

**ARIZONA PUBLIC SAFETY PERSONNEL RETIREMENT  
SYSTEM CONSOLIDATED REPORT**

**JUNE 30, 2013**



September 27, 2013

The Board of Trustees  
Arizona Public Safety Personnel Retirement System  
Phoenix, Arizona

**Re: Arizona Public Safety Personnel Retirement System Actuarial Valuation as of  
June 30, 2013**

Ladies and Gentlemen:

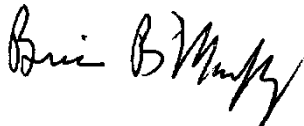
The results of the June 30, 2013 annual actuarial valuation of members covered by the Arizona Public Safety Personnel Retirement System (PSPRS) are presented in this report. The purpose of the valuation was to measure the System's funding progress, provide actuarial information in connection with applicable Governmental Accounting Standards Board Statements and to determine the employer contribution for the 2014-2015 fiscal year. This report should not be relied upon for any other purpose. This report may be distributed to parties other than the System only in its entirety and only with the permission of the Board.

The valuation was based upon information, furnished by the State Retirement System, concerning Retirement System benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. Data was checked for internal and year to year consistency, but was not otherwise audited by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the data provided.

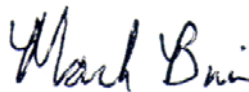
Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the applicable state statutes. Brian B. Murphy, Mark Buis, and James D. Anderson are independent of the plan sponsor and are Members of the American Academy of Actuaries (MAAA) who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. It is our opinion that the actuarial assumptions used for the valuation produce results which are reasonable.

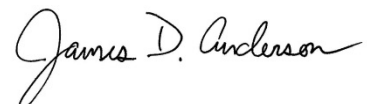
Respectfully submitted,



Brian B. Murphy  
FSA, EA, MAAA



Mark Buis  
FSA, EA, MAAA



James D. Anderson  
FSA, EA, MAAA

BBM/MB/JDA:mr  
1211

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**EXECUTIVE SUMMARY/BOARD SUMMARY**

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**1. Required Employer Contributions to Support Retirement Benefits**

The computed employer contribution and funded status for the fiscal year beginning July 1, 2014 is shown below.

	<b>Contribution</b>	<b>Funded Status</b>
Averages	32.54%	57.1%

**2. Contribution Rate Comparison**

The chart below compares the results of this valuation for the Retirement System with the results of the prior year's valuation:

<b>Valuation Date</b>	<b>Contribution</b>	<b>Funded Status</b>
6/30/2012	30.44%	58.6%
6/30/2013	32.54%	57.1%

**3. Reasons for Change**

There are three general reasons why contribution rates change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions or methods used to predict future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions predicted.

The following benefit changes were reflected in the valuation:

- Member contributions are increased from 10.35% to 11.05% of pay for the fiscal year 2014-2015 with a maintenance of effort provision. The entire schedule is shown on page F-4.

## **EXECUTIVE SUMMARY/BOARD SUMMARY**

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The following method and assumption changes were reflected in the valuation:

- The investment return assumption was decreased to 7.85% from 8.00% and the wage inflation assumption was decreased from 5.0% to 4.5%.

The contribution rate increased from 30.44% of payroll last year to 32.54% of payroll this year for the following reasons:

- Continued phase-in of asset losses from prior years.
- Changes in the actuarial assumptions – due to the use of a lower discount rate.

#### **4. Plan Experience**

Experience during the year ended June 30, 2013 was overall unfavorable. On a market value basis, the System's return for the year ended June 30, 2013 was 10.9%. However, the market value smoothing techniques used in this valuation of the System recognize both past and present investment gains and losses. The effects of the prior asset losses being phased-in were partially offset by gains attributable to demographic experience. Detailed information related to System experience is shown on page B-2.

## EXECUTIVE SUMMARY/BOARD SUMMARY

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### 5. Looking Ahead

If the Market Value of Assets were used as the basis of our calculations (instead of the smoothed value), the employer contribution would have been approximately 35% of payroll (instead of 32.54% of payroll) and the funded status would have been about 51% (instead of 57.1%). If equity markets do not improve significantly, the June 30, 2014 valuation will likely show yet another increase in the employer contribution amount (absent any liability gains).

### 6. Conclusion

The continuing effect of prior losses was dampened by the 7-year smoothing period, and further offset by the effect of lower than expected pay increases. There remains \$628 million of unrecognized investment losses that will, in the absence of other gains, drive the contribution rate up over the next several years.

After accounting for active member contributions, the retired lives are less than fully funded on a funding value of assets basis, and much less than fully funded based upon the market value of assets (please see page B-4). It is most important that this plan receive contributions at least equal to the rates shown in this report.

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**SECTION A**  
INTRODUCTION

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## FUNDING OBJECTIVE

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The purpose of the annual actuarial valuation of the Arizona Public Safety Personnel Retirement System as of June 30, 2013 is to:

- Compute the liabilities associated with benefits likely to be paid on behalf of current retired and active members. This information is contained in Section B.
- Compare accrued assets with accrued liabilities to assess the funded condition. This information is contained in Section B.
- Compute the employers' recommended contribution rates for the Fiscal Year beginning July 1, 2014. This information is contained in Section A.

This objective is stated in Article 4, Chapter 5, Title 38, Sections 843B and 848N of the Arizona Revised Statutes.

## CONTRIBUTION RATES

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The Retirement System is supported by member contributions, employer contributions and investment income from Retirement System assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

- (1) Cover the actuarial present value of benefits allocated to the current year by the actuarial cost method described in Section E (the normal cost); and
- (2) Finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (the unfunded actuarial accrued liability).

*Computed contribution rates* for the fiscal year beginning July 1, 2014 are shown on page A-2.



**CONTRIBUTION REQUIREMENTS**

**Development of Employer Contributions for the Indicated Valuation Date**

Contribution for Fiscal Year	June 30,	
	2012 2014	2013 2015
<b>Pension</b>		
Normal cost requirement		
Service pensions	17.28%	16.65%
Disability pensions	1.73	1.77
Survivors of active members	0.59	0.59
Refunds of members' accumulated contributions	<u>1.09</u>	<u>1.19</u>
Total normal cost requirement	20.69%	20.20%
Employee Contributions		
Total employee rate	10.35	11.05
Less portion not used to reduce employer's contribution	<u>2.70</u>	<u>3.40</u>
Net employee rate	<u>7.65%</u>	<u>7.65%</u>
Employer normal cost requirement	13.04%	12.55%
Amortization of unfunded liabilities	<u>16.01%</u>	<u>18.48%</u>
Total pension contribution requirement	29.05%	31.03%
<b>Health</b>		
Normal cost requirement	0.33%	0.34%
Amortization of unfunded liabilities	<u>1.06%</u>	<u>1.17%</u>
Total health contribution requirement	1.39%	1.51%
<b>Total contribution requirement</b>	<b>30.44%</b>	<b>32.54%</b>

Actuarial accrued liability, \$10,823,539,905, exceeded the funding value of assets, which was \$6,185,073,611. The resulting unfunded actuarial accrued liabilities (after netting out the maintenance of effort reserve of \$41,161,326 from the actuarial value of assets) were amortized as a level percent of payroll over a closed period of 23 years ending June 30, 2037 and added to the employer normal cost. The 23 year period is a one year decrease from last year. The results shown above are prior to the application of the statutory minimum of 8% of payroll (5% of payroll if the actual employer contribution rate is less than 5% for the 2006/2007 fiscal year).

**HISTORICAL SUMMARY OF EMPLOYER RATES**

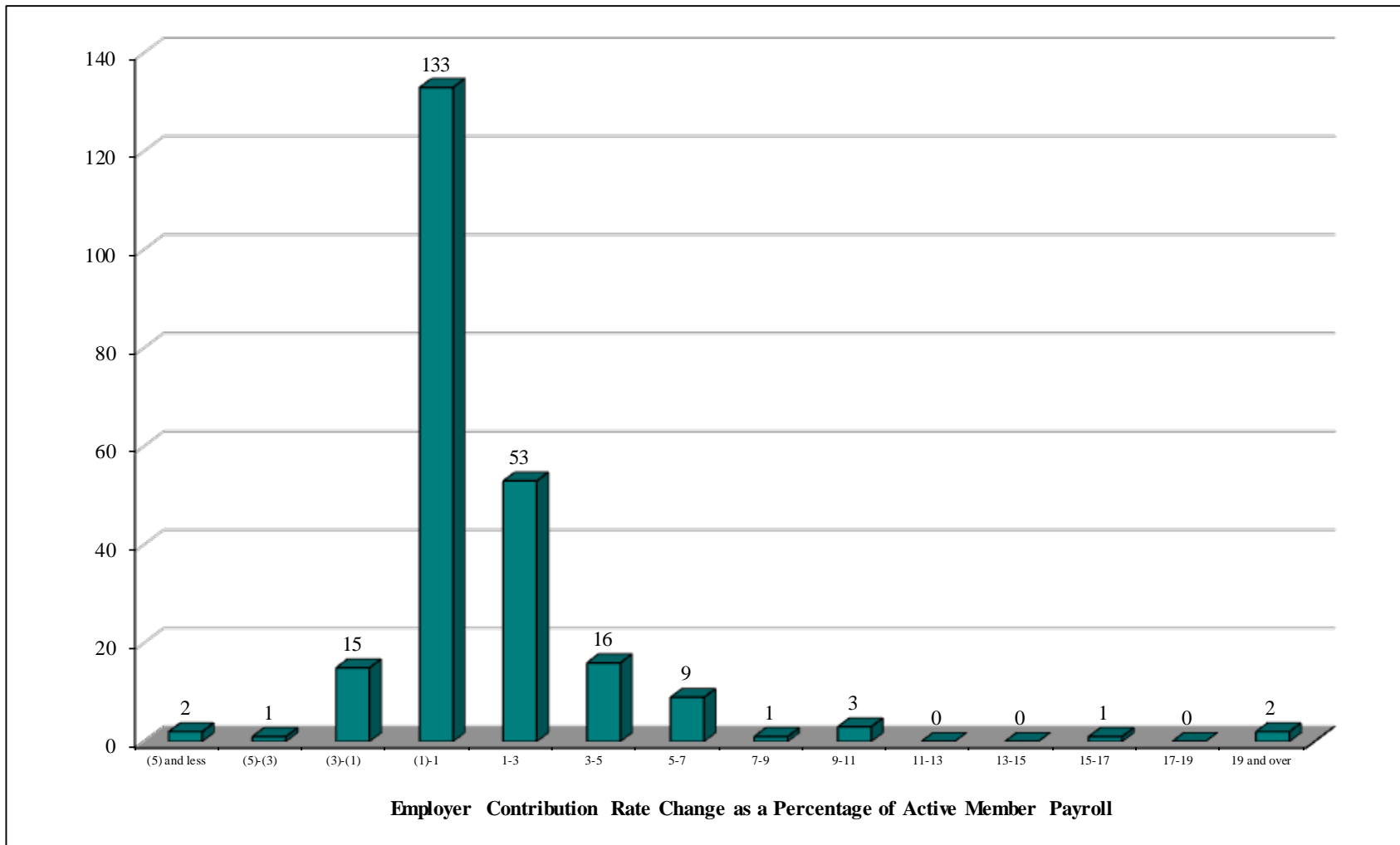
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<b>Valuation Date</b> <b>June 30</b>	<b>Fiscal Year</b> <b>Ending June 30</b>	<b>Normal Cost</b>	<b>Unfunded Actuarial</b> <b>Accrued Liability</b>	<b>Total</b>
2004	2006	10.29%	2.51%	12.80%
2005	2007	10.71	6.38	17.09
2006	2008	10.08	6.44	16.52
2007	2009	12.33	9.38	21.71
2008	2010	11.80	8.97	20.77
2009	2011	12.08	8.81	20.89
2010	2012	12.17	10.51	22.68
2011	2013	12.61	14.57	27.18
2012	2014	13.37	17.07	30.44
<b>2013</b>	<b>2015</b>	<b>12.89</b>	<b>19.65</b>	<b>32.54</b>

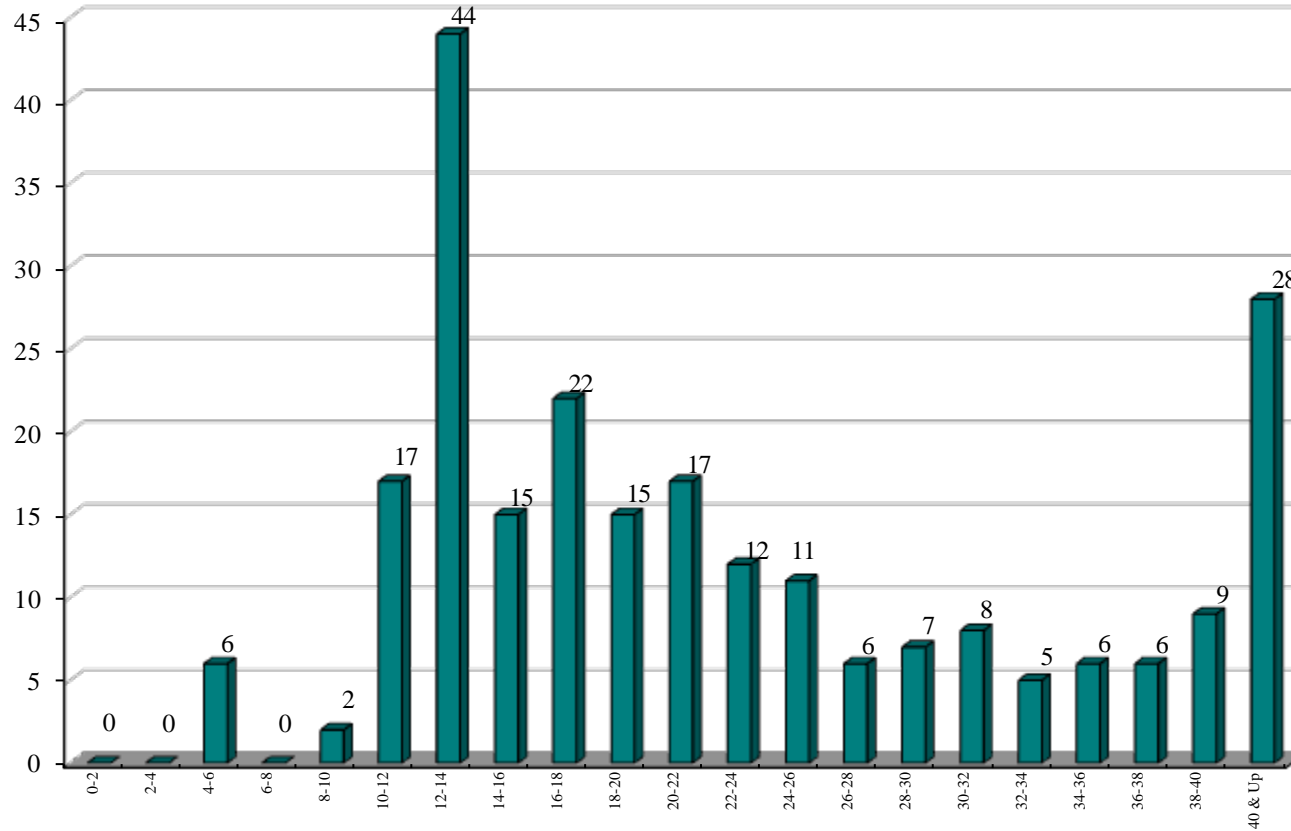
2005 results were revised pursuant to changes enacted by the 2006 Legislature and the PSPRS Board of Trustees.

Results prior to 2009 were calculated by the prior actuary.

**EMPLOYER CONTRIBUTION RATE CHANGES AT JUNE 30, 2013**  
**ALL EMPLOYERS**



**EMPLOYER CONTRIBUTION RATES - ALL EMPLOYERS AT JUNE 30, 2013**



**Employer Contribution Rate as a Percentage of Active Member Payroll**

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**SECTION B**  
FUNDING RESULTS

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**PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY**

	June 30,	
	2012	2013
A. Accrued Liability		
1. For retirees and beneficiaries	\$ 5,045,392,933	\$ 5,262,215,315
2. For DROP members	1,318,879,833	1,390,054,474
3. For vested terminated members	22,200,487	25,997,914
4. For present active members		
a. Value of expected future benefit payments	6,456,407,513	6,525,217,636
b. Value of future normal costs	2,517,350,780	2,379,945,434
c. Active member accrued liability: (a) - (b)	3,939,056,733	4,145,272,202
5. Total accrued liability	10,325,529,986	10,823,539,905
B. Present Assets (Funding Value)	6,051,595,012	6,185,073,611
C. Unfunded Accrued Liability: (A.5) - (B)	4,273,934,974	4,638,466,294
D. Stabilization Reserve	13,132,786	16,068,231
E. Net Unfunded Accrued Liability: (C) + (D)	\$ 4,287,067,760	\$ 4,654,534,525
F. Funding Ratio: (B) / (A.5)	58.6%	57.1%

**DERIVATION OF EXPERIENCE GAIN/(LOSS)**

Actual experience will never (except by coincidence) exactly match assumed experience. Gains and losses often cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below, along with a year-by-year comparative schedule.

(Dollar amounts in \$'000s)

	June 30,	
	2012	2013
(1) UAAL at start of year	\$3,569,316	\$4,273,935
(2) Normal cost from last valuation	278,249	293,207
(3) Actual contributions	437,210	515,047
(4) Interest accrual	287,911	333,041
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	3,698,266	4,385,136
(6) Changes from benefit increases	167,001	-
(7) Changes in actuarial methods and assumptions	347,081	74,793
(8) Change in reserve for future pension increases	(182,218)	-
(9) Expected UAAL after changes: (5) + (6) + (7) + (8)	4,030,130	4,459,929
(10) Actual UAAL at end of year	4,273,935	4,638,466
(11) Experience Gain/(Loss): (9) - (10)	\$ (243,805)	\$ (178,537)

**FY 2013 Gains and Losses by Source**

	Gain/(Loss)	% of Liability
Investment Return	\$(279,148)	-2.7%
Salary Increases	86,025	0.8%
Retirement	6,237	0.1%
Turnover	7,443	0.1%
Disability	2,269	0.0%
Death-in-Service	(4,955)	0.0%
Retiree Mortality	(10,515)	-0.1%
Other	14,107	0.1%
Total	(178,537)	-1.7%

**UNFUNDED ACTUARIAL ACCRUED LIABILITIES  
COMPARATIVE STATEMENT**

(Dollar amounts in \$'000s)

Valuation Date	(1) Actuarial Accrued Liabilities (AAL)	(2) Valuation Assets	(3) Unfunded AAL	(4) Funded Ratio (2)/(1)	(5) Financing Period	(6) Payroll	Liability Ratio	
							(7) Unfunded (3)/(6)	(8) Total (1)/(6)
2003	\$4,739,613	\$4,781,377	\$ 0	100.9%	20	\$ 881,285	0.0%	537.8%
2004	5,167,333	4,774,313	393,020	92.4	20	911,718	43.1	566.8
2005	5,951,937	4,886,963	1,064,974	82.1	20	974,863	109.2	610.5
2006	6,495,012	4,999,911	1,495,101	77.0	30	1,073,685	139.2	604.9
2007	7,268,291	4,829,521	2,438,770	66.4	29	1,228,037	198.6	591.9
2008	7,662,779	5,095,645	2,567,134	66.5	28	1,383,332	185.6	553.9
2009	7,989,451	5,445,497	2,543,954	68.2	27	1,415,643	179.7	564.4
2010	8,491,822	5,591,304	2,900,518	65.8	26	1,400,544	207.1	606.3
2011	9,365,261	5,795,945	3,569,316	61.9	25	1,325,350	269.3	706.6
2012	10,325,530	6,051,595	4,273,935	58.6	24	1,349,252	316.8	765.3
<b>2013</b>	<b>10,823,540</b>	<b>6,185,074</b>	<b>4,638,466</b>	<b>57.1</b>	<b>23</b>	<b>1,370,609</b>	<b>338.4</b>	<b>789.7</b>

The Unfunded Liability ratio gives a general measure of the ability to collect contributions to pay off the unfunded liabilities. The Total Liability ratio gives a longer term indication of the volatility of the contribution rate.

2005 Results revised pursuant to changes in assumptions and methods enacted by the 2006 Legislature and the PSPRS Board of Trustees. Results prior to 2009 were calculated by the prior actuary.



**SHORT CONDITION TEST**

If the contributions to PSPRS are soundly executed, the System will *pay all promised benefits when due -- the ultimate test of financial soundness.*

A *short condition test* is one means of checking a system’s progress under its funding program. In a short condition test, the plan’s present assets (cash and investments) are compared with:

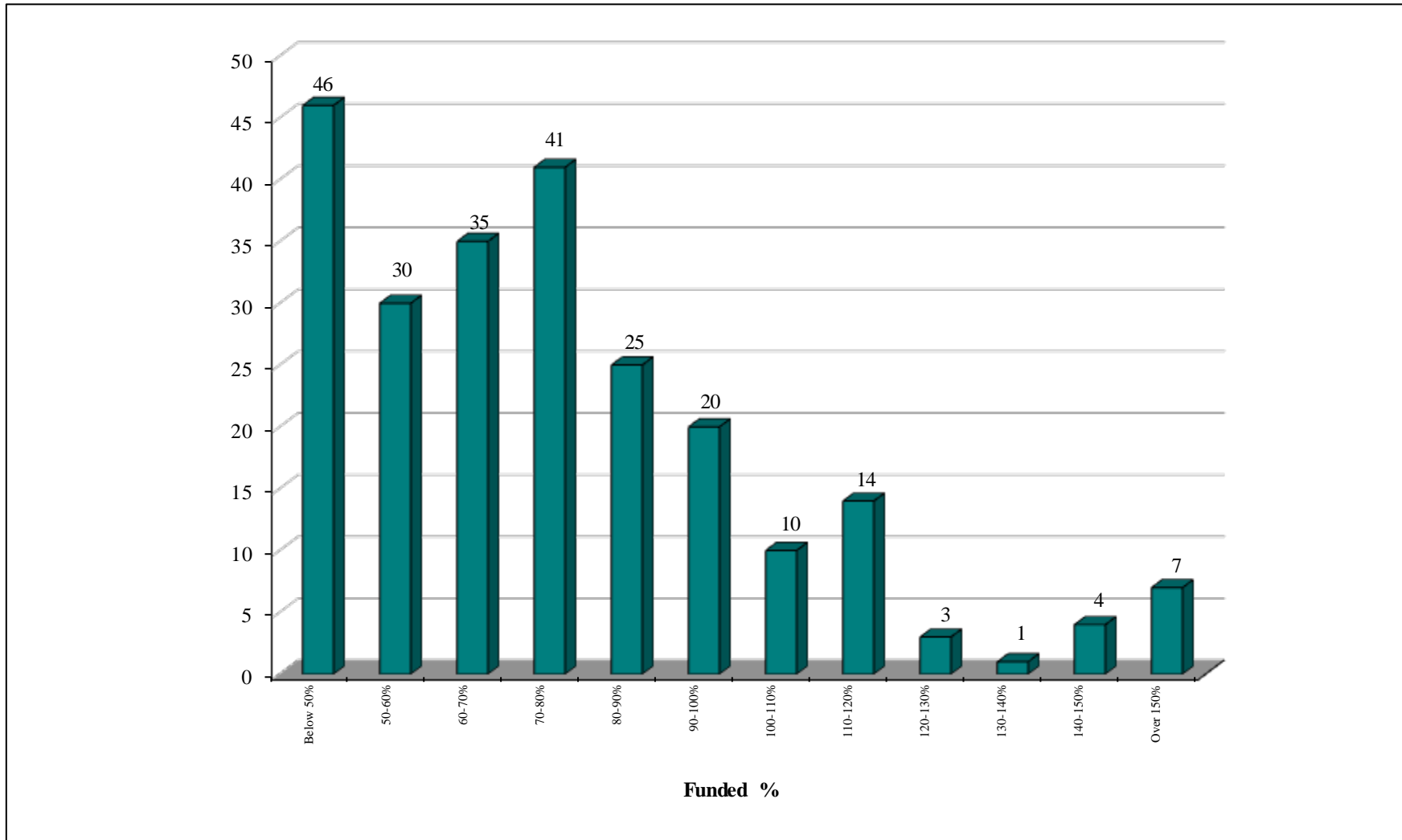
- 1) Member contributions on deposit;
- 2) The liabilities for future benefits to present retired lives; and
- 3) The liabilities for service already rendered by active and inactive members.

In a system that has been following the discipline of pre-funding, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active and inactive members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the system.

**Short Condition Test  
(Including Health Insurance Subsidy)  
(in \$'000s)**

Calendar Year	Aggregate Actuarial Liabilities For			Actuarial Assets	Portion of Actuarial Liabilities covered by Assets		
	(1) Non-Retired Contributions	(2) Annuitants	(3) Non-Retired Members (Employer Financed Portion)		(1)	(2)	(3)
2009	\$737,839	\$4,622,427	\$2,629,185	\$5,445,497	100%	100%	3.2%
2010	808,207	4,993,382	2,690,233	5,591,304	100	96	0.0
2011	819,996	5,790,724	2,754,541	5,795,945	100	86	0.0
2012	897,597	6,364,273	3,063,659	6,051,595	100	81	0.0
<b>2013</b>	<b>978,017</b>	<b>6,652,270</b>	<b>3,193,253</b>	<b>6,185,074</b>	<b>100</b>	<b>78</b>	<b>0.0</b>

**FUNDED PERCENTS - ALL EMPLOYERS AT JUNE 30, 2013**



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**SECTION C**  
FUND ASSETS

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**DEVELOPMENT OF FUNDING VALUE OF ASSETS (7-YEAR SMOOTHING)**

<b>Year Ended June 30:</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
A. Funding Value Beginning of Year (Including Future Benefit Increases)	\$ 6,051,595,012						
B. Market Value End of Year	5,557,274,418						
C. Market Value Beginning of Year	5,074,687,874						
D. Non Investment Net Cash Flow	(68,751,086)						
E. Investment Income							
E1. Total: B-C-D	551,337,630						
E2. Amount for Immediate Recognition: (8.00%)	481,377,558						
E3. Amount for Phased in Recognition: E1-E2	69,960,072						
F. Phased in Recognition of Investment Income							
F1. Current Year: E3 / 7	9,994,296						
F2. First Prior Year	(75,653,848)	\$ 9,994,296					
F3. Second Prior Year	42,476,982	(75,653,848)	\$ 9,994,296				
F4. Third Prior Year	9,922,277	42,476,982	(75,653,848)	\$ 9,994,296			
F5. Fourth Prior Year	(192,391,612)	9,922,277	42,476,982	(75,653,848)	\$ 9,994,296		
F6. Fifth Prior Year	(124,481,914)	(192,391,612)	9,922,277	42,476,982	(75,653,848)	\$ 9,994,296	
F7. Sixth Prior Year	50,985,946	(124,481,913)	(192,296,967)	9,922,277	42,476,985	(75,653,847)	\$ 9,994,296
F8. Funding Value Corridor Adjustment	0						
F9. Total Recognized Investment Gain	(279,147,873)	(330,133,818)	(205,557,260)	(13,260,293)	(23,182,567)	(65,659,551)	9,994,296
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7)	6,185,073,611						
G2. Upper Corridor: (120% x B)	6,668,729,302						
G3. Lower Corridor: (80% x B)	4,445,819,534						
G4. End of Year: (G1 subject to max of G2 and min of G3)	6,185,073,611						
H. Difference Between Market Value & Funding Value: (B-G4)	(627,799,193)	(297,665,375)	(92,108,115)	(78,847,822)	(55,665,255)	9,994,296	0
I. Market Rate of Return	10.9%						
J. Recognized Rate of Return	3.4%						
K. Ratio of Funding Value to Market Value	111.3%						

The funding value of assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment return (line E3) are phased in over a closed 7-year period. During periods when investment performance exceeds the assumed rate, funding value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than market value. The funding value of assets is **unbiased** with respect to market value. At any time it may be either greater or less than market value. If actual and assumed rates of investment return are exactly equal for 7 consecutive years, the funding value will become equal to market value.

**REVENUES AND DISBURSEMENTS**

	<b>2012</b>	<b>2013</b>
<b>Market Value at the Beginning of Year:</b>	\$ 5,216,642,852	\$ 5,074,687,874
<b>Revenues:</b>		
a. Member contributions	\$ 126,380,896	\$ 134,193,451
b. Employer contributions	310,829,503	380,853,077
c. Interest income (net of expenses)	(46,551,714)	546,233,183
d. Net transfers	458,256	230,447
e. Total	\$ 391,116,941	\$ 1,061,510,158
<b>Disbursements:</b>		
a. Refunds of member contributions	\$ 12,376,688	\$ 12,819,713
b. Pension benefits	460,700,737	492,506,527
c. DROP benefits	46,481,278	60,213,930
d. Health subsidy	13,513,216	13,383,444
e. Total	\$ 533,071,919	\$ 578,923,614
<b>Reserve Increase:</b>		
Total revenues minus total disbursements	\$ (141,954,978)	482,586,544
<b>Market Value at the End of Year:</b>	\$ 5,074,687,874	\$ 5,557,274,418

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**SECTION D**  
CENSUS DATA

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**JUNE 30, 2013 VALUATION DATA SUMMARY**

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For purposes of the June 30, 2013 valuation, information on 31,519 covered persons was furnished. These people may be briefly described as follows.

	No.	Averages			
		Age	Years of Service	Annual Pay or Retirement Allowance	
				2013	2012
Actives	18,436	39.5	11.1	\$74,344	\$72,767
Retirees & Beneficiaries	10,159	63.1		49,571	49,480
DROP	1,482	53.6		63,236	62,038
Inactive Vested	1,442	37.6			
	31,519				

**ACTIVE MEMBERS**

**Members in Active Service as of June 30, 2013  
by Years of Service**

Age	Years of Service							Total Count	Total Pay	Average Pay
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Up			
Under 25	297	1						298	\$ 14,452,212	\$48,497
25 - 29	1,034	838						1,872	107,898,911	57,638
30 - 34	757	2,286	374					3,417	225,015,313	65,852
35 - 39	400	1,534	1,521	281				3,736	270,378,576	72,371
40 - 44	212	918	1,390	1,395	163	2		4,080	325,448,028	79,767
45 - 49	144	376	628	1,000	565	146		2,859	240,922,429	84,268
50 - 54	47	178	273	413	315	250	48	1,524	133,178,772	87,388
55 - 59	18	68	95	151	81	66	22	501	41,296,911	82,429
60 - 64	5	17	31	36	15	15	5	124	10,158,144	81,921
65 and over	4	4	4	7	4	2		25	1,860,031	74,401
<b>Total</b>	<b>2,918</b>	<b>6,220</b>	<b>4,316</b>	<b>3,283</b>	<b>1,143</b>	<b>481</b>	<b>75</b>	<b>18,436</b>	<b>\$ 1,370,609,327</b>	<b>\$74,344</b>



**TERMINATED VESTED MEMBERS**

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Age	Years of Service					Total Count
	0 - 4	5 - 9	10 - 14	15 - 19	20 & Up	
Under 30	270	25	1			296
30 - 39	496	127	25	1		649
40 - 44	154	37	27	6	1	225
45 - 49	80	19	21	4		124
50 - 54	52	13	11	10	2	88
55 - 59	17	12	9	2		40
60 - 69	5	4	7	2		18
70 and over	2					2
<b>Total</b>	<b>1,076</b>	<b>237</b>	<b>101</b>	<b>25</b>	<b>3</b>	<b>1,442</b>

**RETIREES AND BENEFICIARIES**

Attained Ages	Males		Females		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 25	1	\$ 18,036	6	\$ 226,767	7	\$ 244,803
25-29	3	96,146	11	502,240	14	598,386
30-34	19	543,233	20	720,480	39	1,263,713
35-39	45	1,536,678	51	2,002,269	96	3,538,947
40-44	140	5,439,654	70	2,919,841	210	8,359,495
45-49	467	20,947,764	128	5,365,682	595	26,313,446
50-54	929	44,781,724	216	9,422,854	1,145	54,204,578
55-59	1,527	80,645,285	258	11,811,788	1,785	92,457,073
60-64	1,858	100,229,542	234	10,362,627	2,092	110,592,169
65-69	1,596	85,109,525	230	10,217,016	1,826	95,326,541
70-74	857	45,046,305	205	8,364,683	1,062	53,410,988
75-79	475	23,330,709	153	6,019,285	628	29,349,994
80-84	281	13,023,566	132	5,121,095	413	18,144,661
85-89	93	3,996,516	87	3,260,433	180	7,256,949
90-94	19	771,863	37	1,353,407	56	2,125,270
95-99	6	231,144	4	133,441	10	364,585
100 and Over	0	0	1	36,693	1	36,693
<b>Totals</b>	<b>8,316</b>	<b>\$425,747,690</b>	<b>1,843</b>	<b>\$77,840,601</b>	<b>10,159</b>	<b>\$503,588,291</b>

Pension Being Paid		Number	Annual Pensions	Average Pensions
Retired Members	Service Pensions	7,444	\$391,491,786	\$52,592
	Disability Pensions	1,410	58,553,496	41,527
Totals		8,854	450,045,282	50,830
Survivors of Members	Spouses	1,252	52,139,469	41,645
	Children with Guardians	53	1,403,540	26,482
Total		1,305	53,543,009	41,029
<b>Total Pension being Paid</b>		<b>10,159</b>	<b>\$503,588,291</b>	<b>\$49,571</b>
		<b>Average Age</b>	<b>Average Service</b>	<b>Average Age at Retirement</b>
Normal retired members		63.5	23.6	51.3
Disability retired members		56.8	14.2	43.8
Spouse beneficiaries		68.2	18.9	44.0

**DROP MEMBERS**

Attained Ages	Males		Females		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	33	\$ 1,502,070	5	\$ 237,903	38	\$ 1,739,973
45-49	257	14,521,555	35	2,013,500	292	16,535,055
50-54	546	36,248,902	54	3,084,498	600	39,333,400
55-59	417	28,159,019	15	759,099	432	28,918,118
60-64	110	6,676,239	5	267,979	115	6,944,218
65 and Over	5	244,268	0	0	5	244,268
<b>Totals</b>	<b>1,368</b>	<b>\$87,352,053</b>	<b>114</b>	<b>\$6,362,979</b>	<b>1,482</b>	<b>\$93,715,032</b>

**PENSIONS BEING PAID  
HISTORICAL SCHEDULE**

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Valuation Date June 30	No.	Annual Pensions	% Incr. in Annual Pensions	Average Pension	Present Value of Pensions	
					Total	Average
2004	7,663	\$ 286,346,220	11.6	\$ 37,367	\$ 2,995,380,537	\$ 390,889
2005	8,160	317,771,553	11.0	38,943	3,607,372,524	442,080
2006	8,720	353,932,939	11.4	40,589	4,028,016,095	461,928
2007	8,958	375,472,203	6.1	41,915	4,266,600,730	476,289
2008	9,422	404,386,274	7.7	42,919	4,404,386,241	467,458
2009	9,653	435,480,427	7.7	45,113	4,513,524,906	467,577
2010	10,047	472,656,961	8.5	47,045	4,863,374,108	484,062
2011	10,941	541,794,019	14.6	49,520	5,648,799,031	516,296
2012	11,298	578,216,439	6.7	51,179	6,218,323,756	550,392
<b>2013</b>	<b>11,641</b>	<b>597,303,323</b>	<b>3.3</b>	<b>51,310</b>	<b>6,505,529,543</b>	<b>558,846</b>

Results prior to 2009 were calculated by the prior actuary. Annual pensions include payments to DROP accounts.

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**SECTION E**  
METHODS AND ASSUMPTIONS

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## VALUATION METHODS

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**Actuarial Cost Method** - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an individual entry-age actuarial cost method having the following characteristics:

- (i) the annual normal costs for each individual active member, payable from the date of hire to the date of retirement, are sufficient to accumulate to the value of the member's benefits.
- (ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

The entry-age actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's compensation between the entry age of the member and the assumed exit ages.

**Actuarial Accrued Liability** - The actuarial accrued liability is the portion of actuarial present value allocated to service rendered prior to the valuation date, including experience gains and losses. The actuarial accrued liability was computed using the assumptions summarized in this report.

**Actuarial Value of System Assets** - The actuarial value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased in over a closed seven year period subject to a 20% corridor. During periods when investment performance exceeds the assumed rate, actuarial value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, the actuarial value of assets will tend to be greater than market value.

**Financing of Unfunded Actuarial Accrued Liabilities** - The actuarial value of assets were subtracted from the computed actuarial accrued liability. Any unfunded amount would be amortized as level percent of payroll over a closed period of 23 years. If the actuarial value of assets exceeded the actuarial accrued liability, the excess was amortized over an open period of 20 years and applied as a credit to reduce the normal cost which otherwise would be payable.

Active member payroll was assumed to increase 4.5% annually for the purpose of computing the amortization payment (credit) as a level percent of payroll.

**VALUATION ASSUMPTIONS**

Beginning with the June 30, 2007 valuation and with each subsequent valuation, if the actuarial value of assets exceeds the actuarial accrued liabilities, one half of this excess in each year is allocated to a Stabilization Reserve. The Stabilization Reserve is excluded from the calculation of the employer contribution rates. The Stabilization Reserve continues to accumulate as long as the plan is over-funded. Once the plan becomes under-funded, the Stabilization Reserve will be used to dampen increases in the employer contribution rates.

*The rate of investment return* was 7.85% a year, compounded annually net of investment and administrative expenses.

The assumed real return is the rate of return in excess of wage growth. Considering other assumptions used in the valuation, the 7.85% nominal rate translates to a net real return over wage growth of 3.35% a year.

*The rates of pay increase* used for individual members are shown below. This assumption is used to project a member’s current pay to the pay upon which System benefits will be based.

Salary Increase Assumptions For An Individual Member									
Sample Ages	Merit & Seniority				Base (Economy)	Increase Next Year			
	Police Large	Police Small	Fire Large	Fire Small		Police Large	Police Small	Fire Large	Fire Small
20	4.00%	4.00%	4.00%	4.00%	4.50%	8.50%	8.50%	8.50%	8.50%
25	3.70%	3.16%	3.70%	3.70%	4.50%	8.20%	7.66%	8.20%	8.20%
30	2.60%	2.12%	2.90%	2.66%	4.50%	7.10%	6.62%	7.40%	7.16%
35	1.22%	1.17%	1.54%	1.32%	4.50%	5.72%	5.67%	6.04%	5.82%
40	0.52%	0.36%	0.48%	0.41%	4.50%	5.02%	4.86%	4.98%	4.91%
45	0.28%	0.10%	0.14%	0.12%	4.50%	4.78%	4.60%	4.64%	4.62%
50	0.14%	0.07%	0.04%	0.07%	4.50%	4.64%	4.57%	4.54%	4.57%
55	0.04%	0.02%	0.00%	0.02%	4.50%	4.54%	4.52%	4.50%	4.52%
60	0.00%	0.00%	0.00%	0.00%	4.50%	4.50%	4.50%	4.50%	4.50%
65	0.00%	0.00%	0.00%	0.00%	4.50%	4.50%	4.50%	4.50%	4.50%
Ref	383	384	385	386	4.50%				

Active member payroll is assumed to grow at 4.5% per year. Although no specific price inflation assumption is required to perform this valuation, since no benefits are linked to prices, a price inflation assumption on the order of 3.0% to 4.0% would be consistent with the other economic assumptions.

**VALUATION ASSUMPTIONS**

*The healthy mortality table* used to evaluate death after retirement in this valuation of the System was the RP 2000 Mortality table projected to 2015 using projection scale AA (adjusted by 105% for males and females). This assumption was first used for the June 30, 2012 valuation of the System and include margin for future improvements in mortality. Sample rates of mortality and years of life expectancy are shown below:

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.17%	0.14%	31.88	33.93
55	0.29	0.25	27.19	29.20
60	0.56	0.49	22.67	24.66
65	1.08	0.95	18.43	20.39
70	1.86	1.63	14.56	16.49
75	3.22	2.62	11.04	12.95
80	5.81	4.34	8.00	9.80
Ref:	397 x 1.05 0 year set forward	398 x 1.05 0 year set forward		

This assumption is used to measure the probabilities of each benefit payment being made after retirement.

*The disabled mortality table* used to evaluate death after retirement in this valuation of the System was the RP 2000 Mortality table projected to 2015 using projection scale AA set forward 10 years for both males and females. This assumption was first used for the June 30, 2012 valuation of the System. Sample rates of mortality and years of life expectancy are shown below:

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.53%	0.47%	23.05	25.08
55	1.03	0.90	18.79	20.80
60	1.77	1.55	14.89	16.86
65	3.06	2.49	11.34	13.29
70	5.54	4.13	8.25	10.09
75	9.97	7.08	5.81	7.35
80	17.27	12.59	4.02	5.30
Ref:	397 x 1.00 10 year set forward	398 x 1.00 10 year set forward		



**VALUATION ASSUMPTIONS**

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For actives, the sample rates of mortality for death-in-service are shown below, and were first used for the June 30, 2012 valuation of the System.

Sample Attained Ages	Probability of Dying Next Year	
	Men	Women
50	0.10%	0.08%
55	0.16	0.14
60	0.32	0.28
65	0.62	0.54
Ref:	397 x 0.60 0 year set back	398 x 0.60 0 year set forward

*The rates of regular retirement* used to measure the probability of eligible members retiring during the next year are shown below. This assumption was first used for the June 30, 2012 valuation of the System.

**Retirement/DROP Rates:** Age-related rates for employees who were hired before January 1, 2012 are shown below:

Age at Retirement	Rates			
	Police Large	Police Small	Fire Large	Fire Small
62	75%	75%	75%	75%
63	60%	60%	60%	60%
64	60%	60%	60%	60%
65	60%	60%	60%	60%
66	60%	60%	60%	60%
67	60%	60%	60%	60%
68	60%	60%	60%	60%
69	60%	60%	60%	60%
70	100%	100%	100%	100%
Ref.	2145	2145	2145	2145

These retirement rates are applicable to employees attaining age 62 before attaining 20 years of service.

**VALUATION ASSUMPTIONS**

Service-related rates for employees who were hired before January 1, 2012 are shown below:

Service at Retirement	Rates			
	Police Large	Police Small	Fire Large	Fire Small
20	25%	37%	14%	20%
21	17%	33%	12%	20%
22	17%	20%	7%	10%
23	10%	13%	7%	10%
24	10%	10%	7%	8%
25	40%	35%	27%	25%
26	40%	35%	30%	25%
27	35%	30%	25%	25%
28	32%	30%	37%	25%
29	32%	30%	37%	25%
30	38%	30%	37%	35%
31	42%	30%	40%	35%
32	75%	75%	50%	35%
33	75%	75%	50%	35%
34	100%	100%	100%	100%
Ref.	2146	2147	2148	2149

These retirement rates are applicable to employees attaining 20 years of service before attaining age 62.

Age-related rates for employees who were hired after January 1, 2012 are shown below:

Age at Retirement	Rates			
	Police Large	Police Small	Fire Large	Fire Small
53	10%	15%	10%	10%
54	10%	10%	10%	10%
55	45%	40%	30%	20%
56	45%	40%	45%	30%
57	45%	30%	30%	30%
58	45%	30%	45%	30%
59	45%	30%	45%	30%
60	50%	30%	45%	45%
61	50%	30%	50%	45%
62	80%	65%	50%	45%
63	80%	65%	50%	45%
64	100%	100%	100%	100%
Ref.	1737	1738	1739	1740

**VALUATION ASSUMPTIONS**

*Rates of separation from active membership* used in the valuation are shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment. This assumption was first used for the June 30, 2012 valuation of the System.

Sample Ages	Service Index	% of Active Members Separating Within Next Year			
		Police Large	Police Small	Fire Large	Fire Small
All	1	16.00%	15.00%	8.50%	7.50%
	2	7.00%	10.00%	2.50%	6.00%
	3	4.00%	9.00%	1.00%	5.00%
	4	3.00%	7.00%	1.00%	5.00%
	5	2.50%	6.00%	1.00%	5.00%
	10	2.00%	5.30%	1.00%	3.00%
	15	0.60%	1.80%	0.10%	1.00%
	20	0.50%	1.80%	0.10%	1.00%
Ref.		757	603	758	605

*Rates of disability* among active members used in the valuation are shown below, and were first used for the June 30, 2012 valuation of the System.

Sample Ages	% of Active Members Becoming Disabled Within Next Year			
	Police Large	Police Small	Fire Large	Fire Small
20	0.08%	0.12%	0.02%	0.03%
25	0.08%	0.12%	0.02%	0.03%
30	0.17%	0.23%	0.04%	0.03%
35	0.22%	0.28%	0.09%	0.07%
40	0.36%	0.46%	0.16%	0.16%
45	0.51%	0.63%	0.16%	0.44%
50	0.78%	1.60%	0.40%	0.60%
55	1.02%	1.60%	0.93%	1.04%
Ref.	588	589	590	591
	80%	80%	80%	80%

**SUMMARY OF ASSUMPTIONS USED  
JUNE 30, 2013**

**MISCELLANEOUS AND TECHNICAL ASSUMPTIONS**

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<b>Marriage Assumption:</b>	85% of males and females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
<b>Pay Increase Timing:</b>	Six months after the valuation date. This means that the pays received are assumed to be annual rates of pay on the valuation date as opposed to W-2 type earnings for the prior 12 months.
<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year.
<b>Eligibility Testing:</b>	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.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Decrement Operation:</b>	Disability and turnover decrements do not operate during retirement eligibility.
<b>Service Credit Accruals:</b>	It is assumed that members accrue one year of service credit per year.
<b>Incidence of Contributions:</b>	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.
<b>Normal Form of Benefit:</b>	A straight life payment is the assumed normal form of benefit for members who are not married, and the 80% Joint and Survivor form of payment with no reduction, for married members. 85% of members are assumed to be married at time of retirement.
<b>Benefit Service:</b>	Exact fractional service is used to determine the amount of benefit payable.
<b>Health Care Utilization:</b>	75% of future retirees are expected to utilize retiree health care. 85% of those are assumed to be married.
<b>Future Cost of Living Increases:</b>	Future cost of living increases are not reflected in the liabilities. The 2012 Experience Study recommended reducing the expected rate of return by approximately 0.5% to account for this contingency.

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**SECTION F**  
PLAN PROVISIONS

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**SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED**

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**Membership:** Persons who are employed in an eligible group, prior to attaining age 50 years, for at least 40 hours a week for more than six months per year.

**Average Monthly Compensation:** One-thirty-sixth of total compensation paid to member during the three years, out of the last 20 years of credited service, in which the amount paid was highest. Compensation is the amount including base salary, overtime pay, shift differential pay and holiday pay, paid to an employee on a regular payroll basis and longevity pay paid at least every six months for which contributions are made to the System.

**Normal Retirement:** First day of month following completion of 20 years of service or following 62<sup>nd</sup> birthday and completion of 15 years of service.

The amount of monthly normal pension is based on credited service and average monthly compensation as follows:

- **For retirement with 25 or more years of credited service,** 50% of average monthly compensation for the first 20 years of credited service, plus 2-1/2% of average monthly compensation for each year of credited service above 20 years.
- **For retirement with 20 years of credited service but less than 25 years of credited service,** 50% of average monthly compensation for the first 20 years of credited service, plus 2% of average monthly compensation for each year of credited service between 20 and 25 years.
- **For retirement with less than 20 years of credited service,** the percent of average monthly compensation is reduced at a rate of 4% for each year less than 20 years.

The maximum amount payable as a normal retirement pension is 80% of the average monthly compensation.

**Vested Termination (deferred retirement):** Termination of covered position employment with 10 or more years of credited service. Pension is equal to twice the amount of pension based on the member's accumulated contributions with payments commencing at age 62. Benefit is forfeited if accumulated contributions are refunded. The following schedule shows additional money which would be payable to members who receive a refund of their accumulated member contributions.

<u>Years of Credited Service</u>	<u>Additional Monies (% of Contributions)</u>
0-4	0%
5-6	25-40
7-8	55-70
9-10	85-100

**Ordinary Disability Retirement (not duty-related):** Physical condition which totally and permanently prevents performance of a reasonable range of duties or a mental condition which totally and permanently prevents any substantial gainful employment. The amount of pension is a percentage of normal pension, as follows:

<u>Credited Service</u>	<u>Additional Monies (% of Contributions)</u>
Less than 7 years	25%
7-13 years	50%
14-19 years	75%

**Accidental Disability Retirement (duty-related):** Total and presumably permanent disability, incurred in performance of duty, preventing performance of a reasonable range of duties within the employee’s job classification. No credited service requirement. Pension is computed in the same manner as normal pension based on credited service and average monthly compensation at time of termination of employment. Pension is 50% of average monthly compensation, or normal pension amount, whichever is greater.

**Offset of Ordinary Disability Retirement before the member’s normal retirement date:** The pension is reduced if the retiree engages in any employment and the income from this employment is greater than the retiree’s pension. The reduction is equal to the difference between the retiree’s income from employment and the retiree’s pension.

**Temporary Disability:** Termination of employment prior to normal retirement eligibility by reason of temporary disability. Pension is 1/12 of 50% of compensation during the year preceding the date disability was incurred. Payments terminate after 12 months of prior recovery.

**Catastrophic Disability:** Pension is 90% of average monthly compensation. After 60 months, the pension is the greater of 62.5% of average monthly compensation or the member’s accrued normal pension.

**Survivor Pension:** Death while a member is employed by an employer, or death after retirement. No credited service requirement.

**Spouse Pension:** 80% of pension deceased active member would have been paid for accidental disability retirement or, in the case of retired member, 80% of the retired member’s pension. Requires two years of marriage. Terminates upon death. For member killed in line of duty, 100% of average compensation, reduced by child’s pension.

**Child’s Pension:** 20% of the pension each month based on the calculation for an accidental disability retirement. Payable to a dependent child under age 18 (age 23 if a full-time student).

**Guardian’s Pension:** Same amount as spouse’s pension. Payable only during periods no spouse is being paid and there is at least one child under age 18 (age 23 if a full time student). 80% of the member’s pension and the child’s pension will be paid to the guardian.

**Other Termination of Employment:** Member is paid his/her accumulated contributions.

**Post-Retirement Adjustments:** Effective July 1 of each year, each retired member or survivor of a retired member may be entitled to a permanent benefit increase in his base benefit. The maximum amount of the increase is four percent (4%) of the average normal PSPRS benefit being received on the preceding June 30 and is contingent upon sufficient excess investment earnings for the fund. To be eligible for the increase the member or survivor must be age 55 or older on July 1 of the current year and began receiving benefits on or before July 31 of the previous year. A member or survivor is also eligible if he began receiving benefits on or before July 31 of the two previous years regardless of age.

Prior to July 1, 2013 a COLA reserve is maintained and used to pay for the post-retirement adjustment. The investment return on the COLA reserve is the same as the return on the market value of assets (whether the return is positive or negative). Additional amounts are added to the COLA reserve in years when the investment return on the market value of assets exceeds 9.0%. Each year the present value of that year’s post-retirement adjustment is subtracted from the COLA reserve. A post-retirement adjustment is paid as long as there is a positive balance in the COLA reserve.

**Post-Retirement Health Insurance Subsidy:** Payable on behalf of retired members and survivors who elect coverage provided by the state or participating employer. The monthly amounts cannot exceed:

Member Only		With Dependents		
Not Medicare Eligible	Medicare Eligible	All Not Medicare Eligible	All Medicare Eligible	One With Medicare
\$150	\$100	\$260	\$170	\$215

**Deferred Retirement Option Plan (DROP):** A member with 20 or more years of credited service under the System may enter into the DROP program with his employer. Under the DROP program, the member must voluntarily and irrevocably elect to enter into the program with his employer for a period of up to 60 months. During the DROP period, the member remains in the employ of the employer as a full-time paid firefighter or full-time paid certified Peace officer but no member or employer contributions are made to the System, therefore no additional years of credited service are accrued on the member’s behalf. The member’s monthly pension is calculated based upon the years of credited service and average monthly compensation at the beginning of the DROP period. This monthly pension amount is credited to a DROP participation account with interest at the rate of 8.5% annually, but credited monthly to the account. The interest rate credited to the DROP account is 8.25% for the fiscal year beginning July 1, 2010, 8.0% for the fiscal year beginning July 1, 2011 and 7.85% for the fiscal year beginning July 1, 2012.



At the end of the DROP period or prior to that time if the member terminates employment, the monies in the DROP participation account will be either paid to the member in a lump-sum amount or paid in a lump-sum distribution to an eligible retirement plan or individual retirement account. The member will then begin receiving the monthly pension amount directly from the System in the same amount as was being credited to the DROP participation account.

**Reverse DROP:** Expired effective July 1, 2010.

**Member Contributions:** See below under “Existing Members”, the first bullet.

**Employer Contributions:** Percent of payroll normal cost plus 30 year (25 years remaining as of June 30, 2011) amortization of unfunded actuarial accrued liability (20 year amortization for credit). The statutory minimum is 8% of payroll (5% of payroll if the actual employer contribution rate is less than 5% for the 2006/2007 fiscal year).

### **Changes in Plan Provisions for Existing Members and New Hires Effective January 1, 2012**

#### ***Existing Members***

- Member contribution rates are shown in the schedule below. Additional member contributions DO NOT reduce the employer contribution. This means there is a “maintenance of effort” provision
  1. FY 2010-2011 – 7.65%
  2. FY 2011-2012 – 8.65%
  3. FY 2012-2013 – 9.55%
  4. FY 2013-2014 – 10.35%
  5. FY 2014-2015 – 11.05%
  6. FY 2015-2016 and after: 11.65% or a 33.3%/66.7% split between the employee and the employer, whichever is lower; minimum employee contribution rate is 7.65%
- Employer will contribute to the System when members retire and return to work
- DROP
  - Members who have at least 20 years of service on or after January 1, 2012 – no change in the DROP
  - Members with less than 20 years of service on or after January 1, 2012
    - a. Can still elect DROP
    - b. Interest credited on DROP account is the average return on the actuarial value of assets, with a minimum of 2% and a maximum equal to the actuarial assumed earnings rate. The interest rate credited to the DROP account is 3.80% for the fiscal year beginning July 1, 2012 and 3.20% for the fiscal year that starts July 1, 2013.
    - c. Members in the DROP contributed to the Retirement System; contributions are not refundable

#### ***New Hires on or after January 1, 2012***

**Average Monthly Compensation:** One- sixtieth of total compensation paid to member during the five years, out of the last 20 years of credited service, in which the amount paid was highest. Compensation is the amount including base salary, overtime pay, shift differential pay and holiday pay, paid to an employee on a regular payroll basis and longevity pay paid at least every six months for which contributions are made to the System.

**Normal Retirement:** First day of month following the attainment of age 52.5 and completion of 25 years of service.

The amount of monthly normal pension is based on credited service and average monthly compensation as follows:

- **For retirement with 25 years of credited service,** 62.5% of average monthly compensation.
- **For retirement with less than 25 years of credited service,** the monthly benefit is reduced at a rate of 4% for each year less than 25 years of service.
- **For retirement with more than 25 years of credited service,** the monthly benefit is increased by 2.5% of the average monthly compensation multiplied by the numbers of years greater than 25 years.

The maximum amount payable as a normal retirement pension is 80% of the average monthly compensation.

- If ceases to hold office for any reason other than death or retirement, member can withdraw their accumulated contributions less any benefit payments already received or any amount the member owes the plan (no employer match of refund contributions) with interest at rate set by Board
- Member contribution rates are shown in the schedule below. Additional member contributions DO NOT reduce the employer contribution, this means there is a “maintenance of effort” provision
  1. FY 2011-2012 – 8.65%
  2. FY 2012-2013 – 9.55%
  3. FY 2013-2014 – 10.35%
  4. FY 2014-2015 – 11.05%
  5. FY 2015-2016 and after: 11.65% or a 33.3%/66.7% split between the employee and the employer, whichever is lower; minimum employee contribution rate is 7.65%
- Employer will contribute to System when members retire and return to work
- No DROP

**Existing Members and New Hires**

- COLA provision – effective July 1, 2013
  - Effective May 31, 2011 no more excess investment earnings will be transferred to the current COLA reserve. Any remaining COLA reserve will be used to pay future COLA increases until the COLA reserve is depleted.

- A COLA is only paid in a year when the return on the market value of assets exceeds 10.5% and the plan is at least 60% funded. 100% of the excess earnings is used to determine whether a COLA can be paid and the size of the COLA for that year.
- No COLA reserve accumulates. The present value of that year's COLA for eligible retirees cannot exceed 100% of the earnings in excess of 10.5%. If the excess earnings is high enough to exceed the present value of that year's COLA, the excess stays in the fund.
- To be eligible for an increase the retiree or the survivor must be:
  - In the case of a retired member who became a member of the plan before January 1, 2012, the retired member or survivor was receiving benefits on or before July 31 of the two previous years or
  - In the case of a retired member who became a member of the plan before January 1, 2012, the retired member or survivor was 55 or older on July 1 of the current year and was receiving benefits on or before July 31 of the previous year
  - In the case of a retired member who became a member of the plan on or after January 1, 2012, the retired member or survivor was at least 55 or older on July 1 and receiving benefits
  - In the case of a retired member who became a member of the plan on or after January 1, 2012, if under 55 on July 1, was receiving accidental disability benefits for the preceding 2 years
  - In the case of a member who became a member of the plan on or after January 1, 2012, if the survivor is under 55 on July 1, is the survivor of the member who was killed in the line of duty, and has been receiving a survivor benefits for the preceding 2 years
- The amount of the COLA to be paid is determined as follows:
  - Funded ratio is 60-64%, COLA is 2%
  - Funded ratio is 65-69%, COLA is 2.5%
  - Funded ratio is 70-74%, COLA is 3%
  - Funded ratio is 75-79%, COLA is 3.5%
  - Funded ratio is 80% or more, COLA is 4%

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**SECTION G**

**GLOSSARY**

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<b><i>Actuarial Accrued Liability</i></b>	The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as “accrued liability” or “past service liability”.
<b><i>Accrued Service</i></b>	The service credited under the plan which was rendered before the date of the actuarial valuation.
<b><i>Actuarial Assumptions</i></b>	Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
<b><i>Actuarial Cost Method</i></b>	A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future plan benefits” between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method”.
<b><i>Actuarial Equivalent</i></b>	A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.
<b><i>Actuarial Present Value</i></b>	The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.
<b><i>Amortization</i></b>	Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.
<b><i>Experience Gain/(Loss)</i></b>	A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.
<b><i>Normal Cost</i></b>	The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost.” Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

<b><i>Reserve Account</i></b>	An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses.
<b><i>Unfunded Actuarial Accrued Liability</i></b>	The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability”.
<b><i>Valuation Assets</i></b>	The value of current plan assets recognized for valuation purposes. Generally based on market value plus a portion of unrealized appreciation or depreciation.

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## **APPENDIX I**

### **ACCOUNTING DISCLOSURES**

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**This information is presented in draft form for review by the System's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the System's financial statements.**

**GASB STATEMENT NO. 25 SUPPLEMENTARY INFORMATION**

**SCHEDULE OF FUNDING PROGRESS  
(EXCLUDING HEALTH INSURANCE SUBSIDY BEGINNING JUNE 30, 2008)  
SCHEDULE OF FUNDING PROGRESS**

<b>Year Ended June 30</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded AAL (UAAL) (b)-(a)</b>	<b>Funded Ratio (a)/(b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percent of Covered Payroll [(b)-(a)]/(c)</b>
2004	\$ 4,774,312,978	\$ 5,167,332,630	\$ 393,019,652	92.4 %	\$ 911,718,122	43.1 %
2005	4,886,962,635	5,951,937,046	1,064,974,411	82.1 %	974,862,717	109.2 %
2006	4,999,911,405	6,495,012,333	1,495,100,928	77.0 %	1,073,685,222	139.2 %
2007	4,829,521,186	7,268,291,485	2,438,770,299	66.4 %	1,228,037,467	198.6 %
2008	5,095,645,042	7,405,397,175	2,309,752,133	68.8 %	1,383,332,020	167.0 %
2009	5,445,497,208	7,778,394,070	2,332,896,862	70.0 %	1,415,642,509	164.8 %
2010	5,591,303,990	8,255,185,021	2,663,881,031	67.7 %	1,400,543,761	190.2 %
2011	5,795,944,673	9,094,447,076	3,298,502,403	63.7 %	1,325,349,817	248.9 %
2012	6,051,595,012	10,054,752,250	4,003,157,238	60.2 %	1,349,251,544	296.7 %
<b>2013</b>	<b>6,185,073,611</b>	<b>10,544,353,313</b>	<b>4,359,279,702</b>	<b>58.7 %</b>	<b>1,370,609,327</b>	<b>318.1 %</b>

Results prior to 2009 were calculated by the prior actuary.



**GASB STATEMENT NO. 25 SUPPLEMENTARY INFORMATION**

**SCHEDULE OF EMPLOYER CONTRIBUTIONS**

<b>Fiscal Year Ended June 30</b>	<b>Annual Required Contribution</b>
2001	\$ 51,391,526
2002	51,983,407
2003	50,800,669
2004	79,000,130
2005	104,497,150
2006	127,218,686
2007	177,587,507
2008	233,556,049
2009	328,436,309
2010	300,707,126
2011	308,826,519 (est.)
2012	331,409,431 (est.)
2013	375,527,931 (est.)
2014	432,133,225 (est.)
2015	464,438,313 (est.)

Fiscal Years prior to 2011 provided by the prior actuary.

Beginning with the 2011 fiscal year, this schedule shows the estimated annual required contribution (calculated based on recommended contribution rate and the projected payroll for the fiscal year). Actual amounts reported in the employer's financial statements may be different, due to differences between the projected payroll and the actual payroll during the fiscal year.

**GASB STATEMENT NO. 25 SUPPLEMENTARY INFORMATION**

**SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS**

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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:

Valuation date	June 30, 2013
Actuarial cost method	Entry Age Normal
Amortization method	Level percent-of-pay closed
Remaining amortization period	23 years
Asset valuation method	7-year smoothed market 80%/120% market
Actuarial assumptions:	
Investment rate of return	7.85%
Projected salary increases	4.5% - 8.5%
Payroll growth	4.5%
Cost-of-living adjustments	None

**GASB STATEMENT NO. 45 SUPPLEMENTARY INFORMATION**

The following information is presented concerning the post-retirement health insurance subsidy. The liabilities and computed contribution for the post-retirement health insurance subsidy were based on the same assumptions and actuarial cost methods as indicated for GASB Statement No. 25. Although segregated assets for the health insurance subsidy have not been available historically, it is our understanding that they will be made available beginning with the June 30, 2014 actuarial valuation.

**SCHEDULE OF FUNDING PROGRESS**

<b>Valuation Date</b> <b>June 30</b>	<b>Actuarial Value of Assets</b> <b>(a)</b>	<b>Actuarial Accrued Liability (AAL)</b> <b>(b)</b>	<b>Unfunded AAL (UAAL)</b> <b>(b-a)</b>	<b>Funded Ratio</b> <b>(a/b)</b>	<b>Annual Covered Payroll</b> <b>(c)</b>	<b>UAAL as a % of Covered Payroll</b> <b>((b-a)/c)</b>
2006	\$0	\$232,878,379	\$232,878,379	0.00%	\$1,073,685,222	21.69%
2007	0	256,905,578	256,905,578	0.00	1,228,037,467	20.92%
2008	0	257,381,466	257,381,466	0.00	1,383,332,020	18.61%
2009	0	211,056,746	211,056,746	0.00	1,415,642,509	14.91%
2010	0	236,637,370	236,637,370	0.00	1,400,543,761	16.90%
2011	0	270,813,801	270,813,801	0.00	1,325,349,817	20.43%
2012	0	270,777,736	270,777,736	0.00	1,349,251,544	20.07%
<b>2013</b>	<b>0</b>	<b>279,186,592</b>	<b>279,186,592</b>	<b>0.00</b>	<b>1,370,609,327</b>	<b>20.37%</b>

**ANNUAL REQUIRED CONTRIBUTION**

<b>Valuation Date June 30</b>	<b>Fiscal Year Ended June 30</b>	<b>Normal Cost (a)</b>	<b>Actuarial Accrued Liability (b)</b>	<b>Total (a+b)</b>	<b>Dollar Amount</b>
2005	2007	0.53%	1.17%	1.70%	\$21,797,745
2006	2008	0.51%	1.00%	1.51%	20,888,314
2007	2009	0.58%	0.98%	1.56%	22,084,023
2008	2010	0.51%	0.89%	1.40%	19,607,613
2009	2011	0.57%	0.72%	1.29%	20,325,827
2010	2012	0.57%	0.85%	1.42%	22,135,531
2011	2013	0.38%	1.10%	1.48%	21,625,733
2012	2014	0.33%	1.06%	1.39%	20,676,943
<b>2013</b>	<b>2015</b>	<b>0.34%</b>	<b>1.17%</b>	<b>1.51%</b>	<b>22,600,769</b>

Fiscal Years prior to 2011 provided by the prior actuary.

**Health Insurance Subsidy Payment Reported for FY 2013: \$13,383,444**

Note: GASB Statement No. 45 Supplementary Information is shown individually in the separate reports for each participating unit.

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## **APPENDIX II**

### SUMMARY OF POPULATION DATA BY INDIVIDUAL EMPLOYERS

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# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	Number of Actives	Active Payroll	Number of Retirees	Annual Retiree Benefits	Number of DROP	Annual DROP Benefits	Number of Vested Inactive	Annual Vested Benefits
1	BISBEE FIRE DEPT.	17	\$ 798,782	21	\$ 755,506	1	\$ 33,743	7	\$ 164,841
2	CASA GRANDE FIRE DEPT.	54	4,231,402	17	847,388	1	47,298	2	47,952
3	CASA GRANDE POLICE DEPT.	72	5,248,916	41	1,770,142	4	224,403	3	5,785
4	CHANDLER FIRE DEPT.	188	15,395,116	47	2,578,178	14	1,120,311	1	608
5	CHANDLER POLICE DEPT.	292	23,985,615	85	4,324,394	30	1,963,347	6	299,834
6	CLIFTON FIRE DEPT.	-	-	1	27,665	-	-	-	-
7	DEPT. OF PUBLIC SAFETY	926	63,191,273	1,175	56,490,553	141	8,247,964	37	1,123,167
8	DOUGLAS FIRE DEPT.	25	1,409,268	23	884,718	-	-	4	11,665
9	DOUGLAS POLICE DEPT.	31	2,047,135	28	1,032,193	1	37,375	3	57,325
10	FLAGSTAFF FIRE DEPT.	71	4,613,508	76	3,442,979	11	585,451	2	1,365
11	FLAGSTAFF POLICE DEPT.	110	6,928,981	65	3,079,196	1	32,019	19	263,433
12	GLENDALE FIRE DEPT.	212	18,547,600	79	4,239,748	17	1,344,783	4	74,359
13	GLENDALE POLICE DEPT.	360	28,335,867	162	8,053,201	25	1,611,473	16	289,092
14	GLOBE FIRE DEPT.	18	884,920	11	420,745	1	37,949	-	-
15	KINGMAN FIRE DEPT.	45	2,663,020	16	711,181	5	270,672	-	-
16	MARICOPA COUNTY SHERIFF'S OFFICE	594	36,253,259	416	19,110,724	48	2,615,178	22	703,498
17	MESA FIRE DEPT.	345	31,008,317	194	11,083,793	47	3,149,897	10	335,070
18	MESA POLICE DEPT.	696	60,096,603	416	21,713,682	64	3,585,198	28	313,220
19	MIAMI FIRE DEPT.	-	-	-	-	-	-	-	-
20	NOGALES FIRE DEPT.	45	2,350,157	17	638,114	1	43,802	-	-
21	PHOENIX FIRE DEPT.	1,391	127,635,938	929	55,298,097	196	15,701,129	15	618,964
22	PHOENIX POLICE DEPT.	2,673	240,805,736	1,914	107,091,273	272	19,938,072	229	2,582,415
23	PRESCOTT FIRE DEPT.	49	3,252,687	53	2,694,439	7	337,035	8	210,850
24	PRESCOTT POLICE DEPT.	67	3,995,530	58	2,580,375	2	112,244	3	185,657
25	SCOTTSDALE POLICE DEPT.	382	30,600,630	193	9,721,942	26	1,795,987	47	1,201,047
26	SIERRA VISTA FIRE DEPT.	46	2,825,891	19	918,333	4	252,602	2	985
27	TEMPE FIRE DEPT.	132	12,538,385	109	5,770,115	21	1,691,738	5	39,863
28	TEMPE POLICE DEPT.	313	28,346,961	207	10,763,509	22	1,354,095	26	529,405
29	TUCSON FIRE	511	34,904,848	501	25,050,011	96	4,962,525	9	47,166
30	TUCSON POLICE	856	57,032,297	815	38,594,908	105	6,127,179	43	632,179
31	WINSLOW FIRE DEPT.	5	294,289	3	167,154	-	-	-	-
32	YUMA FIRE DEPT.	108	7,295,392	74	3,443,315	7	336,171	-	-
33	YUMA POLICE DEPT.	164	10,013,175	100	4,310,047	5	266,062	18	234,657
34	YUMA COUNTY SHERIFF'S DEPT.	77	4,731,347	37	1,462,911	3	128,501	9	113,562
35	GAME AND FISH DEPT.	123	6,480,230	141	6,111,640	11	473,470	5	33,225
36	SIERRA VISTA POLICE DEPT.	66	4,475,266	32	1,649,119	1	87,873	6	57,258
37	BENSON POLICE DEPT.	14	785,494	4	162,205	-	-	1	43,506
38	BISBEE POLICE DEPT.	12	649,299	14	525,831	1	47,643	2	27,590
39	PIMA COUNTY SHERIFF'S DEPT.	487	30,767,865	346	15,248,021	38	2,067,127	55	384,169
40	KINGMAN POLICE DEPT.	51	2,838,418	22	996,988	2	69,815	6	99,312
41	ASU CAMPUS POLICE	61	3,685,045	34	1,499,999	1	56,017	13	46,748
42	LAKE HAVASU CITY FIRE DEPT.	74	4,751,588	41	1,904,696	5	340,331	4	71,174
43	MOHAVE COUNTY SHERIFF'S DEPT.	77	4,346,341	37	1,455,727	9	477,170	14	229,521
44	BULLHEAD CITY FIRE DEPT.	71	5,298,746	16	666,599	10	552,588	1	4,213
45	U OF A CAMPUS POLICE	55	3,430,561	24	894,690	3	182,682	10	138,489
46	COCHISE COUNTY SHERIFF'S DEPT.	76	4,425,898	64	2,482,202	1	38,951	18	132,388
47	SAFFORD POLICE DEPT.	16	1,061,331	12	466,095	4	199,987	-	-
49	DREXEL HEIGHTS FIRE DISTRICT	78	4,473,922	14	483,992	6	303,737	13	429,107
50	WINSLOW POLICE DEPT.	19	1,078,727	7	271,189	3	134,971	4	128,573
51	PAYSON FIRE DEPT.	30	1,714,959	7	320,924	1	66,520	1	51,332

# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	Number of Actives	Active Payroll	Number of Retirees	Annual Retiree Benefits	Number of DROP	Annual DROP Benefits	Number of Vested Inactive	Annual Vested Benefits
52	PAYSON POLICE DEPT.	25	\$ 1,588,546	20	\$ 824,630	-	\$ -	6	\$ 75,509
53	NORTHERN AZ. CONSOLIDATED FIRE DISTRICT	29	1,280,765	4	169,425	2	99,025	15	141,422
54	FRY FIRE DISTRICT	37	2,582,032	19	936,625	-	-	4	356,607
55	FREDONIA MARSHALS	3	127,252	1	28,875	-	-	1	7,159
56	NAU CAMPUS POLICE	16	976,897	11	502,401	1	29,212	3	96,193
58	SOUTH TUCSON FIRE DEPT.	3	160,581	5	170,440	-	-	4	98,733
59	AVONDALE FIRE DEPT.	53	4,255,000	7	343,421	1	52,332	2	5,302
60	PARKER POLICE DEPT.	11	576,548	3	111,325	-	-	5	125,379
61	COCONINO COUNTY SHERIFF'S DEPT.	50	2,805,923	50	2,220,169	4	163,811	9	145,932
62	CENTRAL YAVAPAI FIRE DISTRICT	74	5,426,031	27	1,451,173	9	538,431	2	86,869
64	BUCKSKIN FIRE DISTRICT	11	708,056	8	317,645	-	-	4	109,060
65	SNOWFLAKE POLICE DEPT.	15	724,838	6	211,209	-	-	-	-
66	COTTONWOOD POLICE DEPT.	31	1,846,933	14	531,835	1	53,805	5	45,933
67	LAKE HAVASU CITY POLICE DEPT.	68	4,423,351	37	1,669,056	10	511,741	9	231,054
69	SOUTH TUCSON POLICE DEPT.	14	626,179	16	574,118	-	-	2	5,508
70	APACHE JUNCTION POLICE DEPT.	47	3,032,150	32	1,393,853	6	260,837	9	129,732
71	NAVAJO COUNTY SHERIFF'S DEPT.	49	2,232,165	30	1,105,775	-	-	11	67,944
72	MOHAVE VALLEY FIRE DISTRICT	34	1,895,587	2	96,825	-	-	5	51,774
73	PEORIA FIRE DEPT.	139	10,431,141	22	1,057,749	9	590,739	2	7,102
74	PEORIA POLICE DEPT.	165	13,250,689	59	2,730,954	18	987,056	16	101,489
76	PARADISE VALLEY POLICE DEPT.	23	1,848,061	33	1,503,318	4	250,248	1	8,656
77	WILLCOX POLICE DEPT.	9	460,761	7	244,792	-	-	-	-
78	SHOW LOW POLICE DEPT.	28	1,753,529	12	465,267	-	-	2	55,819
79	ELOY POLICE DEPT.	28	1,747,297	7	271,856	2	87,129	6	180,879
80	NOGALES POLICE DEPT.	52	3,090,619	21	744,887	-	-	7	172,522
81	GILBERT POLICE DEPT.	218	17,167,856	37	1,766,140	5	299,451	25	317,412
83	CLIFTON POLICE DEPT.	4	228,560	1	27,053	-	-	4	42,921
85	COOLIDGE POLICE DEPT.	27	1,455,443	11	380,463	4	181,297	3	92,044
86	HOLBROOK POLICE DEPT.	15	681,557	11	395,128	-	-	1	7,547
87	SANTA CRUZ COUNTY SHERIFF'S DEPT.	36	2,050,941	15	580,642	1	36,835	9	116,919
88	PRESOTT VALLEY POLICE DEPT.	61	3,774,794	12	483,751	1	46,654	8	269,828
89	EAGAR POLICE DEPT.	7	361,778	4	142,196	1	50,862	1	4,188
90	TOLLESON POLICE DEPT.	29	1,940,205	8	337,514	-	-	1	3,086
91	FLORENCE POLICE DEPT.	28	1,603,691	5	159,121	-	-	2	64,879
92	SPRINGVILLE POLICE DEPT.	5	284,501	3	89,614	-	-	-	-
93	EL MIRAGE POLICE DEPT.	36	2,726,506	9	343,419	-	-	8	43,359
94	SUPERIOR POLICE DEPT.	5	213,242	2	62,439	-	-	3	78,648
95	SAN LUIS POLICE DEPT.	30	1,487,720	5	217,640	-	-	4	26,707
96	PAGE POLICE DEPT.	19	1,116,130	7	296,171	-	-	6	328,352
97	PAGE FIRE DEPT.	14	764,833	2	72,398	-	-	7	215,630
98	YAVAPAI COUNTY SHERIFF'S DEPT.	118	6,514,365	60	2,285,116	4	186,960	26	288,447
100	PIMA POLICE DEPT.	3	129,320	-	-	-	-	2	10,501
101	APACHE COUNTY SHERIFF'S DEPT.	29	1,415,761	21	760,775	-	-	6	67,041
102	COTTONWOOD FIRE DEPT.	26	1,546,338	3	122,757	-	-	1	14,556
103	LA PAZ COUNTY SHERIFF'S DEPT.	25	1,380,267	19	736,938	2	73,169	3	72,840
104	PINAL COUNTY SHERIFF'S DEPT.	208	12,959,859	85	3,227,567	4	160,629	21	588,615
105	CLARKDALE POLICE DEPT.	7	346,915	5	133,441	-	-	1	6,169
106	BUCKEYE POLICE DEPT.	74	5,090,979	14	613,650	-	-	8	54,213
107	MARANA POLICE DEPT.	72	4,498,048	18	689,000	1	31,010	15	143,689
108	TOLLESON FIRE DEPT.	27	2,149,081	4	177,902	2	93,741	3	6,184

# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	Number of Actives	Active Payroll	Number of Retirees	Annual Retiree Benefits	Number of DROP	Annual DROP Benefits	Number of Vested Inactive	Annual Vested Benefits
109	CHINO VALLEY POLICE DEPT.	21	\$ 1,163,976	6	\$ 239,526	1	\$ 31,173	-	\$ -
110	SURPRISE POLICE DEPT.	117	7,998,905	16	646,882	6	355,414	15	196,742
111	WELLTON POLICE DEPT.	6	322,347	2	68,371	-	-	2	27,309
112	GILA COUNTY SHERIFF'S DEPT.	37	1,884,079	26	798,756	4	117,509	9	146,211
113	PINETOP-LAKESIDE POLICE DEPT.	11	601,562	10	346,657	-	-	4	143,979
114	BULLHEAD CITY POLICE DEPT.	69	4,702,408	31	1,276,452	5	287,350	2	3,035
115	WILLIAMS POLICE DEPT.	10	499,591	5	110,849	-	-	4	24,179
116	MIAMI POLICE DEPT.	3	151,462	2	64,364	-	-	2	19,914
117	THATCHER POLICE DEPT.	11	706,206	7	255,312	-	-	-	-
118	YOUNGTOWN POLICE DEPT.	1	57,322	3	101,802	-	-	5	177,680
119	DEPT. OF EMER & MILITARY AFF	43	2,272,795	15	565,150	2	64,456	7	78,647
120	SURPRISE FIRE DEPT.	104	8,419,235	4	197,328	4	275,324	2	21,593
121	CAMP VERDE MARSHALS	14	706,486	7	257,106	-	-	3	31,658
122	ORO VALLEY POLICE DEPT.	91	6,048,143	22	840,340	2	131,454	9	236,195
123	GREENLEE COUNTY SHERIFF'S DEPT.	14	764,569	4	138,610	-	-	3	15,101
124	TUCSON AIRPORT AUTHORITY FIRE DEPT.	16	1,107,139	16	789,660	1	43,994	2	15,715
125	TUCSON AIRPORT AUTHORITY POLICE DEPT.	19	1,373,259	17	760,066	2	75,503	2	6,247
126	WICKENBURG POLICE DEPT.	17	970,576	6	232,689	-	-	3	107,460
127	EL MIRAGE FIRE DEPT.	23	1,622,055	2	93,663	-	-	2	135,402
128	PATAGONIA MARSHALS	1	51,965	2	65,987	-	-	3	74,226
129	SEDONA POLICE DEPT.	20	1,204,424	8	352,092	1	47,773	6	194,444
130	MAMMOTH POLICE DEPT.	4	143,296	1	14,958	-	-	7	50,836
131	GLOBE POLICE DEPT.	23	1,096,682	13	467,576	1	26,974	3	86,235
132	TOMBSTONE MARSHALS	4	159,723	-	-	-	-	5	167,443
133	GOLDER RANCH FIRE DISTRICT	123	8,435,384	7	246,708	6	297,463	3	25,241
134	FORT MOJAVE MESA FIRE DISTRICT	27	2,030,748	10	443,466	1	46,093	6	151,342
136	GOODYEAR FIRE DEPT.	89	7,232,073	1	50,154	2	163,127	1	119,962
137	GOODYEAR POLICE DEPT.	89	6,582,586	15	707,296	2	92,594	6	329,524
138	CHINO VALLEY FIRE DISTRICT	31	2,000,148	4	216,643	3	135,829	-	-
139	A VONDALE POLICE DEPT.	104	7,009,002	20	845,273	1	38,006	21	187,161
140	GRAHAM COUNTY SHERIFF'S DEPT.	20	1,031,637	6	174,485	1	47,935	2	49,993
142	GOLDEN VALLEY FIRE DISTRICT	26	1,473,406	4	146,882	-	-	3	12,831
143	DAISY MOUNTAIN FIRE DISTRICT	83	6,551,303	2	102,740	-	-	3	44,800
144	QUARTZSITE POLICE DEPT.	10	582,504	2	70,287	-	-	2	12,361
145	PICTURE ROCKS FIRE DISTRICT	17	856,591	8	216,738	-	-	6	118,193
146	PIMA COUNTY COMM. COLLEGE POLICE	26	1,485,664	13	466,215	-	-	7	6,732
147	NORTHWEST FIRE DISTRICT	174	13,533,966	19	916,513	10	453,752	6	32,372
148	APACHE JUNCTION FIRE DISTRICT	79	6,201,982	11	508,675	3	144,265	3	180,424
149	GILBERT FIRE DEPT.	172	13,278,222	3	135,614	5	276,817	2	27,191
150	PINE-STRAWBERRY FIRE DISTRICT	17	1,149,493	4	164,156	2	92,979	1	22,357
151	ATTORNEY GENERAL INVEST.	11	607,641	28	1,131,717	4	152,652	2	39,465
153	ST. JOHNS POLICE DEPT.	6	255,846	2	45,821	-	-	3	21,350
154	PIMA COUNTY ATTORNEY INVEST.	5	245,887	4	182,803	1	46,587	-	-
155	SUN LAKES FIRE DISTRICT	38	3,533,109	9	409,852	1	84,850	4	7,663
156	KEARNY POLICE DEPT.	5	203,073	3	123,372	-	-	3	248,381
157	GREENLEE COUNTY ATTORNEY INVEST.	-	-	-	-	-	-	-	-
158	NAVAJO COUNTY ATTORNEY INVEST.	-	-	1	33,141	-	-	-	-
162	AVRA VALLEY FIRE DISTRICT	26	1,194,411	3	79,328	-	-	11	73,710
163	SAN LUIS FIRE DEPT.	29	1,492,179	1	25,329	1	33,439	4	39,728
164	AZ DEPT. LIQ. LIC. & CONTROL INVEST.	11	662,583	13	457,699	1	57,263	4	245,653



# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	Number of Actives	Active Payroll	Number of Retirees	Annual Retiree Benefits	Number of DROP	Annual DROP Benefits	Number of Vested Inactive	Annual Vested Benefits
165	MARICOPA COUNTY ATTORNEY INVEST.	11	\$ 678,993	18	\$ 776,738	-	-	2	\$ 260,803
166	SEDONA FIRE DISTRICT	73	5,460,156	17	871,455	1	88,547	1	64
167	GUADALUPE FIRE DEPT.	4	262,193	1	46,050	-	-	-	-
168	MAYER FIRE DISTRICT	18	939,129	3	89,529	-	-	-	-
169	SOMERTON POLICE DEPT.	18	901,334	2	90,903	1	28,450	3	74,307
170	SUN CITY WEST FIRE DISTRICT	47	4,204,058	13	577,548	3	143,425	-	-
171	SOMERTON FIRE DEPT.	18	974,872	3	67,343	-	-	1	2,673
172	TUBAC FIRE DISTRICT	29	1,633,908	2	50,898	-	-	-	-
173	LA PAZ COUNTY ATTORNEY INVEST.	-	-	1	31,210	-	-	-	-
174	SAHUARITA POLICE DEPT.	38	2,489,096	1	37,716	-	-	2	5,587
176	FLORENCE FIRE DEPT.	23	1,350,329	-	-	-	-	1	2,331
177	SUN CITY FIRE DISTRICT	47	3,880,510	15	1,028,354	11	725,098	2	48,266
178	HAYDEN POLICE DEPT.	9	461,575	-	-	-	-	2	488
179	GILA RIVER FIRE DEPT.	66	4,406,282	8	211,735	-	-	6	310,608
180	GILA RIVER POLICE DEPT.	119	7,403,175	4	136,333	-	-	9	483,913
181	SALT RIVER PIMA-MARICOPA FIRE	77	6,021,954	9	403,923	1	63,990	2	69,108
182	SALT RIVER PIMA-MARICOPA POLICE	94	7,254,535	13	608,182	1	44,324	13	695,158
183	LA KESIDE FIRE DISTRICT	24	1,551,102	1	26,920	-	-	-	-
185	PINETOP FIRE DISTRICT	26	1,811,487	7	198,883	-	-	4	119,407
186	SHOW LOW FIRE DISTRICT	30	1,864,452	2	103,454	-	-	3	222,768
187	YA VAPAI COUNTY ATTORNEY INVEST.	-	-	2	72,147	-	-	-	-
188	THREE POINTS FIRE DISTRICT	16	812,975	2	106,590	-	-	1	1,692
190	BUCKEYE FIRE DEPT.	80	5,417,529	-	-	-	-	-	-
191	MONTEZUMA RIMROCK FIRE DISTRICT	8	455,690	2	59,139	1	28,493	3	41,314
192	HEBER-OVERGAARD FIRE DISTRICT	12	792,211	1	23,988	-	-	5	62,881
193	HELLSGATE FIRE DISTRICT	9	550,313	-	-	1	46,892	-	-
194	GREEN VALLEY FIRE DISTRICT	60	3,868,517	8	298,018	7	337,364	4	82,643
195	SUMMIT FIRE DISTRICT	37	2,272,771	4	168,946	2	109,938	6	75,662
196	CAMP VERDE FIRE DISTRICT	26	1,625,668	2	103,941	-	-	2	103,112
197	FORT MCDOWELL TRIBAL FIRE DEPT.	14	890,088	-	-	-	-	1	80,811
198	FORT MCDOWELL TRIBAL POLICE DEPT.	19	1,488,889	-	-	-	-	2	17,503
199	HIGHLANDS FIRE DISTRICT	23	1,664,640	4	158,329	-	-	1	4,937
200	RIO RICO FIRE DISTRICT	30	1,532,084	-	-	-	-	5	94,540
201	TRI-CITY FIRE DISTRICT	20	1,110,862	-	-	-	-	2	30,527
202	MARICOPA COUNTY PARK RANGERS	-	-	4	177,580	-	-	1	48,265
203	VERDE VALLEY FIRE DISTRICT	25	1,766,253	3	129,863	1	68,964	3	88,766
204	AZ. STATE PARK RANGERS	24	1,056,385	12	432,532	9	336,162	4	128,322
205	LINDEN FIRE DISTRICT	10	458,809	-	-	-	-	-	-
206	HUALAPAI INDIAN TRIBE POLICE DEPT.	16	967,058	-	-	-	-	2	24,751
207	PINEWOOD FIRE DISTRICT	17	1,144,501	3	154,490	-	-	-	-
208	RINCON VALLEY FIRE DISTRICT	37	1,869,095	1	67,006	-	-	5	112,770
209	TONOPAH VALLEY FIRE DISTRICT	13	485,487	-	-	-	-	4	12,653
210	JEROME POLICE DEPT.	4	170,819	-	-	-	-	1	20,579
211	FORT MOJAVE TRIBAL POLICE DEPT.	20	1,520,469	-	-	-	-	5	43,077
212	BUCKEYE VALLEY FIRE DISTRICT	72	4,359,060	-	-	-	-	5	31,451
213	ELOY FIRE DISTRICT	26	1,681,524	-	-	1	68,045	1	45,701
214	PASCUA YAQUI TRIBE FIRE DEPT.	22	1,445,039	1	47,160	-	-	2	71,056
215	PASCUA YAQUI TRIBE POLICE DEPT.	26	2,099,462	4	139,208	-	-	7	150,843
216	TOWN OF SUPERIOR FIRE DEPT.	5	206,858	-	-	-	-	-	-
217	WICKENBURG FIRE DEPT.	12	503,155	-	-	-	-	-	-

# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	Number of Actives	Active Payroll	Number of Retirees	Annual Retiree Benefits	Number of DROP	Annual DROP Benefits	Number of Vested Inactive	Annual Vested Benefits
219	BLACK CANYON FIRE DISTRICT	8	\$ 356,606	-	\$ -	-	\$ -	4	45,431
220	GRAHAM COUNTY ATTORNEY INVEST.	-	-	-	-	-	-	-	-
221	QUARTZSITE FIRE DISTRICT	8	445,199	-	-	-	-	2	12,864
222	RIO VERDE FIRE DISTRICT	14	1,116,222	1	21,173	1	42,214	1	5,471
223	SCOTTSDALE FIRE DEPT.	235	17,979,575	10	476,218	2	124,492	1	16,850
224	AK CHIN INDIAN COMM. FIRE DEPT.	37	2,202,637	5	156,775	-	-	5	26,282
225	AK CHIN INDIAN COMM. POLICE DEPT.	13	857,016	2	100,131	-	-	5	24,931
226	CORONA DE TUCSON FIRE DISTRICT	19	994,919	1	32,972	-	-	-	-
227	GOLDEN SHORES FIRE DISTRICT	6	377,601	-	-	-	-	-	-
228	CITY OF MARICOPA FIRE DEPT.	59	4,511,565	-	-	-	-	3	79,388
229	CAVE CREEK MARSHALS	1	87,645	-	-	-	-	-	-
231	SAN CARLOS TRIBAL POLICE DEPT.	23	1,649,749	-	-	-	-	4	76,668
232	GROOM CREEK FIRE DISTRICT	7	367,783	-	-	-	-	2	38,076
233	MOUNT LEMMON FIRE DISTRICT	6	288,128	-	-	-	-	-	-
234	YA VAPAI PRESCOTT TRIBAL POLICE	4	240,009	-	-	-	-	7	202,726
235	TOHONO O'ODHAM NATION FIRE DEPT.	50	2,987,472	-	-	-	-	4	20,747
236	TOHONO O'ODHAM NATION POLICE DEPT.	71	4,991,939	10	408,897	-	-	3	27,814
237	WILLIAMSON VALLEY FIRE DISTRICT	4	208,930	-	-	-	-	3	12,635
238	HARQUAHALA FIRE DISTRICT	13	773,965	-	-	-	-	9	176,158
239	COOLIDGE FIRE DEPT.	3	158,357	-	-	-	-	1	3,597
240	CLARKDALE FIRE DISTRICT	10	524,498	-	-	-	-	2	71,011
241	WITTMANN FIRE DISTRICT	11	542,879	-	-	-	-	-	-
242	CENTRAL AZ. COLLEGE POLICE DEPT.	5	264,737	1	42,616	-	-	-	-
243	CITY OF MARICOPA POLICE DEPT.	50	3,497,406	2	67,162	-	-	3	124,272
244	ORACLE FIRE DISTRICT	8	330,906	-	-	-	-	2	7,228
245	BENSON FIRE DEPT.	1	68,531	-	-	-	-	-	-
246	DESERT HILLS FIRE DEPT.	24	1,182,621	1	24,772	-	-	2	38,437
247	QUEEN CREEK FIRE DEPT.	27	1,897,526	1	86,392	-	-	2	6,170
248	SONOITA ELGIN FIRE DEPT.	10	456,294	-	-	-	-	5	16,869
249	CHRISTOPHER-KOHL'S FIRE DISTRICT	4	197,049	1	13,350	-	-	1	13,727
250	WHESTONE FIRE DISTRICT	6	251,792	-	-	-	-	-	-
251	QUEEN VALLEY FIRE DISTRICT	3	123,511	-	-	-	-	-	-
252	LAKE MOHAVE RANCHOS FIRE DISTRICT	6	229,476	2	87,715	-	-	10	137,571
253	HUACHUCA CITY POLICE DEPT.	5	234,594	-	-	-	-	1	7,041
254	PALOMINAS FIRE DISTRICT	6	246,197	-	-	-	-	3	16,626
255	SUN SITES PEARCE FIRE DISTRICT	6	276,843	-	-	-	-	2	28,381
TOTAL		18,436	1,370,609,327	10,159	503,588,291	1,482	93,715,032	1,442	25,997,907

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## **APPENDIX III**

### **SUMMARY OF LIABILITY AND ASSET INFORMATION BY INDIVIDUAL EMPLOYERS**

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# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	Total AAL	Total Assets	Reserve for future Pension Increases	Net Assets	Funded Percent	Unfunded Liability
1	BISBEE FIRE DEPT.	\$ 8,981,980	\$ 1,396,623	\$ -	\$ 1,396,623	15.50%	\$ 7,585,357
2	CASA GRANDE FIRE DEPT.	20,763,347	12,719,418	-	12,719,418	61.30%	8,043,929
3	CASA GRANDE POLICE DEPT.	35,861,675	16,999,345	-	16,999,345	47.40%	18,862,330
4	CHANDLER FIRE DEPT.	94,225,441	68,896,411	-	68,896,411	73.10%	25,329,030
5	CHANDLER POLICE DEPT.	156,314,787	104,171,101	-	104,171,101	66.60%	52,143,686
6	CLIFTON FIRE DEPT.	255,985	147,953	-	147,953	57.80%	108,032
7	DEPT. OF PUBLIC SAFETY	900,668,747	415,486,988	-	415,486,988	46.10%	485,181,759
8	DOUGLAS FIRE DEPT.	12,116,606	4,203,038	-	4,203,038	34.70%	7,913,568
9	DOUGLAS POLICE DEPT.	17,408,947	7,254,659	-	7,254,659	41.70%	10,154,288
10	FLAGSTAFF FIRE DEPT.	58,986,814	30,383,466	-	30,383,466	51.50%	28,603,348
11	FLAGSTAFF POLICE DEPT.	51,849,328	24,004,933	-	24,004,933	46.30%	27,844,395
12	GLENDALE FIRE DEPT.	127,654,822	88,685,749	-	88,685,749	69.50%	38,969,073
13	GLENDALE POLICE DEPT.	197,913,590	108,106,921	-	108,106,921	54.60%	89,806,669
14	GLOBE FIRE DEPT.	7,657,198	3,636,717	-	3,636,717	47.50%	4,020,481
15	KINGMAN FIRE DEPT.	20,993,906	14,417,713	-	14,417,713	68.70%	6,576,193
16	MARICOPA COUNTY SHERIFF'S OFFICE	359,194,157	196,884,139	-	196,884,139	54.80%	162,310,018
17	MESA FIRE DEPT.	276,151,427	170,546,734	-	170,546,734	61.80%	105,604,693
18	MESA POLICE DEPT.	488,513,570	283,840,532	-	283,840,532	58.10%	204,673,038
19	MIAMI FIRE DEPT.	-	19,964	-	19,964	0.00%	(19,964)
20	NOGALES FIRE DEPT.	15,630,357	9,088,407	-	9,088,407	58.10%	6,541,950
21	PHOENIX FIRE DEPT.	1,243,606,797	715,325,667	-	715,325,667	57.50%	528,281,130
22	PHOENIX POLICE DEPT.	2,264,932,786	1,268,534,043	-	1,268,534,043	56.00%	996,398,743
23	PRESCOTT FIRE DEPT.	45,764,152	19,144,554	-	19,144,554	41.80%	26,619,598
24	PRESCOTT POLICE DEPT.	39,317,930	12,955,492	-	12,955,492	33.00%	26,362,438
25	SCOTTSDALE POLICE DEPT.	223,687,942	144,927,433	-	144,927,433	64.80%	78,760,509
26	SIERRA VISTA FIRE DEPT.	21,579,084	13,682,275	-	13,682,275	63.40%	7,896,809
27	TEMPE FIRE DEPT.	133,413,911	77,456,500	-	77,456,500	58.10%	55,957,411
28	TEMPE POLICE DEPT.	220,593,899	106,886,995	-	106,886,995	48.50%	113,706,904
29	TUCSON FIRE	426,505,432	195,656,778	-	195,656,778	45.90%	230,848,654
30	TUCSON POLICE	672,468,740	322,448,565	-	322,448,565	47.90%	350,020,175
31	WINSLOW FIRE DEPT.	2,802,507	6,103,193	-	6,103,193	217.80%	(3,300,686)
32	YUMA FIRE DEPT.	62,290,244	30,236,758	-	30,236,758	48.50%	32,053,486
33	YUMA POLICE DEPT.	75,730,103	43,890,713	-	43,890,713	58.00%	31,839,390
34	YUMA COUNTY SHERIFF'S DEPT.	27,175,491	15,673,417	-	15,673,417	57.70%	11,502,074
35	GAME AND FISH DEPT.	93,046,890	33,186,238	-	33,186,238	35.70%	59,860,652
36	SIERRA VISTA POLICE DEPT.	29,708,414	14,623,299	-	14,623,299	49.20%	15,085,115
37	BENSON POLICE DEPT.	3,557,920	2,080,926	-	2,080,926	58.50%	1,476,994
38	BISBEE POLICE DEPT.	7,959,261	1,989,934	-	1,989,934	25.00%	5,969,327
39	PIMA COUNTY SHERIFF'S DEPT.	281,478,741	148,870,973	-	148,870,973	52.90%	132,607,768
40	KINGMAN POLICE DEPT.	19,758,227	12,170,155	-	12,170,155	61.60%	7,588,072
41	ASU CAMPUS POLICE	25,256,091	14,858,698	-	14,858,698	58.80%	10,397,393
42	LAKE HAVASU CITY FIRE DEPT.	37,910,213	21,218,473	-	21,218,473	56.00%	16,691,740
43	MOHAVE COUNTY SHERIFF'S DEPT.	33,138,433	20,062,339	-	20,062,339	60.50%	13,076,094
44	BULLHEAD CITY FIRE DEPT.	34,206,495	26,499,996	-	26,499,996	77.50%	7,706,499
45	U OF A CAMPUS POLICE	21,359,456	12,202,994	-	12,202,994	57.10%	9,156,462
46	COCHISE COUNTY SHERIFF'S DEPT.	35,221,483	14,410,210	-	14,410,210	40.90%	20,811,273
47	SAFFORD POLICE DEPT.	10,834,966	4,802,966	-	4,802,966	44.30%	6,032,000
49	DREXEL HEIGHTS FIRE DISTRICT	21,675,206	17,517,805	-	17,517,805	80.80%	4,157,401
50	WINSLOW POLICE DEPT.	7,968,322	5,587,881	-	5,587,881	70.10%	2,380,441
51	PA YSON FIRE DEPT.	8,394,621	5,600,975	-	5,600,975	66.70%	2,793,646

# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	Total AAL	Total Assets	Reserve for future Pension Increases	Net Assets	Funded Percent	Unfunded Liability
52	PA YSON POLICE DEPT.	\$ 13,459,646	\$ 5,304,593	\$ -	\$ 5,304,593	39.40%	\$ 8,155,053
53	NORTHERN AZ. CONSOLIDATED FIRE DISTRICT	6,323,646	4,187,972	-	4,187,972	66.20%	2,135,674
54	FRY FIRE DISTRICT	17,140,729	8,753,406	-	8,753,406	51.10%	8,387,323
55	FREDONIA MARSHALS	552,642	615,666	-	615,666	111.40%	(63,024)
56	NAU CAMPUS POLICE	8,449,103	3,705,923	-	3,705,923	43.90%	4,743,180
58	SOUTH TUCSON FIRE DEPT.	2,863,056	1,669,691	-	1,669,691	58.30%	1,193,365
59	A VONDALE FIRE DEPT.	16,941,089	14,599,018	-	14,599,018	86.20%	2,342,071
60	PARKER POLICE DEPT.	2,918,625	2,190,946	-	2,190,946	75.10%	727,679
61	COCONINO COUNTY SHERIFFS DEPT.	33,810,064	11,083,591	-	11,083,591	32.80%	22,726,473
62	CENTRAL YA VAPAI FIRE DISTRICT	40,676,013	24,073,481	-	24,073,481	59.20%	16,602,532
64	BUCKSKIN FIRE DISTRICT	4,722,341	1,798,085	-	1,798,085	38.10%	2,924,256
65	SNOWFLAKE POLICE DEPT.	3,704,581	1,996,104	-	1,996,104	53.90%	1,708,477
66	COTTONWOOD POLICE DEPT.	10,222,682	4,500,945	-	4,500,945	44.00%	5,721,737
67	LAKE HAVASU CITY POLICE DEPT.	38,902,906	21,811,342	-	21,811,342	56.10%	17,091,564
69	SOUTH TUCSON POLICE DEPT.	6,854,401	342,794	-	342,794	5.00%	6,511,607
70	APACHE JUNCTION POLICE DEPT.	25,883,465	11,933,944	-	11,933,944	46.10%	13,949,521
71	NA VAJO COUNTY SHERIFFS DEPT.	14,589,227	6,013,808	-	6,013,808	41.20%	8,575,419
72	MOHAVE VALLEY FIRE DISTRICT	6,307,113	6,253,934	-	6,253,934	99.20%	53,179
73	PEORIA FIRE DEPT.	54,302,697	44,476,474	-	44,476,474	81.90%	9,826,223
74	PEORIA POLICE DEPT.	79,958,487	50,542,535	-	50,542,535	63.20%	29,415,952
76	PARADISE VALLEY POLICE DEPT.	24,386,754	8,362,281	-	8,362,281	34.30%	16,024,473
77	WILLCOX POLICE DEPT.	3,984,731	2,011,815	-	2,011,815	50.50%	1,972,916
78	SHOW LOW POLICE DEPT.	10,209,395	6,133,449	-	6,133,449	60.10%	4,075,946
79	ELOY POLICE DEPT.	7,735,986	6,120,133	-	6,120,133	79.10%	1,615,853
80	NOGALES POLICE DEPT.	19,505,861	12,665,083	-	12,665,083	64.90%	6,840,778
81	GILBERT POLICE DEPT.	70,179,781	51,402,243	-	51,402,243	73.20%	18,777,538
83	CLIFTON POLICE DEPT.	460,736	624,491	-	624,491	135.50%	(163,755)
85	COOLIDGE POLICE DEPT.	9,425,552	5,614,087	-	5,614,087	59.60%	3,811,465
86	HOLBROOK POLICE DEPT.	6,125,248	2,069,353	-	2,069,353	33.80%	4,055,895
87	SANTA CRUZ COUNTY SHERIFFS DEPT.	12,602,932	6,303,468	-	6,303,468	50.00%	6,299,464
88	PRESCOTT VALLEY POLICE DEPT.	17,069,244	12,975,252	-	12,975,252	76.00%	4,093,992
89	EAGAR POLICE DEPT.	3,102,680	1,958,550	-	1,958,550	63.10%	1,144,130
90	TOLLESON POLICE DEPT.	7,950,426	4,789,661	-	4,789,661	60.20%	3,160,765
91	FLORENCE POLICE DEPT.	4,102,343	4,287,840	-	4,287,840	104.50%	(185,497)
92	SPRINGERVILLE POLICE DEPT.	2,025,757	1,650,663	-	1,650,663	81.50%	375,094
93	EL MIRA GE POLICE DEPT.	11,026,150	6,969,107	-	6,969,107	63.20%	4,057,043
94	SUPERIOR POLICE DEPT.	1,184,887	992,391	-	992,391	83.80%	192,496
95	SAN LUIS POLICE DEPT.	6,121,139	4,858,811	-	4,858,811	79.40%	1,262,328
96	PAGE POLICE DEPT.	5,799,919	4,208,818	-	4,208,818	72.60%	1,591,101
97	PAGE FIRE DEPT.	1,913,484	1,704,611	-	1,704,611	89.10%	208,873
98	YA VAPAI COUNTY SHERIFFS DEPT.	43,752,594	21,788,780	-	21,788,780	49.80%	21,963,814
100	PIMA POLICE DEPT.	133,969	400,828	-	400,828	299.20%	(266,859)
101	APACHE COUNTY SHERIFFS DEPT.	11,109,268	3,838,506	-	3,838,506	34.60%	7,270,762
102	COTTONWOOD FIRE DEPT.	5,089,319	4,073,625	-	4,073,625	80.00%	1,015,694
103	LA PAZ COUNTY SHERIFFS DEPT.	12,170,080	5,989,778	-	5,989,778	49.20%	6,180,302
104	PINAL COUNTY SHERIFFS DEPT.	67,702,002	43,793,080	-	43,793,080	64.70%	23,908,922
105	CLARKDALE POLICE DEPT.	2,423,757	1,842,193	-	1,842,193	76.00%	581,564
106	BUCKEYE POLICE DEPT.	16,985,423	12,720,118	-	12,720,118	74.90%	4,265,305
107	MARANA POLICE DEPT.	20,584,925	14,437,155	-	14,437,155	70.10%	6,147,770
108	TOLLESON FIRE DEPT.	9,398,121	7,583,994	-	7,583,994	80.70%	1,814,127

# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	Total AAL	Total Assets	Reserve for future Pension Increases	Net Assets	Funded Percent	Unfunded Liability
109	CHINO VALLEY POLICE DEPT.	\$ 5,904,240	\$ 4,260,221	-	\$ 4,260,221	72.20%	\$ 1,644,019
110	SURPRISE POLICE DEPT.	29,964,504	23,677,026	-	23,677,026	79.00%	6,287,478
111	WELLTON POLICE DEPT.	1,138,739	765,803	-	765,803	67.30%	372,936
112	GILA COUNTY SHERIFF'S DEPT.	13,944,556	6,922,099	-	6,922,099	49.60%	7,022,457
113	PINETOP-LAKESIDE POLICE DEPT.	4,885,264	1,847,587	-	1,847,587	37.80%	3,037,677
114	BULLHEAD CITY POLICE DEPT.	34,323,212	21,676,795	-	21,676,795	63.20%	12,646,417
115	WILLIAMS POLICE DEPT.	1,867,459	1,489,167	-	1,489,167	79.70%	378,292
116	MIAMI POLICE DEPT.	1,393,119	776,620	-	776,620	55.70%	616,499
117	THATCHER POLICE DEPT.	5,091,013	2,618,461	-	2,618,461	51.40%	2,472,552
118	YOUNGTOWN POLICE DEPT.	1,347,815	895,973	-	895,973	66.50%	451,842
119	DEPT. OF EMER & MILITARY AFF	12,401,897	8,142,649	-	8,142,649	65.70%	4,259,248
120	SURPRISE FIRE DEPT.	28,437,677	24,903,960	-	24,903,960	87.60%	3,533,717
121	CAMP VERDE MARSHALS	4,182,329	3,050,572	-	3,050,572	72.90%	1,131,757
122	ORO VALLEY POLICE DEPT.	31,655,801	23,173,423	-	23,173,423	73.20%	8,482,378
123	GREENLEE COUNTY SHERIFF'S DEPT.	4,133,688	3,285,266	-	3,285,266	79.50%	848,422
124	TUCSON AIRPORT AUTHORITY FIRE DEPT.	12,337,769	5,044,376	-	5,044,376	40.90%	7,293,393
125	TUCSON AIRPORT AUTHORITY POLICE DEPT.	12,849,273	4,450,383	-	4,450,383	34.60%	8,398,890
126	WICKENBURG POLICE DEPT.	4,444,599	2,552,736	-	2,552,736	57.40%	1,891,863
127	EL MIRAGE FIRE DEPT.	4,058,606	3,805,486	-	3,805,486	93.80%	253,120
128	PATAGONIA MARSHALS	865,195	622,692	-	622,692	72.00%	242,503
129	SEDONA POLICE DEPT.	8,008,533	5,695,571	-	5,695,571	71.10%	2,312,962
130	MAMMOTH POLICE DEPT.	427,524	336,620	-	336,620	78.70%	90,904
131	GLOBE POLICE DEPT.	8,564,048	3,951,965	-	3,951,965	46.10%	4,612,083
132	TOMBSTONE MARSHALS	440,708	861,080	-	861,080	195.40%	(420,372)
133	GOLDER RANCH FIRE DISTRICT	30,274,138	23,561,515	-	23,561,515	77.80%	6,712,623
134	FORT MOJAVE MESA FIRE DISTRICT	12,550,222	8,416,011	-	8,416,011	67.10%	4,134,211
136	GOODYEAR FIRE DEPT.	20,903,920	19,244,419	-	19,244,419	92.10%	1,659,501
137	GOODYEAR POLICE DEPT.	25,725,105	19,286,661	-	19,286,661	75.00%	6,438,444
138	CHINO VALLEY FIRE DISTRICT	9,839,926	7,736,476	-	7,736,476	78.60%	2,103,450
139	AVONDALE POLICE DEPT.	24,039,986	17,506,275	-	17,506,275	72.80%	6,533,711
140	GRAHAM COUNTY SHERIFF'S DEPT.	5,355,072	3,526,191	-	3,526,191	65.80%	1,828,881
142	GOLDEN VALLEY FIRE DISTRICT	4,369,547	3,411,393	-	3,411,393	78.10%	958,154
143	DAISY MOUNTAIN FIRE DISTRICT	18,729,543	17,794,387	-	17,794,387	95.00%	935,156
144	QUARTZSITE POLICE DEPT.	2,533,690	2,908,065	-	2,908,065	114.80%	(374,375)
145	PICTURE ROCKS FIRE DISTRICT	4,384,683	3,801,203	-	3,801,203	86.70%	583,480
146	PIMA COUNTY COMM. COLLEGE POLICE	8,220,314	5,095,032	-	5,095,032	62.00%	3,125,282
147	NORTHWEST FIRE DISTRICT	57,558,204	43,538,493	-	43,538,493	75.60%	14,019,711
148	APACHE JUNCTION FIRE DISTRICT	27,867,125	21,877,044	-	21,877,044	78.50%	5,990,081
149	GILBERT FIRE DEPT.	43,484,238	40,413,033	-	40,413,033	92.90%	3,071,205
150	PINE-STRAWBERRY FIRE DISTRICT	5,863,268	3,831,421	-	3,831,421	65.30%	2,031,847
151	ATTORNEY GENERAL INVEST.	14,271,665	4,377,915	-	4,377,915	30.70%	9,893,750
153	ST. JOHNS POLICE DEPT.	1,062,843	1,045,116	-	1,045,116	98.30%	17,727
154	PIMA COUNTY ATTORNEY INVEST.	3,208,118	1,771,644	-	1,771,644	55.20%	1,436,474
155	SUN LAKES FIRE DISTRICT	15,520,544	12,122,885	-	12,122,885	78.10%	3,397,659
156	KEARNY POLICE DEPT.	1,973,331	1,690,548	-	1,690,548	85.70%	282,783
157	GREENLEE COUNTY ATTORNEY INVEST.	-	48,925	-	48,925	0.00%	(48,925)
158	NA VAJO COUNTY ATTORNEY INVEST.	409,783	79,748	-	79,748	19.50%	330,035
162	AVRA VALLEY FIRE DISTRICT	2,458,388	2,908,326	-	2,908,326	118.30%	(449,938)
163	SAN LUIS FIRE DEPT.	3,511,533	3,370,686	-	3,370,686	96.00%	140,847
164	AZ DEPT. LIQ. LIC. & CONTROL INVEST.	8,215,431	3,794,275	-	3,794,275	46.20%	4,421,156

# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	Total AAL	Total Assets	Reserve for future Pension Increases	Net Assets	Funded Percent	Unfunded Liability
165	MARICOPA COUNTY ATTORNEY INVEST.	\$ 9,290,483	\$ 4,227,762	\$ -	\$ 4,227,762	45.50%	\$ 5,062,721
166	SEDONA FIRE DISTRICT	24,641,223	16,398,919	-	16,398,919	66.60%	8,242,304
167	GUADALUPE FIRE DEPT.	1,269,571	764,790	-	764,790	60.20%	504,781
168	MA YER FIRE DISTRICT	2,853,076	2,702,768	-	2,702,768	94.70%	150,308
169	SOMERTON POLICE DEPT.	4,279,719	3,185,860	-	3,185,860	74.40%	1,093,859
170	SUN CITY WEST FIRE DISTRICT	24,047,354	15,244,574	-	15,244,574	63.40%	8,802,780
171	SOMERTON FIRE DEPT.	3,162,865	2,414,481	-	2,414,481	76.30%	748,384
172	TUBAC FIRE DISTRICT	4,803,689	4,249,017	-	4,249,017	88.50%	554,672
173	LA PAZ COUNTY ATTORNEY INVEST.	314,435	255,948	-	255,948	81.40%	58,487
174	SAHUARITA POLICE DEPT.	6,659,052	6,697,228	-	6,697,228	100.60%	(38,176)
176	FLORENCE FIRE DEPT.	2,043,720	2,420,278	-	2,420,278	118.40%	(376,558)
177	SUN CITY FIRE DISTRICT	35,799,656	19,731,381	-	19,731,381	55.10%	16,068,275
178	HA YDEN POLICE DEPT.	301,390	1,198,400	-	1,198,400	397.60%	(897,010)
179	GILA RIVER FIRE DEPT.	10,225,996	9,506,649	-	9,506,649	93.00%	719,347
180	GILA RIVER POLICE DEPT.	12,900,038	14,094,674	-	14,094,674	109.30%	(1,194,636)
181	SALT RIVER PIMA-MARICOPA FIRE	22,903,031	19,236,104	-	19,236,104	84.00%	3,666,927
182	SALT RIVER PIMA-MARICOPA POLICE	22,874,262	18,454,141	-	18,454,141	80.70%	4,420,121
183	LAKESIDE FIRE DISTRICT	3,634,543	3,435,002	-	3,435,002	94.50%	199,541
185	PINETOP FIRE DISTRICT	7,098,034	4,462,242	-	4,462,242	62.90%	2,635,792
186	SHOW LOW FIRE DISTRICT	4,887,119	4,895,908	-	4,895,908	100.20%	(8,789)
187	YA YAPAI COUNTY ATTORNEY INVEST.	842,908	22,289	-	22,289	2.60%	820,619
188	THREE POINTS FIRE DISTRICT	2,687,404	2,062,884	-	2,062,884	76.80%	624,520
190	BUCKEYE FIRE DEPT.	11,658,222	12,404,294	-	12,404,294	106.40%	(746,072)
191	MONTEZUMA RIMROCK FIRE DISTRICT	1,809,155	1,236,960	-	1,236,960	68.40%	572,195
192	HEBER-OVERGAARD FIRE DISTRICT	1,458,801	1,671,895	-	1,671,895	114.60%	(213,094)
193	HELLSGATE FIRE DISTRICT	1,875,218	1,475,093	-	1,475,093	78.70%	400,125
194	GREEN VALLEY FIRE DISTRICT	18,470,502	14,339,606	-	14,339,606	77.60%	4,130,896
195	SUMMIT FIRE DISTRICT	9,132,708	7,558,621	-	7,558,621	82.80%	1,574,087
196	CAMP VERDE FIRE DISTRICT	5,266,247	4,432,507	-	4,432,507	84.20%	833,740
197	FORT MCDOWELL TRIBAL FIRE DEPT.	1,956,739	1,939,027	-	1,939,027	99.10%	17,712
198	FORT MCDOWELL TRIBAL POLICE DEPT.	4,086,711	3,931,468	-	3,931,468	96.20%	155,243
199	HIGHLANDS FIRE DISTRICT	6,203,779	4,247,542	-	4,247,542	68.50%	1,956,237
200	RIO RICO FIRE DISTRICT	2,748,682	3,090,035	-	3,090,035	112.40%	(341,353)
201	TRI-CITY FIRE DISTRICT	2,052,969	2,116,184	-	2,116,184	103.10%	(63,215)
202	MARICOPA COUNTY PARK RANGERS	2,015,621	(137,020)	-	(137,020)	-6.80%	2,152,641
203	VERDE VALLEY FIRE DISTRICT	7,266,937	6,134,159	-	6,134,159	84.40%	1,132,778
204	AZ. STATE PARK RANGERS	13,216,748	9,493,341	-	9,493,341	71.80%	3,723,407
205	LINDEN FIRE DISTRICT	702,455	784,529	-	784,529	111.70%	(82,074)
206	HUALAPAI INDIAN TRIBE POLICE DEPT.	989,558	1,155,094	-	1,155,094	116.70%	(165,536)
207	PINEWOOD FIRE DISTRICT	3,493,658	2,032,312	-	2,032,312	58.20%	1,461,346
208	RINCON VALLEY FIRE DISTRICT	3,946,179	3,710,622	-	3,710,622	94.00%	235,557
209	TONOPAH VALLEY FIRE DISTRICT	475,354	669,124	-	669,124	140.80%	(193,770)
210	JEROME POLICE DEPT.	228,424	338,991	-	338,991	148.40%	(110,567)
211	FORT MOJAVE TRIBAL POLICE DEPT.	1,671,646	2,346,401	-	2,346,401	140.40%	(674,755)
212	BUCKEYE VALLEY FIRE DISTRICT	7,476,418	7,219,608	-	7,219,608	96.60%	256,810
213	ELOY FIRE DISTRICT	4,199,072	3,407,782	-	3,407,782	81.20%	791,290
214	PASCUA YAQUI TRIBE FIRE DEPT.	5,521,314	3,507,443	-	3,507,443	63.50%	2,013,871
215	PASCUA YAQUI TRIBE POLICE DEPT.	6,807,898	4,310,496	-	4,310,496	63.30%	2,497,402
216	TOWN OF SUPERIOR FIRE DEPT.	380,081	471,859	-	471,859	124.10%	(91,778)
217	WICKENBURG FIRE DEPT.	858,076	891,513	-	891,513	103.90%	(33,437)

# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	Total AAL	Total Assets	Reserve for future Pension Increases	Net Assets	Funded Percent	Unfunded Liability
219	BLACK CANYON FIRE DISTRICT	\$ 633,763	\$ 730,939	-	\$ 730,939	115.30%	\$ (97,176)
220	GRAHAM COUNTY ATTORNEY INVEST.	-	3,018	-	3,018	0.00%	(3,018)
221	QUARTZSITE FIRE DISTRICT	963,519	887,590	-	887,590	92.10%	75,929
222	RIO VERDE FIRE DISTRICT	4,862,870	3,785,617	-	3,785,617	77.80%	1,077,253
223	SCOTTSDALE FIRE DEPT.	43,843,306	50,368,289	-	50,368,289	114.90%	(6,524,983)
224	AK CHIN INDIAN COMM. FIRE DEPT.	5,379,174	4,473,798	-	4,473,798	83.20%	905,376
225	AK CHIN INDIAN COMM. POLICE DEPT.	2,351,774	2,348,166	-	2,348,166	99.80%	3,608
226	CORONA DE TUCSON FIRE DISTRICT	2,419,743	1,842,256	-	1,842,256	76.10%	577,487
227	GOLDEN SHORES FIRE DISTRICT	973,196	998,976	-	998,976	114.40%	(125,780)
228	CITY OF MARICOPA FIRE DEPT.	9,144,653	9,223,905	-	9,223,905	100.90%	(79,252)
229	CAVE CREEK MARSHALS	219,110	183,970	-	183,970	84.00%	35,140
231	SAN CARLOS TRIBAL POLICE DEPT.	3,151,499	2,469,524	-	2,469,524	78.40%	681,975
232	GROOM CREEK FIRE DISTRICT	549,314	642,782	-	642,782	117.00%	(93,468)
233	MOUNT LEMMON FIRE DISTRICT	561,805	628,562	-	628,562	111.90%	(66,757)
234	YAVAPAI PRESCOTT TRIBAL POLICE	422,592	697,928	-	697,928	165.20%	(275,336)
235	TOHONO O'ODHAM NATION FIRE DEPT.	5,966,997	5,683,800	-	5,683,800	95.30%	283,197
236	TOHONO O'ODHAM NATION POLICE DEPT.	18,483,822	15,734,620	-	15,734,620	85.10%	2,749,202
237	WILLIAMSON VALLEY FIRE DISTRICT	243,209	353,227	-	353,227	145.20%	(110,018)
238	HARQUAHALA FIRE DISTRICT	883,445	1,106,837	-	1,106,837	125.30%	(223,392)
239	COOLIDGE FIRE DEPT.	140,736	267,125	-	267,125	189.80%	(126,389)
240	CLARKDALE FIRE DISTRICT	937,534	871,705	-	871,705	93.00%	65,829
241	WITTMANN FIRE DISTRICT	673,196	684,100	-	684,100	101.60%	(10,904)
242	CENTRAL AZ. COLLEGE POLICE DEPT.	802,691	585,818	-	585,818	73.00%	216,873
243	CITY OF MARICOPA POLICE DEPT.	6,128,435	6,509,050	-	6,509,050	106.20%	(380,615)
244	ORACLE FIRE DISTRICT	362,815	436,117	-	436,117	120.20%	(73,302)
245	BENSON FIRE DEPT.	482,821	400,117	-	400,117	82.90%	82,704
246	DESERT HILLS FIRE DEPT.	2,199,278	1,482,193	-	1,482,193	67.40%	717,085
247	QUEEN CREEK FIRE DEPT.	2,958,679	2,151,300	-	2,151,300	72.70%	807,379
248	SONOITA ELGIN FIRE DEPT.	646,126	614,348	-	614,348	95.10%	31,778
249	CHRISTOPHER-KOHL'S FIRE DISTRICT	361,120	360,463	-	360,463	99.80%	657
250	WHETSTONE FIRE DISTRICT	293,160	327,762	-	327,762	111.80%	(34,602)
251	QUEEN VALLEY FIRE DISTRICT	230,282	199,004	-	199,004	86.40%	31,278
252	LAKE MOHAVE RANCHOS FIRE DISTRICT	1,451,138	1,090,340	-	1,090,340	75.10%	360,798
253	HUACHUCA CITY POLICE DEPT.	448,905	213,700	-	213,700	47.60%	235,205
254	PALOMINAS FIRE DISTRICT	177,363	366,922	-	366,922	206.90%	(189,559)
255	SUN SITES PEARCE FIRE DISTRICT	473,493	423,268	-	423,268	89.40%	50,225
TOTAL		10,823,539,905	6,185,073,611	-	6,185,073,611		4,638,466,294



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**APPENDIX IV**

**SUMMARY OF CONTRIBUTION INFORMATION BY  
INDIVIDUAL EMPLOYERS**

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# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	ER NC%	UAL Pmt %	Calculated ER Cont	Required ER Cont
1	BISBEE FIRE DEPT.	11.47%	54.68%	66.15%	66.15%
2	CASA GRANDE FIRE DEPT.	12.10%	11.08%	23.18%	23.18%
3	CASA GRANDE POLICE DEPT.	12.25%	20.75%	33.00%	33.00%
4	CHANDLER FIRE DEPT.	11.84%	9.61%	21.45%	21.45%
5	CHANDLER POLICE DEPT.	12.10%	12.63%	24.73%	24.73%
6	CLIFTON FIRE DEPT.	0.00%	0.00%	0.00%	5.00%
7	DEPT. OF PUBLIC SAFETY	13.66%	44.15%	57.81%	57.81%
8	DOUGLAS FIRE DEPT.	12.95%	32.18%	45.13%	45.13%
9	DOUGLAS POLICE DEPT.	12.19%	28.49%	40.68%	40.68%
10	FLAGSTAFF FIRE DEPT.	13.51%	35.75%	49.26%	49.26%
11	FLAGSTAFF POLICE DEPT.	11.95%	23.21%	35.16%	35.16%
12	GLENDALE FIRE DEPT.	13.01%	12.20%	25.21%	25.21%
13	GLENDALE POLICE DEPT.	12.29%	18.38%	30.67%	30.67%
14	GLOBE FIRE DEPT.	11.89%	26.19%	38.08%	38.08%
15	KINGMAN FIRE DEPT.	12.11%	14.32%	26.43%	26.43%
16	MARICOPA COUNTY SHERIFF'S OFFICE	13.76%	25.90%	39.66%	39.66%
17	MESA FIRE DEPT.	12.92%	19.67%	32.59%	32.59%
18	MESA POLICE DEPT.	13.38%	19.69%	33.07%	33.07%
19	MIAMI FIRE DEPT.	0.00%	0.00%	0.00%	5.00%
20	NOGALES FIRE DEPT.	12.74%	16.13%	28.87%	28.87%
21	PHOENIX FIRE DEPT.	13.16%	23.89%	37.05%	37.05%
22	PHOENIX POLICE DEPT.	13.69%	23.93%	37.62%	37.62%
23	PRESCOTT FIRE DEPT.	11.91%	47.75%	59.66%	59.66%
24	PRESCOTT POLICE DEPT.	12.15%	38.12%	50.27%	50.27%
25	SCOTTSDALE POLICE DEPT.	13.41%	14.97%	28.38%	28.38%
26	SIERRA VISTA FIRE DEPT.	12.27%	16.23%	28.50%	28.50%
27	TEMPE FIRE DEPT.	13.10%	25.69%	38.79%	38.79%
28	TEMPE POLICE DEPT.	12.01%	23.11%	35.12%	35.12%
29	TUCSON FIRE	13.04%	38.11%	51.15%	51.15%
30	TUCSON POLICE	13.29%	35.30%	48.59%	48.59%
31	WINSLOW FIRE DEPT.	11.18%	0.00%	11.47%	11.47%
32	YUMA FIRE DEPT.	13.16%	25.29%	38.45%	38.45%
33	YUMA POLICE DEPT.	13.23%	18.34%	31.57%	31.57%
34	YUMA COUNTY SHERIFF'S DEPT.	13.39%	14.16%	27.55%	27.55%
35	GAME AND FISH DEPT.	13.64%	53.14%	66.78%	66.78%
36	SIERRA VISTA POLICE DEPT.	12.55%	19.41%	31.96%	31.96%
37	BENSON POLICE DEPT.	11.61%	10.88%	22.49%	22.49%
38	BISBEE POLICE DEPT.	11.88%	52.82%	64.70%	64.70%
39	PIMA COUNTY SHERIFF'S DEPT.	13.43%	24.84%	38.27%	38.27%
40	KINGMAN POLICE DEPT.	12.24%	15.51%	27.75%	27.75%
41	ASU CAMPUS POLICE	13.35%	16.40%	29.75%	29.75%
42	LAKE HAVASU CITY FIRE DEPT.	11.99%	20.27%	32.26%	32.26%
43	MOHAVE COUNTY SHERIFF'S DEPT.	12.75%	17.47%	30.22%	30.22%
44	BULLHEAD CITY FIRE DEPT.	12.18%	8.57%	20.75%	20.75%
45	U OF A CAMPUS POLICE	12.35%	15.44%	27.79%	27.79%
46	COCHISE COUNTY SHERIFF'S DEPT.	12.49%	27.20%	39.69%	39.69%
47	SAFFORD POLICE DEPT.	12.33%	32.79%	45.12%	45.12%
49	DREXEL HEIGHTS FIRE DISTRICT	11.86%	5.52%	17.38%	17.38%
50	WINSLOW POLICE DEPT.	12.60%	12.95%	25.55%	25.55%
51	PAYSON FIRE DEPT.	11.49%	9.40%	20.89%	20.89%

# Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

Division Number	Employer Name	ER NC%	UAL Pmt %	Calculated ER Cont	Required ER Cont
52	PA YSON POLICE DEPT.	12.69%	29.45%	42.14%	42.14%
53	NORTHERN AZ. CONSOLIDATED FIRE DISTRICT ;	13.03%	9.91%	22.94%	22.94%
54	FRY FIRE DISTRICT	12.57%	18.88%	31.45%	31.45%
55	FREDONIA MARSHALS	13.00%	0.00%	13.35%	13.35%
56	NAU CAMPUS POLICE	11.04%	27.75%	38.79%	38.79%
58	SOUTH TUCSON FIRE DEPT.	12.66%	44.06%	56.72%	56.72%
59	A VONDALE FIRE DEPT.	12.51%	3.38%	15.89%	15.89%
60	PARKER POLICE DEPT.	12.90%	7.40%	20.30%	20.30%
61	COCONINO COUNTY SHERIFF'S DEPT.	11.93%	46.31%	58.24%	58.24%
62	CENTRAL YA VAPAI FIRE DISTRICT	11.76%	17.72%	29.48%	29.48%
64	BUCKSKIN FIRE DISTRICT	11.42%	23.69%	35.11%	35.11%
65	SNOWFLAKE POLICE DEPT.	12.28%	13.64%	25.92%	25.92%
66	COTTONWOOD POLICE DEPT.	12.01%	17.82%	29.83%	29.83%
67	LAKE HA VASU CITY POLICE DEPT.	12.31%	22.39%	34.70%	34.70%
69	SOUTH TUCSON POLICE DEPT.	12.37%	59.64%	72.01%	72.01%
70	APACHE JUNCTION POLICE DEPT.	12.79%	26.50%	39.29%	39.29%
71	NA VAJO COUNTY SHERIFF'S DEPT.	12.31%	22.20%	34.51%	34.51%
72	MOHA VE VALLEY FIRE DISTRICT	12.67%	0.36%	13.03%	13.03%
73	PEORIA FIRE DEPT.	12.07%	5.56%	17.63%	17.63%
74	PEORIA POLICE DEPT.	12.02%	12.92%	24.94%	24.94%
76	PARADISE VALLEY POLICE DEPT.	12.27%	50.17%	62.44%	62.44%
77	WILLCOX POLICE DEPT.	13.19%	24.90%	38.09%	38.09%
78	SHOW LOW POLICE DEPT.	11.60%	13.52%	25.12%	25.12%
79	ELOY POLICE DEPT.	11.96%	5.44%	17.40%	17.40%
80	NOGALES POLICE DEPT.	12.54%	12.93%	25.47%	25.47%
81	GILBERT POLICE DEPT.	12.19%	6.47%	18.66%	18.66%
83	CLIFTON POLICE DEPT.	11.54%	-0.08%	11.46%	11.46%
85	COOLIDGE POLICE DEPT.	11.92%	15.18%	27.10%	27.10%
86	HOLBROOK POLICE DEPT.	11.93%	34.19%	46.12%	46.12%
87	SANTA CRUZ COUNTY SHERIFF'S DEPT.	12.35%	17.76%	30.11%	30.11%
88	PRESCOTT VALLEY POLICE DEPT.	12.11%	6.35%	18.46%	18.46%
89	EAGAR POLICE DEPT.	11.83%	17.92%	29.75%	29.75%
90	TOLLESON POLICE DEPT.	12.57%	9.50%	22.07%	22.07%
91	FLORENCE POLICE DEPT.	13.09%	-0.22%	12.87%	12.87%
92	SPRINGERVILLE POLICE DEPT.	12.09%	7.69%	19.78%	19.78%
93	EL MIRAGE POLICE DEPT.	11.96%	8.68%	20.64%	20.64%
94	SUPERIOR POLICE DEPT.	14.56%	5.38%	19.94%	19.94%
95	SAN LUIS POLICE DEPT.	11.89%	5.01%	16.90%	16.90%
96	PAGE POLICE DEPT.	12.65%	8.33%	20.98%	20.98%
97	PAGE FIRE DEPT.	11.39%	1.71%	13.10%	13.10%
98	YA VAPAI COUNTY SHERIFF'S DEPT.	12.19%	19.54%	31.73%	31.73%
100	PIMA POLICE DEPT.	14.17%	-1.43%	12.74%	12.74%
101	APACHE COUNTY SHERIFF'S DEPT.	13.27%	29.66%	42.93%	42.93%
102	COTTONWOOD FIRE DEPT.	12.29%	3.91%	16.20%	16.20%
103	LA PAZ COUNTY SHERIFF'S DEPT.	11.63%	25.70%	37.33%	37.33%
104	PINAL COUNTY SHERIFF'S DEPT.	13.49%	10.74%	24.23%	24.23%
105	CLARKDALE POLICE DEPT.	14.56%	9.59%	24.15%	24.15%
106	BUCKEYE POLICE DEPT.	12.21%	4.97%	17.18%	17.18%
107	MARANA POLICE DEPT.	12.62%	8.04%	20.66%	20.66%
108	TOLLESON FIRE DEPT.	12.06%	5.02%	17.08%	17.08%

Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation

<b>Division Number</b>	<b>Employer Name</b>	<b>ER NC%</b>	<b>UAL Pmt %</b>	<b>Calculated ER Cont</b>	<b>Required ER Cont</b>
109	CHINO VALLEY POLICE DEPT.	12.23%	8.28%	20.51%	20.51%
110	SURPRISE POLICE DEPT.	12.39%	4.69%	17.08%	17.08%
111	WELLTON POLICE DEPT.	12.90%	6.83%	19.73%	19.73%
112	GILA COUNTY SHERIFF'S DEPT.	12.76%	21.44%	34.20%	34.20%
113	PINETOP-LAKESIDE POLICE DEPT.	12.40%	28.91%	41.31%	41.31%
114	BULLHEAD CITY POLICE DEPT.	12.34%	15.61%	27.95%	27.95%
115	WILLIAMS POLICE DEPT.	13.05%	4.51%	17.56%	17.56%
116	MIAMI POLICE DEPT.	12.57%	23.83%	36.40%	36.40%
117	THATCHER POLICE DEPT.	11.72%	20.13%	31.85%	31.85%
118	YOUNGTOWN POLICE DEPT.	19.81%	45.77%	65.58%	65.58%
119	DEPT. OF EMER & MILITARY AFF	12.50%	10.89%	23.39%	23.39%
120	SURPRISE FIRE DEPT.	11.79%	2.57%	14.36%	14.36%
121	CAMP VERDE MARSHALS	12.25%	9.54%	21.79%	21.79%
122	ORO VALLEY POLICE DEPT.	12.41%	8.19%	20.60%	20.60%
123	GREENLEE COUNTY SHERIFF'S DEPT.	12.36%	6.51%	18.87%	18.87%
124	TUCSON AIRPORT AUTHORITY FIRE DEPT.	12.32%	37.80%	50.12%	50.12%
125	TUCSON AIRPORT AUTHORITY POLICE DEPT.	12.01%	35.31%	47.32%	47.32%
126	WICKENBURG POLICE DEPT.	11.61%	11.33%	22.94%	22.94%
127	EL MIRAGE FIRE DEPT.	12.03%	1.04%	13.07%	13.07%
128	PATAGONIA MARSHALS	17.21%	27.85%	45.06%	45.06%
129	SEDONA POLICE DEPT.	12.00%	11.44%	23.44%	23.44%
130	MAMMOTH POLICE DEPT.	10.83%	3.77%	14.60%	14.60%
131	GLOBE POLICE DEPT.	11.99%	24.44%	36.43%	36.43%
132	TOMBSTONE MARSHALS	12.45%	-2.29%	10.16%	10.16%
133	GOLDER RANCH FIRE DISTRICT	11.98%	4.76%	16.74%	16.74%
134	FORT MOJAVE MESA FIRE DISTRICT	12.09%	11.83%	23.92%	23.92%
136	GOODYEAR FIRE DEPT.	11.83%	1.49%	13.32%	13.32%
137	GOODYEAR POLICE DEPT.	12.26%	5.78%	18.04%	18.04%
138	CHINO VALLEY FIRE DISTRICT	11.80%	6.25%	18.05%	18.05%
139	A VONDALE POLICE DEPT.	11.91%	5.52%	17.43%	17.43%
140	GRAHAM COUNTY SHERIFF'S DEPT.	11.79%	10.38%	22.17%	22.17%
142	GOLDEN VALLEY FIRE DISTRICT	12.78%	3.86%	16.64%	16.64%
143	DAISY MOUNTAIN FIRE DISTRICT	12.11%	0.97%	13.08%	13.08%
144	QUARTZSITE POLICE DEPT.	13.69%	0.26%	13.95%	13.95%
145	PICTURE ROCKS FIRE DISTRICT	13.02%	4.15%	17.17%	17.17%
146	PIMA COUNTY COMM. COLLEGE POLICE	12.26%	12.25%	24.51%	24.51%
147	NORTHWEST FIRE DISTRICT	12.31%	6.13%	18.44%	18.44%
148	APACHE JUNCTION FIRE DISTRICT	11.73%	5.67%	17.40%	17.40%
149	GILBERT FIRE DEPT.	11.72%	1.51%	13.23%	13.23%
150	PINE-STRAWBERRY FIRE DISTRICT	12.08%	10.35%	22.43%	22.43%
151	ATTORNEY GENERAL INVEST.	12.65%	92.54%	105.19%	105.19%
153	ST. JOHNS POLICE DEPT.	12.95%	0.59%	13.54%	13.54%
154	PIMA COUNTY ATTORNEY INVEST.	13.47%	33.47%	46.94%	46.94%
155	SUN LAKES FIRE DISTRICT	11.54%	5.68%	17.22%	17.22%
156	KEARNY POLICE DEPT.	12.89%	8.06%	20.95%	20.95%
157	GREENLEE COUNTY ATTORNEY INVEST.	0.00%	0.00%	0.00%	5.00%
158	NAVAJO COUNTY ATTORNEY INVEST.	0.00%	0.00%	0.00%	5.00%
162	AVRA VALLEY FIRE DISTRICT	12.44%	0.00%	12.64%	12.64%
163	SAN LUIS FIRE DEPT.	12.45%	0.73%	13.18%	13.18%
164	AZ DEPT. LIQ. LIC. & CONTROL INVEST.	12.56%	38.54%	51.10%	51.10%

**Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation**

<b>Division Number</b>	<b>Employer Name</b>	<b>ER NC%</b>	<b>UAL Pmt %</b>	<b>Calculated ER Cont</b>	<b>Required ER Cont</b>
165	MARICOPA COUNTY ATTORNEY INVEST.	15.18%	43.24%	58.42%	58.42%
166	SEDONA FIRE DISTRICT	11.88%	8.83%	20.71%	20.71%
167	GUADALUPE FIRE DEPT.	11.72%	11.19%	22.91%	22.91%
168	MAYER FIRE DISTRICT	12.95%	1.04%	13.99%	13.99%
169	SOMERTON POLICE DEPT.	12.37%	7.13%	19.50%	19.50%
170	SUN CITY WEST FIRE DISTRICT	11.84%	12.19%	24.03%	24.03%
171	SOMERTON FIRE DEPT.	13.06%	4.55%	17.61%	17.61%
172	TUBAC FIRE DISTRICT	12.48%	2.11%	14.59%	14.59%
173	LA PAZ COUNTY ATTORNEY INVEST.	0.00%	0.00%	0.00%	8.00%
174	SAHUARITA POLICE DEPT.	12.21%	0.10%	12.31%	12.31%
176	FLORENCE FIRE DEPT.	11.49%	-0.23%	11.26%	11.26%
177	SUN CITY FIRE DISTRICT	11.94%	24.18%	36.12%	36.12%
178	HA YDEN POLICE DEPT.	14.87%	-0.49%	14.38%	14.38%
179	GILA RIVER FIRE DEPT.	11.88%	1.09%	12.97%	12.97%
180	GILA RIVER POLICE DEPT.	12.09%	-0.23%	11.86%	11.86%
181	SALT RIVER PIMA-MARICOPA FIRE	12.24%	3.64%	15.88%	15.88%
182	SALT RIVER PIMA-MARICOPA POLICE	12.26%	3.64%	15.90%	15.90%
183	LAKESIDE FIRE DISTRICT	12.53%	0.87%	13.40%	13.40%
185	PINETOP FIRE DISTRICT	12.17%	8.50%	20.67%	20.67%
186	SHOW LOW FIRE DISTRICT	12.31%	0.16%	12.47%	12.47%
187	YAVAPAI COUNTY ATTORNEY INVEST.	0.00%	0.00%	0.00%	5.00%
188	THREE POINTS FIRE DISTRICT	12.81%	4.58%	17.39%	17.39%
190	BUCKEYE FIRE DEPT.	11.79%	0.14%	11.93%	11.93%
191	MONTEZUMA RIMROCK FIRE DISTRICT	11.55%	7.39%	18.94%	18.94%
192	HEBER-OVERGAARD FIRE DISTRICT	12.63%	0.00%	12.86%	12.86%
193	HELLSGATE FIRE DISTRICT	12.56%	4.23%	16.79%	16.79%
194	GREEN VALLEY FIRE DISTRICT	11.70%	6.30%	18.00%	18.00%
195	SUMMIT FIRE DISTRICT	11.84%	4.18%	16.02%	16.02%
196	CAMP VERDE FIRE DISTRICT	12.09%	3.07%	15.16%	15.16%
197	FORT MCDOWELL TRIBAL FIRE DEPT.	12.34%	0.28%	12.62%	12.62%
198	FORT MCDOWELL TRIBAL POLICE DEPT.	12.68%	0.71%	13.39%	13.39%
199	HIGHLANDS FIRE DISTRICT	12.23%	6.94%	19.17%	19.17%
200	RIO RICO FIRE DISTRICT	12.29%	-0.47%	11.82%	11.82%
201	TRI-CITY FIRE DISTRICT	11.87%	0.21%	12.08%	12.08%
202	MARICOPA COUNTY PARK RANGERS	0.00%	0.00%	0.00%	8.00%
203	VERDE VALLEY FIRE DISTRICT	12.38%	3.91%	16.29%	16.29%
204	AZ. STATE PARK RANGERS	12.53%	20.37%	32.90%	32.90%
205	LINDEN FIRE DISTRICT	12.27%	-0.24%	12.03%	12.03%
206	HUALAPAI INDIAN TRIBE POLICE DEPT.	13.23%	0.07%	13.30%	13.30%
207	PINEWOOD FIRE DISTRICT	12.66%	7.46%	20.12%	20.12%
208	RINCON VALLEY FIRE DISTRICT	12.05%	0.90%	12.95%	12.95%
209	TONOPAH VALLEY FIRE DISTRICT	12.50%	-0.32%	12.18%	12.18%
210	JEROME POLICE DEPT.	12.21%	-0.24%	11.97%	11.97%
211	FORT MOJAVE TRIBAL POLICE DEPT.	12.33%	-0.45%	11.88%	11.88%
212	BUCKEYE VALLEY FIRE DISTRICT	11.98%	0.49%	12.47%	12.47%
213	ELOY FIRE DISTRICT	12.34%	2.88%	15.22%	15.22%
214	PASCUA YAQUI TRIBE FIRE DEPT.	12.53%	8.13%	20.66%	20.66%
215	PASCUA YAQUI TRIBE POLICE DEPT.	11.88%	6.94%	18.82%	18.82%
216	TOWN OF SUPERIOR FIRE DEPT.	12.96%	-0.93%	12.03%	12.03%
217	WICKENBURG FIRE DEPT.	11.68%	-0.07%	11.61%	11.61%

**Arizona Public Safety Personnel Retirement System Annual Actuarial Valuation**

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<b>Division Number</b>	<b>Employer Name</b>	<b>ER NC%</b>	<b>UAL Pmt %</b>	<b>Calculated ER Cont</b>	<b>Required ER Cont</b>
219	BLACK CANYON FIRE DISTRICT	11.12%	-0.49%	10.63%	10.63%
220	GRAHAM COUNTY ATTORNEY INVEST.	0.00%	0.00%	0.00%	5.00%
221	QUARTZSITE FIRE DISTRICT	11.24%	1.08%	12.32%	12.32%
222	RIO VERDE FIRE DISTRICT	11.84%	5.71%	17.55%	17.55%
223	SCOTTSDALE FIRE DEPT.	12.06%	-0.06%	12.00%	12.00%
224	AK CHIN INDIAN COMM. FIRE DEPT.	11.81%	2.55%	14.36%	14.36%
225	AK CHIN INDIAN COMM. POLICE DEPT.	13.29%	0.22%	13.51%	13.51%
226	CORONA DE TUCSON FIRE DISTRICT	12.82%	3.48%	16.30%	16.30%
227	GOLDEN SHORES FIRE DISTRICT	12.28%	-0.60%	11.68%	11.68%
228	CITY OF MARICOPA FIRE DEPT.	12.11%	0.09%	12.20%	12.20%
229	CAVE CREEK MARSHALS	12.16%	2.49%	14.65%	14.65%
231	SAN CARLOS TRIBAL POLICE DEPT.	12.22%	2.47%	14.69%	14.69%
232	GROOM CREEK FIRE DISTRICT	11.10%	-0.52%	10.58%	10.58%
233	MOUNT LEMMON FIRE DISTRICT	12.34%	-0.38%	11.96%	11.96%
234	YA VAPAI PRESCOTT TRIBAL POLICE	14.04%	-1.16%	12.88%	12.88%
235	TOHONO O'ODHAM NATION FIRE DEPT.	11.78%	0.69%	12.47%	12.47%
236	TOHONO O'ODHAM NATION POLICE DEPT.	12.45%	3.36%	15.81%	15.81%
237	WILLIAMSON VALLEY FIRE DISTRICT	11.58%	-0.58%	11.00%	11.00%
238	HARQUAHALA FIRE DISTRICT	11.90%	-0.45%	11.45%	11.45%
239	COOLIDGE FIRE DEPT.	13.24%	-1.08%	12.16%	12.16%
240	CLARKDALE FIRE DISTRICT	11.70%	0.88%	12.58%	12.58%
241	WITTMANN FIRE DISTRICT	12.06%	0.09%	12.15%	12.15%
242	CENTRAL AZ. COLLEGE POLICE DEPT.	13.77%	4.84%	18.61%	18.61%
243	CITY OF MARICOPA POLICE DEPT.	12.22%	-0.14%	12.08%	12.08%
244	ORACLE FIRE DISTRICT	12.63%	-0.24%	12.39%	12.39%
245	BENSON FIRE DEPT.	14.78%	7.07%	21.85%	21.85%
246	DESERT HILLS FIRE DEPT.	11.86%	3.53%	15.39%	15.39%
247	QUEEN CREEK FIRE DEPT.	11.10%	2.59%	13.69%	13.69%
248	SONOITA ELGIN FIRE DEPT.	12.33%	0.55%	12.88%	12.88%
249	CHRISTOPHER-KOHL'S FIRE DISTRICT	12.29%	0.20%	12.49%	12.49%
250	WHETSTONE FIRE DISTRICT	11.80%	-0.15%	11.65%	11.65%
251	QUEEN VALLEY FIRE DISTRICT	13.90%	1.58%	15.48%	15.48%
252	LAKE MOHAVE RANCHOS FIRE DISTRICT	13.37%	9.73%	23.10%	23.10%
253	HUACHUCA CITY POLICE DEPT.	15.26%	5.88%	21.14%	21.14%
254	PALOMINAS FIRE DISTRICT	13.81%	-1.62%	12.19%	12.19%
255	SUN SITES PEARCE FIRE DISTRICT	11.10%	1.17%	12.27%	12.27%
TOTAL		12.89%	19.65%	32.54%	32.54%

September 27, 2013

Mr. James Hacking  
Administrator  
Arizona Public Safety Personnel Retirement System  
3010 E. Camelback Road, Suite 200  
Phoenix, Arizona 85016

**Re: Report of the June 30, 2013 Actuarial Valuation of PSPRS**

Dear Mr. Hacking:

Enclosed please find 5 copies of this report.

Any questions or comments you may develop will be welcome.

Sincerely,

Mark Buis, FSA, EA, MAAA

MB:mrh  
Enclosures