Los Angeles County Employees Retirement Association

Actuarial Valuation of Retirement Benefits
June 30, 2014

By

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December 1, 2014

Board of Investments
LACERA
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Dear Members of the Board:

As requested, we have performed an actuarial valuation of retirement benefits for the Los Angeles County Employees Retirement Association (LACERA) as of June 30, 2014 to be used in determining the contribution rates effective July 1, 2015. The major findings of the valuation are contained in this report. This report reflects the benefit provisions and contribution rates in effect as of June 30, 2014, and LACERA's funding policy that was adopted in December of 2009 and amended as of February 2013. It should be noted that under this amended policy, the reserve value for STAR benefits is included in the Valuation Assets for 2014 and future valuations; however, the liability for any potential STAR benefits that may be granted in the future is not included in this valuation.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by LACERA's staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for LACERA have been determined on the basis of actuarial assumptions and methods that are individually reasonable (taking into account the experience of LACERA and reasonable expectations); and that, in combination, offer a reasonable estimate of anticipated experience affecting LACERA. Further, in our opinion, each actuarial assumption used is reasonably related to the experience of the Plan and to reasonable expectations, which, in combination, represent a reasonable estimate of anticipated experience for LACERA.

This valuation report is only an estimate of LACERA's financial condition as of a single date. It can neither predict LACERA's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of benefits, only the timing of contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

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Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The Board of Investments has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix A of this report.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts of LACERA. Actuarial computations under GASB Statements No. 25 and 27 are for purposes of fulfilling financial accounting requirements. The computations prepared for this purpose may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of LACERA's funding requirements as stated under their Funding Policy and the requirements of GASB Statements No. 25 and 27. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes. It should be noted that GASB Statement No. 67 applies for system financial reporting for plan years ending June 30, 2014 and later. Milliman has provided LACERA results relevant to this statement in a separate report.

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The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsors. We are not aware of any relationship that would impair the objectivity of our work.

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On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We would like to express our appreciation to Mr. Gregg Rademacher, Chief Executive Officer of LACERA, and to members of his staff, who gave substantial assistance in supplying the data on which this report is based.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We respectfully submit the following report, and we look forward to discussing it with you.

Sincerely,

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Consulting Actuary

Nick J. Collier, ASA, EA, MAAA
Consulting Actuary

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Section 1: Summary of the Findings

2014 Valuation Results

	June 30, 2014	June 30, 2013
Required Employer Contribution Rate	19.33%	21.34%
Funded Ratio	79.5%	75.0%

Overview

This report presents the results of the June 30, 2014 actuarial valuation. This valuation determines the required contribution rates payable starting July, 2015. Several key points are summarized as follows:

- **Investment Returns:** For the fiscal year ending in 2014, the fund returned 16.8% on a market basis (gross of investment expenses), a rate of return greater than the assumed rate. The recognition of net asset gains from the current and prior years resulted in a gain on the actuarial value of assets for the current year. In total, there was a $1.7 billion gain on actuarial assets as compared to the assumed rate of return for the prior year of 7.50%.
- **Employer Contribution Rates:** The total required Employer contribution rate decreased from the prior valuation by 2.01% (from 21.34% to 19.33% of payroll). The most significant factor causing this decrease was the recognition of asset gains from the current and prior years, which resulted in a 1.43% decrease. Additionally, Cost of Living Adjustments (COLAs) less than assumed and salary increases less than assumed caused further decreases in the employer rate. See the “Analysis of Change” section below for a listing of the sources of change.
- **Member Contribution Rates:** New member contribution rates for General Plan G and Safety Plan C are being recommended, effective July 1, 2015, based on the new plan normal cost rates calculated in the 2014 valuation. As shown in Section 5, we are recommending a decrease in the General Plan G member rate from 7.63% of payroll to 7.62%, and an increase in the Safety Plan C member rate from 13.39% of payroll to 13.42%.
- **Funding:** The Funded Ratio increased from 75.0% to 79.5%. The recognition of deferred asset gains from the current and prior years caused a 3.0% increase in the Funded Ratio. Additionally, the salary increases and COLA increases less than assumed caused further increases to the Funded Ratio. See the “Analysis of Change” below for a listing of the sources of change.

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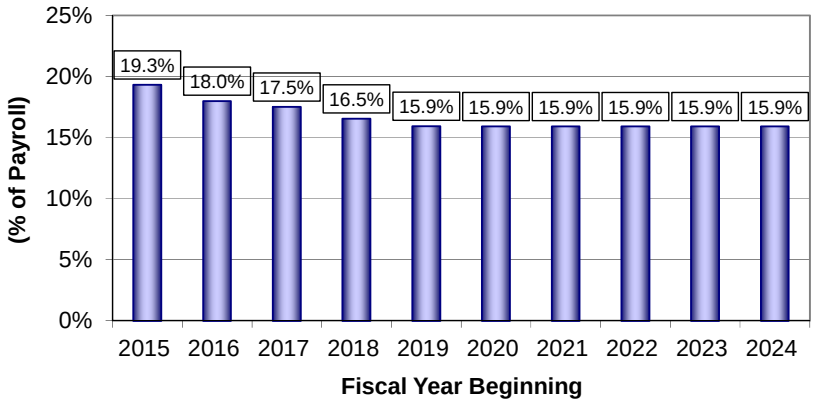
Required Contribution Rate

In accordance with LACERA's Funding Policy, the required Employer contribution rate, beginning July 1, 2015, is 19.33% of payroll. This is equal to the payment of the Employer Normal Cost rate plus a layered 30-year amortization of the UAAL. It should be noted that 19.33% is a weighted average for all LACERA plans. The actual percent of payroll to be contributed by the employers varies by plan as shown in Exhibit 11.

The new required rate is effective for the fiscal year beginning July 1, 2015. Based on asset gains and losses that are currently being deferred, it is expected that the Employer contribution rate will fluctuate over the next few years if all actuarial assumptions are met. To illustrate this impact, we have performed a 10-year projection of the Employer contribution rate that assumes all actuarial assumptions are met and reflects the projected recognition of deferred asset gains and losses existing as of June 30, 2014. This projection is shown in the chart below.

Projected Employer Contribution Rate*



**Projections assume that actuarial assumptions are met after June 30, 2014, and reflect the scheduled recognition of asset gains and losses currently being deferred.*

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Analysis of Change

The following chart shows that the recognition of prior asset losses was the most significant factor affecting the Employer contribution rate and the funded status.

Sources of Change	Employer Contribution Rate	Funded Ratio
June 30, 2013 Actuarial Valuation	**21.34%**	**75.0%**
Expected Year-to-Year Change	0.00%	0.5%
Recognized Asset Gain/Loss		
From Current Year	-0.55%	1.2%
From Prior Years	-0.88%	1.8%
Combined Asset Gain/Loss	-1.43%	3.0%
Payroll Increase < Assumed	0.11%	0.0%
Liability Gain/Loss		
Salary Increase < Assumed	-0.26%	0.4%
Retiree COLAs < Assumed	-0.38%	0.6%
Assumption Changes	0.00%	0.0%
Other	-0.05%	0.0%
Combined Liability Gain/Loss	**-0.69%**	**1.0%**
Total Change	**-2.01%**	**4.5%**
June 30, 2014 Actuarial Valuation	**19.33%**	**79.5%**

Funding Progress

Based on the 2013 valuation, the expected Unfunded Actuarial Accrued Liability (UAAL) amount as of June 30, 2014 was $13.65 billion. The actual UAAL for the fiscal year ending June 30, 2014 is $11.29 billion. The decrease was primarily due to a net gain on Valuation Assets of $1.7 billion.

One measure of the funding adequacy of the Plan is the Funded Ratio, which compares the value of the Actuarial Value of Assets (net of certain non-valuation reserves) to the Actuarial Accrued Liability (AAL), for all LACERA plans combined. LACERA's Funded Ratio was 94.5% as of June 30, 2008. As shown in the graph below, the Funded Ratio decreased steadily over the five year period following the economic downturn, to a low of 75.0%, due to the recognition of significant deferred asset losses. As of the 2014 valuation, deferred net asset gains are now being recognized in the valuation assets, and consequently the Funded Ratio has increased since the prior year.

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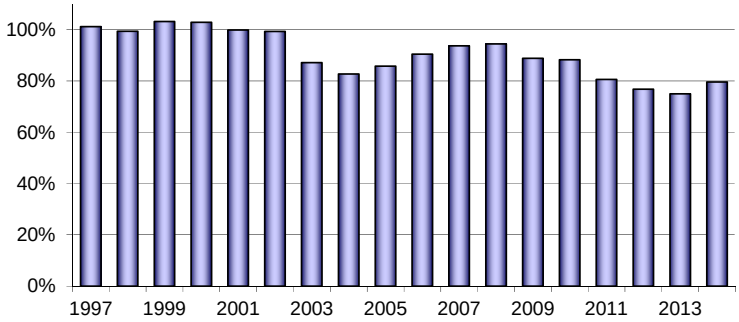
Funding Progress (continued)

On June 30, 2014, the total Market Value of the fund (including non-valuation reserves) was $47.7 billion. The Actuarial Value was $44.2 billion and was split between $0.5 billion of Non-Valuation Assets and $43.7 billion of Valuation Assets. The Valuation Assets are equal to 79.5% of the $54.9 billion AAL. The Actuarial Value of Assets is 93% of the Market Value of Assets.

All dollar amounts in billions

	Market Value of Total Assets	Actuarial Value		Actuarial Accrued Liability	Funded Ratio
		Non-Valuation Reserves	Valuation Assets		
2005	$ 32.0	$ 1.1	$ 29.5	$ 34.4	85.8%
2006	35.2	0.9	32.8	36.3	90.5
2007	40.9	0.8	37.0	39.5	93.8
2008	38.7	0.9	39.7	42.0	94.5
2009	30.5	0.8	39.5	44.5	88.9
2010	33.4	0.8	38.8	46.6	83.3
2011	39.5	0.9	39.2	48.6	80.6
2012	38.3	0.9	39.0	50.8	76.8
2013	41.8	0.4	39.9	53.2	75.0
2014	47.7	0.5	43.7	54.9	79.5

Historical Funded Ratios



Association Assets

- **Market Value:** The market value of assets has increased over the past 10 years. The average rate of return for the fund over that period is 7.9% (gross of expenses), as reported by LACERA; however, due to benefit payments being greater than contributions, the total annual increase in the market value has averaged less. This is typical of a mature retirement system. The values shown in the market value column are total assets net of liabilities and include all reserves.
- **Actuarial Assets:** The market value of total assets is used in calculating the actuarial value of assets. Under the actuarial asset method, the market value returns in excess of the assumption are smoothed over a five-year period.
- **Valuation Reserves:** The reserves represent the ownership of LACERA's assets. The reserves are established in compliance with the County Employees Retirement Law of 1937 as administered by the Board of Investments. These assets also reflect five-year smoothing. On a smoothed basis, the fund returned 11.8% for the prior year.
- **Non-Valuation Reserves:** The non-valuation reserves are set aside for obligations or contingencies. They are not used to fund the retirement benefits unless explicitly stated. These assets may also reflect smoothing.
- **Valuation Assets:** This is the combination of the valuation reserves and the portion of the non-valuation reserves that are recognized for funding purposes only as specified in LACERA's Funding Policy. It should be noted that under this policy the reserve value for STAR benefits is included in the Valuation Assets; however, the liability for any STAR benefits that may be granted in the future is not included in the valuation.

Future Impact of Recognition of Deferred Losses

The smoothing method is currently deferring $3.57 billion in net asset gains. As the currently deferred gains and losses are recognized over upcoming valuations, it is expected there will be fluctuations in the required Employer contribution rate.

The potential future impact of the recognition of these deferred gains and losses on the projected Employer contribution rate is illustrated in the chart on page 2.

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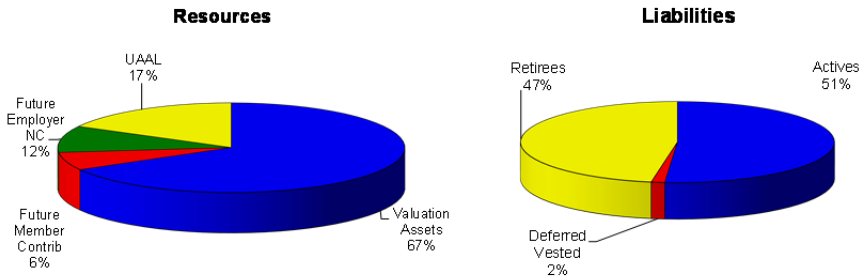
Actuarial Balance Sheet

The first step in the valuation process is to compare the total actuarial assets of LACERA with its total liabilities for all plans. In this analysis, assets equal those currently on hand, at the actuarial value, and also expected future contributions by both the employers and members. Liabilities reflect benefits already earned in the past and those expected to be earned in the future by current members. This relationship is shown in the following chart. The AAL is the total of these liabilities less expected future Normal Cost contributions.

Comparing the current and future assets to the current and future liabilities, we then determine the annual contribution amount for the coming fiscal year.

The 2014 actuarial valuation indicates that LACERA's Valuation Assets are less than its AAL. The difference between these two values is the UAAL. It is discussed, along with the effect of the experience gains and losses, in detail in Section 4, Actuarial Liabilities.



Funding Policy

The Board of Investments adopted a new Funding Policy in 2009, which was amended in 2013. Significant provisions of this policy, first reflected in the June 30, 2009 actuarial valuation, are as follows:

- **Asset Smoothing Period:** Asset gains and losses are smoothed over a five-year period.

Funding Policy (continued)

- **Amortization Period:** The funding policy utilizes a "layered" amortization method. Under the policy, the UAAL amount as of the valuation for which the policy was first effective (June 30, 2009) is amortized over a closed 30-year period. Subsequent gains and losses on the UAAL are amortized over new closed 30-year periods. The Employer contribution rate is not allowed to be less than the rate if LACERA amortized the total UAAL over a 30-year period. Exhibit 12 of this report illustrates in detail the calculation of the total UAAL rate for the fiscal year beginning in 2014.

  If LACERA moves to a negative UAAL position, only the normal cost rate will generally be paid. If the Funded Ratio exceeds 120%, the "surplus" amount will be amortized over an open 30-year period.

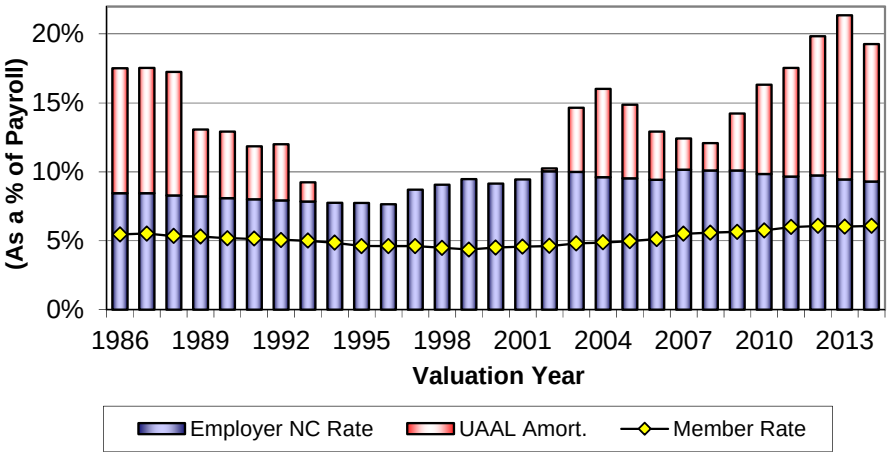
- **STAR Reserve:** The STAR reserve is included in the Valuation Assets. There is no corresponding liability for future STAR benefits included in the valuation. The inclusion of the STAR reserve in the Valuation Assets was formalized for the current and future actuarial valuations in the February 2013 amendment to LACERA's Funding Policy.

  Note that if the STAR reserve of $614 million was excluded from the Valuation Assets, the UAAL would increase by this amount. Under this hypothetical scenario, the required 2015 Employer contribution rate would increase by 0.53% to 19.86% and the Funded Ratio would decrease by 1.2% to 78.3%.

Employer Contribution Rates

Based on the results of the valuation, the required Employer contribution rate will decrease for the fiscal year beginning in 2015 to a rate of 19.33% of pay. A historical perspective of the Employer contribution rates is shown in the following graph.

Required Employer Contribution Rate

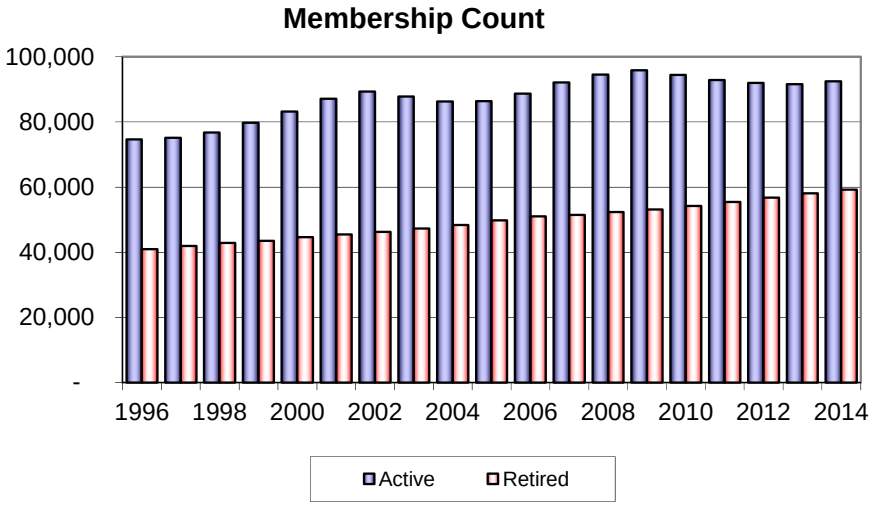


Member Rates

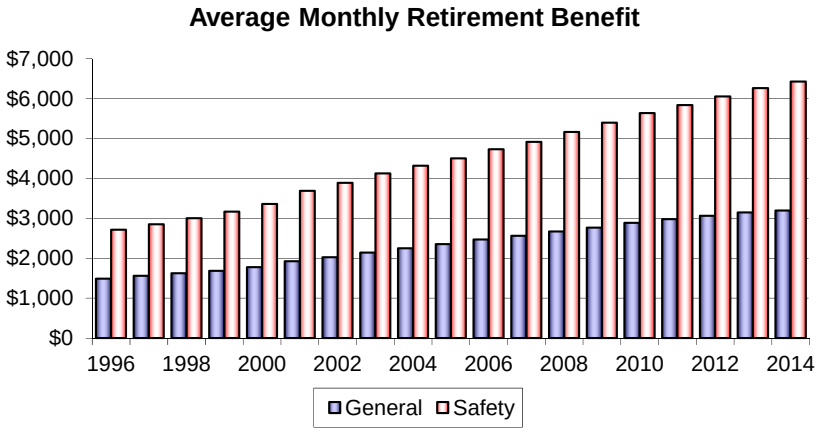
New member rates for members of General Plan G and Safety Plan C are being recommended that are equal to one-half of the plan's normal cost rate calculated as of the June 30, 2014 valuation. Note that LACERA has elected not to round member rates for General Plan G and Safety Plan C. Member rates for all plans are discussed in Section 5 and are shown in detail in Appendix D.

Member Information

Payroll and active membership have each increased slightly since 2013. As of June 30, 2014, the annualized payroll is $6.82 billion for 92,466 active members. This is a result of a 1.4% increase in average pay and a 1.0% increase in the number of active members.



Retired member counts and average retirement benefit amounts continue to increase steadily. For 2014, there were 59,229 retired members and beneficiaries with an average benefit of $3,816 per month. This represents a 2.0% increase in count and a 1.9% increase in the average monthly benefit.



Analysis of Change in Member Population

The following table summarizes the year-to-year change in member population. In addition to the movement shown below, 283 members transferred from Plan E to Plan D during the past year, and 87 members transferred from Plan D to Plan E.

	Active Contributing Members	Deferred Members*	Retirees, Disabilities, & Beneficiaries
June 30, 2013 Valuation	**91,545**	**12,319**	**58,086**
Termination without Refund	(1,121)	1,121	-
Termination with Refund	(457)	(237)	-
Active/Deferred Death with Annuity	(57)	(62)	119
Service Retirement	(2,004)	(352)	2,356
Disability Retirement	(149)	(14)	163
Retiree Death without Beneficiary	-	-	(1,492)
New Entrants	4,602	-	-
Rehires	107	(104)	(3)
Total Change	**921**	**352**	**1,143**
June 30, 2014 Valuation	**92,466**	**12,671**	**59,229**

** Includes non-vested terminated members who have not taken a refund.*

Sensitivity to Investment Return

The valuation results are projections based on the actuarial assumptions. Actual experience will differ from these assumptions, either increasing or decreasing the ultimate cost. Of the assumptions, the investment return generally has the biggest impact. The following chart provides a simple analysis on how the short-term costs are affected by the investment return assumption. Note that the long-term cost of the plan will be largely driven by actual investment returns and other experience; the assumptions impact the timing of the contributions.

	Investment Return Assumption		
	Current 7.50%	**+0.5% 8.00%**	**-0.5% 7.00%**
Employer Contribution Rate	19.33%	15.87%	22.84%
Change		-3.46%	3.51%
Funded Ratio	79.5%	84.1%	74.9%
Change		4.6%	-4.6%

Summary Valuation Results

The following Exhibit 1 presents a summary of key data elements on June 30, 2014 and June 30, 2013, and how they changed over the past year. More detail on each of these elements can be found in the following Sections and Exhibits of this report.

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Exhibit 1: Summary of Significant Valuation Results

		June 30, 2014	June 30, 2013	Percentage Change
I.	Total Membership			
	A. Active Members	92,466	91,545	1.0%
	B. Retired Members & Beneficiaries	59,229	58,086	2.0%
	C. Deferred Members	12,671	12,319	2.9%
	D. Total	164,366	161,950	1.5%
II.	Pay Rate as of June 30, 2014			
	A. Annual Total ($millions)	$ 6,815	$ 6,656	2.4%
	B. Monthly Average per Active Member	$ 6,142	$ 6,059	1.4%
III.	Average Monthly Benefit Paid to Current Retirees and Beneficiaries			
	A. Service Retirement	$ 3,847	$ 3,801	1.2%
	B. Disability Retirement	$ 4,828	$ 4,668	3.4%
	C. Surviving Spouse and Dependents	$ 2,567	$ 2,486	3.3%
	D. Total	$ 3,816	$ 3,746	1.9%
IV.	Actuarial Accrued Liability ($millions)			
	A. Active Members	$ 23,059	$ 22,267	3.6%
	B. Retired Members	$ 30,972	$ 30,120	2.8%
	C. Vested Terminated Members	$ 911	$ 860	5.9%
	D. Total	$ 54,942	$ 53,247	3.2%
V.	Assets			
	A. Market Value of Fund ($millions)	$ 47,722	$ 41,774	14.2%
	B. Actuarial Value ($millions)			
	1. Valuation Reserves	$ 43,654	$ 39,932	9.3%
	2. Non-valuation Reserves	$ 499	$ 440	13.5%
	C. Annual Investment Return			
	1. Market Basis (Gross Return)	16.8%	12.1%	na
	2. Valuation (Actuarial) Basis	11.8%	5.4%	na
VI.	Unfunded Actuarial Accrued Liability or (Surplus Funding) in $millions	$ 11,288	$ 13,315	(15.2)%
VII.	Required Employer contribution rate for all plans combined as a percent of total payroll			
	A. Gross Normal Cost	15.37%	15.47%	(0.6)%
	B. Member Contributions*	(6.08)%	(6.03)%	0.8%
	C. Employer Normal Cost	9.29%	9.44%	(1.6)%
	D. UAAL Amortization	10.04%	11.90%	(15.6)%
	E. Total Required Contribution Rate	19.33%	21.34%	(9.4)%
VIII.	Funded Ratio	79.5%	75.0%	6.0%
IX.	Results Based on Market Value (Informational Purposes Only)			
	Total Required Contribution Rate	16.23%	20.09%	(19.2)%
	Funded Ratio (excluding non-valuation reserves)	86.0%	77.6%	10.8%

**Includes non-contributory members. The average rate for contributory plans decreased from 7.87% to 7.85%.*

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Section 2: Scope of the Report

This report presents the actuarial valuation of the Los Angeles County Employees Retirement Association as of June 30, 2014. This valuation was requested by the Board of Investments. Section 31453 of the County Employees Retirement Law of 1937 (the '37 Act) requires an actuarial valuation to be performed at least every three years for the purpose of setting contribution rates. The 2014 valuation meets this requirement. Under LACERA's Funding Policy, annual valuations determine the Employer contribution rates each year. Member contribution rates are set each triennial valuation, or in years in which relevant actuarial assumptions are altered, such as 2013. For members of General Plan G and Safety Plan C, member contribution rates are recalculated each year, based on one-half of the plan's normal cost rate.

In reading our cover letter, please pay particular attention to the guidelines employed in the preparation of this report. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings depend. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings resulting from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of the system. The assets and investment income are presented in Exhibits 2-4. Exhibit 5 develops the Actuarial Value of Assets as of June 30, 2014. Exhibit 6 develops the Valuation Assets used for funding benefits.

Section 4 describes the benefit obligations of LACERA. Exhibit 7 is the Actuarial Balance Sheet and Exhibit 8a analyzes the change in UAAL (Surplus Funding). Exhibit 8b shows a history of these changes.

Section 5 discusses the member contribution rates.

Section 6 discusses the Employer contributions needed to fund the benefits under the actuarial cost method in use.

Section 7 discloses the information required under Statement No. 25 of the Governmental Accounting Standards Board (GASB). It should be noted that GASB Statement No. 67 applies for system financial reporting for plan years ending June 30, 2014 and later. Milliman has provided LACERA results relevant to this statement in a separate report.

Section 8 shows the estimated cash flow of the system, including a projection of both contributions and benefit payments.

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Scope of the Report (continued)

This report includes several appendices:

Appendix A	A summary of the actuarial procedures and assumptions used to estimate liabilities and contributions.
Appendix B	A summary of the current benefit structure, as determined by the provisions of governing law on June 30, 2014.
Appendix C	Schedules of valuation data classified by various categories of plan members.
Appendix D	Member contribution rates by plan.
Appendix E	Historical information.
Appendix F	A glossary of actuarial terms used in this report.

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Section 3: Assets

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is June 30, 2014. On that date, the assets available for the payment of retirement benefits are appraised. These assets are compared with the actuarial liabilities (both accrued and future) for current members, which are generally in excess of the actuarial assets. The purpose of the valuation is to determine what future contributions by the members and employers are needed to pay all expected future benefits.

This section of the report looks at the determination of assets used for funding purposes. In the next section, the actuarial liabilities will be discussed. Sections 5 and 6 review the process for determining required contributions based on the relationship between the actuarial assets and the actuarial liabilities.

A historical summary of the system's assets is presented below:

All dollar amounts in billions

		Actuarial Value		
	Market Value of Total Assets	Non-Valuation Reserves	Valuation Assets	Total Fund Return*
2005	$ 32.0	$ 1.1	$ 29.5	11.0%
2006	35.2	0.9	32.8	13.0
2007	40.9	0.8	37.0	19.1
2008	38.7	0.9	39.7	-1.5
2009	30.5	0.8	39.5	-18.3
2010	33.4	0.8	38.8	11.8
2011	39.5	0.9	39.2	20.4
2012	38.3	0.9	39.0	0.3
2013	41.8	0.4	39.9	12.1
2014	47.7	0.5	43.7	16.8

**As reported in the Investment Section of the CAFR, gross of investment expenses.*

On June 30, 2014, the total market value of the fund, less current liabilities, was $47.7 billion. The actuarial value of the fund was determined to be $44.2 billion, including the non-valuation reserves. The average total fund return for the last 10 years is 7.9% gross of fees, as reported by LACERA.

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Financial Exhibits

Exhibit 2 presents a Statement of Plan Net Assets and Exhibit 3 presents a Statement of Changes in Plan Net Assets. Exhibit 4 describes the allocation of LACERA's assets by the various reserve values determined for accounting purposes as disclosed in the Comprehensive Annual Financial Report (CAFR).

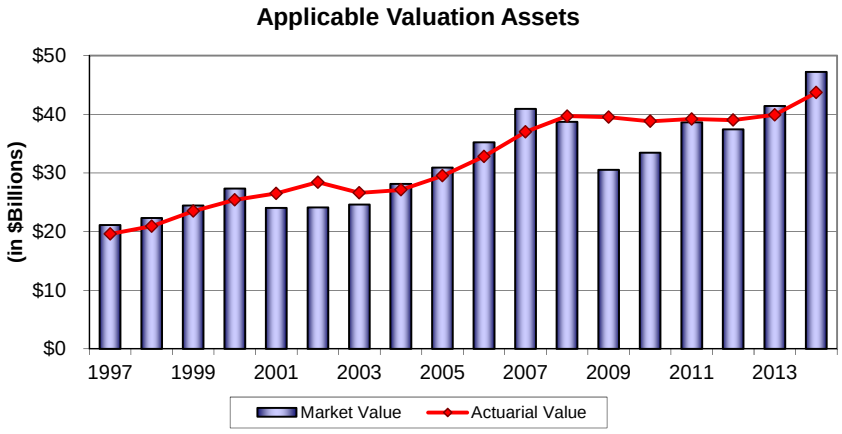
Exhibits 2-4 are taken directly from data furnished to us by LACERA in their annual financial report. We have accepted these tables for use in this report without audit, but we have reviewed them both for the prior year and the current year for reasonableness and consistency with previous reports.

Actuarial Asset Method

The actuarial asset method computes the expected market value of assets based on the prior year's market value of assets, the actual cash flow of contributions and benefit payments, and the assumed investment rate of return. For the previous year, the assumed rate of return was 7.50%, net of all expenses. The difference between the actual market value and the computed expected market value is smoothed, or recognized over a five-year period.

Actuarial Value of Assets

The development of the June 30, 2014 actuarial value of assets is shown in Exhibit 5. Note the smoothing process is deferring past investment gains and losses, and is currently in a net actuarial gain position. The result is an actuarial value of assets that is smaller than the June 30, 2014 market value by $3.6 billion. The following graph shows a historical comparison of the actuarial and market assets used for valuation purposes.



Funding Policy

Under the Board of Investments' long-term Funding Policy, the following is the allocation of actuarial assets. A Funded Ratio equal to 100% is the Funding Goal.

For funding purposes and for setting contributions rates, recognized earnings for a plan year is the recognized investment income as determined by the Actuarial Asset Method and includes both unrealized income and net realized income, together with the prior balance in the Contingency Reserve. The allocation of recognized earnings is performed once a year as of the Valuation Date in the following order of priority:

Priority 1: Allocate to the Member Reserve so the Actuarial Asset allocation to that Reserve equals the accounting value for that Reserve on the Valuation Date.

Priority 2: Allocate to the Advanced Employer Contributions Reserve so the Actuarial Asset allocation to that Reserve equals the accounting value for that Reserve on the Valuation Date.

Priority 3: Allocate to the Employer Reserve so the Actuarial Asset allocation to that reserve equals the accounting value for that Reserve on the Valuation Date.

Priority 4: Allocate to the County Contribution Credit Reserve so the Actuarial Asset allocation to that reserve equals the accounting value for that Reserve on the Valuation Date. Note: This Reserve is not a Valuation Reserve.

Priority 5: Allocate to the Employer Reserve so the total amounts allocated equal one year's interest at the assumed interest rate used in the actuarial valuation as of the preceding Valuation Date to the extent there are positive recognized earnings to allocate.

Priority 6: Allocate to the Contingency Reserve an amount equal to 1% of the Market Value of Assets as of the Valuation Date to the extent there are positive recognized earnings to allocate.

Priority 7: Allocate to the Employer Reserve an amount, if necessary, when combined with other Valuation Reserves, to provide 100% funding of the AAL as of the Valuation Date to reach the Funding Goal. In the event there are negative recognized earnings, allocate the entire amount.

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Funding Policy (continued)

Priority 8: The Board may consider additional actions as permitted under the County Employee Retirement Law (CERL) using funds in excess of the amount needed to meet the Funding Goal for funding discretionary benefits. "Excess Earnings" as defined in the County Employees Retirement Law (CERL) may be appropriated upon reaching the Funding Goal; however, the Board may consider adjustment to the employer's contributions only upon satisfying California Government Code Section 7522.52(b).

For the 2014 valuation, there were sufficient recognized earnings to allocate assets under Priorities 1-6, but they were not sufficient to reach the Funding Goal of 100% under Priority 7.

Valuation Assets

Valuation Assets are the actuarial value of the fund, less the value of any reserves which have been set aside for current liabilities and special benefits that are to be funded outside of the actuarially determined contribution rates. The '37 Act requires the Contingency Reserve be set at a minimum of 1.0% of assets.

The Funding Policy allows the STAR Reserve to be allocated to the Valuation Assets (subject to periodic review), if needed. The June 30, 2014 STAR Reserve accounting value of $614 million was included in Valuation Assets and used to determine the contribution rates for the fiscal year commencing July 1, 2015. Although the reserve value for STAR benefits is included in the 2014 Valuation Assets, there is no liability for STAR benefits that may be granted in the future included in this valuation.

The non-valuation reserve allocations for funding purposes shown in Exhibit 6 are not the same as those shown in the annual report and in Exhibit 4.

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Exhibit 2: Statement of Plan Net Assets
For Years Ended June 30, 2014 and 2013
(Dollars in Thousands)

	2014	2013
Assets		
Cash	$ 230,254	$ 184,297
Collateral on Loaned Securities	998,216	138,273
Receivables		
Contributions Receivable	74,412	64,664
Accounts Receivable – Sale of Investments	583,816	939,919
Accrued Interest and Dividends	120,236	88,242
Accounts Receivable – Other	27,000	24,717
Total Receivables	805,464	1,117,542
Investments at Fair Value		
Equities	25,412,713	21,404,466
Fixed Income	11,893,851	11,354,170
Hedge Funds	546,267	493,750
Commodities	2,169,289	1,194,331
Real Estate	4,995,446	4,108,198
Private Equity	4,015,799	3,730,991
Total Investments	49,033,365	42,285,906
Total Assets	**51,067,299**	**43,726,018**
Liabilities		
Accounts Payable – Purchase of Investments	2,283,900	1,743,312
Retiree Payroll and Other Payables	645	656
Accrued Expenses	28,392	29,380
Tax Withholding Payable	29,624	28,247
Obligations under Securities Lending Program	998,216	138,273
Accounts Payable – Other	4,245	12,631
Total Liabilities	**3,345,022**	**1,952,499**
Net Assets Held in Trust for Pension Benefits	**47,722,277**	**41,773,519**

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Exhibit 3: Statement of Changes in Plan Net Assets
For the Years Ended June 30, 2014 and 2013
(Dollars in Thousands)

	2014	2013
Additions		
Contributions		
Employer	$ 1,320,442	$ 723,195
Member	439,001	679,572
Total Contributions	1,759,443	1,402,767
Investment Income		
From Investing Activities		
Net Appreciation/(Depreciation) in Fair Value of Investments	4,699,445	2,661,499
Investment Income	2,305,690	2,079,642
Total Investing Activity Income/(Loss)	7,005,135	4,741,141
Less Expenses From Investing Activities	(101,170)	(86,815)
Net Investing Activity Income/(Loss)	6,903,965	4,654,326
From Securities Lending Activities		
Securities Lending Income	2,896	4,286
Less Expenses From Securities Lending Activities		
Borrower Rebates	2,289	1,321
Management Fees	(738)	(918)
Total Expenses from Securities Lending Activities	1,551	403
Net Securities Lending Income	4,447	4,689
Total Net Investment Income/(Loss)	6,908,412	4,659,015
Miscellaneous	2,256	385
Total Additions/(Declines)	**8,670,111**	**6,062,167**
Deductions		
Retiree Payroll	2,637,182	2,514,096
Administrative Expense	58,723	53,863
Refunds	23,528	25,012
Lump Sum Death Benefits	1,691	2,243
Miscellaneous	229	190
Total Deductions	**2,721,353**	**2,595,404**
Net Increase/(Decrease)	5,948,758	3,466,763
Net Assets Held in Trust for Pension Benefits Beginning of Year	41,773,519	38,306,756
End of Year	**47,722,277**	**41,773,519**

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Exhibit 4: Allocation of Assets by Accounting Reserve Amounts (Dollars in Thousands)

	June 30, 2014	June 30, 2013
1. Member Reserves		
a. Active Members	$ 17,816,467	$ 16,866,229
b. Unclaimed Deposits	-	-
c. Total Member Reserves	$ 17,816,467	$ 16,866,229
2. Employer Reserves		
a. Actual Employer Contributions	$ 20,862,024	$ 20,612,325
b. Advanced Employer Contributions	-	-
c. Total Employer Contributions	$ 20,862,024	$ 20,612,325
3. County Contribution Credit Reserve	$ 21,891	$ 21,891
4. STAR Reserve	614,011	614,011
5. Contingency Reserve	49,376	-
6. Total Reserves at Book Value	$ 39,363,769	$ 38,114,456
7. Unrealized Investment Portfolio Appreciation	8,358,508	3,659,063
8. **Total Reserves at Fair Value**	**$ 47,722,277**	**$ 41,773,519**

Note: These amounts were determined by LACERA for accounting purposes and are reported in the June 30, 2014 CAFR.

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Exhibit 5: Five-Year Smoothing of Gains and Losses on Market Value
(Dollars in Thousands)

June 30, 2014 Valuation										
Plan Year Ending	Contributions	Benefit Payments	Expected Market Value	Actual Market Value	Phase-Out of Gain / (Loss)					
6/30/2014	$ 1,759,443	$ 2,662,401	$ 43,970,326	$ 47,722,277	80.00%	x	$ 3,751,951	=	$	3,001,561
6/30/2013	1,402,767	2,541,351	40,037,011	41,773,519	60.00%	x	1,736,508	=		1,041,905
6/30/2012	1,585,687	2,390,598	41,654,490	38,306,756	40.00%	x	(3,347,734)	=		(1,339,094)
6/30/2011	1,407,917	2,269,791	35,130,366	39,452,011	20.00%	x	4,321,645	=		864,329
6/30/2010								=		0
					Total Phase-Out of Gain / (Loss)			=	$	3,568,701
					Total Market Value of Assets			=		47,722,277
					Total Actuarial Value of Assets			=	**$**	**44,153,576**

Total Actuarial Value of Assets = Total Market Value of Assets less the Total Phase-Out amount
Phase-Out amounts will be recognized in future years.

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Exhibit 6: Allocation of Valuation and Non-Valuation Assets
(Dollars in Thousands)

	June 30, 2014	June 30, 2013
1. Total Market Value of Assets	$ 51,067,299	$ 43,726,018
2. Current Liabilities	3,345,022	1,952,499
3. Net Assets Held in Trust for Pension Benefits	$ 47,722,277	$ 41,773,519
4. Market Stabilization Reserve(1)	3,568,701	1,401,477
5. Actuarial Value of Fund Assets	$ 44,153,576	$ 40,372,042
6. Non-Valuation Reserves(2)		
a. Unclaimed Deposits	$ -	$ -
b. Contingency Reserve	477,223	417,735
c. Advanced Employer Contributions	-	-
d. County Contribution Credit Reserve	21,891	21,891
e. Reserve for STAR Program	-	-
f. Total	$ 499,114	$ 439,626
7. Valuation Assets(2)		
a. Member Reserves	$ 17,816,467	$ 16,866,229
b. Employer Reserves for Funding Purposes	$ 25,837,995	$ 23,066,187
c. Total	$ 43,654,462	$ 39,932,416

(1) The Market Stabilization Reserve represents the difference between the Market Value of the fund less Current Liabilities, and the Actuarial Value of the fund as determined in Exhibit 5.

(2) The values used for funding purposes for all reserves are based on the Board's Funding Policy. Amounts used for funding purposes may differ from those reported in the financial report as shown in Exhibit 4.

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Section 4: Actuarial Liabilities

In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of LACERA's assets as of the valuation date, June 30, 2014. In this section, the discussion will focus on the commitments of LACERA for retirement benefits, which are referred to as its actuarial liabilities.

In an active system, the actuarial liabilities will almost always exceed the actuarial assets. This is usually expected in all but a fully closed down fund, where no further contributions of any sort are anticipated. This deficiency has to be provided by future contributions. An actuarial valuation method sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion. The determination of the level of future contributions needed is discussed in the next section.

Actuarial Balance Sheet – Liabilities

First, we need to determine the amount of the deficiency. We compare the Valuation Assets to the actuarial liabilities. The difference is the amount that needs to be funded by the member and employer contributions in the future. Both the current and future assets (contributions) are compared to the actuarial liabilities in the Actuarial Balance Sheet.

Exhibit 7 contains an analysis of the actuarial present value of all future benefits for inactive members (both retired and deferred vested members) and active members. The analysis is given by class of membership, by plan and by type of benefit. Note that for purposes of this exhibit the Valuation Assets are shown allocated by plan in proportion to each plan's reserves (employer and member).

The actuarial liabilities include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes measures of both benefits already earned and future benefits to be earned. For all members, active and inactive, the value extends over the rest of their lives and for the lives of any surviving beneficiaries.

The actuarial assumptions used to determine the liabilities are based on the results of the 2013 Investigation of Experience Report. New assumptions were adopted by the Board effective with the June 30, 2013 actuarial valuation. See Appendix A of this report for details.

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Exhibit 7: Actuarial Balance Sheet – June 30, 2014
(Dollars in Millions)

	General						Safety			
LIABILITIES	**Plan A**	**Plan B**	**Plan C**	**Plan D**	**Plan E**	**Plan G**	**Plan A**	**Plan B**	**Plan C**	**All Plans**
Present Value of Benefits - Inactives										
- Retirees and Beneficiaries	$ 12,785	$ 355	$ 186	$ 3,951	$ 2,247	$ -	$ 7,658	$ 3,790	$ -	$ 30,972
- Vested Terminated	23	6	3	408	374	1	2	94	0	911
- Inactive Total	12,808	361	189	4,359	2,621	1	7,660	3,884	0	31,883
Present Value of Benefits - Actives										
- Service Retirement	$ 406	$ 118	$ 100	$ 14,594	$ 5,549	$ 548	$ 50	$ 7,047	$ 72	$ 28,484
- Transfer Service (prior LACERA plan)	0	0	*	164	347	*	1	10	0	522
- Disability Retirement	6	2	1	810	N/A	48	4	2,747	43	3,661
- Death	3	1	1	363	N/A	18	*	64	1	451
- Termination (No Refund)	*	*	*	191	100	23	*	42	2	358
- Refund of Member Contributions	*	*	*	60	N/A	17	*	8	1	85
- Active Total	415	121	102	16,182	5,996	654	55	9,918	119	33,562
Total Actuarial Liabilities	**$ 13,223**	**$ 482**	**$ 291**	**$ 20,541**	**$ 8,617**	**$ 655**	**$ 7,715**	**$ 13,801**	**$ 119**	**$ 65,444**
ASSETS										
Valuation Assets	$ 2,820	$ 440	$ 288	$ 17,032	$ 9,816	$ 57	$ 1,560	$ 11,636	$ 5	$ 43,654
PV Future Member Contributions	4	2	2	2,715	N/A	332	*	1,108	61	4,224
PV Future Employer Normal Cost Contribs.	13	3	2	2,919	1,229	332	2	1,718	60	6,278
UAAL or (Surplus Funding)	10,386	37	(1)	(2,125)	(2,428)	(66)	6,153	(661)	(7)	11,288
Total Current and Future Assets	**$ 13,223**	**$ 482**	**$ 291**	**$ 20,541**	**$ 8,617**	**$ 655**	**$ 7,715**	**$ 13,801**	**$ 119**	**$ 65,444**

** Less than $0.5 million*

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Actuarial Balance Sheet – Liabilities (continued)

All liabilities reflect the benefits effective through June 30, 2014. This includes permanent STAR COLAs that have been adopted through the valuation date, but does not include the value of any future STAR benefits that may be granted in the future.

Actuarial Balance Sheet – Assets

For the purpose of the Actuarial Balance Sheet, LACERA's assets are equal to the sum of:

(a) Assets currently available to pay benefits and considered for funding purposes (the Valuation Assets);

(b) The present value of future contributions expected to be made by current active members; and

(c) The present value of future contributions expected to be made by the Employer.

Actuarial Cost Method

The Actuarial Balance sheet determines the amount of future contributions that are needed, but the method used to determine when those future contributions will be made in future years is called the "actuarial cost method." For this valuation, the entry age actuarial cost method has been used. Under this method, the contributions required to meet the difference between current assets and current actuarial liabilities are allocated each year between two elements:

- A normal cost amount; and
- Whatever amount is left over, which is used to amortize what is called the UAAL (Unfunded Actuarial Accrued Liability).

The two items described above – the Normal Cost and UAAL – are the keys to understanding the actuarial cost method.

Normal Cost

The Normal Cost is the theoretical contribution rate that will meet the ongoing costs of a group of average new employees. Suppose that a group of new employees was covered under a separate fund from which all benefits and to which all contributions and associated investment returns were paid. Under the entry age actuarial cost method, the Normal Cost contribution rate maintains the funding of benefits as a level percentage of pay. If experience follows the actuarial assumptions precisely, the fund would be completely liquidated when the last payment to the last survivor of the group is made.

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Normal Cost (continued)

By applying the Normal Cost contribution rate to the present value of salaries expected to be paid in the future, we determine the present value of future Normal Cost contributions. Future contributions are expected to be made by both the members and the Employer. The member contribution rates are determined based upon requirements established in the '37 Act and the actuarial assumptions. Based on these member contribution rates, we determine the present value of future member contributions. We subtract that value from the total future Normal Cost contributions expected, based on the entry age cost method. The remaining difference is the Employer's portion of the future Normal Cost contributions.

Actuarial Accrued Liability

The difference between the present value of all future obligations and the present value of the future Normal Cost contributions is referred to as the Actuarial Accrued Liability (AAL). The AAL is then compared to the value of assets available to fund benefits, and the difference is referred to as the UAAL. The results for LACERA for all plans are summarized below:

(Dollars in millions)	2014	2013	Percent Change
A. Actuarial present value of all future benefits for contributing members, former contributing members, and their survivors	$ 65,444	$ 63,629	2.9%
B. Actuarial present value of total future normal costs for current members	$ 10,502	$ 10,382	1.2%
C. Actuarial accrued liability [A-B]	$ 54,942	$ 53,247	3.2%
D. Valuation Assets	$ 43,654	$ 39,932	9.3%
E. UAAL or (Surplus Funding) [C-D]	$ 11,288	$ 13,315	-15.2%
F. Funded Ratio [D/C]	79.5%	75.0%	6.0%

Unfunded Actuarial Accrued Liability/ Surplus Funding

The portion allocated to service already rendered or accrued is called the AAL. The difference between the AAL and the Valuation Assets is called the UAAL. If a UAAL amount exists, it usually results from prior years' benefit or assumption changes and the net effect of accumulated gains and losses. If the employer had always contributed the current Normal Cost, and if there were no prior benefit or assumption changes, and if actual experience exactly matched the actuarial assumptions, then the present value of all future Normal Cost contributions would be sufficient to fund all benefits and there would be no UAAL.

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Unfunded Actuarial Accrued Liability/ Surplus Funding (continued)

The term "fully funded" is often applied to a system in which contributions for everyone at the Normal Cost rate are expected to be sufficient to pay for the benefits of existing employees. More often than not, systems are not fully funded, either because of past benefit improvements that have not been completely paid for or because of actuarial deficiencies that have occurred because experience has not been as favorable as anticipated. Under these circumstances, a UAAL exists, implying that past experience has varied from what was assumed to have occurred, based on the current benefit levels and actuarial assumptions.

However, even if a system does not have a positive UAAL, a portion or all of the Normal Cost contribution payments will need to be continued in order to have sufficient funds to pay future benefits. The use of the term "fully funded" may seem to imply no further contributions are required. Therefore, a better term is a "well-funded" plan. This occurs when the value of the assets equals or exceeds the AAL and the difference can be referred to as the Surplus Funding.

Exhibit 7 shows how the UAAL, or Surplus Funding, was derived for each level of plan benefits. In the Actuarial Balance sheet, the total actuarial liability for all future benefits must be equal to the current and future assets.

The Actuarial Balance Sheet for each plan, as well as its UAAL, or Surplus Funding amount, is based on an estimated allocation of the total LACERA Valuation Assets, as disclosed in Exhibit 7. The allocation is based on the relative value of each plan's employer and member reserves as reported to us by LACERA. These allocations are shown for illustrative purposes only, as the UAAL contribution rates are assumed paid by the Employer based on the valuation results in aggregate.

Funding Adequacy

A key consideration in determining the adequacy of the funding of LACERA is how the UAAL is being funded. If the UAAL amount is positive, that is, the AAL to be funded is greater than the Valuation Assets, then the UAAL is amortized. Under LACERA's Funding Policy, any positive amount must be amortized over layered 30-year periods.

If future experience is more favorable than expected based on the actuarial assumptions, then LACERA may move to a Surplus Funding position. Conversely, if experience is less favorable, a larger UAAL will develop.

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Analysis of Change in Unfunded Actuarial Accrued Liability

The UAAL, at any date after establishment of a system, is affected by any actuarial gains or losses arising when the actual experience of the system varies from the experience anticipated by the actuarial assumptions used in the valuations. To the extent actual experience, as it develops, differs from that expected according to the assumptions used, so also will the emerging costs differ from the estimated costs.

This year the funding level has decreased, primarily due to the recognition of prior actuarial asset losses.

The 2014 actuarial valuation reflects an actuarial experience gain of $2.4 billion for the fiscal year just ended. The gain was mainly due to a $1.7 billion gain on actuarial assets, as well as other factors. The effect of the experience gains and losses on the UAAL or Surplus Funding is shown in Exhibit 8a. In addition to the gain on actuarial assets, some other factors which impacted the liabilities are:

- **Salary Increases:** Individual salaries for continuing active members increased at a rate less than the valuation assumption. This resulted in a gain.
- **Actual CPI versus Assumption:** The actual CPI increase was less than assumed for the members of all plans, although some members had positive COLA banks to make up for this. The members who received COLA increases less than the assumption generated a gain of $427 million.
- **Mortality Experience:** An actuarial loss due to mortality generally indicates that retired members are living longer than the current assumption would predict. This year, there was a small gain due to mortality, indicating retirees are currently living slightly shorter lives than assumed.
- **Other:** Examples of this are gains and losses from termination, service retirement, disability retirement, death, service purchases, reciprocity, and transfers between plans.

Change in Unfunded Actuarial Accrued Liability – History

Exhibit 8b shows the sources of change in the UAAL over the past five valuations. As is generally the case, the biggest source of change is a return on investments that is either greater than or less than the assumption, causing asset gains and losses.

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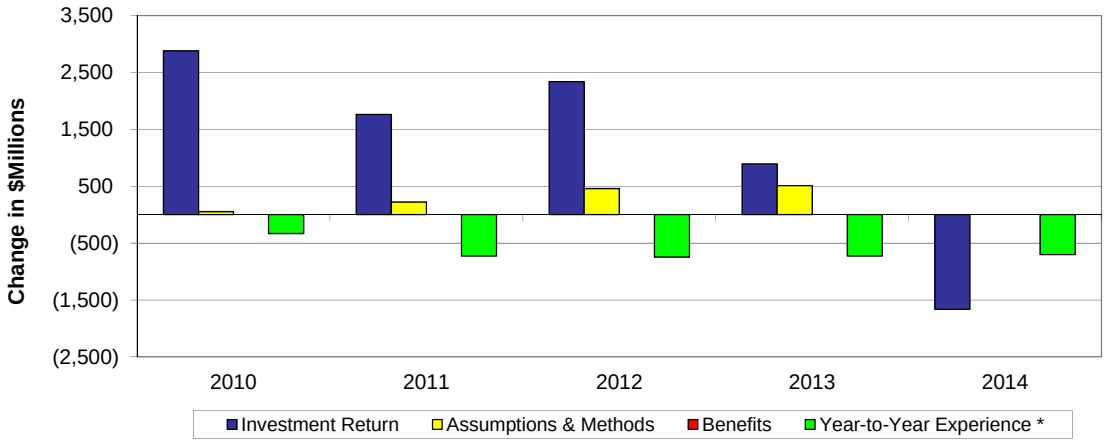
Exhibit 8a: Analysis of Change in Unfunded Actuarial Accrued Liability (Dollars in Millions)

			Amount	As a Percent of June 30, 2014 Actuarial Accrued Liability
Unfunded Actuarial Accrued Liability - June 30, 2013		**$**	**13,315**	24.2%
Increase in UAAL due to New Assumptions			-	0.0%
Interest Accrued			999	1.8%
Benefits Accrued (Normal Cost) *			1,163	2.1%
Contributions (with Assumed Interest)				
Employer - Cash	$ (1,369)			-2.5%
Employer - Contribution Credit	-			0.0%
Member **	(455)			-0.8%
Total			(1,824)	-3.3%
Expected Unfunded Actuarial Acc. Liability - June 30, 2014		**$**	**13,653**	24.8%
Source of Change				
Asset (Gains) and Losses				
(Gain)/Loss due to Investment Income			(1,664)	-3.0%
Actuarial (Gains) and Losses				
Salary Increases Less than Expected	$ (291)			-0.5%
CPI Less than Expected	(427)			-0.8%
Mortality Experience	(26)			0.0%
All Other Experience	43			0.1%
Total			(701)	-1.3%
Total Changes			**(2,365)**	-4.3%
Unfunded Actuarial Accrued Liability - June 30, 2014		**$**	**11,288**	20.5%

* *Includes estimated increase in value of benefits due to service purchases.*
** *Includes service purchase contributions.*
.

Exhibit 8b: History of Changes in Unfunded Actuarial Accrued Liability (Dollars in Millions)



	2010	2011	2012	2013	2014	2010-14
Prior Valuation UAAL / (Surplus)	**$ 4,927**	**$ 7,807**	**$ 9,405**	**$ 11,770**	**$ 13,315**	**$ 4,927**
Increase in UAAL due to:						
Expected Increase / (Decrease)	279	344	315	870	338	2,146
Asset (Gains) and Losses	2,879	1,761	2,337	893	(1,664)	6,206
Changes in Benefits	-	-	-	-	-	-
Changes in Assumptions	54	221	457	511	-	1,243
Changes in Methods	-	-	-	-	-	-
Salary Increases	(353)	(579)	(629)	(563)	(291)	(2,415)
CPI Less than Expected	(29)	(215)	(181)	(190)	(427)	(1,042)
Transfers Between D & E	6	-	-	-	-	6
Mortality Experience	(32)	(16)	(22)	(42)	(26)	(138)
All Other Experience	76	82	88	66	43	355
Total Increase / (Decrease)	**2,880**	**1,598**	**2,365**	**1,545**	**(2,027)**	**6,361**
Valuation UAAL / (Surplus)	**$ 7,807**	**$ 9,405**	**$ 11,770**	**$ 13,315**	**$ 11,288**	**$ 11,288**
Funded Ratio	**83.3%**	**80.6%**	**76.8%**	**75.0%**	**79.5%**	**79.5%**

** Year-to-Year Experience includes changes due to Salary, CPI, Transfers, Mortality and Other Experience.*

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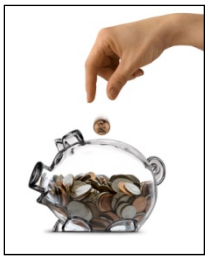
Section 5: Member Contributions



Normal Contributions for non-PEPRA Plans

Member contributions are of two types: Normal contributions and cost-of-living contributions.

Normal contributions for each plan (except for General Plan G and Safety Plan C, as discussed below) are defined in the following sections of the County Employees' Retirement Law:

Plan	'37 Act Reference	Formula
General A	31621.3	1/240th of FAC at age 55
General B	31621.1	1/120th of FAC at age 55
General C	31621	1/120th of FAC at age 60
General D	31621	1/120th of FAC at age 60
General E	N/A	Plan E is non-contributory
Safety A	31639.5	1/200th of FAC at age 50
Safety B	31639.25	1/100th of FAC at age 50

Note: FAC = Final Average Compensation

Normal member contributions are determined using the Entry Age Normal Funding Method and the following actuarial assumptions:

1. Expected rate of return on assets.
2. Individual salary increase rate (wage growth + merit).
3. Mortality for members on service retirement.

As no assumption changes were implemented for the current valuation, no changes are recommended to the current member contribution rates, except for General Plan G and Safety Plan C, as discussed below.

Cost-of-Living Contributions for non-PEPRA Plans

The determination of the member cost-of-living contributions is based on Section 31873 of the County Employees' Retirement Law. This section requires that the cost of this benefit be shared equally between members and the Employer. Unlike the member normal contributions, these rates are based on the actuarial cost of the benefits and reflect all assumptions used in the valuation of liabilities.

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Cost-of-Living Contributions (continued)

As no assumption changes were adopted for the current valuation, we are recommending no change in the member cost-of-living contribution rates. The cost-of-living contributions, expressed as a percentage of the normal contribution rates, are based on the June 30, 2013 actuarial valuation (the most recent valuation with which member rates were changed) and are as follows:

Plan	COLA %
General A	84.18%
General B	22.89%
General C	24.57%
General D	21.86%
General E	0.00%
Safety A	93.72%
Safety B	29.67%

The relative magnitude of these amounts reflects the differences in the normal contribution rates for each plan and the different cost-of-living benefits offered by the different plans. The rate for Plan E is 0.00%, since it is non-contributory.

A sample of the current member contribution rates (normal plus cost-of-living) can be found in Exhibit 9.

Full disclosure of the member rates, showing both the normal and the total (normal plus cost-of-living) contribution rates, can be found in Appendix D.

Member Contribution Rates for General Plan G and Safety Plan C (PEPRA Plans)

Members of the two plans developed in compliance with the Public Employees' Pension Reform Act of 2013 (PEPRA) contribute a flat rate (i.e., does not vary by entry age) based on whether they are in the General or Safety plan. This rate is set equal to one half of the total Normal Cost rate. We are recommending slight changes to the member contribution rates for these plans, as shown below, to reflect the plan's Normal Cost rates for the 2014 valuation.

	General Plan G	Safety Plan C
All Ages: Recommended	**7.62%**	**13.42%**
All Ages: Current	7.63%	13.39%
Ratio (New/Current)	99.9%	100.2%

Note that the member contribution rates for these plans are further split for purposes of this report into a "Normal" and "Cost of Living" component. The cost-of-living component for these members, as shown in Exhibit 9 below, represents one-half of the cost of COLA for these plans.

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Member Rate For Contributory Plan Members Only

The average member contribution rate for only those members in contributory plans at June 30, 2014 is 7.85% of payroll.

This number compares to 6.08% of payroll, which is the average member contribution rate among all members. This 6.08% offsets the gross normal cost to yield the Employer normal cost rate.

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Exhibit 9: Sample Member Contribution Rates

	Entry Age	Recommended Rates (Based on 2014 Valuation) Normal	Cost of Living	Total as a % of Pay	Current Rate (Total)	Ratio (New / Current)
General Members						
Plan A	25	2.88%	2.42%	5.30%	5.30%	100.0%
	35	3.60%	3.03%	6.63%	6.63%	100.0%
	45	4.42%	3.72%	8.14%	8.14%	100.0%
	55	4.78%	4.02%	8.80%	8.80%	100.0%
Plan B	25	5.76%	1.32%	7.08%	7.08%	100.0%
	35	7.19%	1.65%	8.84%	8.84%	100.0%
	45	8.85%	2.03%	10.88%	10.88%	100.0%
	55	9.56%	2.19%	11.75%	11.75%	100.0%
Plan C	25	4.84%	1.19%	6.03%	6.03%	100.0%
	35	6.04%	1.48%	7.52%	7.52%	100.0%
	45	7.54%	1.85%	9.39%	9.39%	100.0%
	55	8.92%	2.19%	11.11%	11.11%	100.0%
Plan D	25	4.84%	1.06%	5.90%	5.90%	100.0%
	35	6.04%	1.32%	7.36%	7.36%	100.0%
	45	7.54%	1.65%	9.19%	9.19%	100.0%
	55	8.92%	1.95%	10.87%	10.87%	100.0%
Plan G	All Ages	6.41%	1.21%	7.62%	7.63%	99.9%
Safety Members						
Plan A	25	4.13%	3.87%	8.00%	8.00%	100.0%
	35	5.09%	4.77%	9.86%	9.86%	100.0%
	45	6.07%	5.69%	11.76%	11.76%	100.0%
	55	6.12%	5.74%	11.86%	11.86%	100.0%
Plan B	25	8.26%	2.45%	10.71%	10.71%	100.0%
	35	10.17%	3.02%	13.19%	13.19%	100.0%
	45	12.14%	3.60%	15.74%	15.74%	100.0%
	55	12.24%	3.63%	15.87%	15.87%	100.0%
Plan C	All Ages	10.76%	2.66%	13.42%	13.39%	100.2%

Note: A portion of some of the member contribution rates is paid for ("picked up") by the Employer and is not considered part of the member's contribution account for refund purposes. Such contributions are referred to as the surcharge amount and are subject to change each year. The rates shown in the table are prior to any surcharge payments.

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Section 6: Employer Contributions

Contributions to LACERA are determined using the Entry Age Normal Cost Method. The portion of the actuarial present value of retirement benefits allocated to a valuation year by the Actuarial Cost Method is called the Normal Cost. These amounts are usually expressed as a percentage of payroll and called the Normal Cost Contribution Rate. Exhibit 10 illustrates the Normal Cost Rates by type of benefit and for each plan based on this valuation. A comparison with last year is also shown.

Under the Funding Policy, the total contribution rate is set equal to the Normal Cost contribution and a payment by the employer towards the UAAL. A portion of the Normal Cost contribution is funded by member contributions. The remainder is paid for by the employer.

Employer Contribution Rate

The total calculated Employer contribution rates for each plan, along with a comparison to the prior year's computed rates, can be found in Exhibit 11. These results are expressed as a percentage of payroll and annual contribution dollars. Note that LACERA's UAAL contribution rate is not determined separately for each plan, but is funded evenly as a percentage of pay over salaries for all members. The total Employer contribution rate was 21.34% for the fiscal year beginning in 2014.

For the fiscal year beginning in 2015, the required rate will decrease to 19.33%. This is equal to the net aggregate calculated Normal Cost contribution rate of 9.29% based on the 2014 Valuation, plus a 30-year layered amortization payment of the UAAL.

(All values as a % of Payroll)

Employer Normal Cost	9.29%
30-year Layered Amortization of UAAL	10.04%
Total Employer Contribution	19.33%

The 2.01% decrease from last year in the total Employer contribution rate was primarily due to the recognition of current and deferred investment gains, which caused a 1.43% decrease in the UAAL rate. Additionally, COLA increases and salary increases that were smaller than assumed decreased the UAAL rate. The UAAL rate reflects a layered 30-year amortization from the valuation date with a July 1, 2015 implementation date for the new Employer contribution rate.

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Employer Contribution Rate (continued)

The change in the calculated Normal Cost contribution rates from year to year is generally due to a few factors. These factors include:

1. **Experience:** Normal experience from year to year reflects differences in both the weighting between membership groups and their characteristics, as well as what was assumed to occur during the past fiscal year and what actually occurred, particularly with respect to salary increases.

2. **Change in Plan Proportion:** As new LACERA members are hired into General Plan G and Safety Plan C, the normal cost rates for these plans will represent a larger share of the overall normal cost rate for LACERA. These plans do not have substantially lower gross normal cost rates than prior LACERA plans; however, due to the higher member contributions for General Plan G and Safety Plan C, the plans have a lower employer normal cost. Therefore, as these plans grow to represent a larger share of the overall employer normal cost, the employer normal cost will be expected to decrease over time.

Hypothetical Population Used for Normal Cost Rate for New Plans

For plans that have been in existence for less than five years, the normal cost rate is calculated based on a hypothetical population which includes all current active members with less than five years of service, as if each of these members had entered the respective new plan (split by General and Safety).

The following table shows a comparison between what the normal cost rate would have been if it had been based on the current population only, and the normal cost rate based on the hypothetical smoothed population used in the valuation.

	Current Population	Smoothed Population
General Plan G		
Normal Cost Rate	15.08%	15.24%
Member Rate	7.54%	7.62%
Safety Plan C		
Normal Cost Rate	27.78%	26.84%
Member Rate	13.89%	13.42%

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Exhibit 10: Calculated Normal Cost Contribution Rates – June 30, 2014

	General							Safety				Grand
A. Normal Cost Contribution Rate	Plan A	Plan B	Plan C	Plan D	Plan E	Plan G	Total	Plan A	Plan B	Plan C	Total	**Total**
Service Retirement	17.93%	13.40%	11.74%	12.35%	8.41%	12.84%	11.31%	15.88%	15.05%	15.69%	15.06%	12.03%
Disability Retirement	0.90%	0.67%	0.62%	1.08%	0.00%	1.17%	0.78%	8.83%	8.65%	10.11%	8.68%	2.30%
Death	0.28%	0.23%	0.22%	0.39%	0.00%	0.40%	0.28%	0.34%	0.30%	0.30%	0.30%	0.28%
Termination (No Refund)	0.33%	0.31%	0.27%	0.52%	0.52%	0.45%	0.51%	0.39%	0.44%	0.45%	0.44%	0.50%
Refund of Member Contributions	0.09%	0.12%	0.10%	0.36%	0.00%	0.38%	0.26%	0.16%	0.23%	0.29%	0.23%	0.25%
Total	**19.53%**	**14.73%**	**12.95%**	**14.70%**	**8.93%**	**15.24%**	**13.14%**	**25.60%**	**24.67%**	**26.84%**	**24.71%**	**15.37%**
B. Member Contributions	(4.92)%	(7.32)%	(6.09)%	(7.04)%	0.00%	(7.62)%	(5.09)%	(1.00)%	(10.18)%	(13.42)%	(10.23)%	(6.08)%
C. Net Employer Normal Cost as of June 30, 2014 (A) - (B)	14.61%	7.41%	6.86%	7.66%	8.93%	7.62%	8.05%	24.60%	14.49%	13.42%	14.48%	9.29%
D. Net Employer Normal Cost as of June 30, 2013	14.61%	7.59%	7.11%	7.84%	9.05%	7.63%	8.24%	24.01%	14.39%	13.39%	14.41%	9.44%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	0.00%	(0.18)%	(0.25)%	(0.18)%	(0.12)%	(0.01)%	(0.19)%	0.59%	0.10%	0.03%	0.07%	(0.15)%
F. Estimated Payroll for fiscal year beginning July 1, 2015*	$ 40	$ 13	$ 12	$ 3,742	$ 1,594	$ 286	$ 5,687	$ 4	$ 1,337	$ 26	$ 1,367	$ 7,054
G. Estimated Total Normal Cost Contribution in Dollars (A x F)**	$ 8	$ 2	$ 2	$ 550	$ 142	$ 44	$ 747	$ 1	$ 330	$ 7	$ 338	$ 1,085

** Estimated Payroll based upon annualized salary rate as of June 30, 2014 increased by 3.50% wage inflation. Dollar figures in millions.*
*** The timing of the Normal Cost shown in this exhibit is spread over the entire year and corresponds to payroll timing.*

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Exhibit 11: Total Employer Contributions

	General							Safety				All
	Plan A	Plan B	Plan C	Plan D	Plan E	Plan G	Total	Plan A	Plan B	Plan C	Total	Plans
A. Net Employer Normal Cost												
1. Basic Benefits	11.65%	5.98%	5.59%	6.40%	7.48%	6.41%	6.73%	19.21%	11.81%	10.76%	11.84%	7.71%
2. Cost-of-Living Benefits	2.96%	1.43%	1.27%	1.26%	1.45%	1.21%	1.32%	5.39%	2.68%	2.66%	2.64%	1.58%
3. Total June 30, 2014	14.61%	7.41%	6.86%	7.66%	8.93%	7.62%	8.05%	24.60%	14.49%	13.42%	14.48%	9.29%
B. UAAL Contribution Rate	10.04%	10.04%	10.04%	10.04%	10.04%	10.04%	10.04%	10.04%	10.04%	10.04%	10.04%	10.04%
C. Total June 30, 2014 Contribution Rate (A) + (B)	**24.65%**	**17.45%**	**16.90%**	**17.70%**	**18.97%**	**17.66%**	**18.09%**	**34.64%**	**24.53%**	**23.46%**	**24.52%**	**19.33%**
D. Total June 30, 2013 Contribution Rate	26.51%	19.49%	19.01%	19.74%	20.95%	19.53%	20.14%	35.91%	26.29%	25.29%	26.31%	21.34%
E. Estimated Payroll for fiscal year beginning July 1, 2015*	$ 40	$ 13	$ 12	$ 3,742	$ 1,594	$ 286	$ 5,687	$ 4	$ 1,337	$ 26	$ 1,367	$ 7,054
F. Estimated Annual Contribution (C x E)	**$ 10**	**$ 2**	**$ 2**	**$ 662**	**$ 302**	**$ 51**	**$ 1,029**	**$ 1**	**$ 328**	**$ 6**	**$ 335**	**$ 1,364**
G. Last Year's Estimated Annual Contribution	$ 14	$ 3	$ 3	$ 742	$ 338	$ 17	$ 1,116	$ 2	$ 352	$ 1	$ 355	$ 1,471
H. Increase / (Decrease) in Annual Contribution	$ (4)	$ (1)	$ (1)	$ (80)	$ (36)	$ 34	$ (87)	$ (1)	$ (24)	$ 5	$ (20)	$ (107)

** Estimated Payroll based upon annualized salary rate as of June 30, 2014 increased by 3.50% wage inflation. Dollar figures in millions.*

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Exhibit 12: Unfunded Actuarial Accrued Liability Detail

Unfunded Actuarial Accrued Liability - 30 Year Layered Amortization Detail

Date Established	Description	Balance as of June 30, 2014	Interest on Balance	Amort. Payment on June 30, 2015 [1]	Balance as of June 30, 2015 [2]	Remaining Period as of June 30, 2015	July 1, 2015 Amortization Payment
June 30, 2009	Initial UAAL	$ 5,501.3	$ 412.6	$ 359.3	$ 5,554.6	24 Years	$ 353.1
June 30, 2010	(Gain) / Loss	2,970.0	222.7	189.5	3,003.1	25 Years	186.2
June 30, 2011	(Gain) / Loss	1,457.2	109.3	91.0	1,475.6	26 Years	89.4
June 30, 2012	(Gain) / Loss	2,360.7	177.1	144.4	2,393.5	27 Years	141.9
June 30, 2013	(Gain) / Loss	1,323.2	99.2	79.4	1,343.1	28 Years	78.0
June 30, 2014	(Gain) / Loss	(2,324.4)	(174.3)	(28.9) [3]	(2,469.8)	29 Years	(140.6)
						Total Amortization Payment July 1, 2015:	$ 708.0
						Projected Payroll July 1, 2015:	$ 7,053.1
	UAAL as of June 30, 2014:	**$ 11,288.0**				**UAAL Contribution Rate (as a % of Payroll) FYB July 1, 2015:**	**10.04%**

Explanatory Notes:

[1] *Amortization Payments are based on a fixed schedule that increases by the payroll assumption each year.*

[2] *The assets and liabilities used in the calculation of the UAAL are as of June 30, 2014; whereas, the contribution rates are not effective until July 1, 2015. Therefore, the UAAL is adjusted to June 30, 2015 based on the actual contribution rate for the period.*

[3] *The 30-year amortization of UAAL does not begin until July 1, 2015; however, the UAAL amount is adjusted based on the July 1, 2014 contribution rate.*

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Section 7: Accounting and CAFR Information

New Governmental Accounting Standards Board (GASB) Statements were recently adopted. GASB Statement No. 67 sets out requirements for defined benefit pension plan reporting and disclosures, and replaces Statement No. 25. GASB Statement No. 68 sets out requirements for accounting by state and local government employers, and replaces Statement No. 27.

For the fiscal year ending June 30, 2014, GASB Statement No. 67 applies, while GASB Statement No. 68 will apply beginning with the fiscal year ending June 30, 2015. Milliman has provided LACERA with results relevant to Statement No. 67 in a separate stand-alone financial reporting valuation report.

Per LACERA's request, we have provided the following exhibits in this report for use in the Comprehensive Annual Financial Report (CAFR):

1. A Schedule of Funding Progress
2. A Schedule of Employer Contributions
3. A Solvency Test

The Schedule of Funding Progress, Exhibit 13, compares actuarial assets and liabilities of the system, based on the actuarial funding method used. The required Schedule of Employer Contributions, Exhibit 14, compares the employer contributions required based on the actuarial valuation with the employer contributions actually made. Information shown in this exhibit comes from LACERA's audited financial statements.

Exhibit 15 compares the Actuarial Value of Valuation Assets to the types of Actuarial Accrued Liabilities, applying them first to Active Member contributions, then to retirees and beneficiaries, and then the remaining amount to the Active Members benefits. This is referred to as the Solvency Test.

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Exhibit 13: Schedule of Funding Progress
(All Dollars in Thousands)

Actuarial Valuation Date	(a) Actuarial Value of Valuation Assets	(b) Actuarial Accrued Liabilities	(b-a) Unfunded Actuarial Accrued Liabilities (UAAL)	(a/b) Funded Ratio	(c) Covered Payroll[1]	[(b-a)/c] UAAL as a Percentage of Covered Payroll
June 30, 2004[2]	27,089,440	32,700,505	5,611,065	82.8%	4,919,531	114.1%
June 30, 2005	29,497,485	34,375,949	4,878,464	85.8%	4,982,084	97.9%
June 30, 2006	32,819,725	36,258,929	3,439,204	90.5%	5,205,804	66.1%
June 30, 2007[2]	37,041,832	39,502,456	2,460,624	93.8%	5,615,736	43.8%
June 30, 2008	39,662,361	41,975,631	2,313,270	94.5%	6,123,888	37.8%
June 30, 2009	39,541,865	44,468,636	4,926,771	88.9%	6,547,616	75.2%
June 30, 2010[2]	38,839,392	46,646,838	7,807,446	83.3%	6,695,439	116.6%
June 30, 2011[2]	39,193,627	48,598,166	9,404,539	80.6%	6,650,674	141.4%
June 30, 2012[2]	39,039,364	51,320,699	12,281,335	76.1%	6,619,816	185.5%
June 30, 2013[2]	39,932,416	53,247,776	13,315,360	75.0%	6,595,902	201.9%
June 30, 2014	43,654,462	54,942,453	11,287,991	79.5%	6,672,228	169.2%

(1) Covered Payroll includes compensation paid to all active employees on which contributions are calculated, as reported by LACERA. Covered Payroll differs from the Active Member Valuation Payroll shown in Table C-1, which is an annualized compensation of only those members who were active on the actuarial valuation date.

(2) Assumption changes.

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Exhibit 14: Schedule of Contributions from the Employer
(All Dollars in Thousands)

Fiscal Year Ending	Required Employer Contribution	Actual Employer Contributions			Percentage of Required Contribution Contributed
		Cash Payment	Transfer from Reserve Accounts	Total	
6/30/2005	$ 750,352	$ 527,810	$ 222,542	$ 750,352	100%
6/30/2006	855,531	676,667	179,368	856,035*	100%
6/30/2007	863,626	751,851	111,775	863,626	100%
6/30/2008	827,911	788,029	40,601	828,630	100%
6/30/2009	847,172	831,672	15,500	847,172	100%
6/30/2010	843,704	843,703	0	843,703	100%
6/30/2011	944,174	944,174	0	944,174	100%
6/30/2012	1,078,929	1,078,929	0	1,078,929	100%
6/30/2013	1,172,014	723,195	448,819	1,172,014	100%
6/30/2014	1,320,442	1,320,442	0	1,320,442	100%

** Total actual employer contributions differ from the Annual Required Contribution due to transfers from CalPERS and certain adjustments for court cases.*

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Exhibit 15: Solvency Test
(Dollars in Millions)

Actuarial Valuation Date	Actuarial Value of Valuation Assets	Actuarial Accrued Liabilities for: Active Member Contributions (A)	Retirees and Beneficiaries[1] (B)	Active Members (Employer Financed Portion) (C)	Portion of Actuarial Accrued Liabilities Covered by Assets: (A)	(B)	(C)
June 30, 2005	29,497	4,308	20,238	9,829	100%	100%	50%
June 30, 2006	32,820	4,628	21,377	10,254	100%	100%	66%
June 30, 2007	37,042	4,852	22,398	12,253	100%	100%	80%
June 30, 2008	39,662	5,279	23,730	12,966	100%	100%	82%
June 30, 2009	39,542	5,795	24,692	13,982	100%	100%	65%
June 30, 2010	38,839	6,278	26,220	14,148	100%	100%	45%
June 30, 2011	39,194	6,529	27,559	14,511	100%	100%	35%
June 30, 2012	39,039	6,961	29,629	14,730	100%	100%	17%
June 30, 2013	39,932	7,837	30,980	14,430	100%	100%	8%
June 30, 2014	43,654	8,354	31,882	14,706	100%	100%	23%

(1) Includes deferred vested members.

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Section 8: Supplemental Information

Cash Flow Projection

Exhibits 16a and 16b are a chart and graph that illustrate both the cash flow history for the past 10 years and a projection on the valuation basis for the next 10 years.

Contributions include both employer and member contributions. The table shows that net cash flow has been increasing over the last five years. Over the next few years, contributions are expected to grow faster than benefit payments, as contribution rates increase due to the recognition of currently deferred asset losses and the scheduled decrease in the investment return assumption is phased in. After these two events have occurred, the cash flow is expected to become increasingly negative. This is a typical pattern for a mature retirement system where it is expected that contributions will be less than benefits and that the system will begin drawing on the fund that has been built up over prior years.

Note that the actual cash contributions since 1998 do not reflect the transfers made between reserve funds, but only cash coming into the system. We are assuming no further transfers, only full cash contributions.

The projected cash flows include contributions, statutory benefits, and administrative expenses only. They are based on the actuarial assumptions as stated in Appendix A of this valuation report. The total Employer contribution rate is assumed to be 21.34% for the first year and 19.33% for the second year; total Employer contributions for the remainder of the period reflect the expected recognition of asset losses currently being deferred. The aggregate member rate is assumed to stay at the calculated rate for June 30, 2014 of 6.08% of payroll. Expenses are based on the expenses for the year ended June 30, 2014, increased annually with the actuarial inflation assumption of 3.00%.

Any increases or reductions in future contribution rates will increase or decrease the net cash flow. The projected cash flows do not include:

- Projected STAR benefits that have not yet been granted. STAR benefits that were vested as of January 2014 are included.
- Projected benefits payable under certain insurance contracts for a group of retired members. These payments are netted against the total expected retiree benefits.

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Exhibit 16a: Cash Flow History and Projections – Dollars

Cash Flow History

Plan Year Ending	Total Contributions	Benefits & Administrative Expenses[1]	Net Cash Flow
2005	$ 814	$ 1,601	$ (787)
2006	973	1,842 [2]	(869)
2007	1,100	1,835	(735)
2008	1,203	1,960	(757)
2009	1,247	2,065	(818)
2010	1,273	2,177	(904)
2011	1,408	2,318	(910)
2012	1,586	2,439	(853)
2013	1,403	2,593	(1,190)
2014	1,759	2,719	(960)

Cash Flow Projections[3]

Plan Year Ending	Total Contributions	Benefits & Administrative Expenses[1]	Net Cash Flow
2015	$ 1,865	$ 2,925	$ (1,060)
2016	1,792	3,028	(1,236)
2017	1,757	3,181	(1,424)
2018	1,782	3,340	(1,558)
2019	1,769	3,507	(1,738)
2020	1,781	3,682	(1,901)
2021	1,843	3,865	(2,022)
2022	1,907	4,055	(2,148)
2023	1,974	4,251	(2,277)
2024	2,043	4,453	(2,409)

(1) *Investment expenses are assumed to be covered by investment return.*

(2) *Benefit payments for the Plan Year ending 2006 include approximately $94 million in retroactive benefit payments pursuant to the Ventura settlement.*

(3) *Future contributions reflect the expected impact of asset gains and losses currently being deferred.*

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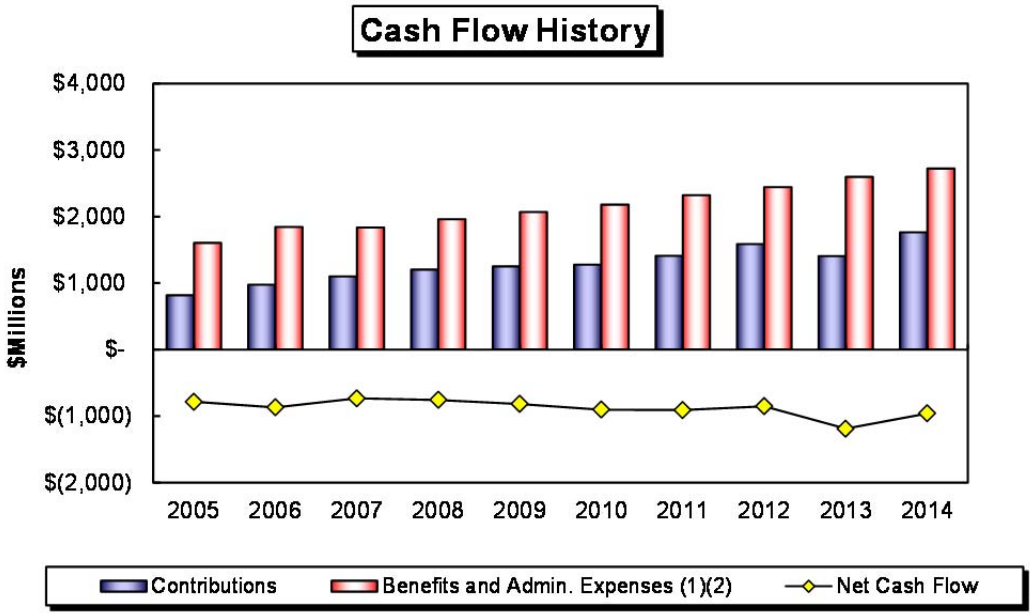
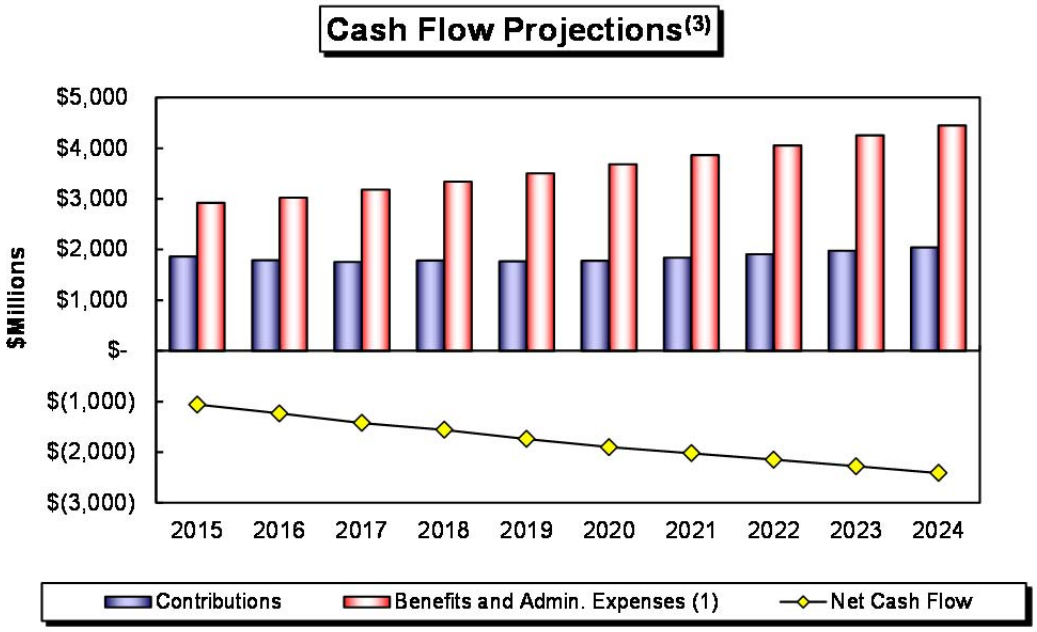
Exhibit 16b: Cash Flow History and Projections – Charts





(1) *Investment expenses are assumed to be covered by investment return.*

(2) *Benefit payments for the Plan Year ending 2006 include approximately $94 million in retroactive benefit payments pursuant to the Ventura settlement.*

(3) *Future contributions reflect the expected impact of asset gains and losses currently being deferred.*

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Appendix A: Actuarial Procedures and Assumptions

The actuarial procedures and assumptions used in this valuation are described in this section. The assumptions were reviewed and changed for the June 30, 2013 actuarial valuation as a result of the 2013 triennial Investigation of Experience Study. Please refer to that Investigation of Experience report for the data and rationale used in the selection and recommendation of each assumption.

The actuarial assumptions used in the valuations are intended to estimate the future experience of the members of LACERA and of LACERA itself in areas that affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in the estimated costs of LACERA's benefits.

Table A-1 summarizes the assumptions. The mortality rates are taken from the sources listed.

Tables A-2 and A-3 show how members are expected to leave retired status due to death.

Table A-4 presents the probability of refund of contributions upon termination of employment while vested.

Table A-5 presents the expected annual percentage increase in salaries.

Tables A-6 to A-13 were developed from the experience as measured by the 2013 Investigation of Experience Study. The rates are the probabilities a member will leave the system for various reasons.

Actuarial Cost Method

The actuarial valuation is prepared using the entry age actuarial cost method. Under the principles of this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit (until maximum retirement age).

For members who transferred between plans, entry age is based on original entry into the system.

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Actuarial Cost Method (continued)

The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets, and (b) the actuarial present value of future normal costs is called the Unfunded Actuarial Accrued Liability (UAAL). The original UAAL as of June 30, 2009 is amortized as a level percentage of the projected salaries of present and future members of LACERA over a closed 30-year period. Future gains and losses are amortized over new closed 30-year periods. This is referred to as "layered" amortization.

For plans that have been in existence for less than five years, the normal cost rate is calculated based on a hypothetical population which includes all current active members with less than five years of service, as if each of these members had entered their respective new plan (split by General and Safety). This normal cost rate is then multiplied by the present value of future compensation of current active members in the respective plans to calculate the present value of future normal costs in aggregate. For all plans, the present value of future benefits minus the present value of future normal costs will be equal to the Actuarial Accrued Liability (AAL).

For General Plan G and Safety Plan C, the normal cost rate is rounded up to the nearest 0.02%.

Records and Data

The data used in this valuation consist of financial information and the age, service, and income records for active and inactive members and their survivors. All of the data were supplied by LACERA and are accepted for valuation purposes without audit.

Replacement of Terminated Members

The ages and relative salaries at entry of future members are assumed to follow a new entrant distribution based on the pattern of current members. Under this assumption, the normal cost rates for active members will remain fairly stable in future years unless there are changes in the governing law, the actuarial assumptions, or the pattern of the new entrants.

Growth in Membership

For benefit determination purposes, no growth in the membership of LACERA is assumed. For funding purposes, if amortization is required, the total payroll of covered members is assumed to grow due to the combined effects of future wage increases of current active members and the replacement of the current active members by new employees. No growth in the total number of active members is assumed.

Internal Revenue Code Section 415 Limit

The Internal Revenue Code Section 415 maximum benefit limitations are not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit after retirement.

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Internal Revenue Code Section 401(a)(17)	The Internal Revenue Code Section 401(a)(17) maximum compensation limitation is not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit after retirement.
Employer Contributions	The employer contribution rate is set by the Board of Investments based on actuarial valuations.
Member Contributions	The member contribution rates vary by entry age and are described in the law. Code references are shown in Appendix B of the valuation report. The methods and assumptions used are detailed later in this section. The individual member rates by entry age, plan and class are illustrated in Appendix D of the valuation report.
Valuation of Assets	The assets are valued using a five-year smoothed method based on the difference between the expected market value and the actual market value of the assets as of the valuation date. The expected market value is the prior year's market value increased with the net increase in the cash flow of funds, all increased with interest during the past fiscal year at the expected investment return rate assumption. The five-year smoothing valuation basis for all assets was adopted effective June 30, 2009.
Investment Earnings and Expenses	The future investment earnings of the assets of LACERA are assumed to accrue at an annual rate of 7.50% compounded annually, net of both investment and administrative expenses. This rate was adopted effective June 30, 2013.
Post-Retirement Benefit Increases	Post-retirement increases are assumed for the valuation in accordance with the benefits provided as described in Appendix B. These adjustments are assumed payable each year in the future as they are less than the expected increase in the Consumer Price Index (CPI) of 3.00% per year. This CPI rate was adopted effective June 30, 2013.
Interest on Member Contributions	The annual credited interest rate on member contributions is assumed to be 7.50% compounded semi-annually for an annualized rate of 7.64%. This rate was adopted effective June 30, 2013.
Future Salaries	The rates of annual salary increase assumed for the purpose of the valuation are illustrated in Table A-5. In addition to increases in salary due to promotions and longevity, this scale includes an assumed 3.50% per annum rate of increase in the general wage level of the membership. These rates were adopted effective June 30, 2013.

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Future Salaries (continued)

Increases are assumed to occur mid-year (i.e., January 1st) and only apply to base salary, excluding megaflex compensation. The mid-year timing reflects that salary increases occur throughout the year, or on average mid-year.

For plans with a one-year final average compensation period, actual average annual compensation is used. For other plans, the monthly rate as of June of the valuation year was annualized. Due to irregular compensation payments included as pensionable earnings, actual annual pay is preferred over annualizing a single monthly payment amount.

Social Security Wage Base

Plan E members have their benefits offset by an assumed Social Security Benefit. For valuation funding purposes, we need to project the Social Security Benefit. We assume the current Social Security provisions will continue and the annual Wage Base will increase at the rate of 3.50% per year. Note, statutory provisions describe exactly how to compute the offset for purposes of determining a member's offset amount at time of termination or retirement. This rate was adopted effective June 30, 2013.

Note that it is assumed all Plan E members born after 1950 have less than 10 years of Social Security-covered service and, therefore, do not have their benefit offset.

General Plan G and Safety Plan C members have their compensation limited to approximately 120% of the Social Security Wage Base. The limit for 2014 is $138,077 (after applying the 120% factor) and is projected to increase at the CPI rate of 3.00%. This rate of future increase was adopted effective June 30, 2013.

Retirement

After members attain age 50 (55 for Plan E members and 52 for General Plan G members) and have 10 years of service (5 years of service for General Plan G and Safety Plan C), they may retire with a benefit commencing immediately. All members, except Plan E, General Plan G, and Safety Plan C members, may also retire regardless of age after 20 years of service for safety members and after 30 years of service for general members. The retirement rates vary by age and are shown by plan in Tables A-6 through A-13.

All general members who attain or who have attained age 75 in active service and all safety members who have attained age 60 in active service are assumed to retire immediately (except for Safety Plan C members who have not yet attained 5 years of service).

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Retirement (continued)

Deferred vested members are assumed to retire at the later of their current age and the assumed retirement age specified as follows:

Assumption for Deferred Commencement	
Plan	**Age at Commencement**
GA	60
GB	60
GC	60
GD	57
GE	60
GG	57
SA	55
SB	50
SC	50

The assumptions regarding termination of employment, early retirement, and unreduced service retirement are treated as a single set of decrements in regards to a particular member. For example, a general member hired at age 30 has a probability to withdraw from LACERA due to death, disability or *other termination of employment* until age 50. After age 50, the member could still withdraw due to death, disability or *retirement*. Thus, in no year during the member's projected employment would they be eligible for both a probability of other termination of employment and a probability of retirement.

The retirement probabilities were adopted effective June 30, 2013.

Disablement

The rates of disablement used in the valuation are also illustrated in Tables A-6 through A-13. These rates were adopted effective June 30, 2013.

Post-Retirement Mortality – Other Than Disabled Members

The same post-retirement mortality rates are used in the valuation for active members, members retired for service, and beneficiaries. These rates are illustrated in Table A-2. Current beneficiary mortality is assumed to be the same assumption as healthy members of the same sex. Future beneficiaries are assumed to be of the opposite sex, and have the same mortality as General members. Note that these assumptions include a margin for expected future mortality improvement. These rates were adopted effective June 30, 2013.

Males General members: RP-2000 Combined Mortality Table for Males, projected to 2025 using Projection Scale AA, with ages set back one year.

Safety members: RP-2000 Combined Mortality Table for Males, projected to 2025 using Projection Scale AA, with ages set back two years.

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Post-Retirement Mortality – Other Than Disabled Members (continued)

Females General members: RP-2000 Combined Mortality Table for Females, projected to 2025 using Projection Scale AA, with ages set back one year.

Safety members: RP-2000 Combined Mortality Table for Females, projected to 2025 using Projection Scale AA, with ages set back one year.

Post-Retirement Mortality – Disabled Members

For disabled members, the mortality rates used in the valuation rates are illustrated in Table A-3. Note that these assumptions include a margin for expected future mortality improvement. These rates were adopted effective June 30, 2013.

Males General members: Average of RP-2000 Combined and Disabled Mortality Tables for Males, projected to 2025 using Projection Scale AA, with ages set back one year.

Safety members: RP-2000 Combined Mortality Table for Males, projected to 2025 using Projection Scale AA, with no age adjustment.

Females General members: Average of RP-2000 Combined and Disabled Mortality Tables for Females, projected to 2025 using Projection Scale AA, with ages set back one year.

Safety members: RP-2000 Combined Mortality Table for Females, projected to 2025 using Projection Scale AA, with no age adjustment.

Mortality while in Active Status

For active members, the mortality rates used in the valuation rates are illustrated in Tables A-6 through A-13. These rates were adopted effective June 30, 2013.

Class	Gender	Proposed Table	
General	Male	RP 2000 Employee Male, Proj. 2025*	+1
General	Female	RP 2000 Employee Female, Proj. 2025*	-2
Safety	Male	RP 2000 Employee Male, Proj. 2025*	-5
Safety	Female	RP 2000 Employee Female, Proj. 2025*	-2

** Projection using Scale AA.*

Note that Safety members have an additional service-connected mortality rate of 0.01% per year.

Other Employment Terminations

Tables A-6 to A-13 show, for all ages, the rates assumed in this valuation for future termination from active service other than for death, disability or retirement. These rates do not apply to members eligible for service retirement. These rates were adopted effective June 30, 2013.

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Other Employment Terminations (continued)

Terminating employees may withdraw their contributions immediately upon termination of employment and forfeit the right to further benefits, or they may leave their contributions with LACERA. Former contributing members whose contributions are on deposit may later elect to receive a refund, may return to work or may remain inactive until becoming eligible to receive a retirement benefit under either LACERA or a reciprocal retirement system. All terminating members who are not eligible for vested benefits are assumed to withdraw their contributions immediately.

All terminating members are assumed not to be rehired.
Table A-4 gives the assumed probabilities that vested members will withdraw their contributions and elect a refund immediately upon termination and the probability the remaining members will elect a deferred vested benefit. All non-vested members are assumed to elect a refund and withdraw their contributions. These rates were adopted effective June 30, 2013.

Probability of Eligible Survivors

For members not currently in pay status, 80% of all males and 55% of all females are assumed to have eligible survivors (spouses or qualified domestic partners). Survivors are assumed to be four years younger than male members and two years older than female members. Survivors are assumed to be of the opposite sex as the member. There is no explicit assumption for children's benefits. We believe the survivor benefits based on this assumption are sufficient to cover children's benefits as they occur.

Valuation of Vested Terminated Members

The deferred retirement benefit is calculated based on the member's final compensation and service at termination. The compensation amount is projected until the assumed retirement age for members who are assumed to be employed by a reciprocal agency. For members who are missing compensation data, Final Compensation is estimated as the average amount for all members who terminated during the same year and had a valid compensation amount. The greater of the present value of the calculated benefit and the employee's current contribution balance is valued.

Reciprocal Employment

18% of General and 35% of Safety current and future deferred vested members are assumed to work for a reciprocal employer.
Current vested reciprocal members are assumed to receive annual salary increases of 4.5%. Future reciprocal vested members are assumed to receive the same salary increases they would have received if they had stayed in active employment with LACERA and retired at the assumed retirement age.

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Valuation of Annuity Purchases

Over 30 years ago, LACERA purchased single life annuities from two insurance companies for some retired members (currently less than 1% of the retired population). The total liability for these members is calculated and then offset by the expected value of the benefit to be paid by the insurance companies.

For affected members, the insurance companies are responsible for:

(1) Straight life annuity payments
(2) Statutory COLAs

LACERA is responsible for:

(1) Benefit payments payable to any beneficiary
(2) STAR COLAs

Member Contribution Rate Assumptions

The following assumptions summarize the procedures used to compute member contribution rates based on entry age:

In general, the member rate is determined by the present value of the future benefit (PVFB) payable at retirement age, divided by the present value of all future salaries payable between age at entry and retirement age. For these purposes, per the CERL:

A. The annuity factor used for general members is based on a 40% / 60% blend of the male and female annuity factors using current valuation assumptions. For Safety members it is based on a 90% / 10% blend of the male and female annuity factors using current valuation assumptions.

B. The annuity factor used in determining the present value of future benefits (PVFB) at entry age is equal to the life only annuity factor at 7.50%.

C. The Final Compensation is the average of the member's highest monthly pensionable earnings during any 12-consecutive-month period.

   Example: For a Plan C Member who enters at age 59 or earlier, the Final Compensation (age 60) will be the monthly average of the annual salaries during age 59. (Since salaries are assumed to increased, age 59 will be the highest one year.)

D. The Member Rates are assumed to increase with entry age. There are a few exceptions at the higher entry ages where the calculated rate is less than the previous entry age (for example, age 53 for General A). In these cases the member contribution rate is adjusted so that it is no less than the value for the previous entry age.

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Implementation Schedule for Changes in Assumptions

LACERA implements changes in member and employer contribution rates, interest crediting rates and operating tables in the fiscal year following adoption of the valuation or investigation of experience that the rates and tables are based upon. For example, a change in the investment return assumption adopted for use in the June 30, 2013 actuarial valuation is used for crediting interest to reserves in the fiscal year beginning July 1, 2014.

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Table A-1: Summary of Valuation Assumptions as of June 30, 2014

I.	Economic assumptions	
	A. General wage increases	3.50%
	B. Investment earnings	7.50%
	C. Growth in membership	0.00%
	D. Post-retirement benefit increases (varies by plan)	Plan COLA not greater than CPI assumption.
	E. CPI inflation assumption	3.00%
II.	Demographic assumptions	
	A. Salary increases due to service	Table A-5
	B. Retirement	Tables A-6 to A-13
	C. Disablement	Tables A-6 to A-13
	D. Mortality during active employment	Tables A-6 to A-13
	E. Mortality for active members after termination and service retired members	Table A-2

Basis – RP-2000 Combined Mortality Table for respective genders projected to 2025 using Projection Scale AA:

Class of Members	Age Adjustment
General – males	-1 year
General – females	-1 year
Safety – males	-2 years
Safety – females	-1 year

	F. Mortality among disabled members	Table A-3

Basis – Average of RP-2000 Combined and Disabled Mortality Tables, projected to 2025 using Projection Scale AA:

General – males	-1 year
General – females	-1 year

Basis –RP-2000 Combined Mortality Table, for respective genders projected to 2025 using Projection Scale AA

Safety – males	0 years
Safety – females	0 years

	G. Mortality for beneficiaries	Table A-2

Basis – Beneficiaries are assumed to have the same mortality as a general member of the opposite sex who has taken a service retirement.

	H. Other terminations of employment	Tables A-6 to A-13
	I. Refund of contributions on vested termination	Table A-4

Table A-2: Mortality for Members Retired for Service*

Age	Safety Male	Safety Female	General Male	General Female
20	0.020%	0.013%	0.020%	0.013%
25	0.026%	0.014%	0.027%	0.014%
30	0.035%	0.018%	0.036%	0.018%
35	0.056%	0.034%	0.062%	0.034%
40	0.083%	0.044%	0.086%	0.044%
45	0.099%	0.071%	0.103%	0.071%
50	0.124%	0.098%	0.130%	0.098%
55	0.176%	0.189%	0.193%	0.189%
60	0.352%	0.392%	0.397%	0.392%
65	0.704%	0.760%	0.793%	0.760%
70	1.256%	1.311%	1.392%	1.311%
75	2.083%	2.136%	2.323%	2.136%
80	3.854%	3.482%	4.393%	3.482%
85	7.340%	5.832%	8.371%	5.832%
90	13.285%	11.053%	14.682%	11.053%

**Note that the mortality assumptions adopted by LACERA per the 2013 Investigation of Experience report contain a margin for expected future mortality improvement. See the Investigation of Experience report for details.*

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Table A-3: Mortality for Members Retired for Disability*

Table A-3: Mortality for Members Retired for Disability

Age	Safety Male	Safety Female	General Male	General Female
20	0.021%	0.013%	0.709%	0.262%
25	0.029%	0.015%	0.827%	0.262%
30	0.039%	0.021%	1.014%	0.285%
35	0.068%	0.036%	1.027%	0.307%
40	0.088%	0.048%	0.990%	0.277%
45	0.109%	0.075%	0.886%	0.291%
50	0.136%	0.109%	0.967%	0.387%
55	0.224%	0.222%	1.127%	0.697%
60	0.451%	0.446%	1.557%	1.112%
65	0.895%	0.856%	2.094%	1.554%
70	1.522%	1.477%	2.791%	2.214%
75	2.660%	2.299%	3.818%	3.119%
80	5.007%	3.849%	6.117%	4.585%
85	9.292%	6.663%	9.845%	6.850%
90	16.592%	12.215%	14.806%	11.601%

**Note that the mortality assumptions adopted by LACERA per the 2013 Investigation of Experience report contain a margin for expected future mortality improvement. See the Investigation of Experience report for details.*

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Table A-4: Immediate Refund of Contributions upon Termination of Employment (Excludes Plan E)

Years of Service	Safety	General
0	100%	100%
1	100%	100%
2	100%	100%
3	100%	100%
4	100%	100%
5	35%	35%
6	35%	35%
7	35%	35%
8	33%	34%
9	31%	34%
10	29%	33%
11	27%	33%
12	25%	32%
13	22%	31%
14	19%	30%
15	16%	30%
16	13%	29%
17	10%	28%
18	6%	25%
19	2%	23%
20	0%	20%
21	0%	18%
22	0%	15%
23	0%	12%
24	0%	9%
25	0%	6%
26	0%	3%
27	0%	0%
28	0%	0%
29	0%	0%
30 & Up	0%	0%

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Table A-5: Annual Increase in Salary*

Years of Service	Due to Promotion and Longevity		Total Annual Increase*	
	General	Safety	General	Safety
<1	6.00%	8.00%	9.71%	11.78%
1	5.25%	7.00%	8.93%	10.75%
2	4.50%	6.00%	8.16%	9.71%
3	3.75%	4.00%	7.38%	7.64%
4	3.00%	3.00%	6.61%	6.60%
5	2.50%	2.50%	6.09%	6.09%
6	2.00%	2.00%	5.57%	5.57%
7	1.75%	1.75%	5.31%	5.31%
8	1.50%	1.50%	5.05%	5.05%
9	1.30%	1.30%	4.85%	4.85%
10	1.15%	1.15%	4.69%	4.69%
11	1.00%	1.00%	4.53%	4.54%
12	0.85%	0.85%	4.38%	4.38%
13	0.70%	0.70%	4.22%	4.22%
14	0.60%	0.60%	4.12%	4.12%
15	0.50%	0.50%	4.02%	4.02%
16	0.40%	0.50%	3.91%	4.02%
17	0.35%	0.50%	3.86%	4.02%
18	0.30%	0.50%	3.81%	4.02%
19	0.25%	0.50%	3.76%	4.02%
20 or More	0.25%	0.50%	3.76%	4.02%

** The total expected increase in salary includes both merit (shown above) and the general wage increase assumption of 3.50% per annum. The total result is compounded rather than additive. For example, the total increase to service less than one year is 9.71% for General members.*

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Appendix A: Rates of Separation From Active Service Tables A-6 to A-13

A schedule of the probabilities of termination of employment due to the following causes can be found on the following pages:

Service Retirement:	Member retires after meeting age and service requirements for reasons other than disability.
Withdrawal:	Member terminates and elects a refund of member contributions, or a deferred vested retirement benefit.
Service Disability:	Member receives disability retirement; disability is service related.
Ordinary Disability:	Member receives disability retirement; disability is not service related.
Service Death:	Member dies before retirement; death is service related.
Ordinary Death:	Member dies before retirement; death is not service related.

Each rate represents the probability that a member will separate from service at each age due to the particular cause. For example, a rate of 0.0300 for a member's service retirement at age 50 means we assume that 30 out of 1,000 members who are age 50 will retire at that age.

Each table represents the detailed rates needed for each LACERA plan by sex:

Table A-6: General Plan A, B & C Males
A-7: General Plan A, B & C Females
A-8: General Plan D & G Males
A-9: General Plan D & G Females
A-10: General Plan E Males
A-11: General Plan E Females
A-12: Safety Plan A, B & C Males
A-13: Safety Plan A, B & C Females

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Table A-6: Rate of Separation From Active Service For General Members Plans A, B & C - Male

Age	Service Retirement	Other Terminations	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
19	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
20	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
21	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
22	0.0000	0.0050	0.0002	0.0001	N/A	0.0003
23	0.0000	0.0050	0.0002	0.0001	N/A	0.0003
24	0.0000	0.0050	0.0002	0.0001	N/A	0.0003
25	0.0000	0.0050	0.0002	0.0001	N/A	0.0003
26	0.0000	0.0050	0.0002	0.0001	N/A	0.0003
27	0.0000	0.0050	0.0002	0.0001	N/A	0.0003
28	0.0000	0.0050	0.0002	0.0001	N/A	0.0004
29	0.0000	0.0050	0.0002	0.0001	N/A	0.0004
30	0.0000	0.0050	0.0002	0.0001	N/A	0.0004
31	0.0000	0.0050	0.0002	0.0001	N/A	0.0005
32	0.0000	0.0050	0.0002	0.0001	N/A	0.0006
33	0.0000	0.0050	0.0002	0.0001	N/A	0.0006
34	0.0000	0.0050	0.0003	0.0001	N/A	0.0007
35	0.0000	0.0050	0.0003	0.0001	N/A	0.0007
36	0.0000	0.0050	0.0004	0.0001	N/A	0.0008
37	0.0000	0.0050	0.0004	0.0001	N/A	0.0008
38	0.0000	0.0050	0.0005	0.0001	N/A	0.0009
39	0.0000	0.0050	0.0005	0.0001	N/A	0.0009
40	0.0300	0.0050	0.0006	0.0002	N/A	0.0009
41	0.0300	0.0050	0.0006	0.0002	N/A	0.0009
42	0.0300	0.0050	0.0007	0.0002	N/A	0.0010
43	0.0300	0.0050	0.0007	0.0003	N/A	0.0010
44	0.0300	0.0050	0.0008	0.0003	N/A	0.0011
45	0.0300	0.0050	0.0009	0.0003	N/A	0.0011
46	0.0300	0.0050	0.0010	0.0004	N/A	0.0012
47	0.0300	0.0050	0.0011	0.0004	N/A	0.0012
48	0.0300	0.0050	0.0012	0.0004	N/A	0.0013
49	0.0300	0.0050	0.0013	0.0004	N/A	0.0014
50	0.0300	0.0050	0.0014	0.0004	N/A	0.0014
51	0.0300	0.0050	0.0015	0.0004	N/A	0.0015
52	0.0300	0.0050	0.0016	0.0004	N/A	0.0016
53	0.0300	0.0050	0.0018	0.0005	N/A	0.0017
54	0.0600	0.0050	0.0020	0.0006	N/A	0.0019
55	0.1000	0.0050	0.0022	0.0006	N/A	0.0021
56	0.1200	0.0050	0.0024	0.0007	N/A	0.0024
57	0.1700	0.0050	0.0026	0.0008	N/A	0.0027
58	0.2200	0.0050	0.0029	0.0009	N/A	0.0029
59	0.2400	0.0050	0.0032	0.0010	N/A	0.0033
60	0.2600	0.0050	0.0036	0.0010	N/A	0.0037
61	0.3100	0.0050	0.0039	0.0011	N/A	0.0041
62	0.3500	0.0050	0.0042	0.0012	N/A	0.0045
63	0.2800	0.0050	0.0042	0.0014	N/A	0.0049
64	0.2800	0.0050	0.0042	0.0015	N/A	0.0053
65	0.2800	0.0050	0.0042	0.0017	N/A	0.0058
66	0.2800	0.0050	0.0042	0.0018	N/A	0.0062
67	0.2800	0.0050	0.0042	0.0020	N/A	0.0064
68	0.2800	0.0050	0.0042	0.0022	N/A	0.0067
69	0.2800	0.0050	0.0042	0.0023	N/A	0.0068
70	0.2800	0.0050	0.0042	0.0025	N/A	0.0071
71	0.2800	0.0050	0.0042	0.0026	N/A	0.0077
72	0.2800	0.0050	0.0042	0.0028	N/A	0.0085
73	0.2800	0.0050	0.0042	0.0030	N/A	0.0094
74	0.2800	0.0050	0.0042	0.0031	N/A	0.0106
75	1.0000	0.0000	0.0000	0.0000	N/A	0.0000

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Table A-7: Rate of Separation From Active Service For General Members Plans A, B & C - Female

Age	Service Retirement	Other Terminations	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.0050	0.0001	0.0001	N/A	0.0001
19	0.0000	0.0050	0.0001	0.0001	N/A	0.0001
20	0.0000	0.0050	0.0001	0.0001	N/A	0.0001
21	0.0000	0.0050	0.0001	0.0001	N/A	0.0001
22	0.0000	0.0050	0.0001	0.0001	N/A	0.0001
23	0.0000	0.0050	0.0001	0.0001	N/A	0.0001
24	0.0000	0.0050	0.0001	0.0001	N/A	0.0001
25	0.0000	0.0050	0.0001	0.0001	N/A	0.0001
26	0.0000	0.0050	0.0001	0.0001	N/A	0.0001
27	0.0000	0.0050	0.0001	0.0001	N/A	0.0001
28	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
29	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
30	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
31	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
32	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
33	0.0000	0.0050	0.0002	0.0001	N/A	0.0003
34	0.0000	0.0050	0.0002	0.0001	N/A	0.0003
35	0.0000	0.0050	0.0003	0.0001	N/A	0.0003
36	0.0000	0.0050	0.0003	0.0001	N/A	0.0003
37	0.0000	0.0050	0.0004	0.0001	N/A	0.0004
38	0.0000	0.0050	0.0004	0.0001	N/A	0.0004
39	0.0000	0.0050	0.0005	0.0001	N/A	0.0004
40	0.0300	0.0050	0.0005	0.0002	N/A	0.0004
41	0.0300	0.0050	0.0005	0.0002	N/A	0.0004
42	0.0300	0.0050	0.0006	0.0002	N/A	0.0005
43	0.0300	0.0050	0.0007	0.0003	N/A	0.0005
44	0.0300	0.0050	0.0007	0.0003	N/A	0.0006
45	0.0300	0.0050	0.0008	0.0003	N/A	0.0006
46	0.0300	0.0050	0.0009	0.0004	N/A	0.0007
47	0.0300	0.0050	0.0009	0.0004	N/A	0.0008
48	0.0300	0.0050	0.0010	0.0004	N/A	0.0008
49	0.0300	0.0050	0.0011	0.0004	N/A	0.0008
50	0.0300	0.0050	0.0012	0.0004	N/A	0.0009
51	0.0300	0.0050	0.0012	0.0004	N/A	0.0010
52	0.0300	0.0050	0.0013	0.0004	N/A	0.0011
53	0.0300	0.0050	0.0014	0.0005	N/A	0.0012
54	0.0600	0.0050	0.0015	0.0006	N/A	0.0014
55	0.1000	0.0050	0.0016	0.0006	N/A	0.0016
56	0.1200	0.0050	0.0016	0.0007	N/A	0.0018
57	0.1700	0.0050	0.0017	0.0008	N/A	0.0021
58	0.2200	0.0050	0.0020	0.0009	N/A	0.0024
59	0.2400	0.0050	0.0022	0.0010	N/A	0.0027
60	0.2600	0.0050	0.0024	0.0010	N/A	0.0032
61	0.3100	0.0050	0.0027	0.0011	N/A	0.0032
62	0.3500	0.0050	0.0029	0.0012	N/A	0.0035
63	0.2800	0.0050	0.0031	0.0014	N/A	0.0038
64	0.2800	0.0050	0.0034	0.0015	N/A	0.0041
65	0.2800	0.0050	0.0037	0.0017	N/A	0.0044
66	0.2800	0.0050	0.0040	0.0018	N/A	0.0048
67	0.2800	0.0050	0.0044	0.0020	N/A	0.0051
68	0.2800	0.0050	0.0048	0.0022	N/A	0.0055
69	0.2800	0.0050	0.0052	0.0023	N/A	0.0058
70	0.2800	0.0050	0.0052	0.0025	N/A	0.0061
71	0.2800	0.0050	0.0052	0.0026	N/A	0.0064
72	0.2800	0.0050	0.0052	0.0028	N/A	0.0067
73	0.2800	0.0050	0.0052	0.0030	N/A	0.0068
74	0.2800	0.0050	0.0052	0.0031	N/A	0.0073
75	1.0000	0.0000	0.0000	0.0000	N/A	0.0078

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Table A-8: Rate of Separation From Active Service For General Members Plan D and G - Male

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.0002	0.0001	N/A	0.0002
19	0.0000	0.0002	0.0001	N/A	0.0002
20	0.0000	0.0002	0.0001	N/A	0.0002
21	0.0000	0.0002	0.0001	N/A	0.0002
22	0.0000	0.0002	0.0001	N/A	0.0003
23	0.0000	0.0002	0.0001	N/A	0.0003
24	0.0000	0.0002	0.0001	N/A	0.0003
25	0.0000	0.0002	0.0001	N/A	0.0003
26	0.0000	0.0002	0.0001	N/A	0.0003
27	0.0000	0.0002	0.0001	N/A	0.0003
28	0.0000	0.0002	0.0001	N/A	0.0004
29	0.0000	0.0002	0.0001	N/A	0.0004
30	0.0000	0.0002	0.0001	N/A	0.0004
31	0.0000	0.0002	0.0001	N/A	0.0005
32	0.0000	0.0002	0.0001	N/A	0.0006
33	0.0000	0.0002	0.0001	N/A	0.0006
34	0.0000	0.0003	0.0001	N/A	0.0007
35	0.0000	0.0003	0.0001	N/A	0.0007
36	0.0000	0.0004	0.0001	N/A	0.0008
37	0.0000	0.0004	0.0001	N/A	0.0008
38	0.0000	0.0005	0.0001	N/A	0.0009
39	0.0000	0.0005	0.0001	N/A	0.0009
40	0.0200	0.0006	0.0002	N/A	0.0009
41	0.0200	0.0006	0.0002	N/A	0.0009
42	0.0200	0.0007	0.0002	N/A	0.0010
43	0.0200	0.0007	0.0003	N/A	0.0010
44	0.0200	0.0008	0.0003	N/A	0.0011
45	0.0200	0.0009	0.0003	N/A	0.0011
46	0.0200	0.0010	0.0004	N/A	0.0012
47	0.0200	0.0011	0.0004	N/A	0.0012
48	0.0200	0.0012	0.0004	N/A	0.0013
49	0.0200	0.0013	0.0004	N/A	0.0014
50	0.0200	0.0014	0.0004	N/A	0.0014
51	0.0200	0.0015	0.0004	N/A	0.0015
52	0.0200	0.0016	0.0004	N/A	0.0016
53	0.0200	0.0018	0.0005	N/A	0.0017
54	0.0200	0.0020	0.0006	N/A	0.0019
55	0.0250	0.0022	0.0006	N/A	0.0021
56	0.0250	0.0024	0.0007	N/A	0.0024
57	0.0300	0.0026	0.0008	N/A	0.0027
58	0.0350	0.0029	0.0009	N/A	0.0029
59	0.0500	0.0032	0.0010	N/A	0.0033
60	0.0600	0.0036	0.0010	N/A	0.0037
61	0.0700	0.0039	0.0011	N/A	0.0041
62	0.1000	0.0042	0.0012	N/A	0.0045
63	0.0900	0.0042	0.0014	N/A	0.0049
64	0.1200	0.0042	0.0015	N/A	0.0053
65	0.2000	0.0042	0.0017	N/A	0.0058
66	0.2000	0.0042	0.0018	N/A	0.0062
67	0.1800	0.0042	0.0020	N/A	0.0064
68	0.1600	0.0042	0.0022	N/A	0.0067
69	0.1600	0.0042	0.0023	N/A	0.0068
70	0.2000	0.0042	0.0025	N/A	0.0071
71	0.2000	0.0042	0.0026	N/A	0.0077
72	0.2000	0.0042	0.0028	N/A	0.0085
73	0.2000	0.0042	0.0030	N/A	0.0094
74	0.2000	0.0042	0.0031	N/A	0.0106
75	1.0000	0.0042	0.0000	N/A	0.0119

Years of Service	Other Terminations
0	0.0800
1	0.0550
2	0.0375
3	0.0300
4	0.0250
5	0.0233
6	0.0217
7	0.0200
8	0.0190
9	0.0180
10	0.0170
11	0.0160
12	0.0150
13	0.0140
14	0.0130
15	0.0120
16	0.0110
17	0.0100
18	0.0092
19	0.0084
20	0.0076
21	0.0068
22	0.0060
23	0.0056
24	0.0052
25	0.0048
26	0.0044
27	0.0040
28	0.0040
29	0.0040
30 & Above	0.0000

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Table A-9: Rate of Separation From Active Service For General Members Plan D and G - Female

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.0001	0.0001	N/A	0.0001
19	0.0000	0.0001	0.0001	N/A	0.0001
20	0.0000	0.0001	0.0001	N/A	0.0001
21	0.0000	0.0001	0.0001	N/A	0.0001
22	0.0000	0.0001	0.0001	N/A	0.0001
23	0.0000	0.0001	0.0001	N/A	0.0001
24	0.0000	0.0001	0.0001	N/A	0.0001
25	0.0000	0.0001	0.0001	N/A	0.0001
26	0.0000	0.0001	0.0001	N/A	0.0001
27	0.0000	0.0001	0.0001	N/A	0.0001
28	0.0000	0.0001	0.0001	N/A	0.0002
29	0.0000	0.0001	0.0001	N/A	0.0002
30	0.0000	0.0001	0.0001	N/A	0.0002
31	0.0000	0.0001	0.0001	N/A	0.0002
32	0.0000	0.0001	0.0001	N/A	0.0002
33	0.0000	0.0002	0.0001	N/A	0.0003
34	0.0000	0.0002	0.0001	N/A	0.0003
35	0.0000	0.0003	0.0001	N/A	0.0003
36	0.0000	0.0003	0.0001	N/A	0.0003
37	0.0000	0.0004	0.0001	N/A	0.0004
38	0.0000	0.0004	0.0001	N/A	0.0004
39	0.0000	0.0005	0.0001	N/A	0.0004
40	0.0200	0.0005	0.0002	N/A	0.0004
41	0.0200	0.0005	0.0002	N/A	0.0004
42	0.0200	0.0006	0.0002	N/A	0.0005
43	0.0200	0.0007	0.0003	N/A	0.0005
44	0.0200	0.0007	0.0003	N/A	0.0006
45	0.0200	0.0008	0.0003	N/A	0.0006
46	0.0200	0.0009	0.0004	N/A	0.0007
47	0.0200	0.0009	0.0004	N/A	0.0008
48	0.0200	0.0010	0.0004	N/A	0.0008
49	0.0200	0.0011	0.0004	N/A	0.0008
50	0.0200	0.0012	0.0004	N/A	0.0009
51	0.0200	0.0012	0.0004	N/A	0.0010
52	0.0200	0.0013	0.0004	N/A	0.0011
53	0.0200	0.0014	0.0005	N/A	0.0012
54	0.0200	0.0015	0.0006	N/A	0.0014
55	0.0250	0.0016	0.0006	N/A	0.0016
56	0.0250	0.0016	0.0007	N/A	0.0018
57	0.0300	0.0017	0.0008	N/A	0.0021
58	0.0350	0.0020	0.0009	N/A	0.0024
59	0.0500	0.0022	0.0010	N/A	0.0027
60	0.0600	0.0024	0.0010	N/A	0.0029
61	0.0700	0.0027	0.0011	N/A	0.0032
62	0.1000	0.0029	0.0012	N/A	0.0035
63	0.0900	0.0031	0.0014	N/A	0.0038
64	0.1200	0.0034	0.0015	N/A	0.0041
65	0.2000	0.0037	0.0017	N/A	0.0044
66	0.2000	0.0040	0.0018	N/A	0.0048
67	0.1800	0.0044	0.0020	N/A	0.0051
68	0.1600	0.0048	0.0022	N/A	0.0055
69	0.1600	0.0052	0.0023	N/A	0.0058
70	0.2000	0.0052	0.0025	N/A	0.0061
71	0.2000	0.0052	0.0026	N/A	0.0064
72	0.2000	0.0052	0.0028	N/A	0.0067
73	0.2000	0.0052	0.0030	N/A	0.0068
74	0.2000	0.0052	0.0031	N/A	0.0073
75	1.0000	0.0000	0.0000	N/A	0.0078

Years of Service	Other Terminations
0	0.0800
1	0.0550
2	0.0375
3	0.0300
4	0.0250
5	0.0233
6	0.0217
7	0.0200
8	0.0190
9	0.0180
10	0.0170
11	0.0160
12	0.0150
13	0.0140
14	0.0130
15	0.0120
16	0.0110
17	0.0100
18	0.0092
19	0.0084
20	0.0076
21	0.0068
22	0.0060
23	0.0056
24	0.0052
25	0.0048
26	0.0044
27	0.0040
28	0.0040
29	0.0040
30 & Above	0.0000

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Table A-10: Rate of Separation From Active Service For General Members Plan E - Male

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	N/A	N/A	N/A	0.0002
19	0.0000	N/A	N/A	N/A	0.0002
20	0.0000	N/A	N/A	N/A	0.0002
21	0.0000	N/A	N/A	N/A	0.0002
22	0.0000	N/A	N/A	N/A	0.0003
23	0.0000	N/A	N/A	N/A	0.0003
24	0.0000	N/A	N/A	N/A	0.0003
25	0.0000	N/A	N/A	N/A	0.0003
26	0.0000	N/A	N/A	N/A	0.0003
27	0.0000	N/A	N/A	N/A	0.0003
28	0.0000	N/A	N/A	N/A	0.0004
29	0.0000	N/A	N/A	N/A	0.0004
30	0.0000	N/A	N/A	N/A	0.0004
31	0.0000	N/A	N/A	N/A	0.0005
32	0.0000	N/A	N/A	N/A	0.0006
33	0.0000	N/A	N/A	N/A	0.0006
34	0.0000	N/A	N/A	N/A	0.0007
35	0.0000	N/A	N/A	N/A	0.0007
36	0.0000	N/A	N/A	N/A	0.0008
37	0.0000	N/A	N/A	N/A	0.0008
38	0.0000	N/A	N/A	N/A	0.0009
39	0.0000	N/A	N/A	N/A	0.0009
40	0.0000	N/A	N/A	N/A	0.0009
41	0.0000	N/A	N/A	N/A	0.0009
42	0.0000	N/A	N/A	N/A	0.0010
43	0.0000	N/A	N/A	N/A	0.0010
44	0.0000	N/A	N/A	N/A	0.0011
45	0.0000	N/A	N/A	N/A	0.0011
46	0.0000	N/A	N/A	N/A	0.0012
47	0.0000	N/A	N/A	N/A	0.0012
48	0.0000	N/A	N/A	N/A	0.0013
49	0.0000	N/A	N/A	N/A	0.0014
50	0.0000	N/A	N/A	N/A	0.0014
51	0.0000	N/A	N/A	N/A	0.0015
52	0.0000	N/A	N/A	N/A	0.0016
53	0.0000	N/A	N/A	N/A	0.0017
54	0.0000	N/A	N/A	N/A	0.0019
55	0.0300	N/A	N/A	N/A	0.0021
56	0.0250	N/A	N/A	N/A	0.0024
57	0.0250	N/A	N/A	N/A	0.0027
58	0.0250	N/A	N/A	N/A	0.0029
59	0.0300	N/A	N/A	N/A	0.0033
60	0.0450	N/A	N/A	N/A	0.0037
61	0.0600	N/A	N/A	N/A	0.0041
62	0.0900	N/A	N/A	N/A	0.0045
63	0.0900	N/A	N/A	N/A	0.0049
64	0.1600	N/A	N/A	N/A	0.0053
65	0.2500	N/A	N/A	N/A	0.0058
66	0.1800	N/A	N/A	N/A	0.0062
67	0.1700	N/A	N/A	N/A	0.0064
68	0.1600	N/A	N/A	N/A	0.0067
69	0.1600	N/A	N/A	N/A	0.0068
70	0.2000	N/A	N/A	N/A	0.0071
71	0.2000	N/A	N/A	N/A	0.0077
72	0.2000	N/A	N/A	N/A	0.0085
73	0.2000	N/A	N/A	N/A	0.0094
74	0.2000	N/A	N/A	N/A	0.0106
75	1.0000	N/A	N/A	N/A	0.0119

Years of Service	Other Terminations
0	0.1400
1	0.0750
2	0.0550
3	0.0400
4	0.0300
5	0.0277
6	0.0253
7	0.0230
8	0.0220
9	0.0210
10	0.0200
11	0.0190
12	0.0180
13	0.0174
14	0.0168
15	0.0162
16	0.0156
17	0.0150
18	0.0144
19	0.0138
20	0.0132
21	0.0126
22	0.0120
23	0.0116
24	0.0112
25	0.0108
26	0.0104
27	0.0100
28	0.0100
29	0.0100
30 & Above	0.0100

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Table A-11: Rate of Separation From Active Service For General Members Plan E - Female

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	N/A	N/A	N/A	0.0001
19	0.0000	N/A	N/A	N/A	0.0001
20	0.0000	N/A	N/A	N/A	0.0001
21	0.0000	N/A	N/A	N/A	0.0001
22	0.0000	N/A	N/A	N/A	0.0001
23	0.0000	N/A	N/A	N/A	0.0001
24	0.0000	N/A	N/A	N/A	0.0001
25	0.0000	N/A	N/A	N/A	0.0001
26	0.0000	N/A	N/A	N/A	0.0001
27	0.0000	N/A	N/A	N/A	0.0001
28	0.0000	N/A	N/A	N/A	0.0002
29	0.0000	N/A	N/A	N/A	0.0002
30	0.0000	N/A	N/A	N/A	0.0002
31	0.0000	N/A	N/A	N/A	0.0002
32	0.0000	N/A	N/A	N/A	0.0002
33	0.0000	N/A	N/A	N/A	0.0003
34	0.0000	N/A	N/A	N/A	0.0003
35	0.0000	N/A	N/A	N/A	0.0003
36	0.0000	N/A	N/A	N/A	0.0003
37	0.0000	N/A	N/A	N/A	0.0004
38	0.0000	N/A	N/A	N/A	0.0004
39	0.0000	N/A	N/A	N/A	0.0004
40	0.0000	N/A	N/A	N/A	0.0004
41	0.0000	N/A	N/A	N/A	0.0004
42	0.0000	N/A	N/A	N/A	0.0005
43	0.0000	N/A	N/A	N/A	0.0005
44	0.0000	N/A	N/A	N/A	0.0006
45	0.0000	N/A	N/A	N/A	0.0006
46	0.0000	N/A	N/A	N/A	0.0007
47	0.0000	N/A	N/A	N/A	0.0008
48	0.0000	N/A	N/A	N/A	0.0008
49	0.0000	N/A	N/A	N/A	0.0008
50	0.0000	N/A	N/A	N/A	0.0009
51	0.0000	N/A	N/A	N/A	0.0010
52	0.0000	N/A	N/A	N/A	0.0011
53	0.0000	N/A	N/A	N/A	0.0012
54	0.0000	N/A	N/A	N/A	0.0014
55	0.0300	N/A	N/A	N/A	0.0016
56	0.0250	N/A	N/A	N/A	0.0018
57	0.0250	N/A	N/A	N/A	0.0021
58	0.0250	N/A	N/A	N/A	0.0024
59	0.0300	N/A	N/A	N/A	0.0027
60	0.0450	N/A	N/A	N/A	0.0029
61	0.0600	N/A	N/A	N/A	0.0032
62	0.0900	N/A	N/A	N/A	0.0035
63	0.0900	N/A	N/A	N/A	0.0038
64	0.1600	N/A	N/A	N/A	0.0041
65	0.2500	N/A	N/A	N/A	0.0044
66	0.1800	N/A	N/A	N/A	0.0048
67	0.1700	N/A	N/A	N/A	0.0051
68	0.1600	N/A	N/A	N/A	0.0055
69	0.1600	N/A	N/A	N/A	0.0058
70	0.2000	N/A	N/A	N/A	0.0061
71	0.2000	N/A	N/A	N/A	0.0064
72	0.2000	N/A	N/A	N/A	0.0067
73	0.2000	N/A	N/A	N/A	0.0068
74	0.2000	N/A	N/A	N/A	0.0073
75	1.0000	N/A	N/A	N/A	0.0078

Years of Service	Other Terminations
0	0.1400
1	0.0750
2	0.0550
3	0.0400
4	0.0300
5	0.0277
6	0.0253
7	0.0230
8	0.0220
9	0.0210
10	0.0200
11	0.0190
12	0.0180
13	0.0174
14	0.0168
15	0.0162
16	0.0156
17	0.0150
18	0.0144
19	0.0138
20	0.0132
21	0.0126
22	0.0120
23	0.0116
24	0.0112
25	0.0108
26	0.0104
27	0.0100
28	0.0100
29	0.0100
30 & Above	0.0100

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Table A-12: Rate of Separation From Active Service For Safety Members Plan A, B & C - Male

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.0027	0.0000	0.0001	0.0000
19	0.0000	0.0027	0.0000	0.0001	0.0000
20	0.0000	0.0027	0.0000	0.0001	0.0002
21	0.0000	0.0027	0.0000	0.0001	0.0002
22	0.0000	0.0027	0.0000	0.0001	0.0002
23	0.0000	0.0027	0.0000	0.0001	0.0002
24	0.0000	0.0027	0.0000	0.0001	0.0002
25	0.0000	0.0027	0.0000	0.0001	0.0002
26	0.0000	0.0027	0.0000	0.0001	0.0002
27	0.0000	0.0027	0.0000	0.0001	0.0002
28	0.0000	0.0027	0.0000	0.0001	0.0003
29	0.0000	0.0027	0.0000	0.0001	0.0003
30	0.0000	0.0027	0.0000	0.0001	0.0003
31	0.0000	0.0027	0.0000	0.0001	0.0003
32	0.0000	0.0027	0.0000	0.0001	0.0003
33	0.0000	0.0029	0.0000	0.0001	0.0003
34	0.0000	0.0031	0.0000	0.0001	0.0004
35	0.0000	0.0032	0.0000	0.0001	0.0004
36	0.0000	0.0034	0.0000	0.0001	0.0004
37	0.0000	0.0036	0.0000	0.0001	0.0005
38	0.0000	0.0038	0.0000	0.0001	0.0006
39	0.0000	0.0040	0.0000	0.0001	0.0006
40	0.0100	0.0041	0.0000	0.0001	0.0007
41	0.0100	0.0043	0.0000	0.0001	0.0007
42	0.0100	0.0045	0.0000	0.0001	0.0008
43	0.0100	0.0049	0.0000	0.0001	0.0008
44	0.0100	0.0052	0.0000	0.0001	0.0009
45	0.0100	0.0056	0.0000	0.0001	0.0009
46	0.0100	0.0059	0.0000	0.0001	0.0009
47	0.0100	0.0063	0.0000	0.0001	0.0009
48	0.0100	0.0072	0.0000	0.0001	0.0010
49	0.0100	0.0081	0.0000	0.0001	0.0010
50	0.0100	0.0090	0.0000	0.0001	0.0011
51	0.0200	0.0108	0.0000	0.0001	0.0011
52	0.0250	0.0126	0.0000	0.0001	0.0012
53	0.0300	0.0180	0.0000	0.0001	0.0012
54	0.1000	0.0270	0.0000	0.0001	0.0013
55	0.2400	0.0900	0.0000	0.0001	0.0014
56	0.1800	0.0720	0.0000	0.0001	0.0014
57	0.2000	0.1080	0.0000	0.0001	0.0015
58	0.2400	0.1260	0.0000	0.0001	0.0016
59	0.4000	0.1800	0.0000	0.0001	0.0017
60	1.0000	0.0000	0.0000	0.0000	0.0019

Years of Service	Other Terminations
0	0.0300
1	0.0250
2	0.0200
3	0.0150
4	0.0120
5	0.0113
6	0.0107
7	0.0100
8	0.0092
9	0.0084
10	0.0076
11	0.0068
12	0.0060
13	0.0054
14	0.0048
15	0.0042
16	0.0036
17	0.0030
18	0.0024
19	0.0018
20 & Above	0.0000

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Table A-13: Rate of Separation From Active Service For Safety Members Plan A, B & C – Female

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.0033	0.0000	0.0001	0.0001
19	0.0000	0.0033	0.0000	0.0001	0.0001
20	0.0000	0.0033	0.0000	0.0001	0.0001
21	0.0000	0.0033	0.0000	0.0001	0.0001
22	0.0000	0.0033	0.0000	0.0001	0.0001
23	0.0000	0.0033	0.0000	0.0001	0.0001
24	0.0000	0.0033	0.0000	0.0001	0.0001
25	0.0000	0.0033	0.0000	0.0001	0.0001
26	0.0000	0.0033	0.0000	0.0001	0.0001
27	0.0000	0.0033	0.0000	0.0001	0.0001
28	0.0000	0.0038	0.0000	0.0001	0.0002
29	0.0000	0.0041	0.0000	0.0001	0.0002
30	0.0000	0.0046	0.0000	0.0001	0.0002
31	0.0000	0.0050	0.0000	0.0001	0.0002
32	0.0000	0.0054	0.0000	0.0001	0.0002
33	0.0000	0.0060	0.0000	0.0001	0.0003
34	0.0000	0.0067	0.0000	0.0001	0.0003
35	0.0000	0.0072	0.0000	0.0001	0.0003
36	0.0000	0.0078	0.0000	0.0001	0.0003
37	0.0000	0.0085	0.0000	0.0001	0.0004
38	0.0000	0.0088	0.0000	0.0001	0.0004
39	0.0000	0.0091	0.0000	0.0001	0.0004
40	0.0100	0.0095	0.0000	0.0001	0.0004
41	0.0100	0.0097	0.0000	0.0001	0.0004
42	0.0100	0.0101	0.0000	0.0001	0.0005
43	0.0100	0.0104	0.0000	0.0001	0.0005
44	0.0100	0.0108	0.0000	0.0001	0.0006
45	0.0100	0.0111	0.0000	0.0001	0.0006
46	0.0100	0.0114	0.0000	0.0001	0.0007
47	0.0100	0.0118	0.0000	0.0001	0.0008
48	0.0100	0.0122	0.0000	0.0001	0.0008
49	0.0100	0.0135	0.0000	0.0001	0.0008
50	0.0100	0.0203	0.0000	0.0001	0.0009
51	0.0200	0.0237	0.0000	0.0001	0.0010
52	0.0250	0.0270	0.0000	0.0001	0.0011
53	0.0300	0.0338	0.0000	0.0001	0.0012
54	0.1000	0.0405	0.0000	0.0001	0.0014
55	0.2400	0.0473	0.0000	0.0001	0.0016
56	0.1800	0.0810	0.0000	0.0001	0.0018
57	0.2000	0.0810	0.0000	0.0001	0.0021
58	0.2400	0.0810	0.0000	0.0001	0.0024
59	0.4000	0.0810	0.0000	0.0001	0.0027
60	1.0000	0.0000	0.0000	0.0000	0.0029

Years of Service	Other Terminations
0	0.0300
1	0.0250
2	0.0200
3	0.0150
4	0.0120
5	0.0113
6	0.0107
7	0.0100
8	0.0092
9	0.0084
10	0.0076
11	0.0068
12	0.0060
13	0.0054
14	0.0048
15	0.0042
16	0.0036
17	0.0030
18	0.0024
19	0.0018
20 & Above	0.0000

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Appendix B: Summary of Plan Provisions

All actuarial calculations are based on our understanding of the statutes governing LACERA as contained in the County Employees Retirement Plan (CERL) of 1937 and the Public Employees' Pension Relief Act (PEPRA) with provisions adopted by the LACERA Board, effective through July 1, 2014. The benefit and contribution provisions of this law are summarized briefly below, along with corresponding references to the State Code. This summary does not attempt to cover all the detailed provisions of the law.

MEMBERSHIP	Government Code Section
Permanent employees of Los Angeles County (County) and participating districts who work ¾ time or more are eligible for membership in LACERA.	(31551, 31552, Bylaws)
Employees eligible for safety membership (law enforcement, firefighting and lifeguards) become safety members on the first day of the month after date of hire.	(31558)
All other employees become general members on the first day of the month after date of hire.	(31493, Bylaws)
Elective officers become members on the first day of the month after filing a declaration with the Board of Retirement (Board).	(31553, 31562)

General members in Plan E may transfer all their Plan E service credit to Plan D during an approved transfer period by making the required contributions. Transferred members relinquish, waive, and forfeit any and all vested or accrued benefits available under any other retirement plan and are entitled only to the benefits of Plan D.

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RETIREMENT PLANS

The County has established nine defined benefit plans (General Plans A, B, C, D, E and G and Safety Plans A, B and C) and two defined contribution plans (General Plan F and Safety Plan F) based on a member's date of entry into LACERA. (31494.1, 31494.3)

Plan A: General and safety members – prior to September 1977.

Plan B: General members – September 1977 through September 1978. Safety members – September 1977 through December 2012.

Plan C: General members – October 1978 through May 1979.Safety members – first hired on or after January 1, 2013. (7522.02)

Plan D: General members – hired June 1979 through January 3, 1982; and those first hired on or after January 4, 1982 and prior to January 1, 2013, and elected Plan D instead of Plan E; or, former Plan E general members who elected to transfer to Plan D.

Plan E: General members – first hired on or after January 4, 1982 and prior to January 1, 2013, unless they elect Plan D; or, former general members in Plans A-D who elected to transfer to Plan E. (31487, 31496)

Plan G: General members – first hired on or after January 1, 2013. (7522.02)

MEMBER CONTRIBUTIONS

Plans A, B, D and General Plan C members

Contributions are based on the entry age and class of each member and are required of all members in Plans A, B, C, and D. Current member rates are shown in Appendix D. Section 5 provides additional detail on how these rates are calculated. (31620)

Contributions cease when general members are credited with 30 years of service in a contributory plan, provided they were members of LACERA or a reciprocal system on March 7, 1973, and continuously thereafter. All safety members are eligible for the 30-year cessation of contributions. (31625.2, 31836.1)

Interest is credited to contributions semiannually on June 30 and December 31 at an interest rate set by the Board of Investments on amounts that have been on deposit for at least six months. (31591, 31700)

In addition to the normal contributions, members pay one-half of the cost of their plan's COLA. This is discussed further in Section 5 of this report. (31873)

General Plan G and Safety Plan C members

Members contribute 50% of the aggregate Normal Cost rate for their Plan. (7522.30)

EMPLOYER CONTRIBUTIONS

The employer (County or district) contributes to the retirement fund a percent of the total compensation provided for all members based on an actuarial valuation and recommendation of the actuary and the Board of Investments. (31453, 31454 31581)

SERVICE RETIREMENT ALLOWANCE

Eligibility

Plans A-B: **Safety members** (31662.4, 31662.6, 31663.25)

Age 50 with 10 years of County service;
Any age with 20 years of service; or
Age 60, regardless of service.

Plans A-D: **General members** (31672)

Age 50 with 10 years of County service;
Any age with 30 years of service; or
Age 70, regardless of service.

Plan C: **Safety members** (7522.25(d))

Age 50 with 5 years of service.

Plan E: **General members** (31491.3)

Age 65 with 10 years of service. A reduced benefit is also payable at age 55 with 10 years of service.

Plan G: **General members** (7522.20(a))

Age 52 with 5 years of service.

Final Compensation

Plans A, B, D and General Plan C (31462.3, 31461.45)

Average of the member's highest monthly pensionable earnings during any 12-consecutive-month period.

Plan E: Average of the member's highest monthly pensionable earnings during any three 12-consecutive month periods. (31488)

General Plan G and Safety Plan C

Average of the member's highest monthly pensionable earnings during any 36-consecutive month period. (7522.32)

The amount of compensation that is taken into account in computing benefits payable to any person who first becomes a member on or after July 1, 1996, shall not exceed the dollar limitations in Section 401(a)(17) of Title 26 of the US Code. (31671)

The amount of compensation taken into account for General Plan G and Safety Plan C members is limited to $138,077 for 2014. The amount of compensation taken into account shall be adjusted based on changes in the Consumer Price Index for All Urban Consumers. Adjustments shall be effective annually on January 1. (7522.10)

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SERVICE RETIREMENT ALLOWANCE (Continued)

Monthly Allowance

Plans A-B:	**Safety members** 1/50 x Final Compensation x Safety age factor x Years of service. (The Safety Plan A and Safety Plan B age factors are the same.)	(31664)
Plans A-D:	**General members** 1/60 x Final Compensation x a Plan specific age factor x years of service.	(31676.1) (31676.11) (31676.14)
Plan C:	**Safety members** Final Compensation x Safety Plan percentage x Years of service.	(7522.25(d))
Plan E:	**General members [(a)+(b)-(c)] x d where:** (a) 2% x Final Compensation x (Years of Service (up to 35 years), plus (b) 1 % x Final Compensation x Years of Service in excess of 35 (up to 10) (c) Estimated Primary Insurance Amount (PIA) x Years of Covered Service (up to 35) divided by 35. (d) Age Factor The PIA is calculated based on certain assumptions specified by statute, and an assumed Social Security retirement age of 62. If retirement occurs prior to age 65, benefit amount is adjusted by an actuarial equivalent factor (see Sample Plan Age Factors).	(31491, 31491.3 (b)&(c))
Plan G:	**General members** Final Compensation x General Plan percentage x Years of service.	(7522.20(a))

Social Security Integration

Plans A-C:	**General Members** For County service covered by Social Security prior to January 1, 1983, the 1/60 factor is replaced by 1/90 for the first $350 of compensation.	(31808)
Plan D:	The 1/90 factor is applied to the first $1,050 of compensation.	

SERVICE RETIREMENT ALLOWANCE (Continued)

Sample Plan Age Factors

Plan	Age 50	Age 55	Age 60	Age 65 & Up	
General A	0.885	1.169	1.464	1.567	(31676.14)
General B	0.745	1.000	1.309	1.567	(31676.11)
General C&D	0.709	0.895	1.150	1.459	(31676.1)
General E	N/A	0.375	0.601	1.000	(31491.3(a))
Safety A&B	1.000	1.310	1.310	1.310	(31664)

Sample Plan Age Percentages

Plan	Age 50	Age 55	Age 60	Age 65 & Up	
General G	N/A	1.30%	1.80%	2.30%*	(7522.20(a))
Safety C	2.00%	2.50%	2.70%	2.70%	(7522.25(d))

**Maximum percentage for General Plan G is 2.50% at age 67.*

Maximum Allowance

Plans A-B and General Plans C-D:

Allowance may not exceed 100% of final compensation.

General Plans G and Safety Plan C:

Maximum allowance does not apply.

Plan E: The sum of the normal retirement allowance and the estimated PIA cannot exceed 70% of Final Compensation for a member with 35 or less years of service, and cannot exceed 80% of Final Compensation if service exceeds 35 years. (31491.3)

Unmodified Retirement Allowance (Normal Form)

Plans A-D, G: Life Annuity payable to retired member with 65% continuance to an eligible survivor (or eligible children). (31760.12, 31785.4)

Plan E: Life Annuity payable to retired member with 55% continuance to an eligible survivor (or eligible children). (31491, 31492.1)

Eligible survivor includes certain domestic partners. (31780.2)

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SERVICE RETIREMENT ALLOWANCE (Continued)

Optional Retirement Allowance

A member may elect to have the actuarial equivalent of the service or disability retirement allowance applied to a lesser retirement allowance during the retired member's life in order to provide an optional survivor allowance. (31760)

Unmodified Plus:	Members with eligible survivors may elect a higher percent than the standard unmodified continuance, up to 100%. The benefit is actuarially reduced from the unmodified amount. The elected percent of the member's reduced allowance is payable to the eligible survivor.	(31760.5)
Option 1:	Member's allowance is reduced to pay a cash refund of any unpaid annuity payments (up to the amount of the member's contributions at retirement) to the member's estate or to a beneficiary having an insurable interest in the life of the member.	(31761)
Option 2:	100% of member's reduced allowance is payable to a surviving spouse or beneficiary having an insurable interest in the life of the member.	(31762)
Option 3:	50% of member's reduced allowance is payable to a surviving spouse or beneficiary having an insurable interest in the life of the member.	(31763)
Option 4:	Other % of member's reduced allowance is payable to a surviving spouse or beneficiary(ies) having an insurable interest in the life of the member.	(31764)

A member may not revoke and name another beneficiary if the member elects Option 2, 3 or 4. (31782)

Pension Advance Option:	The Pension Advance Option is available to members who are fully insured under Social Security for the purpose of coordinating a member's retirement allowance with benefits receivable from Social Security. It is not available to disability retirees or members who elect Option 2, 3 or 4. The allowance is increased prior to age62 and then reduced after 62 by amounts which have equivalent actuarial values. The automatic 65% continuance for eligible spouses of members who elect the Pension Advance Option is based on the unmodified allowance the member would have received if the member had not elected the option.	(31810, 31811)

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SERVICE RETIREMENT ALLOWANCE (Continued)

All Allowances (31600)

All allowances are made on a pro-rata basis (based on the number of days in that month) if not in effect for the entire month of retirement. For deaths that occur mid-month, the full month's payment is made.

SERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE

Eligibility

Plans A-D, G:	Any age or years of service; disability must result from occupational injury or disease, and member must be permanently incapacitated for the performance of duty.	(31720, 31720.5)
Plan E:	Not available under Plan E.	(31487)

Monthly Allowance

Greater of (1) 50% of final compensation, and (2) the service retirement allowance, if eligible to retire. (31727.4)

Normal Form Of Payment

Life Annuity with 100% continuance to a surviving spouse (or eligible children). (31760, 31786)

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NONSERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE

Eligibility

Plans A-D, G:	Any age with five years of service, and permanently incapacitated for the performance of duty.	(31720, 31836)
Plan E:	Not available under Plan E.	(31487)

Monthly Allowance

The monthly allowance is equal to a service retirement allowance if the member is eligible to retire; otherwise allowance equals (a) or (b) where: (31726, 31726.5)

General Members:	(a) 90% of 1/60 of Final Compensation x years of service, if member must rely on service in another retirement system in order to be eligible to retire, or allowance exceeds 1/3 of final compensation.	(31727(a))
	(b) 90% of 1/60 of Final Compensation x years of service projected to age 65, not to exceed 1/3 of Final Compensation.	(31727(b))
Safety Members:	1/60 is replaced by 1/50 and age 65 is replaced by age 55 in (a) and (b) above.	(31727.2)

Normal Form Of Payment

Life Annuity with 65% continuance to a surviving spouse (or eligible children). (31760, 31760.1, 31760.12, 31785, 31785.4)

SERVICE-CONNECTED DEATH BENEFITS

Eligibility

Plans A-D, G:	Active members who die in service as a result of injury or disease arising out of and in the course of employment.	(31787)
Plan E:	Not available under Plan E.	(31487)

Monthly Allowance

An annual death allowance is payable monthly to an eligible survivor (or eligible children) equal to 50% of the member's Final Compensation. (31787)

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SERVICE-CONNECTED DEATH BENEFITS (Continued)

Optional Combined Benefit (31781.3)

In lieu of the monthly allowance above, a surviving spouse may elect:

(a) A lump sum equal to 1/12 of the compensation earned in the preceding 12 months x years of service (benefit not to exceed 50% of the 12 months' compensation), plus

(b) A monthly payment equal to 50% of the member's Final Compensation, reduced by a monthly amount, which is the actuarial equivalent of (a) above based on the age of surviving spouse.

Death Benefit (Lump Sum) (31781)

The member's accumulated contributions with interest, plus 1/12 of the compensation earned in the preceding 12 months x years of service (benefit not to exceed 50% of the 12 months' compensation).

Additional Allowance for Children (31787.5)

25% of death allowance (whether or not the monthly allowance or combined benefit is chosen) for one child, 40% for two children, and 50% for three or more children.

Additional Amount for Spouse of Safety Member (31787.6)

A surviving spouse of a safety member is also entitled to receive a lump-sum death benefit equal to 12 x monthly rate of compensation at the time of member's death in addition to all other benefits.

Note: *For valuation purposes, an unmarried member is assumed to take the lump sum benefit. A married member is assumed to take the monthly allowance or the lump sum, whichever is more valuable.*

NONSERVICE-CONNECTED DEATH BENEFITS

Eligibility (31780)

Plans A-D, G:	Active members who die while in service or while physically or mentally incapacitated for the performance of duty.	
Plan E:	Not available under Plan E.	(31487)

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NONSERVICE-CONNECTED DEATH BENEFITS (Continued)

Death Benefit (Lump Sum) (31781)

The member's accumulated contributions with interest, plus 1/12 of the compensation earned in preceding 12 months x the number of completed years of service (benefit not to exceed 50% of the 12 months' compensation).

Optional Death Benefit

In lieu of the lump-sum death benefit, the following several optional death benefits are available to provide flexibility to survivors.

First Optional Death Benefit (31781.1, 31781.12)

If a member who would have been entitled to a non-service-connected disability retirement allowance dies prior to retirement as a result of such disability, the surviving spouse (or eligible children) may elect to receive an optional death allowance equal to 65% of the monthly retirement allowance to which the member would have been entitled as of the date of death.

Second Optional Death Benefit (31781.2, 31765.2)

If a member dies prior to reaching the minimum retirement age but has 10 or more years of County service, a surviving spouse (or eligible children) may elect to leave the amount of the death benefit on deposit until the earliest date the member could have retired and at that time receive the allowance provided for in Section 31765 (an Option 3 benefit) or 31765.2 (a 65% continuance).

Third Optional Death Benefit

A surviving spouse of a member who dies after five years of County service may elect a combined benefit equal to:

(a) A lump sum equal to 1/12 of the compensation earnable in the preceding 12 months x the number of completed years of service (benefit not to exceed 50% of the 12 months' compensation), plus (31781.3)

(b) A monthly payment equal to 65% of the monthly retirement allowance to which the member would have been entitled if the member retired or could have retired for a non-service-connected disability as of the date of death, reduced by a monthly amount which is the actuarial equivalent of (a) above based on the age of surviving spouse. (31781.1, 31781.12)

Fourth Optional Death Benefit

If a member dies while eligible or a service retirement and the surviving spouse is designated as beneficiary, the spouse (or eligible children) may elect to receive 65% of the monthly retirement allowance to which the member would have been entitled as of the date of death. (31765.1, 31765.2)

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NONSERVICE-CONNECTED DEATH BENEFITS (Continued)

Fifth Optional Death Benefit

If a member dies while eligible for a service retirement and the surviving spouse is designated as beneficiary and survives the member by not less than 30 days, the spouse (or eligible children) may elect to receive the same retirement allowance as the spouse would have received had the member retired on the date of death and selected Option 3. (31765)

Note: *For valuation purposes, an unmarried member is assumed to take the lump sum benefit. A married member is assumed to take the first optional death benefit or the lump sum, whichever is more valuable.*

POSTRETIREMENT DEATH BENEFIT

Plans A-E:	A one-time lump-sum benefit of $5,000 is payable to the estate or to the beneficiary designated by the member upon the death of any member while receiving a retirement allowance. This is in addition to any other death or survivor benefits. The amount may be paid from surplus earnings of the retirement system, if any, but is currently paid by the County based on agreement with LACERA. It is not included for valuation purposes.	(31789.3)

DEFERRED VESTED BENEFITS

Eligibility

Plans A, B, D and General Plan C:

	Five years of county or reciprocal service. Member contributions must be left on deposit.	(31700)
Safety Plan C:	Age 50 with 5 years of service.	(7522.20(a))
Plan E:	Age 55 with 10 years of service.	(31491)
Plan G:	Age 52 with 5 years of service.	(7522.25(d))

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DEFERRED VESTED BENEFITS (Continued)

Monthly Allowance

Plans A-D, G:	Same as service retirement allowance; payable any time after the member would have been eligible for service retirement.	(31703, 31704, 31705)
	If a terminated member dies before the effective date of the deferred retirement allowance, the member's accumulated contributions are paid to the estate or to the named beneficiary.	(31702)
Plan E:	Same as service retirement allowance at normal retirement age 65 or in an actuarially equivalent reduced amount at early retirement, after age 55.	(31491)

TRANSFERS BETWEEN PLAN D AND PLAN E

Members in Plan D may transfer to Plan E on a prospective basis. Members in Plan E may transfer to Plan D on a prospective basis.	(31494.2, 31494.5)

RECIPROCITY

All Plans:	Reciprocal benefits are may be granted to members who are entitled to retirement benefits from two or more retirement systems established under the CERL or from a County retirement system and the California Public Employees' Retirement System (CalPERS). Reciprocity also applies to the members of the State Teachers' Retirement System Defined Benefit Plan.	(31830, 31840.4, 31840.8)
	Final Compensation may be based on service with CalPERS or another County retirement system, if greater.	
	Deferred members are eligible for disability and death benefits from LACERA, if disabled while a member of CalPERS or another County retirement system, but combined benefits are limited.	(31835)

TRANSFER FROM CALPERS

Whenever firefighting or law enforcement functions performed by a city of the state subject to the California Public Employees Retirement Law are transferred to the County, fire authority, or district, employees performing those functions become members of LACERA. LACERA and CalPERS may enter into an agreement whereby the members' service credit plus the members' and the cities' or states' retirement contributions are transferred from CalPERS to LACERA. (31657)

COST-OF-LIVING INCREASES

Cost-of-living increases (or decreases) are applied to all retirement allowances (service and disability), optional death allowances, and annual death allowances effective April 1, based on changes in the Consumer Price Index (CPI) from the previous January 1 to the current January 1, to the nearest ½ of 1%. (31870, 31870.1)

Plan A: Members (and their beneficiaries) are limited to a maximum 3% cost-of-living increase.

Plans B-D, G: Members (and their beneficiaries) are limited to a maximum 2% cost-of-living increase. (31870, 31870.1)

When the CPI exceeds 2% or 3%, the difference between the actual CPI and the maximum cost-of-living increase given in any year is credited to the COLA Accumulation. It may be used in future years to provide cost-of-living increases when the CPI falls below 2% or 3%, depending on the retirement plan.

Plan E: Members (and their beneficiaries) are limited to a maximum 2% cost-of-living increase. The 2% is pro-rated based on service earned after June 4, 2002. "Elective COLA" increases for service earned prior to June 4, 2002 may be purchased by the member. (31495.5)

STAR PROGRAM

Contributory plan members who have a COLA Accumulation of more than 20% resulting from CPI increases that exceeded the maximum cost-of-living increases that could be granted are eligible for a supplemental cost-of-living increase effective January 1 known as the Supplemental Targeted Adjustment for Retirees Cost-of-Living Adjustment (STAR COLA). These benefits are not evaluated in this report, or as part of the actuarially required funding amount, unless they have been vested by the Board of Retirement. (31874.3(b))

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Appendix C: Valuation Data and Schedules

On the following table, Exhibit C-1, we present a summary of LACERA membership at June 30, 2014 for active members. Similar information is shown in Exhibit C-2Ret for retired members and C-2Def for deferred vested members.

The number of total active members increased by 1.0% and the total salary increased by 2.4% since the last valuation. The total number of retired members and their beneficiaries increased by 2.0%, while the average retirement benefit amount increased by 1.9%.

Note that salary amounts shown are the prior year annual pensionable earnings for those members of plans with a one-year final compensation period. For plans with a three-year final compensation period (Plan E only), the monthly rate of pay at June 2014 is shown.

Additional statistical data on both active and retired members is shown in the following tables. Additional detailed summaries are supplied to the system staff in a supplementary report.

Exhibit C-3: Age Distribution of Active Members

Exhibit C-4: Age, Service, Compensation Distribution of Active Members

Exhibit C-5: Age, Retirement Year, Benefit Amount and Plan Distribution of Retired Members

Exhibits C-4 and C-5 are shown for all plans combined as well as for each plan separately.

Data on LACERA membership as of June 30, 2014 was supplied to us by the system staff. Based on our review of this data and discussions with LACERA staff, all retiree and beneficiary records were included in our valuation.

All active and deferred records supplied by LACERA were included in the valuation.

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Exhibit C-1: LACERA Membership – Active Members as of June 30, 2014

	Sex	Vested	NonVested	Total Number	Annual Salary	Average Age	Average Monthly Salary	Average Credited Service
General Members								
Plan A	M	138	-	138	$ 14,618,184	66.3	$ 8,827	36.3
	F	295	-	295	23,605,032	63.9	6,668	35.6
Plan B	M	36	-	36	3,374,784	63.5	7,812	35.1
	F	102	-	102	8,885,304	60.2	7,259	34.3
Plan C	M	37	-	37	3,374,964	61.8	7,601	36.0
	F	94	-	94	7,761,348	60.4	6,881	34.5
Plan D	M	14,871	1,737	16,608	1,267,026,900	47.4	6,358	14.2
	F	30,206	3,323	33,529	2,344,982,736	46.8	5,828	14.4
Plan E	M	5,595	2,008	7,603	562,371,408	51.8	6,164	18.3
	F	11,905	3,777	15,682	976,482,528	51.5	5,189	19.5
Plan G	M	-	2,005	2,005	99,986,520	35.9	4,156	0.7
	F	2	3,812	3,814	175,200,456	35.0	3,828	0.7
Total		63,281	16,662	79,943	$ 5,487,670,164	47.6	$ 5,720	14.9
Safety Members								
Plan A	M	23	-	23	$ 3,343,584	60.5	$ 12,114	36.1
	F	1	-	1	103,464	64.0	8,622	43.7
Plan B	M	9,645	754	10,399	1,060,317,936	43.4	8,497	16.7
	F	1,514	188	1,702	164,169,516	40.4	8,038	13.8
Plan C	M	1	330	331	20,639,640	30.2	5,196	0.5
	F	-	67	67	4,293,132	28.9	5,340	0.3
Total		11,184	1,339	12,523	$ 1,252,867,272	42.6	$ 8,337	15.8
Grand Total		74,465	18,001	92,466	$ 6,740,537,436	47.0	$ 6,075	15.0

Milliman
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Exhibit C-2Ret: LACERA Membership – Retired Members as of June 30, 2014

	Sex	Number	Annual Allowance	Average Age	Average Monthly Benefit
General Members					
Plan A	M	9,923	$ 584,382,389	76.9	$ 4,908
	F	15,921	650,109,904	77.2	3,403
Plan B	M	225	11,988,294	71.6	4,440
	F	492	19,483,585	72.3	3,300
Plan C	M	136	5,681,773	70.7	3,481
	F	319	10,502,251	72.3	2,744
Plan D	M	3,804	131,934,858	67.5	2,890
	F	6,704	196,407,814	67.3	2,441
Plan E	M	3,495	88,082,765	70.5	2,100
	F	6,848	137,220,971	70.3	1,670
Total		47,867	$ 1,835,794,604	73.4	$ 3,196
Safety Members					
Plan A	M	5,683	$ 504,595,595	72.5	$ 7,399
	F	2,026	118,225,591	75.2	4,863
Plan B	M	2,886	213,389,542	57.3	6,162
	F	767	40,074,491	52.7	4,354
Total		11,362	$ 876,285,219	67.8	$ 6,427
Grand Total		59,229	$ 2,712,079,823	72.3	$ 3,816

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Exhibit C-2Def: LACERA Membership – Deferred Members as of June 30, 2014 Subtotaled by Plan and Retirement Type

	Sex	Number	Average Age
General Members			
Plan A	M	41	67.4
	F	100	66.1
Plan B	M	6	64.5
	F	20	63.0
Plan C	M	7	61.7
	F	19	60.3
Plan D	M	2,488	46.3
	F	5,113	45.1
Plan E	M	1,196	54.9
	F	2,694	55.1
Plan G	M	43	35.3
	F	150	37.4
Total		11,877	48.8
Safety Members			
Plan A	M	7	63.7
	F	-	-
Plan B	M	597	41.3
	F	187	41.6
Plan C	M	2	42.5
	F	1	24.0
Total		794	41.6
Grand Total		12,671	48.3

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Exhibit C-2a: LACERA Membership – Retired Members as of June 30, 2014 Subtotaled by Plan and Retirement Type

Plan	Retirement Type	Number	Annual Benefits in Thousands	Average Monthly Benefit
General Plans:				
Plan A				
	Healthy	18,926	$ 1,022,637	$ 4,503
	Disabled	1,975	69,500	2,932
	Beneficiaries	4,943	142,355	2,400
	Total	25,844	$ 1,234,492	$ 3,981
Plan B				
	Healthy	593	$ 28,063	$ 3,944
	Disabled	66	1,851	2,337
	Beneficiaries	58	1,557	2,237
	Total	717	$ 31,471	$ 3,658
Plan C				
	Healthy	348	$ 13,825	$ 3,311
	Disabled	55	1,481	2,244
	Beneficiaries	52	878	1,407
	Total	455	$ 16,184	$ 2,964
Plan D				
	Healthy	8,038	$ 267,044	$ 2,769
	Disabled	1,545	45,207	2,438
	Beneficiaries	925	16,092	1,450
	Total	10,508	$ 328,343	$ 2,604
Plan E				
	Healthy	9,600	$ 217,543	$ 1,888
	Disabled	0	0	N/A
	Beneficiaries	743	7,761	870
	Total	10,343	$ 225,304	$ 1,815
Safety Plans:				
Plan A				
	Healthy	2,653	$ 246,953	$ 7,757
	Disabled	3,537	293,295	6,910
	Beneficiaries	1,519	82,573	4,530
	Total	7,709	$ 622,821	$ 6,733
Plan B				
	Healthy	1,500	$ 127,150	$ 7,064
	Disabled	1,951	117,511	5,019
	Beneficiaries	202	8,804	3,632
	Total	3,653	$ 253,465	$ 5,782
Grand Totals		59,229	2,712,080	3,816

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Exhibit C-2b: LACERA Membership – Retired Members as of June 30, 2014 Subtotaled by Retirement Type and Plan

Type	Plan	Number		Annual Benefits in Thousands		Average Monthly Benefit
Healthy Retirees						
	General A	18,926	$	1,022,637	$	4,503
	General B	593		28,063		3,944
	General C	348		13,825		3,311
	General D	8,038		267,044		2,769
	General E	9,600		217,543		1,888
	Safety A	2,653		246,953		7,757
	Safety B	1,500		127,150		7,064
	Total	41,658	$	1,923,215	$	3,847
Disabled Retirees						
	General A	1,975	$	69,500	$	2,932
	General B	66		1,851		2,337
	General C	55		1,481		2,244
	General D	1,545		45,207		2,438
	Safety A	3,537		293,295		6,910
	Safety B	1,951		117,511		5,019
	Total	9,129	$	528,845	$	4,828
Beneficiaries						
	General A	4,943	$	142,355	$	2,400
	General B	58		1,557		2,237
	General C	52		878		1,407
	General D	925		16,092		1,450
	General E	743		7,761		870
	Safety A	1,519		82,573		4,530
	Safety B	202		8,804		3,632
	Total	8,442	$	260,020	$	2,567
Grand Totals		59,229	$	2,712,080	$	3,816

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Exhibit C-3: Age Distribution of Active Members as of June 30, 2014

	Age Groups						
	0-29	30-39	40-49	50-59	60-69	70+	Total
General Plans:							
Plan A							
Male	-	-	-	18	87	33	138
Female	-	-	-	55	199	41	295
Plan B							
Male	-	-	-	5	28	3	36
Female	-	-	-	46	53	3	102
Plan C							
Male	-	-	-	12	23	2	37
Female	-	-	-	46	44	4	94
Plan D							
Male	656	3,707	5,098	4,757	2,154	236	16,608
Female	1,063	8,220	10,561	9,525	3,819	341	33,529
Plan E							
Male	190	1,013	1,805	2,488	1,830	277	7,603
Female	274	2,006	3,907	5,709	3,431	355	15,682
Plan G							
Male	680	713	329	230	47	6	2,005
Female	1,412	1,361	630	339	70	2	3,814
Safety Plans:							
Plan A							
Male	-	-	-	10	13	-	23
Female	-	-	-	-	1	-	1
Plan B							
Male	679	2,783	4,072	2,743	119	3	10,399
Female	161	656	614	263	8	-	1,702
Plan C							
Male	208	89	16	14	4	-	331
Female	47	15	3	2	-	-	67
Grand Totals:	5,370	20,563	27,035	26,262	11,930	1,306	92,466

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Exhibit C-4: Age and Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 All Plans

Count

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Total Count
Under 25	363	166	69	17	28	7	0	0	0	0	0	0	650
25-29	1,354	935	514	278	296	1,332	11	0	0	0	0	0	4,720
30-34	951	776	630	393	488	5,232	757	42	0	0	0	0	9,269
35-39	596	455	377	284	329	4,886	3,340	963	64	0	0	0	11,294
40-44	407	309	266	194	199	3,442	3,611	3,123	1,091	82	0	0	12,724
45-49	327	191	190	124	150	2,494	2,689	2,847	3,390	1,757	152	0	14,311
50-54	249	202	155	116	122	1,953	2,073	1,991	2,726	3,163	1,306	122	14,178
55-59	155	123	119	90	81	1,548	1,693	1,544	1,900	2,161	1,669	1,001	12,084
60-64	68	53	67	56	50	971	1,115	1,089	1,365	1,288	948	1,479	8,549
65 & Over	17	25	17	20	24	560	774	743	878	647	349	633	4,687
Total Count	4,487	3,235	2,404	1,572	1,767	22,425	16,063	12,342	11,414	9,098	4,424	3,235	92,466

Average Compensation

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Average Comp.
Under 25	40,056	47,007	43,946	46,727	48,887	54,118	-	-	-	-	-	-	42,951
25-29	43,605	49,933	52,110	51,214	55,030	58,982	75,136	-	-	-	-	-	51,362
30-34	50,347	54,414	59,665	63,728	59,853	65,084	66,930	69,965	-	-	-	-	62,150
35-39	53,465	60,529	64,583	66,370	69,462	67,151	71,102	76,742	89,390	-	-	-	68,236
40-44	52,023	59,942	64,960	72,056	69,795	67,041	74,512	81,306	86,245	96,146	-	-	73,920
45-49	50,662	56,869	57,771	71,456	67,502	65,350	73,898	80,619	87,562	90,765	98,673	-	78,255
50-54	52,557	63,646	61,171	68,862	65,625	60,372	68,757	77,426	83,680	93,606	99,372	92,001	79,786
55-59	48,266	59,047	60,350	71,437	71,276	60,816	67,946	73,981	79,070	89,414	94,476	81,995	77,850
60-64	53,551	70,682	64,902	68,609	73,810	63,251	68,462	70,660	75,709	82,982	88,767	79,811	75,609
65 & Over	68,977	78,354	88,904	52,465	85,491	67,982	68,027	69,116	69,900	77,084	90,010	82,431	73,535
Avg. Annual Compensation	48,239	55,476	59,290	64,296	64,095	64,786	71,176	77,537	82,329	89,405	94,490	81,459	72,897

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Exhibit C-4a: Age and Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 General Plan A

Count

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Total Count
Under 25	0	0	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	2	3	1	8	59	73
60-64	0	0	0	0	0	1	6	8	15	10	8	129	177
65 & Over	0	0	0	0	0	2	6	19	8	16	9	123	183
Total Count	0	0	0	0	0	3	12	29	26	27	25	311	433

Compensation

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Average Comp.
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-	-	-	-	-	-
55-59	-	-	-	-	-	-	-	89,604	41,784	81,864	76,198	76,109	75,157
60-64	-	-	-	-	-	74,172	81,394	106,606	76,450	83,572	109,590	80,129	82,549
65 & Over	-	-	-	-	-	65,118	113,960	82,738	101,152	102,079	109,064	100,126	99,047
Avg. Annual Compensation	-	-	-	-	-	68,136	97,677	89,796	80,051	94,476	98,715	87,275	88,275

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Exhibit C-4b: Age and Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 General Plan B

Count

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Total Count
Under 25	0	0	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0	0	1	1
55-59	0	0	0	0	0	0	0	1	0	0	2	47	50
60-64	0	0	0	0	0	0	2	2	6	4	4	49	67
65 & Over	0	0	0	0	0	0	1	1	0	2	1	15	20
Total Count	0	0	0	0	0	0	3	4	6	6	7	112	138

Compensation

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Average Comp.
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-	-	-	-	94,548	94,548
55-59	-	-	-	-	-	-	-	47,832	-	-	69,984	80,933	79,833
60-64	-	-	-	-	-	-	119,208	118,734	106,478	110,301	63,768	90,626	93,309
65 & Over	-	-	-	-	-	-	106,200	49,032	-	113,376	107,208	95,532	96,109
Avg. Annual Compensation	-	-	-	-	-	-	114,872	83,583	106,478	111,326	71,750	87,251	88,841

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Exhibit C-4c: Age and Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 General Plan C

Count

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Total Count
Under 25	0	0	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	1	0	0	2	4	7
55-59	0	0	0	0	0	0	0	1	1	1	5	43	51
60-64	0	0	0	0	0	0	0	1	1	1	3	45	51
65 & Over	0	0	0	0	0	0	0	2	1	0	3	16	22
Total Count	0	0	0	0	0	0	0	5	3	2	13	108	131

Compensation

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Average Comp.
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	54,300	-	-	98,724	68,748	75,249
55-59	-	-	-	-	-	-	-	51,120	104,148	104,640	77,314	74,898	75,825
60-64	-	-	-	-	-	-	-	110,328	137,748	172,140	150,788	91,329	97,694
65 & Over	-	-	-	-	-	-	-	63,048	84,804	-	150,164	68,668	80,004
Avg. Annual Compensation	-	-	-	-	-	-	-	68,369	108,900	138,390	114,375	80,594	85,010

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Exhibit C-4d: Age and Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 General Plan D

Count

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Total Count
Under 25	0	24	44	9	17	5	0	0	0	0	0	0	99
25-29	2	212	355	194	170	678	9	0	0	0	0	0	1,620
30-34	10	244	468	283	350	3,217	444	34	0	0	0	0	5,050
35-39	15	151	291	216	241	3,296	2,038	582	47	0	0	0	6,877
40-44	9	115	193	145	137	2,365	2,241	1,759	600	57	0	0	7,621
45-49	5	79	143	97	113	1,763	1,720	1,689	1,572	740	117	0	8,038
50-54	6	57	89	86	86	1,379	1,410	1,269	1,400	1,252	556	76	7,666
55-59	4	41	70	66	50	1,102	1,129	1,027	1,106	1,028	649	344	6,616
60-64	2	20	47	37	33	669	735	699	773	628	359	265	4,267
65 & Over	0	3	6	10	15	343	499	417	497	295	146	52	2,283
Total Count	53	946	1,706	1,143	1,212	14,817	10,225	7,476	5,995	4,000	1,827	737	50,137

Compensation

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Average Comp.
Under 25	-	39,158	38,213	35,763	38,790	49,555	-	-	-	-	-	-	38,892
25-29	40,236	48,966	50,024	48,816	48,833	50,945	72,332	-	-	-	-	-	50,113
30-34	52,588	60,393	59,444	61,757	56,884	60,328	62,390	70,470	-	-	-	-	60,325
35-39	73,634	67,643	65,822	65,716	67,233	64,915	68,827	72,484	86,701	-	-	-	67,087
40-44	81,069	64,008	66,832	71,443	71,400	65,484	73,389	77,004	82,177	93,239	-	-	72,239
45-49	61,387	60,238	57,467	71,324	67,023	65,312	74,767	78,049	81,846	83,104	93,748	-	75,202
50-54	148,018	74,223	65,377	65,510	67,800	62,137	70,321	78,900	80,787	87,973	93,114	91,288	76,875
55-59	113,070	65,495	61,494	70,743	73,817	61,664	71,082	78,125	79,570	89,339	91,610	94,939	78,023
60-64	146,502	96,358	60,561	70,106	86,105	63,542	71,771	72,579	77,165	87,754	97,775	93,938	77,631
65 & Over	-	96,160	58,864	52,777	89,904	68,636	68,969	70,030	72,431	80,997	97,396	104,002	74,113
Avg. Annual Compensation	82,657	60,806	59,117	63,138	62,822	62,937	71,223	76,531	79,866	86,949	93,878	94,842	72,043

Milliman

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Exhibit C-4e: Age and Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 General Plan E

Count

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Total Count
Under 25	0	6	11	1	1	0	0	0	0	0	0	0	19
25-29	0	28	93	39	38	247	0	0	0	0	0	0	445
30-34	0	31	97	52	63	805	139	3	0	0	0	0	1,190
35-39	0	38	57	47	34	827	688	136	2	0	0	0	1,829
40-44	0	19	61	43	38	689	766	584	208	5	0	0	2,413
45-49	0	13	44	25	28	526	645	632	898	479	9	0	3,299
50-54	0	20	59	28	31	519	551	533	875	1,034	322	23	3,995
55-59	0	12	45	23	30	427	527	460	654	887	679	458	4,202
60-64	0	4	19	19	17	287	366	363	556	618	549	971	3,769
65 & Over	0	5	11	10	9	209	263	298	369	334	189	427	2,124
Total Count	0	176	497	287	289	4,536	3,945	3,009	3,562	3,357	1,748	1,879	23,285

Compensation

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Average Comp.
Under 25	-	40,908	36,775	34,284	38,424	-	-	-	-	-	-	-	38,036
25-29	-	48,473	46,924	45,966	40,620	45,007	-	-	-	-	-	-	45,335
30-34	-	52,455	51,814	59,279	53,045	52,765	53,073	41,128	-	-	-	-	52,986
35-39	-	65,274	53,083	65,134	67,499	56,830	56,938	59,593	56,604	-	-	-	57,546
40-44	-	56,662	56,803	73,955	57,724	60,284	60,412	67,161	66,251	73,459	-	-	62,618
45-49	-	47,269	57,554	74,664	66,815	55,351	59,167	68,473	70,689	69,319	85,952	-	65,139
50-54	-	57,964	52,024	77,055	58,053	52,116	58,251	64,217	74,365	76,675	71,558	65,541	67,699
55-59	-	68,901	57,282	72,478	69,298	56,696	58,929	61,500	72,013	80,960	79,274	68,628	70,174
60-64	-	42,852	73,993	65,695	49,941	60,116	60,783	64,536	72,266	76,499	81,014	73,187	71,530
65 & Over	-	98,203	105,290	52,153	78,136	65,418	64,000	65,933	65,354	72,214	82,275	74,762	70,026
Avg. Annual Compensation	-	57,096	54,384	64,849	57,834	55,870	59,118	65,243	71,261	76,276	78,758	72,340	66,088

Milliman
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Exhibit C-4f: Age and Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 General Plan G

Count

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Total Count
Under 25	290	94	0	1	0	0	0	0	0	0	0	0	385
25-29	1,191	513	3	0	0	0	0	0	0	0	0	0	1,707
30-34	880	409	2	2	0	1	0	0	0	0	0	0	1,294
35-39	559	220	0	0	1	0	0	0	0	0	0	0	780
40-44	390	156	0	1	0	0	0	0	0	0	0	0	547
45-49	317	94	0	0	1	0	0	0	0	0	0	0	412
50-54	234	114	0	0	1	1	0	0	0	0	0	0	350
55-59	150	68	1	0	0	0	0	0	0	0	0	0	219
60-64	64	28	0	0	0	0	0	0	0	0	0	0	92
65 & Over	16	17	0	0	0	0	0	0	0	0	0	0	33
Total Count	4,091	1,713	6	4	3	2	0	0	0	0	0	0	5,819

Compensation

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Average Comp.
Under 25	34,898	39,403	-	30,204	-	-	-	-	-	-	-	-	35,986
25-29	41,465	43,074	33,992	-	-	-	-	-	-	-	-	-	41,936
30-34	49,759	47,500	53,184	147,708	-	29,916	-	-	-	-	-	-	49,187
35-39	52,461	52,492	-	-	171,192	-	-	-	-	-	-	-	52,622
40-44	51,246	56,312	-	35,208	-	-	-	-	-	-	-	-	52,661
45-49	50,233	54,520	-	-	42,564	-	-	-	-	-	-	-	51,193
50-54	49,010	56,072	-	-	29,916	48,552	-	-	-	-	-	-	51,254
55-59	46,289	52,550	50,616	-	-	-	-	-	-	-	-	-	48,253
60-64	47,471	55,765	-	-	-	-	-	-	-	-	-	-	49,995
65 & Over	54,551	69,373	-	-	-	-	-	-	-	-	-	-	62,187
Avg. Annual Compensation	46,652	48,682	43,160	90,207	81,224	39,234	-	-	-	-	-	-	47,291

Milliman
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Exhibit C-4g: Age and Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 Safety Plan A

Count

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Total Count
Under 25	0	0	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	1	0	0	2	7	10
60-64	0	0	0	0	0	0	0	0	0	1	2	11	14
65 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Count	0	0	0	0	0	0	0	1	0	1	4	18	24

Compensation

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Average Comp.
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-	-	-	-	-	-
55-59	-	-	-	-	-	-	-	122,304	-	-	115,152	114,573	115,462
60-64	-	-	-	-	-	-	-	-	-	128,964	119,238	174,999	163,745
65 & Over	-	-	-	-	-	-	-	-	-	-	-	-	-
Avg. Annual Compensation	-	-	-	-	-	-	-	122,304	-	128,964	117,195	151,500	143,627

Milliman
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Exhibit C-4h: Age and Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 Safety Plan B

Count

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Total Count
Under 25	1	40	14	6	9	2	0	0	0	0	0	0	72
25-29	2	161	63	45	88	407	2	0	0	0	0	0	768
30-34	2	78	62	55	75	1,209	174	5	0	0	0	0	1,660
35-39	1	38	29	21	53	763	614	245	15	0	0	0	1,779
40-44	0	15	12	5	24	388	603	780	283	20	0	0	2,130
45-49	0	5	2	2	8	205	324	526	920	538	26	0	2,556
50-54	0	6	7	2	4	54	112	188	451	877	426	18	2,145
55-59	0	1	3	1	1	19	37	52	136	244	324	43	861
60-64	0	0	1	0	0	14	6	16	14	26	23	9	109
65 & Over	0	0	0	0	0	6	5	6	3	0	1	0	21
Total Count	6	344	193	137	262	3,067	1,877	1,818	1,822	1,705	800	70	12,101

Compensation

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Average Comp.
Under 25	60,312	69,777	67,598	68,002	67,773	65,526	-	-	-	-	-	-	68,705
25-29	61,200	71,686	72,381	66,104	73,225	80,850	87,756	-	-	-	-	-	76,463
30-34	31,032	71,026	73,462	74,910	79,428	85,969	89,586	83,827	-	-	-	-	84,445
35-39	68,448	73,173	74,762	75,865	78,938	87,997	94,526	96,375	102,186	-	-	-	90,567
40-44	-	70,222	76,320	80,861	79,743	88,530	96,608	101,597	109,564	110,102	-	-	98,285
45-49	-	72,773	82,374	37,746	79,783	91,332	98,608	103,467	113,798	120,396	125,240	-	109,179
50-54	-	108,828	84,778	98,268	86,460	94,879	100,747	105,043	110,735	121,609	128,566	133,848	117,349
55-59	-	91,140	82,936	93,276	3,600	104,260	100,671	101,950	109,572	120,431	132,813	131,852	121,292
60-64	-	-	96,216	-	-	112,786	101,644	99,278	113,633	112,184	119,559	141,172	113,776
65 & Over	-	-	-	-	-	120,890	123,034	125,890	121,304	-	104,556	-	122,110
Avg. Annual Compensation	52,204	72,135	73,825	72,011	76,703	86,924	96,025	101,812	111,982	120,779	129,889	133,564	101,189

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Exhibit C-4i: Age and Service Distribution of Active Members by Count and Average Compensation as of June 30, 2014 Safety Plan C

Count

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Total Count
Under 25	72	2	0	0	1	0	0	0	0	0	0	0	75
25-29	159	21	0	0	0	0	0	0	0	0	0	0	180
30-34	59	14	1	1	0	0	0	0	0	0	0	0	75
35-39	21	8	0	0	0	0	0	0	0	0	0	0	29
40-44	8	4	0	0	0	0	1	0	0	0	0	0	13
45-49	5	0	1	0	0	0	0	0	0	0	0	0	6
50-54	9	5	0	0	0	0	0	0	0	0	0	0	14
55-59	1	1	0	0	0	0	0	0	0	0	0	0	2
60-64	2	1	0	0	0	0	0	0	0	0	0	0	3
65 & Over	1	0	0	0	0	0	0	0	0	0	0	0	1
Total Count	337	56	2	1	1	0	1	0	0	0	0	0	398

Compensation

Age	Years of Service 0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Average Comp.
Under 25	60,549	61,524	-	-	61,020	-	-	-	-	-	-	-	60,581
25-29	59,453	62,442	-	-	-	-	-	-	-	-	-	-	59,802
30-34	59,389	63,990	82,020	69,708	-	-	-	-	-	-	-	-	60,687
35-39	65,048	64,695	-	-	-	-	-	-	-	-	-	-	64,951
40-44	57,244	61,644	-	-	-	-	68,448	-	-	-	-	-	59,460
45-49	67,114	-	61,644	-	-	-	-	-	-	-	-	-	66,202
50-54	81,137	84,271	-	-	-	-	-	-	-	-	-	-	82,257
55-59	85,524	86,160	-	-	-	-	-	-	-	-	-	-	85,842
60-64	155,148	86,160	-	-	-	-	-	-	-	-	-	-	132,152
65 & Over	299,796	-	-	-	-	-	-	-	-	-	-	-	299,796
Avg. Annual Compensation	62,024	65,857	71,832	69,708	61,020	-	68,448	-	-	-	-	-	62,645

Milliman

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Exhibit C-5: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014 All Plans

Age	Retirement Year										Total Count	Average Monthly Benefit
	Pre-1969	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14		
Under 35	0	0	0	0	0	0	2	9	32	63	106	$ 1,444
35-39	0	0	0	1	0	0	2	3	23	55	84	2,440
40-44	0	0	0	0	0	1	7	60	69	78	215	2,978
45-49	0	0	0	0	1	25	87	132	121	154	520	3,000
50-54	0	0	0	0	10	77	159	170	175	557	1,148	2,975
55-59	0	0	1	20	55	120	143	187	621	2,141	3,288	4,270
60-64	0	0	25	76	105	140	201	655	2,444	3,281	6,927	4,169
65-69	1	16	132	218	185	258	893	2,827	3,574	4,139	12,243	4,274
70-74	4	33	160	214	255	918	2,184	3,091	2,787	1,746	11,392	4,136
75-79	24	54	161	224	705	1,725	1,911	1,949	1,186	780	8,719	3,686
80-84	51	85	166	665	1,067	1,737	1,208	727	548	478	6,732	3,379
85-89	48	74	442	836	877	916	454	327	333	388	4,695	3,075
90-94	40	105	430	512	461	238	159	172	162	168	2,447	2,704
95-99	16	65	179	150	36	42	35	45	38	30	636	2,423
100 & Over	11	18	23	5	2	4	6	5	2	1	77	2,454
Total Count	195	450	1,719	2,921	3,759	6,201	7,451	10,359	12,115	14,059	**59,229**	
Avg Monthly Benefit	$ 1,661	$ 2,165	$ 2,629	$ 2,770	$ 3,214	$ 3,924	$ 3,744	$ 4,330	$ 3,833	$ 4,018		**$ 3,816**

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Exhibit C-5a: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014 General Plan A

Age	Retirement Year										Total Count	Average Monthly Benefit
	Pre-1969	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14		
Under 35	0	0	0	0	0	0	0	1	9	10	20	$ 1,300
35-39	0	0	0	0	0	0	0	0	3	6	9	2,036
40-44	0	0	0	0	0	0	1	1	6	2	10	2,208
45-49	0	0	0	0	1	1	2	3	5	3	15	1,745
50-54	0	0	0	0	0	0	4	3	10	7	24	2,237
55-59	0	0	0	4	7	3	10	14	58	109	205	3,532
60-64	0	0	15	28	23	27	35	242	550	820	1,740	4,695
65-69	1	9	60	73	59	88	506	1,062	1,527	651	4,036	4,967
70-74	1	19	84	92	102	641	1,029	1,777	804	294	4,843	4,701
75-79	12	32	95	109	539	1,101	1,227	860	334	273	4,582	4,073
80-84	22	48	106	507	740	1,380	689	283	234	252	4,261	3,521
85-89	25	43	325	642	754	722	257	184	202	260	3,414	3,039
90-94	27	87	368	477	415	171	117	129	124	128	2,043	2,659
95-99	10	58	174	146	33	32	26	36	33	24	572	2,416
100 & Over	9	18	23	5	2	2	6	4	1	0	70	2,389
Total Count	107	314	1,250	2,083	2,675	4,168	3,909	4,599	3,900	2,839	**25,844**	
Avg Monthly Benefit	$ 1,289	$ 1,668	$ 2,212	$ 2,315	$ 2,872	$ 3,869	$ 3,814	$ 5,034	$ 4,957	$ 4,728		**$ 3,981**

Milliman

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Exhibit C-5b: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014
General Plan B

Age	Retirement Year										Total Count	Average Monthly Benefit
	Pre-1969	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14		
Under 35	0	0	0	0	0	0	0	0	0	0	0	$ -
35-39	0	0	0	0	0	0	0	0	0	0	0	-
40-44	0	0	0	0	0	0	0	0	0	0	0	-
45-49	0	0	0	0	0	0	0	0	0	0	0	-
50-54	0	0	0	0	0	0	0	0	1	1	2	1,505
55-59	0	0	0	0	0	1	1	0	15	14	31	3,019
60-64	0	0	0	1	2	2	1	13	27	81	127	5,064
65-69	0	0	0	2	5	3	12	26	58	61	167	4,252
70-74	0	0	0	1	4	5	16	45	31	21	123	3,821
75-79	0	0	0	2	2	9	25	41	20	10	109	3,419
80-84	0	0	0	1	8	13	30	10	12	5	79	2,450
85-89	0	0	0	3	8	25	10	7	1	1	55	1,901
90-94	0	0	0	1	9	5	2	1	2	0	20	1,511
95-99	0	0	0	2	0	0	1	0	0	1	4	448
100 & Over	0	0	0	0	0	0	0	0	0	0	0	-
Total Count	0	0	0	13	38	63	98	143	167	195	**717**	
Avg Monthly Benefit	$ -	$ -	$ -	$ 1,204	$ 1,147	$ 1,716	$ 2,271	$ 3,149	$ 4,167	$ 5,572		**$ 3,658**

Milliman
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Exhibit C-5c: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014
General Plan C

Age	Retirement Year										Total Count	Average Monthly Benefit
	Pre-1969	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14		
Under 35	0	0	0	0	0	0	0	0	0	0	0	$ -
35-39	0	0	0	0	0	0	0	0	0	2	2	1,320
40-44	0	0	0	0	0	0	0	0	0	1	1	1,463
45-49	0	0	0	0	0	0	0	0	0	0	0	-
50-54	0	0	0	0	0	0	0	1	0	1	2	3,105
55-59	0	0	0	1	2	1	1	0	7	11	23	2,768
60-64	0	0	1	2	3	2	3	10	18	39	78	3,962
65-69	0	0	0	3	2	1	5	17	25	44	97	4,113
70-74	0	0	0	0	3	10	9	16	28	14	80	2,846
75-79	0	0	0	0	8	11	15	25	9	6	74	2,316
80-84	0	0	0	1	5	9	14	9	7	3	48	1,958
85-89	0	0	0	2	5	15	3	4	4	3	36	1,618
90-94	0	0	0	2	4	5	0	0	1	0	12	1,093
95-99	0	0	0	0	0	1	0	1	0	0	2	1,120
100 & Over	0	0	0	0	0	0	0	0	0	0	0	-
Total Count	0	0	1	11	32	55	50	83	99	124	**455**	
Avg Monthly Benefit	$ -	$ -	$ 1,639	$ 1,074	$ 864	$ 1,280	$ 1,789	$ 2,453	$ 2,950	$ 5,259		**$ 2,964**

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Exhibit C-5d: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014
General Plan D

Age	Retirement Year										Total Count	Average Monthly Benefit
	Pre-1969	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14		
Under 35	0	0	0	0	0	0	0	3	7	20	30	$ 896
35-39	0	0	0	0	0	0	1	1	6	17	25	1,792
40-44	0	0	0	0	0	1	3	14	13	22	53	1,729
45-49	0	0	0	0	0	3	5	28	39	50	125	2,052
50-54	0	0	0	0	0	9	35	51	63	341	499	1,800
55-59	0	0	0	2	7	24	41	67	357	590	1,088	2,189
60-64	0	0	1	4	15	29	55	232	503	1,099	1,938	2,781
65-69	0	0	0	2	16	34	160	302	683	1,416	2,613	3,132
70-74	0	0	0	4	13	55	164	355	765	650	2,006	2,798
75-79	0	0	0	4	17	54	154	387	373	207	1,196	2,295
80-84	0	0	0	3	15	54	188	186	111	66	623	1,971
85-89	0	0	0	5	8	48	76	32	38	21	228	1,674
90-94	0	0	1	2	12	22	12	9	8	9	75	1,445
95-99	0	0	0	0	1	0	1	3	2	1	8	1,499
100 & Over	0	0	0	0	0	1	0	0	0	0	1	1,202
Total Count	0	0	2	26	104	334	895	1,670	2,968	4,509	**10,508**	
Avg Monthly Benefit	$ -	$ -	$ 5,145	$ 1,289	$ 1,338	$ 1,515	$ 1,755	$ 2,068	$ 2,491	$ 3,161		**$ 2,604**

Exhibit C-5e: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014
General Plan E

Age	Retirement Year										Total Count	Average Monthly Benefit
	Pre-1969	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14		
Under 35	0	0	0	0	0	0	1	1	6	9	17	$ 776
35-39	0	0	0	0	0	0	1	0	1	6	8	1,302
40-44	0	0	0	0	0	0	0	0	2	10	12	2,012
45-49	0	0	0	0	0	0	0	2	7	14	23	977
50-54	0	0	0	0	0	0	0	2	3	18	23	771
55-59	0	0	0	0	0	0	0	3	11	464	478	745
60-64	0	0	0	0	0	0	5	8	640	765	1,418	1,307
65-69	0	0	0	0	0	2	6	468	793	1,850	3,119	2,282
70-74	0	0	0	0	0	3	274	425	1,100	690	2,492	2,131
75-79	0	0	0	0	1	104	226	587	398	208	1,524	1,672
80-84	0	0	0	1	39	95	257	189	117	81	779	1,325
85-89	0	0	0	2	19	89	86	54	45	40	335	1,145
90-94	0	0	0	3	20	30	15	14	4	12	98	737
95-99	0	0	0	2	2	7	3	0	2	1	17	845
100 & Over	0	0	0	0	0	0	0	0	0	0	0	-
Total Count	0	0	0	8	81	330	874	1,753	3,129	4,168	**10,343**	
Avg Monthly Benefit	$ -	$ -	$ -	$ 319	$ 363	$ 692	$ 853	$ 1,312	$ 1,671	$ 2,457		**$ 1,815**

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Exhibit C-5f: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014
Safety Plan A

Age	Retirement Year										Total Count	Average Monthly Benefit
	Pre-1969	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14		
Under 35	0	0	0	0	0	0	0	0	0	4	4	$ 3,075
35-39	0	0	0	1	0	0	0	0	0	1	2	2,399
40-44	0	0	0	0	0	0	0	0	0	0	0	-
45-49	0	0	0	0	0	1	1	3	0	2	7	4,974
50-54	0	0	0	0	0	2	0	2	0	5	9	5,163
55-59	0	0	1	3	2	3	5	6	11	90	121	9,149
60-64	0	0	8	33	36	36	66	84	417	147	827	8,227
65-69	0	7	72	129	92	112	176	891	369	71	1,919	7,461
70-74	3	14	76	116	133	197	687	447	52	71	1,796	6,978
75-79	12	22	66	109	137	443	262	48	52	74	1,225	6,215
80-84	29	37	60	151	259	182	30	49	66	71	934	5,552
85-89	23	31	117	182	83	17	22	46	43	63	627	4,998
90-94	13	18	61	27	1	5	13	19	23	19	199	4,835
95-99	6	7	5	0	0	2	4	5	1	3	33	3,898
100 & Over	2	0	0	0	0	1	0	1	1	1	6	3,419
Total Count	88	136	466	751	743	1,001	1,266	1,601	1,035	622	**7,709**	
Avg Monthly Benefit	$ 2,113	$ 3,310	$ 3,740	$ 4,187	$ 5,328	$ 6,515	$ 7,219	$ 8,357	$ 8,541	$ 7,299		**$ 6,733**

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Exhibit C-5g: Distribution of Retired Members by Age and Retirement Year as of June 30, 2014
Safety Plan B

Age	Retirement Year										Total Count	Average Monthly Benefit
	Pre-1969	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14		
Under 35	0	0	0	0	0	0	1	4	10	20	35	$ 2,134
35-39	0	0	0	0	0	0	0	2	13	23	38	3,264
40-44	0	0	0	0	0	0	3	45	48	43	139	3,603
45-49	0	0	0	0	0	20	79	96	70	85	350	3,486
50-54	0	0	0	0	10	66	120	111	98	184	589	4,057
55-59	0	0	0	10	37	88	85	97	162	863	1,342	6,940
60-64	0	0	0	8	26	44	36	66	289	330	799	7,150
65-69	0	0	0	9	11	18	28	61	119	46	292	5,310
70-74	0	0	0	1	0	7	5	26	7	6	52	3,834
75-79	0	0	0	0	1	3	2	1	0	2	9	2,755
80-84	0	0	0	1	1	4	0	1	1	0	8	1,441
85-89	0	0	0	0	0	0	0	0	0	0	0	-
90-94	0	0	0	0	0	0	0	0	0	0	0	-
95-99	0	0	0	0	0	0	0	0	0	0	0	-
100 & Over	0	0	0	0	0	0	0	0	0	0	0	-
Total Count	0	0	0	29	86	250	359	510	817	1,602	**3,653**	
Avg Monthly Benefit	$ -	$ -	$ -	$ 2,149	$ 2,325	$ 3,087	$ 3,390	$ 3,763	$ 5,698	$ 7,676		**$ 5,782**

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Appendix D: Member Contribution Rates

This section illustrates the member normal contribution rates and the normal plus cost-of-living contribution rates by entry age.

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Exhibit D-1: Normal Member Contribution Rates

	General					Safety		
Entry Age	Plan A	Plan B	Plan C	Plan D	Plan G	Plan A	Plan B	Plan C
16	2.36%	4.71%	3.96%	3.96%	6.41%	3.58%	7.17%	10.76%
17	2.41%	4.82%	4.05%	4.05%	6.41%	3.58%	7.17%	10.76%
18	2.46%	4.93%	4.14%	4.14%	6.41%	3.58%	7.17%	10.76%
19	2.52%	5.04%	4.23%	4.23%	6.41%	3.66%	7.31%	10.76%
20	2.58%	5.15%	4.33%	4.33%	6.41%	3.73%	7.46%	10.76%
21	2.63%	5.27%	4.43%	4.43%	6.41%	3.81%	7.61%	10.76%
22	2.69%	5.39%	4.53%	4.53%	6.41%	3.89%	7.77%	10.76%
23	2.75%	5.51%	4.63%	4.63%	6.41%	3.96%	7.93%	10.76%
24	2.82%	5.63%	4.74%	4.74%	6.41%	4.05%	8.09%	10.76%
25	2.88%	5.76%	4.84%	4.84%	6.41%	4.13%	8.26%	10.76%
26	2.94%	5.88%	4.95%	4.95%	6.41%	4.21%	8.42%	10.76%
27	3.01%	6.02%	5.06%	5.06%	6.41%	4.30%	8.60%	10.76%
28	3.07%	6.15%	5.17%	5.17%	6.41%	4.39%	8.77%	10.76%
29	3.14%	6.29%	5.29%	5.29%	6.41%	4.48%	8.96%	10.76%
30	3.21%	6.43%	5.41%	5.41%	6.41%	4.57%	9.14%	10.76%
31	3.29%	6.57%	5.53%	5.53%	6.41%	4.67%	9.34%	10.76%
32	3.36%	6.72%	5.65%	5.65%	6.41%	4.77%	9.53%	10.76%
33	3.44%	6.87%	5.78%	5.78%	6.41%	4.87%	9.74%	10.76%
34	3.51%	7.03%	5.91%	5.91%	6.41%	4.98%	9.95%	10.76%
35	3.60%	7.19%	6.04%	6.04%	6.41%	5.09%	10.17%	10.76%
36	3.68%	7.36%	6.17%	6.17%	6.41%	5.19%	10.39%	10.76%
37	3.76%	7.52%	6.31%	6.31%	6.41%	5.30%	10.60%	10.76%
38	3.85%	7.69%	6.46%	6.46%	6.41%	5.41%	10.81%	10.76%
39	3.93%	7.86%	6.60%	6.60%	6.41%	5.51%	11.02%	10.76%
40	4.02%	8.03%	6.75%	6.75%	6.41%	5.61%	11.23%	10.76%
41	4.10%	8.20%	6.91%	6.91%	6.41%	5.71%	11.43%	10.76%
42	4.18%	8.37%	7.07%	7.07%	6.41%	5.81%	11.62%	10.76%
43	4.27%	8.53%	7.23%	7.23%	6.41%	5.91%	11.81%	10.76%
44	4.34%	8.69%	7.39%	7.39%	6.41%	5.99%	11.99%	10.76%
45	4.42%	8.85%	7.54%	7.54%	6.41%	6.07%	12.14%	10.76%
46	4.50%	9.00%	7.70%	7.70%	6.41%	6.12%	12.24%	10.76%
47	4.57%	9.14%	7.86%	7.86%	6.41%	6.12%	12.24%	10.76%
48	4.64%	9.28%	8.01%	8.01%	6.41%	6.12%	12.24%	10.76%
49	4.70%	9.40%	8.16%	8.16%	6.41%	6.12%	12.24%	10.76%
50	4.75%	9.49%	8.31%	8.31%	6.41%	6.12%	12.24%	10.76%
51	4.77%	9.55%	8.45%	8.45%	6.41%	6.12%	12.24%	10.76%
52	4.78%	9.56%	8.59%	8.59%	6.41%	6.12%	12.24%	10.76%
53	4.78%	9.56%	8.72%	8.72%	6.41%	6.12%	12.24%	10.76%
54	4.78%	9.56%	8.83%	8.83%	6.41%	6.12%	12.24%	10.76%
55	4.78%	9.56%	8.92%	8.92%	6.41%	6.12%	12.24%	10.76%
56	4.78%	9.56%	8.97%	8.97%	6.41%	6.12%	12.24%	10.76%
57	4.78%	9.56%	8.98%	8.98%	6.41%	6.12%	12.24%	10.76%
58	4.78%	9.56%	8.98%	8.98%	6.41%	6.12%	12.24%	10.76%
59	4.78%	9.56%	8.98%	8.98%	6.41%	6.12%	12.24%	10.76%
60	4.78%	9.56%	8.98%	8.98%	6.41%	6.12%	12.24%	10.76%

Note: For general members entering after age 60, the rate equals the rate at age 60. Likewise, for safety members entering after age 50, the rate equals the rate at age 50.

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Exhibit D-2: Normal Plus Cost-of-Living Member Contribution Rates

	General					Safety		
Entry Age	Plan A	Plan B	Plan C	Plan D	Plan G	Plan A	Plan B	Plan C
16	4.35%	5.79%	4.93%	4.83%	7.62%	6.94%	9.30%	13.42%
17	4.44%	5.92%	5.05%	4.94%	7.62%	6.94%	9.30%	13.42%
18	4.53%	6.06%	5.16%	5.05%	7.62%	6.94%	9.30%	13.42%
19	4.64%	6.19%	5.27%	5.15%	7.62%	7.09%	9.48%	13.42%
20	4.75%	6.33%	5.39%	5.28%	7.62%	7.23%	9.67%	13.42%
21	4.84%	6.48%	5.52%	5.40%	7.62%	7.38%	9.87%	13.42%
22	4.95%	6.62%	5.64%	5.52%	7.62%	7.54%	10.08%	13.42%
23	5.06%	6.77%	5.77%	5.64%	7.62%	7.67%	10.28%	13.42%
24	5.19%	6.92%	5.90%	5.78%	7.62%	7.85%	10.49%	13.42%
25	5.30%	7.08%	6.03%	5.90%	7.62%	8.00%	10.71%	13.42%
26	5.41%	7.23%	6.17%	6.03%	7.62%	8.16%	10.92%	13.42%
27	5.54%	7.40%	6.30%	6.17%	7.62%	8.33%	11.15%	13.42%
28	5.65%	7.56%	6.44%	6.30%	7.62%	8.50%	11.37%	13.42%
29	5.78%	7.73%	6.59%	6.45%	7.62%	8.68%	11.62%	13.42%
30	5.91%	7.90%	6.74%	6.59%	7.62%	8.85%	11.85%	13.42%
31	6.06%	8.07%	6.89%	6.74%	7.62%	9.05%	12.11%	13.42%
32	6.19%	8.26%	7.04%	6.89%	7.62%	9.24%	12.36%	13.42%
33	6.34%	8.44%	7.20%	7.04%	7.62%	9.43%	12.63%	13.42%
34	6.46%	8.64%	7.36%	7.20%	7.62%	9.65%	12.90%	13.42%
35	6.63%	8.84%	7.52%	7.36%	7.62%	9.86%	13.19%	13.42%
36	6.78%	9.04%	7.69%	7.52%	7.62%	10.05%	13.47%	13.42%
37	6.93%	9.24%	7.86%	7.69%	7.62%	10.27%	13.75%	13.42%
38	7.09%	9.45%	8.05%	7.87%	7.62%	10.48%	14.02%	13.42%
39	7.24%	9.66%	8.22%	8.04%	7.62%	10.67%	14.29%	13.42%
40	7.40%	9.87%	8.41%	8.23%	7.62%	10.87%	14.56%	13.42%
41	7.55%	10.08%	8.61%	8.42%	7.62%	11.06%	14.82%	13.42%
42	7.70%	10.29%	8.81%	8.62%	7.62%	11.26%	15.07%	13.42%
43	7.86%	10.48%	9.01%	8.81%	7.62%	11.45%	15.31%	13.42%
44	7.99%	10.68%	9.21%	9.01%	7.62%	11.60%	15.55%	13.42%
45	8.14%	10.88%	9.39%	9.19%	7.62%	11.76%	15.74%	13.42%
46	8.29%	11.06%	9.59%	9.38%	7.62%	11.86%	15.87%	13.42%
47	8.42%	11.23%	9.79%	9.58%	7.62%	11.86%	15.87%	13.42%
48	8.55%	11.40%	9.98%	9.76%	7.62%	11.86%	15.87%	13.42%
49	8.66%	11.55%	10.16%	9.94%	7.62%	11.86%	15.87%	13.42%
50	8.75%	11.66%	10.35%	10.13%	7.62%	11.86%	15.87%	13.42%
51	8.79%	11.74%	10.53%	10.30%	7.62%	11.86%	15.87%	13.42%
52	8.80%	11.75%	10.70%	10.47%	7.62%	11.86%	15.87%	13.42%
53	8.80%	11.75%	10.86%	10.63%	7.62%	11.86%	15.87%	13.42%
54	8.80%	11.75%	11.00%	10.76%	7.62%	11.86%	15.87%	13.42%
55	8.80%	11.75%	11.11%	10.87%	7.62%	11.86%	15.87%	13.42%
56	8.80%	11.75%	11.17%	10.93%	7.62%	11.86%	15.87%	13.42%
57	8.80%	11.75%	11.19%	10.94%	7.62%	11.86%	15.87%	13.42%
58	8.80%	11.75%	11.19%	10.94%	7.62%	11.86%	15.87%	13.42%
59	8.80%	11.75%	11.19%	10.94%	7.62%	11.86%	15.87%	13.42%
60	8.80%	11.75%	11.19%	10.94%	7.62%	11.86%	15.87%	13.42%

Note: For general members entering after age 60, the rate equals the rate at age 60. Likewise, for safety members entering after age 50, the rate equals the rate at age 50.

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Appendix E: Historical Information

This section presents historical statistical information on LACERA's membership and the calculated contribution rates.

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Exhibit E-1: Active Membership Data

	General Members					Safety Members					Total Members				
Valuation Date (June 30)	Number	Annual Salary (in millions)	Average Age	Average Credited Service	Average Monthly Salary	Number	Annual Salary (in millions)	Average Age	Average Credited Service	Average Monthly Salary	Number	Annual Salary (in millions)	Average Age	Average Credited Service	Average Monthly Salary
1998	65,782	$ 2,837	44.7	12.9	$ 3,594	10,947	$ 725	39.9	13.8	$ 5,519	76,729	$ 3,562	44.0	13.0	$ 3,870
1999	68,652	$ 3,105	44.6	12.7	$ 3,769	11,024	$ 753	40.0	13.7	$ 5,696	79,676	$ 3,858	43.9	12.8	$ 4,035
2000	71,940	$ 3,353	44.4	12.5	$ 3,884	11,264	$ 790	39.8	13.8	$ 5,849	83,204	$ 4,143	43.8	12.6	$ 4,150
2001	75,048	$ 3,608	44.5	12.3	$ 4,006	12,021	$ 860	39.6	13.0	$ 5,967	87,069	$ 4,468	43.9	12.4	$ 4,277
2002	77,062	$ 3,833	44.7	12.3	$ 4,145	12,190	$ 894	39.6	13.8	$ 6,115	89,252	$ 4,727	44.0	12.5	$ 4,414
2003	75,995	$ 3,954	45.2	12.7	$ 4,336	11,765	$ 899	40.1	13.7	$ 6,370	87,760	$ 4,853	44.5	12.9	$ 4,609
2004	74,826	$ 3,967	45.6	13.1	$ 4,418	11,409	$ 885	40.6	14.7	$ 6,467	86,235	$ 4,852	44.9	13.3	$ 4,689
2005	75,167	$ 4,046	45.8	13.2	$ 4,486	11,217	$ 905	41.0	14.9	$ 6,722	86,384	$ 4,951	45.2	13.4	$ 4,777
2006	77,167	$ 4,267	45.7	13.0	$ 4,608	11,464	$ 969	41.2	15.0	$ 7,047	88,631	$ 5,236	45.1	13.3	$ 4,924
2007	79,829	$ 4,673	45.7	12.8	$ 4,878	12,267	$ 1,104	40.8	14.4	$ 7,499	92,096	$ 5,777	45.1	13.0	$ 5,227
2008	81,664	$ 5,017	45.8	12.8	$ 5,119	12,828	$ 1,187	40.5	13.7	$ 7,714	94,492	$ 6,204	45.1	12.9	$ 5,471
2009	82,878	$ 5,348	46.1	13.1	$ 5,377	12,910	$ 1,240	40.8	14.0	$ 8,002	95,788	$ 6,588	45.4	13.2	$ 5,731
2010	81,413	$ 5,318	46.6	13.6	$ 5,444	12,997	$ 1,257	41.3	14.5	$ 8,062	94,410	$ 6,575	45.9	13.7	$ 5,804
2011	80,145	$ 5,295	47.0	14.0	$ 5,506	12,641	$ 1,240	41.9	15.1	$ 8,172	92,786	$ 6,535	46.3	14.2	$ 5,869
2012	79,467	$ 5,272	47.3	14.4	$ 5,528	12,485	$ 1,230	42.3	15.5	$ 8,209	91,952	$ 6,502	46.7	14.6	$ 5,892
2013	79,006	$ 5,253	47.6	14.8	$ 5,541	12,539	$ 1,235	42.3	15.7	$ 8,207	91,545	$ 6,488	46.9	14.9	$ 5,906
2014	79,943	$ 5,488	47.6	14.9	$ 5,720	12,523	$ 1,253	42.6	15.8	$ 8,337	92,466	$ 6,741	47.0	15.0	$ 6,075

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Exhibit E-2: Retired Membership Data

	General Members				Safety Members				Total Members			
Valuation Date (June 30)	Number	Annual Allowance (in millions)	Average Age	Average Monthly Benefit	Number	Annual Allowance (in millions)	Average Age	Average Monthly Benefit	Number	Annual Allowance (in millions)	Average Age	Average Monthly Benefit
1998	35,462	$ 692	71.1	$ 1,626	7,425	$ 267	62.5	$ 3,001	42,887	$ 959	69.6	$ 1,864
1999	35,837	$ 725	71.4	$ 1,686	7,674	$ 291	63.1	$ 3,166	43,511	$ 1,016	70.0	$ 1,947
2000	36,596	$ 780	71.4	$ 1,778	8,032	$ 324	63.1	$ 3,358	44,628	$ 1,104	69.9	$ 2,062
2001	37,077	$ 890	71.6	$ 2,001	8,319	$ 382	63.4	$ 3,828	45,396	$ 1,272	70.1	$ 2,336
2002	37,618	$ 914	71.8	$ 2,025	8,624	$ 403	63.7	$ 3,892	46,242	$ 1,317	70.3	$ 2,374
2003	38,283	$ 984	71.9	$ 2,142	8,949	$ 443	63.9	$ 4,128	47,232	$ 1,427	70.4	$ 2,518
2004	39,097	$ 1,056	72.0	$ 2,250	9,235	$ 478	64.2	$ 4,318	48,332	$ 1,534	70.5	$ 2,645
2005	40,251	$ 1,138	72.1	$ 2,355	9,518	$ 514	64.6	$ 4,504	49,769	$ 1,652	70.7	$ 2,766
2006	41,309	$ 1,224	72.2	$ 2,469	9,683	$ 549	65.0	$ 4,728	50,992	$ 1,773	70.8	$ 2,898
2007	41,584	$ 1,280	72.2	$ 2,565	9,808	$ 578	65.4	$ 4,914	51,392	$ 1,858	70.9	$ 3,013
2008	42,298	$ 1,356	72.4	$ 2,671	10,052	$ 623	65.8	$ 5,167	52,350	$ 1,979	71.1	$ 3,150
2009	42,825	$ 1,423	72.6	$ 2,768	10,244	$ 663	66.3	$ 5,394	53,069	$ 2,086	71.4	$ 3,275
2010	43,752	$ 1,514	72.7	$ 2,883	10,444	$ 706	66.7	$ 5,638	54,196	$ 2,220	71.6	$ 3,414
2011	44,726	$ 1,597	72.9	$ 2,976	10,645	$ 746	67.0	$ 5,836	55,371	$ 2,343	71.7	$ 3,526
2012	45,899	$ 1,686	73.0	$ 3,061	10,871	$ 789	67.3	$ 6,049	56,770	$ 2,475	71.9	$ 3,633
2013	46,939	$ 1,774	73.2	$ 3,149	11,147	$ 837	67.5	$ 6,261	58,086	$ 2,611	72.1	$ 3,746
2014	47,867	$ 1,836	73.4	$ 3,196	11,362	$ 876	67.8	$ 6,427	59,229	$ 2,712	72.3	$ 3,816

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Exhibit E-3: Contribution Rates

	General Plans					Safety Plans					Total All Plans				
Valuation Date (June 30)	Calculated Normal Cost	Member Contributions	Net Employer Normal Cost	UAAL Rate	Total Employer Contribution	Calculated Normal Cost	Member Contributions	Net Employer Normal Cost	UAAL Rate	Total Employer Contribution	Calculated Normal Cost	Member Contributions	Net Employer Normal Cost	UAAL Rate	Total Employer Contribution
1998	10.27%	3.06%	7.21%	0.00%	7.21%	25.00%	8.70%	16.30%	0.00%	16.30%	13.27%	4.21%	9.06%	0.00%	9.06%
1999	10.98%	3.20%	7.78%	0.00%	7.78%	25.41%	9.12%	16.29%	0.00%	16.29%	13.81%	4.36%	9.45%	0.00%	9.45%
2000	10.91%	3.33%	7.58%	0.00%	7.58%	25.22%	9.44%	15.78%	0.00%	15.78%	13.66%	4.51%	9.15%	0.00%	9.15%
2001	11.27%	3.45%	7.82%	0.00%	7.82%	25.47%	9.27%	16.20%	0.00%	16.20%	14.01%	4.57%	9.44%	0.00%	9.44%
2002	12.04%	3.53%	8.51%	0.21%	8.72%	25.92%	9.37%	16.55%	0.21%	16.76%	14.66%	4.63%	10.03%	0.21%	10.24%
2003	12.25%	3.72%	8.53%	4.66%	13.19%	25.89%	9.55%	16.34%	4.66%	21.00%	14.80%	4.81%	9.99%	4.66%	14.65%
2004	12.20%	3.82%	8.38%	6.41%	14.79%	24.61%	9.61%	15.00%	6.41%	21.41%	14.48%	4.88%	9.60%	6.41%	16.01%
2005	12.22%	3.91%	8.31%	5.33%	13.64%	24.69%	9.68%	15.01%	5.33%	20.34%	14.50%	4.97%	9.53%	5.33%	14.86%
2006	12.22%	4.07%	8.15%	3.49%	11.64%	24.70%	9.70%	15.00%	3.49%	18.49%	14.54%	5.12%	9.42%	3.49%	12.91%
2007	13.15%	4.38%	8.77%	2.24%	11.01%	26.04%	10.18%	15.86%	2.24%	18.10%	15.67%	5.51%	10.16%	2.24%	12.40%
2008	13.18%	4.47%	8.71%	1.99%	10.70%	26.01%	10.22%	15.79%	1.99%	17.78%	15.68%	5.59%	10.09%	1.99%	12.08%
2009	13.29%	4.57%	8.72%	4.12%	12.84%	26.08%	10.21%	15.87%	4.12%	19.99%	15.75%	5.65%	10.10%	4.12%	14.22%
2010	13.32%	4.68%	8.64%	6.47%	15.11%	25.00%	10.19%	14.81%	6.47%	21.28%	15.59%	5.75%	9.84%	6.47%	16.31%
2011	13.36%	4.91%	8.45%	7.89%	16.34%	25.09%	10.50%	14.59%	7.89%	22.48%	15.65%	6.00%	9.65%	7.89%	17.54%
2012	13.50%	5.01%	8.49%	10.09%	18.58%	25.42%	10.52%	14.90%	10.09%	24.99%	15.81%	6.08%	9.73%	10.09%	19.82%
2013	13.25%	5.01%	8.24%	11.90%	20.14%	24.67%	10.26%	14.41%	11.90%	26.31%	15.47%	6.03%	9.44%	11.90%	21.34%
2014	13.14%	5.09%	8.05%	10.04%	18.09%	24.71%	10.23%	14.48%	10.04%	24.52%	15.37%	6.08%	9.29%	10.04%	19.33%

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Exhibit E-4: Funded Status History

(Dollars in Millions)

		Market Value Basis			Actuarial Value Basis						
Valuation Year	Actuarial Accrued Liability (AAL)	Market Value of Assets (MVA)[1]	Unfunded AAL (UAAL)/Surplus MVA Basis	Funded Ratio MVA Basis	Actuarial Value of Assets (AVA)[1]	Unfunded AAL (UAAL)/Surplus AVA Basis	Funded Ratio AVA Basis	Covered Payroll	Asset Smoothing Ratio (AVA / MVA)	Asset Volatility Ratio (MVA / Payroll)	Liability Volatility Ratio (AAL / Payroll)
1996 [2]	17,300	18,600	1,300	107.5%	17,700	400	102.3%	3,356	95.2%	5.5	5.2
1997 [2]	19,300	21,100	1,800	109.3%	19,600	300	101.6%	3,373	92.9%	6.3	5.7
1998	20,960	22,332	1,372	106.5%	20,851	(109)	99.5%	3,562	93.4%	6.3	5.9
1999	22,785	24,382	1,597	107.0%	23,536	751	103.3%	3,858	96.5%	6.3	5.9
2000	24,721	27,257	2,536	110.3%	25,427	706	102.9%	4,143	93.3%	6.6	6.0
2001	26,490	23,916	(2,574)	90.3%	26,490	-	100.0%	4,469	110.8%	5.4	5.9
2002	28,437	24,085	(4,352)	84.7%	28,262	(175)	99.4%	4,730	117.3%	5.1	6.0
2003	30,474	24,616	(5,858)	80.8%	26,564	(3,910)	87.2%	4,934	107.9%	5.0	6.2
2004	32,700	28,094	(4,606)	85.9%	27,089	(5,611)	82.8%	4,942	96.4%	5.7	6.6
2005	34,375	30,904	(3,471)	89.9%	29,497	(4,878)	85.8%	5,051	95.4%	6.1	6.8
2006	36,259	34,256	(2,003)	94.5%	32,820	(3,439)	90.5%	5,333	95.8%	6.4	6.8
2007	39,503	40,073	570	101.4%	37,042	(2,461)	93.8%	5,886	92.4%	6.8	6.7
2008	41,975	37,834	(4,141)	90.1%	39,662	(2,313)	94.5%	6,257	104.8%	6.0	6.7
2009	44,469	29,723	(14,746)	66.8%	39,542	(4,927)	88.9%	6,673	133.0%	4.5	6.7
2010	46,646	32,629	(14,017)	69.9%	38,839	(7,807)	83.3%	6,739	119.0%	4.8	6.9
2011	48,599	38,587	(10,012)	79.4%	39,194	(9,405)	80.6%	6,705	101.6%	5.8	7.2
2012	50,809	37,453	(13,356)	73.7%	39,039	(11,770)	76.8%	6,675	104.2%	5.6	7.6
2013	53,247	41,334	(11,913)	77.6%	39,932	(13,315)	75.0%	6,656	96.6%	6.2	8.0
2014	54,942	47,223	(7,719)	86.0%	43,654	(11,288)	79.5%	6,815	92.4%	6.9	8.1

[1] *Asset values exclude non-valuation reserves*
[2] *Only rounded values are available.*

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Exhibit E-5: Reconciliation of Changes in Unfunded Actuarial Accrued Liability or Surplus

(Dollars in Millions)

Valuation Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Prior Year UAAL	175	3,910	5,611	4,878	3,439	2,461	2,313	4,927	7,807	9,405	11,770	13,315
Normal Cost	722	770	769	787	882	990	1,053	1,219	1,200	1,237	1,430	1,163
Contributions	(782)	(815)	(1,076)	(1,196)	(1,258)	(1,249)	(1,310)	(1,322)	(1,461)	(1,646)	(1,455)	(1,824)
Interest	15	357	435	378	267	191	179	382	605	724	895	999
Changes in Assumptions/Methodology	40	697	-	-	515	-	-	54	221	457	511	-
Changes in Benefit Provisions	17	-	-	-	-	-	-	-	-	-	-	-
Expected Current Year UAAL	187	4,919	5,739	4,847	3,845	2,393	2,235	5,260	8,372	10,177	13,151	13,653
Actual Current Year UAAL	3,910	5,611	4,878	3,439	2,461	2,313	4,927	7,807	9,405	11,770	13,315	11,288
Total (Gain)/Loss on UAAL	3,723	692	(861)	(1,408)	(1,384)	(80)	2,692	2,547	1,033	1,593	164	(2,365)
Asset (Gains)/Losses	3,351	871	(790)	(1,642)	(2,187)	(429)	2,465	2,879	1,761	2,337	893	(1,664)
Ventura Settlement/Court Cases	190	-	-	50	-	15	-	-	-	-	-	-
Salary Increases	(66)	(270)	(115)	156	673	298	380	(353)	(579)	(629)	(563)	(291)
All Other Actuarial (Gains)/Losses	248	91	44	28	130	36	(153)	21	(149)	(115)	(166)	(410)

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Exhibit E-6: Reconciliation of Changes in Employer Contribution Rate

Valuation Year	Prior Year Contribution Rate	Changes in Existing Amortization Bases	Assumption/ Method Changes	Salary/Payroll Variations	Plan Amendments	Asset (Gains)/Losses	Demographic/Other (Gains)/Losses	Current Year Contribution Rate
2003	10.24%	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	14.65%
2004	14.65%	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	16.01%
2005	16.01%	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	N/A[1]	14.86%
2006	14.86%	-0.29%	0.00%	0.02%	0.00%	-1.82%	0.14%	12.91%
2007	12.91%	-0.28%	1.34%	0.61%	0.00%	-2.14%	-0.04%	12.40%
2008	12.40%	-0.17%	0.00%	0.21%	0.00%	-0.24%	-0.12%	12.08%
2009	12.08%	-0.04%	-1.76%	0.21%	0.00%	3.91%	-0.18%	14.22%
2010	14.22%	0.00%	-0.27%	-0.10%	0.00%	2.29%	0.17%	16.31%
2011	16.31%	0.00%	0.25%	-0.14%	0.00%	1.39%	-0.27%	17.54%
2012	17.54%	0.00%	0.54%	-0.11%	0.00%	1.92%	-0.07%	19.82%
2013	19.82%	0.00%	0.82%	-0.01%	0.00%	0.74%	-0.03%	21.34%
2014	21.34%	0.00%	0.00%	-0.15%	0.00%	-1.43%	-0.43%	19.33%

[1] *Data not available.*

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Exhibit E-7: Funding Policy History

	Description of changes, if any	Effective Date	Impact on Contribution Rate	Impact on Funding Ratio	Rationale
2009	Changed from 3-year to 5-year asset smoothing. Included STAR reserve as a valuation asset. Adopted 30-year layered amortization period.	June 30, 2009	-1.68% *	4.40%	See June 30, 2009 valuation report.
2010	Included STAR reserve as a valuation asset.	June 30, 2010	-0.52% *	1.40%	See June 30, 2010 valuation report.
2011	Included STAR reserve as a valuation asset.	June 30, 2011	-0.52% *	1.20%	See June 30, 2011 valuation report.
2012	Included STAR reserve as a valuation asset for 2012 and future valuations (adopted February 2013).	June 30, 2012	-0.53% *	1.20%	See June 30, 2012 valuation report.

**Note that savings due to inclusion of STAR reserve as valuation asset are not cumulative from year to year.*

Exhibit E-8: History of Changes in Economic Assumptions

(Years with no changes excluded)

	Price Inflation	Wage Inflation	Real Wage Inflation[1]	Investment Return Assumption	Real Investment Return[2]	Effective Date	Change in Contribution Rate	Change in Funding Ratio	Rationale
2004	3.50%	3.75%	0.25%	7.75%	4.25%	July 1, 2004	1.65%	N/A[3]	See 2004 Investigation of Experience Report.
2007	3.50%	4.00%	0.50%	7.75%	4.25%	July 1, 2007	0.66%	-1.3%	See 2007 Investigation of Experience Report.
2011	3.45%	3.95%	0.50%	7.70%	4.25%	July 1, 2011	0.25%	-0.3%	See 2010 Investigation of Experience Report.
2012	3.35%	3.85%	0.50%	7.60%	4.25%	July 1, 2012	0.54%	-0.7%	See 2010 Investigation of Experience Report.
2013	3.00%	3.50%	0.50%	7.50%	4.50%	July 1, 2013	0.37%	-0.1%	See 2013 Investigation of Experience Report.

[1] *Excess of assumed wage inflation over price inflation.*
[2] *Excess of assumed investment return over price inflation.*
[3] *Information not available.*

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Exhibit E-9: History of Changes in Demographic and Other Non-Economic Assumptions

(Years with no changes excluded)

	Demographic Assumption Revisions	Effective Date	Change in Contribution Rate	Change in Funding Ratio	Rationale
2004	Mortality, merit salary scale, retirement, termination, probability of refund, probability of eligible survivor revised.	July 1, 2004	-0.63%	N/A[1]	Refer to the 2004 Investigation of Experience Report.
2007	Mortality, retirement, termination, probability of refund, merit salary scale for Safety members revised.	July 1, 2007	0.68%	N/A[1]	Refer to the 2007 Investigation of Experience Report.
2010	Mortality, retirement, termination, probability of refund, assumed benefit commencement age revised.	July 1, 2010	-0.27%	-0.1%	Refer to the 2010 Investigation of Experience Report.
2013	Mortality, retirement, termination, probability of refund, merit salary scale for Safety members, probability of eligible survivor, assumption for beneficiary age, reciprocity assumption revised.	July 1, 2013	0.45%	-0.6%	Refer to the 2013 Investigation of Experience Report.

[1] *Information not available.*

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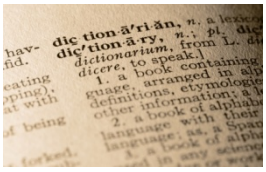
Appendix F: Glossary



The following definitions include excerpts from a list adopted by the major actuarial organizations in the United States. In some cases, the definitions have been modified for specific applicability to LACERA and include terms used exclusively by LACERA. Defined terms are capitalized throughout this Appendix.

Accrued Benefit — The amount of an individual's benefit (whether or not vested) as of a specific date, determined in accordance with the terms of a pension plan and based on compensation and service to that date.

Actuarial Accrued Liability — That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

Actuarial Assumptions — Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement, and retirement; changes in compensation; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; and other relevant items.

Actuarial Gain (Loss) — A measure of the difference between actual experience and that expected based on a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

Actuarial Present Value — The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions.

Actuarial Valuation — The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

Actuarial Value of Assets — The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.

Actuarially Equivalent — Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

Amortization Payment — That portion of the pension plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Contingency Reserve	Reserves accumulated for future earning deficiencies, investment losses, and other contingencies. Additions include investment income and other revenues; deductions include investment expense, administrative expense, interest allocated to other reserves, funding the STAR Reserve, and distributions to the Contribution Credit Reserve. The Contingency Reserve is used to satisfy the California Government Code requirement for (31592 and 31592.2) LACERA to reserve 1% of the assets against earning deficiencies, investment losses, and other contingencies.
County Contribution Credit Reserve	The accumulated balance of the County's proportionate share of excess earnings as stipulated in the Retirement System Funding Agreement between LACERA and the County. Additions include distributions from excess earning during the fiscal years ending 1994 through 1998 and related earnings. Deductions include payments, as the County authorizes, for future employer contributions due LACERA and for funding a portion of the Retiree Healthcare Program under the provisions of Internal Revenue Code 401(h).
Employer Reserve	The accumulation of employer contributions for future retirement benefit payments. Additions include contributions from employers and related earnings. Deductions include annuity payments to retired members and survivors, lump sum death benefit payments to member survivors, and supplemental disability payments.
Entry Age Actuarial Cost Method	A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit ages. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the Actuarial Present Value of future Normal Costs is called the Actuarial Accrued Liability.
Funded Ratio	A measurement of the funded status of the system. The Funded Ratio is calculated by dividing the Valuation Assets by the Actuarial Accrued Liability. For example, a Funded Ratio of 90% indicates assets are 10% less than liabilities.
Funding Goal	The Funding Goal is the funded status the Board of Investments would like LACERA to achieve. The main goal is to provide benefit security for its members as well as to achieve and maintain stable employer contributions that are as low as possible. A Funded Ratio equal to 100% is the Funding Goal.
Layered Amortization Period	Payment of each year's change in the Unfunded Actuarial Accrued Liability (UAAL) is amortized over separate closed periods. For LACERA, the original UAAL as of June 30, 2009 is being amortized over a closed 30-year period, while each year's subsequent gain or loss on the UAAL is amortized over a new closed 30-year period starting with that date. The amortization payments are based on a level percent of pay.

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Member Reserve	The accumulation of member contributions. Additions include member contributions and related earnings. Deductions include annuity payments to retirees and refunds to members.
Non-Valuation Reserves	Reserves excluded from the calculation of contribution rates, including the Contingency Reserve, the STAR reserve, the County Contribution Credit Reserve, and any other reserves specifically excluded by the Board of Investments.
Normal Cost	That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.
Plan Year	A twelve-month period beginning July 1 and ending June 30.
Projected Benefits	Those pension plan benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits.
STAR Reserve	Reserves accumulated for the payment of cost-of-living benefits as defined in California Government Code Section 31874.3.
Supplemental Targeted Adjustment for Retirees (STAR) Benefits	Supplemental cost-of-living payments to retired members to restore purchasing power at a specified percentage level, as described in California Government Code Section 31874.3.
Surplus Funding	The excess, if any, of the Actuarial Value of Assets over the Actuarial Accrued Liability. Standard actuarial terminology defines this as the “Funding Excess.” LACERA uses the term “Surplus Funding.”
Unfunded Actuarial Accrued Liability	The excess, if any, of the Actuarial Accrued Liability over the Actuarial Value of Assets.
Valuation Date	The date upon which the Normal Cost, Actuarial Accrued Liability, and Actuarial Value of Assets are determined. Generally, the Valuation Date will coincide with the ending of a Plan Year.
Valuation Reserves	All reserves excluding the Non-Valuation Reserves.

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