> ACTUARIAL VALUATION June 30, 2007



By

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February 4, 2008

Board of Investments Los Angeles County Employees Retirement Association 300 North Lake Avenue, Suite 820 Pasadena, CA 91101-4199

Dear Members of the Board:

As requested, we have made an actuarial valuation of the Los Angeles County Employees Retirement Association (LACERA) as of June 30, 2007 for determining the contribution rates effective July 1, 2008. 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, 2007, and both the Interim Funding Policy and the Retirement Benefit Enhancement Agreement.

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.

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 which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

We further certify that all costs, liabilities, rates of interest, and other factors for LACERA have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of LACERA and reasonable expectations) and which, in combination, offer our best estimate of anticipated experience affecting LACERA. Nevertheless, the emerging costs will vary from those presented in this report to the extent that actual experience differs from that projected by the actuarial assumptions. The Board of Investments has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix A.



Board of Investment LACERA February 4, 2008 Page Two

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for LACERA. Actuarial computations under GASB Statement No. 25 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 Interim Funding Policy, the Retirement Benefit Enhancement Agreement, and of GASB Statement No. 25. 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.

Milliman's work product was prepared exclusively for LACERA for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning LACERA's operations, and uses LACERA's data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

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,

Kar D. Steffe

Karen I. Steffen, FSA, EA, MAAA Consulting Actuary

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### **Table of Contents**

Section 1: Exhibit 1:	Summary of the Findings
Section 2:	Scope of the Report11
Section 3:	Assets13
Exhibit 2:	Statement of Plan Net Assets For Years Ended June 30, 2006 and 2007.17
Exhibit 3:	Statement of Changes in Plan Net Assets For the Years Ended June 30, 2006 and 200718
Exhibit 4:	Allocation of Assets by Accounting Reserve Amounts
Exhibit 5:	3-Year Smoothing of Gains and Losses on Market Value20
Exhibit 6:	Allocation of Valuation and Non-Valuation Assets21
Section 4:	Actuarial Liabilities23
Exhibit 7:	Actuarial Balance Sheet – June 30, 200724
Exhibit 8a:	Analysis of Change in Unfunded Actuarial Accrued Liability
Exhibit 8b:	History of Changes in Unfunded Actuarial Accrued Liability
Section 5:	Member Contributions
Exhibit 9:	Sample Member Contribution Rates35
Section 6:	County Contributions
Exhibit 10:	Calculated Normal Cost Contribution Rates – June 30, 2007
Exhibit 11:	Total County Contributions40
Section 7:	Accounting Information41
Exhibit 12:	Schedule of Funding Progress42
Exhibit 13:	Schedule of Contributions from the Employer43
Exhibit 14:	Solvency Test
Section 8:	Supplemental Information45
Exhibit 15a	a: Cash Flow History and Projections – Dollars46
Exhibit 15t	e: Cash Flow History and Projections - Charts47



### **Table of Contents**

Appendix A:	Actuarial Procedures and Assumptions	A-1
Appendix B:	Summary of Plan Provisions	B-1
Appendix C:	Valuation Data and Schedules	C-1
Appendix D:	Member Contribution Rates	D-1
Appendix E:	Historical Information	E-1
Appendix F:	Glossary	F-1



### Section 1: Summary of the Findings



#### 2007 Valuation Results

	June 30, 2007	June 30, 2006
Required County Contribution Rate	12.40%	12.91%
Funded Ratio	93.8%	90.5%

Overview

We are pleased to present the results of the June 30, 2007 triennial actuarial valuation. Several key points are summarized as follows:

Investment Returns: For the fiscal year ending in 2007, the fund returned 19.1% on a market basis. This return, in excess of the assumed rate of 7.75%, combined with the recognition of a portion of the deferred gains from 2005 and 2006 resulted in a \$2.1 billion gain on actuarial assets. This gain is the key factor affecting this year's valuation results.

Note that currently a \$3.0 billion net investment gain is being deferred. This is because the asset-smoothing method has recognized all of the losses from earlier in this decade, but only a portion of the gains from the prior two years. These gains will be reflected over the next two valuations.

- **Funding:** The Funded Ratio increased from 90.5% to 93.8%. The investment gain resulted in a 5.4% increase in the Funded Ratio; however, this was somewhat offset by the impact of changes in the actuarial assumptions and actual salary increases that exceeded those assumed.
- Contribution Rates: The County normal cost rate increased from 9.42% to 10.16% primarily due to assumption changes. The County's required contribution rate to finance the Unfunded Actuarial Accrued Liability (UAAL) over 30 years decreased from 3.49% to 2.24%. The result is a decrease in the required total contribution rate from the prior valuation of 0.51% (from 12.91% to 12.40% of payroll). The most important factor causing this decrease was the asset gain, although this was somewhat offset by changes in the assumptions and higher than assumed salary increases.
- Member Rates: Since this is a triennial valuation, we have recommended new member contribution rates. The new assumptions caused increases in the member rates, particularly at the younger entry ages. The average rate for contributory members increased from 7.27% to 7.66%.

### Summary of the Findings (continued)

Required Contribution Rate	In accordance with the Retirement Benefits Enhancement Agreement, the required County contribution rate is 12.40% of payroll. This is equal to the payment of the County normal cost rate plus a 30-year amortization of the UAAL. It should be noted that the 12.40% is a weighted average for all LACERA plans. The actual percent of payroll to be contributed by the County varies by plan as shown in Exhibit 11.
	The new required rate is effective for the fiscal year beginning July 1, 2008. The 12.40% contribution rate is currently adequate to maintain the funding of the retirement system benefits based on the actuarial methods and assumptions used and satisfies the funding policies adopted by the Board. If the County were to elect to continue contributing at the current rate of 12.91%, this would reduce the projected amortization period from 30 years to 21.9 years.
Analysis of Change	The following chart shows that the asset gains were the most significant factor affecting the County contribution rate and the funded status. However, the impact of the asset gains was somewhat offset by assumption changes and salary increases greater than assumed.

Sources of Change	County Contribution Rate	Funded Ratio
June 30, 2006 Actuarial Valuation	12.91%	90.5%
Expected Year-to-Year Change Asset Gain/Loss Salary / Payroll Variation Retiree COLAs Less than Expected Assumption Changes Other	-0.28% -2.14% 0.61% 0.00% 1.34% -0.04%	1.0% 5.4% -1.7% 0.0% -1.4% 0.0%
Total Change	-0.51%	3.3%
June 30, 2007 Actuarial Valuation	12.40%	93.8%

**Funding Progress** Based on the 2006 valuation, the expected funding status as of June 30, 2007 was a UAAL amount of \$3.28 billion. Reflecting the change in assumptions, the actual cashflow and assumed interest, the expected UAAL as of June 30, 2007 was \$3.85 billion. The actual UAAL for the fiscal year ending June 30, 2007 is \$2.46 billion. The decrease was due to a net experience gain on assets of \$2.19 billion, which was offset somewhat by a loss on liabilities of \$0.80 billion. The loss on liabilities was primarily due to an actual increase in salaries for continuing active members greater than the assumed rate.



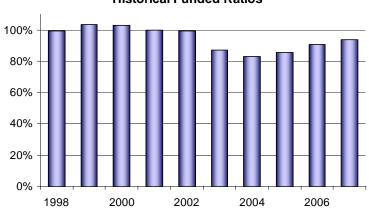
## Funding Progress (continued)

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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, for all LACERA plans combined. LACERA had maintained a Funded Ratio of approximately 100% for 1996-2002. Due to asset losses recently recognized, the Funded Ratio decreased significantly in 2003 and 2004. Strong investment returns over the past several years have resulted in an increase in the Funded Ratio to 93.8% this year, as shown in the following graph.

On June 30, 2007, the total Market Value of the fund was \$40.9 billion. The Actuarial Value was \$37.8 billion and was split between \$0.8 billion of Non-valuation Assets and \$37.0 billion of Valuation Assets. The Valuation Assets are equal to 93.8% of the \$39.5 billion Actuarial Accrued Liability.

	All dollar amounts in billions					
	Market	Actuaria	I Value			
	Value of	Non-		Actuarial		
	Total	Valuation	Valuation	Accrued	Funded	
	Assets	Reserves	Assets	Liability	Ratio	
1998	\$ 25.5	\$ 3.5	\$ 20.9	\$ 21.0	99.5%	
1999	28.0	3.7	23.5	22.8	103.3	
2000	31.6	4.3	25.4	24.7	102.9	
2001	28.4	4.4	26.5	26.5	100.0	
2002	26.0	2.0	28.3	28.4	99.4	
2003	26.2	1.6	26.6	30.5	87.2	
2004	29.5	1.4	27.1	32.7	82.8	
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	



#### **Historical Funded Ratios**

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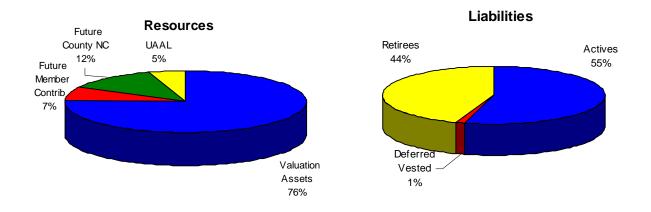
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Association Assets	<u>Market Value</u> : The market value of assets has increased over the past ten years, as a result of contributions and investment earnings, offset by benefit payments. The average return for the fund over that period has been 8.4%. The values shown in the market value column are total assets net of liabilities, and include all reserves.
	<u>Actuarial Assets:</u> The market value of total assets is used in calculating the actuarial value of assets. Under the actuarial asset method, the market value returns are smoothed over a three-year period.
	<u>Valuation Reserves</u> : 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 smoothing.
	<u>Non-Valuation Reserves:</u> 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.
	<u>Valuation Assets:</u> This is the combination of the valuation reserves and the portion of the non-valuation reserves that are recognized for funding purposes only as allowed under the 2003 Retirement Benefits Enhancement Agreement.
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 County 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 Actuarial Accrued Liability (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.



### Summary of the Findings (continued)

Actuarial Balance Sheet (continued) The 2007 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.



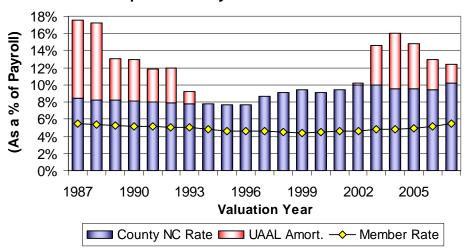
**Funding Agreement** In 1994, the County and LACERA entered into a funding agreement that determined how the excess earnings were to be allocated for 1994-1998 and how County contributions were to be computed if a UAAL existed. Since LACERA met the funding requirements of the Funding Agreement in 1994-1998, County contributions consisted of the Normal Cost contribution only during that period.

Funding PolicyThe 1994 Funding Agreement indicated the funding policy to be<br/>followed in 1994 through 1998. It only describes the<br/>amortization of any UAAL amounts for 1999-2008. During 2000,<br/>the Board discussed a long-term funding policy and established<br/>a method of allocating earnings on the various reserve funds<br/>under their Interim Funding Policy. In 2003, along with adopting<br/>certain benefit enhancements, a Retirement Benefits<br/>Enhancement Agreement set up a new funding policy for the<br/>2002-2008 valuations.



### Summary of the Findings (continued)

Funding Policy (continued)	Under the 2002 Retirement Benefits Enhancement Agreement, all of the funds in the Contingency Reserve in excess of 1% of the actuarial value of assets of the entire fund are considered as part of the Valuation Assets. In addition, in any year in which the Funded Ratio is less than 100% prior to its inclusion, a portion of the STAR Reserve is also to be considered as part of the Valuation Assets. The portion that is not available for treatment as Valuation Assets is the amount determined to be sufficient to fund the STAR benefits until July 1, 2009.
	Note that, if the entire STAR reserve of \$634 million was excluded from the Valuation Assets, the UAAL would increase by \$622 million. Under this hypothetical scenario, the required County contribution rate would increase by 0.60% to 13.00%, and the Funded Ratio would decrease by 1.6% to 92.2%.
	The Retirement Benefits Enhancement Agreement was adopted as a short term funding policy, applicable through the 2008 actuarial valuation.
County Contribution Rates	Based on the results of the valuation, the Interim Funding Policy, and the Retirement Benefits Enhancement Agreement, the required County contribution rate will decrease for the fiscal year beginning in 2008 to a rate of 12.40% of pay. A historical perspective of the County contribution rates is shown in the following graph.



#### **Required County Contribution Rate**



#### **Member Rates**

Since this is a triennial valuation, we have recommended new member contribution rates. The new assumptions caused increases in the member rates, particularly at the younger entry ages. A summary is shown in the following table.

Entry	Member Contribution Rates				
Entry Age	Current	New	Increase		
General A					
25	4.96%	5.21%	0.25%		
35	6.20%	6.39%	0.19%		
45	7.61%	7.76%	0.15%		
General B					
25	6.79%	7.08%	0.29%		
35	8.48%	8.71%	0.23%		
45	10.43%	10.57%	0.14%		
General C					
25	5.79%	6.09%	0.30%		
35	7.21%	7.46%	0.25%		
45	9.02%	9.20%	0.18%		
General D					
25	5.66%	5.99%	0.33%		
35	7.05%	7.34%	0.29%		
45	8.82%	9.05%	0.23%		
Safety A					
25	7.79%	8.21%	0.42%		
35	9.73%	9.96%	0.23%		
45	11.49%	11.61%	0.12%		
Safety B					
25	10.18%	10.72%	0.54%		
35	12.72%	13.00%	0.28%		
45	15.02%	15.16%	0.14%		

Member rates for all plans are discussed in Section 5, and the rates are shown in detail in Appendix D.

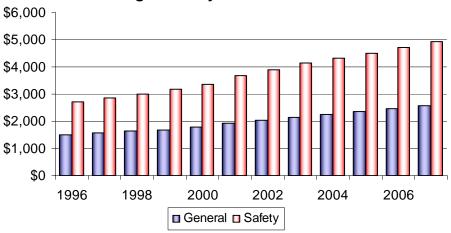


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Member InformationPayroll has increased since 2006. As of June 30, 2007, the<br/>annualized payroll is \$5.89 billion for 92,096 active members.<br/>This increase is a result of a 6.2% increase in average pay and a<br/>3.9% increase in active members.



Retired member counts and average retirement benefit amounts continue to increase steadily. For 2007, there were 51,392 retired members and beneficiaries with an average benefit of \$3,013 per month. This represents a 0.8% increase in count and a 4.0% increase in the average monthly benefit.



#### Average Monthly Retirement Benefit



### Summary of the Findings (continued)

#### 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, 583 members (592 last year) transferred from Plan E to Plan D during the past year; and 176 members (160 last year) transferred from Plan D to Plan E.

	Active Contributing Members	Deferred Vested Members	Retirees, Disabilities, & Beneficiaries
June 30, 2006 Valuation	88,631	7,459	50,992
Termination without Refund	(930)	930	-
Termination with Refund	(1,642)	(93)	-
Active/Deferred Death with Annuity	(64)	(37)	101
Service Retirement	(1,491)	(260)	1,751
Disability Retirement	(160)	(3)	163
Retiree Death without Beneficiary	-	-	(1,613)
New Entrants	7,664	-	-
Rehires	88	(86)	(2)
Total Change	3,465	451	400
June 30, 2007 Valuation	92,096	7,910	51,392

#### 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 costs are affected by the investment return assumption.

	Investm	Investment Return Assumption				
	Current	+0.5%	-0.5%			
	7.75%	8.25%	7.25%			
County Contribution Rate	12.40%	8.83%	16.16%			
Change		-3.57%	3.76%			
Funded Ratio	93.8%	99.7%	88.0%			
Change		5.9%	-5.8%			

### Summary Valuation Results

The following Exhibit 1 presents a summary of key data elements on June 30, 2007 and June 30, 2006, 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.

						Percentage
_	<b>T</b> . 110	Ju	ne 30, 2007	Ju	ne 30, 2006	Change
I.	Total Membership					
	A. Active Members		92,096		88,631	3.9%
	B. Retired Members & Beneficiaries		51,392		50,992	0.8%
	C. Vested Terminated Members		7,911		7,458	6.1%
	D. Total		151,399		147,081	2.9%
II.	Pay Rate as of June 30, 2007					
	A. Annual Total (\$millions)	\$	5,886	\$	5,333	10.4%
	B. Monthly Average	\$	5,326	\$	5,014	6.2%
III.	Average Monthly Benefit Paid to					
	Current Retirees and Beneficiaries					
	A. Service Retirement	\$	3,073	\$	2,961	3.8%
	B. Disability Retirement	\$	3,668	\$	3,496	4.9%
	C. Surviving Spouse and Dependents	\$	1,927	\$	1,842	4.6%
	D. Total	\$	3,013	\$	2,898	4.0%
IV.	Actuarial Accrued Liability					
	A. Active Members	\$	17,106	\$	14,882	14.9%
	B. Retired Members	\$	21,778	\$	20,682	5.3%
	C. Vested Terminated Members	\$	619	<u>\$</u>	695	(11.0)%
	D. Total	\$	39,503	\$	36,259	8.9%
V.	Assets					
	A. Market Value of Fund (\$millions)	\$	40,908	\$	35,186	16.3%
	B. Actuarial Value (\$millions)	¢	27.040	¢	22,020	10.00/
	<ol> <li>Valuation Reserves</li> <li>Non-valuation Reserves</li> </ol>	\$ \$	37,042 835	\$ \$	32,820 930	12.9%
	C. Annual Investment Return	φ	000	φ	930	(10.2)%
	1. Market Basis		19.1%		13.0%	na
	2. Valuation (Actuarial) Basis		14.5%		13.5%	na
VI.	Unfunded Actuarial Accrued Liability					
	or Surplus Funding (\$millions)	\$	2,461	\$	3,439	(28.4)%
VII.	Required County contribution rate for all plans combined as a percent of total payroll					
	A. Gross Normal Cost		15.67%		14.54%	7.8%
	B. Member Contributions		(5.51)%		<u>(5.12)%</u>	7.6%
	C. County Normal Cost		10.16%		9.42%	7.9%
	D. UAAL Amortization		2.24%		3.49%	(35.8)%
	E. Total Required Contribution		12.40%		12.91%	(4.0)%
VIII.	Funded Ratio		93.8%		90.5%	3.6%

### Exhibit 1: Summary of Significant Valuation Results



### Section 2: Scope of the Report



This report presents the actuarial valuation of the Los Angeles County Employees Retirement Association as of June 30, 2007. This valuation was requested by the Board. 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 purposes of setting contribution rates. The 2007 valuation meets this requirement. Additionally, under the Retirement Benefit Enhancement Agreement, annual valuations determine the County Contribution rates each year through 2008.

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, 2007. 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 County 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).

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



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, 2007.
- Appendix C Schedules of valuation data classified by various categories of plan members.
  - Appendix D Member contribution rates by plan.
- Appendix E Historical information.

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• Appendix F A glossary of actuarial terms used in this report.



#### 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, 2007. On that date, the assets available for the payment of retirement benefits are appraised. These assets are compared with the actuarial liabilities, which are generally well in excess of the actuarial assets. The purpose of the valuation is to determine what future contributions by the members and County are needed to pay all expected future benefits.

This section of the report deals with the determination of assets used for funding purposes. In the next section, the actuarial liabilities will be discussed. Sections 5 and 6 deal with 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							
	_						
	Market	Non-					
	Value of	Valuation	Valuation	Total Fund			
	Total Assets	Reserves	<u>Assets</u>	<u>Return*</u>			
1998	\$ 25.5	NA	\$ 20.9	15.5%			
1999	28.0	\$ 3.7	23.5	12.9			
2000	31.6	4.3	25.4	15.2			
2001	28.4	4.4	26.5	-5.2			
2002	26.1	2.0	28.3	-5.6			
2003	26.2	1.6	26.6	3.6			
2004	29.5	1.4	27.1	16.5			
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			

\*As reported in the Investment Section of the CAFR.

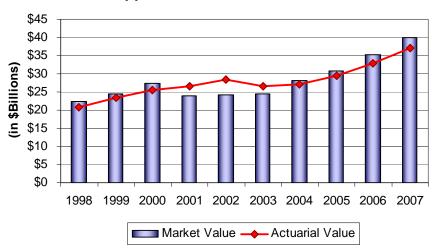
On June 30, 2007, the total market value of the fund, less current liabilities, was \$40.9 billion. The actuarial value of the fund was determined to be \$37.8 billion, including the non-valuation reserves. The average total fund return for the last ten years is 8.4%.



Financial ExhibitsExhibit 2 presents a Statement of Plan Net Assets and Exhibit 3<br/>presents a Statement of Changes in Plan Net Assets. Exhibit 4<br/>describes the allocation of LACERA's assets by the various<br/>reserve values determined for accounting purposes as disclosed<br/>in the Comprehensive Annual Financial Report (CAFR).Exhibits 2-4 are taken directly from data furnished to us by<br/>LACERA in their annual financial report. We have accepted<br/>these tables for use in this report without audit, but we have<br/>reviewed them both for the prior year and the current year for<br/>reasonableness and consistency with previous reports.

Actuarial Asset 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. The current assumed rate of return is 7.75%, net of all expenses. The difference between the actual market value and the computed expected market value is smoothed, or recognized over a three-year period.

Actuarial Value of Assets The development of the June 30, 2007 actuarial value of assets is shown in Exhibit 5. Note the smoothing process is deferring investment gains from 2006 and 2007 and is now in a net actuarial gain position. The result is an actuarial value of assets less than the June 30, 2007 market value by \$3.0 billion. The following graph shows a historical comparison of the actuarial and market assets used for valuation purposes.



#### **Applicable Valuation Assets**



Interim Actuarial Funding Policy	At the February 14, 2001 Board meeting, the following Interim Actuarial Funding Policy was adopted:				
	Earnings for a Plan Year plus recognized investment income, together with the prior balances in the Contingency Reserve will be allocated as of the Valuation Date in the following order of priority:				
	Priority 1: Allocate to the Member Reserve an amount eq one year's interest at LACERA's interest crediti rate, generally the assumed interest rate used actuarial valuation as of the preceding Valuatio Date.	ing in the			
	Priority 2: Allocate to the Employer Reserve and the Adva Employer Contributions Reserve amounts equa one year's interest at the assumed interest rate in the actuarial valuation as of the preceding Valuation Date.	al to			
	Priority 3: Allocate to the Contingency Reserve an amour equal to 1% of Actuarial Value of Assets.	nt			
	Priority 4: Allocate to the County Contribution Credit Rese amount equal to one year's interest at the assu interest rate used in the actuarial valuation as o preceding Valuation Date.	imed			
	Priority 5: Allocate to the Employer Reserve an amount, i necessary, when combined with other valuation Reserves, to provide 100% funding of the Actu Accrued Liability as of the Valuation Date.	า			
	Priority 6: Allocate any remaining Earnings as directed by Board of Investments.	' the			
	There were enough earnings for the year and assets in the contingency reserve to satisfy Priorities 1-4. The remaind credited to the Employer Reserve (Priority 5); however, this not enough to provide 100% funding of the AAL.	er was			
Valuation Assets	Valuation Assets are the actuarial value of the fund, less the value of any reserves which have been set aside for curre liabilities and special benefits that are to be funded outside actuarially determined contribution rates. The 37 Act require the Contingency Reserve be set at a minimum of 1.0% of	nt e of the iires			



### Valuation Assets (continued)

The Retirement Benefits Enhancement Agreement allows a portion of the STAR Reserve to also be allocated to the Valuation Assets, if needed. The estimated value of approving a permanent STAR benefit through July 1, 2009 is \$11.3 million and should be excluded from the Valuation Assets. Thus, all but \$11.3 million of the June 30, 2007 accounting value of the \$634 million STAR Reserve was used to determine the contribution rates for fiscal year commencing July 1, 2008. 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.

Note that the County Contribution Credit Reserve is credited with interest under the Interim Funding Policy as shown in Exhibit 6, the allocation of Valuation Assets, and is greater than the accounting value shown in Exhibit 4.

The Retirement Benefits Enhancement Agreement expires on July 1, 2010. Commencing with the June 30, 2009 valuation, the funding policy for LACERA shall be determined by the Board of Investment as it shall deem appropriate.



### Exhibit 2: Statement of Plan Net Assets For Years Ended June 30, 2006 and 2007 (Dollars in Thousands)

	 2007	2006
Assets		
Cash	\$ 21,444	\$ 72,553
Collateral on Loaned Securities	3,126,337	2,906,455
Receivables		
Accounts Receivable – Sale of Investments	393,776	213,906
Accrued Interest and Dividends	137,271	118,188
Accounts Receivable – Other	82,355	79,209
Total Receivables	613,402	411,303
Investments at Fair Value		
Stocks	21,936,470	18,817,409
Bonds	10,388,361	8,978,511
Short-Term Investments	1,418,843	1,412,210
Commodities	410,932	-
Real Estate	4,126,103	3,553,426
Mortgages	256,791	231,195
Alternative Assets	2,791,924	2,198,244
Total Investments	41,329,424	35,190,995
Capital Assets Net of Depreciation	-	-
Total Assets	45,090,607	38,581,306
Liabilities		
Accounts Payable – Purchase of Investments	988,225	391,503
Retiree Payroll and Other Payables	203	139
Accrued Expenses	33,988	65,953
Tax Withholding Payable	18,513	17,075
Obligations under Securities Lending Program	3,126,337	2,906,455
Accounts Payable – Other	15,235	14,592
Total Liabilities	4,182,501	3,395,717
Net Assets Held in Trust for Pension Benefits	 40,908,106	35,185,589



### Exhibit 3: Statement of Changes in Plan Net Assets For the Years Ended June 30, 2006 and 2007 (Dollars in Thousands)

	2007	2006
Additions		
Contributions		
Employer	\$ ,	\$ 676,667
Member	347,701	296,176
Total Contributions	1,099,629	972,843
Investment Income		
From Investing Activities		
Net Appreciation/(Depreciation) in Fair Value of Investments	2,760,428	1,078,066
Investment Income	 3,794,202	3,107,323
Total Investing Activity Income/(Loss)	6,554,630	4,185,389
Less Expenses From Investing Activities	(75,922)	(102,415)
Net Investing Activity Income/(Loss)	6,478,708	4,082,974
From Securities Lending Activities		
Securities Lending Income	149,925	162,282
Less Expenses From Securities Lending Activities	110,020	102,202
Borrower Rebates	(140,620)	(151,758)
Management Fees	(829)	(1,088)
Total Expenses from Securities Lending Activities	(141,449)	(152,846)
Net Securities Lending Income	 8,476	9,436
Total Net Investment Income/(Loss)	6,487,184	4,092,410
Miscellaneous	1,803	1,582
Total Additions/(Declines)	 7,588,616	5,066,835
Deductions		
Retiree Payroll	1,773,027	1,777,381
Administrative Expense	43,880	42,469
Refunds	18,038	19,731
Lump Sum Death Benefits	1,589	1,351
Miscellaneous	 197	75
Total Deductions	1,836,731	1,841,007
Transfer to OPEB Agency Fund	29,368	66,344
Net Increase/(Decrease)	5,722,517	3,159,484
Net Assets Held in Trust for Pension Benefits Beginning of Year	35,185,589	32,026,105



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

	June 30, 2007	June 30, 2006
1. Member Reserves		
a. Active Members	\$ 12,003,875	\$ 11,268,431
b. Unclaimed Deposits	-	-
c. Total Member Reserves	\$ 12,003,875	\$ 11,268,431
2. Employer Reserves		
a. Actual Employer Contributions	\$ 17,484,630	\$ 14,323,464
b. Advanced Employer Contributions	-	-
c. Total Employer Contributions	\$ 17,484,630	\$ 14,323,464
3. County Contribution Credit Reserve	\$ 444,738	\$ 544,039
4. STAR Reserve	633,626	654,099
5. Contingency Reserve	412,940	1,227,685
6. Total Reserves at Book Value	\$ 30,979,809	\$ 28,017,718
7. Unrealized Investment Portfolio Appreciation	9,928,297	7,167,871
8. Total Reserves at Fair Value	\$ 40,908,106	\$ 35,185,589

Note: These amounts were determined by LACERA for accounting purposes and are reported in the June 30, 2007 CAFR.



## Exhibit 5: 3-Year Smoothing of Gains and Losses on Market Value (Dollars in Thousands)

June 30, 2007 Valuation													
Plan Year Ending	C	ontributions		Benefit Payments	N	Expected larket Value	N	Actual larket Value			Phase-Out of (	Gair	n / (Loss)
06/30/2007	\$	1,099,629	\$	1,822,022	\$	37,162,609	\$	40,908,106	67%	x	\$ 3,745,497	=	\$ 2,496,998
06/30/2006		972,843		1,864,880		33,582,170		35,185,589	33%	х	1,603,419	=	534,473
06/30/2005		813,906		1,624,681		30,924,368		32,026,105	0%	х	1,101,737	=	0
06/30/2004								29,481,183				=	0
								Total	Phase-C	Out o	of Gain / (Loss)	=	\$ 3,031,471
								Т	otal Mark	ket \	/alue of Assets	=	40,908,106
								Tota	al Actuar	ial \	/alue of Assets	=	\$ 37,876,635
		Total Actua	arial Va	alue of Assets =				ssets less the T I be recognized					



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

	June 30, 2007	June 30, 2006
<ol> <li>Total Market Value of Assets</li> <li>Current Liabilities</li> <li>Net Assets Held in Trust for Pension Benefits</li> <li>Market Stabilization Reserve<sup>(1)</sup></li> <li>Actuarial Value of Fund Assets</li> </ol>	<ul> <li>\$ 45,090,607</li> <li>4,182,501</li> <li>\$ 40,908,106</li> <li>3,031,471</li> <li>\$ 37,876,635</li> </ul>	<pre>\$ 38,581,306 3,395,717 \$ 35,185,589 1,436,192 \$ 33,749,397</pre>
<ul> <li>6. Non-Valuation Reserves<sup>(2)</sup></li> <li>a. Unclaimed Deposits</li> <li>b. Contingency Reserve</li> <li>c. Advanced Employer Contributions</li> <li>d. County Contribution Credit Reserve</li> <li>e. Reserve for STAR Program</li> </ul>	\$- 378,766 - 444,737 11,300	\$- 337,494 - 557,678 34,500
<ul> <li>f. Total</li> <li>7. Valuation Assets<sup>(2)</sup></li> <li>a. Member Reserves</li> <li>b. Employer Reserves for Funding Purposes</li> </ul>	<ul> <li>\$ 834,803</li> <li>\$ 12,003,875</li> <li>\$ 25,037,957</li> </ul>	\$ 929,672 \$ 11,268,431 \$ 21,551,294
c. Total	\$ 37,041,832	\$ 32,819,725

(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 Interim 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, 2007. 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 and investment returns. 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 Actuarial Value of the Valuation Assets to the Actuarial Liabilities. The difference is the amount that needs to be funded by the Member and County 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 2007 Investigation of Experience Report. New assumptions were adopted by the Board effective with the June 30, 2007 actuarial valuation.



### Exhibit 7: Actuarial Balance Sheet – June 30, 2007 (Dollars in millions)

				Ge	eneral					Sat	fety			
	 Plan A	PI	an B	P	an C	 Plan D	F	Plan E	F	Plan A	F	Plan B	A	II Plans
Present Value of Benefits - Inactives - Retirees and Beneficiaries - Vested Terminated	\$ 11,692 69	\$	149 8	\$	80 3	\$ 1,310 203	\$	776 283	\$	6,810 2	\$	961 51	\$	21,778 619
- Inactive Total Present Value of Benefits - Actives	11,761		157		83	1,513		1,059		6,812		1,012		22,397
- Service Retirement	\$ 2,250	\$	214	\$	133	\$ 9,058	\$	4,578	\$	541	\$	4,362	\$	21,136
<ul> <li>Transfer Service (prior LACERA plan)</li> </ul>	12		1		2	65		271		4		4		359
<ul> <li>Disability Retirement</li> </ul>	54		6		4	775		N/A		229		3,070		4,138
- Death	22		2		2	294		N/A		2		58		380
- Termination (No Refund)	*		*		*	242		152		*		53		447
- Refund of Member Contributions	 *		*		*	 88		N/A		*		11		99
- Active Total	 2,338		223		141	 10,522		5,001		776		7,558		26,559
Total Actuarial Liabilities	\$ 14,099	\$	380	\$	224	\$ 12,035	\$	6,060	\$	7,588	\$	8,570	\$	48,956
ASSETS														
Valuation Assets	\$ 9,350	\$	426	\$	251	\$ 8,511	\$	6,895	\$	4,794	\$	6,815	\$	37,042
PV Future Member Contributions	26		8		6	2,368		*		1		1,107		3,516
PV Future County Normal Cost Contribs.	108		9		6	2,678		1,401		33		1,703		5,938
UAAL or (Surplus Funding)	 4,615		(63)		(39)	 (1,522)		(2,236)		2,760		(1,054)		2,461
Total Current and Future Assets	\$ 14,099	\$	380	\$	224	\$ 12,035	\$	6,060	\$	7,588	\$	8,570	\$	48,956

\* Less than \$0.5 million

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## Actuarial Liabilities (continued)

Actuarial Balance Sheet – Liabilities (continued)	All liabilities reflect the benefits effective through June 30, 2007. This includes the permanent STAR COLA adopted for 2007 and actual benefits and retroactive payments pursuant to the final Ventura settlement. Also, estimated liabilities of \$50 million for recently settled court cases (Bugh case and Local 1014 case) are included.
Actuarial Balance Sheet – Assets	For the purpose of the Actuarial Balance Sheet, LACERA's assets are equal to the sum of:
	<ul> <li>(a) assets currently available to pay benefits and considered for funding purposes, the Valuation Assets,</li> </ul>
	(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 County.
Actuarial Cost Method	The Actuarial Balance sheet determines the amount of future contributions that are needed, but the method used to determine the incidence of when those future contributions are yet to 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 – or essentially any actuarial cost method – the contributions required to meet the difference between current assets and current actuarial liabilities are allocated each year between two elements:
	<ul> <li>A normal cost amount; and</li> <li>Whatever amount is left over, which is used to amortize what is called the UAAL.</li> </ul>
	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 was made.



### Actuarial Liabilities (continued)

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 County. 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 County's portion of the future normal cost contributions.
Actuarial Accrued	The difference between the present value of all future obligations

Liability and the present value of the future normal cost contributions is referred to as the "actuarial accrued liability". The Actuarial Accrued Liability 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)	2007	2006	Percent Change	
A. Actuarial present value of all future benefits for contributing members, former contributing members, and their survivors	\$ 48,956	\$ 44,055	11.1%	
B. Actuarial present value of total future normal costs for current members	\$ 9,453	\$ 7,796	21.3%	
C. Actuarial accrued liability [A-B]	\$ 39,503	\$ 36,259	8.9%	
D. Valuation Assets	\$ 37,042	\$ 32,820	12.9%	
E. UAAL or Surplus Funding [C-D]	\$ 2,461	\$ 3,439	-28.4%	
F. Funded Ratio [D/C]	93.8%	90.5%	3.6%	



### Actuarial Liabilities (continued)

Actuarial Accrued Liability (continued)	It is interesting to note the maturity of LACERA's fund. Nearly one half, 45.8%, of the total actuarial obligation (both accrued and future benefits) is for retired and deferred vested members. Of the \$26.6 billion in obligations for the active members, the cost method allocates about two-thirds to service already rendered. Of course, Plans A-C for general members and Plan A for safety members are no longer open for new employees. To the extent those older plans represent more costly plan benefits, this adds to the weighting for accrued obligations.
Unfunded Actuarial Accrued Liability/ Surplus Funding	The portion allocated to service already rendered or accrued is called the Actuarial Accrued Liability. The difference between the Actuarial Accrued Liability and the Valuation Assets is called the Unfunded Actuarial Accrued Liability (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 County had always contributed the current Normal Cost, if there were no prior benefit or assumption changes and if actual experience exactly matched the actuarial assumptions, the present value of all future Normal Cost contributions would be sufficient to fund all benefits and there would be no UAAL.
	The term "fully funded" is often applied to a system in which contributions for everyone at the normal cost rate are 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 Actuarial Accrued Liability 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.



Unfunded Actuarial Accrued Liability/ Surplus Funding (continued)	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 County 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 actuarial accrued liability to be funded is greater than the Valuation Assets, then the UAAL is amortized. Under the new Retirement Benefits Enhancement Agreement with the County, any positive amount as of June 30, 2002 through 2008 must be amortized over a rolling 30- year period.			
	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.			
Funding Policy	The 1994 Funding Agreement applied to valuations in 1994 through 1998. In 2000, an Interim Funding Policy was adopted as described more fully in Section 3, Assets, and has been applied since then. The current Retirement Benefits Enhancement Agreement applies to the 2002 – 2008 valuations. This valuation reflects the combined funding policy as directed by those agreements.			
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.			
	The funded status of LACERA from 1996 to 2002 remained at approximately 100%. In the two years following this period, the funding level decreased significantly due to losses on the Valuation Assets reflected under the asset-smoothing method. The last three years the funding level has increased due to the recognition of current and deferred asset gains under this same smoothing method.			



#### Actuarial Liabilities (continued)

Analysis of Change in Unfunded Actuarial Accrued Liability (continued) The 2007 actuarial valuation reflects an actuarial experience gain of \$1.38 billion for the fiscal year just ended. The gain was mainly due to a \$2.19 billion gain on actuarial assets. This was somewhat offset by a loss due to larger than assumed salary increases. The effect of the experience gains and losses on the UAAL or Surplus Funding is shown in Exhibit 8a. In addition to the investment return, some other factors which impacted the liabilities are:

- ✓ Salary Increases Individual salaries for continuing active members increased at a rate greater than the valuation assumption. This resulted in a loss.
- 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.
- ✓ Actual CPI versus Assumption The CPI used for retiree COLAs was greater than 3%. Thus, all members received increases in their benefits equal to the assumption (3.0% for Plan A, 2.0% for Plans B-D, pro-rated portion of 2.0% for Plan E), and there was no gain or loss due to CPI.
- Transfers Between Plans D & E 583 members transferred from Plan E to Plan D during the past year. 176 members transferred from Plan D to Plan E. This resulted in a small increase in liabilities.
- ✓ Improved Retiree Data Reporting Milliman worked with LACERA staff to refine the retiree data process. Changes made in the procedures resulted in an increase in liabilities.
- ✓ Other Examples of this are gains and losses from termination, service retirement, disability retirement, death, service purchases, reciprocity, and data revisions.

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.

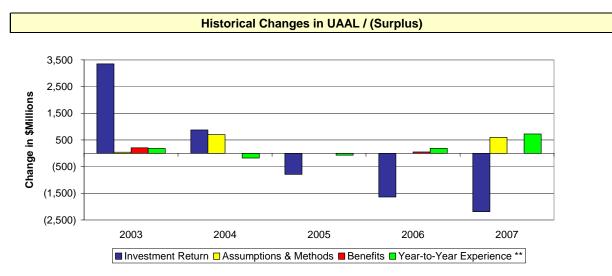


# Exhibit 8a: Analysis of Change in Unfunded Actuarial Accrued Liability (Dollars in millions)

			Amount	As a Percent of June 30, 2007 Actuarial Accrued Liability
Unfunded Actuarial Accrued Liability - June 30, 2006	:	\$ 	3,439	8.7%
Increase in UAAL due to new assumptions		•	, 515	1.3%
Interest Accrued			267	0.7%
Benefits Accrued (Normal Cost)			882	2.2%
Contributions (with Assumed Interest) Employer - Cash Employer - Contribution Credit Member Total	(781) (116) (361)		(1,258)	-2.0% -0.3% -0.9% -3.2%
Expected Unfunded Actuarial Acc. Liability - June 30, 2	2007	\$	3,845	9.7%
Source of Change				
Asset (Gains) and Losses (Gain)/Loss due to investment income (Gain)/Loss due to recognition of STAR reserves Total	(2,187)		(2,187)	-5.5% 0.0% -5.5%
Actuarial (Gains) and Losses Salary Increases CPI Less than Expected Transfers Between Plan D & Plan E Improved Retiree Data Reporting Mortality Experience All Other Experience Total	673 - 4 81 (22) 67		803	1.7% 0.0% 0.0% 0.2% -0.1% 0.2% 2.0%
Recognition of Liabilities due to Court Cases				0.0%
Total Changes			(1,384)	-3.5%
Unfunded Actuarial Accrued Liability - June 30, 2007	:	\$	2,461	6.2%







_	2003	2004	2005	2006	2007	2003-07
Prior Valuation UAAL / (Surplus) \$	175 \$	3,910 \$	5,611 \$	4,878	3,439	<mark>\$ 175</mark>
Increase in UAAL due to:						
Expected Increase / (Decrease)	(45)	312	128	(31)	(109)	255
Asset (Gains) and Losses	3,351	871	(790)	(1,642)	(2,187)	(397)
Changes in Benefits*	207			50	-	257
Changes in Assumptions		697	-	-	515	1,212
Changes in Methods	40			-	81	121
Salary Increases	(66)	(270)	(115)	156	673	378
CPI Less than Expected		(31)	-	-	-	(31)
Transfers Between D & E	29	15	13	10	4	71
Mortality Experience	90	61	(1)	(22)	(22)	106
All Other Experience	129	46	32	40	67	314
Total Increase / (Decrease)	3,735	1,701	(733)	(1,439)	(978)	2,286
Valuation UAAL / (Surplus) \$	3,910 \$	5,611 \$	4,878 \$	3,439	2,461	\$ 2,461
Funded Ratio	87.2%	82.8%	85.8%	90.5%	93.8%	93.8%

\* Benefit changes are as follows:

2003: Domestic partner benefits and estimated increase in benefits due to Ventura lawsuit. 2006: Benefits due to Bugh and Local 1014 Court Cases.

\*\* 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

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

Normal contributions for each plan 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

\* 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

Effective with the 2007 valuation, the assumed rate of individual salary increase was changed, necessitating a change in the member normal rates. Member rates increased, particularly at the younger entry ages.

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



#### Member Contributions (continued)

#### Cost-of-Living Contributions (continued)

As this is a triennial valuation, we are recommending a change in the member cost-of-living contribution rates. The cost-of-living contributions, expressed as a percentage of the normal rates, are based on the June 30, 2007 actuarial valuation and are as follows:

	New	Old
General Plan A:	79.57%	78.28%
General Plan B:	22.29%	21.96%
General Plan C:	23.97%	23.75%
General Plan D:	21.97%	20.98%
Safety Plan A:	101.27%	100.24%
Safety Plan B:	31.40%	30.86%

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.

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.



#### Exhibit 9: Sample Member Contribution Rates

	г		tates (based of		1)	
	Entry Age	Normal	Cost of Living	Total as a % of Pay	Prior Rate (Total)	Ratio (New/Old)
General Mem	bers					
Plan A	25	2.90%	2.31%	5.21%	4.96%	105%
	35	3.56%	2.83%	6.39%	6.20%	103%
	45	4.32%	3.44%	7.76%	7.61%	102%
	55	4.63%	3.68%	8.31%	8.24%	101%
Plan B	25	5.79%	1.29%	7.08%	6.79%	104%
	35	7.12%	1.59%	8.71%	8.48%	103%
	45	8.64%	1.93%	10.57%	10.43%	101%
	55	9.26%	2.06%	11.32%	11.27%	100%
Plan C	25	4.91%	1.18%	6.09%	5.79%	105%
	35	6.02%	1.44%	7.46%	7.21%	103%
	45	7.42%	1.78%	9.20%	9.02%	102%
	55	8.65%	2.07%	10.72%	10.65%	101%
Plan D	25	4.91%	1.08%	5.99%	5.66%	106%
	35	6.02%	1.32%	7.34%	7.05%	104%
	45	7.42%	1.63%	9.05%	8.82%	103%
	55	8.65%	1.90%	10.55%	10.42%	101%
Safety Memb	ers					
Plan A	25	4.08%	4.13%	8.21%	7.79%	105%
	35	4.95%	5.01%	9.96%	9.73%	102%
	45	5.77%	5.84%	11.61%	11.49%	101%
	55	5.80%	5.87%	11.67%	11.57%	101%
Plan B	25	8.16%	2.56%	10.72%	10.18%	105%
	35	9.89%	3.11%	13.00%	12.72%	102%
	45	11.54%	3.62%	15.16%	15.02%	101%
	55	11.59%	3.64%	15.23%	15.13%	101%

#### **Recommended Rates (Based on 2007 Valuation)**

Note: A portion of some of the member contribution rates is paid for ("picked up") by the County 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: County Contributions



Contributions to LACERA are determined using the Entry Age Normal Cost Funding 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.

During the fiscal year 1994-1995, a Retirement Association Funding Agreement was negotiated with the County. This agreement resulted in the issuance of approximately \$2 billion in Pension Obligation Bonds, the proceeds of which were used to fund the UAAL of the Association. The agreement also allowed that surplus earnings on Association assets for the period July 1, 1994 through June 30, 1998 would be split between the County (75%) and the STAR program (25%). Those excess earnings were used to create the County Contribution Credit Reserve, which can be used by the County to meet its required contribution requirement without adding in new cash deposits to the fund.

Under the 1994 Funding Agreement, the County's contribution rate is set equal to the County's portion of the Normal Cost contribution not payable by the member contributions and some payment towards the UAAL, but only under certain conditions. From 1995 to 2001, no UAAL contributions were required and the County contributed only their portion of the Normal Cost contribution. Under the new 2002 Retirement Benefits Enhancement Agreement, the County must pay the Normal Cost contribution adjusted for a portion of either a positive UAAL or a positive Surplus Funding.

The total calculated County 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 County contribution rate was 12.91% for the fiscal year beginning in 2007.

For the fiscal year beginning in 2008, the required rate decreased to 12.40%. This is equal to the net aggregate calculated normal cost contribution rate, of 10.16% based on the 2007 valuation, plus a 30-year amortization payment of the UAAL.



This work product was prepared solely for LACERA for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

County Contribution Rate	(All values as a % of Payroll)10.16%County Normal Cost10.16%30-year Amortization of UAAL2.24Total County Contribution12.40%
	The 0.51% decrease in the total County contribution rate was primarily due to the investment gains which caused a 2.14% decrease in the UAAL rate. This was somewhat offset by increases in the contribution rate due to changes in assumptions and salary increases that exceeded the assumption. The UAAL rate reflects a 30-year amortization from the valuation date and the one-year deferral in the implementation of the new County contribution rate effective July 1, 2008.
	For the June 30, 2007 actuarial valuation, the normal cost rate increased due to the changes in assumptions adopted with the recent investigation of experience.
	Apart from the experience study, the change in the calculated normal cost contribution rates from year-to-year is generally due to two factors. These factors are listed in order of magnitude (i.e., experience had the greatest impact this year):
	(1) Experience: Normal experience from year-to-year, reflecting differences in both the weighting between membership groups and in their characteristics, as well as on what was assumed to occur during the past fiscal year and what actually occurred, particularly with respect to salary increases. Based on current plan provisions, the aggregate normal cost rate is expected to decrease as a greater number of members are covered by General Plans D and E and Safety B. Additionally, as members transfer between Plan D and Plan E, this will also have an impact.
	(2) <b>Contribution Shut-Off</b> : For general members hired prior to April 1973 and all Safety members, member contributions are not collected after the member has 30 years of service. Therefore, the member contributions towards the total annual normal cost is zero, resulting in a sizable increase in the County's share of the normal cost contributions for the years when the member has more than 30 years of service. The County's share of the normal cost rates for those groups can be expected to increase rather than remain level, as otherwise expected under the entry age cost method. As most general members hired prior to April 1973 have now attained 30 years of service, this statement applies mainly to

Safety groups.

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#### Exhibit 10: Calculated Normal Cost Contribution Rates – June 30, 2007

			Ge	neral				Safety		Grand
A. Normal Cost Contribution Rate	Plan A	Plan B	Plan C	Plan D	Plan E	Total	Plan A	Plan B	Total	<u>Total</u>
Service Retirement	15.67%	13.54%	12.19%	12.41%	7.81%	10.96%	12.34%	12.08%	12.09%	11.18%
Disability Retirement	1.07%	0.98%	0.94%	1.49%	0.00%	0.95%	12.99%	12.71%	12.72%	3.25%
Death	0.38%	0.36%	0.34%	0.49%	0.00%	0.31%	0.32%	0.29%	0.29%	0.31%
Termination (No Refund)	0.42%	0.30%	0.28%	0.67%	0.62%	0.64%	0.50%	0.57%	0.57%	0.62%
Refund of Member Contributions	0.09%	0.12%	0.11%	0.51%	0.00%	0.29%	0.25%	0.38%	0.37%	0.31%
Total	17.63%	15.30%	13.86%	15.57%	8.43%	13.15%	26.40%	26.03%	26.04%	15.67%
B. Member Contributions	(2.86)%	(6.75)%	(5.88)%	(7.02)%	0.00%	(4.38)%	(0.58)%	(10.67)%	(10.18)%	(5.51)%
C. Net County Normal Cost as of June 30, 2007 (A) - (B)	14.77%	8.55%	7.98%	8.55%	8.43%	8.77%	25.82%	15.36%	15.86%	10.16%
D. Net County Normal Cost as of June 30, 2006	14.03%	7.95%	7.65%	7.84%	7.80%	8.15%	23.24%	14.48%	15.00%	9.42%
E. Increase (Decrease) as a Percentage of Payroll (C) - (D)	0.74%	0.60%	0.33%	0.71%	0.63%	0.62%	2.58%	0.88%	0.86%	0.74%

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#### Exhibit 11: Total County Contributions

			Ge	neral				Safety		All
	Plan A	<u>Plan E</u>	Plan C	<u>Plan D</u>	<u>Plan E</u>	Total	Plan A	<u>Plan B</u>	Total	<u>Plans</u>
A. Normal Cost										
1. Basic Benefits	10.21%	6.849	6.51%	5 7.18%	7.10%	7.26%	14.99%	12.52%	12.62%	8.69%
2. Cost-of-Living Benefits	4.56%	1.719	6 1.47%	5 1.37%	1.33%	1.51%	10.83%	2.84%	3.24%	1.47%
3. Total June 30, 2007	14.77%	8.55	% 7.98%	8.55%	8.43%	8.77%	25.82%	15.36%	15.86%	10.16%
B. UAAL Contribution Rate	2.24%	2.249	6 2.24%	5 2.24%	2.24%	2.24%	2.24%	2.24%	2.24%	2.24%
C. Total June 30, 2007 Contribution Rate (A) + (B)	17.01%	10.799	<b>% 10.22%</b>	5 <b>10.79%</b>	10.67%	11.01%	28.06%	17.60%	18.10%	12.40%
D. Total June 30, 2006 Contribution Rate	17.52%	11.449	6 11.14%	5 11.33%	11.29%	11.64%	26.73%	17.97%	18.49%	12.91%
E. Estimated Payroll for fiscal year beginning July 1, 2008	\$ 227	\$ 29	) \$ 20	\$2,929	\$1,717	\$4,922	\$ 60	\$1,138	\$1,198	\$6,120
F. Estimated Annual Contribution* (C x E)	\$ 39	\$ 3	3\$2	\$ 316	\$ 183	\$ 542	<b>\$</b> 17	\$ 200	\$ 217	\$ 759
G. Last Year's Estimated Annual Contribution	\$ 42	\$ 3	8 \$ 2	\$ 292	\$ 185	\$ 524	\$ 17	\$ 174	\$ 190	\$ 714
H. Increase / (Decrease) in Annual Contribution	\$ (3)	\$ -	\$-	\$ 24	\$ (2)	\$ 18	\$-	\$ 26	\$27	\$ 45

\* Based upon annualized salary rate as of June 30, 2007 increased by 4.00% wage inflation. Dollar figures in millions.



### Section 7: Accounting Information



GASB reporting standards are required for defined benefit pension plan reporting and disclosures (Statement No. 25). The reporting requirements for Statement No. 25 include certain supplementary information that must be added to the financial statements. These include:

- (1) A Schedule of Funding Progress
- (2) A Schedule of Employer Contributions

The Schedule of Funding Progress, Exhibit 12, compares actuarial assets and liabilities of the System, based on the actuarial funding method used. The required Schedule of Employer Contributions, Exhibit 13, compares the employer contributions required based on the actuarial valuation – the actuarial required contribution (ARC) – with the employer contributions actually made. Information shown in this exhibit comes from LACERA's audited financial statements. The ARC must be calculated based on certain parameters required for disclosure purposes.

We believe the actuarial methods and assumptions used in this valuation to determine the employer's contribution for funding purposes satisfy the GASB reporting requirements.

GASB Statement No. 27 is required for pension accounting by state and local governmental employers.

The comparability of the data from year-to-year can be affected by changes in actuarial assumptions, benefit provisions, accounting policies, etc. For example, assumptions were changed in 2007 based on the triennial Investigation of Experience.

Exhibit 14 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. Although not required under GASB, this test is part of the CAFR guidelines specified by the Government Finance Officers Association (GFOA).



#### Exhibit 12: Schedule of Funding Progress (All Dollars In Thousands)

Actuarial Valuation Date	(a) Actuarial Value of Valuation Assets	(b) Actuarial Accrued Liabilities	(b-a) Jnfunded Actuarial Accrued ilities (UAAL)	(a/b) Funded Ratio	Cove	(c) ered Payroll <sup>(1)</sup>	[(b-a)/c] UAAL as a Percentage of Covered Payroll
June 30, 1998	\$20,851,133	\$20,959,946	\$ 108,813	99.5%	\$	3,562,416	3.1%
June 30, 1999	23,536,116	22,784,706	(751,410)	103.3%		3,858,090	-19.5%
June 30, 2000	25,426,507	24,720,380	(706,127)	102.9%		4,107,964	-17.2%
June 30, 2001 <sup>(2)</sup>	26,490,000	26,489,976	(24)	100.0%		4,398,443	0.0%
June 30, 2002 <sup>(3)</sup>	28,262,129	28,437,493	175,364	99.4%		4,744,340	3.7%
June 30, 2003	26,564,328	30,474,025	3,909,697	87.2%		4,933,615	79.2%
June 30, 2004 <sup>(2)</sup>	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 <sup>(2)</sup>	37,041,832	39,502,456	2,460,624	93.8%		5,615,736	43.8%

(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. For years prior to 1999, Covered Payroll is estimated.

(2) Assumption changes based on triennial Investigation of Experience.

(3) Benefits were enhanced under MOU package.



# Exhibit 13: Schedule of Contributions from the Employer (All Dollars In Thousands)

Annual		Actu	_		
Fiscal Year Ending	Required Contribution (ARC)	Cash Payment	Transfer from Reserve Accounts	Total	Percentage of ARC Contributed
6/30/1998	\$243,489	\$9,420	\$239,777	\$249,197	102%
6/30/1999	317,285	84,226	248,403	332,629	105%
6/30/2000	342,060	130,319	211,832	342,151	100%
6/30/2001	390,679	193,650	197,029	390,679	100%
6/30/2002	414,708	258,884	155,824	414,708	100%
6/30/2003	518,922	324,709	194,213	518,922	100%
6/30/2004	521,978	395,062	126,916	521,978	100%
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%

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



## Exhibit 14: Solvency Test

(Dollars In Millions)

				Actu	uarial A	ccrued Liabi	lities fo	or			
	Actuarial Value of		Activ	e Member		irees and	(E	ve Members Employer Financed		n of Actuarial A bilities Covered Assets	
Actuarial Valuation Date		aluation Assets	Cont	ributions (A)	Bene	Beneficiaries <sup>(1)</sup> (B)		Portion) (C)	(A)	(B)	(C)
June 30, 1998	\$	20,851	\$	2,643	\$	11,268	\$	7,049	100%	100%	98%
June 30, 1999		23,536		2,710		11,863		8,211	100%	100%	109%
June 30, 2000		25,427		3,190		12,922		8,609	100%	100%	108%
June 30, 2001		26,490		3,320		14,368		8,802	100%	100%	100%
June 30, 2002		28,262		3,596		15,424		9,417	100%	100%	98%
June 30, 2003		26,564		3,790		16,844		9,840	100%	100%	60%
June 30, 2004		27,089		4,042		18,857		9,802	100%	100%	43%
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%

(1) Includes deferred vested members.



#### Section 8: Supplemental Information



Cash Flow Projection

Exhibits 15a and 15b 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 decreased over the last 10 years. It has leveled off somewhat for the past five years, but it is expected to begin to significantly decrease for the next 10 years. 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. The projection shows that the negative projected cash flow is expected to more than double in size from 2008 to 2017.

Note that the actual cash contributions since 1998 do not reflect the transfers made between reserve funds, but only cash coming into the System. Starting in 2008, we assumed 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 County contribution rate is assumed to be 12.91% for the first year and 12.40% for the rest of the 10-year projection. The ultimate rate is equal to the required County normal cost rate plus a contribution to finance the UAAL, as calculated in the 2007 valuation. The aggregate member rate is assumed to stay at the calculated rate for June 30, 2007 of 5.51% of payroll. Expenses are based on the expenses for the year ended June 30, 2007, increased annually with the actuarial inflation assumption of 3.5%.

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. STAR benefits that were vested as of January 2007 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.



			С	ash Fl	ow History			
Plan				Ber	nefits &			
Year				Admi	nistrative	Ν	let	
Ending	Contrik	outions		Exp	enses <sup>(2)</sup>	Casl	Cash Flow	
1998	\$	189	-	\$	968	\$	(779)	
1999		288			1,024		(736)	
2000		329			1,094		(765)	
2001		410			1,187		(777)	
2002		564			1,276		(712)	
2003		559			1,379		(820)	
2004		658			1,484		(826)	
2005		814			1,601		(787)	
2006		973			1,842 <sup>(3)</sup>		(869)	
2007		1,100			1,835		(735)	

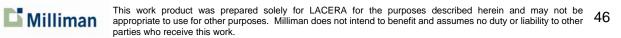
#### Exhibit 15a: Cash Flow History and Projections – Dollars

		Ca	ash	Flow	Projection	s <sup>(1)</sup>		
Plan				Bei	nefits &			
Year				Admi	nistrative		1	Net
Ending	Contr	Contributions			enses <sup>(2)</sup>		Cash Flow	
2008	\$	1,061		\$	1,948		\$	(887)
2009		1,096			2,077			(981)
2010		1,140			2,218			(1,078)
2011		1,186			2,355			(1,169)
2012		1,233			2,496			(1,263)
2013		1,283			2,641			(1,358)
2014		1,334			2,790			(1,456)
2015		1,387			2,946			(1,558)
2016		1,443			3,109			(1,666)
2017		1,500			3,278			(1,777)

<sup>(1)</sup> Future contributions are assumed to be at the 10.16% normal cost rate plus a UAAL payment of 2.24% after the first year.

<sup>(2)</sup> Investment expenses are assumed to be covered by investment return.

<sup>(3)</sup> Benefit payments for the plan year ending 2006 include approximately \$94 million in retroactive benefit payments pursuant to the Ventura settlement.



#### 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 June 30, 2007 as a result of the 2007 triennial Investigation of Experience Study.

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 2007 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 (CERL 31453.5). 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.
	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 UAAL (or Surplus Funding) is amortized as a level percentage of the projected salaries of present and future members of LACERA over a 30-year period from the valuation date, this is commonly referred to as a "rolling 30-year amortization method".
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.
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.

County Contributions	The County contribution rate is set by the Retirement Board 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 three-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 expected market value, with three-year smoothing valuation basis for all assets was adopted effective June 30, 2000.
Investment Earnings and Expenses	The future investment earnings of the assets of LACERA are assumed to accrue at an annual rate of 7.75% compounded annually, net of both investment and administrative expenses. This rate was adopted June 30, 2004.
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 of 3.5% per year. This rate was adopted June 30, 2004.
Interest on Member Contributions	The annual credited interest rate on member contributions is assumed to be 7.75% compounded semi-annually for an annualized rate of 7.90%. This rate was adopted June 30, 2004.
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 4.00% per annum rate of increase in the general wage level of the membership. These rates were adopted June 30, 2007.
	Increases are assumed to occur mid-year (i.e., January 1 <sup>st</sup> ) 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.



Future Salaries (Continued)	For plans with a one-year final average compensation period, actual average annual compensation is used. For Plan E, the monthly rate as of June of the valuation year was annualized. Due to irregular compensation payments now included as pensionable earnings, actual annual pay is preferred over annualizing a single monthly payment amount.
	Note: In 2007, a one-time salary load of 2.0% to active non- Plan E General members and 4.0% to active Safety members was added. This was to reflect negotiated salary increases during the 2006-2007 year which had not been fully reflected in the one-year final compensation number. Loads were developed based on conversations with LACERA staff and an analysis of the relative year-over-year increase in the unadjusted "Salary" data field (which reflects the latest monthly pay rate) as compared to the "Average Salary" field (which has the compensation amount for a full year).
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 4.00% 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 June 30, 2007.
	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.
Retirement	After members attain age 50 (55 for Plan E members) and have ten years of service, they may retire with a benefit commencing immediately. All members, except Plan E 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.
	All deferred vested members are assumed to retire at the later of age 50 and earliest eligibility, except for Plan E who are assumed to retire at age 65.



Retirement (Continued)	retirement single set example, a withdraw f <i>termination</i> member co Thus, in no would they	nptions regarding termination of employment, early , and unreduced service retirement are treated as a of decrements in regards to a particular member. For a general member hired at age 30 has a probability to rom LACERA due to death, disability or <i>other</i> <i>n of employment</i> until age 50. After age 50, the ould still withdraw due to death, disability or <i>retirement</i> . o year during the member's projected employment <i>v</i> be eligible for both a probability of other termination ment and a probability of retirement.
	The retirer	nent probabilities were adopted June 30, 2007.
Disablement	illustrated	of disablement used in the valuation are also in Tables A-6 through A-13. These rates were une 30, 2007.
Post-Retirement Mortality – Other Than Disabled Members	valuation f beneficiari beneficiary healthy me assumed t	post-retirement mortality rates are used in the or active members, members retired for service, and es. These rates are illustrated in Table A-2. Current / mortality is assumed to be the same assumption as embers of the same sex. Future beneficiaries are o be of the opposite sex, and have the same mortality I members. These rates were adopted June 30, 2004. General members: RP-2000 Combined Mortality Table for Males, with ages set back two years.
		Safety members: RP-2000 Combined Mortality Table for Males, with ages set back three years.
	Females	General members: RP-2000 Combined Mortality Table for Females, with ages set back two years.
		Safety members: RP-2000 Combined Mortality Table for Females, with ages set back two years.
Post-Retirement Mortality – Disabled Members		ed members, the mortality rates used in the valuation Ilustrated in Table A-3. These rates were adopted 2007.
	Males	General members: RP-2000 Combined Mortality Table for Males, with ages set forward one year.
		Safety members: RP-2000 Combined Mortality Table for Males, with ages set back two years.
	Females	General members: RP-2000 Combined Mortality Table for Females with no age adjustment.
		Safety members: RP-2000 Combined Mortality Table for Females with ages set back two years.



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 June 30, 2007.			
	Class	Sex	Mortality Table	Adjustment
	General General Safety Safety	Male Female Male Female	RP2000 Employee Male RP2000 Employee Female RP2000 Employee Male RP2000 Employee Female	+0 -1 -9 -1
Other Employment Terminations	valuation fo death, disal	or future tern bility or retin ligible for se	ow, for all ages, the rates assemination from active service rement. These rates do not a ervice retirement. These rate 7.	other than for apply to
	immediately to further be LACERA. I on deposit or may rem retirement b retirement s	y upon term enefits, or the Former con may later end ain inactive benefit unde system. All benefits are	s may withdraw their contribu- nination of employment and f ney may leave their contribu- tributing members whose co- lect to receive a refund, may e until becoming eligible to re er either LACERA or a recipr terminating members who an assumed to withdraw their co-	orfeit the right tions with intributions are return to work ceive a rocal re not eligible
	Table A-4 g will withdra upon termir elect a defe assumed to	ves the as w their cont nation and t erred vested elect a ref	rs are assumed to not be ref sumed probabilities that ves ributions and elect a refund he probability the remaining benefit. All non-vested me und and withdraw their contr oted June 30, 2007.	ted members immediately members will mbers are
Probability of Eligible Survivors	65% of all f (spouses of assumed to years older of the oppo assumption	emales are r qualified c be four ye than femal site sex as for children sed on this	ently in pay status, 82% of al assumed to have eligible su lomestic partners). Survivors ars younger than male mem e members. Survivors are a the member. There is no ex n's benefits. We believe the assumption are sufficient to hey occur.	rvivors s are bers and four ssumed to be plicit survivor
Valuation of Vested Terminated Members	member's f compensati age for mer reciprocal a data, Final	inal compe ion amount nbers who igency. Fo Compensat bers who te	nt benefit is calculated based nsation and service at termin is projected until the assume are assumed to be employed r members who are missing tion is estimated as the avera erminated during the same ye nount.	nation. The ed retirement d by a compensation age amount



Reciprocal Employment	15% 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 5%. Future reciprocal vested members are assumed to receive the same salary increases they would have received if they had stayed in active employ- ment with LACERA and retired at the assumed retirement age.
Valuation of Annuity Purchases	Over 30 years ago, LACERA purchased single life annuities from two insurance companies for some retired members (currently less than 5% 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:
	<ul><li>(1) Straight life annuity payments</li><li>(2) Statutory COLAs</li></ul>
	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, the:
	A. 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 7.75%.
	C. The Final Compensation is based on the salary paid in the year prior to attaining the retirement age.
	Example: For a Plan C Member who enters at age 59 or earlier, the Final Compensation at retirement (age 60) will be the monthly average of the annual salaries during age 59.
	D. 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.



#### Table A-1: Summary of Valuation Assumptions as of June 30, 2007

	Economic assumptions A. General wage increases	4.00%
	B. Investment earnings	7.75%
	C. Growth in membership	0.00%
	D. Post-retirement benefit increases (varies by plan)	Plan COLA not greater than CPI
	E. CPI inflation assumption	assumption. 3.50%
۱.	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 sexes for general members, as adjusted	:

Class of Members	Age <u>Adjustment</u>
General – males	-2 years
General – females	-2 years
Safety – males	-3 years
Safety – females	-2 years

F. Mortality among disabled members

Basis - RP-2000 Combined Mortality Table, as adjusted:

General – males	+1 year
General – females	0 years
Safety – males	-2 years
Safety – females	-2 years

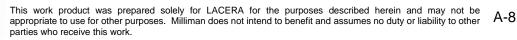
G. Mortality for beneficiaries.

Table A-2

Table A-3

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



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Age	Safety Male	Safety Female	General Male	General Female
20	0.030%	0.019%	0.032%	0.019%
25	0.037%	0.020%	0.037%	0.020%
30	0.038%	0.023%	0.039%	0.023%
35	0.056%	0.039%	0.063%	0.039%
40	0.090%	0.060%	0.096%	0.060%
45	0.122%	0.094%	0.130%	0.094%
50	0.173%	0.143%	0.186%	0.143%
55	0.267%	0.221%	0.292%	0.221%
60	0.469%	0.392%	0.527%	0.392%
65	0.876%	0.765%	1.001%	0.765%
70	1.608%	1.345%	1.787%	1.345%
75	2.728%	2.297%	3.039%	2.297%
80	4.691%	3.760%	5.212%	3.760%
85	8.049%	6.251%	8.972%	6.251%
90	13.604%	10.730%	15.059%	10.730%
90	13.004 %	10.730%	10.009%	10.730%

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



Age	Safety Male	Safety Female	General Male	General Female
20	0.032%	0.019%	0.036%	0.019%
25	0.037%	0.020%	0.038%	0.021%
30	0.039%	0.023%	0.050%	0.026%
35	0.063%	0.039%	0.084%	0.048%
40	0.096%	0.060%	0.114%	0.071%
45	0.130%	0.094%	0.162%	0.112%
50	0.186%	0.143%	0.245%	0.168%
55	0.292%	0.221%	0.420%	0.272%
60	0.527%	0.392%	0.768%	0.506%
65	1.001%	0.765%	1.441%	0.971%
70	1.787%	1.345%	2.457%	1.674%
75	3.039%	2.297%	4.217%	2.811%
80	5.212%	3.760%	7.204%	4.588%
85	8.972%	6.251%	12.280%	7.745%
90	15.059%	10.730%	19.977%	13.168%

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



# Table A-4:Immediate Refund of Contributions Upon Termination of Employment<br/>(Excludes Plan E)

Years of		
Service	Safety	General
0	100%	100%
1	100%	100%
2	100%	100%
3	100%	100%
4	100%	100%
5	30%	40%
6	30%	40%
7	30%	40%
8	28%	39%
9	26%	38%
10	24%	36%
11	22%	35%
12	20%	34%
13	16%	33%
14	12%	32%
15	8%	30%
16	4%	29%
17	0%	28%
18	0%	26%
19	0%	25%
20	0%	23%
21	0%	22%
22	0%	20%
23	0%	16%
24	0%	12%
25	0%	8%
26	0%	4%
27	0%	0%
28	0%	0%
29	0%	0%
30 & Up	0%	0%



#### Table A-5: Annual Increase in Salary\*

Years of	Due to Promotio	n and Longevity	Total Annu	al Increase*
Service	General	Safety	General	Safety
<1	6.00%	6.00%	10.24%	10.24%
1	5.25%	5.25%	9.46%	9.46%
2	4.50%	4.50%	8.68%	8.68%
3	3.75%	3.75%	7.90%	7.90%
4	3.00%	3.00%	7.12%	7.12%
5	2.50%	2.50%	6.60%	6.60%
6	2.00%	2.00%	6.08%	6.08%
7	1.75%	1.75%	5.82%	5.82%
8	1.50%	1.50%	5.56%	5.56%
9	1.30%	1.30%	5.35%	5.35%
10	1.15%	1.15%	5.20%	5.20%
11	1.00%	1.00%	5.04%	5.04%
12	0.85%	0.85%	4.88%	4.88%
13	0.70%	0.70%	4.73%	4.73%
14	0.60%	0.60%	4.62%	4.62%
15	0.50%	0.50%	4.52%	4.52%
16	0.40%	0.50%	4.42%	4.52%
17	0.35%	0.50%	4.36%	4.52%
18	0.30%	0.50%	4.31%	4.52%
19	0.25%	0.50%	4.26%	4.52%
20 or More	0.25%	0.50%	4.26%	4.52%

\* The total expected increase in salary includes both merit (shown above) and the general wage increase assumption of 4.00% per annum. The total result is compound rather than additive. For example, the total increase to service less than one year is 10.24%.



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



23         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           24         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           26         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           27         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         0.0006           32         0.0000         0.0050         0.0003         0.0001         N/A         0.0006           34         0.0000         0.0050         0.0004         0.0001         N/A         0.0008           35         0.0000         0.0050         0.0006         0.0002         N/A         0.0018           36         0.0000         0.0050         0.0006         0.0002         N/A         0.0010           37         0.0000 <td< th=""><th>Age</th><th>Service Retirement</th><th>Other Terminations</th><th>Service Disability</th><th>Ordinary Disability</th><th>Service Death</th><th>Ordinary Death</th></td<>	Age	Service Retirement	Other Terminations	Service Disability	Ordinary Disability	Service Death	Ordinary Death
19         0.0000         0.0050         0.0002         0.0001         N/A         0.0003           20         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           21         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           22         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           23         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           25         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           26         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           27         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           30         0.0000         0.0050         0.0002         0.0001         N/A         0.0006           31         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 <td< td=""><td>18</td><td>0.0000</td><td>0.0050</td><td>0.0002</td><td>0.0001</td><td>N/A</td><td>0.0003</td></td<>	18	0.0000	0.0050	0.0002	0.0001	N/A	0.0003
20         0.0000         0.0050         0.0002         0.0001         N/A         0.0002           21         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           23         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           24         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           25         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           26         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           28         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           30         0.0000         0.0050         0.0002         0.0001         N/A         0.0006           31         0.0000         0.0050         0.0002         0.0001         N/A         0.0006           34         0.0000         0.0050         0.0002         N/A         0.0006           37         0.0000         0.0050         0.0005         0.0002         N/A         0.0006           35         0.0000         0.0050 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
21         0.0000         0.0050         0.0002         0.0001         N/A         0.0000           22         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           23         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           24         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           26         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           27         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         0.0006           31         0.0000         0.0050         0.0003         0.0001         N/A         0.0006           34         0.0000         0.0050         0.0004         0.0001         N/A         0.0006           35         0.0000         0.0050         0.0006         0.0002         N/A         0.0006           36         0.0000 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
22         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           23         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           25         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           26         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           27         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           28         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           30         0.0000         0.0050         0.0002         0.0001         N/A         0.0005           31         0.0000         0.0050         0.0002         0.0001         N/A         0.0006           33         0.0000         0.0050         0.0003         0.0001         N/A         0.0008           34         0.0000         0.0050         0.0004         0.0002         N/A         0.0008           35         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           36         0.0000 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
24         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           25         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           26         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           27         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           28         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           30         0.0000         0.0050         0.0002         0.0001         N/A         0.0005           31         0.0000         0.0050         0.0002         0.0001         N/A         0.0006           33         0.0000         0.0050         0.0003         0.0001         N/A         0.0006           34         0.0000         0.0050         0.0004         0.0002         N/A         0.0008           35         0.0000         0.0050         0.0004         0.0002         N/A         0.0011           36         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.0300 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>0.0004</td></td<>							0.0004
25         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           26         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           27         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           28         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         0.0003         0.0001         N/A         0.0006           34         0.0000         0.0050         0.0004         0.0002         N/A         0.0008           37         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300 <td< td=""><td>23</td><td>0.0000</td><td>0.0050</td><td>0.0002</td><td>0.0001</td><td>N/A</td><td>0.0004</td></td<>	23	0.0000	0.0050	0.0002	0.0001	N/A	0.0004
26         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           27         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           28         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         0.0006           32         0.0000         0.0050         0.0002         0.0001         N/A         0.0006           34         0.0000         0.0050         0.0003         0.0001         N/A         0.0006           35         0.0000         0.0050         0.0004         0.0001         N/A         0.0008           36         0.0000         0.0050         0.0005         0.0001         N/A         0.0001           38         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           42         0.3000 <td< td=""><td>24</td><td>0.0000</td><td>0.0050</td><td>0.0002</td><td>0.0001</td><td>N/A</td><td>0.0004</td></td<>	24	0.0000	0.0050	0.0002	0.0001	N/A	0.0004
27         0.0000         0.0050         0.0002         0.0001         N/A         0.0004           28         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         0.0006           33         0.0000         0.0050         0.0002         0.0001         N/A         0.0006           34         0.0000         0.0050         0.0003         0.0001         N/A         0.0008           36         0.0000         0.0050         0.0004         0.0002         N/A         0.0008           37         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           39         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           42         0.3000 <td< td=""><td>25</td><td>0.0000</td><td>0.0050</td><td>0.0002</td><td>0.0001</td><td>N/A</td><td>0.0004</td></td<>	25	0.0000	0.0050	0.0002	0.0001	N/A	0.0004
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           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           34         0.0000         0.0050         0.0003         0.0001         N/A         0.0007           35         0.0000         0.0050         0.0004         0.0001         N/A         0.0008           36         0.0000         0.0050         0.0004         0.0002         N/A         0.0009           37         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           39         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0003         N/A         0.0011           42         0.0300         0.0050 <td< td=""><td>26</td><td>0.0000</td><td>0.0050</td><td>0.0002</td><td>0.0001</td><td>N/A</td><td>0.0004</td></td<>	26	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         0.0006           32         0.0000         0.0050         0.0002         0.0001         N/A         0.0006           34         0.0000         0.0050         0.0003         0.0001         N/A         0.0006           34         0.0000         0.0050         0.0004         0.0001         N/A         0.0008           35         0.0000         0.0050         0.0004         0.0001         N/A         0.0008           36         0.0000         0.0050         0.0006         0.0002         N/A         0.0010           39         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           42         0.0300         0.0050         0.0005         0.003         N/A         0.0014           43         0.0300	27	0.0000	0.0050	0.0002	0.0001	N/A	0.0004
30         0.0000         0.0050         0.0002         0.0001         N/A         0.0003           31         0.0000         0.0050         0.0002         0.0001         N/A         0.0006           33         0.0000         0.0050         0.0003         0.0001         N/A         0.0006           34         0.0000         0.0050         0.0003         0.0001         N/A         0.0006           36         0.0000         0.0050         0.0004         0.0002         N/A         0.0008           37         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           39         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0003         N/A         0.0013           43         0.0300         0.0050         0.0004         N/A         0.0014           44         0.0300         0.0050         0.0012         0.0005         N/A         0.0014           47         0.0300         0.0050         0.0014 <td< td=""><td>28</td><td>0.0000</td><td>0.0050</td><td>0.0002</td><td>0.0001</td><td>N/A</td><td>0.0004</td></td<>	28	0.0000	0.0050	0.0002	0.0001	N/A	0.0004
31         0.0000         0.0050         0.0002         0.0001         N/A         0.0003           32         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         0.0004         0.0002         N/A         0.0008           36         0.0000         0.0050         0.0004         0.0002         N/A         0.0009           38         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.3300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           42         0.0300         0.0050         0.0007         0.0003         N/A         0.0011           43         0.0300         0.0050         0.0010         0.0004         N/A         0.0014           44         0.0300         0.0050         0.0011         0.0005         N/A         0.0017           46         0.0300 <td< td=""><td></td><td>0.0000</td><td></td><td>0.0002</td><td>0.0001</td><td></td><td>0.0004</td></td<>		0.0000		0.0002	0.0001		0.0004
32         0.0000         0.0050         0.0002         0.0001         N/A         0.0006           33         0.0000         0.0050         0.0003         0.0001         N/A         0.0007           35         0.0000         0.0050         0.0004         0.0002         N/A         0.0008           36         0.0000         0.0050         0.0004         0.0002         N/A         0.0009           38         0.0000         0.0050         0.0006         0.0002         N/A         0.0009           38         0.0000         0.0050         0.0006         0.0002         N/A         0.0010           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0007         0.0003         N/A         0.0012           43         0.0300         0.0050         0.0001         0.0004         N/A         0.0014           45         0.0300         0.0050         0.0011         0.0004         N/A         0.0014           46         0.0300         0.0050         0.0013         0.0055         N/A         0.0016           47         0.0300 <td< td=""><td>30</td><td>0.0000</td><td>0.0050</td><td>0.0002</td><td>0.0001</td><td></td><td>0.0004</td></td<>	30	0.0000	0.0050	0.0002	0.0001		0.0004
33         0.0000         0.0050         0.0003         0.0001         N/A         0.0006           34         0.0000         0.0050         0.0004         0.0001         N/A         0.0008           35         0.0000         0.0050         0.0004         0.0002         N/A         0.0008           37         0.0000         0.0050         0.0006         0.0002         N/A         0.0009           38         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0006         0.0003         N/A         0.0012           43         0.0300         0.0050         0.0007         0.0003         N/A         0.0012           43         0.0300         0.0050         0.0001         0.0004         N/A         0.0014           44         0.0300         0.0050         0.0011         0.0005         N/A         0.0016           47         0.0300         0.0050         0.0014         0.0005         N/A         0.0014           49         0.0300 <td< td=""><td></td><td>0.0000</td><td>0.0050</td><td>0.0002</td><td>0.0001</td><td></td><td>0.0005</td></td<>		0.0000	0.0050	0.0002	0.0001		0.0005
34         0.0000         0.0050         0.0003         0.0001         N/A         0.0007           35         0.0000         0.0050         0.0004         0.0002         N/A         0.0008           36         0.0000         0.0050         0.0004         0.0002         N/A         0.0008           37         0.0000         0.0050         0.0006         0.0002         N/A         0.0010           38         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0007         0.0003         N/A         0.0012           42         0.0300         0.0050         0.0009         0.0003         N/A         0.0013           44         0.0300         0.0050         0.0011         0.0004         N/A         0.0015           45         0.0300         0.0050         0.0011         0.0004         N/A         0.0015           46         0.0300         0.0050         0.0012         0.0005         N/A         0.0021           47         0.0300 <td< td=""><td></td><td></td><td></td><td></td><td>0.0001</td><td></td><td>0.0006</td></td<>					0.0001		0.0006
35         0.0000         0.0050         0.0004         0.0001         N/A         0.0008           36         0.0000         0.0050         0.0005         0.0001         N/A         0.0008           37         0.0000         0.0050         0.0006         0.0002         N/A         0.0010           39         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0007         0.0003         N/A         0.0012           43         0.0300         0.0050         0.0009         0.0003         N/A         0.0013           44         0.0300         0.0050         0.0011         0.0004         N/A         0.0014           45         0.0300         0.0050         0.0011         0.0004         N/A         0.0017           46         0.0300         0.0050         0.0011         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0014         0.0005         N/A         0.0022           50         0.0300 <td< td=""><td></td><td>0.0000</td><td>0.0050</td><td>0.0003</td><td>0.0001</td><td></td><td>0.0006</td></td<>		0.0000	0.0050	0.0003	0.0001		0.0006
36         0.0000         0.0050         0.0004         0.0002         N/A         0.0008           37         0.0000         0.0050         0.0006         0.0002         N/A         0.0001           38         0.0000         0.0050         0.0006         0.0002         N/A         0.0010           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0007         0.0003         N/A         0.0011           42         0.0300         0.0050         0.0009         0.0003         N/A         0.0013           43         0.0300         0.0050         0.0010         0.0004         N/A         0.0014           45         0.0300         0.0050         0.0011         0.0004         N/A         0.0015           46         0.0300         0.0050         0.0011         0.0005         N/A         0.0016           47         0.0300         0.0050         0.0014         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0017         0.0006         N/A         0.0021           50         0.0300 <td< td=""><td>34</td><td>0.0000</td><td>0.0050</td><td>0.0003</td><td>0.0001</td><td></td><td>0.0007</td></td<>	34	0.0000	0.0050	0.0003	0.0001		0.0007
37         0.0000         0.0050         0.0005         0.0001         N/A         0.0009           38         0.0000         0.0050         0.0006         0.0002         N/A         0.0010           39         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0008         0.0003         N/A         0.0012           42         0.0300         0.0050         0.0009         0.0003         N/A         0.0013           44         0.0300         0.0050         0.0011         0.0004         N/A         0.0014           45         0.0300         0.0050         0.0012         0.0005         N/A         0.0016           46         0.0300         0.0050         0.0014         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0017         0.0006         N/A         0.0021           51         0.0300         0.0050         0.0017         0.0006         N/A         0.0022           52         0.0300 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>0.0008</td></td<>							0.0008
38         0.0000         0.0050         0.0006         0.0002         N/A         0.0010           39         0.0000         0.0050         0.0006         0.0002         N/A         0.0011           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0007         0.0003         N/A         0.0012           43         0.0300         0.0050         0.0009         0.0003         N/A         0.0013           44         0.0300         0.0050         0.0011         0.0004         N/A         0.0015           46         0.0300         0.0050         0.0011         0.0004         N/A         0.0017           48         0.0300         0.0050         0.0013         0.0005         N/A         0.0019           49         0.0300         0.0050         0.0014         0.0005         N/A         0.0021           51         0.0300         0.0050         0.0017         0.0066         N/A         0.0021           52         0.0300         0.0050         0.0017         0.0066         N/A         0.0026           54         0.0500 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>0.0008</td></td<>							0.0008
39         0.0000         0.0050         0.0006         0.0002         N/A         0.0010           40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0007         0.0003         N/A         0.0012           43         0.0300         0.0050         0.0008         0.0003         N/A         0.0012           43         0.0300         0.0050         0.0010         0.0004         N/A         0.0014           44         0.0300         0.0050         0.0011         0.0004         N/A         0.0015           46         0.0300         0.0050         0.0012         0.0005         N/A         0.0016           47         0.0300         0.0050         0.0014         0.0005         N/A         0.0019           48         0.0300         0.0050         0.0016         0.0006         N/A         0.0023           50         0.0300         0.0050         0.0017         0.0066         N/A         0.0023           52         0.0300         0.0050         0.0022         0.0008         N/A         0.0023           54         0.0500 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>0.0009</td></td<>							0.0009
40         0.0300         0.0050         0.0006         0.0002         N/A         0.0011           41         0.0300         0.0050         0.0007         0.0003         N/A         0.0012           43         0.0300         0.0050         0.0008         0.0003         N/A         0.0012           43         0.0300         0.0050         0.0019         0.0003         N/A         0.0013           44         0.0300         0.0050         0.0011         0.0004         N/A         0.0015           45         0.0300         0.0050         0.0011         0.0004         N/A         0.0015           46         0.0300         0.0050         0.0012         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0014         0.0005         N/A         0.0021           50         0.0300         0.0050         0.0017         0.0006         N/A         0.0023           51         0.0300         0.0050         0.0018         0.0007         N/A         0.0024           53         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
41         0.0300         0.0050         0.0007         0.0003         N/A         0.0011           42         0.0300         0.0050         0.0008         0.0003         N/A         0.0012           43         0.0300         0.0050         0.0009         0.0003         N/A         0.0013           44         0.0300         0.0050         0.0010         0.0004         N/A         0.0015           46         0.0300         0.0050         0.0011         0.0005         N/A         0.0016           47         0.0300         0.0050         0.0012         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0014         0.0005         N/A         0.0019           49         0.0300         0.0050         0.0016         0.0006         N/A         0.0020           50         0.0300         0.0050         0.0017         0.0006         N/A         0.0021           51         0.0300         0.0050         0.0022         0.0008         N/A         0.0024           52         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>0.0010</td></td<>							0.0010
42         0.0300         0.0050         0.0008         0.0003         N/A         0.0012           43         0.0300         0.0050         0.0010         0.0004         N/A         0.0013           44         0.0300         0.0050         0.0011         0.0004         N/A         0.0014           45         0.0300         0.0050         0.0011         0.0004         N/A         0.0015           46         0.0300         0.0050         0.0012         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0014         0.0005         N/A         0.0019           49         0.0300         0.0050         0.0016         0.0006         N/A         0.0020           50         0.0300         0.0050         0.0017         0.0006         N/A         0.0021           51         0.0300         0.0050         0.0020         0.0008         N/A         0.0024           53         0.0300         0.0050         0.0022         0.0008         N/A         0.0028           54         0.0500         0.0050         0.0027         0.0010         N/A         0.0030           55         0.0800 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
43         0.0300         0.0050         0.0009         0.0003         N/A         0.0013           44         0.0300         0.0050         0.0011         0.0004         N/A         0.0014           45         0.0300         0.0050         0.0011         0.0005         N/A         0.0015           46         0.0300         0.0050         0.0012         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0014         0.0005         N/A         0.0017           49         0.0300         0.0050         0.0016         0.0006         N/A         0.0021           50         0.0300         0.0050         0.0017         0.0006         N/A         0.0023           52         0.0300         0.0050         0.0022         0.0008         N/A         0.0024           53         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500         0.0050         0.0027         0.0010         N/A         0.0030           56         0.1000         0.0050         0.0032         0.0012         N/A         0.0040           59         0.2000 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
44         0.0300         0.0050         0.0010         0.0004         N/A         0.0014           45         0.0300         0.0050         0.0011         0.0005         N/A         0.0015           46         0.0300         0.0050         0.0012         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0014         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0016         0.0006         N/A         0.0020           50         0.0300         0.0050         0.0017         0.0006         N/A         0.0021           51         0.0300         0.0050         0.0017         0.0008         N/A         0.0023           52         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500         0.0025         0.0009         N/A         0.0028           55         0.0800         0.0050         0.0027         0.0010         N/A         0.0033           57         0.1400         0.0050         0.0032         0.0011         N/A         0.0036           58         0.1800         0.0050 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
45         0.0300         0.0050         0.0011         0.0004         N/A         0.0015           46         0.0300         0.0050         0.0012         0.0005         N/A         0.0016           47         0.0300         0.0050         0.0013         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0014         0.0006         N/A         0.0019           49         0.0300         0.0050         0.0017         0.0006         N/A         0.0020           50         0.0300         0.0050         0.0017         0.0006         N/A         0.0021           51         0.0300         0.0050         0.0018         0.0007         N/A         0.0023           52         0.0300         0.0050         0.0022         0.0088         N/A         0.0026           53         0.0300         0.0050         0.0022         0.0088         N/A         0.0026           54         0.0500         0.0025         0.0009         N/A         0.0026           54         0.0500         0.0032         0.0011         N/A         0.0030           56         0.1000         0.0050         0.0032 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
46         0.0300         0.0050         0.0012         0.0005         N/A         0.0016           47         0.0300         0.0050         0.0013         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0014         0.0005         N/A         0.0019           49         0.0300         0.0050         0.0016         0.0006         N/A         0.0020           50         0.0300         0.0050         0.0017         0.0006         N/A         0.0021           51         0.0300         0.0050         0.0018         0.0007         N/A         0.0023           52         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           53         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500         0.0025         0.0009         N/A         0.0026           55         0.0800         0.0050         0.0027         0.0010         N/A         0.0030           56         0.1000         0.0050         0.0032         0.0012         N/A         0.0040           58         0.1800         0.0050 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
47         0.0300         0.0050         0.0013         0.0005         N/A         0.0017           48         0.0300         0.0050         0.0014         0.0005         N/A         0.0019           49         0.0300         0.0050         0.0016         0.0006         N/A         0.0020           50         0.0300         0.0050         0.0017         0.0006         N/A         0.0021           51         0.0300         0.0050         0.0018         0.0007         N/A         0.0023           52         0.0300         0.0050         0.0022         0.0008         N/A         0.0024           53         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500         0.0050         0.0027         0.0010         N/A         0.0028           55         0.0800         0.0050         0.0032         0.0011         N/A         0.0030           56         0.1000         0.0050         0.0032         0.0012         N/A         0.0036           57         0.1400         0.0050         0.0032         0.0012         N/A         0.0040           58         0.1800 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
48         0.0300         0.0050         0.0014         0.0005         N/A         0.0019           49         0.0300         0.0050         0.0016         0.0006         N/A         0.0020           50         0.0300         0.0050         0.0017         0.0006         N/A         0.0021           51         0.0300         0.0050         0.0018         0.0007         N/A         0.0023           52         0.0300         0.0050         0.0022         0.0008         N/A         0.0024           53         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500         0.0050         0.0027         0.0010         N/A         0.0038           55         0.8800         0.0050         0.0027         0.0010         N/A         0.0038           56         0.1000         0.0050         0.0032         0.0011         N/A         0.0038           57         0.1400         0.0050         0.0032         0.0012         N/A         0.0040           58         0.1800         0.0050         0.0036         0.0013         N/A         0.0040           59         0.2000 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
49         0.0300         0.0050         0.0016         0.0006         N/A         0.0020           50         0.0300         0.0050         0.0017         0.0006         N/A         0.0021           51         0.0300         0.0050         0.0018         0.0007         N/A         0.0023           52         0.0300         0.0050         0.0022         0.0008         N/A         0.0024           53         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500         0.0050         0.0025         0.0009         N/A         0.0028           55         0.0800         0.0050         0.0027         0.0010         N/A         0.0028           55         0.0800         0.0050         0.0027         0.0011         N/A         0.0030           56         0.1000         0.0050         0.0032         0.0011         N/A         0.0030           57         0.1400         0.0050         0.0032         0.0012         N/A         0.0040           59         0.2000         0.0050         0.0040         0.0015         N/A         0.0044           60         0.2200 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
50         0.0300         0.0050         0.0017         0.0006         N/A         0.0021           51         0.0300         0.0050         0.0018         0.0007         N/A         0.0023           52         0.0300         0.0050         0.0020         0.0008         N/A         0.0024           53         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500         0.0050         0.0025         0.0009         N/A         0.0028           55         0.0800         0.0050         0.0027         0.0010         N/A         0.0030           56         0.1000         0.0050         0.0030         0.0011         N/A         0.0033           57         0.1400         0.0050         0.0032         0.0012         N/A         0.0033           58         0.1800         0.0050         0.0036         0.0013         N/A         0.0040           59         0.2000         0.0050         0.0040         0.0015         N/A         0.0044           60         0.2200         0.0050         0.0048         0.0018         N/A         0.0054           61         0.2500 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
51         0.0300         0.0050         0.0018         0.0007         N/A         0.0023           52         0.0300         0.0050         0.0020         0.0008         N/A         0.0024           53         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500         0.0050         0.0025         0.0009         N/A         0.0028           55         0.0800         0.0050         0.0027         0.0010         N/A         0.0030           56         0.1000         0.0050         0.0032         0.0011         N/A         0.0033           57         0.1400         0.0050         0.0032         0.0012         N/A         0.0033           58         0.1800         0.0050         0.0032         0.0012         N/A         0.0040           59         0.2000         0.0050         0.0040         0.0015         N/A         0.0044           60         0.2200         0.0050         0.0044         0.0016         N/A         0.0054           61         0.2500         0.0050         0.0052         0.0019         N/A         0.0056           63         0.2500 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
52         0.0300         0.0050         0.0020         0.0008         N/A         0.0024           53         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500         0.0050         0.0025         0.0009         N/A         0.0028           55         0.0800         0.0050         0.0027         0.0010         N/A         0.0030           56         0.1000         0.0050         0.0030         0.0011         N/A         0.0033           57         0.1400         0.0050         0.0032         0.0012         N/A         0.0036           58         0.1800         0.0050         0.0036         0.0013         N/A         0.0040           59         0.2000         0.0050         0.0040         0.0015         N/A         0.0044           60         0.2200         0.0050         0.0044         0.0016         N/A         0.0044           61         0.2500         0.0050         0.0048         0.0018         N/A         0.0059           63         0.2500         0.0050         0.0052         0.0024         N/A         0.0059           64         0.2500 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
53         0.0300         0.0050         0.0022         0.0008         N/A         0.0026           54         0.0500         0.0050         0.0025         0.0009         N/A         0.0028           55         0.0800         0.0050         0.0027         0.0010         N/A         0.0030           56         0.1000         0.0050         0.0030         0.0011         N/A         0.0033           57         0.1400         0.0050         0.0032         0.0012         N/A         0.0036           58         0.1800         0.0050         0.0036         0.0013         N/A         0.0040           59         0.2000         0.0050         0.0040         0.0015         N/A         0.0044           60         0.2200         0.0050         0.0044         0.0016         N/A         0.0044           61         0.2500         0.0050         0.0048         0.0018         N/A         0.0059           63         0.2500         0.0050         0.0052         0.0019         N/A         0.0059           64         0.2500         0.0050         0.0052         0.0029         N/A         0.0070           65         0.3000 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
54         0.0500         0.0050         0.0025         0.0009         N/A         0.0028           55         0.0800         0.0050         0.0027         0.0010         N/A         0.0030           56         0.1000         0.0050         0.0030         0.0011         N/A         0.0033           57         0.1400         0.0050         0.0032         0.0012         N/A         0.0036           58         0.1800         0.0050         0.0036         0.0013         N/A         0.0040           59         0.2000         0.0050         0.0040         0.0015         N/A         0.0044           60         0.2200         0.0050         0.0044         0.0016         N/A         0.0044           61         0.2500         0.0050         0.0048         0.0018         N/A         0.0059           63         0.2500         0.0050         0.0052         0.0019         N/A         0.0059           63         0.2500         0.0050         0.0052         0.0024         N/A         0.0059           64         0.2500         0.0050         0.0052         0.0029         N/A         0.0070           65         0.3000 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
55         0.0800         0.0050         0.0027         0.0010         N/A         0.0030           56         0.1000         0.0050         0.0030         0.0011         N/A         0.0033           57         0.1400         0.0050         0.0032         0.0012         N/A         0.0036           58         0.1800         0.0050         0.0036         0.0013         N/A         0.0040           59         0.2000         0.0050         0.0040         0.0015         N/A         0.0044           60         0.2200         0.0050         0.0044         0.0016         N/A         0.0049           61         0.2500         0.0050         0.0048         0.0018         N/A         0.0059           63         0.2500         0.0050         0.0052         0.0019         N/A         0.0059           63         0.2500         0.0050         0.0052         0.0024         N/A         0.0059           64         0.2500         0.0050         0.0052         0.0029         N/A         0.0070           65         0.3000         0.0050         0.0052         0.0034         N/A         0.0076           66         0.2400 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
56         0.1000         0.0050         0.0030         0.0011         N/A         0.0033           57         0.1400         0.0050         0.0032         0.0012         N/A         0.0036           58         0.1800         0.0050         0.0036         0.0013         N/A         0.0040           59         0.2000         0.0050         0.0040         0.0015         N/A         0.0044           60         0.2200         0.0050         0.0044         0.0016         N/A         0.0049           61         0.2500         0.0050         0.0048         0.0018         N/A         0.0059           63         0.2500         0.0050         0.0052         0.0019         N/A         0.0059           64         0.2500         0.0050         0.0052         0.0024         N/A         0.0057           65         0.3000         0.0050         0.0052         0.0024         N/A         0.0050           65         0.3000         0.0050         0.0052         0.0024         N/A         0.0076           66         0.2400         0.0050         0.0052         0.0034         N/A         0.0076           66         0.2400 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
57         0.1400         0.0050         0.0032         0.0012         N/A         0.0036           58         0.1800         0.0050         0.0036         0.0013         N/A         0.0040           59         0.2000         0.0050         0.0040         0.0015         N/A         0.0044           60         0.2200         0.0050         0.0044         0.0016         N/A         0.0049           61         0.2500         0.0050         0.0048         0.0018         N/A         0.0054           62         0.3500         0.0050         0.0052         0.0019         N/A         0.0056           63         0.2500         0.0050         0.0052         0.0024         N/A         0.0056           64         0.2500         0.0050         0.0052         0.0029         N/A         0.0076           65         0.3000         0.0050         0.0052         0.0034         N/A         0.0076           66         0.2400         0.0050         0.0052         0.0039         N/A         0.0081							
58         0.1800         0.0050         0.0036         0.0013         N/A         0.0040           59         0.2000         0.0050         0.0040         0.0015         N/A         0.0044           60         0.2200         0.0050         0.0044         0.0016         N/A         0.0049           61         0.2500         0.0050         0.0048         0.0018         N/A         0.0054           62         0.3500         0.0050         0.0052         0.0019         N/A         0.0059           63         0.2500         0.0050         0.0052         0.0024         N/A         0.0065           64         0.2500         0.0050         0.0052         0.0029         N/A         0.0076           65         0.3000         0.0050         0.0052         0.0034         N/A         0.0076           66         0.2400         0.0050         0.0052         0.0039         N/A         0.0081							
59         0.2000         0.0050         0.0040         0.0015         N/A         0.0044           60         0.2200         0.0050         0.0044         0.0016         N/A         0.0049           61         0.2500         0.0050         0.0048         0.0018         N/A         0.0054           62         0.3500         0.0050         0.0052         0.0019         N/A         0.0059           63         0.2500         0.0050         0.0052         0.0024         N/A         0.0065           64         0.2500         0.0050         0.0052         0.0029         N/A         0.0070           65         0.3000         0.0050         0.0052         0.0034         N/A         0.0076           66         0.2400         0.0050         0.0052         0.0039         N/A         0.0081							
60         0.2200         0.0050         0.0044         0.0016         N/A         0.0049           61         0.2500         0.0050         0.0048         0.0018         N/A         0.0054           62         0.3500         0.0050         0.0052         0.0019         N/A         0.0059           63         0.2500         0.0050         0.0052         0.0024         N/A         0.0065           64         0.2500         0.0050         0.0052         0.0029         N/A         0.0070           65         0.3000         0.0050         0.0052         0.0034         N/A         0.0076           66         0.2400         0.0050         0.0052         0.0039         N/A         0.0081							
610.25000.00500.00480.0018N/A0.0054620.35000.00500.00520.0019N/A0.0059630.25000.00500.00520.0024N/A0.0065640.25000.00500.00520.0029N/A0.0070650.30000.00500.00520.0034N/A0.0076660.24000.00500.00520.0039N/A0.0081							
62         0.3500         0.0050         0.0052         0.0019         N/A         0.0059           63         0.2500         0.0050         0.0052         0.0024         N/A         0.0065           64         0.2500         0.0050         0.0052         0.0029         N/A         0.0070           65         0.3000         0.0050         0.0052         0.0034         N/A         0.0076           66         0.2400         0.0050         0.0052         0.0039         N/A         0.0081							0.0054
63         0.2500         0.0050         0.0052         0.0024         N/A         0.0065           64         0.2500         0.0050         0.0052         0.0029         N/A         0.0070           65         0.3000         0.0050         0.0052         0.0034         N/A         0.0076           66         0.2400         0.0050         0.0052         0.0039         N/A         0.0081							
65         0.3000         0.0050         0.0052         0.0034         N/A         0.0076           66         0.2400         0.0050         0.0052         0.0039         N/A         0.0081							0.0065
65         0.3000         0.0050         0.0052         0.0034         N/A         0.0076           66         0.2400         0.0050         0.0052         0.0039         N/A         0.0081	64	0.2500	0.0050	0.0052	0.0029	N/A	0.0070
	65	0.3000	0.0050		0.0034	N/A	0.0076
							0.0081
	67	0.2400	0.0050	0.0052	0.0044	N/A	0.0086
	68	0.2400	0.0050	0.0052	0.0049		0.0091
		0.2400			0.0054		0.0095
	70	0.3000	0.0050		0.0059		0.0099
							0.0104
							0.0112
							0.0123
							0.0137
75 1.0000 0.0000 0.0000 0.0084 N/A 0.0151	75	1.0000	0.0000	0.0000	0.0084	N/A	0.0151

## Table A-6:Rate of Separation From Active Service For General Members<br/>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	0.0002
23	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
24	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
25	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
26	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
27	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
28	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
29	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
30	0.0000	0.0050	0.0002	0.0001	N/A	0.0002
31	0.0000	0.0050	0.0002	0.0001	N/A	0.0003
32 33	0.0000 0.0000	0.0050 0.0050	0.0002 0.0003	0.0001 0.0001	N/A N/A	0.0003 0.0003
33 34	0.0000	0.0050	0.0003	0.0001	N/A N/A	0.0003
34	0.0000	0.0050	0.0003	0.0001	N/A	0.0004
36	0.0000	0.0050	0.0004	0.0002	N/A	0.0005
37	0.0000	0.0050	0.0005	0.0002	N/A	0.0005
38	0.0000	0.0050	0.0006	0.0002	N/A	0.0006
39	0.0000	0.0050	0.0006	0.0002	N/A	0.0006
40	0.0300	0.0050	0.0006	0.0002	N/A	0.0006
41	0.0300	0.0050	0.0007	0.0003	N/A	0.0007
42	0.0300	0.0050	0.0008	0.0003	N/A	0.0008
43	0.0300	0.0050	0.0009	0.0003	N/A	0.0009
44	0.0300	0.0050	0.0010	0.0004	N/A	0.0009
45	0.0300	0.0050	0.0011	0.0004	N/A	0.0010
46	0.0300	0.0050	0.0012	0.0005	N/A	0.0011
47	0.0300	0.0050	0.0013	0.0005	N/A	0.0012
48	0.0300	0.0050	0.0014	0.0006	N/A	0.0013
49	0.0300	0.0050	0.0014	0.0006	N/A	0.0014
50	0.0300	0.0050	0.0016	0.0006	N/A	0.0016
51	0.0300	0.0050	0.0017	0.0007	N/A	0.0017
52	0.0300	0.0050	0.0018	0.0008	N/A	0.0018
53	0.0300	0.0050	0.0019	0.0009	N/A	0.0020
54	0.0500	0.0050	0.0020	0.0010	N/A	0.0021
55	0.0800	0.0050	0.0022	0.0011	N/A	0.0023
56	0.1000	0.0050	0.0022	0.0011	N/A	0.0025
57	0.1400	0.0050	0.0024	0.0012	N/A	0.0028
58	0.1800	0.0050	0.0027	0.0014	N/A	0.0030
59	0.2000	0.0050	0.0030	0.0015	N/A	0.0033
60	0.2200	0.0050	0.0034	0.0017	N/A	0.0036
61	0.2500	0.0050 0.0050	0.0037	0.0019	N/A	0.0039
62 63	0.3500		0.0040	0.0020	N/A N/A	0.0043
63 64	0.2500 0.2500	0.0050 0.0050	0.0043 0.0047	0.0022 0.0024	N/A N/A	0.0047
65	0.3000	0.0050	0.0047	0.0024	N/A N/A	0.0050 0.0054
66	0.2400	0.0050	0.0056	0.0028	N/A N/A	0.0058
67	0.2400	0.0050	0.0061	0.0028	N/A N/A	0.0058
68	0.2400	0.0050	0.0066	0.0030	N/A N/A	0.0062
69	0.2400	0.0050	0.0072	0.0032	N/A	0.0069
70	0.3000	0.0050	0.0072	0.0034	N/A	0.0073
70	0.3000	0.0050	0.0072	0.0038	N/A	0.0076
72	0.3000	0.0050	0.0072	0.0040	N/A	0.0079
73	0.3000	0.0050	0.0072	0.0040	N/A	0.0085
74	0.3000	0.0050	0.0072	0.0044	N/A	0.0093
75	1.0000	0.0000	0.0000	0.0046	N/A	0.0103

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



				Plan	D - Male		
Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0002	0.0001	N/A	0.0003	0	0.0900
19	0.0000	0.0002	0.0001	N/A	0.0003	1	0.0650
20	0.0000	0.0002	0.0001	N/A	0.0003	2	0.0500
21	0.0000	0.0002	0.0001	N/A	0.0004	3	0.0400
22	0.0000	0.0002	0.0001	N/A	0.0004	4	0.0300
23	0.0000	0.0002	0.0001	N/A	0.0004	5	0.0283
24	0.0000	0.0002	0.0001	N/A	0.0004	6	0.0267
25	0.0000	0.0002	0.0001	N/A	0.0004	7	0.0250
26	0.0000	0.0002	0.0001	N/A	0.0004	8	0.0236
27	0.0000	0.0002	0.0001	N/A	0.0004	9	0.0222
28	0.0000	0.0002	0.0001	N/A	0.0004	10	0.0208
29	0.0000	0.0002	0.0001	N/A	0.0004	11	0.0194
30	0.0000	0.0002	0.0001	N/A	0.0004	12	0.0180
31	0.0000	0.0002	0.0001	N/A	0.0005	13	0.0168
32	0.0000	0.0002	0.0001	N/A	0.0006	14	0.0156
33	0.0000	0.0003	0.0001	N/A	0.0006	15	0.0144
34	0.0000	0.0003	0.0001	N/A	0.0007	16	0.0132
35	0.0000	0.0004	0.0001	N/A	0.0008	17	0.0120
36	0.0000	0.0004	0.0002	N/A	0.0008	18	0.0112
37	0.0000	0.0005	0.0001	N/A	0.0009	19	0.0104
38	0.0000	0.0006	0.0002	N/A	0.0010	20	0.0096
39	0.0000	0.0006	0.0002	N/A	0.0010	21	0.0088
40	0.0200	0.0006	0.0002	N/A	0.0011	22	0.0080
41	0.0200	0.0007	0.0003	N/A	0.0011	23	0.0076
42	0.0200	0.0008	0.0003	N/A	0.0012	24	0.0072
43	0.0200	0.0009	0.0003	N/A	0.0013	25	0.0068
44	0.0200	0.0010	0.0004	N/A	0.0014	26	0.0064
45	0.0200	0.0011	0.0004	N/A	0.0015	27	0.0060
46	0.0200	0.0012	0.0005	N/A	0.0016	28	0.0060
47	0.0200	0.0013	0.0005	N/A	0.0017	29	0.0060
48	0.0200	0.0014	0.0005	N/A	0.0019	30 & Above	0.0000
49	0.0200	0.0016	0.0006	N/A	0.0020		
50	0.0200	0.0017	0.0006	N/A	0.0021		
51	0.0200	0.0018	0.0007 0.0008	N/A	0.0023		
52	0.0200	0.0020		N/A	0.0024		
53 54	0.0200 0.0200	0.0022 0.0025	0.0008 0.0009	N/A N/A	0.0026 0.0028		
55	0.0250	0.0025	0.0009	N/A N/A	0.0028		
55 56	0.0250	0.0027	0.0010	N/A N/A	0.0033		
50	0.0250	0.0032	0.0012	N/A N/A	0.0036		
58	0.0400	0.0036	0.0012	N/A	0.0040		
59	0.0600	0.0040	0.0015	N/A	0.0040		
60	0.0600	0.0044	0.0016	N/A	0.0049		
61	0.0700	0.0048	0.0018	N/A	0.0054		
62	0.1000	0.0052	0.0019	N/A	0.0059		
63	0.0900	0.0052	0.0024	N/A	0.0065		
64	0.1500	0.0052	0.0029	N/A	0.0070		
65	0.2400	0.0052	0.0034	N/A	0.0076		
66	0.2000	0.0052	0.0039	N/A	0.0081		
67	0.2000	0.0052	0.0044	N/A	0.0086		
68	0.2000	0.0052	0.0049	N/A	0.0091		
69	0.2000	0.0052	0.0054	N/A	0.0095		
70	0.2500	0.0052	0.0059	N/A	0.0099		
71	0.2500	0.0052	0.0064	N/A	0.0104		
72	0.2500	0.0052	0.0069	N/A	0.0112		
73	0.2500	0.0052	0.0074	N/A	0.0123		
74	0.2500	0.0052	0.0079	N/A	0.0137		
75	1.0000	0.0000	0.0084	N/A	0.0151		

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



				Plan D	- Female		
Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0002	0.0001	N/A	0.0002	0	0.0900
19	0.0000	0.0002	0.0001	N/A	0.0002	1	0.0650
20	0.0000	0.0002	0.0001	N/A	0.0002	2	0.0500
21	0.0000	0.0002	0.0001	N/A	0.0002	3	0.0400
22	0.0000	0.0002	0.0001	N/A	0.0002	4	0.0300
23	0.0000	0.0002	0.0001	N/A	0.0002	5	0.0283
24	0.0000	0.0002	0.0001	N/A	0.0002	6	0.0267
25	0.0000	0.0002	0.0001	N/A	0.0002	7	0.0250
26	0.0000	0.0002	0.0001	N/A	0.0002	8	0.0236
27	0.0000	0.0002	0.0001	N/A	0.0002	9	0.0222
28	0.0000	0.0002	0.0001	N/A	0.0002	10	0.0208
29	0.0000	0.0002	0.0001	N/A	0.0002	11	0.0194
30	0.0000	0.0002	0.0001	N/A	0.0002	12	0.0180
31	0.0000	0.0002	0.0001	N/A	0.0003	13	0.0168
32	0.0000	0.0002	0.0001	N/A	0.0003	14	0.0156
33	0.0000	0.0003	0.0001	N/A	0.0003	15	0.0144
34	0.0000	0.0003	0.0001	N/A	0.0004	16	0.0132
35	0.0000	0.0004	0.0001	N/A	0.0004	17	0.0120
36	0.0000	0.0004	0.0002	N/A	0.0005	18	0.0112
37	0.0000	0.0005	0.0001	N/A	0.0005	19	0.0104
38	0.0000	0.0006	0.0002	N/A	0.0006	20	0.0096
39	0.0000	0.0006	0.0002	N/A	0.0006	21	0.0088
40	0.0200	0.0006	0.0002	N/A	0.0006	22	0.0080
41	0.0200	0.0007	0.0003	N/A	0.0007	23	0.0076
42	0.0200	0.0008	0.0003	N/A	0.0008	24	0.0072
43	0.0200	0.0009	0.0003	N/A	0.0009	25	0.0068
44	0.0200	0.0010	0.0004	N/A	0.0009	26	0.0064
45	0.0200	0.0011	0.0004	N/A	0.0010	27	0.0060
46	0.0200	0.0012	0.0005	N/A	0.0011	28	0.0060
47	0.0200	0.0013	0.0005	N/A	0.0012	29	0.0060
48	0.0200	0.0014	0.0006	N/A	0.0013	30 & Above	0.0000
49	0.0200	0.0014	0.0006	N/A	0.0014		
50	0.0200	0.0016	0.0006	N/A	0.0016		
51	0.0200	0.0017	0.0007	N/A	0.0017		
52	0.0200	0.0018	0.0008	N/A	0.0018		
53	0.0200	0.0019	0.0009	N/A	0.0020		
54	0.0200	0.0020	0.0010	N/A	0.0021		
55	0.0250	0.0022	0.0011	N/A	0.0023		
56	0.0250	0.0022	0.0011	N/A	0.0025		
57	0.0300	0.0024	0.0012	N/A	0.0028		
58	0.0400	0.0027	0.0014	N/A	0.0030		
59	0.0600	0.0030	0.0015	N/A	0.0033		
60	0.0600	0.0034	0.0017	N/A	0.0036		
61	0.0700	0.0037	0.0019	N/A	0.0039		
62	0.1000	0.0040	0.0020	N/A	0.0043		
63	0.0900	0.0043	0.0022	N/A	0.0047		
64	0.1500	0.0047	0.0024	N/A	0.0050		
65	0.2400	0.0051	0.0026	N/A	0.0054		
66	0.2000	0.0056	0.0028	N/A	0.0058		
67	0.2000	0.0061	0.0030	N/A	0.0062		
68	0.2000	0.0066	0.0032	N/A	0.0066		
69	0.2000	0.0072	0.0034	N/A	0.0069		
70	0.2500	0.0072	0.0036	N/A	0.0073		
71	0.2500	0.0072	0.0038	N/A	0.0076		
72	0.2500	0.0072	0.0040	N/A	0.0079		
73	0.2500	0.0072	0.0042	N/A	0.0085		
74	0.2500	0.0072	0.0044	N/A	0.0093		
75	1.0000	0.0000	0.0046	N/A	0.0103		

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



				i iaii i			
Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	N/A	N/A	N/A	0.0003	0	0.1500
19	0.0000	N/A	N/A	N/A	0.0003	1	0.0900
20	0.0000	N/A	N/A	N/A	0.0003	2	0.0700
21	0.0000	N/A	N/A	N/A	0.0004	3	0.0550
22	0.0000	N/A	N/A	N/A	0.0004	4	0.0450
23	0.0000	N/A	N/A	N/A	0.0004	5	0.0407
23	0.0000	N/A	N/A	N/A	0.0004	6	0.0363
24	0.0000	N/A	N/A	N/A	0.0004	7	0.0320
26	0.0000	N/A	N/A	N/A	0.0004	8	0.0304
20		N/A N/A	N/A N/A	N/A N/A		9	
28	0.0000	N/A N/A	N/A N/A	N/A N/A	0.0004	9 10	0.0288 0.0272
	0.0000				0.0004		
29	0.0000	N/A	N/A	N/A	0.0004	11	0.0256
30	0.0000	N/A	N/A	N/A	0.0004	12	0.0240
31	0.0000	N/A	N/A	N/A	0.0005	13	0.0228
32	0.0000	N/A	N/A	N/A	0.0006	14	0.0216
33	0.0000	N/A	N/A	N/A	0.0006	15	0.0204
34	0.0000	N/A	N/A	N/A	0.0007	16	0.0192
35	0.0000	N/A	N/A	N/A	0.0008	17	0.0180
36	0.0000	N/A	N/A	N/A	0.0008	18	0.0174
37	0.0000	N/A	N/A	N/A	0.0009	19	0.0168
38	0.0000	N/A	N/A	N/A	0.0010	20	0.0162
39	0.0000	N/A	N/A	N/A	0.0010	21	0.0156
40	0.0000	N/A	N/A	N/A	0.0011	22	0.0150
41	0.0000	N/A	N/A	N/A	0.0011	23	0.0144
42	0.0000	N/A	N/A	N/A	0.0012	24	0.0138
43	0.0000	N/A	N/A	N/A	0.0013	25	0.0132
44	0.0000	N/A	N/A	N/A	0.0014	26	0.0126
45	0.0000	N/A	N/A	N/A	0.0015	27	0.0120
46	0.0000	N/A	N/A	N/A	0.0016	28	0.0120
47	0.0000	N/A	N/A	N/A	0.0017	29	0.0120
48	0.0000	N/A	N/A	N/A	0.0019	30 & Above	0.0120
49	0.0000	N/A	N/A	N/A	0.0020		
50	0.0000	N/A	N/A	N/A	0.0021		
51	0.0000	N/A	N/A	N/A	0.0023		
52	0.0000	N/A	N/A	N/A	0.0024		
53	0.0000	N/A	N/A	N/A	0.0026		
54	0.0000	N/A	N/A	N/A	0.0028		
55	0.0300	N/A	N/A	N/A	0.0030		
56	0.0300	N/A	N/A	N/A	0.0033		
57	0.0300	N/A	N/A	N/A	0.0036		
58	0.0300	N/A	N/A	N/A	0.0040		
59	0.0350	N/A	N/A	N/A	0.0044		
60	0.0500	N/A	N/A	N/A	0.0049		
61	0.0700	N/A	N/A	N/A	0.0054		
62	0.1000	N/A	N/A	N/A	0.0059		
63	0.0900	N/A	N/A	N/A	0.0065		
64	0.1600	N/A	N/A	N/A	0.0070		
65	0.2500	N/A	N/A	N/A	0.0076		
66	0.1800	N/A	N/A	N/A	0.0081		
67	0.1800	N/A	N/A	N/A	0.0086		
68	0.1800	N/A	N/A	N/A	0.0091		
69	0.1800	N/A	N/A	N/A	0.0095		
70	0.2500	N/A	N/A	N/A	0.0099		
70	0.2500	N/A	N/A	N/A	0.0104		
72	0.2500	N/A	N/A	N/A	0.0112		
73	0.2500	N/A	N/A	N/A	0.0123		
73	0.2500	N/A N/A	N/A N/A	N/A N/A	0.0123		
74 75	1.0000	N/A N/A	N/A N/A	N/A N/A	0.0151		
15	1.0000	1 1/7	11/7	11/7	0.0131		

# 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	Years of Service	Other Terminations
18	0.0000	N/A	N/A	N/A	0.0002	0	0.1500
19	0.0000	N/A	N/A	N/A	0.0002	1	0.0900
20	0.0000	N/A	N/A	N/A	0.0002	2	0.0700
21	0.0000	N/A	N/A	N/A	0.0002	3	0.0550
22	0.0000	N/A	N/A	N/A	0.0002	4	0.0450
23	0.0000	N/A	N/A	N/A	0.0002	5	0.0407
24	0.0000	N/A	N/A	N/A	0.0002	6	0.0363
25	0.0000	N/A	N/A	N/A	0.0002	7	0.0320
26	0.0000	N/A	N/A	N/A	0.0002	8	0.0304
27	0.0000	N/A	N/A	N/A	0.0002	9	0.0288
28	0.0000	N/A	N/A	N/A	0.0002	10	0.0272
29	0.0000	N/A	N/A	N/A	0.0002	11	0.0256
30	0.0000	N/A	N/A	N/A	0.0002	12	0.0240
31	0.0000	N/A	N/A	N/A	0.0003	13	0.0228
32	0.0000	N/A	N/A	N/A	0.0003	14	0.0216
33	0.0000	N/A	N/A	N/A	0.0003	15	0.0204
34	0.0000	N/A	N/A	N/A	0.0004	16	0.0192
35	0.0000	N/A	N/A	N/A	0.0004	17	0.0180
36	0.0000	N/A	N/A	N/A	0.0005	18	0.0174
37	0.0000	N/A	N/A	N/A	0.0005	19	0.0168
38	0.0000	N/A	N/A	N/A	0.0006	20	0.0162
39	0.0000	N/A	N/A	N/A	0.0006	21	0.0156
40	0.0000	N/A	N/A	N/A	0.0006	22	0.0150
41	0.0000	N/A	N/A	N/A	0.0007	23	0.0144
42	0.0000	N/A	N/A	N/A	0.0008	24	0.0138
43	0.0000	N/A	N/A	N/A	0.0009	25	0.0132
44	0.0000	N/A	N/A	N/A	0.0009	26	0.0126
45	0.0000	N/A	N/A	N/A	0.0010	27	0.0120
46	0.0000	N/A	N/A	N/A	0.0011	28	0.0120
47	0.0000	N/A	N/A	N/A	0.0012	29	0.0120
48	0.0000	N/A	N/A	N/A	0.0013	30 & Above	0.0120
49	0.0000	N/A	N/A	N/A	0.0014		
50	0.0000	N/A	N/A	N/A	0.0016		
51	0.0000	N/A	N/A	N/A	0.0017		
52	0.0000	N/A	N/A	N/A	0.0018		
53	0.0000	N/A	N/A	N/A	0.0020		
54	0.0000	N/A	N/A	N/A	0.0021		
55	0.0300	N/A	N/A	N/A	0.0023		
56	0.0300	N/A N/A	N/A N/A	N/A N/A	0.0025		
57 58	0.0300 0.0300	N/A	N/A N/A	N/A N/A	0.0028 0.0030		
59	0.0350	N/A N/A	N/A	N/A N/A	0.0033		
60	0.0500	N/A	N/A	N/A	0.0036		
61	0.0700	N/A	N/A	N/A	0.0039		
62	0.1000	N/A	N/A	N/A	0.0043		
63	0.0900	N/A	N/A	N/A	0.0047		
64	0.1600	N/A	N/A	N/A	0.0050		
65	0.2500	N/A	N/A	N/A	0.0054		
66	0.1800	N/A	N/A	N/A	0.0058		
67	0.1800	N/A	N/A	N/A	0.0062		
68	0.1800	N/A	N/A	N/A	0.0066		
69	0.1800	N/A	N/A	N/A	0.0069		
70	0.2500	N/A	N/A	N/A	0.0073		
71	0.2500	N/A	N/A	N/A	0.0076		
72	0.2500	N/A	N/A	N/A	0.0079		
73	0.2500	N/A	N/A	N/A	0.0085		
74	0.2500	N/A	N/A	N/A	0.0093		
75	1.0000	N/A	N/A	N/A	0.0103		

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



				Plan A	& B - Male		
	Service	Service	Ordinary	Service	Ordinary	Years of	Other
Age	Retirement	Disability	Disability	Death	Death	Service	Terminations
18	0.0000	0.0050	0.0003	0.0001	0.0002	0	0.0500
19	0.0000	0.0050	0.0003	0.0001	0.0002	1	0.0425
20	0.0000	0.0050	0.0003	0.0001	0.0002	2	0.0350
21	0.0000	0.0050	0.0003	0.0001	0.0002	3	0.0300
22	0.0000	0.0050	0.0003	0.0001	0.0002	4	0.0250
23	0.0000	0.0050	0.0003	0.0001	0.0003	5	0.0217
24	0.0000	0.0050	0.0003	0.0001	0.0003	6	0.0183
25	0.0000	0.0050	0.0003	0.0001	0.0003	7	0.0150
26	0.0000	0.0050	0.0003	0.0001	0.0003	8	0.0132
27	0.0000	0.0050	0.0003	0.0001	0.0003	9	0.0114
28	0.0000	0.0050	0.0003	0.0001	0.0003	10	0.0096
29	0.0000	0.0050	0.0003	0.0001	0.0003	11	0.0078
30	0.0000	0.0050	0.0003	0.0001	0.0004	12	0.0060
31	0.0000	0.0050	0.0003	0.0001	0.0004	13	0.0056
32	0.0000	0.0050	0.0003	0.0001	0.0004	14	0.0052
33	0.0000	0.0052	0.0003	0.0001	0.0004	15	0.0048
34	0.0000	0.0054	0.0003	0.0001	0.0004	16	0.0044
35	0.0000	0.0056	0.0003	0.0001	0.0004	17	0.0040
36	0.0000	0.0058	0.0003	0.0001	0.0004	18	0.0032
37	0.0000	0.0060	0.0003	0.0001	0.0004	19	0.0024
38	0.0000	0.0064	0.0003	0.0001	0.0004	20 & Above	0.0000
39	0.0000	0.0068	0.0003	0.0001	0.0004		
40	0.0100	0.0072	0.0004	0.0001	0.0005		
41	0.0100	0.0076	0.0004	0.0001	0.0006		
42	0.0100	0.0080	0.0004	0.0001	0.0006		
43	0.0100	0.0088	0.0004	0.0001	0.0007		
44	0.0100	0.0096	0.0004	0.0001	0.0008		
45	0.0100	0.0104	0.0005	0.0001	0.0008		
46	0.0100	0.0112	0.0005	0.0001	0.0009		
47	0.0100	0.0120	0.0005	0.0001	0.0010		
48	0.0100	0.0136	0.0005	0.0001	0.0010		
49	0.0100	0.0152	0.0006	0.0001	0.0011		
50	0.0100	0.0168	0.0007	0.0001	0.0011		
51	0.0200	0.0184	0.0007	0.0001	0.0012		
52	0.0250	0.0200	0.0008	0.0001	0.0013		
53	0.0300	0.0300	0.0009	0.0001	0.0014		
54	0.1200	0.0500	0.0010	0.0001	0.0015		
55	0.2400	0.1500	0.0020	0.0001	0.0016		
56	0.1800	0.1500	0.0022	0.0001	0.0017		
57	0.1800	0.1500	0.0024	0.0001	0.0019		
58	0.2000	0.1500	0.0024	0.0001	0.0020		
59	0.3000	0.1500	0.0024	0.0001	0.0021		
60	1.0000	0.0000	0.0000	0.0000	0.0000		

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



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

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0050	0.0006	0.0001	0.0002	0	0.0500
19	0.0000	0.0050	0.0006	0.0001	0.0002	1	0.0425
20	0.0000	0.0050	0.0006	0.0001	0.0002	2	0.0350
21	0.0000	0.0050	0.0006	0.0001	0.0002	3	0.0300
22	0.0000	0.0050	0.0006	0.0001	0.0002	4	0.0250
23	0.0000	0.0050	0.0006	0.0001	0.0002	5	0.0217
24	0.0000	0.0050	0.0006	0.0001	0.0002	6	0.0183
25	0.0000	0.0050	0.0006	0.0001	0.0002	7	0.0150
26	0.0000	0.0050	0.0006	0.0001	0.0002	8	0.0132
27	0.0000	0.0050	0.0006	0.0001	0.0002	9	0.0114
28	0.0000	0.0050	0.0006	0.0001	0.0002	10	0.0096
29	0.0000	0.0050	0.0006	0.0001	0.0002	11	0.0078
30	0.0000	0.0060	0.0006	0.0001	0.0002	12	0.0060
31	0.0000	0.0070	0.0006	0.0001	0.0003	13	0.0056
32	0.0000	0.0080	0.0006	0.0001	0.0003	14	0.0052
33	0.0000	0.0090	0.0006	0.0001	0.0003	15	0.0048
34	0.0000	0.0100	0.0006	0.0001	0.0004	16	0.0044
35	0.0000	0.0110	0.0008	0.0001	0.0004	17	0.0040
36	0.0000	0.0120	0.0008	0.0001	0.0005	18	0.0032
37	0.0000	0.0125	0.0008	0.0001	0.0005	19	0.0024
38	0.0000	0.0130	0.0008	0.0001	0.0006	20 & Above	0.0000
39	0.0000	0.0135	0.0008	0.0001	0.0006		
40	0.0100	0.0140	0.0010	0.0001	0.0006		
41	0.0100	0.0145	0.0010	0.0001	0.0007		
42	0.0100	0.0150	0.0010	0.0001	0.0008		
43	0.0100	0.0155	0.0010	0.0001	0.0009		
44	0.0100	0.0160	0.0012	0.0001	0.0009		
45	0.0100	0.0165	0.0012	0.0001	0.0010		
46	0.0100	0.0170	0.0014	0.0001	0.0011		
47	0.0100	0.0175	0.0014	0.0001	0.0012		
48	0.0100	0.0180	0.0016	0.0001	0.0013		
49	0.0100	0.0185	0.0020	0.0001	0.0014		
50	0.0100	0.0190	0.0022	0.0001	0.0016		
51	0.0200	0.0300	0.0026	0.0001	0.0017		
52	0.0250	0.0350	0.0028	0.0001	0.0018		
53	0.0300	0.0400	0.0034	0.0001	0.0020		
54	0.1200	0.0450	0.0040	0.0001	0.0021		
55	0.2400	0.0700	0.0048	0.0001	0.0023		
56	0.1800	0.1200	0.0054	0.0001	0.0025		
57	0.1800	0.1200	0.0060	0.0001	0.0028		
58	0.2000	0.1200	0.0066	0.0001	0.0030		
59	0.3000	0.1200	0.0072	0.0001	0.0033		
60	1.0000	0.0000	0.0000	0.0000	0.0000		



#### Appendix B: Summary of Plan Provisions



All actuarial calculations are based on our understanding of the statutes governing the LACERA as contained in the County Employees Retirement Plan (CERL) of 1937, with provisions adopted by the LACERA Board, effective through July 1, 2007. 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

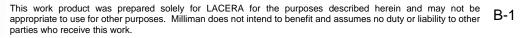
Permanent employees of Los Angeles County (County) and participating districts who work <sup>3</sup> / <sub>4</sub> time or more are eligible for membership in LACERA.	(31551, 31552, Bylaws)
Employees eligible for safety membership (law enforcement, fire fighting and lifeguards) become safety members 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, or the first day of the month after they make an election of either Plan D or Plan E, depending on the law in effect at that time.	(31493, 31493.5, 31493.6, 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.

#### **RETIREMENT PLANS**

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

- Plan A:General and safety members prior to September 1977.
- Plan B:General members September 1977 through September1978.Safety members September 1977 to present.
- Plan C: General members October 1978 through May 1979.



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#### **RETIREMENT PLANS** (Continued)

Plan D:	General members – Hired June 1979 through January 3, 1982; and those hired on or after January 4, 1982 and elect Plan D instead of Plan E; or, former Plan E general members who elected to transfer to Plan D.	
Plan E:	General members – hired on or after January 4, 1982, unless they elect Plan D; or, former general members in Plans A-D who elected to transfer to Plan E.	(31487, 31496)
Plan F:	General members in Plan D and safety members in Plan B who first became members on or after January 1, 1990, and are subject to the limitations set forth in Section 415 of the Internal Revenue Code of 1986. Currently there are no members participating in Plan F. No further description of Plan F is included here.	(31510)
MEMBER CONTRIB	UTIONS	
Plans A-D:	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 member 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 nermal contributions, mambers nev and	

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

#### **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 (31453, 31454 31581) investigation, valuation and recommendation of the actuary.



#### SERVICE RETIREMENT ALLOWANCE

Eligibility:		(31672)
Plans A-D:	General members: Age 50 with 10 years of County service;	
	Any age with 30 years of service; or Age 70 regardless of service.	
	Safety members:	(31662.4,
	Age 50 with 10 years of County service; Any age with 20 years of service; or Age 60 regardless of service (Mandatory retirement age for members hired before April 1, 1997). No mandatory retirement for members hired on or after April 1, 1997.	31662.6, 31663.25)
Plan E:	Age 65 with 10 years of service. A reduced benefit is also payable at age 55 with 10 years of service.	(31491.3)
Final Compensation: Plans A-D:	Monthly average of a member's compensation during the last year of service.	(31462.3, 31461.45)
Plan E:	Monthly average of a member's compensation for the last three years of service.	(31488)
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)
Monthly Allowance:		(31664)
	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.)	(31004)
Plans A-D:	<b>General members:</b> 1/60 x Final Compensation x a Plan specific age factor x years of service.	(31676.1) (31676.11) (31676.14)



# Appendix B (continued)

#### SERVICE RETIREMENT ALLOWANCE (Continued)

Plan E:	<ul> <li>General members: (a)+(b)-(c) where:</li> <li>(a) 2% x Final Compensation x (Years of Service (up to 35 years), plus</li> <li>(b) 1 % x Final Compensation x Years of Service in excess of 35 (up to 10)</li> <li>(c) Estimated Primary Insurance Amount (PIA) x Years of Covered Service (up to 35) divided by 35.</li> <li>The PIA is calculated based on certain assumptions specified by statute, and an assumed Social Security retirement age of 62.</li> <li>If retirement occurs prior to age 65, benefit amount is adjusted by an actuarial equivalent factor (see Sample Plan Age Factors).</li> </ul>	(31491, 31491.3 (b)&(c))
Social Security Integration	<u>:</u>	
Plans A-C:	<b>General Members:</b> 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.	

#### 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)

#### Maximum Allowance:

Plans A-D:	Allowance may not exceed 100% of final compensation.	
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)



#### SERVICE RETIREMENT ALLOWANCE (Continued)

<u>Unmodified Retirement Al</u> Plans A-D:	<b>Iowance (Normal Form):</b> 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 ce	rtain domestic partners.	(31780.2)		
A member may elect to have retirement allowance applied	<b>Optional Retirement Allowance:</b> A member may elect to have the actuarial equivalent of the service or disability (31760) retirement allowance applied to a lesser retirement allowance during the retired member's life in order to provide an optional survivor allowance.			
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)		



# Appendix B (continued)

#### SERVICE RETIREMENT ALLOWANCE (Continued)

A member may not revoke and name another beneficiary if the member elects (31782) Option 2, 3 or 4.			
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 age 62 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)	
<u>All Allowances:</u>	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.	(31600)	
SERVICE-CONNECTED DI	SABILITY RETIREMENT ALLOWANCE	(0.1700	
<u>Eligibility:</u> Plans A-D:	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)	



## Appendix B (continued)

# NONSERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE Eligibility:

Eligibility: Plans A-D:	Any age with 5 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:	<ul> <li>(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.</li> <li>(b) 90% 1/60 of Final Compensation x years of</li> </ul>	(31727(a))		
	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				
<u>Eligibility:</u> Plans A-D:	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	(31787)		

50% of the member's Final Compensation.



SE	RVICE-CONNECTED DE	EATH BENEFITS (Continued)	
In l	<ul> <li>Optional Combined Benefit:</li> <li>In lieu of the monthly allowance above, a surviving spouse may elect:</li> <li>(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</li> </ul>		
(b)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	al to 50% of the member's Final Compensation, nount, which is the actuarial equivalent of (a) above <i>v</i> iving spouse.	
The ear		butions and interest, plus 1/12 of the compensation months x years of service (benefit not to exceed 50%	(31781)
259 ber	· · · ·	Children: The ther or not the monthly allowance or combined The hild, 40% for two children, and 50% for three or more	(31787.5)
Additional Amount for Spouse of Safety Member: 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. <i>Note:</i> 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			(31787.6)
	gibility: Plans A-D:	Active members who die while in service or while physically or mentally incapacitated for the performance of duty.	(31780)
	Plan E:	Not available under Plan E.	(31487)



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#### NONSERVICE-CONNECTED DEATH BENEFITS (Continued)

#### Death Benefit (Lump Sum):

The member's normal contributions and 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:

If a member who would have been entitled to a non-service-connected (31781.1)disability retirement allowance dies prior to retirement as a result of such 31781.12) 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:

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:

parties who receive this work.

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

- (31781.3)(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
- (b) A monthly payment equal to 65% of the monthly retirement allowance (31781.1,to which the member have been entitled if the member retired or been 31781.12) 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.

This work product was prepared solely for LACERA for the purposes described herein and may not be

appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other

(31781)

(31781.2)31765.2)

B-9

#### NONSERVICE-CONNECTED DEATH BENEFITS (Continued)

#### 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)

#### 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.

#### **POST-RETIREMENT DEATH BENEFIT**

Plans A-D:	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.	(31789.1)
Plan E:	The only death benefits payable after retirement are the continuance allowances described above under Unmodified and Optional Retirement Allowances. There is no \$5,000 lump-sum payment under Plan E.	(31492)



# Appendix B (continued)

#### **DEFERRED VESTED BENEFITS**

<u>Eligibility:</u>		(31700)
Plans A-D:	Five years of county or reciprocal service. member contributions must be left on deposit.	
Plan E:	Age 55 with 10 years of service.	(31491)
Monthly Allowance: Plans A-D:	Same as service retirement allowance; payable anytime 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 may transfer to Plan D on a p	Plan E on a prospective basis. Members in prospective basis.	(31494.2, 31494.5)
RECIPROCITY:		
Plans A-E:	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.	(04005)
	Deferred members are eligible for disability and death benefits from LACERA, if disabled while a member of CaIPERS 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.



#### **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 (31870, 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%.

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

Members who have a COLA Accumulation of more than 20% resulting from CPI (318874.3(b)) 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 Investments.



#### **Appendix C: Valuation Data and Schedules**



On the following table, Exhibit C-1, we present a summary of LACERA membership at June 30, 2007 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 3.9% and the total salary increased by 10.3% since the last valuation. The total number of retired members and their beneficiaries increased by 0.8%, while the average retirement benefit amount increased by 4.0%.

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 2007 is shown. In the 2007 valuation, a special one-time salary load was applied to active members to reflect salary increases during the 2006-2007 Plan Year that were not fully reflected in the annual compensation amount we use. See Appendix A for more information.

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, 2007 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. However, benefit amounts were zeroed for eight retiree records who have returned to work and who were valued as active participants.

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



#### Exhibit C-1: LACERA Membership – Active Members as of June 30, 2007

	Sex	Vested	NonVested	Total Number	Annual Salary	Average Age	Average Monthly Salary	Average Credited Service
General	Member	ſS						
Plan A	М	1,014	1	1,015	\$ 89,616,960	59.7	\$ 7,358	33.3
	F	1,800	4	1,804	124,198,620	58.1	5,737	32.8
Plan B	М	117	1	118	10,655,508	58.0	7,525	29.4
	F	239	-	239	16,483,812	56.7	5,747	28.9
Plan C	М	83	-	83	7,278,840	56.9	7,308	28.7
	F	177	-	177	12,030,108	56.1	5,664	28.0
Plan D	М	10,694	4,766	15,460	972,305,328	44.3	5,241	9.9
	F	21,814	9,912	31,726	1,789,248,300	43.3	4,700	9.8
Plan E	М	5,360	1,757	7,117	486,419,844	50.8	5,696	18.0
	F	12,620	9,470	22,090	1,164,889,644	46.7	4,394	14.5
Total		53,918	25,911	79,829	\$ 4,673,126,964	45.7	\$ 4,878	12.8
Safety M	lembers							
Plan A	М	390	-	390	\$ 49,697,172	55.7	\$ 10,619	33.8
	F	44	-	44	5,361,636	54.6	10,155	32.3
Plan B	М	8,523	1,888	10,411	929,397,660	40.6	7,439	14.1
	F	1,104	318	1,422	119,468,484	37.9	7,001	11.2
Total		10,061	2,206	12,267	\$ 1,103,924,952	40.8	\$ 7,499	14.4
Grand Total		63,979	28,117	92,096	\$ 5,777,051,916	45.1	\$ 5,227	13.0



#### Average Annual Average Monthly Benefit Sex Number Allowance Age **General Members** Plan A 547,452,488 73.5 \$ Μ 12,152 \$ 3,754 17,758 522,681,335 F 74.7 2,453 Plan B Μ 145 4,479,120 69.4 2,574 F 372 8,875,586 70.1 1,988 Plan C Μ 118 2,706,252 69.4 1,911 F 242 4,522,340 69.7 1,557 Plan D 1,885 45,748,657 64.9 Μ 2,022 F 3,267 62,201,143 64.8 1,587 Plan E Μ 2,002 33,913,996 68.8 1,412 F 3,643 47,329,259 68.3 1,083 Total 41,584 \$ 1,279,910,176 72.2 \$ 2,565 Safety Members Plan A Μ 6,332 \$ 436,823,136 68.1 \$ 5,749 F 1,829 78,916,868 70.9 3,596 Plan B Μ 1,237 48,943,968 50.0 3,297 F 410 13,630,557 46.5 2,770 Total 9,808 \$ 578,314,529 65.4 \$ 4,914 Grand Total \$ 51,392 \$ 1,858,224,705 70.9 3,013

#### Exhibit C-2Ret: LACERA Membership – Retired Members as of June 30, 2007



#### Exhibit C-2Def: LACERA Membership – Deferred Vested Members as of June 30, 2007 Subtotaled by Plan and Retirement Type

_	Sex	Number	Average Age
General Members			
Plan A	М	135	60.5
	F	238	58.0
Plan B	Μ	15	58.7
	F	35	55.3
Plan C	М	8	59.3
	F	20	53.8
Plan D	М	963	45.8
	F	1,791	44.2
Plan E	Μ	1,305	52.7
	F	2,931	51.5
Total		7,441	49.6
Safety Members			
Plan A	М	13	58.6
	F	-	-
Plan B	Μ	345	30.6
	F	112	38.8
Total		470	33.3
Grand Total		7,911	48.6



	Retirement	-	An	nual Benefits		Average Monthly
Plan	Туре	Number	in	Thousands	_	Benefit
General Plans:						
Plan A						
	Healthy	22,101	\$	889,293	\$	3,353
	Disabled	2,668		72,266		2,257
	Beneficiaries	5,141		108,575		1,760
	Total	29,910	\$	1,070,134	\$	2,982
Plan B						
	Healthy	417	\$	11,553	\$	2,309
	Disabled	68		1,312		1,608
	Beneficiaries	32		490		1,276
	Total	517	\$	13,355	\$	2,153
Plan C						
	Healthy	261	\$	5,549	\$	1,772
	Disabled	65		1,355		1,737
	Beneficiaries	34		325	_	797
	Total	360	\$	7,229	\$	1,673
Plan D						
	Healthy	3,613	\$	76,569	\$	1,766
	Disabled	1,115		26,317		1,967
	Beneficiaries	424		5,064	_	995
	Total	5,152	\$	107,950	\$	1,746
Plan E						
	Healthy	5,304	\$	78,752	\$	1,237
	Disabled	0		0		N/A
	Beneficiaries	341		2,491	_	609
	Total	5,645	\$	81,243	\$	1,199
Safety Plans:						
Plan A						
	Healthy	2,985	\$	214,765	\$	5,996
	Disabled	3,864		249,816		5,388
	Beneficiaries	1,312		51,160	_	3,249
	Total	8,161	\$	515,741	\$	5,266
Plan B						
	Healthy	284	\$	12,904	\$	3,786
	Disabled	1,265		47,048		3,099
	Beneficiaries	98		2,623	_	2,230
	Total	1,647	\$	62,575	\$	3,166
Grand Totals		51,392		1,858,227		3,013

#### Exhibit C-2a: LACERA Membership – Retired Members as of June 30, 2007 Subtotaled by Plan and Retirement Type



Туре	Plan	Number	Annual Benefits in Thousands	_	Average Monthly Benefit
Healthy Retirees					
	General A	22,101	\$ 889,293	\$	3,353
	General B	417	11,553		2,309
	General C	261	5,549		1,772
	General D	3,613	76,569		1,766
	General E	5,304	78,752		1,237
	Safety A	2,985	214,765		5,996
	Safety B	284	12,904	_	3,786
	Total	34,965	\$ 1,289,385	\$	3,073
<b>Disabled Retirees</b>					
	General A	2,668	\$ 72,266	\$	2,257
	General B	68	1,312		1,608
	General C	65	1,355		1,737
	General D	1,115	26,317		1,967
	Safety A	3,864	249,816		5,388
	Safety B	1,265	47,048	_	3,099
	Total	9,045	\$ 398,114	\$	3,668
Beneficiaries					
	General A	5,141	\$ 108,575	\$	1,760
	General B	32	490		1,276
	General C	34	325		797
	General D	424	5,064		995
	General E	341	2,491		609
	Safety A	1,312	51,160		3,249
	Safety B	98	2,623	_	2,230
	Total	7,382	\$ 170,728	\$	1,927
Grand Totals		51,392	\$ 1,858,227	\$	3,013

#### Exhibit C-2b: LACERA Membership – Retired Members as of June 30, 2007 Subtotaled by Retirement Type and Plan



		Age Groups											
	0-29	30-39	40-49	50-59	60-69	70+	Total						
General Plans:													
Plan A													
Male	-	-	-	564	406	45	1,015						
Female	-	-	-	1,268	484	52	1,804						
Plan B													
Male	-	-	1	80	36	1	118						
Female	-	-	11	169	50	9	239						
Plan C													
Male	-	-	2	65	15	1	83						
Female	-	-	20	114	40	3	177						
Plan D													
Male	1,508	4,089	4,698	3,693	1,310	162	15,460						
Female	3,401	9,059	9,807	7,179	2,097	183	31,726						
Plan E													
Male	200	826	1,960	2,685	1,301	145	7,117						
Female	1,589	4,443	6,588	6,775	2,455	240	22,090						
Safety Plans:													
Plan A													
Male	-	-	1	371	18	-	390						
Female	-	-	-	42	2	-	44						
Plan B													
Male	1,179	3,398	4,190	1,608	36	-	10,411						
Female	261	551	480	128	2	-	1,422						
Grand Totals:	8,138	22,366	27,758	24,741	8,252	841	92,096						

#### Exhibit C-3: Age Distribution of Active Members as of June 30, 2007



Exhibit C-4: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2007 All Plans

_	
	Count

	Years of Service												Total
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	979	451	181	36	19	11	0	0	0	0	0	0	1,677
25-29	1,832	1,724	887	430	337	1,241	10	0	0	0	0	0	6,461
30-34	1,266	1,300	832	602	538	4,676	572	19	0	0	0	0	9,805
35-39	979	896	601	414	420	4,991	2,443	1,763	49	5	0	0	12,561
40-44	664	674	473	311	266	3,500	2,283	4,410	1,258	56	11	3	13,909
45-49	611	551	366	268	213	2,861	1,569	3,413	2,637	1,278	38	44	13,849
50-54	387	421	277	209	173	2,214	1,324	2,497	2,113	2,501	1,075	141	13,332
55-59	251	262	175	128	106	1,563	1,024	1,818	1,332	1,772	1,894	1,084	11,409
60-64	89	103	85	71	74	843	628	1,085	756	823	725	864	6,146
65 & Over	29	61	27	25	34	435	392	582	415	399	238	310	2,947
Total Count	7,087	6,443	3,904	2,494	2,180	22,335	10,245	15,587	8,560	6,834	3,981	2,446	92,096

#### Average Compensation

	Years of Service												Average
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	40,445	38,146	36,336	41,105	36,871	42,273	-	-	-	-	-	-	39,369
25-29	44,381	44,774	45,724	48,044	49,987	49,853	55,514	-	-	-	-	-	46,275
30-34	46,431	47,878	50,111	52,005	55,168	57,057	64,609	58,132	-	-	-	-	53,908
35-39	46,301	51,141	52,933	56,769	60,816	61,121	69,801	67,727	70,005	97,680	-	-	61,373
40-44	45,015	47,525	50,274	55,269	55,807	58,439	69,001	73,232	68,690	88,177	93,500	112,860	64,380
45-49	44,874	45,614	51,764	55,655	57,975	56,997	66,402	73,808	81,054	73,773	99,906	108,390	67,478
50-54	47,174	50,733	57,546	57,663	58,949	56,573	64,287	68,806	79,193	76,691	71,500	84,258	68,097
55-59	44,194	51,158	53,316	57,155	60,818	57,053	61,484	65,711	73,536	74,655	77,549	71,204	67,796
60-64	46,312	62,742	55,444	63,679	62,561	58,796	60,849	63,262	70,799	71,911	72,608	73,241	66,628
65 & Over	78,730	76,659	84,277	82,395	69,859	62,568	57,553	59,492	68,006	67,360	70,329	70,456	65,066
Avg. Annual Compensation	44,881	47,419	50,108	54,130	56,703	57,891	66,237	69,924	76,006	74,607	74,842	73,301	62,729



#### Exhibit C-4a: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2007 General Plan A

Count

	Years of Service												Total
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	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	1	4	7	17	24	369	41	463
55-59	0	0	0	1	2	7	14	21	35	68	747	474	1,369
60-64	0	0	0	0	1	8	15	24	32	30	301	296	707
65 & Over	0	0	0	0	1	2	4	6	21	15	93	138	280
Total Count	0	0	0	1	4	18	37	58	105	137	1,510	949	2,819

Compensation

	Years of Service												Average
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	93,744	52,974	71,133	68,752	76,048	64,617	68,130	65,733
55-59	-	-	-	78,600	74,772	73,673	67,140	83,986	83,534	79,833	75,005	72,342	74,594
60-64	-	-	-	-	145,896	58,140	80,287	90,206	76,066	87,450	80,273	82,824	81,635
65 & Over	-	-	-	-	56,640	64,878	80,724	75,698	109,213	116,301	84,003	77,773	84,094
Avg. Annual Compensation	-	-	-	78,600	88,020	66,907	72,407	84,151	84,000	84,831	74,071	76,219	75,848



#### Exhibit C-4b: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2007 General Plan B

						Years of	of Service						Total
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	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	2	10	0	0	12
50-54	0	0	0	0	0	1	2	2	2	88	16	2	113
55-59	0	0	0	0	0	3	1	2	3	87	37	3	136
60-64	0	0	0	1	0	0	0	0	2	46	13	1	63
65 & Over	0	0	0	0	0	0	0	0	0	28	5	0	33
Total Count	0	0	0	1	0	4	3	4	9	259	71	6	357

#### Compensation

Count

						Years o	of Service						Average
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-	49,572	63,494	-	-	61,174
50-54	-	-	-	-	-	89,556	95,238	66,786	76,542	64,742	79,052	139,578	69,097
55-59	-	-	-	-	-	106,832	43,500	78,672	93,300	82,965	79,707	100,744	82,872
60-64	-	-	-	57,984	-	-	-	-	111,378	79,885	70,939	65,616	78,465
65 & Over	-	-	-	-	-	-	-	-	-	73,590	64,558	-	72,221
Avg. Annual Compensation	-	-	-	57,984	-	102,513	77,992	72,729	83,876	74,461	76,887	107,834	76,021



#### Exhibit C-4c: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2007 General Plan C

						Years	of Service						Total
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	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	1	21	0	0	22
50-54	0	0	0	0	0	0	1	0	2	65	5	1	74
55-59	0	0	0	0	0	1	0	2	2	90	10	0	105
60-64	0	0	0	0	0	0	0	1	3	32	4	1	41
65 & Over	0	0	0	0	0	0	0	0	0	16	2	0	18
Total Count	0	0	0	0	0	1	1	3	8	224	21	2	260

#### Compensation

Count

						Years	of Service						Average
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-	112,728	55,573	-	-	58,171
50-54	-	-	-	-	-	-	94,044	-	87,096	71,274	94,001	90,876	73,810
55-59	-	-	-	-	-	89,556	-	100,140	72,054	71,297	138,439	-	78,429
60-64	-	-	-	-	-	-	-	74,604	110,456	69,731	89,508	221,112	78,451
65 & Over	-	-	-	-	-	-	-	-	-	62,898	54,636	-	61,980
Avg. Annual Compensation	-	-	-	-	-	89,556	94,044	91,628	95,299	68,993	110,557	155,994	74,265



#### Exhibit C-4d: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2007 General Plan D

						Years of Se	ervice						Total
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	504	256	95	16	14	8	0	0	0	0	0	0	893
25-29	1,069	1,200	617	260	233	631	6	0	0	0	0	0	4,016
30-34	783	911	566	350	387	2,765	232	8	0	0	0	0	6,002
35-39	647	650	403	266	305	3,028	1,171	663	13	0	0	0	7,146
40-44	459	491	322	209	192	2,253	1,263	1,801	424	10	0	0	7,424
45-49	410	395	244	193	154	1,890	946	1,670	812	361	6	0	7,081
50-54	268	312	184	155	133	1,447	812	1,363	790	651	117	10	6,242
55-59	164	184	128	90	76	1,032	675	1,010	567	456	157	91	4,630
60-64	52	63	50	57	56	549	379	626	338	245	47	34	2,496
65 & Over	18	28	17	21	21	251	224	348	186	122	11	9	1,256
Total Count	4,374	4,490	2,626	1,617	1,571	13,854	5,708	7,489	3,130	1,845	338	144	47,186

Compensation

Count

_						Years of Se	ervice						Average
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	25 627	22.017	22 508	29.224	26 744	40 724							24.020
	35,637	33,917	32,598	38,234	36,741	40,731	-	-	-	-	-	-	34,930
25-29	41,452	43,230	44,425	48,231	47,927	44,623	52,928	-	-	-	-	-	43,770
30-34	45,210	46,266	49,251	52,957	54,050	54,261	53,169	56,550	-	-	-	-	51,265
35-39	46,362	51,074	51,866	56,329	59,603	59,374	65,723	57,315	63,900	-	-	-	57,772
40-44	43,925	47,745	50,333	56,929	54,950	58,480	66,701	65,541	62,428	71,620	-	-	59,736
45-49	46,122	46,017	52,663	57,852	58,299	58,212	66,448	70,268	71,082	64,864	79,576	-	62,409
50-54	46,279	52,327	59,602	58,950	59,425	59,422	65,744	68,541	75,927	70,064	71,234	78,028	64,760
55-59	43,495	51,734	53,278	59,985	57,879	58,499	63,571	68,068	74,592	73,225	80,788	71,407	64,831
60-64	45,330	71,857	55,854	64,043	64,182	59,853	61,624	63,735	74,510	75,229	79,273	91,108	65,494
65 & Over	70,068	75,057	84,208	79,030	68,090	65,087	57,649	60,129	67,821	67,194	110,774	76,012	64,311
Avg. Annual Compensation	43,415	46,770	49,639	55,399	55,781	57,429	64,695	66,342	71,915	70,332	78,225	76,806	58,525



#### Exhibit C-4e: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2007 General Plan E

						Years o	f Service						Total
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	207	114	58	14	4	2	0	0	0	0	0	0	399
25-29	365	315	182	133	55	338	2	0	0	0	0	0	1,390
30-34	281	241	188	204	99	1,037	120	8	0	0	0	0	2,178
35-39	234	185	148	100	77	1,180	629	520	18	0	0	0	3,091
40-44	167	157	116	76	51	925	668	1,291	528	12	0	0	3,991
45-49	194	151	109	68	53	840	491	1,134	982	532	3	0	4,557
50-54	112	107	81	53	40	732	459	935	905	1,054	401	34	4,913
55-59	86	78	44	35	27	504	324	759	662	863	715	450	4,547
60-64	35	40	34	13	17	274	232	431	379	462	351	522	2,790
65 & Over	11	33	10	4	12	177	164	228	208	216	127	161	1,351
Total Count	1,692	1,421	970	700	435	6,009	3,089	5,306	3,682	3,139	1,597	1,167	29,207

#### Compensation

Count

						Years o	f Service						Average
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	30,725	32,809	31,221	35,276	30,714	37,872	-	-	-	-	-	-	31,588
25-29	36,667	38,504	41,371	43,527	44,487	41,753	43,038	-	-	-	-	-	39,911
30-34	39,974	43,157	45,006	45,548	50,941	47,158	49,100	48,709	-	-	-	-	45,736
35-39	39,934	46,320	48,583	49,647	57,516	51,612	58,745	52,687	48,895	-	-	-	51,967
40-44	44,120	44,236	42,387	43,595	51,130	49,772	62,059	61,649	54,877	63,470	-	-	55,618
45-49	41,621	43,868	44,933	47,985	54,629	50,042	59,355	66,787	67,447	56,000	73,816	-	59,012
50-54	46,851	45,753	45,334	53,692	57,367	49,532	58,876	63,634	70,641	61,451	57,463	64,853	60,183
55-59	44,866	49,798	50,668	47,287	66,830	52,324	55,938	61,110	69,136	66,005	62,413	61,598	61,443
60-64	45,714	48,386	53,999	62,524	52,317	54,518	57,892	60,391	66,365	68,026	63,624	65,259	62,526
65 & Over	92,905	78,019	84,394	100,062	74,057	57,250	56,856	58,093	64,011	63,346	57,287	61,375	61,130
Avg. Annual Compensation	39,888	43,419	44,730	46,899	53,843	49,886	58,734	61,867	66,337	62,885	61,050	63,300	56,538



#### Exhibit C-4f: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2007 Safety Plan A

						Year	s of Service						Total
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	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	1	0	0	1
50-54	0	0	0	0	0	0	1	0	2	15	110	16	144
55-59	0	0	0	0	0	0	0	1	0	11	201	56	269
60-64	0	0	0	0	0	0	0	0	0	1	9	8	18
65 & Over	0	0	0	0	0	0	0	0	0	0	0	2	2
Total Count	0	0	0	0	0	0	1	1	2	28	320	82	434

#### Compensation

Count

						Yea	rs of Service						Average
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-	-	97,356	-	-	97,356
50-54	-	-	-	-	-	-	103,284	-	116,898	114,202	121,931	114,338	120,083
55-59	-	-	-	-	-	-	-	86,328	-	113,609	130,136	130,935	129,464
60-64	-	-	-	-	-	-	-	-	-	91,740	126,771	133,476	127,805
65 & Over	-	-	-	-	-	-	-	-	-	-	-	271,656	271,656
Avg. Annual Compensation	-	-	-	-	-	-	103,284	86,328	116,898	112,566	127,221	131,377	126,864



#### Exhibit C-4g: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2007 Safety Plan B

						Years of	Service						Total
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	268	81	28	6	1	1	0	0	0	0	0	0	385
25-29	398	209	88	37	49	272	2	0	0	0	0	0	1,055
30-34	202	148	78	48	52	874	220	3	0	0	0	0	1,625
35-39	98	61	50	48	38	783	643	580	18	5	0	0	2,324
40-44	38	26	35	26	23	322	352	1,318	306	34	11	3	2,494
45-49	7	5	13	7	6	131	132	609	840	353	29	44	2,176
50-54	7	2	12	1	0	33	45	190	395	604	57	37	1,383
55-59	1	0	3	2	1	16	10	23	63	197	27	10	353
60-64	2	0	1	0	0	12	2	3	2	7	0	2	31
65 & Over	0	0	0	0	0	5	0	0	0	2	0	0	7
Total Count	1,021	532	308	175	170	2,449	1,406	2,726	1,624	1,202	124	96	11,833

Compensation

Count

						Years of	Service						Average
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	56,996	59,019	59,613	62,360	63,312	63,408							57,729
	,	,	,	,	,	,	-	-	-	-	-	-	,
25-29	59,323	63,093	63,831	62,967	65,958	72,052	75,750	-	-	-	-	-	64,195
30-34	60,144	65,484	68,659	72,506	71,537	77,650	85,133	87,476	-	-	-	-	74,618
35-39	61,104	66,483	74,412	74,042	77,237	82,207	88,042	93,113	95,524	97,680	-	-	84,959
40-44	62,117	63,229	75,863	76,055	73,337	83,046	90,428	95,086	101,202	101,766	93,500	112,860	92,227
45-49	61,911	66,475	92,145	69,583	79,216	84,067	92,279	96,591	106,639	110,977	106,811	108,390	101,821
50-54	86,630	68,472	108,461	68,724	-	85,743	91,307	96,099	105,552	111,845	113,951	105,469	106,259
55-59	101,064	-	93,736	91,794	93,924	94,116	94,214	92,290	103,819	109,765	112,922	104,303	106,195
60-64	82,284	-	84,108	-	-	108,553	111,306	157,772	99,522	100,383	-	123,288	109,534
65 & Over	-	-	-	-	-	123,422	-	-	-	92,460	-	-	114,576
Avg. Annual Compensation	59,441	63,585	71,046	71,172	71,801	79,994	88,746	95,110	105,109	110,806	110,243	107,288	88,639



#### Exhibit C-5: Distribution of Retired Members by Age and Retirement Year as of June 30, 2007 All Plans

Retirement Year													verage Ionthly
Age	Pre-1964	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-07	Total Count		Benefit
Under 35	0	0	0	0	2	0	6	16	45	43	112	\$	1,491
35-39	0	0	0	0	0	0	5	30	91	45	171		2,670
40-44	0	0	0	0	0	2	54	118	162	63	399		2,604
45-49	0	0	0	0	4	31	108	162	175	75	555		2,597
50-54	0	0	0	8	41	73	117	174	304	393	1,110		2,279
55-59	0	0	5	63	136	140	189	373	1,338	1,659	3,903		3,158
60-64	0	2	19	179	270	239	495	1,555	3,596	2,045	8,400		3,844
65-69	1	14	63	191	247	413	1,378	2,509	3,043	1,398	9,257		3,480
70-74	7	34	102	228	445	1,068	2,249	2,078	1,605	601	8,417		3,041
75-79	28	56	103	393	1,122	1,497	2,030	1,151	702	343	7,425		2,758
80-84	39	69	184	930	1,419	1,407	991	514	434	253	6,240		2,466
85-89	21	52	303	846	962	480	290	251	276	121	3,602		2,113
90-94	26	65	244	493	251	47	77	79	97	32	1,411		1,935
95-99	16	49	114	97	1	1	15	23	18	5	339		1,565
100 & Over	15	11	14	2	0	0	1	4	3	1	51		1,219
Total Count	153	352	1,151	3,430	4,900	5,398	8,005	9,037	11,889	7,077	51,392		
Avg Monthly Benefit	\$ 1,209	\$1,498	\$1,733	\$2,178	\$2,291	\$ 2,704	\$ 3,237	\$ 3,080	\$ 3,578	\$ 3,189		\$	3,013



#### Exhibit C-5a: Distribution of Retired Members by Age and Retirement Year as of June 30, 2007 General Plan A

					Det	irement Year					Total	Average
Age	Pre-1964	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-07	Count	Monthly Benefit
Under 35	0	0	0	0	0	0	3	5	11	8	27	\$ 1,092
35-39	0	0	0	0	0	0	0	2	3	1	6	1,424
40-44	0	0	0	0	0	1	1	0	2	5	9	1,416
45-49	0	0	0	0	1	1	2	5	7	5	21	1,895
50-54	0	0	0	4	9	11	11	24	61	65	185	2,175
55-59	0	0	2	33	49	36	43	160	470	540	1,333	3,171
60-64	0	1	9	91	97	89	258	780	1,634	928	3,887	3,922
65-69	1	6	39	102	119	251	926	1,330	1,668	388	4,830	3,743
70-74	1	14	60	146	289	793	1,581	1,325	608	194	5,011	3,221
75-79	12	26	63	280	833	1,104	1,640	581	317	177	5,033	2,810
80-84	16	43	120	698	1,151	1,258	730	314	276	169	4,775	2,397
85-89	10	31	241	759	930	430	212	199	223	102	3,137	2,053
90-94	19	39	216	491	249	42	65	67	81	25	1,294	1,893
95-99	12	36	111	97	1	1	14	22	16	5	315	1,476
100 & Over	11	11	14	2	0	0	1	4	3	1	47	1,226
Total Count	82	207	875	2,703	3,728	4,017	5,487	4,818	5,380	2,613	29,910	
Avg Monthly Benefit	\$ 993	\$1,115	\$1,377	\$ 1,878	\$ 1,949	\$ 2,462	\$ 3,228	\$ 3,153	\$ 4,080	\$ 4,047		\$ 2,982



#### Exhibit C-5b: Distribution of Retired Members by Age and Retirement Year as of June 30, 2007 General Plan B

					Potirom	ent Year					Total	Average Monthly
Age	Pre-1964	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-07	Count	Benefit
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	1	1	1	4	10	17	1,437
55-59	0	0	0	0	3	4	5	4	17	20	53	2,196
60-64	0	0	0	0	1	4	4	20	41	21	91	2,466
65-69	0	0	0	0	3	2	6	15	54	20	100	2,830
70-74	0	0	0	0	1	9	10	28	25	10	83	2,362
75-79	0	0	0	0	3	11	30	33	11	3	91	1,732
80-84	0	0	0	0	2	18	24	10	4	2	60	1,413
85-89	0	0	0	0	4	7	4	3	3	0	21	1,213
90-94	0	0	0	0	0	1	0	0	0	0	1	802
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	0	17	57	84	114	159	86	517	
Avg Monthly Benefit	\$-	\$-	\$-	\$ -	\$ 946	\$ 898	\$1,424	\$1,966	\$2,724	\$3,125		\$2,153

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#### Exhibit C-5c: Distribution of Retired Members by Age and Retirement Year as of June 30, 2007 General Plan C

					Potirom	ent Year					Total	Average Monthly
Age	Pre-1964	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-07	Count	Benefit
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	1	0	1	3,515
50-54	0	0	0	1	1	4	1	3	4	5	19	1,351
55-59	0	0	0	0	3	2	2	2	17	11	37	1,736
60-64	0	0	0	0	2	3	6	10	15	19	55	1,830
65-69	0	0	0	0	0	7	8	9	27	13	64	1,867
70-74	0	0	0	0	0	3	12	16	28	8	67	1,918
75-79	0	0	0	0	3	8	18	19	6	5	59	1,696
80-84	0	0	0	0	3	9	16	1	3	3	35	979
85-89	0	0	0	0	2	8	6	1	3	2	22	1,113
90-94	0	0	0	0	0	0	0	1	0	0	1	1,428
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	1	14	44	69	62	104	66	360	
Avg Monthly Benefit	\$-	\$ -	\$-	\$1,367	\$ 792	\$ 846	\$1,144	\$1,606	\$2,176	\$2,241		\$1,673



#### Exhibit C-5d: Distribution of Retired Members by Age and Retirement Year as of June 30, 2007 General Plan D

						ent Year					Total	Mo	erage onthly
Age	Pre-1964	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-07	Count	Be	enefit
Under 35	0	0	0	0	0	0	1	3	13	12	29	\$	957
35-39	0	0	0	0	0	0	1	4	18	7	30		1,578
40-44	0	0	0	0	0	0	10	15	38	19	82		1,593
45-49	0	0	0	0	0	4	15	40	47	23	129		1,812
50-54	0	0	0	0	3	6	26	54	120	210	419		1,507
55-59	0	0	0	1	3	21	35	82	277	294	713		1,630
60-64	0	0	0	0	4	12	46	190	353	394	999		1,991
65-69	0	0	0	0	5	21	64	191	416	397	1,094		2,005
70-74	0	0	0	0	2	21	60	220	371	166	840		1,692
75-79	0	0	0	0	5	18	88	201	145	63	520		1,521
80-84	0	0	0	0	9	21	76	72	35	19	232		1,293
85-89	0	0	0	0	2	9	26	8	8	3	56		1,049
90-94	0	0	0	0	0	1	4	0	2	1	8		1,036
95-99	0	0	0	0	0	0	0	0	1	0	1		532
100 & Over	0	0	0	0	0	0	0	0	0	0	0		-
Total Count	0	0	0	1	33	134	452	1,080	1,844	1,608	5,152		
Avg Monthly Benefit	\$-	\$-	\$-	\$2,128	\$1,320	\$1,154	\$1,265	\$1,487	\$1,778	\$2,077		\$	1,746



#### Exhibit C-5e: Distribution of Retired Members by Age and Retirement Year as of June 30, 2007 General Plan E

					Retirem	ent Year					Total	Avera Montl	
Age	Pre-1964	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-07	Count	Bene	•
Under 35	0	0	0	0	0	0	0	2	1	2	5	\$	681
35-39	0	0	0	0	0	0	0	0	2	2	4		590
40-44	0	0	0	0	0	0	0	0	1	4	5		834
45-49	0	0	0	0	0	0	0	0	2	2	4	1,	,085
50-54	0	0	0	0	0	0	0	0	6	5	11		622
55-59	0	0	0	0	0	0	0	6	168	414	588		623
60-64	0	0	0	0	0	0	2	112	522	479	1,115		994
65-69	0	0	0	0	0	0	43	303	651	550	1,547	1,	,567
70-74	0	0	0	0	0	17	129	358	518	186	1,208	1,	,390
75-79	0	0	0	0	2	42	155	277	154	64	694	1,	,107
80-84	0	0	0	0	6	51	127	84	56	28	352		906
85-89	0	0	0	0	5	26	31	14	16	4	96		761
90-94	0	0	0	0	2	3	4	4	2	1	16		625
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	0	15	139	491	1,160	2,099	1,741	5,645		
Avg Monthly Benefit	\$-	\$-	\$-	\$-	\$ 412	\$ 378	\$ 718	\$ 875	\$1,303	\$1,499		<b>\$</b> 1,	,199



#### Exhibit C-5f: Distribution of Retired Members by Age and Retirement Year as of June 30, 2007 Safety Plan A

					Retirem	ent Year					Total	verage onthly
Age	Pre-1964	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-07	Count	enefit
Under 35	0	0	0	0	2	0	0	3	3	0	8	\$ 1,354
35-39	0	0	0	0	0	0	1	0	2	0	3	4,811
40-44	0	0	0	0	0	0	0	1	1	0	2	3,934
45-49	0	0	0	0	0	0	3	2	5	0	10	3,988
50-54	0	0	0	3	13	17	6	20	17	16	92	3,401
55-59	0	0	3	29	72	57	70	94	327	290	942	5,759
60-64	0	1	10	88	161	126	166	420	977	162	2,111	6,190
65-69	0	8	24	89	120	130	328	658	217	26	1,600	5,663
70-74	6	20	42	82	153	224	452	129	54	37	1,199	5,009
75-79	16	30	40	113	275	312	96	40	68	31	1,021	4,420
80-84	23	26	64	232	247	50	18	33	60	32	785	4,079
85-89	11	21	62	87	19	0	11	26	23	10	270	3,664
90-94	7	26	28	2	0	0	4	7	12	5	91	2,872
95-99	4	13	3	0	0	0	1	1	1	0	23	2,828
100 & Over	4	0	0	0	0	0	0	0	0	0	4	1,137
Total Count	71	145	276	725	1,062	916	1,156	1,434	1,767	609	8,161	
Avg Monthly Benefit	\$1,459	\$2,044	\$2,863	\$3,299	\$3,603	\$4,619	\$5,504	\$6,011	\$6,902	\$6,830		\$ 5,266



Exhibit C-5g:	Distribution of Retired Members by Age and Retirement Year as of June 30, 2007
_	Safety Plan B

						ent Year					Total	Average Monthly
Age	Pre-1964	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04	2005-07	Count	Benefit
Under 35	0	0	0	0	0	0	2	3	17	21	43	\$2,222
35-39	0	0	0	0	0	0	3	24	66	35	128	3,000
40-44	0	0	0	0	0	1	43	102	120	35	301	2,935
45-49	0	0	0	0	3	26	88	115	113	45	390	2,871
50-54	0	0	0	0	15	34	72	72	92	82	367	3,067
55-59	0	0	0	0	6	20	34	25	62	90	237	4,066
60-64	0	0	0	0	5	5	13	23	54	42	142	3,912
65-69	0	0	0	0	0	2	3	3	10	4	22	2,594
70-74	0	0	0	0	0	1	5	2	1	0	9	2,606
75-79	0	0	0	0	1	2	3	0	1	0	7	783
80-84	0	0	0	0	1	0	0	0	0	0	1	992
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	0	31	91	266	369	536	354	1,647	
Avg Monthly Benefit	\$-	\$-	\$-	\$-	\$1,776	\$1,967	\$2,679	\$2,913	\$3,210	\$4,159		\$3,166



#### 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.



		Gen		Safety				
Entry Age	Plan A	Plan B	Plan C	Plan D	Plan A	Plan B		
16	2.41%	4.82%	4.08%	4.08%	3.59%	7.17%		
17	2.46%	4.92%	4.16%	4.16%	3.59%	7.17%		
18	2.51%	5.02%	4.25%	4.25%	3.59%	7.17%		
19	2.56%	5.12%	4.34%	4.34%	3.65%	7.31%		
20	2.62%	5.23%	4.43%	4.43%	3.72%	7.44%		
21	2.67%	5.34%	4.52%	4.52%	3.79%	7.58%		
22	2.72%	5.45%	4.62%	4.62%	3.86%	7.72%		
23	2.78%	5.56%	4.71%	4.71%	3.93%	7.87%		
24	2.84%	5.68%	4.81%	4.81%	4.01%	8.01%		
25	2.90%	5.79%	4.91%	4.91%	4.08%	8.16%		
26	2.96%	5.91%	5.01%	5.01%	4.16%	8.32%		
27	3.02%	6.03%	5.11%	5.11%	4.24%	8.47%		
28	3.08%	6.16%	5.22%	5.22%	4.32%	8.63%		
29	3.14%	6.29%	5.33%	5.33%	4.40%	8.80%		
30	3.21%	6.42%	5.44%	5.44%	4.48%	8.97%		
31	3.28%	6.55%	5.55%	5.55%	4.57%	9.14%		
32	3.34%	6.69%	5.66%	5.66%	4.66%	9.32%		
33	3.41%	6.83%	5.78%	5.78%	4.75%	9.51%		
34	3.49%	6.97%	5.90%	5.90%	4.85%	9.70%		
35	3.56%	7.12%	6.02%	6.02%	4.95%	9.89%		
36	3.64%	7.28%	6.15%	6.15%	5.04%	10.09%		
37	3.72%	7.43%	6.28%	6.28%	5.14%	10.28%		
38	3.79%	7.59%	6.41%	6.41%	5.23%	10.46%		
39	3.87%	7.75%	6.55%	6.55%	5.32%	10.64%		
40	3.95%	7.90%	6.69%	6.69%	5.41%	10.82%		
41	4.03%	8.06%	6.83%	6.83%	5.50%	10.99%		
42	4.10%	8.21%	6.97%	6.97%	5.58%	11.15%		
43	4.18%	8.36%	7.12%	7.12%	5.65%	11.31%		
44	4.25%	8.50%	7.27%	7.27%	5.72%	11.44%		
45	4.32%	8.64%	7.42%	7.42%	5.77%	11.54%		
46	4.39%	8.78%	7.56%	7.56%	5.80%	11.59%		
47	4.45%	8.91%	7.70%	7.70%	5.80%	11.59%		
48	4.52%	9.03%	7.84%	7.84%	5.80%	11.59%		
49	4.57%	9.14%	7.98%	7.98%	5.80%	11.59%		
50	4.61%	9.21%	8.11%	8.11%	5.80%	11.59%		
51	4.63%	9.26%	8.24%	8.24%	5.80%	11.59%		
52	4.63%	9.26%	8.36%	8.36%	5.80%	11.59%		
53	4.63%	9.26%	8.47%	8.47%	5.80%	11.59%		
54	4.63%	9.26%	8.57%	8.57%	5.80%	11.59%		
55	4.63%	9.26%	8.65%	8.65%	5.80%	11.59%		
56	4.63%	9.26%	8.69%	8.69%	5.80%	11.59%		
57	4.63%	9.26%	8.69%	8.69%	5.80%	11.59%		
58	4.63%	9.26%	8.69%	8.69%	5.80%	11.59%		
59	4.63%	9.26%	8.69%	8.69%	5.80%	11.59%		
60	4.63%	9.26%	8.69%	8.69%	5.80%	11.59%		

#### Exhibit D-1: Normal Member Contribution Rates

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.



		Gen	eral		Safety				
Entry Age	Plan A	Plan B	Plan C	Plan D	Plan A	Plan B			
16	4.33%	5.89%	5.06%	4.98%	7.23%	9.42%			
17	4.42%	6.02%	5.16%	5.07%	7.23%	9.42%			
18	4.51%	6.14%	5.27%	5.18%	7.23%	9.42%			
19	4.60%	6.26%	5.38%	5.29%	7.35%	9.61%			
20	4.70%	6.40%	5.49%	5.40%	7.49%	9.78%			
21	4.79%	6.53%	5.60%	5.51%	7.63%	9.96%			
22	4.88%	6.66%	5.73%	5.64%	7.77%	10.14%			
23	4.99%	6.80%	5.84%	5.74%	7.91%	10.34%			
24	5.10%	6.95%	5.96%	5.87%	8.07%	10.53%			
25	5.21%	7.08%	6.09%	5.99%	8.21%	10.72%			
26	5.32%	7.23%	6.21%	6.11%	8.37%	10.93%			
27	5.42%	7.37%	6.33%	6.23%	8.53%	11.13%			
28	5.53%	7.53%	6.47%	6.37%	8.69%	11.34%			
29	5.64%	7.69%	6.61%	6.50%	8.86%	11.56%			
30	5.76%	7.85%	6.74%	6.64%	9.02%	11.79%			
31	5.89%	8.01%	6.88%	6.77%	9.20%	12.01%			
32	6.00%	8.18%	7.02%	6.90%	9.38%	12.25%			
33	6.12%	8.35%	7.17%	7.05%	9.56%	12.50%			
34	6.27%	8.52%	7.31%	7.20%	9.76%	12.75%			
35	6.39%	8.71%	7.46%	7.34%	9.96%	13.00%			
36	6.54%	8.90%	7.62%	7.50%	10.14%	13.26%			
37	6.68%	9.09%	7.79%	7.66%	10.35%	13.51%			
38	6.81%	9.28%	7.95%	7.82%	10.53%	13.74%			
39	6.95%	9.48%	8.12%	7.99%	10.71%	13.98%			
40	7.09%	9.66%	8.29%	8.16%	10.89%	14.22%			
41	7.24%	9.86%	8.47%	8.33%	11.07%	14.44%			
42	7.36%	10.04%	8.64%	8.50%	11.23%	14.65%			
43	7.51%	10.22%	8.83%	8.68%	11.37%	14.86%			
44	7.63%	10.39%	9.01%	8.87%	11.51%	15.03%			
45	7.76%	10.57%	9.20%	9.05%	11.61%	15.16%			
46	7.88%	10.74%	9.37%	9.22%	11.67%	15.23%			
47	7.99%	10.90%	9.55%	9.39%	11.67%	15.23%			
48	8.12%	11.04%	9.72%	9.56%	11.67%	15.23%			
49	8.21%	11.18%	9.89%	9.73%	11.67%	15.23%			
50	8.28%	11.26%	10.05%	9.89%	11.67%	15.23%			
51	8.31%	11.32%	10.22%	10.05%	11.67%	15.23%			
52	8.31%	11.32%	10.36%	10.20%	11.67%	15.23%			
53	8.31%	11.32%	10.50%	10.33%	11.67%	15.23%			
54	8.31%	11.32%	10.62%	10.45%	11.67%	15.23%			
55	8.31%	11.32%	10.72%	10.55%	11.67%	15.23%			
56	8.31%	11.32%	10.77%	10.60%	11.67%	15.23%			
57	8.31%	11.32%	10.77%	10.60%	11.67%	15.23%			
58	8.31%	11.32%	10.77%	10.60%	11.67%	15.23%			
59	8.31%	11.32%	10.77%	10.60%	11.67%	15.23%			
60	8.31%	11.32%	10.77%	10.60%	11.67%	15.23%			

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

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.

#### **Appendix E: Historical Information**



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



#### Exhibit E-1: Active Membership Data

	General Members									Saf	ety Member	S			Total Members					
Valuation Date (June 30)	Number	S	nnual Salary nillions)	Average Age	Average Credited Service	M	erage onthly alary	Number	S	nnual alary nillions)	Average Age	Average Credited Service	M	verage onthly alary	Number	S	nnual alary nillions)	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



#### Exhibit E-2: Retired Membership Data

General Members						Safety Members						Total Members						
Valuation Date (June 30)	Annual Allowance Number (in millions)		Average Age	Average Monthly Benefit		Number	Annual Allowance Number (in millions)		Average Age	Average Je Monthly Benefit		Number	Annual Allowance (in millions)		Average N		erage onthly enefit	
1998 1999 2000 2001 2002 2003	35,462 35,837 36,596 37,077 37,618 38,283	\$ \$ \$ \$ \$ \$	692 725 780 890 914 984	71.1 71.4 71.4 71.6 71.8 71.9	\$ \$ \$ \$ \$ \$ \$	1,626 1,686 1,778 2,001 2,025 2,142	7,425 7,674 8,032 8,319 8,624 8,949	\$ \$ \$ \$ \$ \$ \$ \$	267 291 324 382 403 443	62.5 63.1 63.4 63.7 63.9	\$ \$ \$ \$ \$ \$ \$ \$ \$	3,001 3,166 3,358 3,828 3,892 4,128	42,887 43,511 44,628 45,396 46,242 47,232	\$\$\$\$\$	959 1,016 1,104 1,272 1,317 1,427	69.6 70.0 69.9 70.1 70.3 70.4	\$ \$ \$ \$ \$ \$	2,374
2003 2004 2005 2006 2007	39,097 40,251 41,309 41,584	\$ \$ \$ \$	1,056 1,138 1,224 1,280	71.3 72.0 72.1 72.2 72.2		2,142 2,250 2,355 2,469 2,565	9,235 9,518 9,683 9,808	\$ \$ \$ \$ \$	478 514 549 578	64.2 64.6 65.0 65.4	) () () () () () () () () () () () () ()	4,318 4,504 4,728 4,914	48,332 49,769 50,992 51,392	) () () () () () () () () () () () () () () () () () () (	1,534 1,652 1,773 1,858	70.4 70.5 70.7 70.8 70.9	÷ \$ \$ \$ \$ \$ \$	2,645 2,766 2,898



#### Exhibit E-3: Contribution Rates

		Gen			Saf	ety Members		Total All Members							
Valuation Date (June 30)	Calculated Normal Cost	Member Contributions	Net County Normal Cost	UAAL Rate	Total Annual Contribution	Calculated Normal Cost	Member Contributions	Net County Normal Cost	UAAL Rate	Total Annual Contribution	Calculated Normal Cost	Member Contributions	Net County Normal Cost	UAAL Rate	Total Annual 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%



#### Appendix F: Glossary

hav die tion ärtlän, n. e. e. e. die tion ärtlän, n. e. e. e. intimeringenetei- terres verangenetei- dierres v	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.

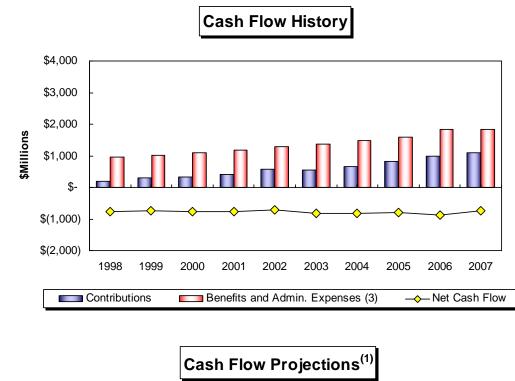


Contingency Reserve	Reserves accumulated for future earning deficiencies, investment losses, and other contingencies. Additions include investment income and other revenues; deductions include investment expense, administrative expense, interest allocated to other reserves, funding the STAR Reserve, 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 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.
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.

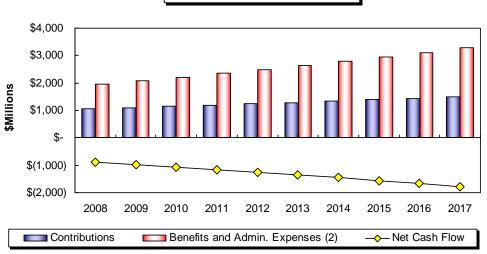


Normal Cost	That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.
Open Amortization Period	As discussed in the Actuarial Cost Method section of Appendix C, LACERA uses an open (often referred to as "rolling") 30-year amortization period. That is, the amortization begins again or is recalculated at each valuation date. This is as opposed to a closed (or "fixed") amortization period which is a specific number of years that is counted from one date and declines to zero with the passage of time.
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.





#### Exhibit 15b: Cash Flow History and Projections - Charts



- <sup>(1)</sup> Future contributions are assumed to be at the 10.16% normal cost rate plus a UAAL payment of 2.24% after the first year.
- <sup>(2)</sup> Investment expenses are assumed to be covered by investment return.
- <sup>(3)</sup> Benefit payments for the Plan Year ending 2006 include approximately \$94 million in retroactive benefit payments pursuant to the Ventura settlement.