Joint Public Safety Personnel Retirement Board
Goodyear City Hall - La Jolla Conference Room (2nd Floor)
1900 N. Civic Square
Goodyear, AZ 85395

Thursday, March 20, 2025	8:00 a.m.	Meeting Agenda

CALL TO ORDER

ROLL CALL

PUBLIC COMMENTS

Before you begin to speak, identify yourself by clearly stating for the record, your name and address. This is the time for citizens who would like to address the Board on any non-agenda item within the jurisdiction of the Board. The Board will listen to comments, and may take any one of the following:

- Respond to criticism.
- Request that staff investigate and report on the matter.
- Request that the matter be scheduled on a future agenda.

BUSINESS

1. **APPROVAL OF MINUTES**
   Approve the draft minutes of the February 13, 2025 Joint Public Safety Personnel Retirement Board meeting.

2. **2024 ACTUARIAL REPORTS FOR GOODYEAR POLICE AND FIRE**
   Review and discuss the 2024 Actuarial Reports for Goodyear Police and Fire for the Arizona Public Safety Personnel Retirement System.

3. Review, discuss and possible action on the Goodyear PSPRB medical forms.

EXECUTIVE SESSION

Per ARS §38-431.03, upon a public majority vote of the members constituting a quorum, the Goodyear Joint Public Safety Personnel Retirement Board may hold an executive session for any item on the agenda.

INFORMATION ITEMS

Comments, Commendations, Report on Current Events and Presentations by Board, Commission or Committee Members, staff or members of the public. The members may not propose, discuss, deliberate or take any legal action on the information presented pursuant to A.R.S. § 38-431.02.

NEXT MEETING

There are no future Joint Public Safety Personnel Retirement Board meetings scheduled at this time.

ADJOURNMENT

Pursuant to A.R.S. § 38-431.02, notice is hereby given to the members of the Commission and to the general public that the Commission will hold a meeting open to the public. Public body members of the city of Goodyear will attend either in person or by telephone conference call and/or video communication.

THE CITY OF GOODYEAR ENDEAVORS TO MAKE ALL PUBLIC MEETINGS ACCESSIBLE TO PERSONS WITH DISABILITIES. With 48-hour advance notice, special assistance can be provided for sight and/or hearing-impaired persons at this meeting. Reasonable accommodations will be made upon request for persons with disabilities or non-English speaking residents. Please call the City Clerk (623) 882-7830 or Arizona Relay (TDD) 7-1-1 to request an accommodation to participate in this public meeting.

For Non-English assistance please contact the City Clerk at (623) 882-7830.

Si necesita asistencia o traducción en español, favor de llamar al menos 48 horas antes de la reunión al (623) 882-7830.

POSTING VERIFICATION
This agenda was posted on 3/10/2025 at 4:35 p.m. by (VM).

ITEM #: 1.
DATE: 03/20/2025

Joint PSPRB

SUBJECT
APPROVAL OF MINUTES

Recommendation

Approve the draft minutes of the February 13, 2025 Joint Public Safety Personnel Retirement Board meeting.

Attachments

February 13, 2025 Meeting Minutes

Joint Public Safety Personnel Retirement Board
Goodyear City Hall - La Jolla Vista Conference Room (2nd Floor)
1900 N. Civic Square
Goodyear, AZ 85395

Thursday, February 13, 2025	8:00 a.m.	Meeting Minutes

CALL TO ORDER

Chair Kaino called the Goodyear Joint Public Safety Personnel Retirement Board meeting to order at 8:00 a.m.

ROLL CALL

Present: **Chair Laura Kaino; Vice Chair Jay Mathias; Boardmember Michael Gugel; Boardmember Patrick Doyle; Boardmember Jason Costello; Boardmember Jason Bayer; Boardmember Teresa Kuluff**

Staff Present: Board Attorney Lesli Sorensen; Board Secretary Jasmine Pernicano; Alternate Board Secretary Viviana Monge; Human Resources Director Lyman Locket; Benefits Analyst Chanda Washington; Benefits Analyst Maria Carillo

Boardmember Gugel and Board Attorney Sorensen participated remotely via Teams videoconference.

PUBLIC COMMENTS

There were no public comments.

BUSINESS

1. Appoint Board Secretary

MOTION BY Boardmember Patrick Doyle, SECONDED BY Boardmember Jason Costello to ELECT Jasmine Pernicano, as Board Secretary for Goodyear Local Public Safety Personnel Retirement Board. The motion carried as follows:

AYE: **Chair Laura Kaino, Vice Chair Jay Mathias, Boardmember Michael Gugel, Boardmember Patrick Doyle, Boardmember Jason Costello, Boardmember Jason Bayer, Boardmember Teresa Kuluff**

Passed - Unanimously

2. **APPROVAL OF MINUTES**
Approve the draft minutes of the February 22, 2024 and June 27, 2024 Joint Public Safety Personnel Retirement Board meeting.

MOTION BY Boardmember Teresa Kuluff, SECONDED BY Vice Chair Jay Mathias to APPROVE the draft minutes of the February 22, 2024 and June 27, 2024 Joint Public Safety Personnel Retirement Board meeting. The motion carried as follows:

AYE: **Chair Laura Kaino, Vice Chair Jay Mathias, Boardmember Michael Gugel, Boardmember Patrick Doyle, Boardmember Jason Costello, Boardmember Jason Bayer, Boardmember Teresa Kuluff**

Passed - Unanimously

3. Review, discuss and possible action on the Goodyear PSPRB medical forms.

This item was tabled to a future meeting.

INFORMATION ITEMS

Board Secretary, Jasmine Pernicano inquired how the Board would like to receive their packets either in paper or electronically. The Board confirmed that electronic packets are their preferred method.

NEXT MEETING

There are no future Joint Public Safety Personnel Retirment Board meetings scheduled at this time.

ADJOURNMENT

There being no further business to discuss, Chair Kaino adjourned the meeting at 8:07 a.m.

Respectfully Submitted by:

____
Jasmine Pernicano, Board Secretary

____
Laura Kaino, Chair

Date:____________________

ITEM #: 2.
DATE: 03/20/2025

Joint PSPRB

SUBJECT
2024 ACTUARIAL REPORTS FOR GOODYEAR POLICE AND FIRE

Recommendation:
Review and discuss the 2024 Actuarial Reports for Goodyear Police and Fire for the Arizona Public Safety Personnel Retirement System.

Attachments

2024 Actuarial Reports for FIRE
2024 Actuarial Reports for PD

ARIZONA PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM

GOODYEAR FIRE DEPT. (136)

ACTUARIAL VALUATION
AS OF JUNE 30, 2024

CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING JUNE 30, 2026

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

VIA E-MAIL

November 2024

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

Re: Actuarial Valuation Report as of June 30, 2024 for Goodyear Fire Dept. (136)

Dear Members of the Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the Arizona Public Safety Personnel Retirement System (PSPRS). The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year.

This report was prepared at the request of the Board and is intended for use by PSPRS and those designated or approved by the Board. It documents the valuation of the consolidated plan and provides summary information for PSPRS participating employers. This report may be provided to parties other than PSPRS only in its entirety and only with the permission of the Board. Foster & Foster is not responsible for the unauthorized use of this report.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Title 38, Chapter 5, Article 4 of the Arizona Revised Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

The computed contribution rates shown in the “Contribution Results” section should be considered minimum contribution rates that comply with the Board’s funding policy and Arizona Statutes. 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 funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of the Plan’s liabilities.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by PSPRS through June 30, 2024 and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

This valuation assumes the continuing ability of the participating employers 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.

In performing the analysis, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models to generate the costs. All internally developed models are reviewed as part of the process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the Arizona Public Safety Personnel Retirement System, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Arizona Public Safety Personnel Retirement System. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 239-433-5500.

Respectfully Submitted,

Foster & Foster, Inc.

By: ______________________
Bradley R. Heinrichs, FSA, EA, MAAA

By: ______________________
Paul M. Baugher, FSA, EA, MAAA

TABLE OF CONTENTS

I. SUMMARY OF REPORT

The regular annual actuarial valuation of the Arizona Public Safety Personnel Retirement System for the Goodyear Fire Dept., performed as of June 30, 2024, has been completed and the results are presented in this Report. The purpose of this valuation 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 the section entitled "Liability Support."
- Compare accumulated assets with the liabilities to assess the funded condition. This information is contained in the section entitled "Liability Support."
- Compute the employers' recommended contribution rates for the Fiscal Year beginning July 1, 2025. This information is contained in the section entitled "Contribution Results."

1. Key Valuation Results

The funded status as of June 30, 2024 and the employer contribution amounts applicable to the plan/fiscal year ending June 30, 2026 are as follows:

	Tier 1 & Tier 2 Members			Tier 3 Members *		
	Pension	**Health**	**Total**	**Pension**	**Health**	**Total**
Employer Contribution Rate	21.91%	0.29%	22.20%	8.41%	0.11%	8.52%
Funded Status	91.6%	121.6%	91.9%	107.9%	216.2%	109.5%

2. Comparison of Key Results to Prior Year

The chart below compares the results from this valuation with the results of the prior year's valuation (as of June 30, 2023):

Contribution Rate

	Tier 1 & Tier 2 Members			Tier 3 Members *		
Valuation Date	**Pension**	**Health**	**Total**	**Pension**	**Health**	**Total**
June 30, 2023	18.26%	0.34%	18.60%	8.63%	0.12%	8.75%
June 30, 2024	21.91%	0.29%	22.20%	8.41%	0.11%	8.52%

Funded Status

	Tier 1 & Tier 2 Members			Tier 3 Members		
Valuation Date	**Pension**	**Health**	**Total**	**Pension**	**Health**	**Total**
June 30, 2023	98.5%	117.7%	98.7%	107.3%	212.5%	108.9%
June 30, 2024	91.6%	121.6%	91.9%	107.9%	216.2%	109.5%

** The Tier 3 rates shown are the calculated rates as of the valuation date and do not reflect any Legacy costs that the employer must also contribute.*

3. Reasons for Change

Changes in the results from the prior year's valuation can be illustrated in the following tables along with high-level explanations for the entire System below:

Contribution Rate

	Tier 1 & Tier 2		Tier 3 Members	
	Pension	**Health**	**Pension**	**Health**
Contribution Rate Last Valuation	18.26%	0.34%	8.63%	0.12%
Asset Experience	0.03%	0.00%	(0.08%)	0.00%
Payroll Base	(0.19%)	0.00%	0.00%	0.00%
Liability Experience	5.12%	(0.02%)	(0.03%)	0.00%
Additional Contribution	(0.90%)	0.00%	0.00%	0.00%
Assumption/Method Change	0.00%	0.00%	0.00%	0.00%
Other	(0.41%)	(0.03%)	(0.11%)	(0.01%)
Contribution Rate This Valuation	21.91%	0.29%	8.41%	0.11%

Funded Status

	Tier 1 & Tier 2		Tier 3 Members	
	Pension	**Health**	**Pension**	**Health**
Funded Status Last Valuation	98.5%	117.7%	107.3%	212.5%
Asset Experience	(0.1%)	0.0%	1.1%	2.5%
Liability Experience	(8.7%)	3.0%	0.5%	4.6%
Additional Contribution	1.4%	0.0%	0.0%	0.0%
Assumption/Method Change	0.0%	0.0%	0.0%	0.0%
Other	0.5%	0.9%	(1.0%)	(3.4%)
Funded Status This Valuation	91.6%	121.6%	107.9%	216.2%

Assets Experience – Asset gains and losses (relative to the assumed earnings rate) are smoothed over seven years for Tiers 1 and 2 and over five years for Tier 3. The return on the market value of assets for the year ending June 30, 2024 was 10.2% for Tiers 1 and 2 and 11.8% for Tier 3. On a smoothed, actuarial value of assets basis, the average return was 7.1% for Tiers 1 and 2 and 8.2% for Tier 3. The return nearly met the 2023 assumed earnings rate for Tiers 1 and 2 of 7.2% and exceeded the 2023 assumed earnings rate for Tier 3 of 7.0%.

Payroll Base – Under the current amortization policy for Tiers 1 and 2, the contribution rate is developed as a level percentage of payroll. Payroll for this purpose includes members of this plan and the defined contribution plan's members that would have been in this plan. To the extent that actual payroll is lower/greater than last year's projected payroll, the contribution rate will increase/decrease as a result.

Liability Experience – Experience overall was unfavorable, driven by salary increases that were higher than expected.

Additional Contribution – Monies contributed in excess of the required contribution rate in order to pay down the unfunded liability.

Assumption / Method Change – The Board continued the decrease in the payroll growth assumption from 2.00% to 1.50%.

Other – This is the combination of all other factors that could impact liabilities year-over-year, with the primary sources being changes in benefits for continuing inactives. Note that Tier 3 experience will stabilize as the group matures.

4. Looking Ahead

The volatility in annual returns, which have produced both gains and losses in recent years, was dampened by the asset smoothing reflected in the actuarial value of assets. The gain realized this year will, in the absence of other losses, put downward pressure on the contribution rate next year.

If the June 30, 2024 pension valuation results were based on the market value of assets instead of the actuarial value of assets, the pension funded percentage for Tiers 1 and 2 would be 92.6% (instead of 91.6%) and the pension employer contribution requirement would be 21.34% of payroll (instead of 21.91%).

5. Conclusion

The funded status for Tiers 1 and 2 will continue to improve if assumptions are met and contributions at least equal to the rates determined for each employer are made to the fund. The recent adoption of a layered amortization approach along with a plan to systematically lower the payroll growth assumption was an excellent step to improve funding and ensure the Plan is on a viable path.

The funded status for Tier 3 will stabilize as the population continues to grow, as contributions appear sufficient to keep the liabilities fully funded.

II. Contribution Results

Contribution Requirements

Development of Employer Contributions - Tiers 1 & 2 Members				
Valuation Date	June 30, 2024		June 30, 2023	
Applicable to Fiscal Year Ending	2026		2025	
	Rate	**Dollar**	**Rate**	**Dollar**
Pension				
Normal Cost				
Total Normal Cost	24.27%	$ 2,686,897	24.69%	$ 2,313,474
Employee Cost	(7.65%)	(846,921)	(7.65%)	(716,812)
Employer (Net) Normal Cost	16.62%	1,839,976	17.04%	1,596,662
Amortization of Unfunded Liability	5.29%	585,648	1.22%	114,315
Total Employer Cost (Pension)	21.91%	2,425,624	18.26%	1,710,977
Health				
Normal Cost	0.29%	32,105	0.34%	31,858
Amortization of Unfunded Liability	0.00%	0	0.00%	0
Total Employer Cost (Health)	0.29%	32,105	0.34%	31,858
Total Employer Cost (Pension + Health)	**22.20%**	**2,457,729**	**18.60%**	**1,742,835**
Alternate Contribution Rate (ACR) *	8.00%		8.00%	
Underlying Payroll (as of valuation date)		10,907,249		9,186,360

** The Alternate Contribution Rate is the sum of the positive amortization rates for Tiers 1 & 2 Pension and Health (subject to an 8% minimum) and is charged when retirees return to active status.*

The results above are based on the current amortization schedule approved by the Board of Trustees for your individual plan (see "Actuarial Assumptions and Methods").

Development of Employer Contributions – Tier 3 Members

Valuation Date	June 30, 2024	June 30, 2023
Applicable to Fiscal Year Ending	2026	2025

Defined Benefit (DB) Retirement Plan

	Rate	Dollar	Rate	Dollar
Pension				
Total Normal Cost	16.82%	$ 910,911	17.25%	$ 753,328
Amortization of Unfunded Liability	0.00%	0	0.00%	0
Total Pension Cost	16.82%	910,911	17.25%	753,328
Health				
Total Normal Cost	0.22%	11,914	0.23%	10,044
Amortization of Unfunded Liability	0.00%	0	0.00%	0
Total Health Cost	0.22%	11,914	0.23%	10,044
Total				
Total Calculated Tier 3 Required EE/ER Individual Cost	8.52%	461,413	8.75%	381,686
Funding Policy Tier 3 Required EE/ER Individual Cost [1]	8.69%	470,619	8.89%	388,237
ER Legacy Cost of Tiers 1 & 2 Amort of Unfunded Liabilities [2]	5.29%	286,488	1.22%	53,279
Total Funding Policy Tier 3 Required ER Defined Benefit Cost	**13.98%**	**757,107**	**10.11%**	**441,516**
Underlying Payroll (as of valuation date)		5,335,609		4,281,490

[1] The "Funding Policy" cost was adopted in 2023 and first reflected in the June 30, 2023 valuation. This cost is a 3-year rolling average of the actual calculated costs. The total cost is split equally between employer and employee, in compliance with state statutes. Note that pension and health monies are split differently for the two parties based on IRS requirements. More information on this breakout is included in the "Historical Summary of Rates".

[2] Pursuant to ARS § 38-843(B), the amortization of positive unfunded liabilities for Tiers 1 & 2 shall be applied to all Tier 3 payroll on a level percent basis. However, while it is statutorily required to present the rates in this manner, these are the minimums where alternate methods for paying down that unfunded liability is at the discretion of each employer. Further, to understand the effects of reform in relation to Tier 3, compare the total rate of Tier 3 before application of those legacy costs.

Development of Employer Contributions – Tier 3 Members		
Valuation Date	June 30, 2024	June 30, 2023
Applicable to Fiscal Year Ending	2026	2025

Defined Contribution (DC) Retirement Plan

	Rate	Dollar	Rate	Dollar
Tier 2 & 3 DB / Non-Social Security				
Employee Cost	3.00%		3.00%	
Employer Cost [1]	3.00%		3.00%	
Tier 3 DC Only				
Employee Cost	9.00%	$ 17,229	9.00%	$ 11,811
Employee Health Subsidy Program Cost	0.20%	383	0.23%	302
Employee Disability Program Cost	1.54%	2,948	1.50%	1,968
Total Employee Cost	**10.74%**	**20,560**	**10.73%**	**14,081**
Employer Cost	9.00%	17,229	9.00%	11,811
Employer Health Subsidy Program Cost	0.20%	383	0.23%	302
Employer Disability Program Cost	1.54%	2,948	1.50%	1,968
Total Employer Cost (before Legacy)	**10.74%**	**20,560**	**10.73%**	**14,081**
ER Legacy Cost of Tiers 1 & 2 Amort of Unfunded Liabilities [2]	5.29%	10,127	1.22%	1,601
Total Employer Cost	**16.03%**	**30,687**	**11.95%**	**15,682**
Underlying Payroll (as of valuation date)		188,608		128,660

[1] *Employer rate is 4% for Tier 2 members for a period of time depending on the individual's membership date.*

[2] *Pursuant to ARS § 38-843(B), the amortization of positive unfunded liabilities for Tiers 1 & 2 shall be applied to all Tier 3 payroll on a level percent basis. However, while it is statutorily required to present the rates in this manner, these are the minimums where alternate methods for paying down that unfunded liability is at the discretion of each employer. Further, to understand the effects of reform in relation to Tier 3, compare the total rate of Tier 3 before application of those legacy costs.*

Contribution Rate Summary

	Tier 1	Tier 2		Tier 3		
Membership Date On or After	7/1/1968	1/1/2012		7/1/2017		
Participates in Social Security	N/A	Yes	No	Yes	No	N/A
Available Retirement Plan [1]	DB Only	DB Only	Hybrid	DB Only	Hybrid	DC Only
Employee Contribution Rate						
PSPRS DB Rate	7.65%	7.65%	7.65%	8.69%	8.69%	
PSPRS DC Rate			3.00%		3.00%	9.00%
Employer Health Subsidy Program Cost						0.20%
PSPDCRP Disability Program Rate						1.54%
Total EE Contribution Rate	7.65%	7.65%	10.65%	8.69%	11.69%	10.74%
Employer Contribution Rate						
PSPRS DB Normal Cost	16.91%	16.91%	16.91%	8.69%	8.69%	
PSPRS DB Tier 1 & 2 Legacy Cost [2]	5.29%	5.29%	5.29%	5.29%	5.29%	5.29%
PSPRS DC Rate			3.00%		3.00%	9.00%
Employer Health Subsidy Program Cost						0.20%
PSPDCRP Disability Program Rate						1.54%
Total ER Contribution Rate	22.20%	22.20%	25.20%	13.98%	16.98%	16.03%
Employer Alternate Contribution Rate [3]	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%

[1] *Employers that pay into Social Security on behalf of their members do not participate in the Hybrid Plan.*

[2] *Per statute (ARS § 38-843(B)), any positive unfunded liability for Tiers 1 and 2 is to be applied to all Tier 3 (DB and DC) payrolls*

[3] *The Alternate Contribution Rate is the sum of the positive amortization rates for Tiers 1 & 2 Pension and Health (subject to an 8% minimum) and is charged when retirees return to active status.*

Exhibit summarizes employee and employer contributions based on Statute and the results of June 30, 2024 actuarial valuation. Pension and health components are combined, where applicable.

Impact of Additional Contributions

	Additional Contribution (000s)										
Impact On	**$0**	**$1,000**	**$2,000**	**$3,000**	**$4,000**	**$5,000**	**$6,000**	**$7,000**	**$8,000**	**$9,000**	**$10,000**
Funded Status - June 30, 2024	91.6%	92.7%	93.7%	94.8%	95.9%	96.9%	98.0%	99.0%	100.1%	101.1%	102.2%
FYE 2026 Contribution Rate	21.91%	21.29%	20.67%	20.04%	19.42%	18.80%	18.18%	17.56%	16.93%	16.31%	15.69%

Table shows the hypothetical change in the funded status and contribution rate from the June 30, 2024 actuarial valuation results for Tiers 1 & 2 if an additional contribution of the amount shown had been made to the Fund on June 30, 2024. This illustration can help estimate the impact of contributing additional monies to the fund in the future.

Historical Summary of Rates

	Valuation Date June 30	Fiscal Year Ending June 30	Pension Normal Cost	Pension Unfunded Amortization	Pension Total	Health Normal Cost	Health Unfunded Amortization	Health Total
TIERS 1 & 2	2020	2022	15.11%	15.83%	30.94%	0.34%	(0.03%)	0.31%
(Employer)	2021	2023	15.14%	8.04%	23.18%	0.32%	(0.06%)	0.26%
	2022	2024	16.75%	2.25%	19.00%	0.34%	0.00%	0.34%
	2023	2025	17.04%	1.22%	18.26%	0.34%	0.00%	0.34%
	2024	2026	16.62%	5.29%	21.91%	0.29%	0.00%	0.29%
TIER 3 *	2020	2022	9.68%	0.00%	9.68%	0.26%	0.00%	0.26%
(Employer)	2021	2023	9.68%	0.00%	9.68%	0.26%	0.00%	0.26%
	2022	2024	9.30%	0.00%	9.30%	0.26%	0.00%	0.26%
	2023	2025	8.77%	0.00%	8.77%	0.12%	0.00%	0.12%
	2024	2026	8.46%	0.00%	8.46%	0.23%	0.00%	0.23%
TIER 3 *	2020	2022	9.68%	0.00%	9.68%	0.26%	0.00%	0.26%
(Employee)	2021	2023	9.68%	0.00%	9.68%	0.26%	0.00%	0.26%
	2022	2024	9.30%	0.00%	9.30%	0.26%	0.00%	0.26%
	2023	2025	8.77%	0.00%	8.77%	0.12%	0.00%	0.12%
	2024	2026	8.69%	0.00%	8.69%	0.00%	0.00%	0.00%

* *Rates shown are Board approved Funding Policy rates. Starting in 2023, these rates are a 3-year rolling average of calculated EE/ER rates. Does not reflect Legacy costs that the employer must also contribute.*

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

III. Liability Support

Liabilities and Funded Ratios by Benefit - Tiers 1 & 2

	June 30, 2024	June 30, 2023
Pension		
Actuarial Present Value of Benefits (PVB)		
Retirees and Beneficiaries	$ 18,751,574	$ 17,898,003
DROP Members	16,628,438	14,316,502
Vested Members	42,963	41,154
Active Members	77,831,838	64,358,455
Total Actuarial Present Value of Benefits	113,254,813	96,614,114
Actuarial Accrued Liability (AAL)		
All Inactive Members	35,422,975	32,255,659
Active Members	59,143,173	47,494,992
Total Actuarial Accrued Liability	94,566,148	79,750,651
Actuarial Value of Assets (AVA)	86,647,868	78,525,317
Unfunded Actuarial Accrued Liability	7,918,280	1,225,334
PVB Funded Ratio (AVA / PVB)	76.5%	81.3%
AAL Funded Ratio (AVA / AAL)	91.6%	98.5%
Health		
Actuarial Present Value of Benefits (PVB)		
Retirees and Beneficiaries	$ 134,382	$ 122,222
DROP Members	196,942	183,137
Active Members	861,236	848,139
Total Present Value of Benefits	1,192,560	1,153,498
Actuarial Accrued Liability (AAL)		
All Inactive Members	331,324	305,359
Active Members	653,019	626,920
Total Actuarial Accrued Liability	984,343	932,279
Actuarial Value of Assets (AVA)	1,197,389	1,097,358
Unfunded Actuarial Accrued Liability	(213,046)	(165,079)
PVB Funded Ratio (AVA / PVB)	100.4%	95.1%
AAL Funded Ratio (AVA / AAL)	121.6%	117.7%

Health liabilities were increased by $9,122 under the lateral transfer methodology. Pension liabilities were not impacted.

Liabilities and Funded Ratios by Benefit - Tier 3

	June 30, 2024	June 30, 2023
Pension		
Actuarial Present Value of Benefits (PVB)		
Retirees and Beneficiaries	$ 7,268,826	$ 2,783,769
Vested Members	9,523,410	6,565,608
Active Members	710,626,649	558,509,014
Total Actuarial Present Value of Benefits	727,418,885	567,858,391
Actuarial Accrued Liability (AAL)		
All Inactive Members	16,792,236	9,349,377
Active Members	148,879,454	101,611,814
Total Actuarial Accrued Liability	165,671,690	110,961,191
Actuarial Value of Assets (AVA)	178,758,433	119,101,476
Unfunded Actuarial Accrued Liability	(13,086,743)	(8,140,285)
PVB Funded Ratio (AVA / PVB)	24.6%	21.0%
AAL Funded Ratio (AVA / AAL)	107.9%	107.3%
Health		
Actuarial Present Value of Benefits (PVB)		
Retirees and Beneficiaries	$ 34,351	$ 0
Active Members	9,825,773	7,842,159
Total Present Value of Benefits	9,860,124	7,842,159
Actuarial Accrued Liability (AAL)		
All Inactive Members	34,351	0
Active Members	2,398,606	1,651,466
Total Actuarial Accrued Liability	2,432,957	1,651,466
Actuarial Value of Assets (AVA)	5,259,235	3,508,666
Unfunded Actuarial Accrued Liability	(2,826,278)	(1,857,200)
PVB Funded Ratio (AVA / PVB)	53.3%	44.7%
AAL Funded Ratio (AVA / AAL)	216.2%	212.5%

The liabilities shown on this page are the liabilities for all Tier 3 members grouped together in the Risk Sharing group. These liabilities are NOT the liabilities solely for Goodyear Fire Dept. Tier 3 members.

Derivation of Experience (Gain)/Loss

		Tiers 1 & 2		Tier 3	
		Pension	**Health**	**Pension**	**Health**
(1)	Unfunded Actuarial Accrued Liability as of June 30, 2023	1,225,334	(165,079)	(8,140,285)	(1,857,200)
(2)	Normal Cost Developed in Last Valuation	1,596,662	31,858	19,953,819	277,457
(3)	Actual Contributions	3,685,949	35,502	24,962,037	1,397,879
(4)	Expected Interest On (1), (2), and (3)	72,796	(10,848)	(32,441)	(163,191)
(5)	Expected Unfunded Actuarial Accrued Liability as of June 30, 2024 (1)+(2)-(3)+(4)	(791,157)	(179,571)	(13,180,944)	(3,140,813)
(6)	Changes to UAAL Due to Assumptions, Methods and Benefits	0	0	0	0
(7)	Change to UAAL Due to Actuarial (Gain)/Loss	8,709,437	(33,475)	94,201	314,535
(8)	Unfunded Actuarial Accrued Liability as of June 30, 2024	7,918,280	(213,046)	(13,086,743)	(2,826,278)

Amortization of Unfunded Liabilities - Tiers 1 & 2

	Date Established	Outstanding Balance	Years Remaining	Amortization Rate
Pension	6/30/2019	0	12	0.00%
	6/30/2021	5,747,909	12	4.15%
	6/30/2022	(3,785,385)	13	(2.60%)
	6/30/2023	(826,640)	14	(0.54%)
	6/30/2024	6,782,396	15	4.28%
	Total	7,918,280		5.29%
Health	6/30/2019	0	10	0.00%
	6/30/2021	0	10	0.00%
	6/30/2022	0	10	0.00%
	6/30/2023	0	10	0.00%
	6/30/2024	(4,829)	10	0.00%
	Total	(4,829)		0.00%

Amortization of Unfunded Liabilities - Tier 3

	Date Established	Outstanding Balance	Years Remaining	Amortization Rate *
Pension	6/30/2018	94,700	4	0.01%
	6/30/2019	(893,556)	5	(0.07%)
	6/30/2020	625,762	6	0.04%
	6/30/2021	(2,174,987)	7	(0.13%)
	6/30/2022	(3,694,845)	8	(0.20%)
	6/30/2023	(1,375,088)	9	(0.07%)
	6/30/2024	(5,668,729)	10	(0.26%)
	Total	(13,086,743)		0.00%
Health	6/30/2018	(2,008)	4	0.00%
	6/30/2019	(81,696)	5	(0.01%)
	6/30/2020	(158,912)	6	(0.01%)
	6/30/2021	(314,248)	7	(0.02%)
	6/30/2022	(439,549)	8	(0.02%)
	6/30/2023	(697,896)	9	(0.03%)
	6/30/2024	(1,131,969)	10	(0.05%)
	Total	(2,826,278)		0.00%

* *By Statute, negative total amortization rates are not subtracted in Tier 3 rate calculations.*

IV. Asset Support

Statement of Changes in Fiduciary Net Position for Year Ended June 30, 2024

Market Value Basis

	Tiers 1 & 2		Tier 3	
	Pension	Health	Pension	Health
Additions				
Contributions				
Member Contributions	$ 109,846,477	$ 0	$ 52,985,716	$ 0
Employer Contributions	1,182,413,215	0	51,738,352	0
Health Insurance Contributions	0	4,616,669	0	2,687,373
Total Contributions	1,292,259,692	4,616,669	104,724,068	2,687,373
Investment Income				
Net Increase in Fair Value	1,084,528,765	28,088,330	27,137,658	753,277
Interest and Dividends	270,700,975	7,010,914	6,773,624	188,020
Other Income	151,768,967	3,930,680	3,797,644	105,414
Less Investment Expenses	(25,846,576)	(516,914)	(646,747)	(13,863)
Net Investment Income	1,481,152,131	38,513,010	37,062,179	1,032,848
Non-investment Income	31	0	1	0
Transfers In	169,162	0	0	0
Total Additions	2,773,581,016	43,129,679	141,786,248	3,720,221
Deductions				
Distributions to Members				
Benefit Payments	1,128,489,555	0	632,764	0
Health Insurance Subsidy	0	18,596,076	0	4,920
Refund of Contributions	12,787,280	0	2,469,875	0
Total Distributions	1,141,276,835	18,596,076	3,102,639	4,920
Administrative Expenses	8,403,062	210,006	210,701	5,632
Transfers Out	392,168	0	0	0
Other	0	0	0	0
Total Deductions	1,150,072,065	18,806,082	3,313,340	10,552
Net Increase / (Decrease)	1,623,508,951	24,323,597	138,472,908	3,709,669
Net Position Held in Trust				
Prior Valuation	14,310,242,735	387,517,339	260,225,263	7,335,149
Beginning of the Year Adjustment	0	0	0	0
End of the Year	15,933,751,686	411,840,936	398,698,171	11,044,818

Development of Pension Actuarial Value of Assets - Tiers 1 & 2

A. Investment Income	
A1. Actual Investment Income	$ 1,472,749,069
A2. Expected Amount for Immediate Recognition	1,035,670,507
A3. Amount Subject to Amortization	437,078,562

	Year Ended June 30						
B. Amortization Schedule	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
2024 Experience (A3 / 7)	62,439,795	62,439,795	62,439,795	62,439,795	62,439,795	62,439,795	62,439,792
2023 Experience	10,197,720	10,197,720	10,197,720	10,197,720	10,197,720	10,197,717	
2022 Experience	(204,451,249)	(204,451,249)	(204,451,249)	(204,451,249)	(204,451,249)		
2021 Experience	238,978,744	238,978,744	238,978,744	238,978,745			
2020 Experience	(68,882,158)	(68,882,158)	(68,882,160)				
2019 Experience	(22,859,275)	(22,859,275)					
2018 Experience	(6,266,351)						
Total Amortization	9,157,226	15,423,577	38,282,850	107,165,011	(131,813,734)	72,637,512	62,439,792

C. Actuarial Value of Assets	**Total**	**Employer**
C1. Actuarial Value of Assets, June 30, 2023	14,574,029,063	
C2. Non-investment Net Cash Flow	150,759,882	
C3. Preliminary Actuarial Value of Assets, June 30, 2024 (A2 + B + C1 + C2)	15,769,616,678	
C4. Market Value of Assets, June 30, 2024	15,933,751,686	87,549,726
C5. Final Actuarial Value of Assets, June 30, 2024 (C3 Within 20% Corridor of C4)	15,769,616,678	86,647,868

D. Rates of Return	
D1. Market Value Rate of Return	10.2%
D2. Actuarial Value Rate of Return	7.1%

Development of Health Actuarial Value of Assets - Tiers 1 & 2

A. Investment Income	
A1. Actual Investment Income	$ 38,303,004
A2. Expected Amount for Immediate Recognition	27,406,736
A3. Amount Subject to Amortization	10,896,268

	Year Ended June 30						
B. Amortization Schedule	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
2024 Experience (A3 / 7)	1,556,610	1,556,610	1,556,610	1,556,610	1,556,610	1,556,610	1,556,608
2023 Experience	193,035	193,035	193,035	193,035	193,035	193,036	
2022 Experience	(6,416,469)	(6,416,469)	(6,416,469)	(6,416,469)	(6,416,471)		
2021 Experience	9,257,478	9,257,478	9,257,478	9,257,481			
2020 Experience	(2,898,713)	(2,898,713)	(2,898,716)				
2019 Experience	(1,075,569)	(1,075,572)					
2018 Experience	(304,656)						
Total Amortization	311,716	616,369	1,691,938	4,590,657	(4,666,826)	1,749,646	1,556,608

C. Actuarial Value of Assets	Total	Employer
C1. Actuarial Value of Assets, June 30, 2023	392,563,499	
C2. Non-investment Net Cash Flow	(13,979,407)	
C3. Preliminary Actuarial Value of Assets, June 30, 2024 (A2 + B + C1 + C2)	406,302,544	
C4. Market Value of Assets, June 30, 2024	411,840,936	1,213,711
C5. Final Actuarial Value of Assets, June 30, 2024 (C3 Within 20% Corridor of C4)	406,302,544	1,197,389

D. Rates of Return	
D1. Market Value Rate of Return	10.1%
D2. Actuarial Value Rate of Return	7.2%

Development of Pension Actuarial Value of Assets - Tiers 3

A. Investment Income	
A1. Actual Investment Income	$ 36,851,478
A2. Expected Amount for Immediate Recognition	21,712,363
A3. Amount Subject to Amortization	15,139,115

	Year Ended June 30				
B. Amortization Schedule	**2024**	**2025**	**2026**	**2027**	**2028**
2024 Experience (A3 / 5)	3,027,823	3,027,823	3,027,823	3,027,823	3,027,823
2023 Experience	885,521	885,521	885,521	885,520	
2022 Experience	(3,259,379)	(3,259,379)	(3,259,381)		
2021 Experience	3,551,936	3,551,938			
2020 Experience	(351,294)				
Total Amortization	3,854,607	4,205,903	653,963	3,913,343	3,027,823

C. Actuarial Value of Assets	Total	Employer
C1. Actuarial Value of Assets, June 30, 2023	259,708,739	
C2. Non-investment Net Cash Flow	101,621,430	
C3. Preliminary Actuarial Value of Assets, June 30, 2024 (A2 + B + C1 + C2)	386,897,139	
C4. Market Value of Assets, June 30, 2024	398,698,171	184,210,874
C5. Final Actuarial Value of Assets, June 30, 2024 (C3 Within 20% Corridor of C4)	386,897,139	178,758,433

D. Rates of Return	
D1. Market Value Rate of Return	11.8%
D2. Actuarial Value Rate of Return	8.2%

Development of Health Actuarial Value of Assets - Tiers 3

A. Investment Income	
A1. Actual Investment Income	$ 1,027,216
A2. Expected Amount for Immediate Recognition	605,758
A3. Amount Subject to Amortization	421,458

	Year Ended June 30				
B. Amortization Schedule	2024	2025	2026	2027	2028
2024 Experience (A3 / 5)	84,292	84,292	84,292	84,292	84,290
2023 Experience	23,872	23,872	23,872	23,870	
2022 Experience	(101,792)	(101,792)	(101,790)		
2021 Experience	128,963	128,961			
2020 Experience	(10,557)				
Total Amortization	124,778	135,333	6,374	108,162	84,290

C. Actuarial Value of Assets	Total	Employer
C1. Actuarial Value of Assets, June 30, 2023	7,297,670	
C2. Non-investment Net Cash Flow	2,682,453	
C3. Preliminary Actuarial Value of Assets, June 30, 2024 (A2 + B + C1 + C2)	10,710,659	
C4. Market Value of Assets, June 30, 2024	11,044,818	5,423,316
C5. Final Actuarial Value of Assets, June 30, 2024 (C3 Within 20% Corridor of C4)	10,710,659	5,259,235

D. Rates of Return	
D1. Market Value Rate of Return	11.8%
D2. Actuarial Value Rate of Return	8.5%

V. Member Statistics

Valuation Data Summary

	June 30, 2024		June 30, 2023	
	Tiers 1 & 2	Tier 3	Tiers 1 & 2	Tier 3
Actives				
Number	60	45	62	44
Average Current Age	46.7	30.0	46.0	28.9
Average Age at Employment	28.1	27.1	28.3	26.9
Average Past Service	18.6	2.9	17.7	2.0
Average Annual Salary	$160,565	$90,462	$131,849	$72,113
Actives (transferred)				
Number	7	12	7	12
Average Current Age	39.8	31.7	38.8	30.7
Average Age at Employment	28.5	27.2	28.5	27.2
Average Past Service	11.4	4.5	10.4	3.5
Average Annual Salary	$115,985	$93,273	$88,060	$64,449
Retirees				
Number	13	0	12	0
Average Current Age	58.8	N/A	57.8	N/A
Average Annual Benefit	$67,094	N/A	$66,756	N/A
DROP Retirees				
Number	11	N/A	10	N/A
Average Current Age	57.4	N/A	56.8	N/A
Average Annual Benefit	$79,168	N/A	$76,216	N/A
Beneficiaries				
Number	1	2	1	2
Average Current Age	39.8	41.7	38.8	40.7
Average Annual Benefit	$64,017	$2,169	$62,761	$2,169
Disability Retirees				
Number	6	0	6	0
Average Current Age	57.5	N/A	56.5	N/A
Average Annual Benefit	$53,309	N/A	$52,264	N/A
Inactive / Vested				
Number	2	4	2	2
Average Current Age	55.1	34.9	54.1	37.5
Average Accumulated Contributions	$76,500	$11,903	$80,175	$16,626
Total Number	100	63	100	60
Former Members (transferred)	1	2	1	1

Active Counts and Pay Summary - Tiers 1 & 2

	Past Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30+**	**Total Count**	**Total Pay**	**Average Pay**
<20	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0
25 - 29	0	0	0	0	0	0	0	0	0	0
30 - 34	0	2	0	0	0	0	0	2	302,968	151,484
35 - 39	1	3	2	6	0	0	0	12	1,724,440	143,703
40 - 44	0	1	4	7	2	0	0	14	2,137,294	152,664
45 - 49	0	0	0	13	7	1	0	21	3,384,459	161,165
50 - 54	0	0	0	7	5	3	0	15	2,569,936	171,329
55 - 59	0	0	0	2	0	0	0	2	240,928	120,464
60 - 64	0	0	0	1	0	0	0	1	85,791	85,791
65+	0	0	0	0	0	0	0	0	0	0
Total	1	6	6	36	14	4	0	67	10,445,816	155,908

Active Counts and Pay Summary - Tier 3

	Past Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30+**	**Total Count**	**Total Pay**	**Average Pay**
<20	0	0	0	0	0	0	0	0	0	0
20 - 24	10	0	0	0	0	0	0	10	774,625	77,463
25 - 29	12	6	0	0	0	0	0	18	1,681,022	93,390
30 - 34	13	7	0	0	0	0	0	20	1,867,925	93,396
35 - 39	2	4	0	0	0	0	0	6	529,892	88,315
40 - 44	1	1	0	0	0	0	0	2	263,273	131,637
45 - 49	1	0	0	0	0	0	0	1	73,305	73,305
50 - 54	0	0	0	0	0	0	0	0	0	0
55 - 59	0	0	0	0	0	0	0	0	0	0
60 - 64	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0
Total	39	18	0	0	0	0	0	57	5,190,042	91,053

In-Payment Counts and Benefit Summary – All Tiers

Age	Count	Average Annual Benefit
< 40	1	64,017
40 - 44	2	2,169
45 - 49	2	51,961
50 - 54	3	55,894
55 - 59	5	57,233
60 - 64	6	73,930
65 - 69	2	65,424
70 - 74	1	59,880
75 - 79	0	0
80 - 84	0	0
85 - 89	0	0
90 - 94	0	0
95 - 99	0	0
100+	0	0
Total	22	57,292

"In-Payment" refers to retired, beneficiary, and disabled members.

VI. ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate	This is the assumed earnings rate on System assets, compounded annually, net of investment and administrative expenses. ***Tiers 1 & 2:*** 7.20% per year. ***Tier 3:*** 7.00% per year.
Salary Increases	See table at the end of this section. This is an annual increase for individual member's salary. These rates are based on a 2022 experience study using actual plan experience.
Inflation	2.50%.
Tier 3 Compensation Limit	$140,952 for calendar 2024. Assumed increases of 2.00% per year thereafter.
Cost-of-Living Adjustment	1.85%.
Mortality Rates	These rates are used to project future decrements from the population due to death. ***Active Lives:*** PubS-2010 Employee mortality, adjusted by a factor of 1.03 for male members and 1.08 for female members, with generational improvements using 85% of the most recent projection scale (currently Scale MP-2021). 100% of active deaths are assumed to be in the line of duty. ***Inactive Lives:*** PubS-2010 Healthy Retiree mortality, adjusted by a factor of 1.03 for male retirees and 1.11 for female retirees, with generational improvements using 85% of the most recent projection scale (currently Scale MP-2021). ***Beneficiaries:*** PubS-2010 Survivor mortality, adjusted by a factor of 0.98 for male beneficiaries and adjusted by a factor of 1.06 for female beneficiaries, with generational improvements using 85% of the most recent projection scale (currently Scale MP-2021).

Disabled Lives:
PubS-2010 Disabled mortality, adjusted by a factor of 1.08 for male disabled members and 1.01 for female disabled members, with generational improvements using 85% of the most recent projection scale (currently Scale MP-2021).

The mortality assumptions sufficiently accommodate anticipated future mortality improvements.

Retirement / DROP Rates

These rates are used to project future decrements from the active population due to retirement. The rates below are based on a 2022 experience study using actual plan experience.

Tier 1 – reaching age 62 before attaining 20 years of service:
Age-related rates based on age at retirement:

Police - 40% assumed at age 62 and 63, 35% assumed at age 64, 25% assumed at ages 65 and 66, 50% assumed at ages 67 – 69, and 100% assumed at age 70.

Fire - 25% assumed at age 62 and 63, 35% assumed at age 64, 25% assumed at ages 65 and 66, 50% assumed at ages 67 – 69, and 100% assumed at age 70.

Tier 1 – reaching age 62 after attaining 20 years of service:
Service-related rates based on service at retirement. See complete tables at the end of this section.

65% are assumed to enter the DROP program while the remaining 35% are assumed to retire and commence benefits immediately. DROP periods are assumed to be 5 years in length for future DROP elections.

Tiers 2 & 3:
Age-related rates based on age at retirement. 50% assumed at age 53, 30% assumed at ages 54 – 59, 60% assumed at ages 60 – 63, and 100% assumed at age 64.

Termination Rate

These rates are used to project future decrements from the active population due to termination. Complete table of rates based on service at termination are provided at the end of this section. The rates apply to members prior to retirement eligibility and are based on a 2022 experience study using actual plan experience.

Disability Rate	These rates are used to project future decrements from the active population due to disability. Complete table of rates based on age at disability are provided at the end of this section. These rates are based on a 2022 experience study using actual plan experience. 90% of disablements are assumed to be duty-related.
Marital Status	For active members, 85% of males and 60% of females are assumed to be married. Actual marital status is used, where applicable, for inactive members.
Spouse's Age	Male spouses are assumed to be four years older than female members and female spouses are assumed to be two years younger than males members.
Benefit Commencement	Deferred members are assumed to commence benefits as follows: • Tier 1: immediate refund of contributions • Tiers 2 & 3 (less than 15 years service): immediate refund of contributions • Tier 2 (15+ years service): life annuity payable at age 52.5 • Tier 3 (15+ years service): life annuity payable at age 55
Health Care Utilization	For active members, 70% of retirees are expected to utilize retiree health care. Actual utilization is used for inactive members.
Funding Method	Entry Age Normal Cost Method.
Lateral Transfers	When active members transfer between employers, the new employer's liability starts from their new date of hire with no past service liability (i.e., all liability is accrued through normal cost). Per PSPRS administrative decision, once the new employer's liability is fully funded, the liability will reflect all past service liability.
Actuarial Asset Method	Method described below. Note that during periods when investment performance exceeds (falls short) of the assumed rate, the actuarial value of assets will tend to be less (greater) than the market value of assets. ***Tiers 1 & 2:*** Each year the assumed investment income is recognized in full while the difference between actual and assumed investment income are smoothed over a 7-year period subject to a 20% corridor around the market value.

	Tier 3: Each year the assumed investment income is recognized in full while the difference between actual and assumed investment income are smoothed over a 5-year period subject to a 20% corridor around the market value.
Funding Policy Amortization Method	***Tiers 1 & 2:*** Any positive UAAL (assets less than liabilities) is amortized using a layered approach beginning with the June 30, 2020 valuation, with new amounts determined according to a Level Dollar method over a closed period of 15 years (phased into from current period of at most 30 years). Initial layer from June 30, 2019 valuation continues to be amortized according to a Level Percentage of Payroll method. ***Tier 3:*** Any positive UAAL (assets less than liabilities) is amortized according to a Level Dollar method over a closed period of 10 years. No amortization is made of any negative UAAL (assets greater than liabilities).
Payroll Growth	1.50% per year. This is annual increase for total employer payroll.

Changes to Actuarial Assumptions and Methods Since the Prior Valuation
The payroll growth assumption was lowered from 2.00% to 1.50%.

There were no method changes since the prior valuation.

Salary Increase Rates

Age	Maricopa Police	Pima Police	Other Police	Maricopa Fire	Pima Fire	Other Fire
20	15.00%	12.00%	14.00%	15.00%	12.00%	13.00%
21	14.00%	6.00%	12.00%	14.00%	11.00%	12.00%
22	13.00%	6.00%	10.00%	13.00%	10.00%	11.00%
23	12.00%	6.00%	9.00%	12.00%	9.50%	10.00%
24	11.00%	6.00%	8.00%	11.00%	9.00%	9.00%
25	10.00%	6.00%	7.00%	10.00%	8.50%	8.00%
26	9.00%	5.50%	6.50%	9.50%	7.50%	7.50%
27	8.00%	5.50%	6.25%	9.00%	6.50%	7.50%
28	7.50%	5.50%	6.00%	8.50%	5.75%	7.00%
29	7.00%	5.50%	5.80%	8.00%	5.75%	6.50%
30	6.50%	5.25%	5.60%	8.00%	5.50%	6.50%
31	6.00%	5.25%	5.40%	7.50%	5.50%	6.00%
32	5.50%	5.00%	5.20%	7.00%	5.00%	5.50%
33	5.10%	5.00%	5.00%	6.50%	5.00%	5.50%
34	4.90%	5.00%	4.90%	6.50%	5.00%	5.50%
35	4.70%	4.50%	4.80%	6.00%	5.00%	5.50%
36	4.50%	4.50%	4.70%	5.50%	5.00%	5.50%
37	4.30%	4.50%	4.60%	5.25%	4.50%	5.00%
38	4.10%	4.00%	4.50%	5.00%	4.50%	5.00%
39	4.00%	4.00%	4.40%	4.75%	4.50%	5.00%
40	3.90%	4.00%	4.30%	4.75%	4.50%	5.00%
41	3.80%	3.80%	4.20%	4.50%	4.50%	4.50%
42	3.70%	3.60%	4.10%	4.50%	4.00%	4.50%
43	3.60%	3.40%	4.00%	4.50%	4.00%	4.50%
44	3.50%	3.20%	3.90%	4.50%	4.00%	4.00%
45	3.50%	3.00%	3.80%	4.25%	4.00%	4.00%
46	3.50%	3.00%	3.70%	4.25%	3.75%	4.00%
47	3.50%	3.00%	3.60%	4.25%	3.75%	3.75%
48	3.50%	3.00%	3.50%	4.00%	3.75%	3.75%
49	3.50%	3.00%	3.50%	4.00%	3.50%	3.75%
50	3.25%	3.00%	3.50%	3.75%	3.50%	3.75%
51	3.25%	3.00%	3.50%	3.75%	3.50%	3.75%
52	3.25%	2.75%	3.50%	3.75%	3.50%	3.75%
53+	3.25%	2.75%	3.50%	3.75%	3.25%	3.75%

Tier 1 Retirement Rates– reaching age 62 after attaining 20 years of service

Service	Maricopa Police	Pima Police	Other Police	Maricopa Fire	Pima Fire	Other Fire
20	28%	28%	35%	14%	20%	20%
21	25%	25%	35%	17%	20%	25%
22	15%	16%	22%	7%	13%	15%
23	12%	12%	12%	7%	7%	10%
24	8%	9%	12%	7%	7%	10%
25	30%	22%	25%	17%	22%	30%
26	42%	42%	40%	30%	26%	30%
27	32%	30%	28%	23%	30%	30%
28	32%	30%	28%	30%	30%	30%
29	32%	20%	28%	30%	30%	30%
30	35%	25%	35%	30%	30%	35%
31	35%	33%	30%	40%	30%	35%
32	60%	50%	70%	55%	30%	35%
33	60%	50%	70%	55%	60%	60%
34+	100%	100%	100%	100%	100%	100%

Termination Rates

Service	Maricopa Police	Pima Police	Other Police	Maricopa Fire	Pima Fire	Other Fire
0	13.0%	14.0%	13.5%	4.5%	10.0%	10.5%
1	8.0%	9.0%	11.5%	3.5%	6.0%	8.5%
2	6.0%	7.5%	10.5%	2.5%	4.5%	8.0%
3	4.5%	7.0%	9.5%	2.0%	4.0%	8.0%
4	3.6%	6.5%	9.0%	1.5%	4.0%	7.0%
5	3.3%	5.0%	8.0%	1.5%	4.0%	5.0%
6	3.3%	5.0%	7.0%	1.5%	4.0%	5.0%
7	3.3%	4.0%	6.5%	1.5%	3.0%	4.0%
8	2.4%	4.0%	6.5%	1.5%	3.0%	4.0%
9	2.4%	4.0%	6.0%	1.5%	3.0%	3.5%
10	2.4%	4.0%	5.0%	1.0%	2.0%	3.0%
11	1.8%	3.0%	4.0%	1.0%	2.0%	2.5%
12	1.8%	3.0%	4.0%	1.0%	1.5%	2.0%
13	1.3%	2.0%	3.5%	1.0%	1.0%	1.5%
14	1.3%	2.0%	3.0%	0.5%	1.0%	1.4%
15	0.8%	1.5%	2.5%	0.5%	1.0%	1.4%
16	0.8%	1.5%	2.0%	0.5%	0.5%	1.4%
17	0.8%	1.0%	2.0%	0.5%	0.5%	1.4%
18	0.8%	1.0%	1.8%	0.5%	0.5%	1.4%
19	0.8%	1.0%	1.8%	0.5%	0.5%	0.5%
20+	0.5%	1.0%	1.8%	0.4%	0.5%	0.5%

Disability Rates

Age	Maricopa Police	Pima Police	Other Police	Maricopa Fire	Pima Fire	Other Fire
20	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
21	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
22	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
23	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
24	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
25	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
26	0.100%	0.100%	0.160%	0.035%	0.020%	0.020%
27	0.100%	0.100%	0.160%	0.035%	0.020%	0.020%
28	0.100%	0.100%	0.160%	0.035%	0.020%	0.020%
29	0.100%	0.100%	0.160%	0.035%	0.020%	0.020%
30	0.100%	0.100%	0.160%	0.035%	0.020%	0.020%
31	0.230%	0.180%	0.240%	0.090%	0.100%	0.060%
32	0.230%	0.180%	0.240%	0.090%	0.100%	0.060%
33	0.230%	0.180%	0.240%	0.090%	0.100%	0.060%
34	0.230%	0.180%	0.240%	0.090%	0.100%	0.060%
35	0.230%	0.180%	0.240%	0.090%	0.100%	0.060%
36	0.450%	0.350%	0.320%	0.150%	0.150%	0.140%
37	0.450%	0.350%	0.320%	0.150%	0.150%	0.140%
38	0.450%	0.350%	0.320%	0.150%	0.150%	0.140%
39	0.450%	0.350%	0.320%	0.150%	0.150%	0.140%
40	0.450%	0.350%	0.320%	0.150%	0.150%	0.140%
41	0.520%	0.650%	0.550%	0.170%	0.300%	0.250%
42	0.520%	0.650%	0.550%	0.170%	0.300%	0.250%
43	0.520%	0.650%	0.550%	0.170%	0.300%	0.250%
44	0.520%	0.650%	0.550%	0.170%	0.300%	0.250%
45	0.520%	0.650%	0.550%	0.170%	0.300%	0.250%
46	0.650%	0.750%	0.750%	0.300%	0.420%	0.420%
47	0.650%	0.750%	0.750%	0.300%	0.420%	0.420%
48	0.650%	0.750%	0.750%	0.300%	0.420%	0.420%
49	0.650%	0.750%	0.750%	0.300%	0.420%	0.420%
50	0.650%	0.750%	0.750%	0.300%	0.420%	0.420%
51	0.800%	0.800%	0.800%	0.700%	0.750%	0.750%
52	0.800%	0.800%	0.800%	0.700%	0.750%	0.750%
53	0.800%	0.800%	0.800%	0.700%	0.750%	0.750%
54	0.800%	0.800%	0.800%	0.700%	0.750%	0.750%
55	0.800%	0.800%	0.800%	0.700%	0.750%	0.750%
56+	1.000%	0.850%	0.900%	1.100%	0.800%	1.000%

VII. DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined under various assumption scenarios. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. Whenever possible, the recommended assumptions in this report reflect conservatism to allow for some margin of unfavorable future plan experience. However, it is still possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- Payroll Growth: The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll does not increase according to the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized.
- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment

produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

- Contribution risk: This risk results from the potential that actual employer contributions may deviate from actuarially determined contributions, which are determined in accordance with the Board's funding policy. The funding policy is intended to result in contribution requirements that if paid when due, will result in a reasonable expectation that assets will accumulate to be sufficient to pay plan benefits when due. Contribution deficits, particularly large deficits and those that occur repeatedly, increase future contribution requirements and put the plan at risk for not being able to pay plan benefits when due.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature plans with a substantial inactive liability. Similarly, mature plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled "Plan Maturity Measures and Other Risk Metrics." For a better understanding of the overall Plan and the impact of these risks, please refer to the consolidated PSPRS valuation report.

Low Default-Risk Obligation Measure

ASOP No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, was revised as of December 2021 to include a "low-default-risk obligation measure" (LDROM). This liability measure is consistent with the determination of the actuarial accrued liability shown on pages 8 and 9 in terms of member data, plan provisions, and assumptions/methods, including the use of the Entry Age Normal Cost Method, except that the interest rate is tied to low-default-risk fixed income securities. The S&P Municipal Bond 20 Year High Grade Rate Index (daily rate closest to, but not later than, the measurement date) was selected to represent a current market rate of low risk but longer-term investments that could be included in a low-risk asset portfolio. The interest rate used in this valuation was 4.21%, resulting in an LDROM of $149,549,839 for Tiers 1 and 2 and $406,148,719 for Tier 3. The LDROM should not be considered the "correct" liability measurement; it simply shows a possible outcome if the Board elected to hold a very low risk asset portfolio. The Board actually invests the pension plan's contributions in a diversified portfolio of stocks and bonds and other investments with the objective of maximizing investment returns at a reasonable level of risk. Consequently, the difference between the plan's Actuarial Accrued Liability disclosed earlier in this section and the LDROM can be thought of as representing the expected taxpayer savings from investing in the plan's diversified portfolio compared to investing only in high quality bonds.

The actuarial valuation reports the funded status and develops contributions based on the expected return of the plan's investment portfolio. If instead, the plan switched to investing exclusively in high quality bonds, the LDROM illustrates that reported funded status would be lower (which also implies that the Actuarially Determined Contributions would be higher), perhaps significantly. Unnecessarily high contribution requirements in the near term may not be affordable and could imperil plan sustainability and benefit security.

Plan Maturity Measures and Other Risk Metrics - Tiers 1 & 2

	6/30/2024	6/30/2023	6/30/2022	6/30/2021	6/30/2020
Support Ratio					
Total Actives	67	69	70	70	73
Total Inactives	33	31	29	27	24
Actives / Inactives	203.0%	222.6%	241.4%	259.3%	304.2%
Asset Volatility Ratio					
Market Value of Assets (MVA)	87,549,726	77,104,028	69,238,309	67,766,592	41,282,449
Total Annual Payroll	10,445,816	8,791,032	8,688,307	8,629,914	8,191,627
MVA / Total Annual Payroll	838.1%	877.1%	796.9%	785.3%	504.0%
Accrued Liability (AL) Ratio					
Inactive Accrued Liability	35,422,975	32,255,659	28,596,531	27,245,808	23,766,778
Total Accrued Liability	94,566,148	79,750,651	73,323,809	69,695,734	62,406,936
Inactive AL / Total AL	37.5%	40.4%	39.0%	39.1%	38.1%
Funded Ratio					
Actuarial Value of Assets (AVA)	86,647,868	78,525,317	71,123,230	61,953,397	44,448,285
Total Accrued Liability	94,566,148	79,750,651	73,323,809	69,695,734	62,406,936
AVA / Total Accrued Liability	91.6%	98.5%	97.0%	88.9%	71.2%
Net Cash Flow Ratio					
Net Cash Flow [1]	2,312,659	2,489,176	4,322,598	14,028,689	2,231,308
Market Value of Assets (MVA)	87,549,726	77,104,028	69,238,309	67,766,592	41,282,449
Net Cash Flow / MVA	2.6%	3.2%	6.2%	20.7%	5.4%

[1] Determined as total contributions minus benefit payments. Administrative expenses are typically included but are considered part of the net interest rate assumption for this plan.

Plan Maturity Measures and Other Risk Metrics - Tier 3 [1]

	6/30/2024	6/30/2023	6/30/2022	6/30/2021	6/30/2020
Support Ratio					
Total Actives	3,658	3,054	2,417	2,560	1,408
Total Inactives	570	450	327	307	130
Actives / Inactives	641.8%	678.7%	739.1%	833.9%	1,083.1%
Asset Volatility Ratio					
Market Value of Assets (MVA)	184,210,874	119,338,352	74,774,123	51,992,240	22,964,925
Total Annual Payroll	295,480,312	226,680,964	165,151,543	115,883,115	84,448,996
MVA / Total Annual Payroll	62.3%	52.6%	45.3%	44.9%	27.2%
Accrued Liability (AL) Ratio					
Inactive Accrued Liability	16,792,236	9,349,377	4,598,114	2,290,610	1,173,104
Total Accrued Liability	165,671,690	110,961,191	68,939,204	42,733,537	23,239,599
Inactive AL / Total AL	10.1%	8.4%	6.7%	5.4%	5.0%
Funded Ratio					
Actuarial Value of Assets (AVA)	178,758,433	119,101,476	76,171,857	45,863,401	23,570,444
Total Accrued Liability	165,671,690	110,961,191	68,939,204	42,733,537	23,239,599
AVA / Total Accrued Liability	107.9%	107.3%	110.5%	107.3%	101.4%
Net Cash Flow Ratio					
Net Cash Flow [2]	47,922,185	36,208,171	25,802,686	18,607,209	13,192,598
Market Value of Assets (MVA)	184,210,874	119,338,352	74,774,123	51,992,240	22,964,925
Net Cash Flow / MVA	26.0%	30.3%	34.5%	35.8%	57.4%

[1] *Tier 3 results are shown for the Risk Sharing group, where applicable.*
[2] *Determined as total contributions minus benefit payments. Administrative expenses are typically included but are considered part of the net interest rate assumption for this plan.*

VIII. SUMMARY OF CURRENT PLAN

The following is a summary of the benefit provisions provided in Title 38, Chapter 5, Article 4 of the Arizona Revised Statutes.

Membership

Full-time employees of an eligible group, prior to attaining age 65, who are engaged to work for more than six months in a calendar year. Tier 3 Defined Contribution members are able to elect participation in post-retirement health insurance subsidy.

Benefit Tiers

Benefits differ for members based on their hire date:

Tier	Hire Date
1	Hired before January 1, 2012
2	Hired on or after January 1, 2012 but before July 1, 2017
3	Hired on or after July 1, 2017

Compensation

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 Tier 3 members, compensation is limited by statutory cap ($110,000 with adjustments by the Board).

Average Monthly Benefit Compensation

Tier 1:
The highest compensation paid to member during three consecutive years out of the last 20 years of Credited Service, divided by months.

Tier 2:
The highest compensation paid to member during five consecutive years out of the last 20 years of Credited Service, divided by months.

Tier 3:
The highest compensation paid to member during five consecutive years out of the last 15 years of Credited Service, divided by months.

Credited Service

Total periods of service, both before and after the member's date of participation, for which the member made contributions to the fund.

Normal Retirement Date

Tier 1:
First day of month following attainment of 1) 20 years of service or

2) 62^{nd} birthday and completion of 15 years of service.

Tier 2:
First day of month following the attainment of age 52.5 and completion of 15 years of service.

Tier 3:
First day of month following the attainment of age 55 and completion of 15 years of service.

Benefit

Tier 1:
50% of Average Monthly Benefit Compensation, adjusted based on Credited Service as follows (maximum benefit of 80% of Average Monthly Benefit Compensation):

Credited Service	Benefit Adjustment
15 years, but less than 20	Reduced 4% per year less than 20
20 years, but less than 25	Plus 2% per year between 20 and 25
25+ years	Plus 2.5% per year above 20

Tier 2:
Benefit multiplier (below) times Average Monthly Benefit Compensation times Credited Service (maximum benefit of 80% of Average Monthly Benefit Compensation):

Credited Service	Benefit Multiplier
15 years, but less than 17	1.50%
17 years, but less than 19	1.75%
19 years, but less than 22	2.00%
22 years, but less than 25	2.25%
25+ years	2.50%

Tier 3:
Benefit multiplier (below) times Average Monthly Benefit Compensation times Credited Service (maximum benefit of 80% of Average Monthly Benefit Compensation):

Credited Service	Benefit Multiplier
15 years, but less than 17	1.50%
17 years, but less than 19	1.75%
19 years, but less than 22	2.00%
22 years, but less than 25	2.25%
25+ years	2.50%

Form of Benefit	For married retirees, an annuity payable for the life of the member with 80% continuing to the eligible spouse upon death. For unmarried retirees, the normal form is a single life annuity.

Early Retirement — ***Only applicable to Tier 3 members:***

Date	Attainment of age 52.5 and 15 years of Credited Service.
Benefit	Actuarial equivalent of Normal Retirement benefit.

Disability Benefit – Accidental (duty-related)

Eligibility	Total and permanent disability incurred in performance of duty.
Benefit Amount	A maximum of: a.) 50% of Average Monthly Benefit Compensation, and; b.) The monthly Normal Retirement pension that the member is entitled to receive if he or she retired immediately.

Disability Benefit – Ordinary (not duty-related)

Eligibility	Total and permanent disability not incurred in performance of duty.
Benefit Amount	Normal Retirement pension that the member is entitled to receive, prorated based on Credited Service earned over the required Credited Service for Normal Retirement (maximum ratio of 1).

Disability Benefit – Other

Temporary	Benefit equals 1/12 of 50% of compensation during year preceding date of disability. Payments terminate after 12 months.
Catastrophic	Benefit equals 90% of Average Monthly Benefit Compensation. After 60 months member receives greater of 62.5% Average Monthly Benefit Compensation and accrued normal pension.

Pre-Retirement Death Benefit — *Payable following death of active member*

Service Incurred	100% of Average Monthly Benefit Compensation, reduced by child’s pension.
Non-Service Incurred	80% of benefit based on calculation for accidental disability retirement.
Child’s Pension	10% of pension for each child (maximum 20% paid) based on calculation for accidental disability retirement. Payable to dependent child under age 18 (23 if full-time student).

Guardian's Pension	Same as spouse's pension. Payable (along with child's pension) when no spouse is being paid and there is at least one child under 18 (23, if full-time student).
Accumulated Contributions	Any contributions remaining upon the death of the last beneficiary shall be paid as a lump sum.

Vesting (Termination)

Vesting Service Requirement

***Tier 1*:**
10 years of Credited Service.
Tiers 2 & 3:
15 years of Credited Service.

Non-Vested Benefit

***Tier 1*:**
Lump sum payment of accumulated contributions, plus additional amount based on years of Credited Service.

Service	Additional % of Contributions
Less than 5 years	0%
5 years	25%
6 years	40%
7 years	55%
8 years	70%
9 years	85%
10+ years	100%

Tiers 2 & 3:
Lump sum payment of accumulated contributions, with interest at rate determined by the Board.

Vested Benefit

***Tier 1*:**
Deferred retirement annuity based on two times member's accumulated contributions, deferred to age 62. Member is not entitled to survivor benefits, benefit increases, or group health insurance subsidy.

Tiers 2 & 3:
Calculated same as normal retirement pension. Payable if contributions left in fund until reach age requirement. Member is entitled to survivor benefits, benefit increases, and group health insurance subsidy.

Cost-of-Living Adjustment

Payable to retired member or survivor of retired member

Tiers 1 & 2:

Compound cost-of-living adjustment on base benefit. First payment is made on July 1, 2018, with annual adjustments effective every July 1 thereafter. Adjustment does not apply while in DROP.

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. Maximum increase of 2%.

Tier 3:

Compound cost-of-living adjustment on base benefit beginning earlier of first calendar year after the 7th anniversary of retirement or when the retired member reaches 60 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%.

Deferred Retirement Option Plan (DROP):

Eligibility: Tier 1 and 20 years of Credited Service.

DROP Period: Maximum 84 months.

Member Contributions: Cease upon DROP entry.

Benefit Amount: Calculated based on Credited Service and average monthly compensation as of the beginning of the DROP period, credited to DROP participation account for DROP period.

Interest on DROP Participation Account	<u>Beginning Year</u>	<u>Interest Rate</u>
	July 1, 2016	7.40%
	July 1, 2018	7.30%
	July 1, 2022	7.20%

Payment of DROP Participation Account	Payable as lump sum distribution to Public Safety Personnel Defined Contribution Retirement Plan at earlier of 1) end of DROP period, 2) at termination, or 3) five years.
Payment Monthly Benefit	System commences payment of benefit amount at the earlier of 1) the end of the DROP period and 2) at termination.

<u>Post-Retirement Health Insurance Subsidy</u>

Eligibility: Retired member or survivor who elect health coverage provided by the state or participating employer.

Maximum Subsidy Amounts (monthly)

	Member Only	With Dependents
Medicare Eligible	$100	$170
One w/ Medicare	N/A	$215
Not Medicare Eligible	$150	$260

<u>Employee Contributions</u>

Tiers 1 & 2:
7.65% (effective July 1, 2023).

Tier 3:
50% of total contribution, which is Normal Cost plus a level-dollar amortization of unfunded actuarial accrued liability over a closed period not to exceed 10 years.

<u>Employer Contributions</u>

Tiers 1 & 2:
Normal Cost plus amortization of unfunded actuarial accrued liability over a closed period not to exceed 20 years (subject to one-time election to extend to closed period not to exceed 30 years).

Tier 3:
50% of total contribution, which is Normal Cost plus a level-dollar amortization of unfunded actuarial accrued liability over a closed period not to exceed 10 years.

Changes to Benefit Provisions Since the Prior Valuation

None.

IX. Actuarial Funding Policy

A pension plan funding policy describes how pension funding will improve for underfunded plans or maintain funded benefits for funded plans over time for those benefits defined in Arizona Revised Statutes (ARS). Those benefits defined in ARS are to be equitably managed and administered by the Arizona Public Safety Personnel Retirement System (PSPRS agency).

This Actuarial Funding Policy identifies the funding objectives and elements of the actuarial funding policy set by the Board for the PSPRS agency. The Board adopted this Funding Policy to help ensure the systematic funding of future benefit payments for members of the retirement systems as established by the legislature.

This policy covers all retirements systems administered by the Board: The Public Safety Personnel Retirement System (PSPRS); the Correction Officers Retirement Plan (CORP); and the Elected Officials Retirement Plan (EORP).

To achieve the systematic funding of future benefits, metrics are identified to measure the progress, or the lack of progress, over time to identify trends. These trends inform the continuation of the current policies or identify areas of needed research for consideration.

This funding policy is reviewed annually and adopted by the Board in accordance with ARS 38-863.02. This policy was reviewed and adopted by the Board in September 2024.

PSPRS Statement of Purpose

The Purpose of the Public Safety Personnel Retirement System is to provide uniform, consistent, and equitable statewide retirement programs for those who have been entrusted to our care.

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.
    a. Corollary 1a: Current and future contributions should be calculated based upon assumptions that reflect the Board's best estimate of future experience and methods that appropriately allocate costs to address generational equity.
    b. Corollary 1b: While the shorter-term objective is to fully fund the Actuarial Accrued Liability (AAL) that estimates benefits earned as of the valuation date, contributions should target the long-term Present Value of Benefits (PVB) to fund all benefits and help offset risks.
    c. As closed plans mature, the target funding should be 110% of AAL or 100% of PVB, whichever is greater.

2. Maintain public policy goals of accountability and transparency through stakeholder communication and education. Each policy element is clear in intent and effect, and each should be considered in a balanced approach to determine how and when the funding requirements of the plan will be met.
    a. Corollary 2a: Board shall provide stakeholders with separate reports and tools to help explain current results as well as to help model future funding requirements.

3. Promote intergenerational equity. Defined benefit pensions are designed with a long-term perspective and designed to minimize contribution volatility that cannot avoid some level of generational cost shift. However, the goal is that each generation of members and employers (taxpayers) should, to the extent possible, incur the cost of benefits for the employees who provide services to them, rather than shifting those costs to other generations of members and employers (taxpayers).
    a. Corollary 3a: A systematic reduction of the Unfunded Actuarial Accrued Liability (UAAL) over a reasonable time period is paramount to achieving this objective.

Consideration can be given to reduce volatility, to the extent possible, of employer and employee contribution rates as long as the integrity of the objectives listed above is not compromised.

Elements of Actuarial Funding Policy

1. Actuarial Cost Method
    a. The Entry Age Normal level percent of pay actuarial cost method of valuation shall be used in determining the 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 the actual investment return and assumed investment return, shall be recognized annually in level amounts over five years (Tier 3) or seven years (Tiers 1 and 2) in calculating the Actuarial Value of Assets (AVA).
    b. The AVA so determined shall be subject to a 20% corridor relative to the Market Value of Assets (MVA).

3. Amortization Method (Unfunded Amounts)
    a. The AVA is subtracted from the computed AAL. Any unfunded amount is amortized as a level percent of payroll over a closed period.
    b. The unfunded liabilities, for EORP and Tiers 1 & 2 for both PSPRS and CORP, determined in the 6/30/2019 actuarial valuation will become the initial layer for each employer beginning with the 6/30/2020 actuarial valuation and amortized using the current closed year period for that employer and continue to decrease each year.
        i. The payroll growth rate assumption used to amortize the PSPRS 6/30/2019 Unfunded Liability will be decreased by 0.5% beginning with the 6/30/2021 actuarial valuation and again each year with the intention of ultimately achieving 0.0%.
        ii. The payroll growth rate used to amortize the Correction Officers Retirement Plan (CORP) 6/30/2019 Unfunded Liability will be 3.0% beginning with the 6/30/2020 actuarial valuation, and future years will be reduced by 0.5% until 0.0% is reached.
        iii. The payroll growth rate used to amortize the Elected Officials Retirement Plan (EORP) 6/30/2019 Unfunded Liability will be 2.5% beginning with the 6/30/2020 actuarial valuation, and future years will be reduced by 0.5% until 0.0% is reached.
    c. Gains and losses, for EORP and Tiers 1 & 2 for both PSPRS and CORP, for each employer beginning with the 6/30/2020 actuarial valuation will be amortized as a new layer over the same amortization period as the regular unfunded liability to a minimum of 15 years. Once the

amortization period for each employer decreases to 15 years, each subsequent year's gains and losses will be amortized as a new 15-year closed layer.

i. The payroll growth rate used to amortize the unfunded liability for all Plans under this paragraph will be 0.0% (i.e. level-dollar amortization).

d. Tier 3 amortization methods are established in ARS 38-843.G and ARS 38-891.K.

4. Amortization Method (Overfunded Amounts)
   a. The AVA is subtracted from the target funding level (greater of 110% of AAL or 100% of PVB). Any overfunded amount is amortized as a level dollar amount over an open 10-year period.

5. Tier 3 Rate Calculation
   a. Tier 3 is distinct from Tiers 1 & 2 in PSPRS and CORP as the contributions are a shared percentage (50/50 split for PSPRS: for CORP, employer 1/3 and member 2/3 of the normal cost plus 50 percent each, member and employer, of the UAAL amortization) for employers and members based on the actuarially calculated rate. To reduce the impact of volatility to rates, the Tier 3 rates will be smoothed over a 3-year rolling period based on the actuarially calculated rates for each year's actuarial valuation.
      i. Beginning with the 6/30/2023 valuation, the prospective Tier 3 rates set by the Board of Trustees are planned to be a rolling average of the actuarial calculated Tier 3 rates using the 6/30/2023, 6/30/2022 and 6/30/2021 rates in the initial process.
      ii. As assumptions may be updated year-to-year, the prior calculated rates are not updated for those changes, the prior calculated rates are used to smooth in the new rates.
   b. At the May 2023 Board Meeting, the Board changed the assumed rate of return for CORP Tier 3, which was at 7.2%, to match the 7.0% assumed rate of return for PSPRS Tier 3. The Board committed to continue to monitor market conditions and directions with the intent to ultimately adopt a single assumed rate of return for all investments for retirement systems/plans administered by PSPRS agency.

6. Assumed Rate of Return (ARR)
   a. At the May 2023 Board Meeting, the Board changed the assumed rate of return for CORP Tier 3, which was at 7.2%, to match the 7.0% assumed rate of return for PSPRS Tier 3. The Board will continue to monitor market conditions and directions with the intent to ultimately adopt a single assumed rate of return for all investments for retirement systems/plans administered by PSPRS agency.

7. EORP Floor Considerations
   a. Establish a "floor" for EORP based on the immediately previous valuation by adjusting payroll growth, amortization periods of the original layer or other possible options, to improve funding in maintaining contribution levels opposed to reducing employer contributions.

Metrics to Monitor Funding Objectives

1. Appropriateness of Assumptions – Gain/Loss Experience (Corollary 1a)
   a. Metric: Do the cumulative gain/loss layers over the prior five years exceed 8% of plan assets?
   b. Measurement: History of annual gain/loss (split by asset and liability experience) and five-year cumulative results will be tracked.
   c. Action Plan: This metric assumes that a full experience study is performed at least every five years so objective of measurement is to monitor interim experience. If the metric answer is yes, a review of the sources or causes of gains and losses should be analyzed and presented to the Advisory Committee to provide a recommendation to the Board of Trustees. The analysis and presentation are intended to provide a basis for consideration if assumption changes are warranted between full experience studies.

2. Funding Targets (Corollary 1b)
   a. Metric: Has the funded status, on both an AAL and PVB basis when compared to the MVA, increased over a five-year period?
   b. Measurement: History of funded status measures will be tracked.
   c. Action Plan: If the answer is no and not readily explainable (e.g., significant assumption change), a review of the reason(s) for the decrease should be researched and presented to the Advisory Committee to provide a recommendation to the Board of Trustees. The analysis and presentation are intended to provide a basis for consideration if changes to assumptions and/or methods are warranted between full experience studies.

3. Communication with Stakeholders (Corollary 2a)
   a. Metric: Have reports and budgeting tools been provided to stakeholders in a timely fashion?
   b. Measurement: Yes/No answer based on input from PSPRS administrator. (An annual standard survey of stakeholders – 3 to 5 questions.)
   c. Action Plan: If the answer is no, and periodically regardless (e.g., every three years), PSPRS staff will revisit this metric to report to the Advisory Committee to provide a recommendation to the Board of Trustees if current reports / tools are sufficient and if the delivery timing is appropriate.

4. Timely Recognition of Costs (Corollary 3a)
   a. Metric: Has the percentage of unfunded liability subject to negative amortization decreased over a five-year lookback period?
   b. Measurement: History of unfunded liability subject to negative amortization as a percentage of total unfunded liability will be tracked.
   c. Action Plan: If the answer is no, and not readily explainable (e.g., adopted assumption changes being phased in are anticipated to address negative amortization), a review of the reason(s) for negative amortization should be researched and presented to the Advisory Committee to provide a recommendation to the Board of Trustees. The analysis and presentation are intended to provide a basis for consideration if changes to assumptions and/or methods are warranted between full experience studies.

X. GLOSSARY

Actuarial Accrued Liability – Computed differently under different funding methods, the actuarial accrued liability generally represents the portion of the actuarial present value of benefits attributable to service credit earned (or accrued) as of the valuation date.

Actuarial Present Value of Benefits – Amount which, together with future interest, is expected to be sufficient to pay all benefits to be paid in the future, regardless of when earned, as determined by the application of a particular set of actuarial assumptions; equivalent to the actuarial accrued liability plus the present value of future normal costs attributable to the members.

Actuarial Assumptions – Assumptions as to the occurrence of future events affecting pension costs. These assumptions include rates of investment earnings, changes in salary, rates of mortality, withdrawal, disablement, and retirement as well as statistics related to marriage and family composition.

Actuarial Cost Method – A method of determining the portion of the cost of a pension plan to be allocated to each year; sometimes referred to as the "actuarial funding method." Each cost method allocates a certain portion of the actuarial present value of benefits between the actuarial accrued liability and future normal costs.

Actuarial Equivalence – Series of payments with equal actuarial present values on a given date when valued using the same set of actuarial assumptions.

Actuarial Present Value - The amount of funds required as of a specified date to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payments between the specified date and the expected date of payment.

Actuarial Value of Assets – The value of cash, investments, and other property belonging to the pension plan as used by the actuary for the purpose of the actuarial valuation. This may correspond to market value of assets, or some modification using an asset valuation method to reduce the volatility of asset values.

Asset Gain (Loss) – That portion of the actuarial gain attributable to investment performance above (below) the expected rate of return in the actuarial assumptions.

Amortization – Paying off an interest-discounted amount with periodic payments of interest and (generally) principal, as opposed to paying off with a lump sum payment.

Amortization Payment – That portion of the pension plan contribution designated to pay interest and reduce the outstanding principal balance of unfunded actuarial accrued liability. If the amortization payment is less than the accrued interest on the unfunded actuarial accrued liability the outstanding principal balance will increase.

Assumed Earnings Rate – The interest rate used in developing present values to reflect the time value of money.

Decrements – Events which result in the termination of membership in the system such as retirement, disability, withdrawal, or death.

Entry Age Normal (EAN) Funding Method – A standard actuarial funding method whereby each member's normal costs (service costs) are generally level as a percentage of pay from entry age until retirement. The annual cost of benefits is comprised of the normal cost plus an amortization payment to reduce the UAL.

Experience Gain (Loss) – The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities during the period between two valuation dates. It is a measurement of the difference between actual and expected experience, and may be related to investment earnings above (or below) those expected or changes in the liability due to fewer (or greater) than expected numbers of retirements, deaths, disabilities, or withdrawals, or variances in pay increases relative to assumed pay increases. The effect of such gains (or losses) is to decrease (or increase) future costs.

Funded Ratio – A measure of the ratio of the actuarial value of assets to liabilities of the system. Typically, the assets used in the measure are the actuarial value of assets as determined by the asset valuation method. The funded ratio depends not only on the financial strength of the plan but also on the asset valuation method used to determine the assets and on the funding method used to determine the liabilities.

Market Value of Assets (MVA) – The value of assets as they would trade on an open market.

Normal Cost – Computed differently under different funding methods, generally that portion of the actuarial present value of benefits allocated to the current plan year.

Unfunded Actuarial Accrued Liability (UAAL) – The excess of the actuarial accrued liability over the valuation assets; sometimes referred to as "unfunded past service liability". UAAL increases each time an actuarial loss occurs and when new benefits are added without being fully funded initially and decreases when actuarial gains occur.

ARIZONA PUBLIC SAFETY PERSONNEL RETIREMENT SYSTEM

GOODYEAR POLICE DEPT. (137)

ACTUARIAL VALUATION
AS OF JUNE 30, 2024

CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING JUNE 30, 2026

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

VIA E-MAIL

November 2024

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

Re: Actuarial Valuation Report as of June 30, 2024 for Goodyear Police Dept. (137)

Dear Members of the Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the Arizona Public Safety Personnel Retirement System (PSPRS). The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year.

This report was prepared at the request of the Board and is intended for use by PSPRS and those designated or approved by the Board. It documents the valuation of the consolidated plan and provides summary information for PSPRS participating employers. This report may be provided to parties other than PSPRS only in its entirety and only with the permission of the Board. Foster & Foster is not responsible for the unauthorized use of this report.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Title 38, Chapter 5, Article 4 of the Arizona Revised Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

The computed contribution rates shown in the "Contribution Results" section should be considered minimum contribution rates that comply with the Board's funding policy and Arizona Statutes. 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 funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of the Plan's liabilities.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by PSPRS through June 30, 2024 and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

This valuation assumes the continuing ability of the participating employers 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.

In performing the analysis, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models to generate the costs. All internally developed models are reviewed as part of the process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the Arizona Public Safety Personnel Retirement System, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Arizona Public Safety Personnel Retirement System. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 239-433-5500.

Respectfully Submitted,

Foster & Foster, Inc.

By: ______________________
Bradley R. Heinrichs, FSA, EA, MAAA

By: ______________________
Paul M. Baugher, FSA, EA, MAAA

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I. Summary of Report

The regular annual actuarial valuation of the Arizona Public Safety Personnel Retirement System for the Goodyear Police Dept., performed as of June 30, 2024, has been completed and the results are presented in this Report. The purpose of this valuation 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 the section entitled "Liability Support."
- Compare accumulated assets with the liabilities to assess the funded condition. This information is contained in the section entitled "Liability Support."
- Compute the employers' recommended contribution rates for the Fiscal Year beginning July 1, 2025. This information is contained in the section entitled "Contribution Results."

1. Key Valuation Results

The funded status as of June 30, 2024 and the employer contribution amounts applicable to the plan/fiscal year ending June 30, 2026 are as follows:

	Tier 1 & Tier 2 Members			Tier 3 Members *		
	Pension	**Health**	**Total**	**Pension**	**Health**	**Total**
Employer Contribution Rate	25.23%	0.18%	25.41%	8.41%	0.11%	8.52%
Funded Status	84.8%	134.4%	85.3%	107.9%	216.2%	109.5%

2. Comparison of Key Results to Prior Year

The chart below compares the results from this valuation with the results of the prior year's valuation (as of June 30, 2023):

Contribution Rate

	Tier 1 & Tier 2 Members			Tier 3 Members *		
Valuation Date	**Pension**	**Health**	**Total**	**Pension**	**Health**	**Total**
June 30, 2023	24.10%	0.22%	24.32%	8.63%	0.12%	8.75%
June 30, 2024	25.23%	0.18%	25.41%	8.41%	0.11%	8.52%

Funded Status

	Tier 1 & Tier 2 Members			Tier 3 Members		
Valuation Date	**Pension**	**Health**	**Total**	**Pension**	**Health**	**Total**
June 30, 2023	88.4%	136.2%	89.0%	107.3%	212.5%	108.9%
June 30, 2024	84.8%	134.4%	85.3%	107.9%	216.2%	109.5%

** The Tier 3 rates shown are the calculated rates as of the valuation date and do not reflect any Legacy costs that the employer must also contribute.*

3. Reasons for Change

Changes in the results from the prior year's valuation can be illustrated in the following tables along with high-level explanations for the entire System below:

Contribution Rate

	Tier 1 & Tier 2		Tier 3 Members	
	Pension	**Health**	**Pension**	**Health**
Contribution Rate Last Valuation	24.10%	0.22%	8.63%	0.12%
Asset Experience	0.03%	0.00%	(0.08%)	0.00%
Payroll Base	(1.74%)	0.03%	0.00%	0.00%
Liability Experience	3.82%	(0.04%)	(0.03%)	0.00%
Additional Contribution	(0.95%)	0.00%	0.00%	0.00%
Assumption/Method Change	0.03%	0.00%	0.00%	0.00%
Other	(0.06%)	(0.03%)	(0.11%)	(0.01%)
Contribution Rate This Valuation	25.23%	0.18%	8.41%	0.11%

Funded Status

	Tier 1 & Tier 2		Tier 3 Members	
	Pension	**Health**	**Pension**	**Health**
Funded Status Last Valuation	88.4%	136.2%	107.3%	212.5%
Asset Experience	(0.1%)	0.0%	1.1%	2.5%
Liability Experience	(6.3%)	6.2%	0.5%	4.6%
Additional Contribution	1.6%	0.0%	0.0%	0.0%
Assumption/Method Change	0.0%	0.0%	0.0%	0.0%
Other	1.2%	(8.0%)	(1.0%)	(3.4%)
Funded Status This Valuation	84.8%	134.4%	107.9%	216.2%

Assets Experience – Asset gains and losses (relative to the assumed earnings rate) are smoothed over seven years for Tiers 1 and 2 and over five years for Tier 3. The return on the market value of assets for the year ending June 30, 2024 was 10.2% for Tiers 1 and 2 and 11.8% for Tier 3. On a smoothed, actuarial value of assets basis, the average return was 7.1% for Tiers 1 and 2 and 8.2% for Tier 3. The return nearly met the 2023 assumed earnings rate for Tiers 1 and 2 of 7.2% and exceeded the 2023 assumed earnings rate for Tier 3 of 7.0%.

Payroll Base – Under the current amortization policy for Tiers 1 and 2, the contribution rate is developed as a level percentage of payroll. Payroll for this purpose includes members of this plan and the defined contribution plan's members that would have been in this plan. To the extent that actual payroll is lower/greater than last year's projected payroll, the contribution rate will increase/decrease as a result.

Liability Experience – Experience overall was unfavorable, driven by salary increases that were higher than expected.

Additional Contribution – Monies contributed in excess of the required contribution rate in order to pay down the unfunded liability.

Assumption / Method Change – The Board continued the decrease in the payroll growth assumption from 2.00% to 1.50%.

Other – This is the combination of all other factors that could impact liabilities year-over-year, with the primary sources being changes in benefits for continuing inactives. Note that Tier 3 experience will stabilize as the group matures.

4. Looking Ahead

The volatility in annual returns, which have produced both gains and losses in recent years, was dampened by the asset smoothing reflected in the actuarial value of assets. The gain realized this year will, in the absence of other losses, put downward pressure on the contribution rate next year.

If the June 30, 2024 pension valuation results were based on the market value of assets instead of the actuarial value of assets, the pension funded percentage for Tiers 1 and 2 would be 85.7% (instead of 84.8%) and the pension employer contribution requirement would be 24.74% of payroll (instead of 25.23%).

5. Conclusion

The funded status for Tiers 1 and 2 will continue to improve if assumptions are met and contributions at least equal to the rates determined for each employer are made to the fund. The recent adoption of a layered amortization approach along with a plan to systematically lower the payroll growth assumption was an excellent step to improve funding and ensure the Plan is on a viable path.

The funded status for Tier 3 will stabilize as the population continues to grow, as contributions appear sufficient to keep the liabilities fully funded.

II. CONTRIBUTION RESULTS

Contribution Requirements

Development of Employer Contributions - Tiers 1 & 2 Members				
Valuation Date	June 30, 2024		June 30, 2023	
Applicable to Fiscal Year Ending	2026		2025	
	Rate	**Dollar**	**Rate**	**Dollar**
Pension				
Normal Cost				
Total Normal Cost	23.91%	$ 2,592,980	24.11%	$ 2,159,013
Employee Cost	(7.65%)	(829,624)	(7.65%)	(685,046)
Employer (Net) Normal Cost	16.26%	1,763,356	16.46%	1,473,967
Amortization of Unfunded Liability	8.97%	972,774	7.64%	684,150
Total Employer Cost (Pension)	25.23%	2,736,130	24.10%	2,158,117
Health				
Normal Cost	0.28%	30,365	0.34%	30,446
Amortization of Unfunded Liability	(0.10%)	(10,845)	(0.12%)	(10,746)
Total Employer Cost (Health)	0.18%	19,520	0.22%	19,700
Total Employer Cost (Pension + Health)	**25.41%**	**2,755,650**	**24.32%**	**2,177,817**
Alternate Contribution Rate (ACR) *	8.97%		8.00%	
Underlying Payroll (as of valuation date)		10,684,486		8,779,259

** The Alternate Contribution Rate is the sum of the positive amortization rates for Tiers 1 & 2 Pension and Health (subject to an 8% minimum) and is charged when retirees return to active status.*

The results above are based on the current amortization schedule approved by the Board of Trustees for your individual plan (see "Actuarial Assumptions and Methods").

Development of Employer Contributions – Tier 3 Members		
Valuation Date	June 30, 2024	June 30, 2023
Applicable to Fiscal Year Ending	2026	2025

Defined Benefit (DB) Retirement Plan

	Rate	Dollar	Rate	Dollar
Pension				
Total Normal Cost	16.82%	$ 993,762	17.25%	$ 654,761
Amortization of Unfunded Liability	0.00%	0	0.00%	0
Total Pension Cost	16.82%	993,762	17.25%	654,761
Health				
Total Normal Cost	0.22%	12,998	0.23%	8,730
Amortization of Unfunded Liability	0.00%	0	0.00%	0
Total Health Cost	0.22%	12,998	0.23%	8,730
Total				
Total Calculated Tier 3 Required EE/ER Individual Cost	8.52%	503,380	8.75%	331,746
Funding Policy Tier 3 Required EE/ER Individual Cost [1]	8.69%	513,424	8.89%	337,439
ER Legacy Cost of Tiers 1 & 2 Amort of Unfunded Liabilities [2]	8.97%	529,967	7.64%	289,993
Total Funding Policy Tier 3 Required ER Defined Benefit Cost	**17.66%**	**1,043,391**	**16.53%**	**627,432**
Underlying Payroll (as of valuation date)		5,820,902		3,721,288

[1] The "Funding Policy" cost was adopted in 2023 and first reflected in the June 30, 2023 valuation. This cost is a 3-year rolling average of the actual calculated costs. The total cost is split equally between employer and employee, in compliance with state statutes. Note that pension and health monies are split differently for the two parties based on IRS requirements. More information on this breakout is included in the "Historical Summary of Rates".

[2] Pursuant to ARS § 38-843(B), the amortization of positive unfunded liabilities for Tiers 1 & 2 shall be applied to all Tier 3 payroll on a level percent basis. However, while it is statutorily required to present the rates in this manner, these are the minimums where alternate methods for paying down that unfunded liability is at the discretion of each employer. Further, to understand the effects of reform in relation to Tier 3, compare the total rate of Tier 3 before application of those legacy costs.

Development of Employer Contributions – Tier 3 Members		
Valuation Date	June 30, 2024	June 30, 2023
Applicable to Fiscal Year Ending	2026	2025

Defined Contribution (DC) Retirement Plan

	Rate	Dollar	Rate	Dollar
Tier 2 & 3 DB / Non-Social Security				
Employee Cost	3.00%		3.00%	
Employer Cost [1]	3.00%		3.00%	
Tier 3 DC Only				
Employee Cost	9.00%	$ 56,186	9.00%	$ 49,392
Employee Health Subsidy Program Cost	0.20%	1,249	0.23%	1,262
Employee Disability Program Cost	1.54%	9,614	1.50%	8,232
Total Employee Cost	**10.74%**	**67,049**	**10.73%**	**58,886**
Employer Cost	9.00%	56,186	9.00%	49,392
Employer Health Subsidy Program Cost	0.20%	1,249	0.23%	1,262
Employer Disability Program Cost	1.54%	9,614	1.50%	8,232
Total Employer Cost (before Legacy)	**10.74%**	**67,049**	**10.73%**	**58,886**
ER Legacy Cost of Tiers 1 & 2 Amort of Unfunded Liabilities [2]	8.97%	55,999	7.64%	41,928
Total Employer Cost	**19.71%**	**123,048**	**18.37%**	**100,814**
Underlying Payroll (as of valuation date)		615,068		538,037

[1] *Employer rate is 4% for Tier 2 members for a period of time depending on the individual's membership date.*

[2] *Pursuant to ARS § 38-843(B), the amortization of positive unfunded liabilities for Tiers 1 & 2 shall be applied to all Tier 3 payroll on a level percent basis. However, while it is statutorily required to present the rates in this manner, these are the minimums where alternate methods for paying down that unfunded liability is at the discretion of each employer. Further, to understand the effects of reform in relation to Tier 3, compare the total rate of Tier 3 before application of those legacy costs.*

Contribution Rate Summary

	Tier 1	Tier 2		Tier 3		
Membership Date On or After	7/1/1968	1/1/2012		7/1/2017		
Participates in Social Security	N/A	Yes	No	Yes	No	N/A
Available Retirement Plan [1]	DB Only	DB Only	Hybrid	DB Only	Hybrid	DC Only
Employee Contribution Rate						
PSPRS DB Rate	7.65%	7.65%	7.65%	8.69%	8.69%	
PSPRS DC Rate			3.00%		3.00%	9.00%
Employer Health Subsidy Program Cost						0.20%
PSPDCRP Disability Program Rate						1.54%
Total EE Contribution Rate	7.65%	7.65%	10.65%	8.69%	11.69%	10.74%
Employer Contribution Rate						
PSPRS DB Normal Cost	16.54%	16.54%	16.54%	8.69%	8.69%	
PSPRS DB Tier 1 & 2 Legacy Cost [2]	8.87%	8.87%	8.87%	8.97%	8.97%	8.97%
PSPRS DC Rate			3.00%		3.00%	9.00%
Employer Health Subsidy Program Cost						0.20%
PSPDCRP Disability Program Rate						1.54%
Total ER Contribution Rate	25.41%	25.41%	28.41%	17.66%	20.66%	19.71%
Employer Alternate Contribution Rate [3]	8.97%	8.97%	8.97%	8.97%	8.97%	8.97%

[1] Employers that pay into Social Security on behalf of their members do not participate in the Hybrid Plan.

[2] Per statute (ARS § 38-843(B)), any positive unfunded liability for Tiers 1 and 2 is to be applied to all Tier 3 (DB and DC) payrolls

[3] The Alternate Contribution Rate is the sum of the positive amortization rates for Tiers 1 & 2 Pension and Health (subject to an 8% minimum) and is charged when retirees return to active status.

Exhibit summarizes employee and employer contributions based on Statute and the results of June 30, 2024 actuarial valuation. Pension and health components are combined, where applicable.

Impact of Additional Contributions

	Additional Contribution (000s)										
Impact On	**$0**	**$1,000**	**$2,000**	**$3,000**	**$4,000**	**$5,000**	**$6,000**	**$7,000**	**$8,000**	**$9,000**	**$10,000**
Funded Status - June 30, 2024	84.8%	85.9%	86.9%	88.0%	89.1%	90.2%	91.3%	92.3%	93.4%	94.5%	95.6%
FYE 2026 Contribution Rate	25.23%	24.63%	24.04%	23.44%	22.84%	22.25%	21.65%	21.05%	20.46%	19.86%	19.26%

Table shows the hypothetical change in the funded status and contribution rate from the June 30, 2024 actuarial valuation results for Tiers 1 & 2 if an additional contribution of the amount shown had been made to the Fund on June 30, 2024. This illustration can help estimate the impact of contributing additional monies to the fund in the future.

Historical Summary of Rates

			Pension			Health		
	Valuation Date June 30	Fiscal Year Ending June 30	Normal Cost	Unfunded Amortization	Total	Normal Cost	Unfunded Amortization	Total
TIERS 1 & 2	2020	2022	15.29%	17.54%	32.83%	0.38%	(0.32%)	0.06%
(Employer)	2021	2023	15.55%	9.52%	25.07%	0.37%	(0.33%)	0.04%
	2022	2024	16.02%	7.22%	23.24%	0.35%	(0.21%)	0.14%
	2023	2025	16.46%	7.64%	24.10%	0.34%	(0.12%)	0.22%
	2024	2026	16.26%	8.97%	25.23%	0.28%	(0.10%)	0.18%
TIER 3 *	2020	2022	9.68%	0.00%	9.68%	0.26%	0.00%	0.26%
(Employer)	2021	2023	9.68%	0.00%	9.68%	0.26%	0.00%	0.26%
	2022	2024	9.30%	0.00%	9.30%	0.26%	0.00%	0.26%
	2023	2025	8.77%	0.00%	8.77%	0.12%	0.00%	0.12%
	2024	2026	8.46%	0.00%	8.46%	0.23%	0.00%	0.23%
TIER 3 *	2020	2022	9.68%	0.00%	9.68%	0.26%	0.00%	0.26%
(Employee)	2021	2023	9.68%	0.00%	9.68%	0.26%	0.00%	0.26%
	2022	2024	9.30%	0.00%	9.30%	0.26%	0.00%	0.26%
	2023	2025	8.77%	0.00%	8.77%	0.12%	0.00%	0.12%
	2024	2026	8.69%	0.00%	8.69%	0.00%	0.00%	0.00%

* *Rates shown are Board approved Funding Policy rates. Starting in 2023, these rates are a 3-year rolling average of calculated EE/ER rates. Does not reflect Legacy costs that the employer must also contribute.*

III. Liability Support

Liabilities and Funded Ratios by Benefit - Tiers 1 & 2

	June 30, 2024	June 30, 2023
Pension		
Actuarial Present Value of Benefits (PVB)		
Retirees and Beneficiaries	$ 34,953,516	$ 31,831,266
DROP Members	16,503,366	17,049,452
Vested Members	1,137,999	1,191,538
Active Members	59,812,199	47,799,357
Total Actuarial Present Value of Benefits	112,407,080	97,871,613
Actuarial Accrued Liability (AAL)		
All Inactive Members	52,594,881	50,072,256
Active Members	39,850,965	30,537,638
Total Actuarial Accrued Liability	92,445,846	80,609,894
Actuarial Value of Assets (AVA)	78,367,135	71,285,848
Unfunded Actuarial Accrued Liability	14,078,711	9,324,046
PVB Funded Ratio (AVA / PVB)	69.7%	72.8%
AAL Funded Ratio (AVA / AAL)	84.8%	88.4%
Health		
Actuarial Present Value of Benefits (PVB)		
Retirees and Beneficiaries	$ 278,965	$ 248,215
DROP Members	236,940	229,056
Active Members	747,557	729,225
Total Present Value of Benefits	1,263,462	1,206,496
Actuarial Accrued Liability (AAL)		
All Inactive Members	515,905	477,271
Active Members	523,644	492,003
Total Actuarial Accrued Liability	1,039,549	969,274
Actuarial Value of Assets (AVA)	1,397,385	1,320,026
Unfunded Actuarial Accrued Liability	(357,836)	(350,752)
PVB Funded Ratio (AVA / PVB)	110.6%	109.4%
AAL Funded Ratio (AVA / AAL)	134.4%	136.2%

Health liabilities were increased by $23,924 under the lateral transfer methodology. Pension liabilities were not impacted.

Liabilities and Funded Ratios by Benefit - Tier 3

	June 30, 2024	June 30, 2023
Pension		
Actuarial Present Value of Benefits (PVB)		
Retirees and Beneficiaries	$ 7,268,826	$ 2,783,769
Vested Members	9,523,410	6,565,608
Active Members	710,626,649	558,509,014
Total Actuarial Present Value of Benefits	727,418,885	567,858,391
Actuarial Accrued Liability (AAL)		
All Inactive Members	16,792,236	9,349,377
Active Members	148,879,454	101,611,814
Total Actuarial Accrued Liability	165,671,690	110,961,191
Actuarial Value of Assets (AVA)	178,758,433	119,101,476
Unfunded Actuarial Accrued Liability	(13,086,743)	(8,140,285)
PVB Funded Ratio (AVA / PVB)	24.6%	21.0%
AAL Funded Ratio (AVA / AAL)	107.9%	107.3%
Health		
Actuarial Present Value of Benefits (PVB)		
Retirees and Beneficiaries	$ 34,351	$ 0
Active Members	9,825,773	7,842,159
Total Present Value of Benefits	9,860,124	7,842,159
Actuarial Accrued Liability (AAL)		
All Inactive Members	34,351	0
Active Members	2,398,606	1,651,466
Total Actuarial Accrued Liability	2,432,957	1,651,466
Actuarial Value of Assets (AVA)	5,259,235	3,508,666
Unfunded Actuarial Accrued Liability	(2,826,278)	(1,857,200)
PVB Funded Ratio (AVA / PVB)	53.3%	44.7%
AAL Funded Ratio (AVA / AAL)	216.2%	212.5%

The liabilities shown on this page are the liabilities for all Tier 3 members grouped together in the Risk Sharing group. These liabilities are NOT the liabilities solely for Goodyear Police Dept. Tier 3 members.

Derivation of Experience (Gain)/Loss

		Tiers 1 & 2		Tier 3	
		Pension	Health	Pension	Health
(1)	Unfunded Actuarial Accrued Liability as of June 30, 2023	9,324,046	(350,752)	(8,140,285)	(1,857,200)
(2)	Normal Cost Developed in Last Valuation	1,473,967	30,446	19,953,819	277,457
(3)	Actual Contributions	4,276,825	14,773	24,962,037	1,397,879
(4)	Expected Interest On (1), (2), and (3)	626,167	(23,585)	(32,441)	(163,191)
(5)	Expected Unfunded Actuarial Accrued Liability as of June 30, 2024 (1)+(2)-(3)+(4)	7,147,355	(358,664)	(13,180,944)	(3,140,813)
(6)	Changes to UAAL Due to Assumptions, Methods and Benefits	0	0	0	0
(7)	Change to UAAL Due to Actuarial (Gain)/Loss	6,931,356	828	94,201	314,535
(8)	Unfunded Actuarial Accrued Liability as of June 30, 2024	14,078,711	(357,836)	(13,086,743)	(2,826,278)

Amortization of Unfunded Liabilities - Tiers 1 & 2

	Date Established	Outstanding Balance	Years Remaining	Amortization Rate
Pension	6/30/2019	2,511,528	12	1.65%
	6/30/2021	3,161,833	12	2.19%
	6/30/2022	(161,143)	13	(0.11%)
	6/30/2023	1,898,525	14	1.20%
	6/30/2024	6,667,968	15	4.04%
	Total	14,078,711		8.97%
Health	6/30/2019	0	10	0.00%
	6/30/2021	0	10	0.00%
	6/30/2022	0	10	0.00%
	6/30/2023	0	10	0.00%
	6/30/2024	(133,923)	10	(0.10%)
	Total	(133,923)		(0.10%)

Amortization of Unfunded Liabilities - Tier 3

	Date Established	Outstanding Balance	Years Remaining	Amortization Rate *
Pension	6/30/2018	94,700	4	0.01%
	6/30/2019	(893,556)	5	(0.07%)
	6/30/2020	625,762	6	0.04%
	6/30/2021	(2,174,987)	7	(0.13%)
	6/30/2022	(3,694,845)	8	(0.20%)
	6/30/2023	(1,375,088)	9	(0.07%)
	6/30/2024	(5,668,729)	10	(0.26%)
	Total	(13,086,743)		0.00%
Health	6/30/2018	(2,008)	4	0.00%
	6/30/2019	(81,696)	5	(0.01%)
	6/30/2020	(158,912)	6	(0.01%)
	6/30/2021	(314,248)	7	(0.02%)
	6/30/2022	(439,549)	8	(0.02%)
	6/30/2023	(697,896)	9	(0.03%)
	6/30/2024	(1,131,969)	10	(0.05%)
	Total	(2,826,278)		0.00%

* *By Statute, negative total amortization rates are not subtracted in Tier 3 rate calculations.*

IV. Asset Support

Statement of Changes in Fiduciary Net Position for Year Ended June 30, 2024

Market Value Basis

	Tiers 1 & 2		Tier 3	
	Pension	**Health**	**Pension**	**Health**
Additions				
Contributions				
Member Contributions	$ 109,846,477	$ 0	$ 52,985,716	$ 0
Employer Contributions	1,182,413,215	0	51,738,352	0
Health Insurance Contributions	0	4,616,669	0	2,687,373
Total Contributions	1,292,259,692	4,616,669	104,724,068	2,687,373
Investment Income				
Net Increase in Fair Value	1,084,528,765	28,088,330	27,137,658	753,277
Interest and Dividends	270,700,975	7,010,914	6,773,624	188,020
Other Income	151,768,967	3,930,680	3,797,644	105,414
Less Investment Expenses	(25,846,576)	(516,914)	(646,747)	(13,863)
Net Investment Income	1,481,152,131	38,513,010	37,062,179	1,032,848
Non-investment Income	31	0	1	0
Transfers In	169,162	0	0	0
Total Additions	2,773,581,016	43,129,679	141,786,248	3,720,221
Deductions				
Distributions to Members				
Benefit Payments	1,128,489,555	0	632,764	0
Health Insurance Subsidy	0	18,596,076	0	4,920
Refund of Contributions	12,787,280	0	2,469,875	0
Total Distributions	1,141,276,835	18,596,076	3,102,639	4,920
Administrative Expenses	8,403,062	210,006	210,701	5,632
Transfers Out	392,168	0	0	0
Other	0	0	0	0
Total Deductions	1,150,072,065	18,806,082	3,313,340	10,552
Net Increase / (Decrease)	1,623,508,951	24,323,597	138,472,908	3,709,669
Net Position Held in Trust				
Prior Valuation	14,310,242,735	387,517,339	260,225,263	7,335,149
Beginning of the Year Adjustment	0	0	0	0
End of the Year	15,933,751,686	411,840,936	398,698,171	11,044,818

Development of Pension Actuarial Value of Assets - Tiers 1 & 2

A. Investment Income	
A1. Actual Investment Income	$ 1,472,749,069
A2. Expected Amount for Immediate Recognition	1,035,670,507
A3. Amount Subject to Amortization	437,078,562

	Year Ended June 30						
B. Amortization Schedule	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
2024 Experience (A3 / 7)	62,439,795	62,439,795	62,439,795	62,439,795	62,439,795	62,439,795	62,439,792
2023 Experience	10,197,720	10,197,720	10,197,720	10,197,720	10,197,720	10,197,717	
2022 Experience	(204,451,249)	(204,451,249)	(204,451,249)	(204,451,249)	(204,451,249)		
2021 Experience	238,978,744	238,978,744	238,978,744	238,978,745			
2020 Experience	(68,882,158)	(68,882,158)	(68,882,160)				
2019 Experience	(22,859,275)	(22,859,275)					
2018 Experience	(6,266,351)						
Total Amortization	9,157,226	15,423,577	38,282,850	107,165,011	(131,813,734)	72,637,512	62,439,792

C. Actuarial Value of Assets	**Total**	**Employer**
C1. Actuarial Value of Assets, June 30, 2023	14,574,029,063	
C2. Non-investment Net Cash Flow	150,759,882	
C3. Preliminary Actuarial Value of Assets, June 30, 2024 (A2 + B + C1 + C2)	15,769,616,678	
C4. Market Value of Assets, June 30, 2024	15,933,751,686	79,182,804
C5. Final Actuarial Value of Assets, June 30, 2024 (C3 Within 20% Corridor of C4)	15,769,616,678	78,367,135

D. Rates of Return	
D1. Market Value Rate of Return	10.2%
D2. Actuarial Value Rate of Return	7.1%

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ACTUARIES AND CONSULTANTS

Development of Health Actuarial Value of Assets - Tiers 1 & 2

A. Investment Income	
A1. Actual Investment Income	$ 38,303,004
A2. Expected Amount for Immediate Recognition	27,406,736
A3. Amount Subject to Amortization	10,896,268

	Year Ended June 30						
B. Amortization Schedule	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
2024 Experience (A3 / 7)	1,556,610	1,556,610	1,556,610	1,556,610	1,556,610	1,556,610	1,556,608
2023 Experience	193,035	193,035	193,035	193,035	193,035	193,036	
2022 Experience	(6,416,469)	(6,416,469)	(6,416,469)	(6,416,469)	(6,416,471)		
2021 Experience	9,257,478	9,257,478	9,257,478	9,257,481			
2020 Experience	(2,898,713)	(2,898,713)	(2,898,716)				
2019 Experience	(1,075,569)	(1,075,572)					
2018 Experience	(304,656)						
Total Amortization	311,716	616,369	1,691,938	4,590,657	(4,666,826)	1,749,646	1,556,608

C. Actuarial Value of Assets	Total	Employer
C1. Actuarial Value of Assets, June 30, 2023	392,563,499	
C2. Non-investment Net Cash Flow	(13,979,407)	
C3. Preliminary Actuarial Value of Assets, June 30, 2024 (A2 + B + C1 + C2)	406,302,544	
C4. Market Value of Assets, June 30, 2024	411,840,936	1,416,433
C5. Final Actuarial Value of Assets, June 30, 2024 (C3 Within 20% Corridor of C4)	406,302,544	1,397,385

D. Rates of Return	
D1. Market Value Rate of Return	10.1%
D2. Actuarial Value Rate of Return	7.2%

Development of Pension Actuarial Value of Assets - Tiers 3

A. Investment Income	
A1. Actual Investment Income	$ 36,851,478
A2. Expected Amount for Immediate Recognition	21,712,363
A3. Amount Subject to Amortization	15,139,115

	Year Ended June 30				
B. Amortization Schedule	**2024**	**2025**	**2026**	**2027**	**2028**
2024 Experience (A3 / 5)	3,027,823	3,027,823	3,027,823	3,027,823	3,027,823
2023 Experience	885,521	885,521	885,521	885,520	
2022 Experience	(3,259,379)	(3,259,379)	(3,259,381)		
2021 Experience	3,551,936	3,551,938			
2020 Experience	(351,294)				
Total Amortization	3,854,607	4,205,903	653,963	3,913,343	3,027,823

C. Actuarial Value of Assets	**Total**	**Employer**
C1. Actuarial Value of Assets, June 30, 2023	259,708,739	
C2. Non-investment Net Cash Flow	101,621,430	
C3. Preliminary Actuarial Value of Assets, June 30, 2024 (A2 + B + C1 + C2)	386,897,139	
C4. Market Value of Assets, June 30, 2024	398,698,171	184,210,874
C5. Final Actuarial Value of Assets, June 30, 2024 (C3 Within 20% Corridor of C4)	386,897,139	178,758,433

D. Rates of Return	
D1. Market Value Rate of Return	11.8%
D2. Actuarial Value Rate of Return	8.2%

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ACTUARIES AND CONSULTANTS

Development of Health Actuarial Value of Assets - Tiers 3

A. Investment Income	
A1. Actual Investment Income	$ 1,027,216
A2. Expected Amount for Immediate Recognition	605,758
A3. Amount Subject to Amortization	421,458

	Year Ended June 30				
B. Amortization Schedule	**2024**	**2025**	**2026**	**2027**	**2028**
2024 Experience (A3 / 5)	84,292	84,292	84,292	84,292	84,290
2023 Experience	23,872	23,872	23,872	23,870	
2022 Experience	(101,792)	(101,792)	(101,790)		
2021 Experience	128,963	128,961			
2020 Experience	(10,557)				
Total Amortization	124,778	135,333	6,374	108,162	84,290

C. Actuarial Value of Assets	**Total**	**Employer**
C1. Actuarial Value of Assets, June 30, 2023	7,297,670	
C2. Non-investment Net Cash Flow	2,682,453	
C3. Preliminary Actuarial Value of Assets, June 30, 2024 (A2 + B + C1 + C2)	10,710,659	
C4. Market Value of Assets, June 30, 2024	11,044,818	5,423,316
C5. Final Actuarial Value of Assets, June 30, 2024 (C3 Within 20% Corridor of C4)	10,710,659	5,259,235

D. Rates of Return	
D1. Market Value Rate of Return	11.8%
D2. Actuarial Value Rate of Return	8.5%

V. Member Statistics

Valuation Data Summary

	June 30, 2024		June 30, 2023	
	Tiers 1 & 2	Tier 3	Tiers 1 & 2	Tier 3
Actives				
Number	55	37	57	27
Average Current Age	42.0	31.4	41.3	31.4
Average Age at Employment	27.9	29.2	27.9	29.3
Average Past Service	14.1	2.2	13.4	2.1
Average Annual Salary	$146,001	$99,598	$117,104	$83,289
Actives (transferred)				
Number	17	19	17	14
Average Current Age	39.7	30.6	39.1	29.5
Average Age at Employment	26.9	26.1	27.4	26.0
Average Past Service	12.9	4.5	11.6	3.5
Average Annual Salary	$131,234	$109,607	$102,724	$89,431
Retirees				
Number	24	0	22	0
Average Current Age	61.3	N/A	60.9	N/A
Average Annual Benefit	$67,098	N/A	$63,806	N/A
DROP Retirees				
Number	15	N/A	15	N/A
Average Current Age	53.8	N/A	53.5	N/A
Average Annual Benefit	$60,895	N/A	$66,101	N/A
Beneficiaries				
Number	4	0	4	0
Average Current Age	68.0	N/A	67.0	N/A
Average Annual Benefit	$45,250	N/A	$44,363	N/A
Disability Retirees				
Number	11	1	11	1
Average Current Age	51.9	54.6	50.9	53.6
Average Annual Benefit	$53,499	$41,744	$52,450	$41,744
Inactive / Vested				
Number	14	5	15	2
Average Current Age	41.6	31.2	40.9	41.5
Average Accumulated Contributions	$25,084	$6,937	$28,758	$5,869
Total Number	140	62	141	44
Former Members (transferred)	9	6	8	4

Active Counts and Pay Summary - Tiers 1 & 2

	Past Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30+**	**Total Count**	**Total Pay**	**Average Pay**
<20	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0
25 - 29	0	2	0	0	0	0	0	2	235,974	117,987
30 - 34	0	7	4	0	0	0	0	11	1,328,417	120,765
35 - 39	0	7	9	5	0	0	0	21	2,985,385	142,161
40 - 44	0	0	6	13	0	0	0	19	2,750,379	144,757
45 - 49	0	2	1	5	0	0	0	8	1,140,640	142,580
50 - 54	0	0	1	7	0	0	0	8	1,393,250	174,156
55 - 59	0	0	0	1	1	0	0	2	239,615	119,808
60 - 64	0	0	0	1	0	0	0	1	187,370	187,370
65+	0	0	0	0	0	0	0	0	0	0
Total	0	18	21	32	1	0	0	72	10,261,030	142,514

Active Counts and Pay Summary - Tier 3

	Past Service									
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30+**	**Total Count**	**Total Pay**	**Average Pay**
<20	0	0	0	0	0	0	0	0	0	0
20 - 24	8	0	0	0	0	0	0	8	698,241	87,280
25 - 29	14	5	0	0	0	0	0	19	1,853,596	97,558
30 - 34	14	2	0	0	0	0	0	16	1,655,960	103,498
35 - 39	5	3	0	0	0	0	0	8	996,807	124,601
40 - 44	3	1	0	0	0	0	0	4	430,900	107,725
45 - 49	0	1	0	0	0	0	0	1	132,168	132,168
50 - 54	0	0	0	0	0	0	0	0	0	0
55 - 59	0	0	0	0	0	0	0	0	0	0
60 - 64	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0
Total	44	12	0	0	0	0	0	56	5,767,672	102,994

In-Payment Counts and Benefit Summary – All Tiers

Age	Count	Average Annual Benefit
< 40	2	48,783
40 - 44	1	68,549
45 - 49	3	60,657
50 - 54	8	65,681
55 - 59	8	56,719
60 - 64	8	65,800
65 - 69	5	54,578
70 - 74	3	67,241
75 - 79	1	46,362
80 - 84	0	0
85 - 89	1	46,916
90 - 94	0	0
95 - 99	0	0
100+	0	0
Total	40	60,539

"In-Payment" refers to retired, beneficiary, and disabled members.

VI. ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate	This is the assumed earnings rate on System assets, compounded annually, net of investment and administrative expenses. ***Tiers 1 & 2:*** 7.20% per year. ***Tier 3:*** 7.00% per year.
Salary Increases	See table at the end of this section. This is an annual increase for individual member's salary. These rates are based on a 2022 experience study using actual plan experience.
Inflation	2.50%.
Tier 3 Compensation Limit	$140,952 for calendar 2024. Assumed increases of 2.00% per year thereafter.
Cost-of-Living Adjustment	1.85%.
Mortality Rates	These rates are used to project future decrements from the population due to death. ***Active Lives:*** PubS-2010 Employee mortality, adjusted by a factor of 1.03 for male members and 1.08 for female members, with generational improvements using 85% of the most recent projection scale (currently Scale MP-2021). 100% of active deaths are assumed to be in the line of duty. ***Inactive Lives:*** PubS-2010 Healthy Retiree mortality, adjusted by a factor of 1.03 for male retirees and 1.11 for female retirees, with generational improvements using 85% of the most recent projection scale (currently Scale MP-2021). ***Beneficiaries:*** PubS-2010 Survivor mortality, adjusted by a factor of 0.98 for male beneficiaries and adjusted by a factor of 1.06 for female beneficiaries, with generational improvements using 85% of the most recent projection scale (currently Scale MP-2021).

Disabled Lives:
PubS-2010 Disabled mortality, adjusted by a factor of 1.08 for male disabled members and 1.01 for female disabled members, with generational improvements using 85% of the most recent projection scale (currently Scale MP-2021).

The mortality assumptions sufficiently accommodate anticipated future mortality improvements.

Retirement / DROP Rates

These rates are used to project future decrements from the active population due to retirement. The rates below are based on a 2022 experience study using actual plan experience.

Tier 1 – reaching age 62 before attaining 20 years of service:
Age-related rates based on age at retirement:

Police - 40% assumed at age 62 and 63, 35% assumed at age 64, 25% assumed at ages 65 and 66, 50% assumed at ages 67 – 69, and 100% assumed at age 70.

Fire - 25% assumed at age 62 and 63, 35% assumed at age 64, 25% assumed at ages 65 and 66, 50% assumed at ages 67 – 69, and 100% assumed at age 70.

Tier 1 – reaching age 62 after attaining 20 years of service:
Service-related rates based on service at retirement. See complete tables at the end of this section.

65% are assumed to enter the DROP program while the remaining 35% are assumed to retire and commence benefits immediately. DROP periods are assumed to be 5 years in length for future DROP elections.

Tiers 2 & 3:
Age-related rates based on age at retirement. 50% assumed at age 53, 30% assumed at ages 54 – 59, 60% assumed at ages 60 – 63, and 100% assumed at age 64.

Termination Rate

These rates are used to project future decrements from the active population due to termination. Complete table of rates based on service at termination are provided at the end of this section. The rates apply to members prior to retirement eligibility and are based on a 2022 experience study using actual plan experience.

Disability Rate

These rates are used to project future decrements from the active population due to disability. Complete table of rates based on age at disability are provided at the end of this section. These rates are based on a 2022 experience study using actual plan experience. 90% of disablements are assumed to be duty-related.

Marital Status

For active members, 85% of males and 60% of females are assumed to be married. Actual marital status is used, where applicable, for inactive members.

Spouse's Age

Male spouses are assumed to be four years older than female members and female spouses are assumed to be two years younger than males members.

Benefit Commencement

Deferred members are assumed to commence benefits as follows:

- Tier 1: immediate refund of contributions
- Tiers 2 & 3 (less than 15 years service): immediate refund of contributions
- Tier 2 (15+ years service): life annuity payable at age 52.5
- Tier 3 (15+ years service): life annuity payable at age 55

Health Care Utilization

For active members, 70% of retirees are expected to utilize retiree health care. Actual utilization is used for inactive members.

Funding Method

Entry Age Normal Cost Method.

Lateral Transfers

When active members transfer between employers, the new employer's liability starts from their new date of hire with no past service liability (i.e., all liability is accrued through normal cost). Per PSPRS administrative decision, once the new employer's liability is fully funded, the liability will reflect all past service liability.

Actuarial Asset Method

Method described below. Note that during periods when investment performance exceeds (falls short) of the assumed rate, the actuarial value of assets will tend to be less (greater) than the market value of assets.

Tiers 1 & 2:
Each year the assumed investment income is recognized in full while the difference between actual and assumed investment income are smoothed over a 7-year period subject to a 20% corridor around the market value.

Tier 3:
Each year the assumed investment income is recognized in full while the difference between actual and assumed investment income are smoothed over a 5-year period subject to a 20% corridor around the market value.

<u>Funding Policy Amortization Method</u>

Tiers 1 & 2:
Any positive UAAL (assets less than liabilities) is amortized using a layered approach beginning with the June 30, 2020 valuation, with new amounts determined according to a Level Dollar method over a closed period of 15 years (phased into from current period of at most 30 years). Initial layer from June 30, 2019 valuation continues to be amortized according to a Level Percentage of Payroll method.

Tier 3:
Any positive UAAL (assets less than liabilities) is amortized according to a Level Dollar method over a closed period of 10 years. No amortization is made of any negative UAAL (assets greater than liabilities).

<u>Payroll Growth</u>

1.50% per year. This is annual increase for total employer payroll.

Changes to Actuarial Assumptions and Methods Since the Prior Valuation
The payroll growth assumption was lowered from 2.00% to 1.50%.

There were no method changes since the prior valuation.

Salary Increase Rates

Age	Maricopa Police	Pima Police	Other Police	Maricopa Fire	Pima Fire	Other Fire
20	15.00%	12.00%	14.00%	15.00%	12.00%	13.00%
21	14.00%	6.00%	12.00%	14.00%	11.00%	12.00%
22	13.00%	6.00%	10.00%	13.00%	10.00%	11.00%
23	12.00%	6.00%	9.00%	12.00%	9.50%	10.00%
24	11.00%	6.00%	8.00%	11.00%	9.00%	9.00%
25	10.00%	6.00%	7.00%	10.00%	8.50%	8.00%
26	9.00%	5.50%	6.50%	9.50%	7.50%	7.50%
27	8.00%	5.50%	6.25%	9.00%	6.50%	7.50%
28	7.50%	5.50%	6.00%	8.50%	5.75%	7.00%
29	7.00%	5.50%	5.80%	8.00%	5.75%	6.50%
30	6.50%	5.25%	5.60%	8.00%	5.50%	6.50%
31	6.00%	5.25%	5.40%	7.50%	5.50%	6.00%
32	5.50%	5.00%	5.20%	7.00%	5.00%	5.50%
33	5.10%	5.00%	5.00%	6.50%	5.00%	5.50%
34	4.90%	5.00%	4.90%	6.50%	5.00%	5.50%
35	4.70%	4.50%	4.80%	6.00%	5.00%	5.50%
36	4.50%	4.50%	4.70%	5.50%	5.00%	5.50%
37	4.30%	4.50%	4.60%	5.25%	4.50%	5.00%
38	4.10%	4.00%	4.50%	5.00%	4.50%	5.00%
39	4.00%	4.00%	4.40%	4.75%	4.50%	5.00%
40	3.90%	4.00%	4.30%	4.75%	4.50%	5.00%
41	3.80%	3.80%	4.20%	4.50%	4.50%	4.50%
42	3.70%	3.60%	4.10%	4.50%	4.00%	4.50%
43	3.60%	3.40%	4.00%	4.50%	4.00%	4.50%
44	3.50%	3.20%	3.90%	4.50%	4.00%	4.00%
45	3.50%	3.00%	3.80%	4.25%	4.00%	4.00%
46	3.50%	3.00%	3.70%	4.25%	3.75%	4.00%
47	3.50%	3.00%	3.60%	4.25%	3.75%	3.75%
48	3.50%	3.00%	3.50%	4.00%	3.75%	3.75%
49	3.50%	3.00%	3.50%	4.00%	3.50%	3.75%
50	3.25%	3.00%	3.50%	3.75%	3.50%	3.75%
51	3.25%	3.00%	3.50%	3.75%	3.50%	3.75%
52	3.25%	2.75%	3.50%	3.75%	3.50%	3.75%
53+	3.25%	2.75%	3.50%	3.75%	3.25%	3.75%

Tier 1 Retirement Rates– reaching age 62 after attaining 20 years of service

Service	Maricopa Police	Pima Police	Other Police	Maricopa Fire	Pima Fire	Other Fire
20	28%	28%	35%	14%	20%	20%
21	25%	25%	35%	17%	20%	25%
22	15%	16%	22%	7%	13%	15%
23	12%	12%	12%	7%	7%	10%
24	8%	9%	12%	7%	7%	10%
25	30%	22%	25%	17%	22%	30%
26	42%	42%	40%	30%	26%	30%
27	32%	30%	28%	23%	30%	30%
28	32%	30%	28%	30%	30%	30%
29	32%	20%	28%	30%	30%	30%
30	35%	25%	35%	30%	30%	35%
31	35%	33%	30%	40%	30%	35%
32	60%	50%	70%	55%	30%	35%
33	60%	50%	70%	55%	60%	60%
34+	100%	100%	100%	100%	100%	100%

Termination Rates

Service	Maricopa Police	Pima Police	Other Police	Maricopa Fire	Pima Fire	Other Fire
0	13.0%	14.0%	13.5%	4.5%	10.0%	10.5%
1	8.0%	9.0%	11.5%	3.5%	6.0%	8.5%
2	6.0%	7.5%	10.5%	2.5%	4.5%	8.0%
3	4.5%	7.0%	9.5%	2.0%	4.0%	8.0%
4	3.6%	6.5%	9.0%	1.5%	4.0%	7.0%
5	3.3%	5.0%	8.0%	1.5%	4.0%	5.0%
6	3.3%	5.0%	7.0%	1.5%	4.0%	5.0%
7	3.3%	4.0%	6.5%	1.5%	3.0%	4.0%
8	2.4%	4.0%	6.5%	1.5%	3.0%	4.0%
9	2.4%	4.0%	6.0%	1.5%	3.0%	3.5%
10	2.4%	4.0%	5.0%	1.0%	2.0%	3.0%
11	1.8%	3.0%	4.0%	1.0%	2.0%	2.5%
12	1.8%	3.0%	4.0%	1.0%	1.5%	2.0%
13	1.3%	2.0%	3.5%	1.0%	1.0%	1.5%
14	1.3%	2.0%	3.0%	0.5%	1.0%	1.4%
15	0.8%	1.5%	2.5%	0.5%	1.0%	1.4%
16	0.8%	1.5%	2.0%	0.5%	0.5%	1.4%
17	0.8%	1.0%	2.0%	0.5%	0.5%	1.4%
18	0.8%	1.0%	1.8%	0.5%	0.5%	1.4%
19	0.8%	1.0%	1.8%	0.5%	0.5%	0.5%
20+	0.5%	1.0%	1.8%	0.4%	0.5%	0.5%

Disability Rates

Age	Maricopa Police	Pima Police	Other Police	Maricopa Fire	Pima Fire	Other Fire
20	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
21	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
22	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
23	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
24	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
25	0.050%	0.050%	0.120%	0.020%	0.020%	0.020%
26	0.100%	0.100%	0.160%	0.035%	0.020%	0.020%
27	0.100%	0.100%	0.160%	0.035%	0.020%	0.020%
28	0.100%	0.100%	0.160%	0.035%	0.020%	0.020%
29	0.100%	0.100%	0.160%	0.035%	0.020%	0.020%
30	0.100%	0.100%	0.160%	0.035%	0.020%	0.020%
31	0.230%	0.180%	0.240%	0.090%	0.100%	0.060%
32	0.230%	0.180%	0.240%	0.090%	0.100%	0.060%
33	0.230%	0.180%	0.240%	0.090%	0.100%	0.060%
34	0.230%	0.180%	0.240%	0.090%	0.100%	0.060%
35	0.230%	0.180%	0.240%	0.090%	0.100%	0.060%
36	0.450%	0.350%	0.320%	0.150%	0.150%	0.140%
37	0.450%	0.350%	0.320%	0.150%	0.150%	0.140%
38	0.450%	0.350%	0.320%	0.150%	0.150%	0.140%
39	0.450%	0.350%	0.320%	0.150%	0.150%	0.140%
40	0.450%	0.350%	0.320%	0.150%	0.150%	0.140%
41	0.520%	0.650%	0.550%	0.170%	0.300%	0.250%
42	0.520%	0.650%	0.550%	0.170%	0.300%	0.250%
43	0.520%	0.650%	0.550%	0.170%	0.300%	0.250%
44	0.520%	0.650%	0.550%	0.170%	0.300%	0.250%
45	0.520%	0.650%	0.550%	0.170%	0.300%	0.250%
46	0.650%	0.750%	0.750%	0.300%	0.420%	0.420%
47	0.650%	0.750%	0.750%	0.300%	0.420%	0.420%
48	0.650%	0.750%	0.750%	0.300%	0.420%	0.420%
49	0.650%	0.750%	0.750%	0.300%	0.420%	0.420%
50	0.650%	0.750%	0.750%	0.300%	0.420%	0.420%
51	0.800%	0.800%	0.800%	0.700%	0.750%	0.750%
52	0.800%	0.800%	0.800%	0.700%	0.750%	0.750%
53	0.800%	0.800%	0.800%	0.700%	0.750%	0.750%
54	0.800%	0.800%	0.800%	0.700%	0.750%	0.750%
55	0.800%	0.800%	0.800%	0.700%	0.750%	0.750%
56+	1.000%	0.850%	0.900%	1.100%	0.800%	1.000%

VII. DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined under various assumption scenarios. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. Whenever possible, the recommended assumptions in this report reflect conservatism to allow for some margin of unfavorable future plan experience. However, it is still possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- <u>Investment Return</u>: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- <u>Salary Increases</u>: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- <u>Payroll Growth</u>: The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll does not increase according to the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized.
- <u>Demographic Assumptions:</u> Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment

produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

- Contribution risk: This risk results from the potential that actual employer contributions may deviate from actuarially determined contributions, which are determined in accordance with the Board's funding policy. The funding policy is intended to result in contribution requirements that if paid when due, will result in a reasonable expectation that assets will accumulate to be sufficient to pay plan benefits when due. Contribution deficits, particularly large deficits and those that occur repeatedly, increase future contribution requirements and put the plan at risk for not being able to pay plan benefits when due.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature plans with a substantial inactive liability. Similarly, mature plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled "Plan Maturity Measures and Other Risk Metrics." For a better understanding of the overall Plan and the impact of these risks, please refer to the consolidated PSPRS valuation report.

Low Default-Risk Obligation Measure

ASOP No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, was revised as of December 2021 to include a "low-default-risk obligation measure" (LDROM). This liability measure is consistent with the determination of the actuarial accrued liability shown on pages 8 and 9 in terms of member data, plan provisions, and assumptions/methods, including the use of the Entry Age Normal Cost Method, except that the interest rate is tied to low-default-risk fixed income securities. The S&P Municipal Bond 20 Year High Grade Rate Index (daily rate closest to, but not later than, the measurement date) was selected to represent a current market rate of low risk but longer-term investments that could be included in a low-risk asset portfolio. The interest rate used in this valuation was 4.21%, resulting in an LDROM of $147,580,706 for Tiers 1 and 2 and $406,148,719 for Tier 3. The LDROM should not be considered the "correct" liability measurement; it simply shows a possible outcome if the Board elected to hold a very low risk asset portfolio. The Board actually invests the pension plan's contributions in a diversified portfolio of stocks and bonds and other investments with the objective of maximizing investment returns at a reasonable level of risk. Consequently, the difference between the plan's Actuarial Accrued Liability disclosed earlier in this section and the LDROM can be thought of as representing the expected taxpayer savings from investing in the plan's diversified portfolio compared to investing only in high quality bonds.

The actuarial valuation reports the funded status and develops contributions based on the expected return of the plan's investment portfolio. If instead, the plan switched to investing exclusively in high quality bonds, the LDROM illustrates that reported funded status would be lower (which also implies that the Actuarially Determined Contributions would be higher), perhaps significantly. Unnecessarily high contribution requirements in the near term may not be affordable and could imperil plan sustainability and benefit security.

Plan Maturity Measures and Other Risk Metrics - Tiers 1 & 2

	6/30/2024	6/30/2023	6/30/2022	6/30/2021	6/30/2020
Support Ratio					
Total Actives	72	74	80	86	93
Total Inactives	68	67	61	55	49
Actives / Inactives	105.9%	110.4%	131.1%	156.4%	189.8%
Asset Volatility Ratio					
Market Value of Assets (MVA)	79,182,804	69,995,592	63,247,468	62,966,872	37,507,990
Total Annual Payroll	10,261,030	8,421,263	8,509,473	8,656,917	9,220,411
MVA / Total Annual Payroll	771.7%	831.2%	743.3%	727.4%	406.8%
Accrued Liability (AL) Ratio					
Inactive Accrued Liability	52,594,881	50,072,256	45,219,687	38,208,874	29,300,103
Total Accrued Liability	92,445,846	80,609,894	73,733,272	67,183,987	61,494,383
Inactive AL / Total AL	56.9%	62.1%	61.3%	56.9%	47.6%
Funded Ratio					
Actuarial Value of Assets (AVA)	78,367,135	71,285,848	64,969,296	57,565,410	40,384,373
Total Accrued Liability	92,445,846	80,609,894	73,733,272	67,183,987	61,494,383
AVA / Total Accrued Liability	84.8%	88.4%	88.1%	85.7%	65.7%
Net Cash Flow Ratio					
Net Cash Flow [1]	1,716,068	1,724,408	2,931,066	13,990,356	2,161,420
Market Value of Assets (MVA)	79,182,804	69,995,592	63,247,468	62,966,872	37,507,990
Net Cash Flow / MVA	2.2%	2.5%	4.6%	22.2%	5.8%

[1] *Determined as total contributions minus benefit payments. Administrative expenses are typically included but are considered part of the net interest rate assumption for this plan.*

Plan Maturity Measures and Other Risk Metrics - Tier 3 [1]

	6/30/2024	6/30/2023	6/30/2022	6/30/2021	6/30/2020
Support Ratio					
Total Actives	3,658	3,054	2,417	2,560	1,408
Total Inactives	570	450	327	307	130
Actives / Inactives	641.8%	678.7%	739.1%	833.9%	1,083.1%
Asset Volatility Ratio					
Market Value of Assets (MVA)	184,210,874	119,338,352	74,774,123	51,992,240	22,964,925
Total Annual Payroll	295,480,312	226,680,964	165,151,543	115,883,115	84,448,996
MVA / Total Annual Payroll	62.3%	52.6%	45.3%	44.9%	27.2%
Accrued Liability (AL) Ratio					
Inactive Accrued Liability	16,792,236	9,349,377	4,598,114	2,290,610	1,173,104
Total Accrued Liability	165,671,690	110,961,191	68,939,204	42,733,537	23,239,599
Inactive AL / Total AL	10.1%	8.4%	6.7%	5.4%	5.0%
Funded Ratio					
Actuarial Value of Assets (AVA)	178,758,433	119,101,476	76,171,857	45,863,401	23,570,444
Total Accrued Liability	165,671,690	110,961,191	68,939,204	42,733,537	23,239,599
AVA / Total Accrued Liability	107.9%	107.3%	110.5%	107.3%	101.4%
Net Cash Flow Ratio					
Net Cash Flow [2]	47,922,185	36,208,171	25,802,686	18,607,209	13,192,598
Market Value of Assets (MVA)	184,210,874	119,338,352	74,774,123	51,992,240	22,964,925
Net Cash Flow / MVA	26.0%	30.3%	34.5%	35.8%	57.4%

[1] *Tier 3 results are shown for the Risk Sharing group, where applicable.*
[2] *Determined as total contributions minus benefit payments. Administrative expenses are typically included but are considered part of the net interest rate assumption for this plan.*

VIII. Summary of Current Plan

The following is a summary of the benefit provisions provided in Title 38, Chapter 5, Article 4 of the Arizona Revised Statutes.

Membership

Full-time employees of an eligible group, prior to attaining age 65, who are engaged to work for more than six months in a calendar year. Tier 3 Defined Contribution members are able to elect participation in post-retirement health insurance subsidy.

Benefit Tiers

Benefits differ for members based on their hire date:

Tier	Hire Date
1	Hired before January 1, 2012
2	Hired on or after January 1, 2012 but before July 1, 2017
3	Hired on or after July 1, 2017

Compensation

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 Tier 3 members, compensation is limited by statutory cap ($110,000 with adjustments by the Board).

Average Monthly Benefit Compensation

Tier 1:
The highest compensation paid to member during three consecutive years out of the last 20 years of Credited Service, divided by months.

Tier 2:
The highest compensation paid to member during five consecutive years out of the last 20 years of Credited Service, divided by months.

Tier 3:
The highest compensation paid to member during five consecutive years out of the last 15 years of Credited Service, divided by months.

Credited Service

Total periods of service, both before and after the member's date of participation, for which the member made contributions to the fund.

Normal Retirement Date

Tier 1:
First day of month following attainment of 1) 20 years of service or

2) 62nd birthday and completion of 15 years of service.

Tier 2:
First day of month following the attainment of age 52.5 and completion of 15 years of service.

Tier 3:
First day of month following the attainment of age 55 and completion of 15 years of service.

Benefit

Tier 1:
50% of Average Monthly Benefit Compensation, adjusted based on Credited Service as follows (maximum benefit of 80% of Average Monthly Benefit Compensation):

Credited Service	Benefit Adjustment
15 years, but less than 20	Reduced 4% per year less than 20
20 years, but less than 25	Plus 2% per year between 20 and 25
25+ years	Plus 2.5% per year above 20

Tier 2:
Benefit multiplier (below) times Average Monthly Benefit Compensation times Credited Service (maximum benefit of 80% of Average Monthly Benefit Compensation):

Credited Service	Benefit Multiplier
15 years, but less than 17	1.50%
17 years, but less than 19	1.75%
19 years, but less than 22	2.00%
22 years, but less than 25	2.25%
25+ years	2.50%

Tier 3:
Benefit multiplier (below) times Average Monthly Benefit Compensation times Credited Service (maximum benefit of 80% of Average Monthly Benefit Compensation):

Credited Service	Benefit Multiplier
15 years, but less than 17	1.50%
17 years, but less than 19	1.75%
19 years, but less than 22	2.00%
22 years, but less than 25	2.25%
25+ years	2.50%

Form of Benefit	For married retirees, an annuity payable for the life of the member with 80% continuing to the eligible spouse upon death. For unmarried retirees, the normal form is a single life annuity.
Early Retirement	***Only applicable to Tier 3 members:***
Date	Attainment of age 52.5 and 15 years of Credited Service.
Benefit	Actuarial equivalent of Normal Retirement benefit.
Disability Benefit – Accidental (duty-related)	
Eligibility	Total and permanent disability incurred in performance of duty.
Benefit Amount	A maximum of: a.) 50% of Average Monthly Benefit Compensation, and; b.) The monthly Normal Retirement pension that the member is entitled to receive if he or she retired immediately.
Disability Benefit – Ordinary (not duty-related)	
Eligibility	Total and permanent disability not incurred in performance of duty.
Benefit Amount	Normal Retirement pension that the member is entitled to receive, prorated based on Credited Service earned over the required Credited Service for Normal Retirement (maximum ratio of 1).
Disability Benefit – Other	
Temporary	Benefit equals 1/12 of 50% of compensation during year preceding date of disability. Payments terminate after 12 months.
Catastrophic	Benefit equals 90% of Average Monthly Benefit Compensation. After 60 months member receives greater of 62.5% Average Monthly Benefit Compensation and accrued normal pension.
Pre-Retirement Death Benefit	*Payable following death of active member*
Service Incurred	100% of Average Monthly Benefit Compensation, reduced by child's pension.
Non-Service Incurred	80% of benefit based on calculation for accidental disability retirement.
Child's Pension	10% of pension for each child (maximum 20% paid) based on calculation for accidental disability retirement. Payable to dependent child under age 18 (23 if full-time student).

Guardian's Pension	Same as spouse's pension. Payable (along with child's pension) when no spouse is being paid and there is at least one child under 18 (23, if full-time student).
Accumulated Contributions	Any contributions remaining upon the death of the last beneficiary shall be paid as a lump sum.

Vesting (Termination)

Vesting Service Requirement

***Tier 1*:**
10 years of Credited Service.
Tiers 2 & 3:
15 years of Credited Service.

Non-Vested Benefit

***Tier 1*:**
Lump sum payment of accumulated contributions, plus additional amount based on years of Credited Service.

Service	Additional % of Contributions
Less than 5 years	0%
5 years	25%
6 years	40%
7 years	55%
8 years	70%
9 years	85%
10+ years	100%

Tiers 2 & 3:
Lump sum payment of accumulated contributions, with interest at rate determined by the Board.

Vested Benefit

***Tier 1*:**
Deferred retirement annuity based on two times member's accumulated contributions, deferred to age 62. Member is not entitled to survivor benefits, benefit increases, or group health insurance subsidy.

Tiers 2 & 3:
Calculated same as normal retirement pension. Payable if contributions left in fund until reach age requirement. Member is entitled to survivor benefits, benefit increases, and group health insurance subsidy.

Cost-of-Living Adjustment

Payable to retired member or survivor of retired member

Tiers 1 & 2:

Compound cost-of-living adjustment on base benefit. First payment is made on July 1, 2018, with annual adjustments effective every July 1 thereafter. Adjustment does not apply while in DROP.

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. Maximum increase of 2%.

Tier 3:

Compound cost-of-living adjustment on base benefit beginning earlier of first calendar year after the 7th anniversary of retirement or when the retired member reaches 60 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%.

Deferred Retirement Option Plan (DROP):

Eligibility: Tier 1 and 20 years of Credited Service.

DROP Period: Maximum 84 months.

Member Contributions: Cease upon DROP entry.

Benefit Amount: Calculated based on Credited Service and average monthly compensation as of the beginning of the DROP period, credited to DROP participation account for DROP period.

Interest on DROP Participation Account	Beginning Year	Interest Rate
	July 1, 2016	7.40%
	July 1, 2018	7.30%
	July 1, 2022	7.20%

Payment of DROP Participation Account: Payable as lump sum distribution to Public Safety Personnel Defined Contribution Retirement Plan at earlier of 1) end of DROP period, 2) at termination, or 3) five years.

Payment Monthly Benefit: System commences payment of benefit amount at the earlier of 1) the end of the DROP period and 2) at termination.

Post-Retirement Health Insurance Subsidy

Eligibility: Retired member or survivor who elect health coverage provided by the state or participating employer.

Maximum Subsidy Amounts (monthly)

	Member Only	With Dependents
Medicare Eligible	$100	$170
One w/ Medicare	N/A	$215
Not Medicare Eligible	$150	$260

Employee Contributions

Tiers 1 & 2:
7.65% (effective July 1, 2023).

Tier 3:
50% of total contribution, which is Normal Cost plus a level-dollar amortization of unfunded actuarial accrued liability over a closed period not to exceed 10 years.

Employer Contributions

Tiers 1 & 2:
Normal Cost plus amortization of unfunded actuarial accrued liability over a closed period not to exceed 20 years (subject to one-time election to extend to closed period not to exceed 30 years).

Tier 3:
50% of total contribution, which is Normal Cost plus a level-dollar amortization of unfunded actuarial accrued liability over a closed period not to exceed 10 years.

Changes to Benefit Provisions Since the Prior Valuation

None.

IX. ACTUARIAL FUNDING POLICY

A pension plan funding policy describes how pension funding will improve for underfunded plans or maintain funded benefits for funded plans over time for those benefits defined in Arizona Revised Statutes (ARS). Those benefits defined in ARS are to be equitably managed and administered by the Arizona Public Safety Personnel Retirement System (PSPRS agency).

This Actuarial Funding Policy identifies the funding objectives and elements of the actuarial funding policy set by the Board for the PSPRS agency. The Board adopted this Funding Policy to help ensure the systematic funding of future benefit payments for members of the retirement systems as established by the legislature.

This policy covers all retirements systems administered by the Board: The Public Safety Personnel Retirement System (PSPRS); the Correction Officers Retirement Plan (CORP); and the Elected Officials Retirement Plan (EORP).

To achieve the systematic funding of future benefits, metrics are identified to measure the progress, or the lack of progress, over time to identify trends. These trends inform the continuation of the current policies or identify areas of needed research for consideration.

This funding policy is reviewed annually and adopted by the Board in accordance with ARS 38-863.02. This policy was reviewed and adopted by the Board in September 2024.

PSPRS Statement of Purpose

The Purpose of the Public Safety Personnel Retirement System is to provide uniform, consistent, and equitable statewide retirement programs for those who have been entrusted to our care.

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.
    a. Corollary 1a: Current and future contributions should be calculated based upon assumptions that reflect the Board's best estimate of future experience and methods that appropriately allocate costs to address generational equity.
    b. Corollary 1b: While the shorter-term objective is to fully fund the Actuarial Accrued Liability (AAL) that estimates benefits earned as of the valuation date, contributions should target the long-term Present Value of Benefits (PVB) to fund all benefits and help offset risks.
    c. As closed plans mature, the target funding should be 110% of AAL or 100% of PVB, whichever is greater.

2. Maintain public policy goals of accountability and transparency through stakeholder communication and education. Each policy element is clear in intent and effect, and each should be considered in a balanced approach to determine how and when the funding requirements of the plan will be met.
    a. Corollary 2a: Board shall provide stakeholders with separate reports and tools to help explain current results as well as to help model future funding requirements.

3. Promote intergenerational equity. Defined benefit pensions are designed with a long-term perspective and designed to minimize contribution volatility that cannot avoid some level of generational cost shift. However, the goal is that each generation of members and employers (taxpayers) should, to the extent possible, incur the cost of benefits for the employees who provide services to them, rather than shifting those costs to other generations of members and employers (taxpayers).
    a. Corollary 3a: A systematic reduction of the Unfunded Actuarial Accrued Liability (UAAL) over a reasonable time period is paramount to achieving this objective.

Consideration can be given to reduce volatility, to the extent possible, of employer and employee contribution rates as long as the integrity of the objectives listed above is not compromised.

Elements of Actuarial Funding Policy

1. Actuarial Cost Method
    a. The Entry Age Normal level percent of pay actuarial cost method of valuation shall be used in determining the 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 the actual investment return and assumed investment return, shall be recognized annually in level amounts over five years (Tier 3) or seven years (Tiers 1 and 2) in calculating the Actuarial Value of Assets (AVA).
    b. The AVA so determined shall be subject to a 20% corridor relative to the Market Value of Assets (MVA).

3. Amortization Method (Unfunded Amounts)
    a. The AVA is subtracted from the computed AAL. Any unfunded amount is amortized as a level percent of payroll over a closed period.
    b. The unfunded liabilities, for EORP and Tiers 1 & 2 for both PSPRS and CORP, determined in the 6/30/2019 actuarial valuation will become the initial layer for each employer beginning with the 6/30/2020 actuarial valuation and amortized using the current closed year period for that employer and continue to decrease each year.
        i. The payroll growth rate assumption used to amortize the PSPRS 6/30/2019 Unfunded Liability will be decreased by 0.5% beginning with the 6/30/2021 actuarial valuation and again each year with the intention of ultimately achieving 0.0%.
        ii. The payroll growth rate used to amortize the Correction Officers Retirement Plan (CORP) 6/30/2019 Unfunded Liability will be 3.0% beginning with the 6/30/2020 actuarial valuation, and future years will be reduced by 0.5% until 0.0% is reached.
        iii. The payroll growth rate used to amortize the Elected Officials Retirement Plan (EORP) 6/30/2019 Unfunded Liability will be 2.5% beginning with the 6/30/2020 actuarial valuation, and future years will be reduced by 0.5% until 0.0% is reached.
    c. Gains and losses, for EORP and Tiers 1 & 2 for both PSPRS and CORP, for each employer beginning with the 6/30/2020 actuarial valuation will be amortized as a new layer over the same amortization period as the regular unfunded liability to a minimum of 15 years. Once the

amortization period for each employer decreases to 15 years, each subsequent year's gains and losses will be amortized as a new 15-year closed layer.

i. The payroll growth rate used to amortize the unfunded liability for all Plans under this paragraph will be 0.0% (i.e. level-dollar amortization).

d. Tier 3 amortization methods are established in ARS 38-843.G and ARS 38-891.K.

4. Amortization Method (Overfunded Amounts)
   a. The AVA is subtracted from the target funding level (greater of 110% of AAL or 100% of PVB). Any overfunded amount is amortized as a level dollar amount over an open 10-year period.

5. Tier 3 Rate Calculation
   a. Tier 3 is distinct from Tiers 1 & 2 in PSPRS and CORP as the contributions are a shared percentage (50/50 split for PSPRS: for CORP, employer 1/3 and member 2/3 of the normal cost plus 50 percent each, member and employer, of the UAAL amortization) for employers and members based on the actuarially calculated rate. To reduce the impact of volatility to rates, the Tier 3 rates will be smoothed over a 3-year rolling period based on the actuarially calculated rates for each year's actuarial valuation.
      i. Beginning with the 6/30/2023 valuation, the prospective Tier 3 rates set by the Board of Trustees are planned to be a rolling average of the actuarial calculated Tier 3 rates using the 6/30/2023, 6/30/2022 and 6/30/2021 rates in the initial process.
      ii. As assumptions may be updated year-to-year, the prior calculated rates are not updated for those changes, the prior calculated rates are used to smooth in the new rates.
   b. At the May 2023 Board Meeting, the Board changed the assumed rate of return for CORP Tier 3, which was at 7.2%, to match the 7.0% assumed rate of return for PSPRS Tier 3. The Board committed to continue to monitor market conditions and directions with the intent to ultimately adopt a single assumed rate of return for all investments for retirement systems/plans administered by PSPRS agency.

6. Assumed Rate of Return (ARR)
   a. At the May 2023 Board Meeting, the Board changed the assumed rate of return for CORP Tier 3, which was at 7.2%, to match the 7.0% assumed rate of return for PSPRS Tier 3. The Board will continue to monitor market conditions and directions with the intent to ultimately adopt a single assumed rate of return for all investments for retirement systems/plans administered by PSPRS agency.

7. EORP Floor Considerations
   a. Establish a "floor" for EORP based on the immediately previous valuation by adjusting payroll growth, amortization periods of the original layer or other possible options, to improve funding in maintaining contribution levels opposed to reducing employer contributions.

Metrics to Monitor Funding Objectives

1. Appropriateness of Assumptions – Gain/Loss Experience (Corollary 1a)
   a. Metric: Do the cumulative gain/loss layers over the prior five years exceed 8% of plan assets?
   b. Measurement: History of annual gain/loss (split by asset and liability experience) and five-year cumulative results will be tracked.
   c. Action Plan: This metric assumes that a full experience study is performed at least every five years so objective of measurement is to monitor interim experience. If the metric answer is yes, a review of the sources or causes of gains and losses should be analyzed and presented to the Advisory Committee to provide a recommendation to the Board of Trustees. The analysis and presentation are intended to provide a basis for consideration if assumption changes are warranted between full experience studies.

2. Funding Targets (Corollary 1b)
   a. Metric: Has the funded status, on both an AAL and PVB basis when compared to the MVA, increased over a five-year period?
   b. Measurement: History of funded status measures will be tracked.
   c. Action Plan: If the answer is no and not readily explainable (e.g., significant assumption change), a review of the reason(s) for the decrease should be researched and presented to the Advisory Committee to provide a recommendation to the Board of Trustees. The analysis and presentation are intended to provide a basis for consideration if changes to assumptions and/or methods are warranted between full experience studies.

3. Communication with Stakeholders (Corollary 2a)
   a. Metric: Have reports and budgeting tools been provided to stakeholders in a timely fashion?
   b. Measurement: Yes/No answer based on input from PSPRS administrator. (An annual standard survey of stakeholders – 3 to 5 questions.)
   c. Action Plan: If the answer is no, and periodically regardless (e.g., every three years), PSPRS staff will revisit this metric to report to the Advisory Committee to provide a recommendation to the Board of Trustees if current reports / tools are sufficient and if the delivery timing is appropriate.

4. Timely Recognition of Costs (Corollary 3a)
   a. Metric: Has the percentage of unfunded liability subject to negative amortization decreased over a five-year lookback period?
   b. Measurement: History of unfunded liability subject to negative amortization as a percentage of total unfunded liability will be tracked.
   c. Action Plan: If the answer is no, and not readily explainable (e.g., adopted assumption changes being phased in are anticipated to address negative amortization), a review of the reason(s) for negative amortization should be researched and presented to the Advisory Committee to provide a recommendation to the Board of Trustees. The analysis and presentation are intended to provide a basis for consideration if changes to assumptions and/or methods are warranted between full experience studies.

X. GLOSSARY

Actuarial Accrued Liability – Computed differently under different funding methods, the actuarial accrued liability generally represents the portion of the actuarial present value of benefits attributable to service credit earned (or accrued) as of the valuation date.

Actuarial Present Value of Benefits – Amount which, together with future interest, is expected to be sufficient to pay all benefits to be paid in the future, regardless of when earned, as determined by the application of a particular set of actuarial assumptions; equivalent to the actuarial accrued liability plus the present value of future normal costs attributable to the members.

Actuarial Assumptions – Assumptions as to the occurrence of future events affecting pension costs. These assumptions include rates of investment earnings, changes in salary, rates of mortality, withdrawal, disablement, and retirement as well as statistics related to marriage and family composition.

Actuarial Cost Method – A method of determining the portion of the cost of a pension plan to be allocated to each year; sometimes referred to as the "actuarial funding method." Each cost method allocates a certain portion of the actuarial present value of benefits between the actuarial accrued liability and future normal costs.

Actuarial Equivalence – Series of payments with equal actuarial present values on a given date when valued using the same set of actuarial assumptions.

Actuarial Present Value - The amount of funds required as of a specified date to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payments between the specified date and the expected date of payment.

Actuarial Value of Assets – The value of cash, investments, and other property belonging to the pension plan as used by the actuary for the purpose of the actuarial valuation. This may correspond to market value of assets, or some modification using an asset valuation method to reduce the volatility of asset values.

Asset Gain (Loss) – That portion of the actuarial gain attributable to investment performance above (below) the expected rate of return in the actuarial assumptions.

Amortization – Paying off an interest-discounted amount with periodic payments of interest and (generally) principal, as opposed to paying off with a lump sum payment.

Amortization Payment – That portion of the pension plan contribution designated to pay interest and reduce the outstanding principal balance of unfunded actuarial accrued liability. If the amortization payment is less than the accrued interest on the unfunded actuarial accrued liability the outstanding principal balance will increase.

Assumed Earnings Rate – The interest rate used in developing present values to reflect the time value of money.

Decrements – Events which result in the termination of membership in the system such as retirement, disability, withdrawal, or death.

Entry Age Normal (EAN) Funding Method – A standard actuarial funding method whereby each member's normal costs (service costs) are generally level as a percentage of pay from entry age until retirement. The annual cost of benefits is comprised of the normal cost plus an amortization payment to reduce the UAL.

Experience Gain (Loss) – The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities during the period between two valuation dates. It is a measurement of the difference between actual and expected experience, and may be related to investment earnings above (or below) those expected or changes in the liability due to fewer (or greater) than expected numbers of retirements, deaths, disabilities, or withdrawals, or variances in pay increases relative to assumed pay increases. The effect of such gains (or losses) is to decrease (or increase) future costs.

Funded Ratio – A measure of the ratio of the actuarial value of assets to liabilities of the system. Typically, the assets used in the measure are the actuarial value of assets as determined by the asset valuation method. The funded ratio depends not only on the financial strength of the plan but also on the asset valuation method used to determine the assets and on the funding method used to determine the liabilities.

Market Value of Assets (MVA) – The value of assets as they would trade on an open market.

Normal Cost – Computed differently under different funding methods, generally that portion of the actuarial present value of benefits allocated to the current plan year.

Unfunded Actuarial Accrued Liability (UAAL) – The excess of the actuarial accrued liability over the valuation assets; sometimes referred to as "unfunded past service liability". UAAL increases each time an actuarial loss occurs and when new benefits are added without being fully funded initially and decreases when actuarial gains occur.