

City of Ann Arbor Employees' Retirement System

June 30, 2015 Actuarial Valuation
of Pension Benefits

November 2015





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Board of Trustees
City of Ann Arbor Employees' Retirement System
Ann Arbor, Michigan

Certification of Actuarial Valuation

Ladies and Gentlemen:

This report summarizes the actuarial valuation results of City of Ann Arbor Employees' Retirement System as of June 30, 2015 performed by Buck Consultants, LLC.

The actuarial valuation is based on unaudited financial and member data provided by the Executive Director and staff of the Retirement System and summarized in this report. The benefits considered are those delineated in the plan as amended and restated effective June 30, 2015. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Buck Consultants, LLC is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of the Plan.

The City of Ann Arbor Employees' Retirement System is funded by Employer and Member Contributions in accordance with the funding policy adopted by the Retirement Board. The funding objective for the City of Ann Arbor Employees' Retirement System is to pay required contributions that remain level as a percent of Member Compensation. The Retirement Board has also established a funding policy, which is the Minimum Required Policy, objective that the required contributions be sufficient to pay the Normal Costs of active plan members, Plan expenses, and amortize the Unfunded Actuarial Accrued Liability as a level percent of Member Compensation over a declining period. As of this valuation, the period is 25 years. This period will continue to be 25 years. The rolling 25-year aspect of the funding policy is similar to annually refinancing your home over a 25-year period – your home is never paid off. The same is true of a Retirement System that uses a rolling amortization policy. That being said, Section 1.3 of the City of Ann Arbor General Pension Policy allows for more than the Minimum Required policy as follows:

“The City of Ann Arbor will strive to achieve 100% funding of the City of Ann Arbor Employees' Retirement Plan. To the extent that 100% funding has been achieved, the City will continue to fund at a minimum the Normal Cost as defined by an outside actuary. To the extent that 100% funding had not been achieved, the City shall budget each fiscal year the higher of the ADC or the existing level of funding in the current budget year adjusted annually for the change in general fund budgeted revenues. In some years this may result in an excess contribution to the Pension Fund, which will serve to pay down the unfunded actuarial accrued liability and reduce future city cost increases.”

We refer to this as the “Funding Plan” contribution in this report. In this report we projected the impact of the Funding Plan contribution by assuming 2% revenue growth. Under the Funding Plan policy, we project a funded ratio of 100% is projected to be achieved by 2027. This date will vary from valuation to valuation.

The continuation of the normal cost contribution and the potential for excess contributions do improve the funding policy. We will continue to monitor the policy with the Board.

The funding objective is currently being met and is projected to continue to be met in the future. In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the Plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the Plan. The actuary performs an analysis of Plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience.

As required under the ordinance Chapter 18, 1:558, this valuation was prepared on the basis of the interest, salary and demographic assumptions that were determined from the Experience Study for the period July 1, 2008 to June 30, 2013 prepared by Buck Consultants and approved by the Board for use beginning with the June 30, 2013 actuarial valuation. These assumptions will remain in effect for valuation purposes until such time as the Board adopts revised assumptions, which is scheduled to be performed before the June 30, 2018 valuation.

Actuarial Standards of Practice now require that the likelihood and extent of future mortality improvements be considered. We have reflected future mortality improvement in this valuation. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Section 6.

The assumptions and methods used to determine the Actuarially Determined Contributions (ADC) of the City of Ann Arbor Employees' Retirement System as outlined in this report and all supporting schedules meet the parameters and requirements for disclosure of Governmental Accounting Standards Board (GASB) Statement No. 67, financial Reporting for Pension Plans. Based on member data and asset information provided by the Executive Director and staff of the Retirement System, we have prepared the Schedule of Funding Progress that is included in the Financial Section of the Comprehensive Annual Financial Report.

Use of this report for any other purpose may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. No one may make any representations or warranties based on any statements or conclusions contained in this report without the written consent of Buck.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. Because of limited scope, Buck performed no analysis of the potential range of such future differences.

The undersigned are Enrolled Actuaries, an Associate of the Society of Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all Applicable Actuarial Standards of Practice. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,

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Summary of Results

Overview

The City of Ann Arbor Employees' Retirement System provides pension and ancillary benefit payments to the terminated and retired employees of the City of Ann Arbor, Michigan. A Retirement Board comprised of employer, employee, and appointed representatives is responsible for administering the Plan and making investment decisions. This report presents the results of the actuarial valuation of the Plan benefits as of the valuation date of June 30, 2015.

Purpose

An actuarial valuation is performed on the retirement plan annually as of the beginning of the fiscal year. The main purposes of the actuarial valuation detailed in this report are:

1. To determine if the Board's funding policy for the Retirement Plan is being met considering current assets and the current employer and member contribution rates; or determine the employer contribution necessary to meet the Board's funding policy for the Plan;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To disclose the accounting measures for the Plan required by GASB No. 67;
4. To review the current funded status of the Plan;
5. To compare actual and expected experience under the Plan during the last fiscal year;
6. And to report trends in contributions, assets, liabilities, and funded status over the last several years.

This actuarial valuation provides a "snapshot" of the funded position of the Retirement Plan based on the plan provisions, membership, assets, and actuarial assumptions as of the valuation date. Actuarial projections are also performed to provide a long-term view of the expected future funding status and contribution patterns.

Membership

Actives: As of June 30, 2015, there were 688 employees in active service covered under the provisions of the Plan. The significant age, service, salary and accumulated contribution information for these employees is summarized below, along with comparative figures from the last actuarial valuation one year earlier.

	June 30, 2015	June 30, 2014
Number of active employees	688	675
Average age	45.3	45.5
Average years of service	12.3	12.3
Total annual valuation salary	\$48,759,189	\$47,956,745
Average annual salary	70,871	71,047
Total accumulated contributions	\$54,506,635	\$52,362,711
Average accumulated contributions	\$79,225	\$77,574

The number of active members increased by 1.9% from the previous valuation date. The average age of the active members decreased by 0.2 years, and the average service stayed the same. The total annual valuation salary increased by 1.7%. The average salary decreased by 0.2% from the previous valuation. There were 627 active members who were also reported active in the June 30, 2014 actuarial valuation. The total salary for this group increased by 2.4%, which was lower than the 4.9% increase we expected for the group.

Distributions of active members by age, service, and salary are given in Section 5.2. The salaries shown for active members are the actual annualized Year salaries reported.

A schedule of active member data and reconciliation of the active membership from the previous year is shown in Sections 5.3 and 5.4.

Inactives: In addition to the active members, there were 145 inactive vested members who did not elect to receive their accumulated contributions when they left covered employment. The significant age and annual benefit information for these inactive members are summarized below with comparative figures from the last actuarial valuation one year earlier.

	June 30, 2015	June 30, 2014
Number of inactive members	145	140
Average age	50.6	50.0
Average annual benefit payments	\$13,188	\$13,121

The number of inactive vested members increased by 3.6% from the previous valuation. The average age of the inactive vested members increased by 0.6 years. The Average Monthly Pension Benefit for these members increased by 0.5% from the previous valuation.

Distributions of inactive members by age and pension benefit are given in Section 5.9.

Retirees and Beneficiaries: In addition to the active and inactive members, there were 854 retired members and 142 beneficiaries who are receiving monthly benefit payments on the valuation date. The significant age and annual benefit information for these members are summarized below with comparative figures from the last actuarial valuation performed one year earlier.

	June 30, 2015	June 30, 2014
Number of members receiving payments		
➤ Retirees	854	842
➤ Beneficiaries	142	138
➤ Total	996	980
Average age	68.2	67.6
Annual benefit amounts		
➤ Retirees	\$29,154,447	\$28,785,918
➤ Beneficiaries	\$3,094,742	\$2,948,557
➤ Total	\$32,249,189	\$31,734,475
Average annual benefit payments	\$32,379	\$32,382

The number of retired members and beneficiaries increased by 1.6% from the previous valuation date. The average age of the retired members increased by 0.6 years. The total annual benefit payments for these members increased by 1.6% from the previous valuation date.

Distributions of retired members by age and form of payment are given in Section 5.6 through 5.9.

In our opinion, the membership data collected and prepared for use in this actuarial valuation meets the data quality standards required under Actuarial Standards of Practice No. 23.

Plan Assets

The Plan's assets are held in trust and invested for the exclusive benefit of plan members. The trust is funded by member and employer contributions, and pays benefits directly to eligible members in accordance with plan provisions. The assets are audited annually and are reported at fair value. On a fair value basis, the Plan has Net Assets Available for Benefits of \$472.4 million as of June 30, 2015. This includes an increase of \$2.7 million over the Net Assets Available for Benefits of \$469.7 million as of June 30, 2014. During the prior year, the fair value of assets experienced an investment rate of return of 4.22%.

In order to reduce the volatility investment gains and losses can have on the Plan's actuarially required contribution and funded status, the Board has adopted a five-year smoothing method to determine the actuarial value of assets used for funding purposes. This method recognizes gains and losses, i.e. the difference between actual investment return during the year and the expected return based on the valuation interest rate, on a level basis over a five year period. In our opinion, this method complies with Actuarial Standards of Practice No. 44.

As of June 30, 2015, the assets available for benefits on an actuarial value basis were \$459.5 million. This includes an increase of \$25.6 million over the actuarial value of assets of \$433.9 million as of June 30, 2014. During the prior year, the actuarial value of assets experienced an actuarial rate of return of 9.96%.

A summary of the assets held for investment, a summary of changes in assets, and the development of the actuarial value of assets is shown in Section 2.

Actuarial Experience

Differences between the expected experience based on the actuarial assumptions and the actual experience create changes in the actuarial accrued liability, actuarial value of assets, and the unfunded actuarial accrued liability from one year to the next. These changes create an actuarial gain if the experience is favorable and an actuarial loss if the experience is unfavorable. The Plan experienced a total net actuarial gain of \$14.7 million during the prior year. This net gain is about 2.8% of the plan's prior year actuarial accrued liability. The net gain is a combination of two principal factors, demographic experience and investment performance.

The demographic experience tracks actual changes in the plan's population compared to the assumptions for decrements such as mortality, turnover, and retirement, as well as pay increases. The Plan experienced a demographic gain of \$2.3 million during the year ending June 30, 2015. This gain decreased the unfunded actuarial accrued liability by \$2.3 million and increased the funded ratio by 0.5%.

Continued tracking of the demographic experience is warranted in order to confirm the appropriateness of the actuarial assumptions. Details of the demographic, economic, and other assumptions used to value the plan liabilities and normal cost can be found in Section 6. In our opinion, the economic assumptions comply with Actuarial Standards of Practice No. 27 and the demographic assumptions comply with Actuarial Standards of Practice No. 35.

On the asset side, the Plan experienced a gain on an actuarial value of assets basis. The actual rate of return on the actuarial value of plan assets for the year ending June 30, 2015 was approximately 9.96% compared to the assumption of 7.0%, resulting in an asset gain of \$12.4 million. This gain decreased the unfunded actuarial accrued liability by \$12.4 million and increased the funded ratio by 2.7%.

The rate of return on the fair value of assets for the year ending June 30, 2015 was lower than the assumed rate of 7.0%. The actuarial value of the assets recognizes only 20% of the 2015 loss on fair value, delaying the recognition of the remaining 80% over the next four years. Moreover, the actuarial value of assets also recognizes deferred portions of prior years' gains and losses on fair value. It should be noted that the plan's assumed asset return of 7.0% is a long-term rate and short-term performance is not necessarily indicative of expected long-term future returns.

A summary of the actuarial gains and losses experienced during the prior year is shown in Section 1.3.

Actuarial Contributions

The Board has adopted a Funding Policy that requires contributions to be sufficient to pay the normal cost and amortize the unfunded actuarial accrued liability over a declining period. As of this valuation, the period is 25 years. This period will continue to be 25 years for all future fiscal years.

The City contributed \$13,091,474 under the Funding Plan during year ended June 30, 2015, which was \$764,256 more than the \$12,327,218 contribution determined under the Minimum Required Policy (the amount developed in the June 30, 2013 actuarial valuation), increasing the funded ratio by about 0.2%.

The normal cost represents the cost of the benefits that accrue during the year for active members under the Entry Age Actuarial Cost Method. It is determined as a level percentage of pay which, if paid from entry age to the assumed retirement age, assuming all the actuarial assumptions are exactly met by experience, would accumulate to a fund sufficient to pay all benefits provided by the Plan. The expected member contributions are subtracted from this amount to determine the employer normal cost. The employer normal cost for 2017 has been determined to be \$6.8 million, or 12.98% of pay. This represents a decrease in the employer normal cost rate of 0.02% of pay from last year's employer normal cost rate of 13.00%.

The cost method also determines the actuarial accrued liability which represents the value of all accumulated past normal cost payments. This amount is compared to the actuarial value of assets to determine if the Plan is ahead or behind in funding as of the valuation date. The difference between the total actuarial accrued liability and the actuarial value of assets equals the amount of unfunded actuarial accrued liability or surplus (if negative) on the valuation date. This amount is amortized and added to the employer normal cost to determine the annual actuarially required employer contribution for the year.

The unfunded actuarial accrued liability as of June 30, 2015 is \$73.7 million. This represents a decrease of \$15.9 million in the unfunded actuarial accrued liability from last year's amount of \$89.6 million. The annual payment

required to amortize the unfunded actuarial accrued liability of \$73.7 million as of June 30, 2015 is \$4.6 million, or 8.75% of pay.

The annual actuarially required employer contribution for 2017 is \$11.3 million, or 21.7% of pay. This represents a decrease of \$0.9 million in the employer contribution amount of \$12.2 million for 2016, or a decrease of 2.1% of pay from last year's employer contribution rate of 23.8%.

The actuarial liabilities and development of the annual actuarial employer contribution is shown in Sections 1.1 and 1.2.

In our opinion, the measurement of the benefit obligations and determination of the actuarial cost of the Plan is performed in compliance with Actuarial Standards of Practice No. 4.

Funded Status

The funded status is a measure of the progress that has been made in funding the plan as of the valuation date. It is determined as a ratio of the actuarial value of assets divided by the total actuarial accrued liability on the valuation date. A ratio of over 100% represents a plan that is ahead in funding, and a ratio of less than 100% represents a plan that is behind in funding on the valuation date.

As of June 30, 2015 the funded ratio of the Plan is 86.2%. This represents an increase of 3.3% from last year's funded ratio of 82.9% as of June 30, 2014. The funded ratio is not intended to measure the adequacy of funding in any analysis of a possible settlement of plan liabilities, nor is it intended to assess the need for or the amount of future contributions. Additionally, the measurement of a Funded Ratio using the Market Value of Assets would not be materially different.

A history of the unfunded actuarial accrued liability and the funded ratio is shown in Section 1.6.

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
June 30, 2006	398,258	407,302	9,044	97.78%	49,627	18.22%
June 30, 2007	413,712	413,490	(222)	100.05%	50,678	-
June 30, 2008 @*	428,689	430,438	1,749	99.59%	51,287	3.41%
June 30, 2009 *^	426,283	455,219	28,936	93.64%	50,120	57.73%
June 30, 2010 *	421,387	466,883	45,496	90.26%	48,688	93.44%
June 30, 2011	423,734	481,330	57,596	88.03%	45,921	125.42%
June 30, 2012 @*	410,709	496,770	86,061	82.68%	44,004	195.58%
June 30, 2013 @	407,170	507,436	100,266	80.24%	45,063	222.50%
June 30, 2014	433,854	523,461	89,607	82.88%	47,957	186.85%
June 30, 2015	459,480	533,198	73,718	86.17%	48,759	151.19%

*The Retirement System provisions were amended.

^ Amortization period was changed from 15 to 30. Covered payroll adjusted for elimination of 18 Police positions and other 14 positions

@ Reflects a change in valuation assumptions.

Accounting Information

The Governmental Accounting Standards Board (GASB) issues statements which establish financial reporting standards for defined benefit pension plans and accounting for the pension expenditures and expenses for governmental employers. The required financial reporting information for the Plan under GASB No. 67 can be found in Section 3.

Projections

During the year ended June 30, 2015, greater investment returns and lower salaries resulted in a lower Minimum Required Policy employer contribution and higher funded ratio when compared to the projections based on the June 30, 2014 census and valuation assumptions. Based on projection from June 30, 2014 valuation, we expected contribution for 2017 to be \$11,460,000. Actual contribution based on this valuation is \$ 11,349,000. We expected funded ratio for 2015 is 86.00%. Actual funded ratio based on this valuation is 86.17%.

As part of the annual actuarial valuation, a forecast of expected future valuation results is performed over a 30 year period beginning on the valuation date. This analysis provides a dynamic look into the future to identify trends in future employer contributions and funded status. The forecast replaces active members who are assumed to decrement (terminate, retire, etc.) during the period with new employees resulting in a stable active membership. The forecast assumes all actuarial assumptions are exactly realized each year during the forecast period. A sensitivity analysis is also included to show the impact the investment return assumption can have on the future funding measures. The results of these forecasts can be found in Section 4.

Changes in Plan Provisions

There have been no changes in benefits or other plan provisions considered in this actuarial valuation since the last valuation performed as of June 30, 2014.

Changes in Actuarial Assumptions, Methods, or Procedures

There have been no changes in the actuarial assumptions, actuarial cost method, asset valuation method, or valuation procedures since the last actuarial valuation performed as of June 30, 2014.

Comparative Summary of Key Actuarial Valuation Results

	Actuarial Valuation as of	
	June 30, 2015	June 30, 2014
Summary of Member Data		
Number of Members Included in the Valuation		
▪ Active Members	688	675
▪ Inactive Members	145	140
▪ Retirees and beneficiaries	996	980
▪ Total	1,829	1,795
Annual Payroll		
▪ Average (actual)	70,871	71,047
Annual Benefit Payments		
▪ Inactive Members(Average)	13,188	13,121
▪ Retirees and beneficiaries (Average)	32,379	32,382
Summary of Assets		
Fair Value		
▪ <i>Rate of Return</i>	4.22%	14.23%
Actuarial Value		
▪ <i>Rate of Return</i>	9.96%	11.18%
Summary of Liabilities		
Total Actuarial Accrued Liability	533,198,267	523,461,370
Actuarial Value of Assets	459,480,142	433,854,394
Unfunded Actuarial Accrued Liability	73,718,125	89,606,976
Funded Ratio	86.17%	82.88%
Actuarial Employer Contribution Rate		
Employer Normal Cost Rate	12.98%	13.00%
Amortization of Unfunded Actuarial Accrued Liability (Surplus) Rate	8.75%	10.81%
Employer Actuarial Contribution Rate	21.73%	23.81%
Employee Contribution Rate	6.00%	6.00%
Total Actuarial Contribution Rate	27.73%	29.81%
Actual/Statutory Contribution Rate	27.73%	29.81%
Funding Period (years)	25	25

Section 1: Actuarial Funding Results

Section 1.1 - Actuarial Liabilities and Normal Cost

Actuarial Liabilities	General Members	Police Members	Fire Members	Totals
1. Present Value of Projected Benefits				
Active Members				
• Retirement Benefits	113,714,492	63,732,822	42,120,390	219,567,704
• Withdrawal Benefits	8,846,199	425,303	442,284	9,713,786
• Disability Benefits	4,033,309	1,712,925	371,052	6,117,286
• Death Benefits	940,852	197,518	266,797	1,405,167
Total	127,534,852	66,068,568	43,200,523	236,803,943
2. Inactive Members with Deferred Benefits	10,028,542	1,163,832	391,107	11,583,481
3. Retired Members and Beneficiaries Receiving Benefits	183,995,850	98,293,415	67,441,002	349,730,267
4. Total Present Value of Projected Benefits (1. + 2. + 3.)	321,559,244	165,525,815	111,032,632	598,117,691
5. Present Value of Future Normal Costs	40,633,237	14,264,243	10,021,944	64,919,424
6. Total Actuarial Accrued Liability (4. - 5.)	280,926,007	151,261,572	101,010,688	533,198,267

Normal Cost 2017	General Members	Police Members	Fire Members	Totals
1. Active Members				
a. Retirement Benefits	14.19%	19.64%	20.57%	
b. Withdrawal Benefits	2.51%	0.67%	0.70%	
c. Disability Benefits	0.80%	0.90%	0.29%	
d. Death Benefits	0.13%	0.06%	0.14%	
2. Total Normal Cost (As a % of pay*)	17.63%	21.27%	21.70%	18.98%
3. Expected Member Contribution(As a % of pay*)^	6.00%	6.00%	6.00%	6.00%
4. Expected Member Contribution(Dollar amount*)	2,024,619	670,862	438,370	3,133,851
5. Employer Normal Cost (As a % of pay*)	11.63%	15.27%	15.70%	12.98%
6. Employer Normal Cost (Dollar amount*)	3,924,386	1,707,345	1,147,067	6,778,798

*City's dollar contribution includes a payroll projection factor of 1.0712 to project active member payroll to the applicable fiscal year

^The plan changes contribution rates to 6% as of 6/30/2012

Section 1.2 - Actuarial Contributions

Fiscal Year Ending	June 30, 2017				June 30, 2016
Development of Employer Contribution	General	Police	Fire	Total	Total
Minimum Required Contribution					
1. Annual Payroll*	33,743,642	11,181,039	7,306,161	52,230,843	51,371,265
2. Total Actuarial Accrued Liability	280,926,007	151,261,572	101,010,688	533,198,267	523,461,370
3. Actuarial Value of Assets**	242,086,161	130,348,677	87,045,304	459,480,142	433,854,394
4. Unfunded Actuarial Accrued Liability (UAAL) (2.- 3.)	38,839,846	20,912,895	13,965,384	73,718,125	89,606,976
5. Funded Ratio (3. / 2.)	86.17%	86.17%	86.17%	86.17%	82.88%
7. UAAL as a Percent of Annual Payroll (4. / 1.)	115.10%	187.04%	191.15%	141.14%	174.43%
8. Amortization Payment for UAAL***					
a. Amount	2,407,823	1,296,466	865,765	4,570,055	5,555,062
b. As a % of pay	7.14%	11.60%	11.85%	8.75%	10.81%
9. Employer Normal Cost					
a. Amount	3,924,386	1,707,345	1,147,067	6,778,798	6,677,670
b. As a % of pay	11.63%	15.27%	15.70%	12.98%	13.00%
10. Actuarial Employer Contribution					
a. Amount	6,332,209	3,003,811	2,012,832	11,348,853	12,232,732
b. As a % of pay	18.77%	26.87%	27.55%	21.73%	23.81%
11. Funding Period (years)	25	25	25	25	25
Funding Plan					
12. Contribution during year ended on valuation date				13,091,474	13,091,474
13. Assumed revenue increase				2%	2%
14. Estimated Funding Plan Contribution				13,620,370	13,353,303
Estimated City Contribution					
15. Estimated City Contribution (Greater of 10 and 14)				13,620,370	13,353,303

*Includes a payroll projection factor of 1.0712 to project active member payroll to the applicable fiscal year

** Actuarial Value of Assets for the three employee groups are allocated proportional to Actuarial Accrued Liability

*** At the October 15, 2009 Board meeting, the Board adopted a 30-year amortization for the fiscal year ending June 30, 2011 contribution.

This period is scheduled to decline by one year each year until fiscal year ending June 30, 2015 and thereafter when a 25-year amortization period is used. Actual FYE 2017 contribution will likely be higher than ADC since the minimum increase in contributions is the increase in City revenues

Section 1.3 - Actuarial (Gain) / Loss

(\$'s in 000's)

Development of Actuarial (Gain) / Loss	Amount
1. Expected Actuarial Accrued Liability	
a. Actuarial Accrued Liability at June 30, 2014	523,461
b. Normal Cost at June 30, 2014	8,644
c. Interest on a. + b. to End of Year	37,247
d. Benefit Payments and Refund of Contributions for June 30, 2014, with Interest to End of Year	33,811
e. Expected Actuarial Accrued Liability Before Changes (a. + b. + c. - d.)	535,541
f. Change in Actuarial Accrued Liability at June 30, 2015, Due to Change in Actuarial Assumptions (Experience Study)	0
g. Change in Actuarial Accrued Liability at June 30, 2015, Due to Change in Plan Provisions	0
h. Expected Actuarial Accrued Liability at June 30, 2015 (e. + f. + g.)	535,541
2. Actuarial Accrued Liability at June 30, 2015	533,198
3. Liability (Gain) / Loss (2. - 1.h.)	(2,343)
4. Expected Actuarial Value of Assets	
a. Actuarial Value of Assets at June 30, 2014	433,854
b. Interest on a. to End of Year	30,370
c. Contributions Made for June 30, 2014	16,105
d. Interest on c. to End of Year	564
e. Benefit Payments and Refund of Contributions for June 30, 2014, with Interest to End of Year	33,811
f. Change in Actuarial Value of Assets at June 30, 2015 due to Change in Method	0
g. Expected Actuarial Value of Assets at June 30, 2015 (a. + b. + c. + d. - e. - f.)	447,082
5. Actuarial Value of Assets as of June 30, 2015	459,480
6. Actuarial Asset (Gain) / Loss (4.g. - 5.)	(12,398)
7. Actuarial (Gain) / Loss (3. + 6.)	(14,741)

Section 1.4 - Analysis of Financial Experience

Analysis of Actuarial (Gains) and Losses

Resulting From Differences Between Assumed Experience and Actual Experience

(\$'s in 000's)

Type of (Gain) or Loss	As a % of	
	Year End June 30, 2015	Last Year's AAL
(1) COLA Experience	0	0.00%
(2) Salary Experience	(4,925)	-0.94%
(3) Investment Experience	(12,398)	-2.37%
(4) Retiree Mortality Experience	776	0.15%
(5) Contribution Shortfall	0	0.00%
(6) (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	(16,547)	-3.16%
(7) Asset Valuation Method	0	0.00%
(8) New Entrants	244	0.05%
(9) Return to work	170	0.03%
(10) Benefit Changes	611	0.12%
(11) Turnover	(642)	-0.12%
(12) Retirement	526	0.10%
(13) Deaths among actives	161	0.03%
(14) Disability retirements	9	0.00%
(15) Other	727	0.14%
(16) Total (Gain) or Loss During Year, (6) + (7) + (8) + (9) + (10)+ (11)+ (12) + (13)+ (14)+ (15)	(14,741)	-2.81%

Section 1.5 - Actuarial Balance Sheet

Financial Resources	June 30, 2015
1. Actuarial Value of Assets	459,480,142
2. Present Value of Future Contributions	
(a) Expected Member contributions	20,524,060
(b) Employer Normal Cost	44,395,364
(c) State Appropriations	0
(d) Total	64,919,424
3. Unfunded Actuarial Accrued Liability/(Reserve)	73,718,125
4. Total Assets [1 + 2(d) + 3]	598,117,691

Benefit Obligations	June 30, 2015
1. Present Value of Future Benefits	
(a) Active members	236,803,943
(b) Inactive members	11,583,481
(c) Retirees, disabilities and beneficiaries	349,730,267
(d) Total	598,117,691

Section 1.6 - History of UAAL and Funded Ratio

(\$'s in 000's)

Valuation Date	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Funded Ratio (AVA as a % of AAL)	Unfunded Actuarial Accrued Liability (UAAL)
June 30, 2006	407,302	398,258	97.78%	9,044
June 30, 2007	413,490	413,712	100.05%	(222)
June 30, 2008 @*	430,438	428,689	99.59%	1,749
June 30, 2009 ^*	455,219	426,283	93.64%	28,936
June 30, 2010 *	466,883	421,387	90.26%	45,496
June 30, 2011	481,330	423,734	88.03%	57,596
June 30, 2012 @*	496,770	410,709	82.68%	86,061
June 30, 2013 @	507,436	407,170	80.24%	100,266
June 30, 2014	523,461	433,854	82.88%	89,607
June 30, 2015	533,198	459,480	86.17%	73,718

@ Reflects a change in valuation assumptions.

*The Retirement System provisions were amended.

^ Amortization period was changed from 15 to 30.

Section 1.7 - Solvency Test

Valuation Date	Aggregate Accrued Liability For:			Valuation Assets (000's)	Portion of Accrued Liabilities Covered by Assets		
	(1) Active Member Contributions (000's)	(2) Inactive Members (000's)	(3) Active Members (Employer-Financed Portion) (000's)		(1)	(2)	(3)
June 30, 2006	2,952			398,258			
June 30, 2007	2,653			413,712			
June 30, 2008	2,726			428,689			
June 30, 2009	2,815	276,709	175,695	426,283	100.00%	100.00%	83.53%
June 30, 2010	3,148	306,296	157,439	421,387	100.00%	100.00%	71.10%
June 30, 2011	2,790	327,964	150,576	423,734	100.00%	100.00%	61.75%
June 30, 2012	2,797	348,249	145,724	410,709	100.00%	100.00%	40.94%
June 30, 2013	2,858	353,683	150,895	407,170	100.00%	100.00%	33.55%
June 30, 2014	2,948	356,397	164,116	433,854	100.00%	100.00%	45.40%
June 30, 2015	3,013	361,314	168,871	459,480	100.00%	100.00%	56.35%

Section 2: Plan Assets

Section 2.1 - Summary of Fair Value of Assets

Asset Category	Fair Value as of June 30, 2015		Fair Value as of June 30, 2014	
	Amount	%	Amount	%
1. Cash and Short-Term Investments				
a. Cash in Bank	0	0.00%	0	0.00%
b. Other short-term	7,146,277	1.50%	9,382,777	1.98%
c. Total	7,146,277	1.50%	9,382,777	1.98%
2. Investments at Fair Value				
a. U.S. Treasury Notes	0	0.00%	0	0.00%
b. Fixed Income	163,724,182	34.41%	157,793,902	33.38%
c. Domestic Stocks and Equity	253,068,948	53.19%	169,968,507	35.95%
d. International Equity	0	0.00%	81,362,713	17.21%
e. Real Estate	34,788,673	7.31%	32,697,904	6.92%
f. Hedge Funds	15,602,048	3.28%	21,176,761	4.48%
g. Total	467,183,851	98.19%	462,999,787	97.94%
3. Other Assets	1,469,866	0.31%	397,088	0.08%
4. Total Assets (1.c + 2.g + 3.)	475,799,994	100.00%	472,779,652	100.00%
5. Receivables				
a. Interest and Dividends	0		0	
b. Investments Sold	0		0	
c. Other Receivables	0		0	
d. Total	0		0	
6. Payables				
a. Payable for Investments Purchased	0		0	
b. Securities Lending Obligation in Excess of Collateral	0		0	
c. Accounts Payable and Accrued Liabilities	3,217,098		3,094,341	
d. Prior year adjustment to Reserves for Pension Liability	209,000		0	
d. Total	3,426,098		3,094,341	
7. Net Assets for Pension Benefits [4. + 5.d - 6.d.]	472,373,896		469,685,311	

Section 2.2 - Changes in Fair Value of Assets

Transactions	June 30, 2015	June 30, 2014
Additions		
1. Contributions		
a. Contributions from Employers	13,091,474	11,227,291
b. Contributions from Plan Members	3,013,354	2,948,243
c. Total	16,104,828	14,175,534
2. Net Investment Income		
a. Interest and Dividends	4,035,448	3,977,550
b. Net Appreciation(Depreciation)	17,058,048	57,185,178
c. Rental Income	0	0
d. Net Securities Lending Income	0	0
e. Securities Lending Unrealized Gain/(Loss)	0	0
f. Miscellaneous	0	966
g. Total	21,093,496	61,163,694
h. Investment Expense	1,016,928	977,364
i. Net Investment Income	20,076,568	60,186,330
3. Total Additions	36,181,396	74,361,864
Deductions		
4. Benefits and Expenses		
a. Retirement Benefits	32,146,995	31,369,925
b. Refund of Contributions	520,517	641,519
c. Death	0	0
d. Supplemental Payment	0	0
e. Administrative Expenses	616,299	576,766
f. Prior year adjustment to Reserves for Pension Liability	209,000	0
5. Total Deductions	33,492,811	32,588,210
6. Net Increase	2,688,585	41,773,654
7. Net Assets Held in Trust for Pension Benefits		
a. Beginning of Year	469,685,311	427,911,657
b. End of Year	472,373,896	469,685,311

Section 2.3 - Actuarial Value of Assets

Development of Actuarial Value of Assets		Amount																								
1. Actuarial Value of Assets as of June 30, 2014		433,854,394																								
2. Unrecognized Return as of June 30, 2014		35,830,917																								
3. Fair Value of Assets as of June 30, 2014(1. + 2.)		469,685,311																								
4. Contributions																										
(a) Member (includes purchased service)		3,013,354																								
(b) Employer		13,091,474																								
(c) State appropriations		0																								
(d) Total		16,104,828																								
5. Distributions																										
(a) Benefit payments		32,146,995																								
(b) Refund of contributions		520,517																								
(c) Total		32,667,512																								
6. Expected Return at 7.00% on																										
(a) Item 1		30,369,808																								
(b) Item 2		2,508,164																								
(c) Item 4 (d)		563,669																								
(d) Item 5 (c)		1,143,363																								
(e) Total [(a) + (b) + (c) – (d)]		32,298,278																								
7. Actual Return on Fair Value for Fiscal year, Net of Investment Expenses		19,460,269																								
8. Return to be Spread for Fiscal year (7. – 6.e+6.b)		(10,329,845)																								
9. Total Fair Value of Assets as of June 30, 2015		472,373,896																								
10. Return to be Spread																										
	<table border="1"> <thead> <tr> <th>Fiscal Year</th> <th>Return to be Spread</th> <th>Unrecognized Percent</th> <th>Unrecognized Return</th> </tr> </thead> <tbody> <tr> <td>2015</td> <td>(10,329,845)</td> <td>80%</td> <td>(8,263,876)</td> </tr> <tr> <td>2014</td> <td>31,731,939</td> <td>60%</td> <td>19,039,163</td> </tr> <tr> <td>2013</td> <td>19,833,081</td> <td>40%</td> <td>7,933,232</td> </tr> <tr> <td>2012</td> <td>(29,073,824)</td> <td>20%</td> <td>(5,814,765)</td> </tr> <tr> <td colspan="3">Total</td> <td>12,893,754</td> </tr> </tbody> </table>	Fiscal Year	Return to be Spread	Unrecognized Percent	Unrecognized Return	2015	(10,329,845)	80%	(8,263,876)	2014	31,731,939	60%	19,039,163	2013	19,833,081	40%	7,933,232	2012	(29,073,824)	20%	(5,814,765)	Total			12,893,754	
Fiscal Year	Return to be Spread	Unrecognized Percent	Unrecognized Return																							
2015	(10,329,845)	80%	(8,263,876)																							
2014	31,731,939	60%	19,039,163																							
2013	19,833,081	40%	7,933,232																							
2012	(29,073,824)	20%	(5,814,765)																							
Total			12,893,754																							
11. Actuarial Value of Assets (9. – 10.)		459,480,142																								
12. Recognized Rate of Return for the Year on Actuarial Value of Assets		9.96%																								
13. Rate of Return for the Year on Market Value of Assets		4.22%																								

Section 2.4 - Historical Asset Rate of Return

Year Ending 30-Jun	Actuarial Value Annual Recognized Rate of Return	Fair Value Annual Market Rate of Return
2006	4.30%	8.60%
2007	8.50%	16.30%
2008	7.20%	-5.70%
2009	1.30%	-20.00%
2010	1.60%	12.50%
2011	3.78%	23.37%
2012	0.60%	0.01%
2013	4.04%	12.28%
2014	11.18%	14.23%
2015	9.96%	4.22%



Section 2.5 - Forecast of Expected Benefit Payments

Year Ending June 30	Active Employees				Retired Members, Disabled Members and Beneficiaries				Grand Total			
	General Members	Police Members	Fire Members	Subtotal	General Members	Police Members	Fire Members	Subtotal	General Members	Police Members	Fire Members	Subtotal
2015	558,078	254,046	123,397	935,521	17,167,964	8,694,834	6,484,997	32,347,795	17,726,042	8,948,880	6,608,394	33,283,316
2016	1,604,124	695,965	441,243	2,741,332	17,013,879	8,632,583	6,382,609	32,029,071	18,618,003	9,328,548	6,823,852	34,770,403
2017	2,562,038	1,260,754	838,558	4,661,350	16,753,701	8,561,759	6,277,147	31,592,607	19,315,739	9,822,513	7,115,705	36,253,957
2018	3,447,915	1,907,609	1,267,595	6,623,119	16,599,224	8,481,960	6,190,721	31,271,905	20,047,139	10,389,569	7,458,316	37,895,024
2019	4,312,476	2,446,656	1,628,364	8,387,496	16,445,450	8,392,850	6,078,010	30,916,310	20,757,926	10,839,506	7,706,374	39,303,806
2020	5,169,932	2,954,998	1,879,457	10,004,387	16,267,894	8,319,470	5,960,990	30,548,354	21,437,826	11,274,468	7,840,447	40,552,741
2021	6,038,556	3,590,457	2,176,283	11,805,296	16,075,539	8,210,949	5,839,127	30,125,615	22,114,095	11,801,406	8,015,410	41,930,911
2022	6,869,578	4,270,718	2,464,978	13,605,274	15,850,720	8,092,699	5,711,744	29,655,163	22,720,298	12,363,417	8,176,722	43,260,437
2023	7,679,353	4,876,837	2,800,531	15,356,721	15,588,656	7,984,241	5,578,385	29,151,282	23,268,009	12,861,078	8,378,916	44,508,003
2024	8,409,945	5,404,050	3,117,900	16,931,895	15,338,636	7,846,279	5,438,847	28,623,762	23,748,581	13,250,329	8,556,747	45,555,657
2025	9,143,703	5,815,287	3,451,759	18,410,749	15,024,407	7,748,375	5,292,892	28,065,674	24,168,110	13,563,662	8,744,651	46,476,423
2026	9,873,495	6,176,079	3,827,212	19,876,786	14,793,076	7,591,450	5,140,399	27,524,925	24,666,571	13,767,529	8,967,611	47,401,711
2027	10,631,845	6,633,634	4,174,439	21,439,918	14,513,379	7,425,366	4,981,255	26,920,000	25,145,224	14,059,000	9,155,694	48,359,918
2028	11,411,971	6,970,082	4,478,197	22,860,250	14,296,568	7,250,371	4,852,526	26,399,465	25,708,539	14,220,453	9,330,723	49,259,715
2029	12,182,641	7,087,556	4,701,500	23,971,697	13,995,742	7,113,757	4,680,195	25,789,694	26,178,383	14,201,313	9,381,695	49,761,391
2030	12,921,534	7,143,086	4,898,628	24,963,248	13,628,149	6,921,680	4,501,784	25,051,613	26,549,683	14,064,766	9,400,412	50,014,861
2031	13,662,694	7,138,218	5,098,602	25,899,514	13,242,783	6,764,163	4,317,634	24,324,580	26,905,477	13,902,381	9,416,236	50,224,094
2032	14,298,156	7,133,367	5,251,123	26,682,646	12,837,138	6,556,716	4,128,480	23,522,334	27,135,294	13,690,083	9,379,603	50,204,980
2033	14,957,197	7,175,399	5,355,066	27,487,662	12,388,825	6,340,931	3,935,271	22,665,027	27,346,022	13,516,330	9,290,337	50,152,689
2034	15,569,489	7,259,132	5,428,725	28,257,346	12,008,711	6,118,357	3,738,563	21,865,631	27,578,200	13,377,489	9,167,288	50,122,977
2035	16,163,118	7,340,811	5,481,847	28,985,776	11,592,401	5,889,587	3,546,386	21,028,374	27,755,519	13,230,398	9,028,233	50,014,150
2036	16,555,880	7,445,530	5,504,393	29,505,803	11,139,312	5,655,207	3,344,767	20,139,286	27,695,192	13,100,737	8,849,160	49,645,089
2037	16,925,338	7,603,467	5,534,418	30,063,223	10,660,870	5,416,051	3,142,399	19,219,320	27,586,208	13,019,518	8,676,817	49,282,543
2038	17,250,699	7,706,211	5,529,063	30,485,973	10,143,295	5,172,661	2,940,160	18,256,116	27,393,994	12,878,872	8,469,223	48,742,089
2039	17,587,393	7,835,711	5,481,325	30,904,429	9,614,197	4,925,243	2,739,112	17,278,552	27,201,590	12,760,954	8,220,437	48,182,981
2040	17,781,335	7,951,071	5,438,363	31,170,769	9,077,830	4,674,627	2,540,685	16,293,142	26,859,165	12,625,698	7,979,048	47,463,911
2041	17,785,659	7,914,072	5,359,799	31,059,530	8,525,527	4,422,269	2,345,944	15,293,740	26,311,186	12,336,341	7,705,743	46,353,270
2042	17,716,618	7,820,728	5,260,225	30,797,571	7,959,481	4,169,273	2,155,864	14,284,618	25,676,099	11,990,001	7,416,089	45,082,189
2043	17,510,322	7,705,127	5,150,712	30,366,161	7,393,198	3,916,605	1,971,533	13,281,336	24,903,520	11,621,732	7,122,245	43,647,497
2044	17,257,619	7,559,638	5,045,398	29,862,655	6,830,529	3,665,516	1,794,034	12,290,079	24,088,148	11,225,154	6,839,432	42,152,734
2045	16,903,070	7,403,863	4,920,236	29,227,169	6,276,006	3,417,247	1,624,485	11,317,738	23,179,076	10,821,110	6,544,721	40,544,907

*Forecast based on the present employees without assumption about replacement employees



Section 2.6 - Analysis of Changes In Reserves For The Year Ended June 30, 2015

	- - - Reserve for Employer Contributions- - -				Reserve for Retired Benefit Payments	Total Reserves
	Reserve for Employee Contributions	Regular Account	Undistributed Investment Income	Total		
Balance June 30, 2014	\$60,231,653	\$63,773,400	\$0	\$63,773,400	\$345,680,258	\$469,685,311
Prior Year Adjustment	(\$363,158)	\$0	\$0	\$0	\$363,158	\$0
Adjustment to the value of the pension	\$0	\$0	\$0	\$0	(\$209,000)	(\$209,000)
Additions:						
Employee contributions	\$3,013,354			\$0		\$3,013,354
Employer contributions		\$13,091,474		\$13,091,474		\$13,091,474
Investment income			\$21,093,496	\$21,093,496		\$21,093,496
Transfers:						
Board Transfers						
Allowances awarded	(\$3,538,742)	(\$7,641,265)		(\$7,641,265)	\$11,180,006	\$0
7/1/2014 Mark to Market						
Deductions:						
Benefits paid					(\$32,146,995)	(\$32,146,995)
Refunds	(\$520,517)					(\$520,517)
Investment and admin. services			(\$1,633,227)	(\$1,633,227)		(\$1,633,227)
Insurance payments						
Investment income distributions:						
Regular	\$3,836,261	\$4,654,895	(\$31,965,721)	(\$27,310,826)	\$23,474,565	\$0
Extra interest						
Closing entry		(\$12,505,451)	\$12,505,451	\$0		\$0
Balance June 30, 2015	\$62,658,851	\$61,373,053	\$0	\$61,373,053	\$348,341,992	\$472,373,896



Section 2.7 - Reserve For Retired Benefit Payments

	Regular Account	Pension Contingency Account	Pension Adjustment Account	Total
Balance June 30, 2014	\$345,680,258	\$0	\$0	\$345,680,258
Miscellaneous Adjustments	363,158			\$363,158
Adjustment for benefit reserve	(209,000)			(209,000)
Beginning of Year Adjustments:				
Special Transfers (per Board action)	0			\$0
One time adjustment to PAA	0	0	0	0
Balance July 1, 2014	\$345,834,416	\$0	\$0	\$345,834,416
Transfers for New Retirees:				
Employer assets	7,641,265			7,641,265
Member contributions	3,538,742			3,538,742
Deductions:				
Benefits Paid	(32,146,995)			(32,146,995)
Miscellaneous adjustment:				
Investment Income Credited:				
Regular	23,474,565			23,474,565
Extra Interest				
End of Year Adjustments:				
Special Transfers (per Board action)	0	0	0	0
Balance June 30, 2015	\$348,341,992	\$0	0	348,341,992

Section 3: Accounting Information

Section 3.1 - Schedule of Changes in Net Pension Liability as of June 30, 2015

The GASB Statement No. 67 Change in Net Pension Liability:

Schedule of Changes In Net Pension Liability	Fiscal Year Ending June 30, 2015
Total pension liability	
Service Cost	\$ 9,760,000
Interest	36,193,000
Changes of benefit terms	-
Differences between expected and actual experience	279,000
Changes of assumptions	-
Benefit payments, including refunds of member contributions	(32,668,000)
Net change in total pension liability	13,564,000
Total pension liability - beginning	\$ 523,461,000
Total pension liability - ending (a)	\$ 537,025,000
Plan fiduciary net position	
Contributions - employer	\$ 13,091,000
Contributions - member	3,013,000
Net investment income	20,078,000
Benefit payments, including refunds of member contributions	(32,668,000)
Administrative expense	(616,000)
Other*	(209,000)
Net change in plan fiduciary net position	2,689,000
Plan fiduciary net position - beginning	\$ 469,685,000
Plan fiduciary net position - ending (b)	\$ 472,374,000
Net pension liability (asset) - ending (a)-(b)	\$ 64,651,000

*Prior year adjustment to Reserves for Pension Liability

Section 3.2 - Net Pension Liability (Asset)

The GASB Statement No. 67 Net Pension Liability

Net pension liability (asset)	June 30, 2015	June 30, 2014
Total pension liability	\$ 537,025,000	\$ 523,461,000
Plan fiduciary net position (estimate for 2015)	472,374,000	469,685,000
Net pension liability (asset)	<u>\$ 64,651,000</u>	<u>\$ 53,776,000</u>
Plan fiduciary net position as a percentage of the total pension liability	87.96%	89.73%
Covered employee payroll	\$ 48,759,000	\$ 47,957,000
Net pension liability (asset) as a percentage of covered employee payroll	132.59%	112.13%

Section 3.3 - Sensitivity

The GASB Statement No. 67 Sensitivity of Net Pension Liability

Sensitivity of the Net Pension Liability to Changes in the Discount Rate at June 30, 2015	1% Decrease	Current Discount Rate	1 % increase
Total pension liability	\$ 596,823,000	\$ 537,025,000	\$ 486,646,000
Plan fiduciary net position	<u>472,374,000</u>	<u>472,374,000</u>	<u>472,374,000</u>
Discount rate	6.00%	7.00%	8.00%
Net pension liability (asset)	\$ 124,449,000	\$ 64,651,000	\$ 14,272,000

Section 3.4 - Supporting Exhibits

Development of Discount Rate - Projection of Fiduciary Net Position

This projection is used only for determining if the plan has a crossover point for developing the discount rate under GASB 67. For this projection, member contributions and benefit payments do not include amounts for future new members. Employer contributions include projected amounts for current members, plus amounts for new members to the extent the employer contribution exceeds the employer normal cost for the new members.

Since the projection does not produce a crossover point, the discount rate will be the assumed investment rate of return of 7.00 percent.

Fiscal Year	Projected Beginning Fiduciary Net	Projected Member Contributions	Projected Employer Contributions	Projected Benefit payments	Projected Investment Earnings*	Projected Ending Fiduciary Net
Ending 6/30/	Position (a)	(b)	(c)	(d)	(e)	(f)=sum (a) thru (e)
2015	469,685,000	3,013,000	13,091,000	(32,668,000)	19,253,000	472,374,000
2016	472,374,000	2,763,405	12,219,950	(33,535,736)	32,417,000	486,238,619
2017	486,238,619	2,644,953	12,101,366	(34,836,897)	33,334,000	499,482,042
2018	499,482,042	2,496,867	11,945,604	(36,237,869)	34,201,000	511,887,644
2019	511,887,644	2,347,830	11,789,628	(37,843,458)	35,002,000	523,183,644
2020	523,183,644	2,206,913	11,648,553	(39,255,679)	35,734,000	533,517,431
2021	533,517,431	2,083,875	11,518,263	(40,540,475)	36,403,000	542,982,094
2022	542,982,094	1,951,444	11,374,195	(41,935,561)	37,007,000	551,379,172
2023	551,379,172	1,797,426	11,194,396	(43,316,714)	37,535,000	558,589,280
2024	558,589,280	1,640,424	11,004,526	(44,618,635)	37,982,000	564,597,594
2025	564,597,594	1,492,254	10,811,346	(45,670,863)	38,354,000	569,584,331
2026	569,584,331	1,364,060	10,696,578	(46,580,243)	38,663,000	573,727,727
2027	573,727,727	1,246,869	10,538,786	(47,516,295)	38,910,000	576,907,087
2028	576,907,087	1,115,941	10,362,661	(48,478,533)	39,088,000	578,995,156
2029	578,995,156	977,314	1,658,379	(49,376,157)	38,894,000	571,148,693
2030	571,148,693	865,733	1,398,698	(49,881,343)	38,314,000	561,845,781
2031	561,845,781	777,559	1,233,400	(50,128,717)	37,645,000	551,373,024
2032	551,373,024	689,177	1,056,430	(50,362,877)	36,895,000	539,650,754
2033	539,650,754	611,412	915,054	(50,398,729)	36,065,000	526,843,491
2034	526,843,491	522,900	793,953	(50,312,485)	35,164,000	513,011,858
2035	513,011,858	434,444	609,535	(50,168,678)	34,191,000	498,078,160
2036	498,078,160	361,461	490,196	(49,910,720)	33,148,000	482,167,097
2037	482,167,097	299,194	353,277	(49,392,913)	32,046,000	465,472,655
2038	465,472,655	247,519	284,944	(48,898,317)	30,890,000	447,996,801
2039	447,996,801	178,987	175,033	(48,265,835)	29,683,000	429,767,986
2040	429,767,986	132,103	97,692	(47,503,155)	28,429,000	410,923,626
2041	410,923,626	74,917	22,412	(46,569,140)	27,138,000	391,589,815
2042	391,589,815	46,893	0	(45,261,325)	25,829,000	372,204,383
2043	372,204,383	28,691	0	(43,866,370)	24,520,000	352,886,704
2044	352,886,704	18,014	0	(42,353,717)	23,220,000	333,771,000
2045	333,771,000	11,446	0	(40,784,890)	21,937,000	314,934,557
2046	314,934,557	6,971	0	(39,161,294)	20,675,000	296,455,234
2047	296,455,234	4,311	0	(37,452,205)	19,441,000	278,448,339
2048	278,448,339	2,844	0	(35,765,982)	18,240,000	260,925,201
2049	260,925,201	1,920	0	(34,087,655)	17,072,000	243,911,466
2050	243,911,466	1,278	0	(32,405,967)	15,940,000	227,446,777
2051	227,446,777	823	0	(30,639,688)	14,849,000	211,656,913
2052	211,656,913	521	0	(28,901,299)	13,804,000	196,560,134
2053	196,560,134	337	0	(27,169,992)	12,808,000	182,198,479
2054	182,198,479	197	0	(25,466,370)	11,863,000	168,595,306
2055	168,595,306	112	0	(23,797,692)	10,969,000	155,766,726
2056	155,766,726	54	0	(22,168,812)	10,128,000	143,725,969
2057	143,725,969	32	0	(20,584,317)	9,340,000	132,481,683
2058	132,481,683	17	0	(19,049,882)	8,607,000	122,038,818
2059	122,038,818	8	0	(17,570,591)	7,928,000	112,396,235
2060	112,396,235	3	0	(16,149,668)	7,302,000	103,548,571

Section 3.4 – Supporting Exhibits (continued)

Development of Discount Rate - Projection of Fiduciary Net Position (continued)

Fiscal Year Ending 6/30/	Projected Beginning Fiduciary Net Position (a)	Projected Member Contributions (b)	Projected Employer Contributions (c)	Projected Benefit payments (d)	Projected Investment Earnings* (e)	Projected Ending Fiduciary Net Position (f)=sum (a) thru (e)
2061	103,548,571	1	0	(14,790,275)	6,731,000	95,489,297
2062	95,489,297	0	0	(13,495,143)	6,212,000	88,206,154
2063	88,206,154	0	0	(12,266,110)	5,745,000	81,685,044
2064	81,685,044	0	0	(11,104,914)	5,329,000	75,909,130
2065	75,909,130	0	0	(10,011,422)	4,963,000	70,860,708
2066	70,860,708	0	0	(8,985,089)	4,646,000	66,521,619
2067	66,521,619	0	0	(8,028,155)	4,376,000	62,869,464
2068	62,869,464	0	0	(7,140,381)	4,151,000	59,880,083
2069	59,880,083	0	0	(6,319,695)	3,970,000	57,530,388
2070	57,530,388	0	0	(5,565,504)	3,832,000	55,796,884
2071	55,796,884	0	0	(4,876,038)	3,735,000	54,655,846
2072	54,655,846	0	0	(4,249,674)	3,677,000	54,083,172
2073	54,083,172	0	0	(3,682,485)	3,657,000	54,057,687
2074	54,057,687	0	0	(3,170,434)	3,673,000	54,560,253
2075	54,560,253	0	0	(2,712,246)	3,724,000	55,572,007
2076	55,572,007	0	0	(2,304,520)	3,809,000	57,076,487
2077	57,076,487	0	0	(1,942,555)	3,927,000	59,060,932
2078	59,060,932	0	0	(1,623,250)	4,077,000	61,514,682
2079	61,514,682	0	0	(1,344,575)	4,259,000	64,429,107
2080	64,429,107	0	0	(1,103,832)	4,471,000	67,796,275
2081	67,796,275	0	0	(897,239)	4,714,000	71,613,036
2082	71,613,036	0	0	(721,696)	4,988,000	75,879,340
2083	75,879,340	0	0	(574,197)	5,291,000	80,596,143
2084	80,596,143	0	0	(452,245)	5,626,000	85,769,898
2085	85,769,898	0	0	(352,054)	5,992,000	91,409,844
2086	91,409,844	0	0	(270,615)	6,389,000	97,528,229
2087	97,528,229	0	0	(205,628)	6,820,000	104,142,601
2088	104,142,601	0	0	(154,465)	7,285,000	111,273,136
2089	111,273,136	0	0	(114,785)	7,785,000	118,943,351
2090	118,943,351	0	0	(84,429)	8,323,000	127,181,922
2091	127,181,922	0	0	(61,417)	8,901,000	136,021,505
2092	136,021,505	0	0	(44,270)	9,520,000	145,497,235
2093	145,497,235	0	0	(31,744)	10,184,000	155,649,491
2094	155,649,491	0	0	(22,614)	10,895,000	166,521,877
2095	166,521,877	0	0	(15,978)	11,656,000	178,161,899
2096	178,161,899	0	0	(11,165)	12,471,000	190,621,734
2097	190,621,734	0	0	(7,696)	13,343,000	203,957,038
2098	203,957,038	0	0	(5,225)	14,277,000	218,228,813
2099	218,228,813	0	0	(3,493)	15,276,000	233,501,320
2100	233,501,320	0	0	(2,293)	16,345,000	249,844,027
2101	249,844,027	0	0	(1,479)	17,489,000	267,331,548
2102	267,331,548	0	0	(940)	18,713,000	286,043,608
2103	286,043,608	0	0	(588)	20,023,000	306,066,020
2104	306,066,020	0	0	(359)	21,425,000	327,490,661
2105	327,490,661	0	0	(213)	22,924,000	350,414,448
2106	350,414,448	0	0	(125)	24,529,000	374,943,323
2107	374,943,323	0	0	(72)	26,246,000	401,189,251
2108	401,189,251	0	0	(38)	28,083,000	429,272,213
2109	429,272,213	0	0	(16)	30,049,000	459,321,197
2110	459,321,197	0	0	(4)	32,152,000	491,473,193
2111	491,473,193	0	0	0	34,403,000	525,876,193
2112	525,876,193	0	0	0	36,811,000	562,687,193
2113	562,687,193	0	0	0	39,388,000	602,075,193
2114	602,075,193	0	0	0	42,145,000	644,220,193

* The contributions and benefit payments occur halfway through the year and Investment Return is net of Administrative Expenses

**There is no crossover point in this analysis.

After 2073, the projected investment earnings will exceed the projected benefit payments.



Section 3.4 – Supporting Exhibits (continued)

Actuarial Present Values of Projected Benefit Payments

Fiscal Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Present Value of Benefit Payments			
			"Funded" Portion	"Unfunded" Portion	Funded Portion at 7.00%*	Unfunded Portion at 3.73%	Using a Single Discount Rate of 7.0%	
Ending Year	(a)	(b)	(c)	(d)	(e)	(f)= (d)/(1+i) ^(a)	(g)= (e)/(1+3.73%) ^(a)	(h)=(c)/(1+7.00%) ^(a)
2015	1	469,685,000	32,668,000	32,668,000	0	30,530,841	0	30,530,841
2016	2	472,374,000	33,535,736	33,535,736	0	29,291,411	0	29,291,411
2017	3	486,238,619	34,836,897	34,836,897	0	28,437,285	0	28,437,285
2018	4	499,482,042	36,237,869	36,237,869	0	27,645,697	0	27,645,697
2019	5	511,887,644	37,843,458	37,843,458	0	26,981,863	0	26,981,863
2020	6	523,183,644	39,255,679	39,255,679	0	26,157,716	0	26,157,716
2021	7	533,517,431	40,540,475	40,540,475	0	25,246,570	0	25,246,570
2022	8	542,982,094	41,935,561	41,935,561	0	24,406,878	0	24,406,878
2023	9	551,379,172	43,316,714	43,316,714	0	23,561,422	0	23,561,422
2024	10	558,589,280	44,618,635	44,618,635	0	22,681,852	0	22,681,852
2025	11	564,597,594	45,670,863	45,670,863	0	21,697,898	0	21,697,898
2026	12	569,584,331	46,580,243	46,580,243	0	20,682,185	0	20,682,185
2027	13	573,727,727	47,516,295	47,516,295	0	19,717,573	0	19,717,573
2028	14	576,907,087	48,478,533	48,478,533	0	18,800,811	0	18,800,811
2029	15	578,995,156	49,376,157	49,376,157	0	17,896,192	0	17,896,192
2030	16	571,148,693	49,881,343	49,881,343	0	16,896,537	0	16,896,537
2031	17	561,845,781	50,128,717	50,128,717	0	15,869,468	0	15,869,468
2032	18	551,373,024	50,362,877	50,362,877	0	14,900,558	0	14,900,558
2033	19	539,650,754	50,398,729	50,398,729	0	13,935,669	0	13,935,669
2034	20	526,843,491	50,312,485	50,312,485	0	13,001,702	0	13,001,702
2035	21	513,011,858	50,168,678	50,168,678	0	12,116,392	0	12,116,392
2036	22	498,078,160	49,910,720	49,910,720	0	11,265,507	0	11,265,507
2037	23	482,167,097	49,392,913	49,392,913	0	10,419,281	0	10,419,281
2038	24	465,472,655	48,898,317	48,898,317	0	9,640,138	0	9,640,138
2039	25	447,996,801	48,265,835	48,265,835	0	8,892,940	0	8,892,940
2040	26	429,767,986	47,503,155	47,503,155	0	8,179,829	0	8,179,829
2041	27	410,923,626	46,569,140	46,569,140	0	7,494,389	0	7,494,389
2042	28	391,589,815	45,261,325	45,261,325	0	6,807,403	0	6,807,403
2043	29	372,204,383	43,866,370	43,866,370	0	6,165,980	0	6,165,980
2044	30	352,886,704	42,353,717	42,353,717	0	5,563,886	0	5,563,886
2045	31	333,771,000	40,784,890	40,784,890	0	5,007,284	0	5,007,284
2046	32	314,934,557	39,161,294	39,161,294	0	4,493,411	0	4,493,411
2047	33	296,455,234	37,452,205	37,452,205	0	4,016,176	0	4,016,176
2048	34	278,448,339	35,765,982	35,765,982	0	3,584,443	0	3,584,443
2049	35	260,925,201	34,087,655	34,087,655	0	3,192,750	0	3,192,750
2050	36	243,911,466	32,405,967	32,405,967	0	2,836,671	0	2,836,671
2051	37	227,446,777	30,639,688	30,639,688	0	2,506,597	0	2,506,597
2052	38	211,656,913	28,901,299	28,901,299	0	2,209,703	0	2,209,703
2053	39	196,560,134	27,169,992	27,169,992	0	1,941,432	0	1,941,432
2054	40	182,198,479	25,466,370	25,466,370	0	1,700,654	0	1,700,654
2055	41	168,595,306	23,797,692	23,797,692	0	1,485,251	0	1,485,251
2056	42	155,766,726	22,168,812	22,168,812	0	1,293,075	0	1,293,075
2057	43	143,725,969	20,584,317	20,584,317	0	1,122,106	0	1,122,106
2058	44	132,481,683	19,049,882	19,049,882	0	970,524	0	970,524
2059	45	122,038,818	17,570,591	17,570,591	0	836,597	0	836,597
2060	46	112,396,235	16,149,668	16,149,668	0	718,637	0	718,637
2061	47	103,548,571	14,790,275	14,790,275	0	615,090	0	615,090
2062	48	95,489,297	13,495,143	13,495,143	0	524,513	0	524,513
2063	49	88,206,154	12,266,110	12,266,110	0	445,555	0	445,555
2064	50	81,685,044	11,104,914	11,104,914	0	376,987	0	376,987



Section 3.4 – Supporting Exhibits (continued)

Actuarial Present Values of Projected Benefit Payments (continued)

Fiscal Year	Ending Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Present Value of Benefit Payments			
				"Funded" Portion	"Unfunded" Portion	Funded Portion at 7.00%*	Unfunded Portion at 3.73%	Using a Single Discount Rate of 7.0%	
	6/30/	(a)	(b)	(c)	(d)	(e)	(f)= (d)/(1+i) ^(a)	(g)= (e)/(1+3.73%) ^(a)	(h)=(c)/(1+7.00%) ^(a)
	2065	51	75,909,130	10,011,422	10,011,422	0	317,631	0	317,631
	2066	52	70,860,708	8,985,089	8,985,089	0	266,419	0	266,419
	2067	53	66,521,619	8,028,155	8,028,155	0	222,472	0	222,472
	2068	54	62,869,464	7,140,381	7,140,381	0	184,926	0	184,926
	2069	55	59,880,083	6,319,695	6,319,695	0	152,964	0	152,964
	2070	56	57,530,388	5,565,504	5,565,504	0	125,896	0	125,896
	2071	57	55,796,884	4,876,038	4,876,038	0	103,084	0	103,084
	2072	58	54,655,846	4,249,674	4,249,674	0	83,965	0	83,965
	2073	59	54,083,172	3,682,485	3,682,485	0	67,998	0	67,998
	2074	60	54,057,687	3,170,434	3,170,434	0	54,713	0	54,713
	2075	61	54,560,253	2,712,246	2,712,246	0	43,744	0	43,744
	2076	62	55,572,007	2,304,520	2,304,520	0	34,737	0	34,737
	2077	63	57,076,487	1,942,555	1,942,555	0	27,365	0	27,365
	2078	64	59,060,932	1,623,250	1,623,250	0	21,371	0	21,371
	2079	65	61,514,682	1,344,575	1,344,575	0	16,544	0	16,544
	2080	66	64,429,107	1,103,832	1,103,832	0	12,693	0	12,693
	2081	67	67,796,275	897,239	897,239	0	9,643	0	9,643
	2082	68	71,613,036	721,696	721,696	0	7,249	0	7,249
	2083	69	75,879,340	574,197	574,197	0	5,390	0	5,390
	2084	70	80,596,143	452,245	452,245	0	3,967	0	3,967
	2085	71	85,769,898	352,054	352,054	0	2,886	0	2,886
	2086	72	91,409,844	270,615	270,615	0	2,074	0	2,074
	2087	73	97,528,229	205,628	205,628	0	1,473	0	1,473
	2088	74	104,142,601	154,465	154,465	0	1,034	0	1,034
	2089	75	111,273,136	114,785	114,785	0	718	0	718
	2090	76	118,943,351	84,429	84,429	0	494	0	494
	2091	77	127,181,922	61,417	61,417	0	336	0	336
	2092	78	136,021,505	44,270	44,270	0	226	0	226
	2093	79	145,497,235	31,744	31,744	0	151	0	151
	2094	80	155,649,491	22,614	22,614	0	101	0	101
	2095	81	166,521,877	15,978	15,978	0	67	0	67
	2096	82	178,161,899	11,165	11,165	0	43	0	43
	2097	83	190,621,734	7,696	7,696	0	28	0	28
	2098	84	203,957,038	5,225	5,225	0	18	0	18
	2099	85	218,228,813	3,493	3,493	0	11	0	11
	2100	86	233,501,320	2,293	2,293	0	7	0	7
	2101	87	249,844,027	1,479	1,479	0	4	0	4
	2102	88	267,331,548	940	940	0	2	0	2
	2103	89	286,043,608	588	588	0	1	0	1
	2104	90	306,066,020	359	359	0	1	0	1
	2105	91	327,490,661	213	213	0	0	0	0
	2106	92	350,414,448	125	125	0	0	0	0
	2107	93	374,943,323	72	72	0	0	0	0
	2108	94	401,189,251	38	38	0	0	0	0
	2109	95	429,272,213	16	16	0	0	0	0
	2110	96	459,321,197	4	4	0	0	0	0
	2111	97	491,473,193	0	0	0	0	0	0
	2112	98	525,876,193	0	0	0	0	0	0
	2113	99	562,687,193	0	0	0	0	0	0
	2114	100	602,075,193	0	0	0	0	0	0

3.4 – Supporting Exhibits (continued)

Actuarial Assumptions, Method and Additional Information under GASB No. 67

The total pension liability as of June 30, 2015 was determined by rolling forward the total pension liability as of June 30, 2014 to June 30, 2015 using the following actuarial methods and assumptions, applied to all periods included in the measurement. All other assumptions such as Mortality table, retirement rates, termination rates, and disability rates used to determine the total pension liability are set forth in Section 6.3.

Valuation Date:	6/30/2014
Actuarial Cost Method:	Entry Age
Amortization Method:	Level percent of payroll, closed
Remaining amortization period:	25
Asset valuation method:	Market value
Actuarial assumptions:	
- Investment Rate of Return	7%
-Projected Salary Increases	3.50%
-Payroll Increases	0.3%-6.0%
-Inflation Assumption	3.50%
-Cost of Living Adjustments	Adjustments are funded by financial gains, and are not guaranteed

Discount rate: The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that System contributions will continue to follow the current funding policy. Based on those assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Please see Section 3.4 for additional detail.

*At the October 15, 2009 Board meeting, the Board adopted a 30-year amortization for the 2010 fiscal year contribution.

This period is scheduled to decline by one year each year until reaching 25 years, at which point the amortization period is 25 years open.

Section 4: Actuarial Funding Projections

Section 4.1 - Projection Assumptions and Methods

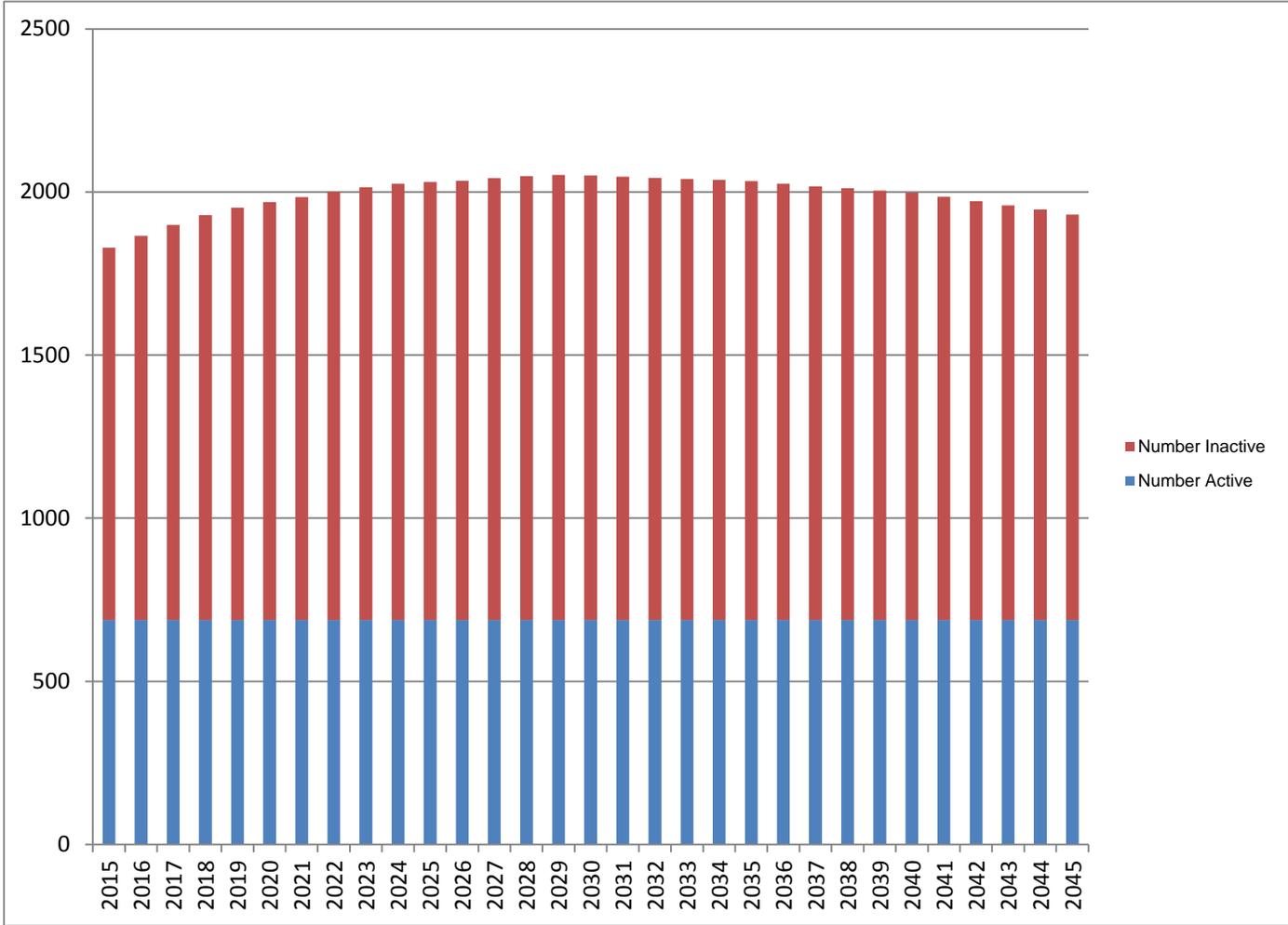
Key Assumptions

- 7.0% investment return on the Fair Value of Assets in all future years.
- 7.0% discount rate for determining liability.
- The Actuarial Value of Assets reflects the deferred gains and losses generated by the smoothing method. The current deferred amounts are recognized in the first four years of the projections.
- Actuarial assumptions and methods as described in Section 6. All future demographic experience is assumed to be exactly realized.
- The actuarially calculated contribution rate is contributed each year.
- Projections assume a 0% increase in the total active member population. All new future members are expected to enter the plan upon date of hire and contribution rates are determined as a percent of total payroll.
- The projections are based on the combined impact of the Minimum Required Policy and the Funding Plan.
- For the Sensitivity Analysis, all assumptions and methods are the same except investment returns on the Fair Value of Assets are assumed as follows:
 - Base Case: 7.00% for all future years
 - Optimistic: 8.00% for all future years
 - Pessimistic: 6.00% for all future years

These scenarios are intended to illustrate the impact if investment return assumptions are different than the 7.00% assumed investment return. They do not illustrate the effect of changing the assumed discount rate for determining liabilities.

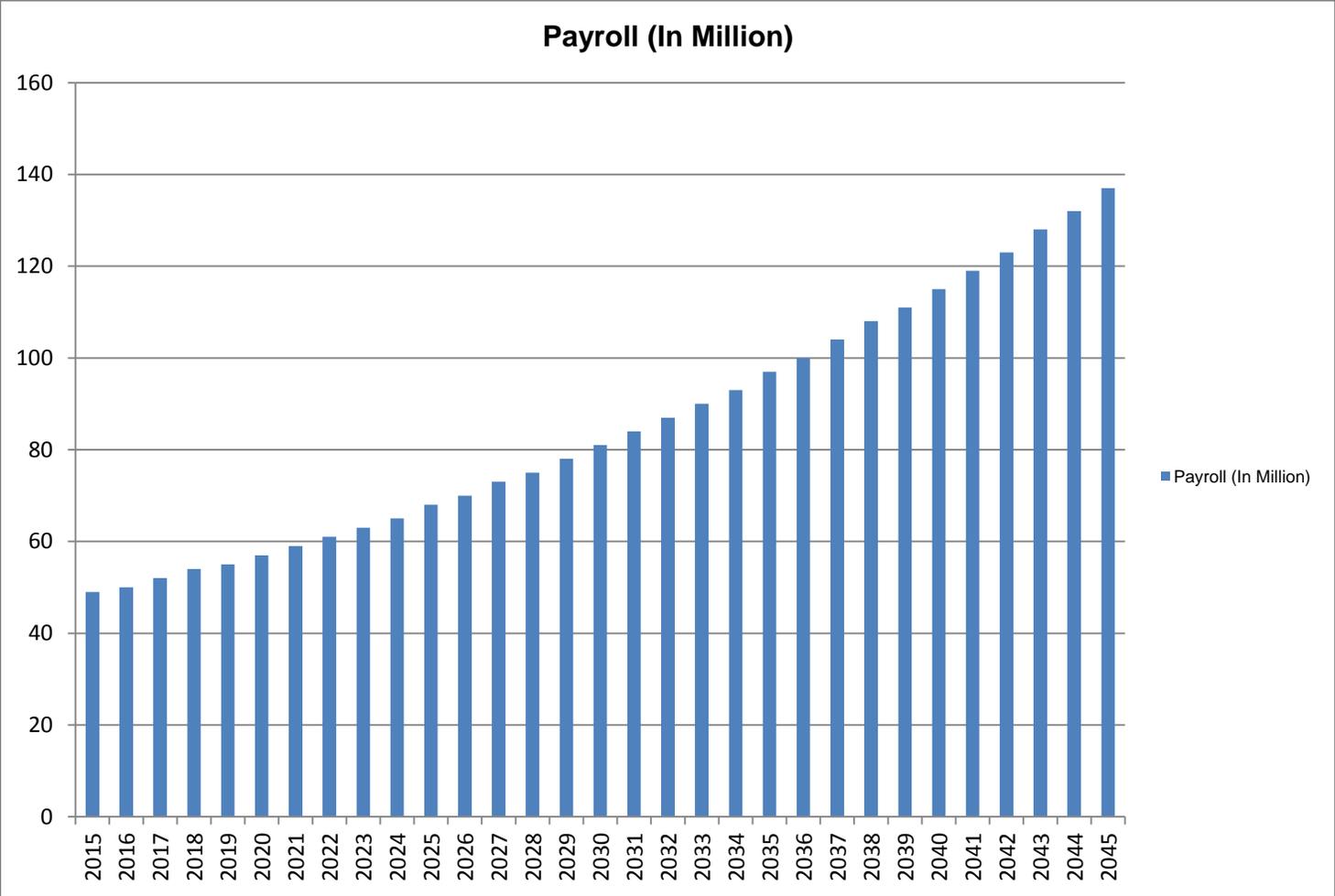
Section 4.2 - Membership Projection

Projected Member Count

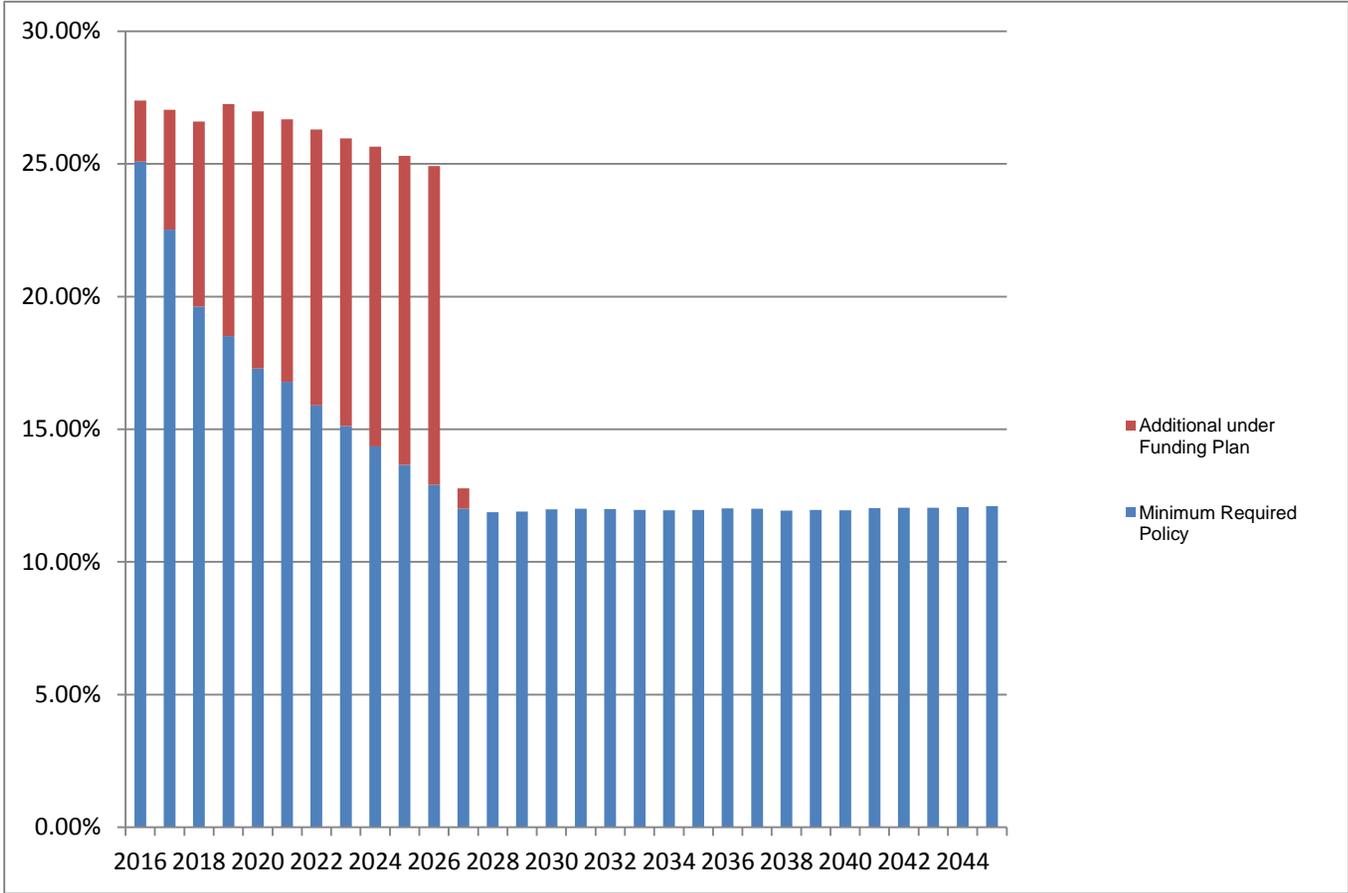


Section 4.2 (cont'd)
Membership Projection

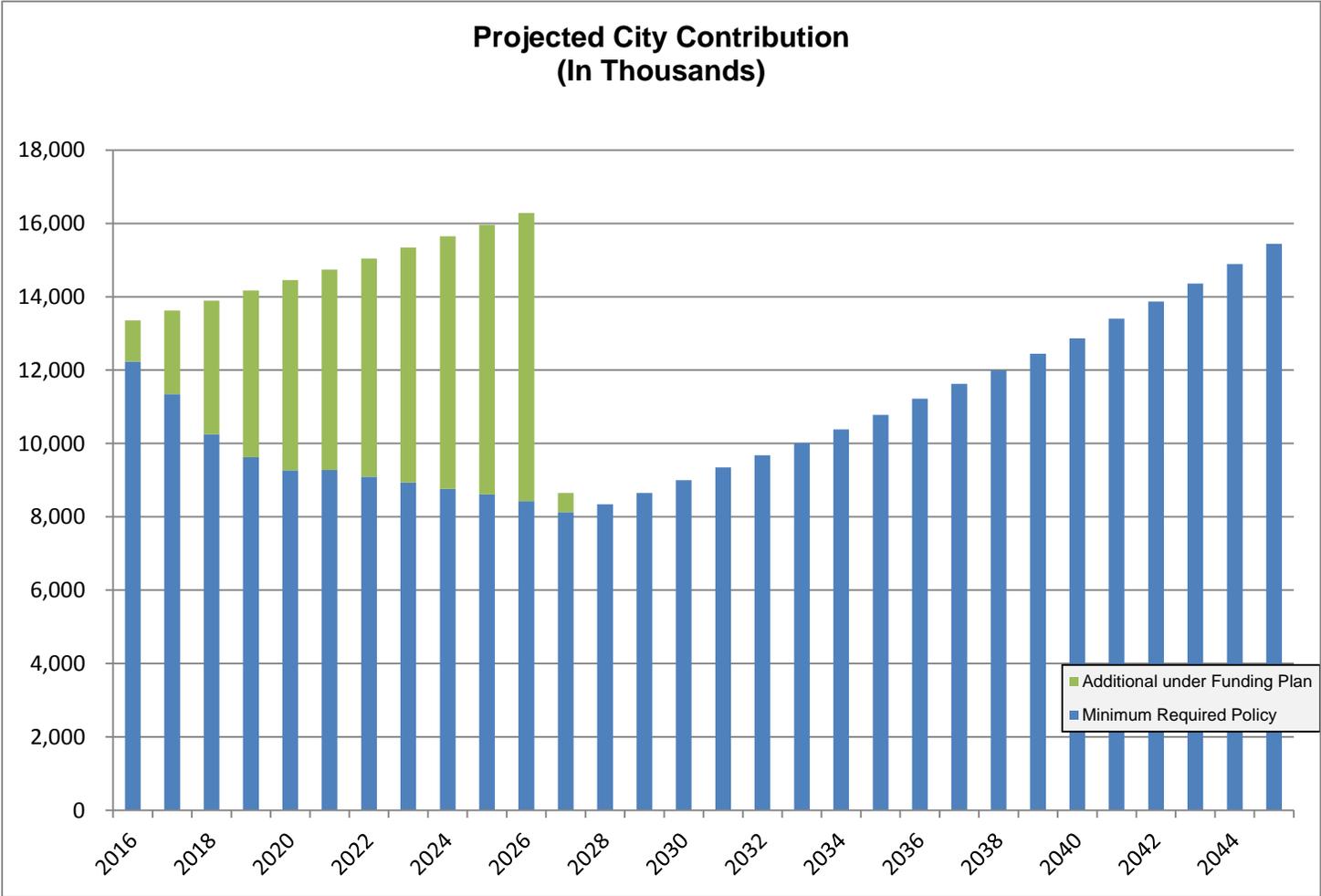
Projected Current and New Member Payroll



Section 4.3 - Projection of Employer Contribution Rates

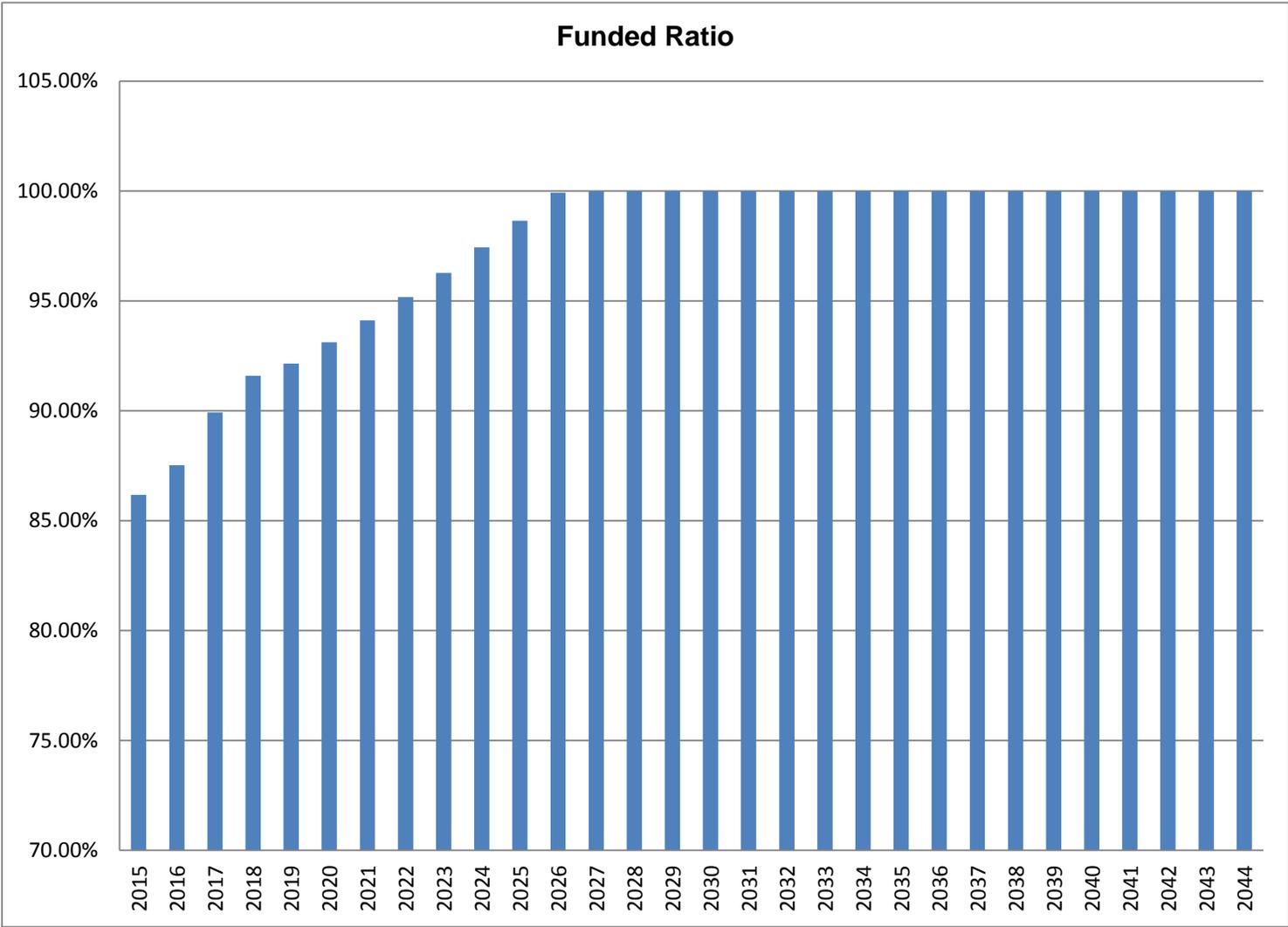


Section 4.4 - Projection of Employer Contribution Amounts



The 2016 projected contribution amount under funding plan, which is \$13,353,304, is assumed to be 2% higher than FY2015 actual contribution.

Section 4.5 - Projection of Funded Status





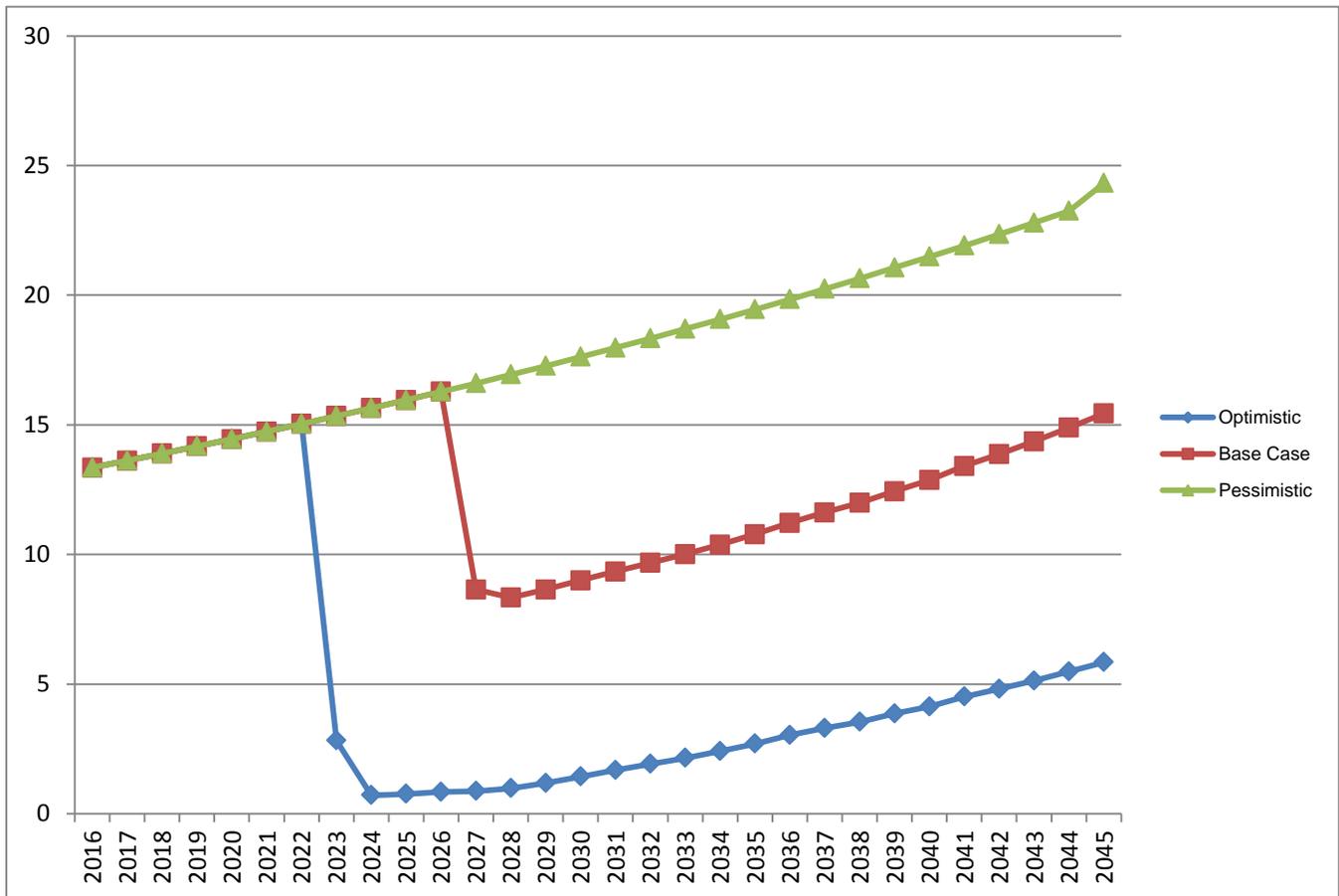
Section 4.6 - Table of Projected Actuarial Results (\$'s in 000's)

Year	Cashflows for the next year						Valuation Amounts on June 30				
	Contributions			Employee Contributions	Total Contributions	Benefit Payments	Investment Earnings	Actuarial	Actuarial	Funded Ratio	Surplus (Deficit)
	Min Req'd	Additional	Funding Plan					Value of Asset	Accrued Liability		
2015	12,233	1,121	13,353	2,926	16,279	33,284	34,903	459,480	533,198	86.17%	(73,718)
2016	11,349	2,272	13,620	3,023	16,643	34,771	41,761	477,378	545,413	87.53%	(68,035)
2017	10,251	3,642	13,893	3,119	17,012	36,255	38,833	501,012	557,173	89.92%	(56,161)
2018	9,620	4,550	14,171	3,215	17,386	37,896	33,514	520,602	568,451	91.58%	(47,849)
2019	9,265	5,189	14,454	3,317	17,771	39,305	36,599	533,605	579,064	92.15%	(45,458)
2020	9,278	5,465	14,743	3,432	18,175	40,553	37,624	548,670	589,258	93.11%	(40,588)
2021	9,096	5,942	15,038	3,546	18,584	41,932	38,657	563,915	599,171	94.12%	(35,256)
2022	8,938	6,401	15,339	3,661	19,000	43,263	39,696	579,224	608,612	95.17%	(29,388)
2023	8,761	6,884	15,646	3,784	19,430	44,512	40,748	594,657	617,656	96.28%	(22,999)
2024	8,615	7,344	15,958	3,920	19,878	45,562	41,824	610,323	626,381	97.44%	(16,058)
2025	8,428	7,850	16,278	4,061	20,339	46,487	42,937	626,462	635,048	98.65%	(8,586)
2026	8,131	516	8,647	4,214	12,860	47,524	43,814	643,252	643,781	99.92%	(530)
2027	8,341	0	8,341	4,362	12,704	48,698	44,408	652,403	652,403	100.00%	0
2028	8,648	0	8,648	4,507	13,154	49,863	44,972	660,817	660,817	100.00%	0
2029	8,995	0	8,995	4,668	13,663	50,661	45,541	669,081	669,081	100.00%	0
2030	9,345	0	9,345	4,844	14,189	51,232	46,137	677,624	677,624	100.00%	0
2031	9,683	0	9,683	5,027	14,709	51,900	46,769	686,718	686,718	100.00%	0
2032	10,014	0	10,014	5,217	15,231	52,467	47,437	696,296	696,296	100.00%	0
2033	10,382	0	10,382	5,408	15,790	53,100	48,149	706,498	706,498	100.00%	0
2034	10,778	0	10,778	5,604	16,383	53,815	48,903	717,337	717,337	100.00%	0
2035	11,223	0	11,223	5,812	17,035	54,481	49,706	728,808	728,808	100.00%	0
2036	11,623	0	11,623	6,029	17,652	55,063	50,565	741,068	741,068	100.00%	0
2037	11,994	0	11,994	6,246	18,241	55,974	51,475	754,222	754,222	100.00%	0
2038	12,445	0	12,445	6,462	18,906	56,931	52,426	767,963	767,963	100.00%	0
2039	12,867	0	12,867	6,686	19,553	58,005	53,420	782,364	782,364	100.00%	0
2040	13,406	0	13,406	6,910	20,316	58,967	54,460	797,331	797,331	100.00%	0
2041	13,871	0	13,871	7,156	21,026	59,877	55,560	813,141	813,141	100.00%	0
2042	14,360	0	14,360	7,403	21,763	60,979	56,717	829,850	829,850	100.00%	0
2043	14,891	0	14,891	7,659	22,550	62,126	57,929	847,351	847,351	100.00%	0
2044	15,442	0	15,442	7,922	23,364	63,312	59,168	865,705	865,705	100.00%	0

Note: Forecast based on the present employees with assumption about replacement employees and change in plan Provisions apply to new members starting in 2012.

Section 4.7 - Sensitivity Analysis

Impact Various Investment Rates of Return Have on the Employer Contribution Amount



Section 5: Member Data



Section 5.1 - Summary of Members Included

As of June 30	Summary of Members Included							
	General		Police		Fire		Total	
	2015	2014	2015	2014	2015	2014	2015	2014
Active Members								
(1) Number	483	476	121	115	84	84	688	675
(2) Average Age	46	46.4	42.3	42.3	45.2	44.6	45.3	45.5
(3) Average Credited Service	10.8	11	15.4	15.4	16.6	15.8	12.3	12.3
(4) Average Annual Earnings	65,219	65,374	86,263	88,532	81,197	79,259	70,871	71,047
Retirees, Disableds and Beneficiaries								
(1) Number	647	631	196	196	153	153	996	980
(2) Average Age	68.5	68	65.5	64.8	70.4	69.6	68.2	67.6
(3) Average Monthly Pension Benefit	2,191	2,186	3,700	3,682	3,557	3,551	2,698	2,699
Vested Terminations (vested at time of termination, not refunded contributions or commenced benefit)								
(1) Number	132	128	10	9	3	3	145	140
(2) Average Age	50.7	50.1	50.0	49.9	47.9	47.0	50.6	50.0
(3) Average Monthly Pension Benefit	1,032	1,016	1,738	1,922	1,923	1,923	1,099	1,093
Total Number of Members	1,262	1,235	327	320	240	240	1,829	1,795

Section 5.2 - Age and Service Distribution of Active Members As of June 30, 2015

Total

Attained Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
15-19	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
20-24	Number	6	0	0	0	0	0	0	0	6
	Total Salary	225,253	0	0	0	0	0	0	0	225,253
	Average Salary	37,542	0	0	0	0	0	0	0	37,542
25-29	Number	43	0	0	0	0	0	0	0	43
	Total Salary	2,202,743	0	0	0	0	0	0	0	2,202,743
	Average Salary	51,227	0	0	0	0	0	0	0	51,227
30-34	Number	39	6	3	0	0	0	0	0	48
	Total Salary	2,314,415	392,379	179,261	0	0	0	0	0	2,886,055
	Average Salary	59,344	65,397	59,754	0	0	0	0	0	60,126
35-39	Number	29	23	18	17	0	0	0	0	87
	Total Salary	1,608,973	1,501,760	1,192,915	1,367,644	0	0	0	0	5,671,292
	Average Salary	55,482	65,294	66,273	80,450	0	0	0	0	65,187
40-44	Number	34	33	17	55	9	0	0	0	148
	Total Salary	1,921,167	2,394,088	1,243,363	4,467,245	621,803	0	0	0	10,647,666
	Average Salary	56,505	72,548	73,139	81,223	69,089	0	0	0	71,944
45-49	Number	11	18	17	44	38	11	0	0	139
	Total Salary	666,020	1,394,328	1,228,508	3,592,069	3,420,827	990,950	0	0	11,292,702
	Average Salary	60,547	77,463	72,265	81,638	90,022	90,086	0	0	81,242
50-54	Number	15	15	14	26	29	16	0	0	115
	Total Salary	811,850	917,369	1,052,704	1,944,448	2,409,613	1,321,276	0	0	8,457,260
	Average Salary	54,123	61,158	75,193	74,786	83,090	82,580	0	0	73,541
55-59	Number	14	11	13	17	12	5	1	0	73
	Total Salary	839,524	726,648	1,045,128	1,190,842	1,007,000	408,089	95,878	0	5,313,109
	Average Salary	59,966	66,059	80,394	70,050	83,917	81,618	95,878	0	72,782
60-64	Number	5	2	6	4	5	2	1	0	25
	Total Salary	391,412	116,879	314,039	386,404	299,014	200,448	60,041	0	1,768,237
	Average Salary	78,282	58,440	52,340	96,601	59,803	100,224	60,041	0	70,729
65-69	Number	0	2	0	0	1	0	0	1	4
	Total Salary	0	125,887	0	0	70,653	0	0	98,331	294,871
	Average Salary	0	62,944	0	0	70,653	0	0	98,331	73,718
TOTAL	Number	196	110	88	163	94	34	2	1	688
	Total Salary	10,981,356	7,569,339	6,255,918	12,948,653	7,828,910	2,920,763	155,919	98,331	48,759,189
	Average Salary	56,027	68,812	71,090	79,440	83,286	85,905	77,960	98,331	70,871

Section 5.2 (cont'd)

Age and Service Distribution of Active Members As of June 30, 2015

General

Attained Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
15-19	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
20-24	Number	5	0	0	0	0	0	0	0	5
	Total Salary	218,165	0	0	0	0	0	0	0	218,165
	Average Salary	43,633	0	0	0	0	0	0	0	43,633
25-29	Number	26	0	0	0	0	0	0	0	26
	Total Salary	1,251,252	0	0	0	0	0	0	0	1,251,252
	Average Salary	48,125	0	0	0	0	0	0	0	48,125
30-34	Number	29	5	2	0	0	0	0	0	36
	Total Salary	1,723,197	315,123	103,020	0	0	0	0	0	2,141,340
	Average Salary	59,421	63,025	51,510	0	0	0	0	0	59,482
35-39	Number	25	19	15	4	0	0	0	0	63
	Total Salary	1,387,525	1,186,175	919,882	255,930	0	0	0	0	3,749,512
	Average Salary	55,501	62,430	61,325	63,983	0	0	0	0	59,516
40-44	Number	32	26	11	12	6	0	0	0	87
	Total Salary	1,818,437	1,863,556	754,250	735,847	336,201	0	0	0	5,508,291
	Average Salary	56,826	71,675	68,568	61,321	56,034	0	0	0	63,314
45-49	Number	11	16	14	23	15	6	0	0	85
	Total Salary	666,020	1,236,181	967,193	1,724,285	1,056,529	430,614	0	0	6,080,822
	Average Salary	60,547	77,261	69,085	74,969	70,435	71,769	0	0	71,539
50-54	Number	15	15	13	16	15	12	0	0	86
	Total Salary	811,850	917,369	974,581	1,067,342	1,137,654	903,182	0	0	5,811,978
	Average Salary	54,123	61,158	74,968	66,709	75,844	75,265	0	0	67,581
55-59	Number	14	11	13	15	8	5	1	0	67
	Total Salary	839,524	726,648	1,045,128	1,024,282	637,957	408,089	95,878	0	4,777,506
	Average Salary	59,966	66,059	80,394	68,285	79,745	81,618	95,878	0	71,306
60-64	Number	5	2	6	3	5	2	1	0	24
	Total Salary	391,412	116,879	314,039	285,218	299,014	200,448	60,041	0	1,667,051
	Average Salary	78,282	58,440	52,340	95,073	59,803	100,224	60,041	0	69,460
65-69	Number	0	2	0	0	1	0	0	1	4
	Total Salary	0	125,887	0	0	70,653	0	0	98,331	294,871
	Average Salary	0	62,944	0	0	70,653	0	0	98,331	73,718
TOTAL	Number	162	96	74	73	50	25	2	1	483
	Total Salary	9,107,381	6,487,817	5,078,094	5,092,904	3,538,007	1,942,333	155,919	98,331	31,500,786
	Average Salary	56,218	67,581	68,623	69,766	70,760	77,693	77,960	98,331	65,219

Section 5.2 (cont'd)

Age and Service Distribution of Active Members As of June 30, 2015

Police

Attained Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
15-19	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
20-24	Number	1	0	0	0	0	0	0	0	1
	Total Salary	7,088	0	0	0	0	0	0	0	7,088
	Average Salary	7,088	0	0	0	0	0	0	0	7,088
25-29	Number	15	0	0	0	0	0	0	0	15
	Total Salary	864,900	0	0	0	0	0	0	0	864,900
	Average Salary	57,660	0	0	0	0	0	0	0	57,660
30-34	Number	7	1	0	0	0	0	0	0	8
	Total Salary	429,919	77,256	0	0	0	0	0	0	507,175
	Average Salary	61,417	77,256	0	0	0	0	0	0	63,397
35-39	Number	3	1	2	9	0	0	0	0	15
	Total Salary	167,459	88,127	190,235	790,804	0	0	0	0	1,236,625
	Average Salary	55,820	88,127	95,118	87,867	0	0	0	0	82,442
40-44	Number	0	0	4	26	2	0	0	0	32
	Total Salary	0	0	338,063	2,327,811	195,035	0	0	0	2,860,909
	Average Salary	0	0	84,516	89,531	97,518	0	0	0	89,403
45-49	Number	0	1	3	11	14	4	0	0	33
	Total Salary	0	81,797	261,314	1,044,348	1,493,680	468,968	0	0	3,350,107
	Average Salary	0	81,797	87,105	94,941	106,691	117,242	0	0	101,518
50-54	Number	0	0	0	7	6	3	0	0	16
	Total Salary	0	0	0	616,619	575,581	317,675	0	0	1,509,875
	Average Salary	0	0	0	88,088	95,930	105,892	0	0	94,367
55-59	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
60-64	Number	0	0	0	1	0	0	0	0	1
	Total Salary	0	0	0	101,186	0	0	0	0	101,186
	Average Salary	0	0	0	101,186	0	0	0	0	101,186
65-69	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
TOTAL	Number	26	3	9	54	22	7	0	0	121
	Total Salary	1,469,366	247,179	789,613	4,880,767	2,264,295	786,643	0	0	10,437,863
	Average Salary	56,514	82,393	87,735	90,385	102,923	112,378	0	0	86,263



Section 5.2 (con'td)

Age and Service Distribution of Active Members As of June 30, 2015

Fire

Attained Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
15-19	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
20-24	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
25-29	Number	2	0	0	0	0	0	0	0	2
	Total Salary	86,590	0	0	0	0	0	0	0	86,590
	Average Salary	43,295	0	0	0	0	0	0	0	43,295
30-34	Number	3	0	1	0	0	0	0	0	4
	Total Salary	161,299	0	76,240	0	0	0	0	0	237,539
	Average Salary	53,766	0	76,240	0	0	0	0	0	59,385
35-39	Number	1	3	1	4	0	0	0	0	9
	Total Salary	53,990	227,459	82,798	320,911	0	0	0	0	685,158
	Average Salary	53,990	75,820	82,798	80,228	0	0	0	0	76,129
40-44	Number	2	7	2	17	1	0	0	0	29
	Total Salary	102,730	530,533	151,050	1,403,587	90,567	0	0	0	2,278,467
	Average Salary	51,365	75,790	75,525	82,564	90,567	0	0	0	78,568
45-49	Number	0	1	0	10	9	1	0	0	21
	Total Salary	0	76,351	0	823,437	870,619	91,368	0	0	1,861,775
	Average Salary	0	76,351	0	82,344	96,735	91,368	0	0	88,656
50-54	Number	0	0	1	3	8	1	0	0	13
	Total Salary	0	0	78,123	260,488	696,378	100,419	0	0	1,135,408
	Average Salary	0	0	78,123	86,829	87,047	100,419	0	0	87,339
55-59	Number	0	0	0	2	4	0	0	0	6
	Total Salary	0	0	0	166,560	369,043	0	0	0	535,603
	Average Salary	0	0	0	83,280	92,261	0	0	0	89,267
60-64	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
65-69	Number	0	0	0	0	0	0	0	0	0
	Total Salary	0	0	0	0	0	0	0	0	0
	Average Salary	0	0	0	0	0	0	0	0	0
TOTAL	Number	8	11	5	36	22	2	0	0	84
	Total Salary	404,609	834,342	388,211	2,974,982	2,026,607	191,787	0	0	6,820,538
	Average Salary	50,576	75,849	77,642	82,638	92,119	95,894	0	0	81,197

Section 5.3 - Member Data Reconciliation

	Active Members	Inactive Members				Total
		With Deferred Benefits	Retired Members	Disabled Members	Bene-ficiaries	
As of 6/30/2014	675	140	814	28	138	1795
Age Retirements	(25)	(2)	27			0
Disability Retirements	(1)			1		0
Deaths Without Beneficiary			(9)	(1)	(3)	(13)
Deaths With Beneficiary			(7)		7	0
Non-vested Terminations	(12)					(12)
Vested Terminations	(9)	9				0
Rehires	2					2
Cash-outs	(1)	(2)				(3)
Expiration of Benefits						0
Data Corrections			1			1
Transfers Out						0
Pick Ups						0
Net Change	(46)	5	12	0	4	(25)
New Entrants During the Year	59					59
As of 6/30/2015	688	145	826	28	142	1829

Number Added To And Removed From Active Membership

Year Ended 30-Jun	Number Added During Year		Terminations During Year										Active Members End of Year
			Age & Service Retirement		Disability Retirement		Died-in Service		Withdrawals				
	A	E	A	E	A	E	A	E	Vested	Other*	Total		
GENERAL MEMBERS													
2011	15	69	54	13.4	0	1.4	1	0.6	6	8	14	19.6	462
2012	51	52	21	16.2	0	1.4	0	0.6	21	10	31	21.6	461
2013	36	37	11	16.8	2	1.4	2	0.7	14	8	22	22.2	460
2014	38	22	14	19.5	0	1.4	0	0.8	3	5	8	17.8	476
2015	48	41	23	23.8	1	1.4	0	0.8	8	9	17	18	483
5-Yr. Totals			123	89.7	3	7	3	3.5			92	99.2	
POLICE MEMBERS													
2011	0	5	0	4	0	0.3	1	0.1	3	1	4	0.7	119
2012	9	15	13	2.9	0	0.3	0	0.1	1	1	2	1.6	113
2013	9	7	7	3.4	0	0.3	0	0.1	0	0	0	1.7	115
2014	3	3	2	4.3	0	0.3	0	0.1	0	1	1	1.6	115
2015	10	4	1	4.6	0	0.3	0	0.1	1	2	3	1.3	121
5-Yr. Totals			23	19.2	0	1.5	1	0.5			10	6.9	
FIRE MEMBERS													
2011	0	5	4	2.7	0	0.1	0	0.1	0	1	1	0.9	83
2012	0	7	5	2.4	0	0.1	1	0.1	0	1	1	0.8	76
2013	9	0	0	3.3	0	0.1	0	0.1	0	0	0	0.9	85
2014	0	1	1	3.3	0	0.1	0	0.1	0	0	0	0.9	84
2015	1	1	1	3.9	0	0.1	0	0.1	0	0	0	0.9	84
5-Yr. Totals			11	15.6	0	0.5	1	0.5			2	4.4	

Section 5.4 - Schedule of Active Member Data

Valuation Date	Number				Annual Earnings	Annual Average Earnings	Percent Increase/ (Decrease) in Average Earnings
	General	Police	Fire	Total			
June 30, 2006	554	154	88	796	49,626,748	62,345	7.5%
June 30, 2007	561	151	89	801	50,677,914	63,268	1.5%
June 30, 2008	564	149	92	805	51,287,330	63,711	0.7%
June 30, 2009	547	148	91	786	52,559,496	66,870	5.0%
June 30, 2010	516	124	88	728	48,688,316	66,880	0.0%
June 30, 2011	462	119	83	664	45,921,381	69,159	3.4%
June 30, 2012	461	113	76	650	44,003,987	67,698	-2.1%
June 30, 2013	460	115	85	660	45,063,112	68,277	0.9%
June 30, 2014	476	115	84	675	47,956,745	71,047	4.1%
June 30, 2015	483	121	84	688	48,759,189	70,871	-0.2%



Section 5.5 - Schedule of Inactive Member Data

Valuation Date	Number				Annual Benefit Payments	Average Annual Benefit Payments
	General	Police	Fire	Total		
June 30, 2010				127	1,379,207	10,860
June 30, 2011	121	11	3	135	1,459,626	10,812
June 30, 2012	138	12	3	153	1,838,157	12,014
June 30, 2013	133	9	3	145	1,955,314	13,485
June 30, 2014	128	9	3	140	1,836,967	13,121
June 30, 2015	132	10	3	145	1,912,274	13,188

Section 5.6 - Schedule of Retired Members by Type of Benefit and Option Elected

Amount of Monthly Pension Benefit	Number of Recipients	Type of Pension Benefit			Option Selected							
		1	2	3	1	2	3	4	5	6	7	
\$ 1 – \$ 300	6	6	0	0	4	0	1	1	0	0	0	0
301 – 600	40	28	8	4	22	0	8	3	1	4	2	
601 – 900	70	54	13	3	41	0	19	6	0	2	2	
901 – 1,200	106	65	33	8	68	0	21	6	2	8	1	
1,201 – 1,500	57	41	12	4	30	2	17	5	3	0	0	
1,501 – 1,800	63	46	15	2	27	0	18	11	4	2	1	
1,801 – 2,100	58	41	16	1	30	0	18	5	3	0	2	
2,101 – 2,400	78	63	13	2	37	4	19	9	5	2	2	
2,401 – 2,700	88	78	8	2	33	2	29	13	11	0	0	
2,701 – 3,000	55	49	5	1	21	0	17	12	5	0	0	
3,001 – 3,300	70	66	4	0	27	0	21	16	5	1	0	
3,301 – 3,600	56	52	4	0	20	1	19	12	3	1	0	
3,601 – 3,900	44	42	2	0	9	1	21	7	5	0	1	
3,901 – 4,200	40	36	3	1	12	1	17	8	1	0	1	
Over \$4,200	165	159	6	0	47	1	59	44	7	2	5	
Totals	996	826	142	28	428	12	304	158	55	22	17	

Type of Pension Benefit	Option Selected
1. Regular retirement	1. Whole Life Annuity
2. Survivor payment	2. 50% Joint and Contingent Annuity
3. Disability	3. 100% Joint and Contingent Annuity
	4. 50% Joint and Contingent and pop up Annuity
	5. 100% Joint and Contingent and pop up Annuity
	6. Straight Life equated
	7. Cash refund



Section 5.7 - Schedule of Retired Members and Beneficiaries

As of June 30	2015	2014	2013	2012	2011
Service					
(1) Number, Fiscal Year Start	814	808	797	769	721
(2) Net Change	12	6	11	28	48
(3) Number, Fiscal Year End	826	814	808	797	769
(4) Average Current Age	67.2	66.7	66.2	66.1	66
(5) Average Monthly Pension Benefit	2,893	2,901	2,870	2859	2817
Surviving Spouse's Benefits					
(1) Number, Fiscal Year Start	138	134	136	135	128
(2) Net Change	4	4	-2	1	7
(3) Number, Fiscal Year End	142	138	134	136	135
(4) Average Current Age	74.6	73.9	73.7	73.7	73.9
(5) Average Monthly Pension Benefit	1,816	1,781	1,714	1677	1675
Disabilities					
(1) Number, Fiscal Year Start	28	29	29	29	30
(2) Net Change	0	-1	0	0	-1
(3) Number, Fiscal Year End	28	28	29	29	29
(4) Average Current Age	64.8	65.1	63.8	66.5	65.5
(5) Average Monthly Pension Benefit	1,416	1,340	1,363	1318	1318
Total					
(1) Number, Fiscal Year Start	980	971	962	933	879
(2) Net Change	16	9	9	29	54
(3) Number, Fiscal Year End	996	980	971	962	933
(4) Average Current Age	68.2	67.6	67.1	67.2	67.2
(5) Average Monthly Pension Benefit	2,698	2,699	2,665	2,645	2,605

Section 5.8 - Retirees Added to and Removed from Rolls

Year Ended	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase in Annual Pension Allowances	Average Annual Pension Allowance
	No.	Annual Pension Allowances	No.	Annual Pension Allowances	No.	Annual Pension Allowances		
June 30, 2006	65	2,289,292	18	356,266	817	23,655,378	8.9%	28,954
June 30, 2007	26	781,783	23	545,506	820	23,891,655	1.0%	29,136
June 30, 2008	21	587,394	21	434,680	820	24,044,369	0.6%	29,322
June 30, 2009	35	1,058,152	21	492,876	834	24,609,645	2.4%	29,508
June 30, 2010	64	2,799,052	19	234,046	879	27,174,651	10.4%	30,915
June 30, 2011	70	2,348,793	16	359,570	933	29,163,874	7.3%	31,258
June 30, 2012	52	1,738,639	23	363,419	962	30,539,094	4.7%	31,745
June 30, 2013	39	1,088,155	30	570,919	971	31,056,330	1.7%	31,984
June 30, 2014	34	1,077,287	25	399,142	980	31,734,475	2.2%	32,382
June 30, 2015	36	1,092,699	20	577,986	996	32,249,189	1.6%	32,379

Section 5.9 - Schedule of Benefit Payments

Attained Ages	Regular retirement & Survivor payment		Disability		Total	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
30-34	0	0	0	0	0	0
35-39	0	0	1	9,625	1	9,625
40-44	5	128,199	0	0	5	128,199
45-49	10	347,555	1	6,655	11	354,210
50-54	57	2,476,429	3	64,151	60	2,540,579
55-59	137	5,515,813	2	37,793	139	5,553,606
60-64	191	7,379,304	7	91,708	198	7,471,012
65-69	192	6,944,642	8	178,945	200	7,123,587
70-74	146	3,953,892	2	40,729	148	3,994,621
75	17	463,870	1	13,345	18	477,215
76	10	230,664	0	0	10	230,664
77	15	315,455	0	0	15	315,455
78	24	593,910	0	0	24	593,910
79	15	356,335	0	0	15	356,335
80	21	629,363	0	0	21	629,363
81	9	221,980	0	0	9	221,980
82	13	255,971	1	5,448	14	261,419
83	19	429,826	1	13,930	20	443,756
84	14	254,163	0	0	14	254,163
85	8	161,541	0	0	8	161,541
86	12	242,398	0	0	12	242,398
87	11	161,489	0	0	11	161,489
88	11	227,166	0	0	11	227,166
89	5	99,118	0	0	5	99,118
90	8	94,168	0	0	8	94,168
91	4	75,667	1	13,549	5	89,216
92	5	72,346	0	0	5	72,346
93	3	50,383	0	0	3	50,383
94	4	69,671	0	0	4	69,671
95	0	0	0	0	0	0
96	0	0	0	0	0	0
97	1	14,989	0	0	1	14,989
98	0	0	0	0	0	0
99	0	0	0	0	0	0
100	0	0	0	0	0	0
101	0	0	0	0	0	0
102	1	7,000	0	0	1	7,000
103	0	0	0	0	0	0
Total	968	31,773,309	28	475,879	996	32,249,189

Section 5.9 (cont'd)
Schedule of Benefit Payments

Inactive Members		
Attained Ages	No.	Estimated Annual Allowances
33	2	27,513
35	0	0
36	2	27,872
37	1	9,059
38	3	45,711
39	8	103,083
40	5	54,995
41	3	37,262
42	1	983
43	6	83,420
44	5	33,083
45	5	97,061
46	6	141,667
47	10	182,877
48	7	94,353
49	4	55,642
50	9	129,401
51	5	62,611
52	3	27,605
53	7	83,051
54	9	165,908
55	5	92,413
56	9	86,908
57	6	68,934
58	5	21,303
59	4	59,129
60	3	28,081
61	3	20,460
62	1	23,927
63	1	395
64	0	0
65	1	2,206
66	2	7,253
67	3	19,705
69	1	18,403
Total	145	1,912,274

Section 6: Basis of the Actuarial Valuation

Section 6.1 - Brief Summary of Benefit Provisions - (June 30, 2015)

REGULAR RETIREMENT (NO REDUCTION FACTOR FOR AGE):

Eligibility

General: Age 50 with 25 years of service, or age 60 with 5 years of service.

Police-Fire: 25 years of service, or age 55 with 5 years of service.

If new hires or rehires on or after the effective date in the table below, vesting year in above changed from 5 to 10 years.

Employee Group	Effective date
AAPOA	1/1/2012
AFSCME	8/29/2011
CSS/PSS	1/1/2012
DEPCHIEFS	7/2/2012
FIRE	7/1/2012
NON-Union	7/1/2011
POLICEPRO	7/2/2012
TEAMSTERS	7/2/2012

Mandatory Retirement Age - None.

Annual Amount –

General: Total service times 2.5% of final average compensation.

Police-Fire: Total service times 2.75% of final average compensation.

A member may elect to receive all or a portion of his accumulated contributions in a lump sum at retirement and receive a lesser benefit.

Type of Final Average Compensation –

Highest 3 consecutive years out of last 10. Some lump sums included.

If new hires or rehires on or after the effective date in the table above, final average compensation in above changed from 3 to 5 years.

EARLY RETIREMENT (AGE REDUCTION FACTOR USED):

Eligibility - General: Age 50 with 20 years of service.

Police-Fire: Age 50 with 20 years of service.

Annual Amount - Computed as regular retirement but the pension portion of the allowance is reduced by .33% for each month by which retirement precedes:

General: Earlier of a) age 60, or b) the age the member would have had 25 years of service.

Police-Fire: Earlier of a) age 55 or b) the age the member would have had 25 years of service.

The annuity portion of the allowance is unreduced.

Section 6.1 - Brief Summary of Benefit Provisions - (June 30, 2015)

DEFERRED RETIREMENT (VESTED BENEFIT):

Eligibility - 5 years of service. Payable at age 60.

If new hires or rehires on or after the effective date in the table on the prior page, vesting year in above changed from 5 to 10 years.

Annual Amount - Same as regular retirement but based upon service and final average compensation at termination. (A member may elect to receive all or a portion of his accumulated contributions at termination, if the member's age plus service total at least 50, and receive a lesser benefit at age 60.)

DUTY DISABILITY RETIREMENT:

Eligibility - No age or service requirement.

Annual Amount - General: Computed as regular retirement. Minimum to age 60 is 18% of final average compensation. Minimum after age 60 is sum of a) 12% of the portion of final average compensation not in excess of Social Security base, plus b) 18% of final average compensation in excess of Social Security base. Upon termination of worker's compensation, additional service credit is granted for period in receipt of worker's compensation and benefit is recomputed.

Police-Fire: Computed as regular retirement. Minimum benefit is 25% of final average compensation. Upon termination of worker's compensation, additional service credit is granted for period in receipt of worker's compensation and benefit is recomputed.

NON-DUTY DISABILITY RETIREMENT:

Eligibility - 5 or more years of service.

If new hires or rehires on or after the effective date in the table on the prior page, vesting year in above changed from 5 to 10 years.

Annual Amount - General: Computed as regular retirement. Minimum to age 60 is 18% of final average compensation. Minimum after age 60 is sum of a) 12% of the portion of final average compensation not in excess of Social Security base, plus b) 18% of final average compensation in excess of Social Security base.

Police-Fire: Computed as regular retirement. Minimum benefit is 25% of final average compensation.

DUTY DEATH BEFORE RETIREMENT:

Eligibility - No age and service requirement.

Annual Amount - Computed as regular retirement but actuarially reduced in accordance with a 100% joint and survivor election. If the member had less than 25 years of service at time of death, a minimum of 25 years of service will be used to compute the benefits. Worker's compensation payments made to the member's beneficiary will offset the benefits paid by the Retirement System. Upon termination of worker's compensation payments the amount paid to the beneficiary will be the greater of the annual worker's compensation payment and the computed 100% joint and survivor retirement benefit.

Section 6.1 - Brief Summary of Benefit Provisions - (June 30, 2015)

NON-DUTY DEATH BEFORE RETIREMENT:

Eligibility - 5 years of service.

If new hires or rehires on or after the effective date in the table in the regular retirement section, vesting year in above changed from 5 to 10 years.

Annual Amount - Computed as regular retirement but actuarially reduced in accordance with a 100% joint and survivor election. If there is no named beneficiary, a lump sum will be payable to the estate.

POST-RETIREMENT ADJUSTMENTS:

Adjustments are made every July 1 to retirants and beneficiaries on the rolls at least 12 months. Adjustments are funded by financial gains, and are not guaranteed.

MEMBER CONTRIBUTIONS: 6% OF ANNUAL COMPENSATION WITH EFFECTIVE DATE IN THE FOLLOWING TABLE:

Employee Group	Effective date
AAPOA	1/1/2012
AFSCME	10/23/2011
CSS/PSS	8/14/2011
DEPCHIEFS	8/1/2010
FIRE	2/1/2010
NON-Union	7/1/2010
POLICEPRO	8/1/2010
TEAMSTERS	8/1/2010
COAM	5/6/2012

Section 6.1 - Brief Summary of Benefit Provisions - (June 30, 2015)

Ledger Balances Of Reserve Funds

The ledger balances (market value) of the Retirement System, as of June 30, 2015, were reported to the actuary to total \$ 472,373,896 as follows:

Account	Ledger Balance	
	6/30/2015	6/30/2014
Reserve for Employee Contributions	62,658,851	60,231,653
Reserve for Employer Contributions	61,373,053	63,773,400
Reserve for Retired Benefit Payments	348,341,992	345,680,258
Reserve for Undistributed Investment Income	0	0
Totals	472,373,896	469,685,311

The Analysis of Changes in Reserves is shown in section 2.6 and section 2.7.

Section 6.2 - Description of Actuarial Methods and Valuation Procedures

A. Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the **Entry Age Actuarial Cost Method** of funding.

Sometimes called a “funding method,” this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the plan is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each Member would have been eligible to join the Plan if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the Plan.

The Normal Cost for the Plan is determined by summing individual results for each active Member and determining an average normal cost rate by dividing the summed individual normal costs by the total payroll of Members before assumed retirement age.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the Normal Cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date.)

Lump sum redemption factors are assumed to be:

Members hired before July 1, 1982:	General - 10%
Members hired after June 30, 1982:	0%

The **Unfunded Actuarial Accrued Liability** is the excess of the Actuarial Accrued Liability over the Actuarial Value of Plan Assets actually on hand on the valuation date. The Unfunded Actuarial Accrued Liability is amortized as a level percent of payroll over a declining period. As of this valuation, the period is 25 years. This period of 25 years will continue in future valuation periods.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the Unfunded Actuarial Accrued Liability.

Section 6.2 - Description of Actuarial Methods and Valuation Procedures

B. Asset Valuation Method

The actuarial value of assets is based on a five-year smoothing method and is determined by spreading the effect of each year's investment return in excess of or below the expected return. The Fair Value of assets at the valuation date is reduced by the sum of the following:

- (i) 80% of the return to be spread during the first year preceding the valuation date,
- (ii) 60% of the return to be spread during the second year preceding the valuation date,
- (iii) 40% of the return to be spread during the third year preceding the valuation date, and
- (iv) 20% of the return to be spread during the fourth year preceding the valuation date.

The return to be spread is the difference between (1) the actual investment return on Fair Value and (2) the expected return on Fair Value.

C. Valuation Procedures

No actuarial liability is included for members who terminated non-vested prior to the valuation date, except those due a refund of contributions.

The compensation amounts used in the projection of benefits and liabilities were June 30, 2015, amount earned during the year provided by staff of the Retirement System.

No termination or retirement benefits were projected to be greater than the dollar limitation required by the Internal Revenue Code Section 415 for governmental plans.

Annual increases in salary were limited to the dollar amount defined under Internal Revenue Code Section 401(a)(17) for affected members.

Section 6.3 - Summary of Actuarial Assumptions and Changes in Assumptions

The current actuarial assumptions were adopted by the Board at its September 19, 2013 Board Meeting based on the results of Buck's quinquennial Experience Review for the period July 1, 2008 through June 30, 2013. The assumptions were first used with the June 30, 2013 actuarial valuation. The next Experience Review will cover the period of July 1, 2013 through June 30, 2018. The assumptions from that review will be first used in the June 30, 2018 valuation.

The rate of investment return, net of expenses, (regular interest) used in making the valuation was 7.0% per annum, compounded annually. This assumption is established by the Board of Trustees as provided in the Retirement System Ordinance, and was first used for the June 30, 1982 actuarial valuation. This rate consists of a real rate of return of 3.5% a year plus a long-term rate of wage inflation of 3.5% a year. This wage inflation assumption was first used in the June 30, 2004 actuarial valuation. Approximate internal rates of investment return, for the purposes of comparisons with assumed rates, have been as follows:

	Year Ended June 30					5 Year Arithmetic Average
	2015	2014	2013	2012	2011	
1) Nominal rate*	4.22%	14.23%	12.3%	0.0%	23.4%	
2) Valuation Asset Adjustment	<u>5.78</u>	<u>(3.03)</u>	<u>(8.28)</u>	<u>0.59</u>	<u>(19.60)</u>	
3) Total rate	10.0	11.2	4	0.6	3.8	5.92%
4) Increase in CPI	0.1	2.1	1.8	1.7	3.6	1.86%
5) Average salary increase	-0.2	4.1	0.9	-2.1	3.4	1.22%
6) Real Return						
-investment purposes (3)-(4)	9.9	9.1	2.2	-1.1	0.2	4.06%
-funding purposes (3)-(5)	10.2	7.1	3.1	2.7	0.4	4.70%
-assumption	3.5	3.5	3.5	3.5	3.5	3.50%

* The nominal rate of return was computed using the approximate formula $i = I$ divided by $1/2 (A + B - I)$, where I is realized investment income net of expenses, A is the beginning of year asset value, and B is the end of year asset value.

6.3 - Summary of Actuarial Assumptions and Changes in Assumptions

The mortality table used to measure post-retirement mortality was the RP 2000 Combined Table projected to 2007 set forward 2 years for males and set back 3 years for females. Disabled mortality rates are the standard post-retirement mortality rates set forward 10 years. These tables first used for the June 30, 2008 actuarial valuation. Pre-retirement mortality rates are assumed to be 75% of post-retirement mortality rates. For Police and Fire 50% of deaths-in-service are assumed to be duty related.

The above Mortality table is applied using full generational projection using mortality improvement scale AA. Actuarial Standards of Practice now require that the likelihood and extent of future mortality improvements be considered for valuations performed on or after June 30, 2011. Future generational rates are projected from 2012 based on Scale AA.

Sample Ages	Single Life Retirement Values							
	Present Value of \$1 Monthly for Life				Future Life Expectancy (Years)			
	Men	Women	Disabled Men	Disabled Women	Men	Women	Disabled Men	Disabled Women
45	\$157.97	\$163.86	\$142.20	\$152.66	37.22	43.28	27.79	33.71
50	150.73	158.89	130.26	143.95	32.02	38.22	22.80	28.75
55	141.06	152.25	116.11	133.17	26.93	33.23	18.21	24.03
60	128.99	143.60	100.05	120.71	22.10	28.36	14.09	19.68
65	114.83	132.85	82.42	106.56	17.66	23.70	10.48	15.71
70	98.71	120.28	64.58	90.98	13.66	19.39	7.47	12.17
75	80.89	105.94	48.29	74.28	10.12	15.45	5.16	9.06
80	63.00	90.11	35.63	57.74	7.20	11.93	3.58	6.51

6.3 - Summary of Actuarial Assumptions and Changes in Assumptions

Probabilities of retirement for members eligible to retire were:

Retirement Age	Age Based						Service Based		
	General		Police		Fire		Years of Service	Police	Fire
	Normal	Early	Normal	Early	Normal	Early			
50	45 %	23 %		35 %		25 %	25	70 %	50 %
51	40	15		35		25	26	70	35
52	40	15		35		25	27	70	35
53	40	15		35		25	28	50	35
54	40	18		35		25	29	50	25
55	40	30	75 %		24 %		30	75	25
56	40	42	75		24		31	75	25
57	40	42	75		24		32	75	25
58	25	42	75		24		33	75	25
59	25	42	75		34		34	75	25
60	25		100		100		35	100	100
61	35								
62	35								
63	35								
64	35								
65	60								
66	40								
67	40								
68	40								
69	40								
70	100								

The assumed conditions for retirement were:

Group	Eligibility Conditions for Retirement
General	50 years of age with 20 or more years of service (reduced); or 50 years of age with 25 or more years of service; or, 60 years of age with 5 or more years of service.
Police-Fire	50 years of age with 20 or more years of service (reduced); or 25 or more years of service; or, 55 years of age with 5 or more years of service.

The above retirement rate assumptions were first used for the June 30, 2013 actuarial valuation.

If new hires or rehires on or after the effective date in the table in the regular retirement portion of section 6.1, vesting year in above changed from 5 to 10 years.

6.3 - Summary of Actuarial Assumptions and Changes in Assumptions

Salary Adjustment Factors for Projections of Current Salaries to FAC					Probabilities of Becoming Disabled			
Sample	Percent Increase in Salary During Next Year				Sample	Percent Becoming Disabled Within Next Year		
	Merit & Longevity					Ages	General	Police
Ages	Base	General	Police	Fire				
20	3.50 %	4.0 %	6.0 %	5.8 %	20	0.06 %	0.08 %	0.02 %
25	3.50	3.6	5.1	5.0	25	0.06	0.08	0.02
30	3.50	2.8	3.2	3.4	30	0.06	0.08	0.02
35	3.50	2.1	1.9	1.9	35	0.06	0.08	0.02
40	3.50	1.8	1.2	1.2	40	0.10	0.14	0.03
45	3.50	1.5	0.9	0.9	45	0.24	0.32	0.08
50	3.50	1.0	0.7	0.7	50	0.42	0.56	0.14
55	3.50	0.7	0.5	0.5	55	0.65	0.86	0.22
60	3.50	0.5	0.3	0.4	60	0.86	1.14	0.29

Percent of disabilities assumed to be duty related: General: 25%, Police and Fire: 50%

Sample Rates of Separation from Active Employment Before Retirement, Death, or Disability					
% of Active Members Separating Within Next Year					
Ages	Years of Service	General		Police	Fire
		Male	Female		
ALL	0	6.00 %	16.00 %	6.00 %	4.50 %
	1	4.80	13.00	6.00	4.00
	2	4.00	11.00	4.00	3.60
	3	3.20	8.00	3.00	3.60
	4	2.40	6.00	2.50	3.60
20	5 and Over	3.20	6.50	2.40	1.40
25		3.20	6.50	2.40	1.40
30		3.20	6.50	2.40	1.10
35		2.50	5.00	1.75	0.90
40		2.50	5.00	0.74	1.00
45		2.50	5.00	0.48	0.90
50		2.50	5.00	0.48	0.50
55		2.50	5.00	0.48	0.50
60		2.50	5.00	0.48	0.50
65		2.50	5.00	0.48	0.50

The interest rate credited on refunds of accumulated contributions paid to terminating members was assumed to be 8.0% per annum, compounded quarterly.

The above withdrawal assumptions were first used for the June 30, 2013 actuarial valuation.

The above salary and disability assumptions were first used for the June 30, 2008 actuarial valuation.

6.3 - Summary of Actuarial Assumptions and Changes in Assumptions

Summary of Assumptions Used Miscellaneous and Technical Assumptions

Marriage Assumption:	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits.
Pay Increase Timing:	Middle of (Fiscal) year.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Decrement Relativity:	Decrement rates are used without adjustment for multiple decrement table effects.
Decrement Operation:	Disability decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during retirement eligibility.
Normal Form of Benefit:	The assumed normal form of benefit is straight life.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent-of-payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

Glossary of Terms

Actuarial Accrued Liability	Total accumulated cost to fund pension benefits arising from service in all prior years.
Actuarial Cost Method	Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a pension plan for a group of plan members to the years of service that give rise to that cost.
Actuarial Present Value of Future Benefits	Amount which, together with future interest, is expected to be sufficient to pay all future benefits.
Actuarial Valuation	Study of probable amounts of future pension benefits and the necessary amount of contributions to fund those benefits.
Actuary	Person who performs mathematical calculations pertaining to pension and insurance benefits based on specific procedures and assumptions.
Annual Required Contribution	Disclosure measure of annual pension cost.
GASB 67	Governmental Accounting Standards Board Statement Number 67.
Normal Cost	That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the plan as a whole.
Unfunded Actuarial Accrued Liability (UAAL)	The portion of the actuarial accrued liability not offset by plan assets.