current combined member/employer contribution rate of 16.00%. Therefore, a Stabilization Reserve Account contribution can not be made.

The following graph illustrates the SRA contribution percentages for the last ten years and the recommended percentage for 2009.

**Recommended SRA Contribution Rates**  
 as recommended in the Valuation as of January 1,

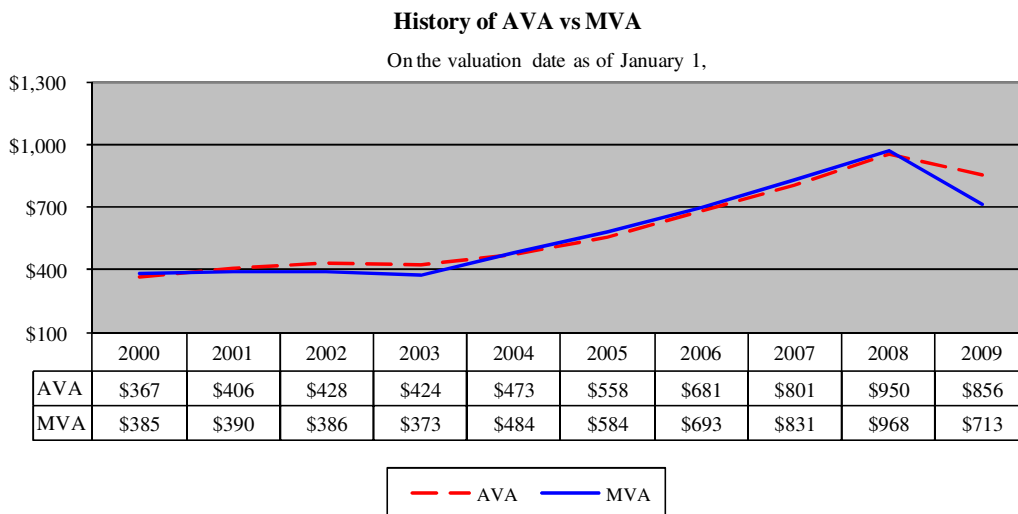


### Financial Data and Experience

This section provides an analysis of the change in Plan Net Assets during the year and an estimate of the yield on mean assets of the SWDB. FPPA provided GRS with a summary of Plan assets as of January 1, 2009. The market value of assets (MVA) reported was \$713.4 million as of January 1, 2009, as compared to \$967.9 million as of January 1, 2008. Table 7 shows data from some of the tables included in the annual financial statements of the Plan. Table 9 shows the estimated yield on a market value basis and on the actuarial asset valuation method.

The actuarial value of assets (AVA) is based on the market value of assets with a three-year phase-in of actual investment return in excess of or less than expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. Table 8 shows the development of the actuarial value of assets. The actuarial value of assets decreased from \$950.1 million to \$856.1 million since the prior valuation. This decrease was more than expected and produced a loss of approximately \$165.0 million.

The valuation assumes investment returns of 8.0% each year. As indicated by item 7b of Table 9, the estimated return on mean market value was -29.67% in 2008; lower than the 8.83% return in 2007, and lower than the 8.0% assumption. The actuarial asset value returned -13.67%, compared to 10.63% in 2007. This difference in the estimated return on market value and actuarial value illustrates the smoothing effect of the asset valuation method.



Note: FPPA adopted policy to smooth assets effective 1/1/2000.

### Member Data

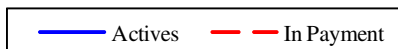
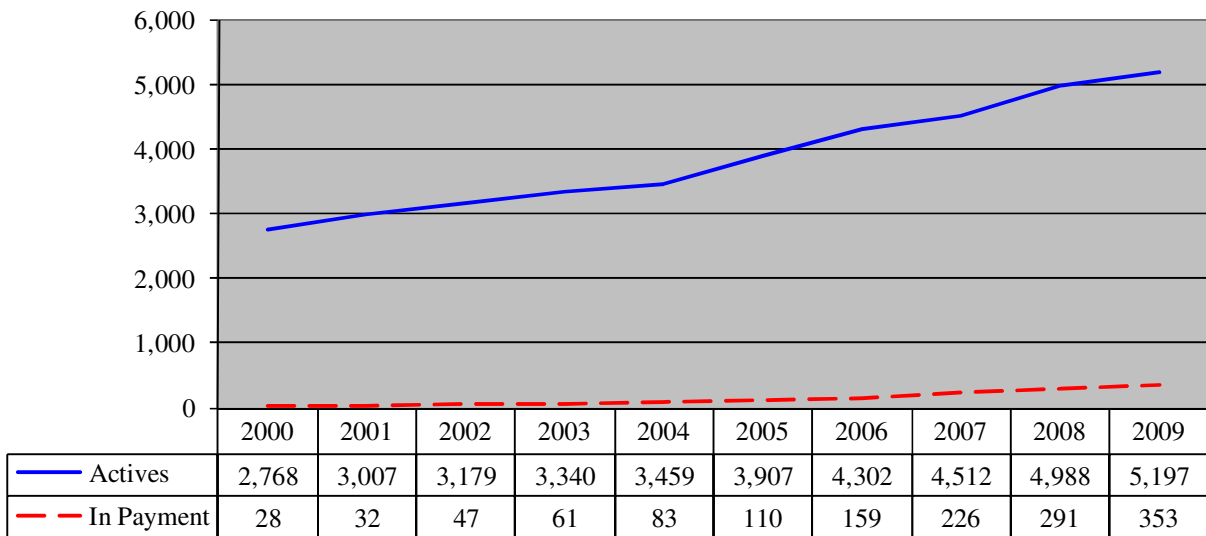
FPPA supplied member data as of January 1, 2009. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year’s data, and was reasonable overall. Information provided for active members includes: name, member ID, sex, a code indicating whether the member was active or inactive, date of birth, service, salary, accumulated member contribution, and the accumulated stabilization reserve account. For retired members, data includes: name, member ID, sex, date of birth, date of retirement, amount of benefit, a code indicating the option elected and the type of retiree (normal retiree, vested retiree, beneficiary), and if applicable, the joint pensioner’s date of birth and sex.

Table 18 shows the number of members by category (active, inactive, retired, etc.). Table 19 shows a historical summary of active member statistics, and Table 20 shows the distribution of active members by age and service.

The total payroll shown on the statistical tables is the amount that was supplied by FPPA. For the cost calculations, the pays were adjusted in accordance with the actuarial assumptions to reflect one year’s salary increase.

#### History of Counts: Active vs In Payment

On the valuation date as of January 1,



## Benefit Provisions

Appendix B in Section IV includes a summary of the benefit provisions for the SWDB. Highlights include:

- Normal Retirement
  - o Eligibility: Age 55 and 25 years of service
  - o Annual Benefit: 2% of average of the member's highest three years base salary for first 10 years of service credit and 2.5% for each year after 10.
  - o Payment Form: Benefits are paid as a monthly life annuity. Optional forms of payment are available.
- Contributions: Members of this fund and their employers are currently each contributing at the rate of 8% of base salary.
- Cost of Living Adjustments (COLA) are granted periodically at the discretion of the FPPA Board. Values throughout this report are presented three ways:
  1. Current Law: Assuming no future COLAs
  2. With 3% ad hoc COLA Granted: Assuming a one time ad hoc COLA of 3% will be granted next year
  3. With 3% COLA Granted all years: Assuming permanent 3% COLAs in each future year

There are no ancillary benefits—e.g., cost of living benefits—that are currently provided by a source independent of FPPA but that might be deemed an FPPA liability if continued beyond the availability of funding by the current funding source.

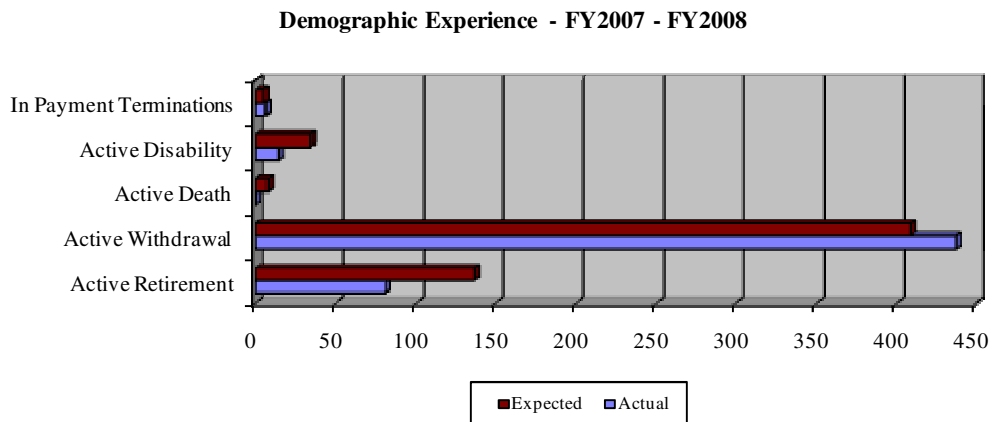
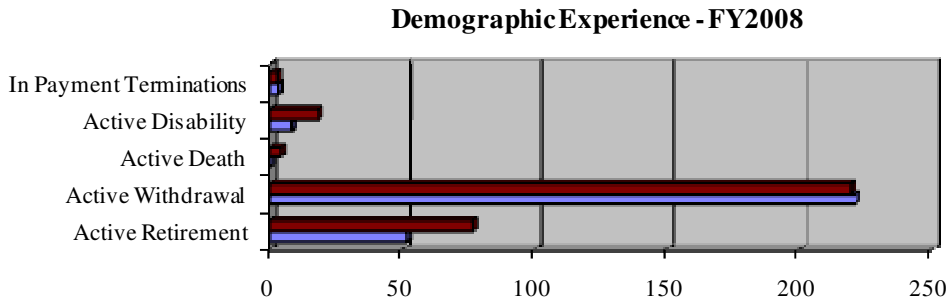
### Actuarial Methods and Assumptions

The valuation was prepared using the Entry Age Normal Method. This is the same funding method that has been used in prior years. The asset valuation method is an actuarial value based on a three-year weighted moving average of expected and actual market value of assets. See Appendix A for a complete description of this method.

The actuarial value of future benefits from the plan is based on several economic and non-economic assumptions. These are summarized in Appendix A of Section IV. The economic assumptions include investment return and salary increases. Non-economic assumptions include rates of mortality, disability, and separation. There have been no changes to the actuarial assumptions since the prior valuation.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions.

For FY2008, the actual salary increases were 98.5% of expected. The following charts provide a comparison of the actual experience versus the expected experience for selected demographic assumptions.



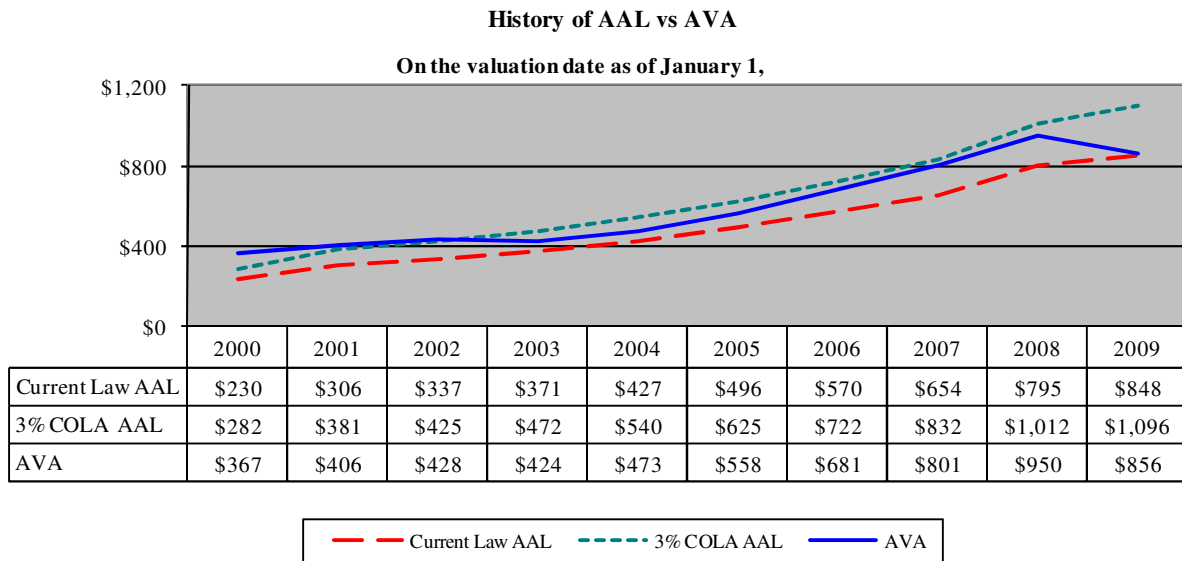
The In Payment Terminations above include deaths and benefits that were canceled for other reasons.

### GASB 25, GASB 27, and Funding Progress

Accounting requirements for FPPA are set by Governmental Accounting Standards Board Statement No. 25 (GASB 25) and No. 27 (GASB 27). Table 12 shows a historical summary of the funded ratios and other information for FPPA. Table 17 shows other information needed in connection with disclosure under GASB 25. GASB Statement No. 27 governs reporting by the employers of government-sponsored retirement plans. Table 16 shows the development of the net pension obligation.

GASB 25 requires that plans calculate an Annual Required Contribution (ARC), and, if actual contributions received are less than the ARC, this must be disclosed. The ARC is calculated in accordance with certain parameters. In particular, it includes a payment to amortize the UAAL. This amortization payment eventually will have to be computed using a funding period no greater than 30 years. Further, the amortization payment included in the ARC may be computed as a level amount, or it may be computed as an amount that increases with payroll. The payroll growth assumption may not anticipate future membership growth.

For FPPA, the employer Annual Required Contribution for 2009 is 8% of pay, estimated to be \$27,878,849 for the plan year ending December 31, 2009. (This is computed as 8% of pay times the estimated payroll of \$348,485,609).



The AAL referenced above is the actuarial accrued liability and the AVA is the actuarial value of assets.

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## **SECTION III**

### **TABLES**

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Development of Contribution Rate

	January 1, 2009			January 1, 2008		
	(1)	(2)	(3)	(4)	(5)	(6)
	Current Law	With 3% Ad Hoc COLA Granted	With Permanent 3% COLA	Current Law	With 3% Ad Hoc COLA Granted	With Permanent 3% COLA
1. Covered payroll (prior year)	\$ 322,971,268	\$ 322,971,268	\$ 322,971,268	\$ 298,313,990	\$ 298,313,990	\$ 298,313,990
2. Covered payroll adjusted for one-year's pay increase	\$ 348,485,609	\$ 348,485,609	\$ 348,485,609	\$ 322,440,891	\$ 322,440,891	\$ 322,440,891
3. Present value of future pay	\$ 3,539,446,666	\$ 3,539,446,666	\$ 3,539,446,666	\$ 3,323,962,073	\$ 3,323,962,073	\$ 3,323,962,073
4. Total normal cost rate	12.64%	12.64%	16.49%	12.63%	12.63%	16.47%
5. Actuarial accrued liability for active members						
a. Present value of future benefits for active members	\$ 1,065,738,127	\$ 1,065,738,127	\$ 1,404,896,883	\$ 973,105,854	\$ 973,105,854	\$ 1,280,709,173
b. Less: present value of future normal costs	(444,217,580)	(444,217,580)	(580,002,031)	(416,643,403)	(416,643,403)	(543,919,781)
c. Actuarial accrued liability (a - b)	\$ 621,520,547	\$ 621,520,547	\$ 824,894,852	\$ 556,462,451	\$ 556,462,451	\$ 736,789,392
6. Total actuarial accrued liability for:						
a. Retirees and beneficiaries	\$ 114,919,047	\$ 118,366,618	\$ 154,541,397	\$ 90,339,348	\$ 93,049,528	\$ 121,661,416
b. Inactive members (terminated vested and nonvested)	20,084,482	20,084,482	25,465,772	19,961,914	19,961,914	25,073,873
c. Active members (Item 5c)	621,520,547	621,520,547	824,894,852	556,462,451	556,462,451	736,789,392
d. Stabilization reserve account	91,297,046	91,297,046	91,297,046	128,736,271	128,736,271	128,736,271
e. Total	\$ 847,821,122	\$ 851,268,693	\$ 1,096,199,067	\$ 795,499,983	\$ 798,210,164	\$ 1,012,260,951
7. Actuarial value of assets	\$ 856,090,014	\$ 856,090,014	\$ 856,090,014	\$ 950,114,346	\$ 950,114,346	\$ 950,114,346
8. Unfunded actuarial accrued liability (UAAL)/(surplus) (Item 6e - Item 7)	\$ (8,268,892)	\$ (4,821,321)	\$ 240,109,053	\$ (154,614,363)	\$ (151,904,182)	\$ 62,146,605
9. Contribution requirement						
a. UAAL amortization payment as % of pay	(0.13%)	(0.08%)	3.80%	(2.65%)	(2.60%)	1.06%
b. Normal cost	12.64%	12.64%	16.49%	12.63%	12.63%	16.47%
c. Contribution requirement (a + b)	12.51%	12.56%	20.29%	9.98%	10.03%	17.53%

**Actuarial Present Value of Future Benefits**

	<u>1/1/2009</u>	<u>1/1/2008</u>
	(1)	(2)
<b>A. Current Law</b>		
1. Active members		
a. Retirement benefits	\$ 1,004,524,366	\$ 915,635,920
b. Deferred termination benefits	44,529,136	41,335,877
c. Refunds	13,574,214	13,317,948
d. Death benefits	3,110,411	2,816,109
e. Total	<u>\$ 1,065,738,127</u>	<u>\$ 973,105,854</u>
2. Members in pay status		
a. Service retirements	\$ 113,350,797	\$ 89,514,370
b. Beneficiaries	1,568,250	824,978
c. Total	<u>\$ 114,919,047</u>	<u>\$ 90,339,348</u>
4. Inactive members		
a. Vested terminations	\$ 15,482,975	\$ 14,736,887
b. Nonvested terminations	4,601,507	5,225,027
c. Total	<u>\$ 20,084,482</u>	<u>\$ 19,961,914</u>
5. Stabilization Reserve Account	\$ 91,297,046	\$ 128,736,271
6. Total actuarial present value of future benefits	\$ 1,292,038,702	\$ 1,212,143,386
<b>B. With Permanent 3% COLA</b>		
1. Active members		
a. Retirement benefits	\$ 1,327,097,325	\$ 1,207,868,232
b. Deferred termination benefits	64,231,472	59,619,240
c. Refunds	9,316,399	9,371,988
d. Death benefits	4,251,687	3,849,713
e. Total	<u>\$ 1,404,896,883</u>	<u>\$ 1,280,709,173</u>
2. Members in pay status		
a. Service retirements	\$ 152,379,518	\$ 120,536,701
b. Beneficiaries	2,161,879	1,124,715
c. Total	<u>\$ 154,541,397</u>	<u>\$ 121,661,416</u>
4. Inactive members		
a. Vested terminations	\$ 20,864,265	\$ 19,848,846
b. Nonvested terminations	4,601,507	5,225,027
c. Total	<u>\$ 25,465,772</u>	<u>\$ 25,073,873</u>
5. Stabilization Reserve Account	\$ 91,297,046	\$ 128,736,271
6. Total actuarial present value of future benefits	\$ 1,676,201,098	\$ 1,556,180,732

**Analysis of Normal Cost by Component**

	<u>1/1/2009</u>	<u>1/1/2008</u>
	(1)	(2)
A. Current Law		
1. Retirement benefits	11.04%	11.02%
2. Deferred termination benefits	0.88%	0.89%
3. Refunds	0.69%	0.69%
4. Death benefits	0.03%	0.03%
5. Total normal cost	<u>12.64%</u>	<u>12.63%</u>
B. With Permanent 3% COLA		
1. Retirement benefits	14.57%	14.54%
2. Deferred termination benefits	1.32%	1.33%
3. Refunds	0.56%	0.56%
4. Death benefits	0.04%	0.04%
5. Total normal cost	<u>16.49%</u>	<u>16.47%</u>

Actuarial Gain/(Loss) on UAAL

	1/1/2009	1/1/2008
	(1)	(2)
A. Current Law		
1. Unfunded actuarial accrued liability (UAAL) as of January 1 of prior year *	\$(154,614,363)	\$ (104,537,761)
2. Total normal cost for year (Normal Cost % x actual payroll paid during year)	40,900,539	37,238,552
3. Non service purchase contributions during year ending December 31	(50,198,470)	(46,409,614)
4. Interest on UAAL for one year	(12,369,149)	(8,363,021)
5. Interest on Item 2 and Item 3 for one-half year	<u>(364,762)</u>	<u>(359,785)</u>
6. Expected UAAL as of January 1 (1 + 2 + 3 + 4 + 5)	\$(176,646,205)	\$ (122,431,629)
7. Actual UAAL at end of year	\$ (8,268,892)	\$ (154,614,363)
8. Actuarial gain/(loss) for the period (6 - 7)	\$(168,377,313)	\$ 32,182,734
<u>SOURCE OF GAINS/(LOSSES)</u>		
9. Asset gain/(loss) (See Table 10)	\$(165,054,799)	\$ 21,025,238
10. Salary liability gain/(loss) for the period	\$ (1,386,472)	\$ 11,534,791
11. Cola Granted as of October 1, 2008 (2.9%)	\$ (2,619,841)	\$ (2,009,672)
12. Net liability gain/(loss) for the period (8 - 9 - 10 - 11)	\$ 683,800	\$ 1,632,377
B. With Permanent 3% COLA		
1. Unfunded actuarial accrued liability (UAAL) as of January 1 of prior year *	\$ 62,146,605	\$ 85,959,567
2. Total normal cost for year (Normal Cost % x actual payroll paid during year)	53,356,746	48,669,650
3. Non service purchase contributions during year ending December 31	(50,198,470)	(46,409,614)
4. Interest on UAAL for one year	4,971,728	6,876,765
5. Interest on Item 2 and Item 3 for one-half year	<u>123,901</u>	<u>88,662</u>
6. Expected UAAL as of January 1 (1 + 2 + 3 + 4 + 5)	\$ 70,400,510	\$ 95,185,031
7. Actual UAAL at end of year	\$ 240,109,053	\$ 62,146,605
8. Actuarial gain/(loss) for the period (6 - 7)	\$(169,708,543)	\$ 33,038,426
<u>SOURCE OF GAINS/(LOSSES)</u>		
9. Asset gain/(loss) (See Table 10)	\$(165,054,799)	\$ 21,025,238
10. Salary liability gain/(loss) for the period	\$ (1,786,344)	\$ 15,287,441
11. Net liability gain/(loss) for the period (8 - 9 - 10)	\$ (2,867,400)	\$ (3,274,253)

\* Beginning of Year 2008 numbers reflect the assumption changes from the 2008 Experience Study

### Analysis of Change in Calculated Contribution Rate

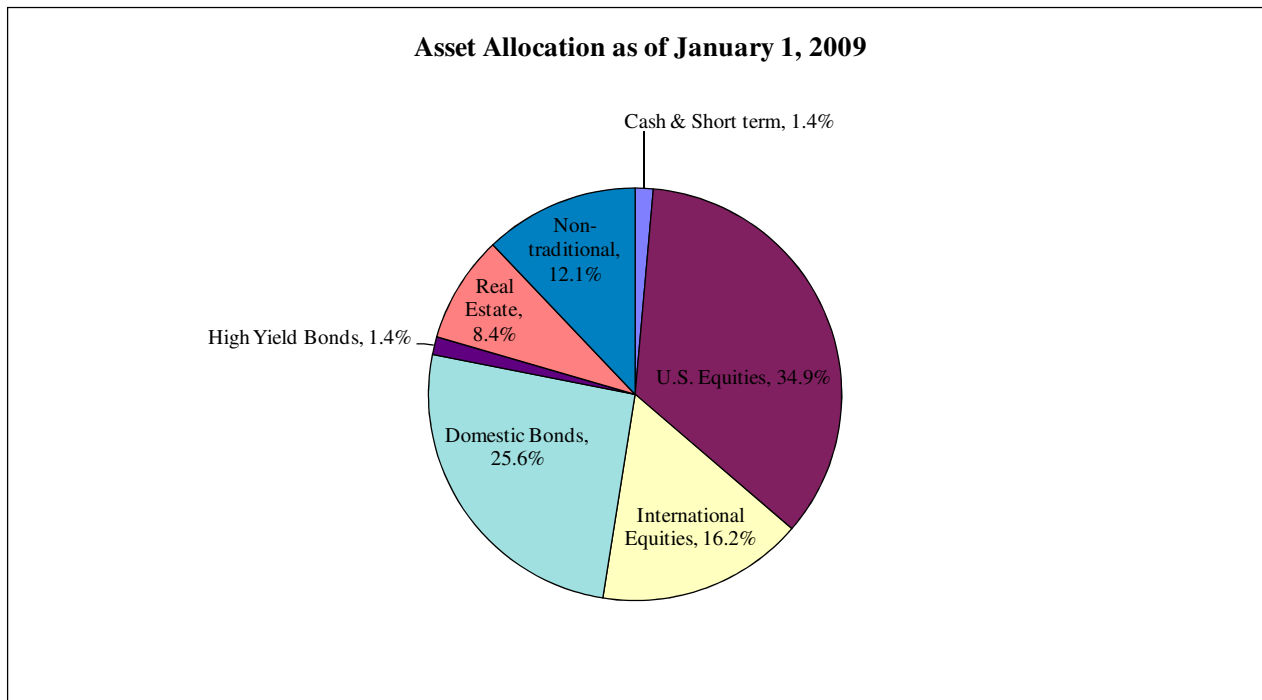
	<u>1/1/2009</u>	<u>1/1/2008</u>
A. Current Law		
1. Recommended contribution rate as of last valuation	9.98%	8.29%
2. Change in contribution rate during year		
a. Change in normal cost	0.01%	(0.14%)
b. Change in assumptions	0.00%	2.40%
c. Change in benefit provisions	0.00%	0.00%
d. Impact of contributing less/(more) than calculated rate	(0.33%)	(0.40%)
e. Recognition of prior asset losses (gains)	(0.26%)	(0.14%)
f. Actuarial (gain) loss from current year asset performance	3.02%	(0.28%)
g. Effect of payroll growth	0.01%	0.33%
h. COLA granted October 1, 2008	0.05%	0.04%
i. Resetting Funding Period to 30 Years	0.00%	0.05%
j. Actuarial (gain) loss from other liability sources	0.03%	(0.17%)
k. Total change	<u>2.53%</u>	<u>1.69%</u>
3. Recommended contribution rate as of this valuation	12.51%	9.98%
B. With Permanent 3% COLA		
1. Recommended contribution rate as of last valuation	17.53%	15.32%
2. Change in contribution rate during year		
a. Change in normal cost	0.02%	(0.22%)
b. Change in assumptions	0.00%	3.03%
c. Change in benefit provisions	0.00%	0.00%
d. Impact of contributing less/(more) than calculated rate	0.09%	0.31%
e. Recognition of prior asset losses (gains)	(0.31%)	(0.15%)
f. Actuarial (gain) loss from current year asset performance	3.02%	(0.27%)
g. Effect of payroll growth	(0.14%)	(0.18%)
h. Resetting Funding Period to 30 Years	(0.08%)	(0.02%)
i. Actuarial (gain) loss from other liability sources	0.16%	(0.29%)
j. Total change	<u>2.76%</u>	<u>2.21%</u>
3. Recommended contribution rate as of this valuation	20.29%	17.53%

**Summary of Historical Valuation Results  
As of the Valuation Date January 1,**

	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>
1. Number of Members										
a. Active	5,197	4,988	4,512	4,302	3,907	3,459	3,340	3,179	3,007	2,768
b. Retired/DROP/Beneficiaries	353	291	226	159	110	83	61	47	32	28
c. Inactive members	<u>530</u>	<u>524</u>	<u>282</u>	<u>274</u>	<u>237</u>	<u>126</u>	<u>108</u>	<u>104</u>	<u>88</u>	<u>76</u>
d. Total	6,080	5,803	5,020	4,735	4,254	3,668	3,509	3,330	3,127	2,872
2. Covered payroll (prior year)	\$ 322,971	\$ 298,314	\$ 264,560	\$ 239,643	\$ 209,765	\$ 182,826	\$ 166,735	\$ 151,370	\$ 136,306	\$ 114,579
3. Average Compensation	\$ 62.1	\$ 59.8	\$ 58.6	\$ 55.7	\$ 53.7	\$ 52.9	\$ 49.9	\$ 47.6	\$ 45.3	\$ 41.4
4. Covered payroll adjusted for one-year's pay increase	\$ 348,486	\$ 322,441	\$ 283,518	\$ 257,072	\$ 224,988	\$ 189,359	\$ 172,626	\$ 156,809	\$ 141,154	\$ 125,090
5. Actuarial Value of Assets	\$ 856,090	\$ 950,114	\$ 801,427	\$ 681,193	\$ 557,950	\$ 473,007	\$ 424,089	\$ 428,389	\$ 405,599	\$ 367,004
6. Market Value of Assets	\$ 713,408	\$ 967,883	\$ 831,477	\$ 692,649	\$ 583,615	\$ 483,967	\$ 373,284	\$ 385,670	\$ 390,254	\$ 385,165
With Permanent 3% COLA										
7. Present Value of Benefits										
a. Retired/Beneficiaries	\$ 154,541	\$ 121,661	\$ 90,383	\$ 57,833	\$ 35,286	\$ 24,101	\$ 15,249	\$ 10,462	\$ 4,737	\$ 4,024
b. Terminations	25,466	25,074	20,375	19,897	18,091	14,052	11,350	10,831	7,429	6,239
c. Actives	1,404,897	1,280,709	969,178	874,063	765,316	658,996	610,906	543,984	485,689	339,697
d. Reserve Account	<u>91,297</u>	<u>128,736</u>	<u>120,394</u>	<u>108,484</u>	<u>101,664</u>	<u>87,469</u>	<u>73,374</u>	<u>80,173</u>	<u>83,771</u>	<u>78,982</u>
Total	\$ 1,676,201	\$ 1,556,181	\$ 1,200,330	\$ 1,060,277	\$ 920,357	\$ 784,619	\$ 710,878	\$ 645,450	\$ 581,627	\$ 428,942
8. Total Contribution										
a. Amount	\$ 70,703	\$ 56,526	\$ 43,431	\$ 40,117	\$ 36,459	\$ 31,928	\$ 28,855	\$ 23,305	\$ 19,728	\$ 10,455
b. Percent of Pay	20.29%	17.53%	15.32%	15.61%	16.20%	16.86%	16.72%	14.86%	13.98%	8.36%
c. SRA Allocation	0.0%	0.0%	0.7%	0.4%	0.0%	0.0%	0.0%	0.5%	1.5%	3.0%
8. Net Pension Obligation \$ amounts in '000s	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

**Allocation of Plan Assets  
 at Market Fair Value**

	<u>January 1, 2009</u>	<u>January 1, 2008</u>	<u>Target Allocation</u>
	(1)	(2)	(3)
1. Cash & Short term	1.4%	1.0%	1.0%
2. U.S. Equities	34.9%	38.7%	38.0%
3. International Equities	16.2%	20.3%	20.0%
4. Domestic Bonds	25.6%	26.5%	24.7%
5. High Yield Bonds	1.4%	0.0%	1.3%
6. Real Estate	8.4%	5.5%	6.0%
7. Non-traditional	<u>12.1%</u>	<u>8.0%</u>	<u>9.0%</u>
8. Total	100.0%	100.0%	100.0%



**Reconciliation of Plan Net Assets**

	Year Ending	
	December 31, 2008 (1)	December 31, 2007 (2)
1. Market value of assets at beginning of year	\$ 967,883,077	\$ 831,477,157
2. Revenue for the year		
a. Contributions	\$ 52,585,187	\$ 72,338,431
b. Net investment income		
i. Interest	\$ (7,089,413)	\$ 10,612,267
ii. Dividends	15,503,682	27,318,225
iii. Real estate	203,725	2,149,642
iv. Net change in accrued income	1,698,609	(255,423)
v. Unrealized gain/(loss)	(257,416,367)	(4,510,299)
vi. Realized gain/(loss)	(36,296,571)	47,508,577
vii. Deferred contribution earnings	324,189	(134,608)
viii. Fees and expenses	(7,118,274)	(6,376,484)
ix. Other income	(2,723,112)	(233,914)
c. Total revenue	\$ (240,328,345)	\$ 148,416,415
3. Expenditures for the year		
a. Refunds	\$ (3,621,108)	\$ (4,697,895)
b. Benefit payments	(10,525,279)	(7,261,454)
c. Identified Receipts	0	(51,147)
d. Total expenditures	\$ (14,146,387)	\$ (12,010,496)
4. Increase in net assets (Item 2c + Item 3d)	\$ (254,474,732)	\$ 136,405,920
5. Market value of assets at end of year (Item 1 + Item 4)	\$ 713,408,345	\$ 967,883,077

**Development of Actuarial Value of Assets**

	<u>2009</u> (1)	<u>2008</u> (2)
1. Market value as of January 1	\$ 967,883,077	\$ 831,477,157
a. Contributions	\$ 52,585,187	\$ 72,338,431
b. Identified receipts	0	(51,147)
c. Benefits paid	(10,525,279)	(7,261,454)
d. Refunds	(3,621,108)	(4,697,895)
e. Net cash flow	<u>38,438,800</u>	<u>60,327,935</u>
2. Expected market value of assets as of December 31	\$ 1,085,290,075	\$ 960,736,382
3. Actual market value of assets as of December 31	\$ 713,408,345	\$ 967,883,077
4. Excess earnings/(shortfall)	\$ (371,881,730)	\$ 7,146,695
5. Gain/(loss) on SRA assets	<u>(44,925,453)</u>	<u>853,483</u>
6. Net asset gain/(loss) (Item 4 - Item 5)	\$ (326,956,277)	\$ 6,293,212
7. Excess earnings/(shortfall) recognized (1/3 x Item 6)	\$ (108,985,426)	\$ 2,097,737
8. a. Deferred excess earnings/(shortfall) for prior year	\$ (217,970,852)	\$ 4,195,474
b. Deferred excess earnings/(shortfall) for prior year - 1	2,097,737	13,147,796
c. Total deferred excess earnings/(shortfall) at December 31	<u>(215,873,115)</u>	<u>\$ 17,768,731</u>
9. Preliminary actuarial value of assets as of December 31 (Item 3 - Item 8c)	\$ 929,281,460	\$ 950,114,346
10. a. 80% of market value of assets	\$ 570,726,676	\$ 774,306,461
b. 120% of market value of assets	856,090,014	1,161,459,692
11. Final actuarial value of assets as of December 31 (Item 9 limited by Item 10)	\$ 856,090,014	\$ 950,114,346

**Investment Yields**

Item (1)	Market Value (2)	Actuarial Value (3)
1. Assets as of January 1, 2008 (A)	\$ 967,883,077	\$ 950,114,346
2. Contributions during FY08	52,585,187	52,585,187
3. Benefit payments made during FY08	(10,525,279)	(10,525,279)
4. Refunds of contributions during FY08	(3,621,108)	(3,621,108)
5. Investment return during FY08	<u>(292,913,532)</u>	<u>(132,463,132)</u>
6. Assets as of January 1, 2009 (B): (1 + 2 + 3 + 4 + 5)	713,408,345	856,090,014
7. Approximate rate of return on average invested assets		
a. Net investment income (I)	(292,913,532)	(132,463,132)
b. Estimated return based on $(2I / (A + B - I))$	-29.67%	-13.67%

**Gain/(Loss) on Actuarial Value of Assets**

Item (1)	Valuation as of 1/1/2009 (2)	Valuation as of 1/1/2008 (3)
1. Actuarial assets, prior valuation	\$ 950,114,346	\$ 801,426,848
2. Total contributions since prior valuation	\$ 52,585,187	\$ 72,338,431
3. Benefits and refunds since prior valuation	\$ (14,146,387)	\$ (12,010,496)
4. Assumed net investment income at 8.0%		
a. Beginning assets	\$ 76,009,148	\$ 64,114,148
b. Contributions	2,062,942	2,837,872
c. Benefits and refunds paid	(554,970)	(471,178)
d. Total	\$ 77,517,120	\$ 66,480,842
5. Expected actuarial assets (1 + 2 + 3 + 4)	\$ 1,066,070,266	\$ 928,235,625
6. Actual actuarial assets, this valuation	\$ 856,090,014	\$ 950,114,346
7. Preliminary asset gain/(loss) (6 - 5)	\$ (209,980,252)	\$ 21,878,721
8. Excess return on SRA	\$ (44,925,453)	\$ 853,483
9. Net asset gain (loss) since prior valuation (7 - 8)	\$ (165,054,799)	\$ 21,025,238

Loss

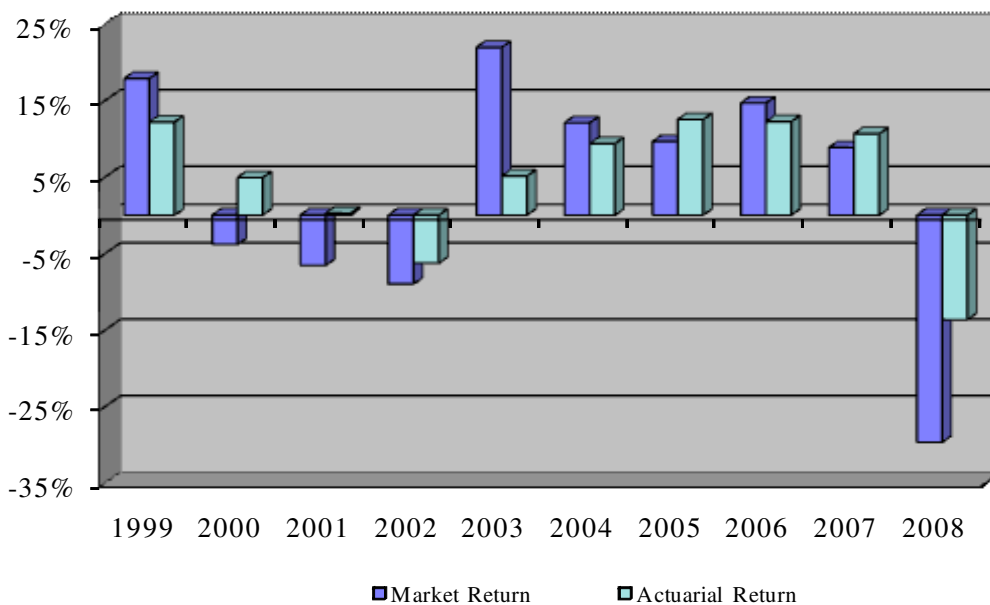
Gain

### History of Investment Return Rates

For Fiscal Year Ending	Market Value	Actuarial Value
(1)	(2)	(3)
December 31, 1999	17.85%	12.16%
December 31, 2000	(3.82%)	4.88%
December 31, 2001	(6.58%)	0.24%
December 31, 2002	(8.99%)	(6.28%)
December 31, 2003	21.92%	5.10%
December 31, 2004	12.06%	9.34%
December 31, 2005	9.62%	12.49%
December 31, 2006	14.63%	12.20%
December 31, 2007	8.82%	10.62%
December 31, 2008	(29.67%)	(13.67%)
Average Returns:		
Last 5 Years	1.51%	5.68%
Last 10 Years	2.39%	4.35%

\* Actuarial value of assets equaled the market value of assets

### History of Asset Returns



**Schedule of Funding Progress (Based on Current Law – 0% COLA)  
 (As required by GASB #25)**

Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL) (3) - (2)	Funded Ratio (2)/(3)	Annual Payroll	UAAL as % of Payroll (4)/(6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
January 1, 2000	\$ 367,003,914	\$ 230,422,395	\$ (136,581,519)	159.3%	\$ 125,090,112	(109.2%)
January 1, 2001	405,598,652	305,500,209	(100,098,443)	132.8%	141,154,007	(70.9%)
January 1, 2002	428,388,591	337,391,594	(90,996,997)	127.0%	156,808,953	(58.0%)
January 1, 2003	424,088,589	371,056,405	(53,032,184)	114.3%	172,625,858	(30.7%)
January 1, 2004	473,006,658	426,673,675	(46,332,983)	110.9%	189,359,234	(24.5%)
January 1, 2005	557,949,693	495,915,617	(62,034,076)	112.5%	217,752,582	(28.5%)
January 1, 2006	681,193,087	569,819,934	(111,373,153)	119.5%	246,693,626	(45.1%)
January 1, 2007	801,426,848	654,097,657	(147,329,192)	122.5%	271,906,902	(54.2%)
January 1, 2008	950,114,346	795,499,983	(154,614,363)	119.4%	312,857,166	(49.4%)
January 1, 2009	856,090,014	847,821,122	(8,268,892)	101.0%	337,918,774	(2.4%)

### History of Employer Contributions

<u>Valuation Date</u>	<u>Annual Required Contribution Rate</u>	<u>Actual Contribution Rate</u>	<u>Percent</u>
(1)	(2)	(3)	(4)
January 1, 2000	8.00%	8.00%	100%
January 1, 2001	8.00%	8.00%	100%
January 1, 2002	8.00%	8.00%	100%
January 1, 2003	8.00%	8.00%	100%
January 1, 2004	8.00%	8.00%	100%
January 1, 2005	8.00%	8.00%	100%
January 1, 2006	8.00%	8.00%	100%
January 1, 2007	8.00%	8.00%	100%
January 1, 2008	8.00%	8.00%	100%
January 1, 2009	8.00%	8.00%	100%

**Solvency Test (Based on Current Law – 0% COLA)**

Valuation Date	Aggregated Accrued Liabilities for				Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Assets		
	Active Members Contributions	Retirees Beneficiaries and Vested Terminations	Members (Employer Financed Portion)			(5)/(2)	[(5)-(2)]/(3)	
							(7)	(8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
January 1, 2000	\$ 66,204	\$ 7,716	\$ 156,503	\$ 367,004	100.0%	100.0%	100.0%	
January 1, 2001	75,909	9,134	220,457	405,599	100.0%	100.0%	100.0%	
January 1, 2002	85,368	15,946	236,078	428,389	100.0%	100.0%	100.0%	
January 1, 2003	95,830	19,925	255,301	424,089	100.0%	100.0%	100.0%	
January 1, 2004	106,332	28,578	291,764	473,007	100.0%	100.0%	100.0%	
January 1, 2005	130,910	40,029	324,977	557,950	100.0%	100.0%	100.0%	
January 1, 2006	161,665	57,780	350,375	681,193	100.0%	100.0%	100.0%	
January 1, 2007	177,180	82,227	394,691	801,427	100.0%	100.0%	100.0%	
January 1, 2008	211,285	110,301	473,914	950,114	100.0%	100.0%	100.0%	
January 1, 2009	232,742	135,004	480,075	856,090	100.0%	100.0%	100.0%	

**Cash Flow Analysis**

Year Ending December 31, (1)	Contributions for the Year (2)	Expenditures During the Year					External Cash Flow for the Year (8)	Market Value of Assets (9)	External Cash Flow as Percent of Market Value (10)
		Benefit Payments (3)	Refund of Contributions (4)	Identified Receipts (5)	Expenses (6)	Total (7)			
2000	\$ 22,182	\$ (345)	\$ (1,301)	\$ (362)	\$ (1,666)	\$ (3,673)	\$ 18,509	\$ 390,254	4.7%
2001	24,378	(565)	(1,838)	(167)	(1,507)	(4,076)	20,302	385,670	5.3%
2002	26,080	(865)	(1,720)	(170)	(1,730)	(4,484)	21,596	373,284	5.8%
2003	29,729	(1,304)	(1,862)	(117)	(1,896)	(5,180)	24,548	483,967	5.1%
2004	42,708	(2,005)	(1,694)	(83)	(2,113)	(5,895)	36,813	583,615	6.3%
2005	56,453	(3,129)	(2,889)	-	(4,152)	(10,171)	46,282	692,649	6.7%
2006	44,137	(5,114)	(4,061)	0	(5,089)	(14,264)	29,873	831,477	3.6%
2007	72,338	(7,261)	(4,698)	(51)	(6,428)	(18,438)	53,900	967,883	5.6%
2008	52,585	(10,525)	(3,621)	0	(7,118)	(21,265)	31,321	713,408	4.4%
2009*	55,758	(12,671)	(2,806)	0	(7,421)	(22,898)	32,860	804,655	4.1%
2010*	58,127	(16,910)	(2,926)	0	(7,736)	(27,572)	30,556	900,805	3.4%
2011*	60,598	(21,357)	(3,050)	0	(8,065)	(32,472)	28,126	1,002,121	2.8%

\* Results for 2009, 2010, & 2011 are based on expected contributions, expected benefit payments, and assumed investment return of 8%  
 Expected contributions are based on combined employee and employer rate of 16% and 4.25% annual payroll growth  
 Expected benefit payments are based on no COLA and expected retirements, terminations, and mortality  
 Assets are assumed to increase at the annual return of 8% with all cash flow occurring in the middle of the year

\$ amounts in '000s

**Annual Required Contribution  
GASB #27**

<b>Estimated Employer Annual Required Contribution (ARC)</b> (8% of projected payroll)	\$ 27,878,849
<b>Net Pension Obligation</b>	
1. Net Pension Obligation as of January 1, 2009	\$ 0
2. Estimated Employer Annual Required Contribution (8% x pay)	27,878,849
3. Estimated Employer Contribution for 2009 plan year (8% x pay)	<u>27,878,849</u>
4. Estimated Net Pension Obligation as of December 31, 2009	\$ 0

**Notes to Required Supplementary Information**  
**(As required by GASB #25)**

Valuation Date	January 1, 2009
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	3-Yr Smoothed Fair Market Value
Actuarial assumptions:	
Investment rate of return *	8.00%
Projected salary increase *	4.75% - 16.75%
* Includes inflation at:	3.50%
Cost of living adjustment	0.00%

**Membership Data**

	<u>January 1, 2009</u>	<u>January 1, 2008</u>	<u>January 1, 2007</u>
	(1)	(2)	(3)
1. Active members			
a. Number	5,197	4,988	4,512
b. Total payroll	\$ 322,971,268	\$ 298,313,990	\$ 264,560,282
c. Average annual salary	62,146	59,806	58,635
d. Average age	39.6	39.3	39.3
e. Average service	9.5	9.2	9.2
2. Inactive members			
a. Vested	166	154	159
b. NonVested *	364	370	123
3. Service retirees			
a. Number	344	282	219
b. Total annual benefits	\$ 10,461,685	\$ 8,220,723	\$ 6,066,966
c. Average annual benefit	30,412	29,151	27,703
d. Average age	59.8	59.4	59.3
4. Beneficiaries and spouses			
a. Number	9	9	7
b. Total annual benefits	\$ 139,803	\$ 81,161	\$ 62,540
c. Average annual benefit	15,534	9,018	8,934
d. Average age	57.7	57.5	60.6

\* Includes members who have terminated and could elect a deferred benefit, but have not yet been processed

**Historical Summary of Active Member Data**

<u>Valuation Date</u>	<u>Active Count</u>	<u>Average Age</u>	<u>Average Svc</u>	<u>Covered Payroll</u>	<u>Average Annual Salary</u>	<u>Percent Change in Average Salary</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1999	2,513	37.4	8.5	\$ 102,400,344	\$ 40,748	3.69%
2000	2,768	37.5	8.6	114,579,015	41,394	1.59%
2001	3,007	37.7	8.6	136,306,027	45,330	9.51%
2002	3,179	38.0	8.8	151,369,850	47,616	5.04%
2003	3,340	38.4	9.1	166,734,883	49,921	4.84%
2004	3,459	38.9	9.4	182,825,786	52,855	5.88%
2005	3,907	39.0	9.1	209,765,329	53,690	1.58%
2006	4,302	39.1	9.1	239,642,543	55,705	3.75%
2007	4,512	39.3	9.2	264,560,282	58,635	5.26%
2008	4,988	39.3	9.2	298,313,990	59,806	2.00%
2009	5,197	39.6	9.5	322,971,268	62,146	3.91%

**Distribution of Active Members by Age and by Years of Service  
 As of December 31, 2008**

Attained Age	Years of Credited Service												Total Count & Avg. Comp.	
	Less than 1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Over		
	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.	Count & Avg. Comp.		
Under 25	56	44	20	9	1									130
		\$40,274	\$49,856	\$43,521	\$64,129									\$41,579
25-29	153	135	126	98	77	69	1							659
	\$40,988	\$41,852	\$47,240	\$52,106	\$58,106	\$61,430	\$68,374							\$48,196
30-34	90	97	97	103	105	328	43							863
	\$41,854	\$44,547	\$47,905	\$53,351	\$58,899	\$63,336	\$69,396							\$55,820
35-39	62	74	79	86	86	390	288	40						1,105
	\$41,822	\$43,827	\$49,892	\$53,873	\$59,890	\$63,589	\$71,609	\$75,933						\$61,558
40-44	35	51	46	52	58	222	217	186	20					887
	\$42,997	\$46,033	\$51,046	\$54,812	\$57,735	\$65,196	\$71,741	\$76,898	\$80,818					\$65,795
45-49	22	19	17	22	22	103	124	167	157	30	1			684
	\$41,176	\$46,984	\$51,930	\$54,420	\$60,857	\$65,165	\$70,045	\$76,080	\$79,615	\$81,203	\$82,485			\$70,670
50-54	11	12	14	14	9	54	51	94	120	178	16			573
	\$42,564	\$52,488	\$53,117	\$58,108	\$65,723	\$64,727	\$67,328	\$74,179	\$75,781	\$79,496	\$76,755			\$72,636
55-59	4	5	5	10	4	31	18	42	45	65	10			239
	\$49,532	\$49,163	\$60,517	\$56,390	\$63,498	\$70,897	\$70,517	\$71,961	\$74,381	\$77,706	\$74,398			\$71,949
60-64	2	2	3	2	5	9	5	9	3	7	1	1		49
	\$38,319	\$50,369	\$64,126	\$63,078	\$90,643	\$69,331	\$70,604	\$83,330	\$61,053	\$76,365	\$70,897	\$77,017		\$72,280
65 & Over	1	2					2	1	1	1				8
	145,609	32,814					\$78,205	45,100	73,989	67,367				\$69,263
Total	436	441	407	396	367	1,206	749	539	346	281	28	1		5,197
	\$41,538	\$43,693	\$49,157	\$53,478	\$59,563	\$64,109	\$70,950	\$75,762	\$77,497	\$79,143	\$75,909	\$77,017		\$62,146

Average: Age: 39.6  
 Service: 9.5

Number of participants:

Males: 4,720  
 Females: 477

**Schedule of Retirants & Annuitants Added to & Removed from Rolls**

Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		% Increase in Annual Benefits	Average Annual Benefits
	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
December 31, 1999	4	\$ 56,252	1	\$ 6,592	28	\$ 311,906	23.19%	\$ 11,140
December 31, 2000	5	50,774	1	15,482	32	353,534	13.35%	11,048
December 31, 2001	16	374,072	1	3,697	47	735,257	107.97%	15,644
December 31, 2002	14	301,795	0	0	61	1,054,842	43.47%	17,292
December 31, 2003	24	606,147	2	21,898	83	1,648,771	56.31%	19,865
December 31, 2004	27	825,955	0	0	110	2,506,161	52.00%	22,783
December 31, 2005	51	1,458,446	2	22,713	159	3,941,893	57.29%	24,792
December 31, 2006	69	2,284,964	2	97,352	226	6,129,506	55.50%	27,122
December 31, 2007	66	2,201,387	1	29,009	291	8,301,884	35.44%	28,529
December 31, 2008	65	2,375,478	3	75,874	353	10,601,488	27.70%	30,033

Includes beneficiaries of deceased members with a deferred benefit.

**Summary of Members and Adjusted Payroll by Employer**

City Code	City Name	Police		Fire		Total	
		No.	Earnings	No.	Earnings	No.	Earnings
501	ARVADA FPD	0	\$ 0	96	\$ 6,271,465	96	\$ 6,271,465
9	AULT	5	183,531	0	0	5	183,531
12	BASALT	9	525,527	0	0	9	525,527
719	BASALT & RURAL FPD	0	0	5	255,719	5	255,719
13	BAYFIELD	3	124,489	0	0	3	124,489
718	BENNETT FPD #7	0	0	5	193,629	5	193,629
503	BERTHOUD FPD	0	0	16	801,655	16	801,655
7331	BIG SANDY FPD	0	0	1	32,727	1	32,727
580	BLACK FOREST RESCUE	0	0	10	407,211	10	407,211
723	BLACK HAWK	0	0	18	1,289,289	18	1,289,289
18	BLANCA	1	29,096	0	0	1	29,096
726	BOULDER MOUNTAIN AUTH	0	0	3	141,775	3	141,775
730	BOULDER RURAL FPD	0	0	13	745,627	13	745,627
326	BRIGHTON	48	2,667,393	0	0	48	2,667,393
26	BRIGHTON (GREATER) FPD	0	0	52	2,779,389	52	2,779,389
28	BRUSH	11	404,686	0	0	11	404,686
7247	BURNING MOUNTAINS FPD ADMIN	0	0	3	181,391	3	181,391
33	CANON CITY	18	793,542	0	0	18	793,542
740	CARBONDALE AND RURAL FPD ADM	0	0	16	850,638	16	850,638
35	CASTLE ROCK	0	0	67	4,287,534	67	4,287,534
37	CENTER	5	139,480	0	0	5	139,480
749	CHAFFEE COUNTY FPD	0	0	1	34,381	1	34,381
754	CIMARRON HILLS FPD	0	0	13	518,200	13	518,200
7125	CLEAR CREEK AUTHORITY	0	0	1	51,494	1	51,494
509	CLIFTON FPD ADMIN	0	0	12	687,824	12	687,824
44	COLLBRAN MARSHALS	1	37,056	0	0	1	37,056
45	COLORADO SPRINGS	88	4,789,347	95	6,011,636	183	10,800,983
46	COLUMBINE VALLEY	6	297,164	0	0	6	297,164
764	COPPER MOUNTAIN	0	0	15	670,836	15	670,836
774	CRIPPLE CREEK	0	0	13	473,494	13	473,494
506	CUNNINGHAM FPD	0	0	76	5,149,703	76	5,149,703
57	DACONO	9	427,052	0	0	9	427,052

City Code	City Name	Police		Fire		Total	
		No.	Earnings	No.	Earnings	No.	Earnings
58	DEBEQUE	3	\$ 125,648	0	\$ 0	3	\$ 125,648
62	DENVER	1,464	101,049,211	838	57,705,501	2,302	158,754,712
566	DONALD WESCOTT FPD	-	0	14	580,465	14	580,465
567	DURANGO & RESCUE AUTH	-	0	46	2,666,228	46	2,666,228
507	EAST GRAND FPD #4 ADMIN	-	0	4	180,036	4	180,036
795	EATON FPD ADMIN	-	0	4	158,983	4	158,983
74	ELIZABETH	4	197,831	0	0	4	197,831
7102	ELK CREEK FPD	-	0	8	399,608	8	399,608
75	EMPIRE	1	43,191	0	0	1	43,191
76	ENGLEWOOD	-	0	49	3,503,134	49	3,503,134
77	ERIE	19	1,057,832	0	0	19	1,057,832
79	EVANS	7	502,883	16	796,881	23	1,299,764
510	FAIRMOUNT FPD	-	0	17	897,497	17	897,497
80	FAIRPLAY MARSHALLS	3	134,774	0	0	3	134,774
7112	FALCON FPD	-	0	16	586,063	16	586,063
81	FEDERAL HEIGHTS	22	1,208,086	14	792,147	36	2,000,233
85	FLORENCE	9	287,944	0	0	9	287,944
7222	FOOTHILLS & RESCUE	-	0	3	133,920	3	133,920
7123	FORT LUPTON FPD	-	0	9	405,919	9	405,919
90	FOWLER	3	78,437	0	0	3	78,437
511	FRANKTOWN FPD	-	0	19	973,929	19	973,929
92	FREDERICK	16	797,163	0	0	16	797,163
592	FREDERICK STONE FPD ADMIN	-	0	31	1,594,983	31	1,594,983
93	FRISCO	12	667,772	0	0	12	667,772
7136	GENESEE	-	0	2	118,389	2	118,389
97	GEORGETOWN	3	130,207	0	0	3	130,207
98	GILCREST	2	78,736	0	0	2	78,736
102	GRANADA	1	28,800	0	0	1	28,800
7147	GRAND FPD #1	-	0	1	44,749	1	44,749
7149	GRAND LAKE FPD	-	0	6	253,740	6	253,740

**Fire and Police Pension Association  
Statewide Defined Benefit Plan  
Actuarial Valuation – January 1, 2009**

*Section III  
Table 21*

City Code	City Name	Police		Fire		Total	
		No.	Earnings	No.	Earnings	No.	Earnings
7150	GRAND VALLEY FPD	0	\$ 0	11	\$ 544,575	11	\$ 544,575
7153	GREATER EAGLE FPD	0	0	17	990,320	17	990,320
512	GREEN MTN FALLS/CHIPITA	0	0	1	43,263	1	43,263
7156	GYP SUM FPD	0	0	6	361,313	6	361,313
7158	HARTSEL FPD	0	0	1	59,594	1	59,594
115	HAXTUN	3	102,821	0	0	3	102,821
119	HOLYOKE	4	143,248	0	0	4	143,248
7176	HUDSON FPD	0	0	1	57,291	1	57,291
124	HUGO	3	115,500	0	0	3	115,500
125	IDAHO SPRINGS	7	306,160	0	0	7	306,160
126	IGNACIO	7	328,849	0	0	7	328,849
7191	JEFFERSON-COMO FPD	0	0	5	164,046	5	164,046
129	JOHNSTOWN	13	704,424	0	0	13	704,424
7193	JOHNSTOWN FPD	0	0	4	147,548	4	147,548
7198	KIOWA FPD	0	0	3	133,307	3	133,307
136	KREMMLING	4	218,174	0	0	4	218,174
138	LA JARA	4	113,041	0	0	4	113,041
144	LA SALLE	5	230,878	0	0	5	230,878
7211	LA SALLE FPD	0	0	2	89,999	2	89,999
146	LA VETA	3	96,194	0	0	3	96,194
137	LAFAYETTE	30	2,083,980	13	733,036	43	2,817,016
593	LAKE DILLON FPD	0	0	40	1,931,905	40	1,931,905
263	LAKESIDE	4	172,139	0	0	4	172,139
141	LARKSPUR FPD ADMIN	0	0	20	1,055,750	20	1,055,750
145	LAS ANIMAS	3	108,180	0	0	3	108,180
147	LEADVILLE	9	348,915	10	378,045	19	726,960
574	LEFTHAND FPD	0	0	1	50,730	1	50,730
150	LOCHBUIE	6	254,479	0	0	6	254,479
214	LOG LANE VILLAGE	1	26,116	0	0	1	26,116
268	LONE TREE	42	2,762,672	0	0	42	2,762,672

City Code	City Name	Police		Fire		Total	
		No.	Earnings	No.	Earnings	No.	Earnings
578	LOS PINOS FPD ADMIN	0	\$ 0	25	\$ 1,171,176	25	\$ 1,171,176
7226	LOWER VALLEY FPD	0	0	6	273,492	6	273,492
155	MANASSA	1	39,661	0	0	1	39,661
157	MANITOU SPRINGS	16	626,649	7	288,930	23	915,579
163	MILLIKEN	6	249,827	0	0	6	249,827
7237	MILLIKEN FPD	0	0	5	203,439	5	203,439
537	MONTROSE FPD	0	0	29	1,695,255	29	1,695,255
170	MOUNTAIN VIEW	1	39,680	0	0	1	39,680
516	MOUNTAIN VIEW FPD	0	0	59	3,520,229	59	3,520,229
7251	NORTH FORK FPD	0	0	1	50,694	1	50,694
532	NORTH METRO RESCUE ADMIN	0	0	99	6,272,518	99	6,272,518
7253	NORTH ROUTT COUNTY	0	0	1	51,000	1	51,000
517	NORTH WASHINGTON FPD	0	0	56	3,797,256	56	3,797,256
7255	NORTHEAST TELLER COUNTY	0	0	16	693,465	16	693,465
7259	NORTH-WEST FPD ADMIN	0	0	7	361,966	7	361,966
7263	OAK CREEK FPD	0	0	3	129,898	3	129,898
180	OLATHE	4	126,440	0	0	4	126,440
588	PAGOSA FPD	0	0	7	300,410	7	300,410
188	PAGOSA SPRINGS	8	363,862	0	0	8	363,862
189	PALISADE	4	172,119	2	100,005	6	272,124
190	PALMER LAKE	4	159,777	0	0	4	159,777
192	PAONIA	5	323,815	0	0	5	323,815
106	PARACHUTE	8	356,224	0	0	8	356,224
191	PARKER	57	3,655,153	0	0	57	3,655,153
7481	PLATEAU VALLEY FPD	0	0	1	46,477	1	46,477
7285	PLATTE CANYON FPD	0	0	7	413,508	7	413,508
7287	PLATTE VALLEY FPD	0	0	4	222,099	4	222,099
196	PLATTEVILLE	7	324,258	0	0	7	324,258
513	PLATTEVILLE/GILCREST FPD ADMIN	0	0	5	243,462	5	243,462
7289	PLEASANT VIEW METRO	0	0	4	174,762	4	174,762

City Code	City Name	Police		Fire		Total	
		No.	Earnings	No.	Earnings	No.	Earnings
199	PUEBLO	178	\$ 11,520,422	118	\$ 7,091,375	296	\$ 18,611,797
519	PUEBLO RURAL FPD	0		29	1,309,138	29	1,309,138
7294	PUEBLO W. METRO	0		18	782,548	18	782,548
521	RED WHITE & BLUE FPD	0		48	3,027,307	48	3,027,307
7306	RIFLE FPD	0		19	1,215,538	19	1,215,538
752	ROCKY MOUNTAIN FPD	0		31	1,775,463	31	1,775,463
7314	RYE FPD ADMIN	0		7	428,873	7	428,873
542	SABLE-ALTURA FPD	0		4	157,546	4	157,546
213	SALIDA	15	630,721	9	350,350	24	981,071
215	SANFORD	1	28,000	0		1	28,000
222	SILT	8	397,178	0		8	397,178
524	SNOWMASS-WILDCAT FPD ADMIN	0		9	532,350	9	532,350
525	SOUTH ADAMS COUNTY FPD ADMIN	0		8	397,858	8	397,858
7339	SOUTH FORK	4	135,597	0		4	135,597
7340	SOUTHEAST WELD FPD	0		1	39,513	1	39,513
548	SOUTHERN PARK COUNTY FPD	0		1	40,000	1	40,000
229	SPRINGFIELD	3	88,255	0		3	88,255
231	STEAMBOAT SPRINGS	0		24	1,174,353	24	1,174,353
232	STERLING	21	840,568	15	572,724	36	1,413,292
82	STONE MARSHALLS	19	977,448	0		19	977,448
7349	STRATMOOR HILLS FPD	0		5	181,425	5	181,425
233	STRATTON	1	34,560	0		1	34,560
545	TELLURIDE FPD ADMIN	0		9	565,417	9	565,417
238	THORNTON	0		17	1,389,895	17	1,389,895
2557	TRI-LAKES MONUMENT FPD ADMIN	0		39	1,947,021	39	1,947,021
240	TRINIDAD	0		12	522,973	12	522,973
5107	UNION COLONY RESCUE	0		96	6,393,842	96	6,393,842
595	UPPER PINE RIVER FPD ADMIN	0		24	831,920	24	831,920
534	WEST METRO FPD ADMIN	0		92	6,067,645	92	6,067,645
7375	WEST ROUTT FPD	0		2	137,602	2	137,602

**Fire and Police Pension Association  
 Statewide Defined Benefit Plan  
 Actuarial Valuation – January 1, 2009**

*Section III  
 Table 21*

City Code	City Name	Police		Fire		Total	
		No.	Earnings	No.	Earnings	No.	Earnings
252	WESTMINSTER	0	\$ 0	111	\$ 7,108,872	111	\$ 7,108,872
7381	WHEAT RIDGE FPD	0	0	3	170,298	3	170,298
254	WIGGINS	2	62,762	0	0	2	62,762
257	WINDSOR	17	971,443	0	0	17	971,443
7384	WINDSOR SEVERANCE FPD	0	0	14	770,161	14	770,161
260	WRAY	8	304,067	0	0	8	304,067
262	YUMA	6	259,575	0	0	6	259,575
Totals		2,325	\$ 147,610,709	2,872	\$ 175,360,559	5,197	\$ 322,971,268

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**SECTION IV**  
APPENDICES

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## SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

### I. Valuation Date

The valuation date is January 1st of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

### II. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial liability.

1. The valuation is prepared on the projected benefit basis. The present value of each participant's expected benefit payable at retirement or termination is determined, based on age, service, sex, compensation, and the interest rate assumed to be earned in the future (8%). The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his terminating with a service benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account of the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Plan on account of the present group of participants and beneficiaries.
2. The employer contributions required to support the benefits of the Plan are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the Entry Age Normal method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his anticipated covered service, would be required in addition to the contributions of the participant to meet the cost of all benefits payable on their behalf.
4. The unfunded accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 30 years from the valuation date. It is assumed that payments are made monthly throughout the year.

III. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a three-year phase-in of actual investment return in excess of or less than expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. The final actuarial value of assets cannot be more than 120% or less than 80% of the market value of assets.

IV. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 8.00% per annum, compounded annually, composed of an assumed 3.50% inflation rate and a 4.50% real rate of return. This rate represents the assumed return, net of all investment and administrative expenses.
2. Salary increase rate: Inflation rate of 3.50%, plus productivity component of 1.25%, plus step-rate/ promotional component as shown:

Years of Service	Annual Step-rate/ Promotional Rate	Total Annual Rate of Increase Including 3.50% Inflation Component and 1.25% Productivity Component
(1)	(2)	(4)
1	12.00%	16.75%
2	10.00%	14.75%
3	8.00%	12.75%
4	7.00%	11.75%
5	2.50%	7.25%
6	2.00%	6.75%
7	1.50%	6.25%
8	1.25%	6.00%
9	1.00%	5.75%
10	0.75%	5.50%
11	0.75%	5.50%
12	0.50%	5.25%
13	0.50%	5.25%
14	0.25%	5.00%
15	0.00%	4.75%

Salary increases are assumed to occur once a year, on January 1. Therefore the pay used for the period between the valuation date and the first anniversary of the valuation date is equal to the reported pay for the prior year, annualized if necessary, and then increased by the salary increase assumption.

3. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 4.25% per year. This increase rate is primarily due to the effect of inflation on salaries, with no allowance for future membership growth.

B. Demographic Assumptions

1. Mortality rates (members in payment status) – 1994 Group Annuity Mortality Table

Annual Rate per 1,000 Members					
Age	Males	Females	Age (cont.)	Males	Females
(1)	(2)	(3)	(4)	(5)	(6)
50	2.58	1.43	70	23.73	13.73
55	4.43	2.29	75	37.21	22.67
60	7.98	4.44	80	62.03	39.40
65	14.54	8.64	85	97.24	67.74

2. Mortality rates (active members) – 1994 Group Annuity Mortality Table, 50% multiplier for off-duty mortality. Increased by .00025 for on-duty related Fire and Police experience. Sample rates are shown below:

Annual Rate per 1,000 Members					
Age	Males	Females	Age (cont.)	Males	Females
(1)	(2)	(3)	(4)	(5)	(6)
20	0.25	0.14	40	0.54	0.35
25	0.33	0.15	45	0.79	0.49
30	0.40	0.18	50	1.29	0.71
35	0.43	0.24	55	2.21	1.15

3. Disability rates: 15% of disabilities are assumed to be total and 85% are assumed to be occupational. Sample rates are shown below.

Annual Rate per 1,000 Members			
Age	Rates	Age (cont.)	Rates
(1)	(2)	(3)	(4)
20	0.14	40	3.49
25	0.14	45	4.82
30	1.15	50	6.26
35	2.26	55	7.81

4. Termination rates (for causes other than death, disability or retirement): Termination rates are based on service. Termination rates are not applied after a member becomes eligible for a retirement benefit. Rates at selected ages are shown:

Police – Annual Rate per 1,000 Members					
Service	Rates	Service (cont.)	Rates	Service (cont.)	Rates
0	180.0	8	32.5	16	17.6
1	130.0	9	29.3	17	16.6
2	111.8	10	26.7	18	15.8
3	77.9	11	24.5	19	15.1
4	60.3	12	22.7	20	14.4
5	49.5	13	21.1	21	13.8
6	42.0	14	19.8	22	13.2
7	36.7	15	18.6	23	12.7

4. Termination rates (continued):

Fire– Annual Rate per 1,000 Members					
Service	Rates	Service (cont.)	Rates	Service (cont.)	Rates
0	90.0	8	25.6	16	10.8
1	70.1	9	23.1	17	9.5
2	55.3	10	20.8	18	8.2
3	46.6	11	18.8	19	7.1
4	40.4	12	16.9	20	6.0
5	35.7	13	15.2	21	4.9
6	31.8	14	13.6	22	4.0
7	28.5	15	12.1	23	3.0

5. Retirement rates:

Age-Based Retirement rates, for members with more than 25 years of service

Age	Annual Rate per 100 Members
55-59	50
60	100

Service-Based Retirement rates

Service	Annual Rate per 100 Members
5-9	5
10-19	12
20-24	25

C. Other Assumptions

1. Percent married: 80% of employees are assumed to be married.
2. Age difference: Male members are assumed to be two years older than their spouses, and female members are assumed to be two years younger than their spouses.
3. Cost of living escalators (COLA): Current Law – 0%. Permanent COLA valued at 3% (maximum permitted by law).

4. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.
5. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.
6. There will be no recoveries once disabled.
7. No surviving spouse will remarry and there will be no children's benefit.
8. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available.
9. Administrative expenses: The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses.
10. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
11. Decrement timing: Decrements of all types are assumed to occur mid-year.
12. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
13. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
14. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
15. Benefit Service: All members are assumed to accrue 1 year of service each year. Exact fractional service is used to determine the amount of benefit payable.

D. Participant Data

Participant data was supplied on electronic files in the form of spreadsheets. There were separate tabs for (i) active and non-vested inactive members, and (ii) members and beneficiaries receiving benefits or vested inactives.

The data for active members included birthdate, sex, service, salary and employee contribution account balance. For retired members and beneficiaries, the data included date of birth, sex, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and a form of payment code.

Salary supplied for the current year was based on the earnings for the year preceding the valuation date. This salary was adjusted by the salary increase rate for one year.

Assumptions were made to correct for missing, bad, or inconsistent data. These had no material impact on the results presented.

E. Allocation to SRA

The SRA contribution rate is determined annually based on the normal cost plus amortization of unfunded liability (surplus). The excess of sixteen percent contributions over the actuarial requirement is available as the SRA contribution rate. The Board has the authority and responsibility to choose the SRA rate. Other considerations may be evaluated such as:

1. Investment performance subsequent to the actuarial valuation
2. Potential future plan changes under consideration
3. Stability of SRA
4. Projections of future SRA contributions

F. Changes to the assumptions:

There were no changes since the prior valuation.

## SUMMARY OF BENEFIT PROVISIONS

1. Effective Date and Authority: The Fire and Police Pension Association Plan (FPPA) was established January 1, 1980. The SWDB is a defined benefit plan for Colorado Fire and Police employees hired on or after April 8, 1978.
2. Plan Year: A twelve-month period ending December 31st.
3. Administration: FPPA administers this statewide multiple employer public employee retirement plan. FPPA is responsible for the investment of the trust assets, including the establishment of the asset allocation policy.
4. Type of Plan: The Statewide Defined Benefit Plan is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is a cost-sharing multiple employer plan.
5. Eligibility: Members included are active employees who are full-time salaried employees of a participating municipality, fire protection district, fire authority, or county improvement district normally serving at least 1,600 hours in a calendar year and whose duties are directly involved with the provision of police or fire protection [31-31-102]. As of August 1, 2003, the Plan may include clerical and other personnel from fire districts whose services are auxiliary to fire protection.

Also included are employees of any employer that covers members under the federal Social Security Act or any county that chooses to affiliate with FPPA and that covers salaried employees whose duties are directly involved with the provision of law enforcement or fire protection as certified by the county under the federal Social Security Act [31-31-704]. This supplemental plan provides one half the benefits provided by the full SWDB plan.

6. Contributions: Members of this fund and their employers are currently each contributing at the rate of 8% of base salary [31-31-402]. Contributions from members and employers of affiliated social security employers are 4% of base salary for a total contribution rate of 8% [31-31-704.6].

Contributions from members and employers of plans re-entering the system are established by resolution and approved by the FPPA Board of Directors.

7. Salary: Base salary means the total base rate of pay including Member Contributions to the Statewide Defined Benefit Plan or Statewide Money Purchase Plan which are “picked up” by the employer, and shall also include longevity pay, sick leave pay taken in the normal course of employment, vacation leave pay taken in the normal course of employment, shift differential, and mandatory overtime that is part of the Member’s fixed, periodic compensation. Accumulated vacation leave pay will also be included if a Member completes his/her service requirement for purposes of Normal retirement while exhausting accumulated vacation leave. Base salary shall not include overtime pay (except as noted in the preceding sentence), step-up pay or other pay for temporarily acting in a higher rank, uniform allowances, accumulated sick leave pay, accumulated vacation leave pay (except as noted in the preceding sentence), and other forms of extra pay (including Member Contributions which are paid by the employer and not deducted from the Member's salary). In the event an employer has established or does establish a Deferred Compensation Plan, the amount of the Member's salary that is deferred shall be included in the Member's base salary. Any amounts voluntarily contributed to an Internal Revenue Code Section 125 “Cafeteria Plan” shall be included in the Member's base salary. A Member is deemed temporarily acting in a higher rank if the appointment to the rank is anticipated to last less than six months. [Rule 101.05].
8. Highest Average Salaries (HAS): The average of the member's highest three calendar years’ annual base salaries.
9. Normal Retirement
  - a. Eligibility: Currently, all members are eligible for retirement on or after age 55 if they have credit for 25 years of service [31-31-403].
  - b. Annual Benefit: The annual Normal Retirement Benefit shall be 2% of the average of the member’s highest three years base salary for each year of credited service up to ten years plus 2.5% for each year thereafter [31-31-403 and Resolution 2000-4; Amendment One]. The benefit for members of affiliated social security employers will be reduced by the amount of social security income the member receives annually, calculated as if the social security benefit started as of age 62 for benefits prior to 2007 [31-31-704]. Beginning January 1, 2007, members of affiliated social security employers will participate in the FPPA supplemental social security program which will provide benefits equal to 1% of the average of the member’s highest three years base salary for each year of credited service up to ten years plus 1.25% for each year thereafter [31-31-704.6].
  - c. Payment Form: Benefits are paid as a monthly life annuity. Optional forms of payment are available; see below.

10. Early Retirement

- a. Eligibility: A member shall be eligible for an Early Retirement Benefit after completion of thirty years of service or attainment of age 50.
- b. Annual Benefit: The Early Retirement Benefit shall be the Normal Retirement Benefit reduced on an actuarially equivalent basis [31-31-403].

11. Deferred Retirement

- a. Annual Benefit: The Normal Retirement Benefit for members who continue to work after their normal retirement date will be increased on an actuarial equivalent basis for service after their Normal Retirement Date [31-31-403].

12. Terminated Vested Benefit

- a. Eligibility: A member with at least five years of service is vested. A vested member who does not withdraw his/her contributions from the fund is eligible for a vested benefit, payable at age 55. [31-31-404]
- b. Monthly Benefit: The monthly benefit is based on the retirement formula described above. Both the HAS and service are determined at the time the member leaves active employment. Benefits may commence at age 55 [31-31-404]. The benefit for members of affiliated social security employers earned prior to January 1, 2007 will be reduced by the amount of social security income the member receives annually [31-31-704].
- c. Payment Form: The same as for Retirement above.
- d. Death Benefit before Retirement: Survivors of an active member who dies prior to retirement eligibility is entitled to receive the benefit described below in item 14. Survivors of an active or inactive member who is eligible for a Normal or Early retirement and who dies after leaving active service but before electing a payment option or receiving the first pension payment is entitled to receive a benefit according to payment Option 1, (100% survivor benefits). See item 15 below [31-31-403].
- e. Death Benefit after Retirement: Survivor benefits are paid according to the payment option elected by the member at the time of retirement [31-31-403].

13. Withdrawal (Refund) Benefit

- a. Eligibility: All members leaving covered employment with less than five years of service are eligible. Optionally, vested members (those with five or more years of service) may withdraw their accumulated contributions in lieu of the future vested benefits otherwise due.

- b. Benefit: The member receives a lump-sum payment equal to the sum of his/her employee contributions. 5% as interest is credited on these contributions [31-31-404].

14. Death Benefit of Active Members

- a. Eligibility: Death must have occurred while an active or an inactive, non-retired member.
- b. Basic Benefit: Upon the death of a non-vested active, unmarried member with no spouse no dependent children, and no beneficiary, a refund of the member's contributions is paid to the member's estate. If the member was vested, single and had no dependent children and was not eligible for a Normal or Early retirement, a joint and survivor annuity may be paid to the beneficiary if greater than the refund [31-31-403]. The benefit for members of affiliated social security employers earned prior to January 1, 2007 will be reduced by the amount of social security income the member receives annually [31-31-704].
- c. Survivors (spouse or dependent children) of active members who die prior to retirement eligibility are covered by the benefits provided by the Statewide Death and Disability Plan.

15. Optional Forms of Payment: In addition to a life annuity, FPPA offers members these optional forms of payment on an actuarially equivalent basis:

- a. Option 1 (Joint and 100% Survivor) - A life annuity payable while either the member or his beneficiary is alive.
- b. Option 2 (Joint and 50% Survivor) - A life annuity payable to the member while both the member and beneficiary are alive, reducing to 50% of this amount if the member predeceases the beneficiary.
- c. Option 3 (Joint and 50% Last Survivor) - A life annuity payable to the member while both the member and beneficiary are alive, reducing to 50% of this amount if either the member or the beneficiary dies.
- d. Option 4 (Joint and 100% Survivor with "Pop Up") - 100% of the reduced retirement income payable for the life of the beneficiary upon the death of the retiring member, with the provision that, should the beneficiary predecease the member, the monthly annuity will revert to the amount that would have been payable under the normal form of payment.
- e. Option 5 (Joint and 50% Survivor with "Pop Up") –50% of the reduced retirement income payable for the life of the beneficiary upon the death of the retiring member, with the provision that, should the beneficiary predecease the member, the monthly annuity will revert to the amount that would have been payable under the normal form of payment.
- f. Social Security Level Income – Only available for employers covered in social security. An annuity paid at one amount prior to age 62, and at a reduced amount after age 62,

designed to provide a level total income when combined with the member's age 62 Social Security benefit. Benefits cease upon the member's death.

Actuarial equivalence is based on tables adopted by the Board.

16. Cost of Living Adjustment (COLA): Benefits to members and beneficiaries are increased annually on October 1. The amount is based on the Board's discretion and can range from 0 to the higher of 3% or the CPI.
17. Stabilization Reserve Account: Annually, at the discretion of the Board of Directors, the difference between the combined member/employer contribution and the actuarially determined contribution rate may be allocated to the stabilization reserve account. Amounts set aside in the SRA are allocated to individual accounts for each new hire member. A member may receive the amounts in this individual account only upon election of normal, early, disability or vested retirement. If the cost of the defined benefit plan exceeds the combined member/employer contribution rate, funds from the SRA may be used to make up the shortfall [31-31-405, 31-31-406]. If a member leaves with less than five years of service, the SRA account is forfeited. If a member has more than five years of service and dies prior to retirement eligibility, then the SRA would be paid to the member's beneficiary or estate.
18. Deferred Retirement Option Plan: A member may elect to participate in the DROP after reaching eligibility for normal retirement, early retirement, or vested retirement and age 55. A member can continue to work while participating in the DROP, but must terminate employment within 5 years of entry into the DROP. The member's percentage of retirement benefit is frozen at the time of entry into the DROP. The monthly payments that begin at entry into the DROP are accumulated until the member terminates service, at which time the DROP accumulated benefits can be paid as a lump sum, if desired. The member's contribution continues and it is credited to the DROP.

Effective January 1, 2003, the member shall self-direct the investments of their DROP funds.

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**SECTION V**

SUPPLEMENTAL STUDIES

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## **SUPPLEMENTAL STUDIES**

There were no supplemental studies requested.