Gabriel Roeder Smith & Company
Consultants & Actuaries

PRESCOTT FIRE DEPT. (023)

ARIZONA PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM

JUNE 30, 2015

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November 6, 2015

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

Re: Prescott Fire Dept.

The results of the June 30, 2015 annual actuarial valuation of members covered by the Arizona Public Safety Personnel Retirement System (PSPRS) are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purpose of the valuation was to measure the System's funding progress and to determine the employer contribution for the 2016-2017 fiscal year. The funding objective is stated in Article 4, Chapter 5, Title 38, Section 843B of the Arizona Revised Statutes. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The findings in this report are based on data and other information through June 30, 2015. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

The valuation was based upon information furnished by the Retirement System, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the Retirement System.

In addition, this report was prepared using certain assumptions approved by the Board as described in the section of this report entitled Methods and Assumptions.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Arizona Public Safety Personnel Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Mark Buis, James D. Anderson and Francois Pieterse are Members of the American Academy of Actuaries (MAAA). These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

Mark Buis	James D. Anderson	Francois Pieterse
FSA, EA, MAAA	FSA, EA, MAAA	ASA, MAAA

MB/JDA/FP:mrb

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EXECUTIVE SUMMARY/BOARD SUMMARY

1. Required Employer Contributions to Support Retirement Benefits

The computed employer contribution for the fiscal year beginning July 1, 2016 and funded status as of June 30, 2015 are shown below.

Averages	Pension	Health	Total
Employer Contribution Rate	75.77%	0.00%	75.77%
Funded Status	37.8%	133.2%	39.3%

2. Contribution Rate Comparison

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

Valuation Date	Pension	Health	Total
6/30/2014 (prior to phase-in)	66.60%	0.00%	66.60%
6/30/2014 (after phase-in)	60.81%	0.00%	60.81%
6/30/2015 (prior to phase-in)	75.77%	0.00%	75.77%
6/30/2015 (after phase-in)	69.82%	0.00%	69.82%

Please note that the pension contribution rate increased significantly for most employers in the June 30, 2014 valuation. This arose primarily due to the repeal of certain aspects of SB1609 which resulted in much larger recognition of liabilities related to Permanent Benefit Increases (PBI). While it is recommended that employers contribute the full amount, beginning with the June 30, 2014 valuation, the Board adopted a policy to allow employers to phase-in the pension contribution rate increase over 3 years, if necessary. Employers that have funded ratios below 50% are strongly encouraged to contribute the full amount prior to phase-in.

EXECUTIVE SUMMARY/BOARD SUMMARY

3. Reasons for Change

Changes in the contribution rate are illustrated on the following chart. The impact of each change will be different for each employer.

Contribution Rate	Pension	Health	Total
Contribution Rate Last Valuation	66.60%	0.00%	66.60%
Asset Losses	1.23%	0.06%	1.29%
Tier 2	(0.35)%	(0.01)%	(0.36)%
Payroll Base	3.71%	(0.02)%	3.69%
PBI Gain/Loss	(1.33)%	0.00%	(1.33)%
Other	5.91%	(0.03)%	5.88%
Contribution Rate This Valuation	75.77%	0.00%	75.77%

Funded Status	Pension	Health	Total
Funded Status Last Valuation	40.0%	126.5%	41.4%
Asset Losses	(1.2)%	(4.0)%	0.4%
Tier 2	0.0%	0.0%	0.0%
Payroll Base	0.4%	0.0%	0.4%
PBI Gain/Loss	1.3%	0.0%	1.3%
Other	(2.7)%	10.7%	(4.2)%
Funded Status This Valuation	37.8%	133.2%	39.3%

Asset Losses – Asset losses are based on 7-year smoothing of assets and therefore primarily attributable to the market downturn in 2008-2009. Note that this is the last year recognition of the large asset loss that occurred in 2008-2009.

EXECUTIVE SUMMARY/BOARD SUMMARY

Tier 2 – The change in the contribution rate is due to the fact that as current members retire, they are replaced by new members who have a less costly Tier of Benefits (for members hired on or after January 1, 2012). This will typically result in a declining normal cost rate that will occur gradually over time as the population mix (Tier 1 / Tier 2) changes. Occasionally, the normal cost rate may increase if there has been a shift in demographics during the year.

Payroll Base – Under the current amortization policy, the contribution rate is developed based on a percentage of payroll. To the extent that overall payroll is lower/greater than last year's payroll projected at 4.0% payroll growth, the contribution rate will increase/decrease as a result. For example, if there were 2 active members in the Plan last year and one of the members retired, the existing unfunded liability would now be spread over the payroll of one member instead of two members and the resulting contribution rate would be much higher. Therefore, it is important to consider the overall dollar level of the contribution along with the contribution rate. The dollar contributions are also shown on page A-2. The change in the funded status is primarily due to gain or losses on the overall salary assumption, which includes both the wage base assumption (4.0%) and the merit and longevity components of the salary assumption.

PBI Gain/(Loss) – Under the current structure, retired members will receive a PBI under certain conditions based on the current year excess asset return. The valuation assumes a resulting average PBI of approximately 2.00% per year. Since there was no PBI for PSPRS members this year, this resulted in a gain for the Retirement System with a corresponding reduction in the contribution rate and increase in the funded status.

Other – This is the combination of all factors other than those listed above and primarily reflects demographic gains and losses (i.e., retirement, turnover, disability, etc. experience that differs from the actuarial assumptions). While this number is small on a combined plan basis, it will vary considerably from employer to employer, especially for employers with a smaller number of members.

EXECUTIVE SUMMARY/BOARD SUMMARY

4. Amortization Period

Unfunded liabilities were amortized as level percent-of-payroll over a closed period of 21 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.

5. Looking Ahead

The continuing effect of prior asset losses was dampened by the 7-year smoothing period. There remain unrecognized investment losses that will, in the absence of other gains, put upward pressure on the contribution rate next year.

In 2014, the Society of Actuaries published new mortality tables which include mortality improvement scales. While these tables were not developed specifically for the Public Sector, we recommend that the mortality assumption be reviewed in conjunction with the next regularly scheduled experience study.

The Board has adopted an investment return assumption of 7.5% for the June 30, 2016 actuarial valuation. If all other assumptions are realized, this change will result in upward pressure on the contribution rate.

6. Conclusion

The reversal of some of the provisions in SB1609 due to the Fields decision resulted in a significant increase in the contribution rate last year. If pending litigation in the Hall case is ruled in favor of the plaintiffs, contribution rates will increase again yet further. In 2014, the Board adopted a provision allowing for up to a 3-year phase-in of the contribution rate. This is the second year of the 3-year period.

SECTION A

INTRODUCTION

FUNDING OBJECTIVE

The purpose of the annual actuarial valuation of the Arizona Public Safety Personnel Retirement System as of June 30, 2015 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, 2016. This information is contained in Section A.

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

CONTRIBUTION RATES

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, 2016 are shown on page A-2.

CONTRIBUTION REQUIREMENTS

Development of Employer Contributions for the Indicated Valuation Date

Valuation Date	**June 30, 2014**	**June 30, 2015**
Contribution for Fiscal Year ending	2016	2017
Pension		
Normal cost requirement		
Service pensions	15.26 %	15.10 %
Disability pensions	1.60	1.50
Survivors of active members	0.78	0.68
Refunds of members' accumulated contributions	1.38	1.39
Total normal cost requirement	19.02 %	18.67 %
Employee contributions		
Total employee rate	11.65	11.65
Less portion used to pay down unfunded liability	4.00	4.00
Net employee rate	7.65 %	7.65 %
Employer normal cost requirement	11.37 %	11.02 %
Amortization of unfunded liabilities	55.23 %	64.75 %
Total recommended pension contribution rate (before phase-in)	**66.60 %**	**75.77 %**
Total pension contribution rate (after phase-in)	**60.81 %**	**69.82 %**
Total recommended pension contribution amount (before phase-in)	**$ 2,579,984**	**$ 2,857,451**
Health		
Normal cost requirement	0.33 %	0.32 %
Amortization of unfunded liabilities	(0.33) %	(0.32) %
Total health contribution requirement	0.00 %	0.00 %
Total health contribution requirement amount	**$ -**	**$ -**
Total contribution rate (before phase-in)	**66.60 %**	**75.77 %**
Total contribution rate (after phase-in)	**60.81 %**	**69.82 %**
Total minimum contribution requirement (if applicable)	**N/A**	**N/A**

The results above are shown both prior to and after the application of the statutory minimum contribution requirement of 8% of payroll (5% of payroll if the actual employer contribution rate is less than 5% for the 2006/2007 Fiscal Year).

IMPACT OF EXTRA CONTRIBUTIONS

Extra Contribution in $(000)	$0	$1,000	$2,000	$3,000	$4,000	$5,000	$6,000	$7,000	$8,000	$9,000	$10,000
Impact on:											
- June 30, 2015 Funded Status	37.8%	39.6%	41.5%	43.3%	45.1%	46.9%	48.8%	50.6%	52.4%	54.3%	56.1%
- FYE 2017 Contribution Rate	75.77%	73.78%	71.79%	69.80%	67.80%	65.81%	63.82%	61.82%	59.83%	57.84%	55.85%

Based on the June 30, 2015 actuarial valuation, the table above shows the hypothetical change in the funded status and contribution rate (before phase-in) due to each additional $1,000,000 in market value.

HISTORICAL SUMMARY OF EMPLOYER RATES

Valuation Date June 30	Fiscal Year Ending June 30	Normal Cost	Unfunded Actuarial Accrued Liability	Total
2009	2011	11.45%	15.65%	27.10%
2010	2012	11.46	18.26	29.72
2011	2013	11.48	22.44	33.92
2012	2014	12.41	31.06	43.47
2013	2015	11.91	47.75	59.66
2014* (before phase-in)	2016	11.37	55.23	66.60
2014* (after phase-in)	2016	11.37	49.44	60.81
2015 (before phase-in)	**2017**	**11.02**	**64.75**	**75.77**
2015 (after phase-in)	**2017**	**11.02**	**58.80**	**69.82**

** Beginning with the June 30, 2014 valuation the rates are for pension only.*

HISTORICAL SUMMARY OF EMPLOYER HEALTH RATES

Valuation Date June 30	Fiscal Year Ending June 30	Normal Cost	Unfunded Actuarial Accrued Liability	Total
2014	2016	0.33%	(0.33)%	0.00%
2015	**2017**	**0.32**	**(0.32)**	**0.00**

SECTION B

FUNDING RESULTS

PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY

	June 30, 2014	June 30, 2015
Pension		
A. Accrued Liability		
1. For retirees and beneficiaries	$ 36,943,774	$ 40,358,050
2. For DROP members	5,187,830	5,264,621
3. For terminated members	144,227	192,472
4. For present active members		
a. Value of expected future benefit payments	15,894,501	15,571,691
b. Value of future normal costs	(5,672,551)	(5,401,524)
c. Active member accrued liability: (a) - (b)	10,221,950	10,170,167
5. Total accrued liability	52,497,781	55,985,310
B. Present Assets (Funding Value)	21,016,905	21,163,426
C. Unfunded Accrued Liability: (A.5) - (B)	31,480,876	34,821,884
D. Stabilization Reserve	-	-
E. Net Unfunded Accrued Liability: (C) + (D)	$ 31,480,876	$ 34,821,884
F. Funding Ratio: (B) / (A.5)	40.0%	37.8%
Health		
A. Accrued Liability		
1. For retirees and beneficiaries	$ 384,351	$ 415,101
2. For DROP members	125,344	124,914
3. For present active members		
a. Value of expected future benefit payments	448,071	439,699
b. Value of future normal costs	(101,150)	(94,800)
c. Active member accrued liability: (a) - (b)	346,921	344,899
4. Total accrued liability	856,616	884,914
B. Present Assets (Funding Value)	1,083,850	1,178,991
C. Net Unfunded Accrued Liability: (A.4) - (B)	$ (227,234)	$ (294,077)
D. Funding Ratio: (B) / (A.4)	126.5%	133.2%

SECTION C

FUND ASSETS

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

Year Ended June 30:	2015	2016	2017	2018	2019	2020	2021
A. Funding Value Beginning of Year (Including Future Benefit Increases)	$ 6,018,984,092						
B. Market Value End of Year	6,075,768,720						
C. Market Value Beginning of Year	5,935,524,128						
D. Non Investment Net Cash Flow	(71,191,648)						
E. Investment Income							
E1. Total: B-C-D	211,436,240						
E2. Amount for Immediate Recognition: (8.00%)	469,695,979						
E3. Amount for Phased-in Recognition: E1-E2	(258,259,739)						
F. Phased-in Recognition of Investment Income							
F1. Current Year: E3 / 7	(36,894,248)						
F2. First Prior Year	33,458,496	$ (36,894,248)					
F3. Second Prior Year	9,542,555	33,458,496	$ (36,894,248)				
F4. Third Prior Year	(72,234,304)	9,542,555	33,458,496	$ (36,894,248)			
F5. Fourth Prior Year	40,557,028	(72,234,304)	9,542,555	33,458,496	$ (36,894,248)		
F6. Fifth Prior Year	9,473,791	40,557,028	(72,234,304)	9,542,555	33,458,496	$ (36,894,248)	
F7. Sixth Prior Year	(183,605,170)	9,473,791	40,557,031	(72,234,303)	9,542,556	33,458,496	$ (36,894,251)
F8. Total Recognized Investment Gain	(199,701,852)	(16,096,682)	(25,570,470)	(66,127,500)	6,106,804	(3,435,752)	(36,894,251)
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7)	6,217,786,571						
G2. Upper Corridor: (120% x B)	7,290,922,464						
G3. Lower Corridor: (80% x B)	4,860,614,976						
G4. End of Year: (G1 subject to max of G2 and min of G3)	6,217,786,571						
H. Difference Between Market Value & Funding Value: (B-G4)	(142,017,851)	(125,921,169)	(100,350,699)	(34,223,199)	(40,330,003)	(36,894,251)	0
I. Market Rate of Return	3.6%						
J. Recognized Rate of Return	4.5%						
K. Ratio of Funding Value to Market Value	102.3%						
L. Market Value of Assets for Division	20,680,041						
M. Funding Value of Assets for Division	21,163,426						

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.

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

Year Ended June 30:	2015	2016	2017	2018	2019	2020	2021
A. Funding Value Beginning of Year (Including Future Benefit Increases)	$ 294,431,458						
B. Market Value End of Year	308,677,610						
C. Market Value Beginning of Year	290,897,309						
D. Non Investment Net Cash Flow	6,969,980						
E. Investment Income							
E1. Total: B-C-D	10,810,321						
E2. Amount for Immediate Recognition: (8.00%)	23,386,441						
E3. Amount for Phased-in Recognition: E1-E2	(12,576,120)						
F. Phased-in Recognition of Investment Income							
F1. Current Year: E3 / 7	(1,796,589)						
F2. First Prior Year	1,653,381	$ (1,796,589)					
F3. Second Prior Year	451,741	1,653,381	$ (1,796,589)				
F4. Third Prior Year	(3,419,544)	451,741	1,653,381	$ (1,796,589)			
F5. Fourth Prior Year	1,919,954	(3,419,544)	451,741	1,653,381	$ (1,796,589)		
F6. Fifth Prior Year	448,486	1,919,954	(3,419,544)	451,741	1,653,381	$ (1,796,589)	
F7. Sixth Prior Year	(8,691,797)	448,486	1,919,954	(3,419,544)	451,740	1,653,381	$ (1,796,586)
F8. Total Recognized Investment Gain	(9,434,368)	(742,571)	(1,191,057)	(3,111,011)	308,532	(143,208)	(1,796,586)
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7)	315,353,511						
G2. Upper Corridor: (120% x B)	370,413,132						
G3. Lower Corridor: (80% x B)	246,942,088						
G4. End of Year: (G1 subject to max of G2 and min of G3)	315,353,511						
H. Difference Between Market Value & Funding Value: (B-G4)	(6,675,901)	(5,933,330)	(4,742,273)	(1,631,262)	(1,939,794)	(1,796,586)	0
I. Market Rate of Return	3.7%						
J. Recognized Rate of Return	4.7%						
K. Ratio of Funding Value to Market Value	102.2%						
L. Market Value of Assets for Division	1,154,032						
M. Funding Value of Assets for Division	1,178,991						

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.

SECTION D

CENSUS DATA

JUNE 30, 2015 VALUATION DATA SUMMARY

For purposes of the June 30, 2015 valuation, information on covered persons was furnished by the Board of Trustees. These people may be briefly described as follows.

		Averages		
	No.	Age	Service	Annual Pay or Retirement Allowance
Actives	51	39.7	10.6	$68,367
Retirees & Beneficiaries	62			51,270
DROP	7			51,139
Terminated	8			
	128			

ACTIVE MEMBERS

Members in Active Service as of June 30, 2015
by Years of Service

	Years of Service							Total	Total	Average
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Up	Count	Pay	Pay
Under 25	2							2	$ 97,387	$ 48,694
25 - 29	2	1						3	153,839	51,280
30 - 34	6	1	3					10	554,282	55,428
35 - 39	3	1	4	2				10	619,815	61,982
40 - 44	2		5	4				11	776,073	70,552
45 - 49	1	1	2	5	2			11	907,190	82,472
50 - 54			1	1				2	164,965	82,483
55 - 59				1				1	126,047	126,047
60 - 64				1				1	87,104	87,104
65 and over									0	0
Total	16	4	15	14	2			51	$ 3,486,702	$ 68,367

TERMINATED MEMBERS

Terminated Members as of June 30, 2015
by Years of Service

Age	Years of Service 0 - 4	5 - 9	10 - 14	15 - 19	20 & Up	Total Count
Under 30	2					2
30 - 39	2	1				3
40 - 44	2					2
45 - 49		1				1
50 - 54						0
55 - 59						0
60 - 69						0
70 and over						0
Total	6	2	0	0	0	8

RETIREES AND BENEFICIARIES

All Retirants and Beneficiaries June 30, 2015 by Attained Ages

Attained Ages	Males No.	Males Annual Benefits	Females No.	Females Annual Benefits	Total No.	Total Annual Benefits
Under 25	0	$ 0	0	$ 0	0	$ 0
25-29	0	0	3	167,624	3	167,624
30-34	0	0	4	242,117	4	242,117
35-39	0	0	1	60,725	1	60,725
40-44	1	35,286	1	101,483	2	136,769
45-49	1	37,359	0	0	1	37,359
50-54	7	379,367	1	36,756	8	416,123
55-59	7	355,148	1	36,084	8	391,232
60-64	14	775,110	1	40,618	15	815,728
65-69	11	531,379	1	40,500	12	571,879
70-74	3	145,048	0	0	3	145,048
75-79	1	44,291	2	69,971	3	114,262
80-84	1	42,095	0	0	1	42,095
85-89	0	0	0	0	0	0
90-94	0	0	1	37,791	1	37,791
95-99	0	0	0	0	0	0
100 and Over	0	0	0	0	0	0
Totals	**46**	**$ 2,345,083**	**16**	**$ 833,669**	**62**	**$ 3,178,752**

Pension Being Paid		Number	Annual Pensions	Average Pensions
Retired Members	Service Pensions	41	$ 2,111,914	$51,510
	Disability Pensions	5	233,169	46,634
Totals		46	2,345,083	50,980
Survivors of Members	Spouses	16	833,669	52,104
	Children with Guardians	0	0	0
Total		16	833,669	52,104
Total Pension being Paid		**62**	**$3,178,752**	**$51,270**

	Average Age	Average Service	Average Age at Retirement
Normal Retired Members	61.6	23.2	50.0
Disability Retired Members	63.4	18.8	46.3
Spouse Beneficiaries	48.2	10.0	36.2

DROP MEMBERS

DROP Members as of June 30, 2015
by Attained Ages

Attained Ages	Males		Females		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	0	$ 0	0	$ 0	0	$ 0
45-49	0	0	0	0	0	0
50-54	5	256,813	0	0	5	256,813
55-59	1	39,299	0	0	1	39,299
60-64	1	61,862	0	0	1	61,862
65 and Over	0	0	0	0	0	0
Totals	**7**	**$357,974**	**0**	**$0**	**7**	**$357,974**

PENSION BEING PAID
HISTORICAL SCHEDULE

Valuation Date June 30	No.	Annual Pensions	% Incr. in Annual Pensions	Average Pension	Present Value of Pensions Total	Present Value of Pensions Average
2009	46	$ 1,921,573	- %	$ 41,773	$ 20,773,130	$ 451,590
2010	49	2,140,029	11.4	43,674	23,047,556	470,358
2011	51	2,327,618	8.8	45,640	25,260,285	495,300
2012	55	2,629,353	13.0	47,806	29,378,451	534,154
2013	60	3,031,474	15.3	50,525	34,967,093	582,785
2014	63	3,234,859	6.7	51,347	42,131,604	668,756
2015	**69**	**3,536,726**	**9.3**	**51,257**	**45,622,671**	**661,198**

SECTION E

METHODS AND ASSUMPTIONS

VALUATION METHODS

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 21 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 4.0% 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 3.85% 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									
	Merit & Seniority					Increase Next Year			
Sample Ages	Police Large	Police Small	Fire Large	Fire Small	Base (Economy)	Police Large	Police Small	Fire Large	Fire Small
20	4.00%	4.00%	4.00%	4.00%	4.00%	8.00%	8.00%	8.00%	8.00%
25	3.70%	3.16%	3.70%	3.70%	4.00%	7.70%	7.16%	7.70%	7.70%
30	2.60%	2.12%	2.90%	2.66%	4.00%	6.60%	6.12%	6.90%	6.66%
35	1.22%	1.17%	1.54%	1.32%	4.00%	5.22%	5.17%	5.54%	5.32%
40	0.52%	0.36%	0.48%	0.41%	4.00%	4.52%	4.36%	4.48%	4.41%
45	0.28%	0.10%	0.14%	0.12%	4.00%	4.28%	4.10%	4.14%	4.12%
50	0.14%	0.07%	0.04%	0.07%	4.00%	4.14%	4.07%	4.04%	4.07%
55	0.04%	0.02%	0.00%	0.02%	4.00%	4.04%	4.02%	4.00%	4.02%
60	0.00%	0.00%	0.00%	0.00%	4.00%	4.00%	4.00%	4.00%	4.00%
65	0.00%	0.00%	0.00%	0.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Ref	383	384	385	386	4.00%				

Active Member Payroll is assumed to grow at 4.0% 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% 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 includes 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

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%

The Fire Small group assumptions were used for the Prescott Fire Dept. valuation.

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2015
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption: 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.

Pay Increase Timing: 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.

Decrement Timing: Decrements of all types are assumed to occur mid-year.

Eligibility Testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Decrement Relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Decrement Operation: Disability and turnover decrements do not operate during retirement eligibility.

Service Credit Accruals: It is assumed that members accrue one year of service credit per year.

Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.

Normal Form of Benefit: 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.

Benefit Service: Exact fractional service is used to determine the amount of benefit payable.

Health Care Utilization: 75% of future retirees are expected to utilize retiree health care. 85% of those are assumed to be married.

Assumed Future Permanent Benefit Increases (PBI): Members retired on or before July 1, 2011: 2% of overall average benefit compounded annually. All members receive the same dollar amount of increase. Members retired on or after August 1, 2011: 0.5% of overall average benefit compounded annually. All members receive the same dollar amount of increase.

SECTION F

PLAN PROVISIONS

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

Membership: Persons who are employed in an eligible group, prior to attaining age 65 years, for at least 40 hours a week for more than six months per year.

Average Monthly Compensation:

For members hired before January 1, 2012:

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.

For members hired on or after January 1, 2012:

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:

For members hired before January 1, 2012:

First day of month following completion of 20 years of service or following 62nd 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 of credited service.

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

For members hired on or after January 1, 2012:

First day of month following the attainment of age 52.5 and completion of 25 years of service.

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

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 credited 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 credited years greater than 25 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 calculated based on twice 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.

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

For members hired on or after January 1, 2012 that cease 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.

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 on employee's credited service (maximum of 20 years divided by 20).

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.

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

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.

** If retired.*

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 or until 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 or until 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.

Permanent Benefit Increases:

For members retired on or before July 1, 2011:

Effective July 1 of each year, each retired member or survivor of a retired member may be entitled to a Permanent Benefit Increase (PBI) in 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. A PBI reserve is maintained and used to pay for the post-retirement adjustment. The investment return on the PBI 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 PBI 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 PBI reserve. A post-retirement adjustment is paid as long as there is a positive balance in the PBI reserve.

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

For members retired on or after August 1, 2011:

A PBI is only paid in a year when the annual return on the market value of assets of the prior fiscal year exceeds 10.5% and the plan is at least 60% funded. 100% of the excess earnings is used to determine whether a PBI can be paid and the size of the PBI for that year. No PBI reserves will accumulate and the present value of that year's PBI for eligible retirees cannot exceed 100% of the earnings in excess of 10.5%. If the excess earnings are high enough to exceed the present value of that year's PBI, 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;
- 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; or
- 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 PBI to be paid is determined as follows:

- Funded ratio is 60-64%, PBI is 2%
- Funded ratio is 65-69%, PBI is 2.5%
- Funded ratio is 70-74%, PBI is 3%
- Funded ratio is 75-79%, PBI is 3.5%
- Funded ratio is 80% or more, PBI is 4%

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

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

Deferred Retirement Option Plan (DROP): A member hired before January 1, 2012 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 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, 7.85% for the fiscal years beginning July 1, 2012, July 1, 2013 and July 1, 2014, and 7.50% for the fiscal year beginning July 1, 2015.

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.

For members with less than 20 years of credited service on January 1, 2012, the monthly pension amount is credited to a DROP participation account with interest calculated as the average return on the actuarial value of assets, with a minimum of 2% and maximum equal to the actuarial assumed rate. The interest credited to the DROP account is 4.40% for the fiscal year beginning July 1, 2012, 3.20% for the fiscal year that starts July 1, 2013 and 3.40% for the fiscal year that starts July 1, 2014.

For members with less than 20 years of credited service on January 1, 2012, 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 and refundable member contributions are made to the System.

A member hired on or after January 1, 2012 may NOT enter into the DROP.

Reverse DROP: Expired effective July 1, 2010.

Employer Contributions: Percent of payroll normal cost plus 30-year (21 years remaining as of June 30, 2015) 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). Employer will contribute to the System when members return to work.

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

Member Contributions: 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.

- FY 2010-2011 – 7.65%
- FY 2011-2012 – 8.65%
- FY 2012-2013 – 9.55%
- FY 2013-2014 – 10.35%
- FY 2014-2015 – 11.05%
- FY 2015-2016 and after: the lesser of 11.65%; or 33.3% of the sum of the member's contribution rate from the preceding fiscal year plus the aggregate computed employer contribution rate; subject to a minimum employee contribution rate of 7.65%.
- The result for FY 2015-2016 is 11.65%.

SECTION G

FUNDING POLICY

ACTUARIAL FUNDING POLICY

Introduction

The purpose of this Actuarial Funding Policy is to record the funding objectives and policy set by the Board for the Arizona Public Safety Personnel Retirement System (PSPRS). The Board establishes this Funding Policy to help ensure the systematic funding of future benefit payments for members of the Retirement System.

In 2012, the Governmental Accounting Standards Board (GASB) approved two new financial reporting standards. GASB Statement No. 67, “Financial Reporting for Pension Plans” replaces the requirements of Statement No. 25. GASB Statement No. 68, “Accounting and Financial Reporting for Pensions” replaces the requirements of Statements No. 27 and No. 50. Prior to the changes, the Annual Required Contribution (ARC) rate was used as a basis for funding decisions. The new GASB statements separate accounting cost (expense) from funding cost (contributions), necessitating the creation of this funding policy.

This funding policy shall be reviewed by the Board annually for several years following initial adoption until the next experience study. Subsequently, it shall be reviewed every five years in conjunction with the experience study.

Funding Objectives

1. Maintain adequate assets so that current plan assets plus future contributions and investment earnings are sufficient to fund all benefits expected to be paid to members and their beneficiaries.
2. Maintain stability of employer contribution rates, consistent with other funding objectives.
3. Maintain public policy goals of accountability and transparency. Each policy element is clear in intent and effect, and each should allow an assessment of whether, how and when the funding requirements of the plan will be met.
4. Promote intergenerational equity. Each generation of members and employers should incur the cost of benefits for the employees who provide services to them, rather than deferring those costs to future members and employers.
5. Provide a reasonable margin for adverse experience to help offset risks.
6. Continue progress of systematic reduction of the Unfunded Actuarial Accrued Liabilities (UAAL).

ACTUARIAL FUNDING POLICY

Elements of Actuarial Funding Policy

1. **Actuarial Cost Method**

   a. The Individual Entry Age Normal level percent of pay actuarial cost method of valuation shall be used in determining Actuarial Accrued Liability (AAL) and Normal Cost. Differences in the past between assumed experience and actual experience ("actuarial gains and losses") shall become part of the AAL. The Normal Cost shall be determined on an individual basis for each active member.

2. **Asset Smoothing Method**

   a. The investment gains or losses of each valuation period, resulting from the difference between actual investment return and assumed investment return, shall be recognized annually in level amounts over 7 years in calculating the Funding Value of Assets

   b. The Funding Value of Assets so determined shall be subject to a 20% corridor relative to Market Value of Assets.

3. **Amortization Method**

   a. The Funding Value of Assets are subtracted from the computed AAL. Any unfunded amount is amortized as a level percent of payroll over a closed period. If the Funding Value of Assets exceeds the AAL, the excess is amortized over an open period of 20 years and applied as a credit to reduce the Normal Cost otherwise payable.

4. **Funding Target**

   a. The targeted funded ratio shall be 100%.

   b. The maximum amortization period shall be 30 years.

   c. If the funded ratio is between 100% and 120%, a minimum contribution equal to the Normal Cost will be made.

ACTUARIAL FUNDING POLICY

Elements of Actuarial Funding Policy (Concluded)

5. Risk Management

a. Assumption Changes

- The actuarial assumptions used shall be those last adopted by the PSPRS Board based on the most recent experience study and upon the advice and recommendation of the actuary. In accordance with best practices, the actuary shall conduct an experience study every five years. The results of the study shall be the basis for the actuarial assumption changes recommended to the PSPRS Board.
- The actuarial assumptions can be updated during the five-year period if significant plan design changes or other significant events occur, as advised by the actuary.

b. Amortization Method

- The amortization method, Level Percent Closed, will ensure full payment of the UAAL over a finite, systematically decreasing period not to exceed 30 years. The amortization period will be reviewed once the period reaches 15 years.

c. Risk Measures

- The following risk measures will be annually determined to provide quantifiable measurements of risk and their movement over time.

  (i) Classic measures currently determined

  – Funded ratio (assets / liability)

  (ii) UAAL / Total Payroll

  – Measures the risk associated with contribution decreases relative impact on the ability to fund the UAAL. An increase in this measure indicates a increase in contribution risk.

  (iii)Total Liability / Total Payroll

  – Measures the risk associated with the ability to respond to liability experience through adjustments in contributions. An increase in this measure indicates an increase in experience risk.

ACTUARIAL FUNDING POLICY

Glossary

1. **Actuarial Accrued Liability (AAL):** 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".
2. **Actuarial Assumptions:** 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.
3. **Actuarial Cost Method:** 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".
4. **Actuarial Gain (Loss):** 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. For example, if during a given year the assets earn more than the investment return assumption, the amount of earnings above the assumption will cause an unexpected reduction in UAAL, or "actuarial gain" as of the next valuation. These include contribution gains and losses that result from actual contributions made being greater or less than the level determined under the policy.
5. **Actuary:** A person who is trained in the applications of probability and compound interest to problems in business and finance that involve payment of money in the future, contingent upon the occurrence of future events. Most actuaries in the United States are Members of the American Academy of Actuaries (MAAA). The Society of Actuaries (SOA) is an international research, education and membership organization for actuaries in the life and health insurance, employee benefits, and pension fields. The SOA administers a series of examinations leading initially to Associateship and the designation ASA and ultimately to Fellowship with the designation FSA.
6. **Amortization:** 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.
7. **Entry Age Normal Actuarial Cost Method:** A funding method that calculates the Normal Cost as a level percentage of pay over the working lifetime of the plan's members.
8. **Experience Study:** An actuarial investigation of demographic and economic experiences of the system during the period studied. The investigation is made for the purpose of updating the actuarial assumptions used in valuing the actuarial liabilities.

ACTUARIAL FUNDING POLICY

Glossary (Concluded)

9. **Funding Value of Assets**: The value of current plan assets recognized for valuation purposes. Generally based on a phased-in recognition of all or a portion of market related investment return. Sometimes referred to as Actuarial Value of Assets.
10. **Market Value of Assets:** The fair value of plan assets as reported in the plan's audited financial statements.
11. **Normal Cost (NC):** 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.
12. **Unfunded Actuarial Accrued Liability (UAAL):** The positive difference, if any, between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability".

SECTION H

GLOSSARY

GLOSSARY

Actuarial Accrued Liability	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."
Accrued Service	The service credited under the plan which was rendered before the date of the actuarial valuation.
Actuarial Assumptions	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.
Actuarial Cost Method	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."
Actuarial Equivalent	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.
Actuarial Present Value	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.
Amortization	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.
Experience Gain (Loss)	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.
Normal Cost	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.

GLOSSARY (CONCLUDED)

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

APPENDIX A

ACCOUNTING DISCLOSURES

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.

Please note that Employer Reporting Information under GASB Statement No. 27 is being replaced by GASB Statement No. 68. Employers will receive a separate report for accounting disclosures under GASB Statement No. 68.

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

Year Ended June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll [(b)-(a)]/(c)	AAL as a Percent of Covered Payroll (b)/(c)
2006	$18,334,323	$27,586,727	$9,252,404	66.5 %	$3,474,512	266.3 %	794.0 %
2007	18,277,316	30,982,052	12,704,736	59.0 %	3,709,276	342.5 %	835.3 %
2008	17,937,835	30,883,588	12,945,753	58.1 %	4,320,143	299.7 %	714.9 %
2009	18,741,981	31,054,176	12,312,195	60.4 %	4,080,036	301.8 %	761.1 %
2010	19,118,127	32,796,075	13,677,948	58.3 %	4,001,892	341.8 %	819.5 %
2011	19,864,483	36,064,123	16,199,640	55.1 %	4,099,794	395.1 %	879.7 %
2012	19,247,445	39,296,872	20,049,427	49.0 %	3,636,198	551.4 %	1,080.7 %
2013	19,144,554	44,966,549	25,821,995	42.6 %	3,252,687	793.9 %	1,382.4 %
2014	21,016,905	52,497,781	31,480,876	40.0 %	3,581,592	879.0 %	1,465.8 %
2015	**21,163,426**	**55,985,310**	**34,821,884**	**37.8 %**	**3,486,702**	**998.7 %**	**1,605.7 %**

Results before 2009 were calculated by the prior actuary.

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ended June 30	Annual Required Contribution
2008	$ 927,617
2009	1,138,302
2010	1,187,079
2011	1,167,084 (est.)
2012	1,255,641 (est.)
2013	1,461,775 (est.)
2014	1,680,133 (est.)
2015	2,056,972 (est.)
2016*	2,579,984 (est.)
2017*	**2,857,451 (est.)**

** This is the estimated Annual Required Contribution before the phase-in plan.*

Fiscal Years prior to 2011 were provided by the prior actuary.

Beginning with the 2011 fiscal year, this schedule shows the estimated annual required contribution (calculated based on the 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.

SUPPLEMENTARY INFORMATION
SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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, 2015
Actuarial cost method	Entry Age Normal
Amortization method	Level percent of pay closed
Remaining amortization period	21 years for underfunded 20 years for overfunded
Asset valuation method	7-year smoothed market 80%/120% market
Actuarial assumptions:	
Investment rate of return	7.85%
Projected salary increases	4.0% - 8.0%
Payroll growth	4.0%
Permanent Benefit Increases	Members retired on or before July 1, 2011: 2% of overall average benefit compounded annually. All members receive the same dollar amount of increase. Members retired on or after August 1, 2011: 0.5% of overall average benefit compounded annually. All members receive the same dollar amount of increase.

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. 27.

SCHEDULE OF FUNDING PROGRESS

Valuation Date June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Annual Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
2006	$ 0	$894,902	$894,902	0.00%	$ 3,474,512	25.76%
2007	0	902,019	902,019	0.00	3,709,276	24.32%
2008	0	900,425	900,425	0.00	4,320,143	20.84%
2009	0	731,571	731,571	0.00	4,080,036	17.93%
2010	0	793,901	793,901	0.00	4,001,892	19.84%
2011	0	945,485	945,485	0.00	4,099,794	23.06%
2012	0	850,856	850,856	0.00	3,636,198	23.40%
2013	0	797,603	797,603	0.00	3,252,687	24.52%
2014	1,083,850	856,616	(227,234)	126.53	3,581,592	0.00%
2015	**1,178,991**	**884,914**	**(294,077)**	**133.23**	**3,486,702**	**0.00%**

ANNUAL REQUIRED CONTRIBUTION

Valuation Date June 30	Fiscal Year Ended June 30	Normal Cost (a)	Actuarial Accrued Liability (b)	Total (a+b)	Dollar Amount
2006	2008	0.44%	1.19%	1.63%	$70,418
2007	2009	0.54	1.15	1.69	73,010
2008	2010	0.45	1.01	1.46	63,074
2009	2011	0.53	0.87	1.40	63,577
2010	2012	0.53	1.00	1.53	68,149
2011	2013	0.34	1.24	1.58	71,416
2012	2014	0.32	1.24	1.56	62,539
2013	2015	0.34	1.41	1.75	62,160
2014	2016	0.33	(0.33)	0.00	0
2015	**2017**	**0.32**	**(0.32)**	**0.00**	**0**

Fiscal Years prior to 2011 were provided by the prior actuary.

Health Insurance Subsidy Payment Reported for FY2015: $49,117