TOWN OF SAHUARITA
ARIZONA PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM (PSPRS)
SAHUARITA LOCAL POLICE BOARD
July 20, 2017

Pursuant to A.R.S. § 38-431.02 notice is hereby given to the public that the Arizona Public Safety Personnel Retirement System (PSPRS) Sahuarita Local Police Board will hold a meeting and executive session at the date and time specified below at the Sahuarita Town Hall, Executive Conference Room on the second floor, 375 West Sahuarita Center Way, Sahuarita, Arizona.

To better serve our community, the conference room is wheelchair accessible. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting the Town Clerk's Office at 520-822-8801.

MEETING AGENDA
AT OR AFTER 4:30 P.M.

1. **Call to Order**

2. **Roll Call**

3. **Consent Agenda:**

   A. **Minutes for Approval – June 6, 2017**

4. **Hall v. Elected Officials Retirement Plan and Parker v. Public Safety Personnel Retirement System updates.**

   A.C. Marriotti, Town of Sahuarita Finance Director, will provide an update regarding refunds to PSPRS members.

5. **Presentation and discussion of PSPRS Fund Performance and the Sahuarita Actuarial Valuation as of June 30, 2016.**

   Don Mineer, Public Safety Personnel Retirement System staff, will present.

6. **Discussion and possible action regarding the Normal Retirement Application submitted by Officer Alexander Droban.**

7. **Discussion and possible action regarding the Deferred Retirement Option Plan (DROP) Retirement Application submitted by Officer Kevin Bender.**

8. **Annual review of Accidental Disability Retirement recipients.**

9. **Notification and overview of the special election process for an employee representative to the PSPRS local board.**

10. **Future Agenda Items**

11. **Adjournment**

***Action may be taken by the Board on any item listed on this agenda. The Board may vote to go into executive session pursuant to A.R.S. § 38-431.03 (A)(3) for discussion or consultation for legal advice with the Local Board Attorney concerning any matter listed on this agenda*.**

TOWN OF SAHUARITA
ARIZONA PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM (PSPRS)
SAHUARITA LOCAL POLICE BOARD
MEETING MINUTES
June 6, 2017

The Public Safety Personnel Retirement System (PSPRS) Sahuarita Local Board met in the Town Hall Agave Conference Room on the second floor, 375 West Sahuarita Center Way, Sahuarita, Arizona on Tuesday, June 6, 2017.

1. Call to Order

Chairman Tom Murphy called the meeting to order at approximately 4:34 p.m.

2. Roll Call

Attendee Name	Title	Status	Arrived
Tom Murphy	Chairman	Present	
Scott Downs	Board Member	Present	4:36 p.m.
Alexander Droban	Board Member	Present	
Clark Munger	Board Member	Present	
Juan Zamora	Board Member	Present	

Also in attendance were Local Board Attorney Thomas Benavidez and Board Secretary Lisa Cole.

Additional attendees included Julie Strzyzewski, Town of Sahuarita Human Resources Analyst, Michelle Johnson-Ochoa, Applicant, and Shelly Johnson-Ochoa, Spouse of Applicant.

3. Consent Agenda:

A. Minutes for Approval – March 22, 2017

B. Pre-Employment Physical Requirement

Name	Hire/Membership Date	Physical Date	Pre-existing Condition
Scott Nied	**10/17/2016**	**9/15/2016**	
Jesus Villanueva	**1/16/2017**	**12/16/2016**	
Jason Dombrose	**4/3/2017**	**3/7/2017**	

MOTION was made to approve the consent agenda.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Clark Munger, Board Member
SECONDER:	Alexander Droban, Board Member
AYES:	Murphy, Droban, Munger, Zamora
ABSENT:	Downs

EXECUTIVE SESSION

MOTION was made to meet in executive session.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Clark Munger, Board Member
SECONDER:	Juan Zamora, Board Member
AYES:	Murphy, Droban, Munger, Zamora
ABSENT:	Downs

Chairman Murphy declared the board convened for executive session at approximately 4:35 p.m.

4. **Executive Session pursuant to A.R.S. § 38-431.03(A)(2) and (A)(3) to discuss records exempt by law from public inspection and for legal advice regarding the Ordinary Disability Retirement Application submitted by Officer Michelle Johnson-Ochoa.**

The board met in executive session to discuss records exempt by law from public inspection and for legal advice regarding the Ordinary Disability Retirement Application submitted by Officer Michelle Johnson-Ochoa.

CONTINUATION OF MEETING

Ms. Johnson-Ochoa and her spouse rejoined the meeting.

MOTION was made to reconvene the regular meeting.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Scott Downs, Board Member
SECONDER:	Alexander Droban, Board Member
AYES:	Murphy, Downs, Droban, Munger, Zamora

Chairman Murphy reconvened the regular meeting at approximately 6:45 p.m.

5. **Consideration and possible action regarding the Ordinary Disability Retirement Application submitted by Officer Michelle Johnson-Ochoa.**

MOTION was made to table the decision on the Ordinary Disability Retirement Application submitted by Officer Michelle Johnson-Ochoa pending receipt of the answers to the following questions from Ms. Johnson-Ochoa's neurosurgeon:

1. Is Ms. Johnson-Ochoa's stated physical inability to perform a reasonable range of duties of a police officer and physical inability to meet the physical qualifications to become a police officer permanent?
2. What is the cause of the degenerative disc disease and when did it begin?

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Scott Downs, Board Member
SECONDER:	Juan Zamora, Board Member
AYES:	Murphy, Downs, Droban, Munger, Zamora

Thomas Benavidez, Board Attorney, requested and was granted permission from Ms. Johnson-Ochoa for the local board to contact her neurosurgeon for the requested information.

Chairman Murphy directed Lisa Cole, Board Secretary, to acquire the requested question responses.

6. Discussion and possible action regarding the Deferred Retirement Option Plan (DROP) Retirement Application submitted by Officer Wesley Genzer, Jr.

Lisa Cole, Board Secretary, stated Officer Genzer submitted the required paperwork to retire from the Deferred Retirement Option Plan and that his employment with the town ended on June 8, 2017, with an effective retirement benefit date of June 30, 2017.

MOTION was made to approve the retirement from DROP Application submitted by Officer Wesley Genzer, Jr. with an effective date of June 30, 2017.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Scott Downs, Board Member
SECONDER:	Alexander Droban, Board Member
AYES:	Murphy, Downs, Droban, Munger, Zamora

7. Discussion and acceptance of the PSPRS Sahuarita Actuarial Valuation as of June 30, 2016.

Lisa Cole, Board Secretary, introduced the item and announced that the total contribution rate for fiscal year 2018 was 21.56%, up from 12.92% from the previous fiscal year due to changes in the PSPRS benefit structure and investment return options. She announced that the funding ratio as of June 30, 2016 for future benefits and accrued liability was reported as 82.4%, which was reported as an unfunded accrued liability of approximately $2.1 million.

Chairman Murphy requested that a staff member from PSPRS attend a future meeting to explain the content of the actuarial report and analysis.

MOTION was made to accept the June 30, 2016 Sahuarita Actuarial Valuation.

RESULT:	**APPROVED [4 -1]**
MOVER:	Alexander Droban, Board Member
SECONDER:	Scott Downs, Board Member
AYES:	Murphy, Downs, Droban, Zamora
NAYES:	Munger

Board Member Munger explained that he voted no because the return assumptions used in the actuarial valuation were unrealistic to sustain future benefits for Sahuarita police officers.

8. 53rd Arizona Legislative First Regular Session update.

Lisa Cole, Local Board Secretary, provided a high level overview of new legislation affecting the public safety retirement system and informed the board members that copies of the bills were available in the meeting packet.

No action was taken – presentation only.

9. Hall v. Elected Officials Retirement Plan and Parker v. Public Safety Personnel Retirement System updates.

Lisa Cole, Local Board Secretary, provided a brief history and update regarding the Hall v. Elected Officials Retirement Plan and Parker v. Public Safety Personnel Retirement System lawsuits. She informed the board that the employer of PSPRS members must provide partial refunds to impacted members who under the contested law had their retirement contribution rates rise above 7.65% and those that retired after the effective date of the 2011 legislation may be owed retroactive benefit increases. Ms. Cole further informed the board that interest rates to be applied to Hall-Parker lawsuit contribution refunds and retroactive permanent benefit increases would be determined by the Maricopa County Superior Court at a later date.

No action was taken – presentation only.

10. Future Agenda Items

Board Member Zamora requested a discussion regarding the method and manner of repayment of retirement contributions in response to the Hall-Parker lawsuits that is in the best interest of the employees and employers.

11. Adjournment

Chairman Murphy adjourned the meeting at approximately 6:58 p.m.

____

Tom Murphy
Chairman

ATTEST:

____

Lisa Cole, MMC
Secretary to the Board

CERTIFICATION

I hereby certify that the foregoing minutes are a true and correct copy of the minutes of the Meeting of the Public Safety Personnel Retirement System Local Board of the Town of Sahuarita held on the 6th day of June, 2017. I further certify that the meeting was duly called and held and that a quorum was present.

Dated this _________day of ______________, 20________.

____
Lisa Cole, MMC
Secretary to the Board

Gabriel Roeder Smith & Company
Consultants & Actuaries

SAHUARITA POLICE DEPT. (174)

ARIZONA PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM

JUNE 30, 2016

GRS

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November 29, 2016

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

Re: Sahuarita Police Dept.

The results of the June 30, 2016 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 2017-2018 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 computed contribution rate shown on page A-2 may be considered as a minimum contribution rate that complies with the Board's funding policy. Users of this report should be aware that contributions made at that rate do not guarantee benefit security. Given the importance of benefit security to any retirement system, we suggest that contributions to the System in excess of those presented in this report be considered.

The findings in this report are based on data and other information through June 30, 2016. 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.

This valuation assumes the continuing ability of the participating employer to make the contributions necessary to fund this plan. A determination regarding whether or not the participating employers are actually able to do so is outside our scope of expertise. Consequently, we did not perform such an analysis.

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 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
FSA, EA, FCA, MAAA

James D. Anderson
FSA, EA, MAAA

Francois Pieterse
ASA, MAAA

MB/JDA/FP:mrb

TABLE OF CONTENTS

EXECUTIVE SUMMARY/BOARD SUMMARY

1. Required Employer Contributions to Support Retirement Benefits

The computed employer contribution for the fiscal year beginning July 1, 2017 and funded status as of June 30, 2016 are shown below.

Tier 1 & Tier 2 Members:

Averages	Pension	Health	Total
Employer Contribution Rate	21.01%	0.55%	21.56%
Funded Status	82.4%	80.6%	82.3%

Tier 3 members (hired on or after July 1, 2017) – pension only:

- Employer contribution for Tier 3 benefits: 7.14%
- Employer contribution for Tier 1 and Tier 2 unfunded liability: 5.52%
- Total employer contribution as a percentage of Tier 3 payroll: 12.66%

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:

	Tier 1 & 2			Tier 3	
Valuation Date	Pension	Health	Total	Pension	Health
6/30/2015	12.42%	0.50%	12.92%	N/A	N/A
6/30/2016	21.01%	0.55%	21.56%	12.66%	0.33%

Please note that the pension contribution rate shown above increased significantly from the June 30, 2015 valuation for most employers. This arose primarily due to changes in the PSPRS benefit structure and investment return assumption which are described on pages 2 – 4 of this report. It is also very important to note that the impact of these changes vary significantly from one employer to another, depending on plan demographics and other factors. In addition, the benefit structure changes impact those hired on or after July 1, 2017 (Tier 3). This Tier has a different level of benefit promise, which is financed on a 50/50 basis between Employer/Employee. Existing unfunded accrued liabilities are financed over all employer payroll.

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	12.42%	0.50%	12.92%
Asset Losses	0.25%	0.01%	0.26%
Tier 2	(0.12)%	(0.04)%	(0.16)%
Payroll Base	0.12%	(0.02)%	0.10%
PBI Gain/Loss	(0.01)%	0.00%	(0.01)%
Benefit Changes	5.22%	0.00%	5.22%
Assumption Changes	2.34%	0.05%	2.39%
Other	0.79%	0.05%	0.84%
Contribution Rate This Valuation	21.01%	0.55%	21.56%

Funded Status	Pension	Health	Total
Funded Status Last Valuation	101.9%	86.9%	101.3%
Asset Losses	(1.0)%	(1.0)%	(1.0)%
Tier 2	0.0%	0.0%	0.0%
Payroll Base	(3.1)%	0.0%	(3.0)%
PBI Gain/Loss	0.0%	0.0%	0.0%
Benefit Changes	(9.8)%	0.0%	(9.5)%
Assumption Changes	(4.6)%	(3.6)%	(4.5)%
Other	(1.0)%	(1.7)%	(1.0)%
Funded Status This Valuation	82.4%	80.6%	82.3%

Asset Losses – Asset losses are based on 7-year smoothing of assets. The return on market value was 0.6% for the year ending June 30, 2016. However, based on funding value, the average return for the last 7 years is approximately 6.6%

EXECUTIVE SUMMARY/BOARD SUMMARY

Tier 2 – The decrease 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. The effect of Tier 3 Members will first impact the June 30, 2018 valuation. 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 2 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) – The prior year valuation assumed 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.

Benefit Changes – Changes to the benefit structure of PSPRS are summarized in section F of this report. Some of the key benefit changes follow:

- replace the prior Permanent Benefit Increase with a CPI-based Cost of Living Adjustment (COLA) for all retirees, and
- change benefit formulas for Tier 3 members (those hired after July 1, 2017) while introducing a 50/50 cost split of Tier 3 plan cost between employees and employers.

EXECUTIVE SUMMARY/BOARD SUMMARY

For most employers the impact of the COLA change is an increase in the employer contribution rate. However, it is very important to note that the COLA impact will vary significantly from one employer to another -- for some employers this benefit change results in a decreased contribution rate. Looking ahead, the impact of the Tier 3 benefit changes will ultimately result in cost decreases (Normal Cost) that emerge gradually over time, as the percentage of the population covered by the new Tier grows.

Impact of November 10, 2016 Hall Decision on Valuation Results

COLA changes helped mitigate potential increases in PSPRS costs arising from the decision in the Hall case. Since the nature and amount of COLA payments has been completely changed, the Hall decision will likely not have a significant impact on the contribution rates in future valuations. In the June 30, 2017 valuation we expect the impact of the Hall decision to be limited to:

- a possible reduction in assets due to refunds of member contributions, and
- possible retroactive adjustments to prior PBI payments.

Assumption Changes – For this valuation, the Board adopted a change in the investment return assumption from 7.85% to 7.5%. While the average System-wide increase on contribution rates was approximately 3.47%, the impact will be different for each employer. The Actuary is currently conducting an experience study which analyzes all of the actuarial assumptions. These changes (if any), will be adopted with the June 30, 2017 actuarial valuation.

Other – This is the combination of all factors other than those listed above and primarily reflect 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.

4. Amortization Period

Unfunded liabilities were amortized as level percent-of-payroll over a closed period of 20 years. If the actuarial value of assets exceeded the actuarial accrued liability, the excess was amortized over

EXECUTIVE SUMMARY/BOARD SUMMARY

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.

If the June 30, 2016 pension valuation results were based on market value instead of smoothed funding value, the pension funded percent of the plan would be 76.0% (instead of 82.4%), and the pension employer contribution requirement would be 22.75% of payroll (instead of 21.01%). Absent investment market gains, it is expected that the funded percent will continue to decrease and the employer contribution requirement will continue to increase.

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 7.4% for the June 30, 2017 actuarial valuation. If all other assumptions are realized, this change will result in upward pressure on the contribution rate.

6. Conclusion

The recent changes in benefit structure and actuarial assumptions significantly increased contribution rates for most employers. This will inject more monies into the fund and ultimately strengthen the long term sustainability of the Retirement System. Additionally, the changes to the historical PBI structure, will help dampen the volatility of contribution rates in the future and provide more predictable benefit increases to retirees.

It is most important that this Plan receive contributions at least equal to the rates shown in this report.

SECTION A

INTRODUCTION

FUNDING OBJECTIVE

The purpose of the annual actuarial valuation of the Arizona Public Safety Personnel Retirement System as of June 30, 2016 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, 2017. 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, 2017 are shown on page A-2.

CONTRIBUTION REQUIREMENTS

Development of Employer Contributions for the Indicated Valuation Date

Valuation Date	**June 30, 2015**	**June 30, 2016**
Contribution for Fiscal Year ending	2017	2018
Tier 1 & 2 Members		
Pension		
Normal cost requirement		
Service pensions	12.77 %	15.51 %
Disability pensions	3.58	4.18
Survivors of active members	0.75	0.89
Refunds of members' accumulated contributions	2.58	2.56
Total normal cost requirement	19.68 %	23.14 %
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	12.03 %	15.49 %
Amortization of unfunded liabilities	0.39 %	5.52 %
Total recommended pension contribution rate	**12.42 %**	**21.01 %**
Total recommended pension contribution amount	**$ 351,946**	**$ 692,230**
Health		
Normal cost requirement	0.41 %	0.39 %
Amortization of unfunded liabilities	0.09 %	0.16 %
Total health contribution requirement	0.50 %	0.55 %
Total health contribution requirement amount	**$ 14,169**	**$ 18,121**
Total contribution rate	**12.92 %**	**21.56 %**
Total minimum contribution requirement (if applicable)	**N/A**	**N/A**
Alternate Contribution Rate (ACR)*	**N/A**	**5.68 %**

* *The Alternate Contribution Rate is the sum of the amortization payments for Tier 1 & 2 Pension and Health, for use when retirees return to active status.*

CONTRIBUTION REQUIREMENTS

Development of Employer Contributions for the Indicated Valuation Date

Valuation Date	**June 30, 2015**	**June 30, 2016**
Contribution for Fiscal Year ending	2017	2018
Tier 3 Members		
Pension		
Normal Cost Requirement	N/A	14.28 %
Tier 3 Amortization of UAL	N/A	0.00
Tier 3 Total recommended pension contribution rate	N/A	14.28 %
Employee Share of Total Rate (50%) for Tier 3	**N/A**	**7.14 %**
Employer Share of Total Rate (50%) for Tier 3	**N/A**	**7.14 %**
Tier 1 & 2 Legacy cost amortization	**N/A**	**5.52 %**
Total recommended employer pension contribution rate	**N/A**	**12.66 %**
Health		
Normal Cost Requirement	N/A	0.34 %
Tier 3 Amortization of UAL	N/A	0.00
Tier 3 Total recommended health contribution rate	N/A	0.34 %
Employee Share of Total Rate (50%) for Tier 3	**N/A**	**0.17 %**
Employer Share of Total Rate (50%) for Tier 3	**N/A**	**0.17 %**
Tier 1 & 2 Legacy cost amortization	**N/A**	**0.16 %**
Total employer health contribution requirement	**N/A**	**0.33 %**
Total Employer cost for Tier 3 Payroll	**N/A**	**12.99 %**
Total Employee cost for Tier 3 Payroll	**N/A**	**7.31 %**

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	$100	$200	$300	$400	$500	$600	$700	$800	$900	$1,000
Impact on:											
- June 30, 2016 Funded Status	82.4%	83.3%	84.2%	85.1%	86.1%	87.0%	87.9%	88.8%	89.7%	90.6%	91.6%
- FYE 2018 Contribution Rate	21.01%	20.77%	20.52%	20.27%	20.03%	19.78%	19.53%	19.29%	19.04%	18.79%	18.55%

Based on the June 30, 2016 actuarial valuation, the table above shows the hypothetical change in the funded status and contribution rate due to each additional $100,000 in market value.

HISTORICAL SUMMARY OF EMPLOYER PENSION RATES

Valuation Date June 30	Fiscal Year Ending June 30	Normal Cost	Unfunded Actuarial Accrued Liability	Total
2009	2011	10.55%	(0.06)%	10.49%
2010	2012	10.99	(0.08)	10.91
2011	2013	12.43	0.87	13.30
2012	2014	12.44	0.56	13.00
2013	2015	12.21	0.10	12.31
2014* (before phase-in)	2016	11.89	0.66	12.55
2014* (after phase-in)	2016	11.89	(0.18)	11.71
2015 (before phase-in)	2017	12.03	0.39	12.42
2015 (after phase-in)	2017	12.03	0.01	12.04
2016	**2018**	**15.49**	**5.52**	**21.01**

** 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	0.42%	0.16%	0.58%
2015	2017	0.41	0.09	0.50
2016	**2018**	**0.39**	**0.16**	**0.55**

SECTION B

FUNDING RESULTS

PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY

	June 30, 2015	June 30, 2016
Pension		
A. Accrued Liability		
1. For retirees and beneficiaries	$ 494,286	$ 909,397
2. For DROP members	793,109	961,603
3. For inactive/vested members	104,076	104,076
4. For present active members		
a. Value of expected future benefit payments	10,315,578	14,648,654
b. Value of future normal costs	(3,494,789)	(4,772,971)
c. Active member accrued liability: (a) - (b)	6,820,789	9,875,683
5. Total accrued liability	8,212,260	11,850,759
B. Present Assets (Funding Value)	8,365,503	9,765,096
C. Unfunded Accrued Liability: (A.5) - (B)	(153,243)	2,085,663
D. Stabilization Reserve	76,622	-
E. Net Unfunded Accrued Liability: (C) + (D)	$ (76,621)	$ 2,085,663
F. Funding Ratio: (B) / (A.5)	101.9%	82.4%
Health		
A. Accrued Liability		
1. For retirees and beneficiaries	$ 20,415	$ 35,221
2. For DROP members	15,658	17,540
3. For present active members		
a. Value of expected future benefit payments	347,354	407,585
b. Value of future normal costs	(72,099)	(80,465)
c. Active member accrued liability: (a) - (b)	275,255	327,120
4. Total accrued liability	311,328	379,881
B. Present Assets (Funding Value)	270,588	306,118
C. Net Unfunded Accrued Liability: (A.4) - (B)	$ 40,740	$ 73,763
D. Funding Ratio: (B) / (A.4)	86.9%	80.6%

PENSION CONTRIBUTION PROJECTION

Ending June 30	Contribution Rate	Contribution Amount (Estimate)
2018	21.01%	$ 692,230
2019	21.34	731,227
2020	20.88	744,084
2021	20.14	746,422
2022	20.20	778,591
2023	20.36	816,148
2024	20.55	856,715
2025	20.23	877,110
2026	19.98	900,921
2027	19.90	933,207
2028	19.78	964,682

Contribution Amount estimated based on June 30, 2016 valuation data, methods, and assumptions, including 7.50% investment return and 4% payroll growth.

SECTION C

FUND ASSETS

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

Year Ended June 30:	2016	2017	2018	2019	2020	2021	2022
A. Funding Value Beginning of Year	$6,217,786,571						
B. Market Value End of Year	6,042,477,418						
C. Market Value Beginning of Year	6,075,768,720						
D. Non Investment Net Cash Flow	(68,927,061)						
E. Investment Income							
E1. Total: B-C-D	35,635,759						
E2. Amount for Immediate Recognition: (7.85%)	485,390,859						
E3. Amount for Phased-in Recognition: E1-E2	(449,755,100)						
F. Phased-in Recognition of Investment Income							
F1. Current Year: E3 / 7	(64,250,729)						
F2. First Prior Year	(36,894,248)	$ (64,250,729)					
F3. Second Prior Year	33,458,496	(36,894,248)	$ (64,250,729)				
F4. Third Prior Year	9,542,555	33,458,496	(36,894,248)	$ (64,250,729)			
F5. Fourth Prior Year	(72,234,304)	9,542,555	33,458,496	(36,894,248)	$ (64,250,729)		
F6. Fifth Prior Year	40,557,028	(72,234,304)	9,542,555	33,458,496	(36,894,248)	$ (64,250,729)	
F7. Sixth Prior Year	9,473,791	40,557,031	(72,234,303)	9,542,556	33,458,496	(36,894,251)	$ (64,250,726)
F8. Total Recognized Investment Gain	(80,347,411)	(89,821,199)	(130,378,229)	(58,143,925)	(67,686,481)	(101,144,980)	(64,250,726)
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7)	6,553,902,958						
G2. Upper Corridor: (120% x B)	7,250,972,902						
G3. Lower Corridor: (80% x B)	4,833,981,934						
G4. End of Year: (G1 subject to max of G2 and min of G3)	6,553,902,958						
H. Difference Between Market Value & Funding Value: (B-G4)	(511,425,540)	(421,604,341)	(291,226,112)	(233,082,187)	(165,395,706)	(64,250,726)	0
I. Market Rate of Return	0.6%						
J. Recognized Rate of Return	6.6%						
K. Ratio of Funding Value to Market Value	108.5%						
L. Market Value of Assets for Division	9,003,089						
M. Funding Value of Assets for Division	9,765,096						

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:	2016	2017	2018	2019	2020	2021	2022
A. Funding Value Beginning of Year	$ 315,353,511						
B. Market Value End of Year	299,092,404						
C. Market Value Beginning of Year	308,677,610						
D. Non Investment Net Cash Flow	(11,347,755)						
E. Investment Income							
E1. Total: B-C-D	1,762,549						
E2. Amount for Immediate Recognition: (7.85%)	24,309,851						
E3. Amount for Phased-in Recognition: E1-E2	(22,547,302)						
F. Phased-in Recognition of Investment Income							
F1. Current Year: E3 / 7	(3,221,043)						
F2. First Prior Year	(1,796,589)	$ (3,221,043)					
F3. Second Prior Year	1,653,381	(1,796,589)	$ (3,221,043)				
F4. Third Prior Year	451,741	1,653,381	(1,796,589)	$ (3,221,043)			
F5. Fourth Prior Year	(3,419,544)	451,741	1,653,381	(1,796,589)	$ (3,221,043)		
F6. Fifth Prior Year	1,919,954	(3,419,544)	451,741	1,653,381	(1,796,589)	$ (3,221,043)	
F7. Sixth Prior Year	448,486	1,919,954	(3,419,544)	451,740	1,653,381	(1,796,586)	$ (3,221,044)
F8. Total Recognized Investment Gain	(3,963,614)	(4,412,100)	(6,332,054)	(2,912,511)	(3,364,251)	(5,017,629)	(3,221,044)
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7)	324,351,993						
G2. Upper Corridor: (120% x B)	358,910,885						
G3. Lower Corridor: (80% x B)	239,273,923						
G4. End of Year: (G1 subject to max of G2 and min of G3)	324,351,993						
H. Difference Between Market Value & Funding Value: (B-G4)	(25,259,589)	(20,847,489)	(14,515,435)	(11,602,924)	(8,238,673)	(3,221,044)	0
I. Market Rate of Return	0.6%						
J. Recognized Rate of Return	6.6%						
K. Ratio of Funding Value to Market Value	108.4%						
L. Market Value of Assets for Division	282,278						
M. Funding Value of Assets for Division	306,118						

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, 2016 VALUATION DATA SUMMARY

For purposes of the June 30, 2016 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	40	42.3	11.1	$76,155
Retirees & Beneficiaries	2			35,444
DROP	1			62,029
Inactive/Vested	4			
	47			

ACTIVE MEMBERS

Members in Active Service as of June 30, 2016
by Years of Service

Age	Years of Service 0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Up	Total Count	Total Pay	Average Pay
Under 25									$ 0	$ 0
25 - 29	1							1	52,513	52,513
30 - 34	2	2	2					6	390,918	65,153
35 - 39	3	2	4					9	702,909	78,101
40 - 44	1	1	4	4				10	730,959	73,096
45 - 49		2	1	3	1			7	545,234	77,891
50 - 54			1	2				3	235,095	78,365
55 - 59	2			1				3	286,203	95,401
60 - 64									0	0
65 and over				1				1	102,366	102,366
Total	9	7	12	11	1			40	$ 3,046,197	$ 76,155

INACTIVE/VESTED MEMBERS

Inactive/Vested Members as of June 30, 2016
by Years of Service

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

RETIREES AND BENEFICIARIES

All Retirants and Beneficiaries June 30, 2016
by Attained Ages

Attained Ages	Males		Females		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 25	0	$ 0	0	$ 0	0	$ 0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	0	0	0	0	0
40-44	0	0	0	0	0	0
45-49	0	0	1	37,716	1	37,716
50-54	0	0	0	0	0	0
55-59	0	0	1	33,172	1	33,172
60-64	0	0	0	0	0	0
65-69	0	0	0	0	0	0
70-74	0	0	0	0	0	0
75-79	0	0	0	0	0	0
80-84	0	0	0	0	0	0
85-89	0	0	0	0	0	0
90-94	0	0	0	0	0	0
95-99	0	0	0	0	0	0
100 and Over	0	0	0	0	0	0
Totals	**0**	**$ 0**	**2**	**$ 70,888**	**2**	**$ 70,888**

Pension Being Paid		**Number**	**Annual Pensions**	**Average Pensions**
Retired Members	Service Pensions	1	$ 37,716	$37,716
	Disability Pensions	1	33,172	33,172
Totals		2	70,888	35,444
Survivors of Members	Spouses	0	0	0
	Children with Guardians	0	0	0
Total		0	0	0
Total Pension being Paid		**2**	**$70,888**	**$35,444**

	Average Age	**Average Service**	**Average Age at Retirement**
Normal Retired Members	47.4	20.0	44.0
Disability Retired Members	58.0	11.3	57.0
Spouse Beneficiaries	0.0	0.0	0.0

DROP MEMBERS

DROP Members as of June 30, 2016
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	1	62,029	0	0	1	62,029
55-59	0	0	0	0	0	0
60-64	0	0	0	0	0	0
65 and Over	0	0	0	0	0	0
Totals	**1**	**$62,029**	**0**	**$0**	**1**	**$62,029**

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	-	$ -	- %	$ -	$ -	$ -
2010	-	-	-	-	-	-
2011	-	-	-	-	-	-
2012	-	-	-	-	-	-
2013	1	37,716	-	37,716	461,048	461,048
2014	1	37,716	-	37,716	483,218	483,218
2015	2	99,745	164.5	49,873	1,287,395	643,698
2016	**3**	**132,917**	**33.3**	**44,306**	**1,871,000**	**623,667**

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 20 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 METHODS

Funded Ratio - Unless otherwise indicated, a funded ratio measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

1. The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligations, in other words, of transferring the obligations to a unrelated third party in an arm’s length market value type transaction.
2. The measurement is dependent upon the actuarial cost method which, in combination with the plan’s amortization policy, affects the timing and amounts of future contributions. The amount of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon actuarial assumptions. A funded ratio measurement in this report of 100% is not synonymous with no required future contributions. If the funded ratio were 100%, the plan would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).
3. The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

Stabilization Reserve - 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.

VALUATION ASSUMPTIONS

Assumptions for this valuation are based on the most recent experience study performed in 2012, and will be updated for the June 30, 2017 based on the experience study currently being performed. As experience emerges for Tier 3 members, separate assumptions may be developed that Tier.

The rate of investment return was 7.50% 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 7.50% nominal rate translates to a net real return over wage growth of 3.50% 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, 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	Rates			
Retirement	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	Rates			
Retirement	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 Police Small group assumptions were used for the Sahuarita Police Dept. valuation.

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2016
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): The cost-of-living adjustment will be based on the average annual percentage change in the Metropolitan Phoenix-Mesa Consumer Price Index published by the United States Department of Labor, Bureau of Statistics. We have assumed that to be 1.75% for this valuation.

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2016
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Financing of Unfunded Actuarial Accrued Liabilities (Money in the Pipes):	The rate-setting valuation projects the unfunded actuarial accrued liability to the beginning of the applicable fiscal year to determine the applicable unfunded amortization rate.
Maintenance of Effort:	For Tier 1 & 2 members, the amount of member contributions that exceed 7.65% of the member's compensation will NOT be used to reduce the employer's contribution requirement. Therefore this Maintenance of Effort is subtracted from assets prior to calculating the contribution rate.

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 Benefit Compensation:
For members hired before January 1, 2012:
One-thirty-sixth of total compensation paid to member during the three consecutive 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 and military differential pay, compensatory time used in lieu of overtime 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 and before July 1, 2017:
One-sixtieth of total compensation paid to member during the five consecutive 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 and military differential pay, compensatory time used in lieu of overtime 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 July 1, 2017:
One-sixtieth of total compensation paid to member during the five consecutive years, out of the last 15 years of credited service, in which the amount paid was highest. Compensation is the amount including base salary, overtime pay, shift and military differential pay, compensatory time used in lieu of overtime 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.

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

For members hired on or after January 1, 2012 and before July 1, 2017:
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 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.

For members hired on or after July 1, 2017:
First day of month following the attainment of age 55 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 15 years of credited service, but less than 17 years of credited service,*** 1.5% of average monthly compensation for each credited year of service.
- ***For retirement with 17 years of credited service, but less than 19 years of credited service,*** 1.75% of average monthly compensation for each credited year of service.
- ***For retirement with 19 years of credited service, but less than 22 years of credited service,*** 2.0% of average monthly compensation for each credited year of service.
- ***For retirement with 22 years of credited service, but less than 25 years of credited service,*** 2.25% of average monthly compensation for each credited year of service.
- ***For retirement with 25 or more years of credited service,*** 2.5% of average monthly compensation for each credited year of service.

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

Early Retirement:
For members hired before July 1, 2017:
Not eligible for an early retirement benefit.

For members hired on or after July 1, 2017:
Members who have earned at least 15 years of credited service may retire at age 52.5 and will receive a benefit that is actuarially equivalent to their normal retirement benefit.

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

Vested Termination (deferred retirement):
For members hired before January 1, 2012:
Termination of covered position employment with 10 or more years of credited service. Annuity is calculated based on twice the member's accumulated contributions with payments commencing at age 62. This annuity is not a retirement benefit and annuitants are not entitled to survivor benefits, benefit increases, or the group health insurance subsidy.

For members hired on or after January 1, 2012 and before July 1, 2017:
Termination of covered position employment with 25 or more years of credited service. Pension is payable if members leaves contributions on account until reaching the age requirement. Pension is calculated in the same way as a normal retirement benefit. This annuity is a retirement benefit and annuitants are entitled to survivor benefits, benefit increases, and the group health insurance subsidy.

For members hired on or after July 1, 2017:
Termination of covered position employment with 15 or more years of credited service. Pension is payable if members leaves contributions on account until reaching the age requirement. Pension is calculated in the same way as a normal retirement benefit. This annuity is a retirement benefit and annuitants are entitled to survivor benefits, benefit increases, and the group health insurance subsidy.

Refunds:
For members hired before January 1, 2012:
Member will receive a lump-sum payment of accumulated contribution. 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:
Member will receive a lump-sum payment of ONLY their accumulated contribution with interest at rate set by Board. Benefit is forfeited if accumulated contributions are refunded.

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).

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

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.

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.

Cost-of-Living Adjustment:

For members hired before July 1, 2017:

Each retired member or survivor of a retired member is eligible to receive a compounding cost-of-living adjustment in the base benefit. The first payment shall be made on July 1, 2018 and every July 1 thereafter.

The cost-of-living adjustment will be based on the average annual percentage change in the Metropolitan Phoenix-Mesa Consumer Price Index published by the United States Department of Labor, Bureau of Statistics. The cost-of-living adjustment will not exceed 2% per year.

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

For members hired on or after July 1, 2017:
Each retired member or survivor of a retired member is eligible to receive a compounding cost-of-living adjustment in the base benefit, beginning at the earlier of the first calendar year after the 7th anniversary of the retired member's retirement or when the retired member is or would have been sixty years of age.

A cost-of-living adjustment shall be paid on July 1 each year that the funded ratio for members hired on or after July 1, 2017 is 70% or more. The cost-of-living adjustment will be based on the average annual percentage change in the Metropolitan Phoenix-Mesa Consumer Price Index published by the United States Department of Labor, Bureau of Statistics. The cost-of-living adjustment will not exceed:

- 2%, if funded ratio for members who are hired on or after July 1, 2017 is 90% or more;
- 1.5%, if funded ratio for members who are hired on or after July 1, 2017 is 80-90%;
- 1%, if funded ratio for members who are hired on or after July 1, 2017 is 70-80%.

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 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 8.0% 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, 7.50% for the fiscal year beginning July 1, 2015 and 7.40% for the fiscal year beginning July 1, 2016.

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

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 beginning July 1, 2013, 3.40% for the fiscal year beginning July 1, 2014, 3.1% for the fiscal year beginning July 1, 2015 and 4.50% for the fiscal year beginning July 1, 2016.

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.

Employer Contributions:
For members hired before July 1, 2017:
Percent-of-payroll normal cost plus 30-year (20 years remaining as of June 30, 2016) 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.

For members hired on or after July 1, 2017:
50% of both the Normal Cost and Actuarially determined amount required to amortize the total unfunded liability for those hired after July 1, 2017. Each year a new amortization base for gains or losses, smoothed over a period not more than 5 years, will be created on a level dollar basis over a period equal to the average expected remaining service lives, but not more than 10 years.

Member Contributions:
For members hired before July 1, 2017:
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%

SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

- 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%
- The result for FY 2016-2017 is 11.65%
- The result for FY 2017-2018 is 11.65%

For members hired on or after July 1, 2017:
50% of both the Normal Cost and Actuarially determined amount required to amortize the total unfunded liability for those hired after July 1, 2017.

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".

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)
2007	$1,843,166	$1,857,078	$13,912	99.3 %	$1,467,612	0.9 %	126.5 %
2008	2,567,341	2,226,533	(340,808)	115.3 %	2,142,910	0.0 %	103.9 %
2009	3,522,313	3,320,309	(202,004)	106.1 %	2,364,545	0.0 %	140.4 %
2010	4,136,216	3,867,734	(268,482)	106.9 %	2,322,852	0.0 %	166.5 %
2011	4,907,824	5,041,686	133,862	97.3 %	2,329,203	5.8 %	216.5 %
2012	5,892,772	5,896,273	3,501	99.9 %	2,350,231	0.2 %	250.9 %
2013	6,697,228	6,417,223	(280,005)	104.4 %	2,489,096	0.0 %	257.8 %
2014	7,327,346	7,429,717	102,371	98.6 %	2,590,256	4.0 %	286.8 %
2015	8,365,503	8,212,260	(153,243)	101.9 %	2,619,917	0.0 %	313.5 %
2016	**9,765,096**	**11,850,759**	**2,085,663**	**82.4 %**	**3,046,197**	**68.5 %**	**389.0 %**

Results before 2009 were calculated by the prior actuary.

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ended June 30	Annual Required Contribution
2009	$ 250,281
2010	175,540
2011	252,244 (est.)
2012	255,695 (est.)
2013	316,628 (est.)
2014	313,786 (est.)
2015	306,880 (est.)
2016*	351,603 (est.)
2017*	351,946 (est.)
2018	**692,230 (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, 2016
Actuarial cost method	Entry Age Normal
Amortization method	Level percent of pay closed
Remaining amortization period	20 years for underfunded 20 years for overfunded
Asset valuation method	7-year smoothed market 80%/120% market
Actuarial assumptions:	
Investment rate of return	7.50%
Projected salary increases	4.0% - 8.0%
Payroll growth	4.0%
Permanent Benefit Increases	The cost-of-living adjustment will be based on the average annual percentage change in the Metropolitan Phoenix-Mesa Consumer Price Index published by the United States Department of Labor, Bureau of Statistics. We have assumed that to be 1.75% for this valuation.

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)
2007	$ 0	$57,647	$57,647	0.0 %	$ 1,467,612	3.93%
2008	0	51,984	51,984	0.0	2,142,910	2.43
2009	0	121,484	121,484	0.0	2,364,545	5.14
2010	0	147,604	147,604	0.0	2,322,852	6.35
2011	0	225,188	225,188	0.0	2,329,203	9.67
2012	0	229,564	229,564	0.0	2,350,231	9.77
2013	0	241,829	241,829	0.0	2,489,096	9.72
2014	218,180	297,184	79,004	73.4	2,590,256	3.05
2015	270,588	311,328	40,740	86.9	2,619,917	1.56
2016	**306,118**	**379,881**	**73,763**	**80.6**	**3,046,197**	**2.42**

ANNUAL REQUIRED CONTRIBUTION

Valuation Date June 30	Fiscal Year Ended June 30	Normal Cost (a)	Actuarial Accrued Liability (b)	Total (a+b)	Dollar Amount
2007	2009	0.59%	0.19%	0.78%	$16,715
2008	2010	0.39	0.15	0.54	11,572
2009	2011	0.59	0.32	0.91	23,949
2010	2012	0.63	0.39	1.02	26,371
2011	2013	0.45	0.52	0.97	24,909
2012	2014	0.37	0.52	0.89	23,061
2013	2015	0.41	0.61	1.02	27,725
2014	2016	0.42	0.16	0.58	16,249
2015	2017	0.41	0.09	0.50	14,169
2016	**2018**	**0.39**	**0.16**	**0.55**	**18,121**

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

Health Insurance Subsidy Payment Reported for FY2016: $1,152

EMPLOYER RISK POOLING (HB1063) & REVISED CONTRIBUTION RATES FOR TIER 3 MEMBERSHIP

174 SAHUARITA POLICE | Tier 3 Type: Pooled Plan

As many of you are aware, the PSPRS Board of Trustees transmitted to lawmakers in mid-February its recommendation from the risk pooling study conducted over the past year. While all the recommendations were not adopted as presented, SB1063 is the final result that creates a new employer risk pool for members hired on or after July 1, 2017 (Tier 3). As such, SB1063 has been signed by the Governor and will take effect July 1. Please continue reading carefully to understand how this will affect your individual plan and for a list of revised Tier 3 contribution rates due to this change in law and the actuarial experience study that recently concluded.

Employer Risk Pool (Tier 3 Only)

The employer risk pool is only for employers whose current active membership group is 250 members or less. All employer groups within the pool will commingle their Tier 3 assets and liabilities, thereby all contributing the same rate. If any employer group has more than 250 members, all groups of that employer (except the state and counties) will remain independent as to their assets and liabilities. Additionally, Indian tribal groups can apply for an exemption to remain independent (although it is recommended that they don't) if done so by January 1, 2018. Please refer to the table below for those employer groups currently remaining independent (aka agent) for their Tier 3 membership. If your group is not listed separately, it is participating in the Employer Risk Pool.

For Tier 3 Membership Only	Current	Average	
Employer Group	Actives	Age at Hire	Salary
Employer Risk Pool	8,276	30.49	49,567
Chandler Fire	186	28.62	48,047
Chandler Police	309	28.85	56,339
Department of Public Safety	1,047	29.51	47,550
Glendale Fire	221	26.74	45,160
Glendale Police	405	28.08	55,174
Maricopa County Sheriff	680	31.6	58,119
Mesa Fire	382	29.55	43,976
Mesa Police	778	29.24	58,860
Phoenix Fire	1,426	27.87	51,768
Phoenix Police	2,630	28.1	47,179
Pima County Sheriff	498	29.05	45,497
Scottsdale Fire	262	28.51	49,643
Scottsdale Police	369	28.2	60,007
Tempe Fire	135	28.09	48,144
Tempe Police	338	27.73	63,169
Tucson Fire	590	28.92	49,682
Tucson Police	848	28.18	52,806

Revised Tier 3 Contribution Rates

A major part of pension reform in 2016 (SB1428) was the more balanced burden of total cost, which is to be shared 50/50 by the employee and employer. With this new tier starting from scratch, there is a higher likelihood of rate volatility in the beginning years. Therefore, it is imperative that this volatility be mitigated as much as possible to avoid large swings in contribution rates as the tier grows. As such, the revised Tier 3 contribution rates reflect the most recent actuarial experience study (completed in March 2017 for the 5-year period ended June 30, 2016) as applied to each individual group and their unique demographics show above. Furthermore, the Board of Trustees adopted a lower assumed earnings rate (7.00%) than that for Tiers 1 and 2.

To be absolutely clear, only the Tier 3 contribution rates for the DB plan were revised and replace what was originally provided on page A-3 of your individual actuarial valuations Fall 2016. Given the 90-day waiting period for a member to choose between the Defined Benefit and Defined Contribution plan, the earliest these Tier 3 rates should be submitted to the administrative office would be after October 1, 2017. Tiers 1 and 2 will remain as individual agent plans and will continue with the rates as communicated on page A-2 of that same valuation, also provided below.

Public Safety Personnel Defined Contribution Retirement Plan (PSPDCRP) and Disability Program Rates

Because the employer risk pool only applies to those members who choose the defined benefit plan, the rates for those members who choose the defined contribution plan remain unchanged as set by statute. As a reminder, those who choose the DC only option will contribute 9% of their salary with an equal 9% match by the employer. Those who choose the defined benefit plan and do not contribute to social security will be considered members of the hybrid plan where they are required to contribute an additional 3% into PSPDCRP with a 4% employer match for a short period of time. Additionally, the DC only members have a separate disability fund created for them where they must contribute an actuarially determined rate on an after-tax basis that is also split 50/50 with the employer.

All Tiers Rates

With the recent court rulings and changes in law, it is no surprise that the System is getting increasingly more complex. That is no more evident than in the contribution rates based on the tiers. Please find below a table that may provide a better understanding of all your rates, by tier, and the legislative mandate to fund the System.

174 SAHUARITA POLICE	**Tier 1**		**Tier 2**		**Tier 3**		
Membership Date on or after	07/01/68	07/20/11	01/01/12		07/01/17		
Participates in Social Security	n/a	n/a	Yes	No	Yes	No	n/a
Available Retirement Plan	**DB Only**	**DB Only**	**DB Only**	**Hybrid**	**DB Only**	**Hybrid**	**DC Only**
Employee Contribution Rate							
PSPRS DB Rate	7.65%	11.65%	11.65%	11.65%	9.94%[1]	9.94%[1]	
PSPRS DC Rate				3.00%		3.00%	9.00%
PSPDCRP Disability Program Rate							1.17%
Total EE Contribution Rate	**7.65%**	**11.65%**	**11.65%**	**14.65%**	**9.94%**	**12.94%**	**10.17%**
Employer Contribution Rate							
PSPRS DB Normal Cost	15.88%[2]	15.88%[2]	15.88%[2]	15.88%[2]	9.94%[1]	9.94%[1]	
PSPRS DB Tier 1&2 Unfunded[3]	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%
PSPDCRP Rate				4.00%[4]		3.00%	9.00%
PSPDCRP Disability Program Rate							1.17%
Total ER Contribution Rate	**21.56%**	**21.56%**	**21.56%**	**25.56%**	**15.62%**	**18.62%**	**15.85%**

1. Tier 3 total DB rate of 9.94% equals 9.68% for Pension plus 0.26% for Health.
2. Tiers 1 and 2 total DB Normal Cost of 15.88% equals 15.49% for Pension plus 0.39% for Health.
3. Per statute, any positive unfunded liability for Tiers 1 and 2 is to be applied to all Tier 3 (DB and DC) payrolls (ARS § 38-843(B)), where the total of 5.68% equals 5.52% for Pension plus 0.16% for Health.
4. The 4% employer match for Tier 2 Hybrid members is for a short period of time depending on the membership date of the employee at which point the rate will change to 3%. (ARS § 38-868(C))

Local Board Consolidation

I know the question looming is "What is happening to the Local Boards?" As communicated previously, the Board of Trustees felt this issue needed more study and research and therefore delegated that project to the newly created PSPRS Advisory Committee who will be addressing this issue over the coming year for possible legislative recommendation to the Board. It should be understood that local board consolidation affects all three tiers, not just Tier 3. Therefore, a different structure than what might be expected by the creation of the Tier 3 employer risk pool is very possible. Regardless, all Local Boards should continue operating as usual until further notice.