ACTUARIAL VALUATION June 30, 2001



Ву

Karen I. Steffen

Fellow, Society of Actuaries Member, American Academy of Actuaries

and

Nick J. Collier

Associate, Society of Actuaries Member, American Academy of Actuaries



1301 Fifth Avenue, Suite 3800 Seattle , WA 98101-2605 Tel +1 206 624.7940 Fax +1 206 340.1380 www.milliman.com

March 1, 2002

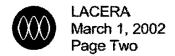
Board of Investments Los Angeles County Employees Retirement Association 300 North Lake Avenue, Suite 820 Pasadena, CA 91101-4199

Dear Members of the Board:

As requested, we have made an actuarial valuation of the Los Angeles County Employees Retirement Association (LACERA). 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, 2001 and the Interim Funding Policy adopted by the Board at the February 14, 2001 meeting. In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the 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.

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 principles prescribed by the Actuarial Standards Board (ASB) and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion 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.



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, 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.

We would like to express our appreciation to Ms. Marsha Richter, Chief Executive Officer of LACERA, and to members of her staff, who gave substantial assistance in supplying the data on which this report is based.

- I, Karen I. Steffen, am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.
- I, Nick J. Collier, am a member of the American Academy of Actuaries and an Associate of the Society 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,

Karen I. Steffen, F.S.A., M.A.A.A.

Consulting Actuary

Nick J. Collier, A.S.A. M.A.A.A. Associate Actuary

Wich Coll'

KIS/cdc

Table of Contents

		Page
Section 1: Exhibit 0:	Summary of the Findings	
Section 2:	Scope of the Report	7
Section 3:	Assets	9
Exhibit 1:	Statement of Plan Net Assets For Years Ended June 30, 2000 and 2001	12
Exhibit 2:	Statement of Changes in Plan Net Assets For the Years Ended June 30, 2000 and 2001	13
Exhibit 3:	Allocation of Assets by Reserve Amounts	14
Exhibit 4:	3-Year Smoothing of Gains and Losses on Market Vaule	15
Exhibit 5:	Allocation of Assets	16
Section 4:	Actuarial Liabilities	17
Exhibit 6:	Actuarial Balance Sheet – June 30, 2001	18
Exhibit 7:	Analysis of Change in Unfunded Actuarial Accrued Liability	24
Section 5:	Member Contributions	25
Exhibit 8:	Sample Member Contribution Rates	27
Section 6:	County Contributions	28
Exhibit 9:	Calculated Normal Cost Contribution Rates - June 30, 2001	30
Exhibit 10	: County Normal Cost Contributions	31
Section 7:	Accounting Information	32
Exhibit 11	: Schedule of Funding Progress	33
Exhibit 12	: Schedule of Contributions from the Employer	34
Exhibit 13	: Solvency Test	35
Section 8:	Supplemental Information	36
Exhibit 14	A: Cash Flow History and Projections	37
Exhibit 14	B: Cash Flow History and Projections	38

Table of Contents

		Page
Annandiy A: A	Actuarial Procedures and Assumptions	Δ_1
• •	Summary of Valuation Assumptions as of June 30, 2001	
	Mortality for Members Retired for Service and Beneficiaries	
Table A-3: N	Mortality for Members Retired for Disability	A-11
Table A-4: I	mmediate Refund of Contributions Upon Termination of Employment While Vested	A-12
Table A-5a:	Annual Increase in Salary Due to Promotions and Longevity	A-13
Table A-5b:	Total Annual Increase in Salary	A-13
Tables A-6:	Rate of Separation From Active Service for General Members Plan A – Male	A-15
Tables A-7:	Rate of Separation From Active Service for General Members Plan A – Female	A-16
Tables A-8:	Rate of Separation From Active Service for General Members Plan B – Male	A-17
Tables A-9:	Rate of Separation From Active Service for General Members Plan B – Female	A-18
Tables A-10	Rate of Separation From Active Service for General Members Plan C – Male	A-19
Tables A-11	:Rate of Separation From Active Service for General Members Plan C – Female	A-20
Tables Á-12	Rate of Separation From Active Service for General Members Plan D – Male	A-21
Tables A-13	Rate of Separation From Active Service for General Members Plan D – Female	A-22
Tables A-14	Rate of Separation From Active Service for General Members Plan E – Male	A-23
Tables A-15	Rate of Separation From Active Service for General Members Plan E – Female	A-24
Tables A-16	Rate of Separation From Active Service for Safety Members Plan A & B – Male	A-25
Tables A-17	Rate of Separation From Active Service for Safety Members	۸ 26

Table of Contents

Page

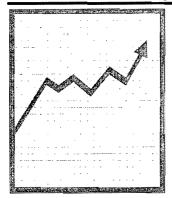
Appendix B:	Summary of Plan Provisions	B-1
Appendix C:	Valuation Data and Schedules	C-1
Exhibit C-1:	: LACERA Membership – Active Members as of June 30, 2001	C-2
Exhibit C-2:	: LACERA Membership – Retired Members as of June 30, 2001	C-3
Exhibit C-3:	: Age Distribution of Active Members as of June 30, 2001	C-4
Exhibit C-4:	: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 - All Plans	C -5
Exhibit C-4	a:Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 - General Plan A	C-6
Exhibit C-4	b:Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 - General Plan B	C-7
Exhibit C-4	c:Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 - General Plan C	C-8
Exhibit C-4	d:Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 - General Plan D	C-9
Exhibit C-4	e:Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 - General Plan E	C-10
Exhibit C-4	f: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 - Safety Plan A	C-11
Exhibit C-4	g:Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 - Safety Plan B	C-12
Exhibit C-5	: Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 - All Plans	C-13
Exhibit C-5a	a:Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 - General Plan A	C-14
Exhibit C-5	b:Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 - General Plan B	C -15
Exhibit C-5	c:Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 - General Plan C	C -16
Exhibit C-5	d:Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 - General Plan D	C-17
Exhibit C-5	e:Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 - General Plan E	C-18
Exhibit C-5	f: Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 - Safety Plan A	C- 19

Milliman USA

Table of Contents (continued)

	Page
Exhibit C-5g:Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 - Safety Plan B	C-20
Appendix D: Member Contribution Rates	D-1
Appendix E: Glossary	E-1

Section 1: Summary of the Findings



Funding Progress

2001 Valuation Results

The June 30, 2001 actuarial valuation indicates there is no Unfunded Actuarial Accrued Liability (UAAL). The actuarial value of valuation assets, \$26.5 billion, is equal to the Actuarial Accrued Liability, \$26.5 billion. The funding ratio of the actuarial assets to the Actuarial Accrued Liability is 100%.

Therefore, in accordance with the funding agreement with the County, no UAAL contributions are required. The County currently pays the normal cost contributions, 9.04% of payroll, for the fiscal year ending June 30, 2002 as determined by the 1998 valuation. The County normal cost contributions based on the 2001 valuation are computed to be 9.44% of payroll. We recommend that the Board of Investments change the County contribution rate to reflect this triennial valuation. County contributions for the fiscal year ending June 30, 2003, would increase 0.40% of pay. This increase in the normal cost rate reflects assumption changes adopted based on the 2001 Investigation of Experience and the experience of the system for the past three years.

Under the interim funding policy, the Board set, the valuation reserves equal to the Actuarial Accrued Liability (AAL). This resulted in a zero UAAL, and therefore, no amortization of any UAAL amount. The recommended contribution, equal to the normal cost rate of 9.44%, is currently adequate to maintain the funding of the retirement system benefits. All methods and assumptions are those shown in our 2001 Investigation of Experience.

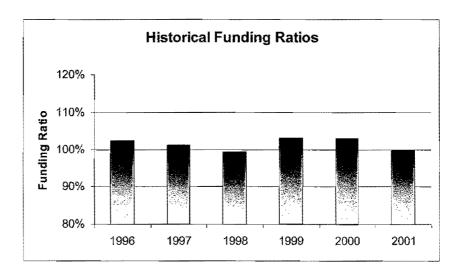
Based on the 2000 valuation, the expected funding status as of June 30, 2001 was a Surplus Funding amount of \$578 million. The changes in assumptions resulted in an actuarial gain of \$239 million (slightly greater than our estimate of \$219 million.) The total net experience loss in assets and liabilities was \$817 million, primarily due to a loss on valuation reserves. Thus, there was a net \$578 million actuarial loss for the fiscal year ending June 30, 2001.

Funding Progress (continued)

One measure of the adequacy of the contribution rates is the funding ratio which compares the value of the Actuarial Value of Assets (net of certain reserves) to the Actuarial Accrued Liability, for all LACERA plans combined. LACERA has maintained a funding ratio of approximately 100% for the past six years, as shown below. The issuance of Pension Obligation Bonds in 1994, along with earnings on assets in excess of the assumed rate, caused the increase in the funded ratio to this level, starting in 1995.

All dollar amounts in billions

	Market	Actuaria	<u>l V</u> alue		
	Value of Total	Non-	Voluntion	Actuarial	Cundina
		Valuation -	Valuation	Accrued	Funding
	<u>Assets</u>	<u>Reserves</u>	<u>Reserves</u>	<u>Liability</u>	<u>Ratio</u>
1996	\$20.2	\$1.6	\$17.7	\$17.3	102.6%
1997	22.9	1.8	19.6	19.3	101.3
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



Association Assets

Market Value: The market value of assets has increased an average of 7.1% over the past five years, as a result of contributions, benefit payments, and investment earnings. The values shown in the market value column are total assets net of liabilities, and include all reserves.

Actuarial Assets: The market value of total assets is used to determine the gross actuarial value of assets. This value reflects some smoothing of the fluctuations found in the market value.

<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 reserves represent the assets available for retirement benefits for funding purposes.

Non-Valuation Reserves: The non-valuation reserves are set aside for obligations or contingencies. They are not used to fund the retirement benefits.

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.

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

The 2001 actuarial valuation indicates that an actuarial loss of \$578 million occurred during the fiscal year just ended. LACERA's valuation reserves are currently equal to its AAL. The effect of the experience gains and losses on the UAAL or Surplus Funding is discussed 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 1994-1999, County contributions consisted of the Normal Cost contribution only during that period.

Milliman USA

Funding Policy

The Funding Agreement indicated the funding policy to be followed in 1994 through 1998. It only describes the amortization of any UAAL amounts for 1999-2008. LACERA now has no UAAL amount. During 2000, the Board discussed a long-term funding policy and these discussions are ongoing. For now an Interim Funding Policy has been adopted as described in Section 3, Assets.

Contribution Rates

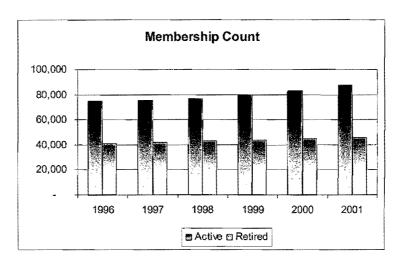
Based on the results of the valuation and the Interim Funding Policy, it is expected that the County contributions will increase for fiscal year 2003 to the normal cost rate of 9.44%. Member contribution rates are discussed in Section 5 and the rates are shown in detail in Appendix D. Since this is a triennial valuation and there were changes in actuarial assumptions, we have recommended changes in both the basic and COLA portion of the member rates.

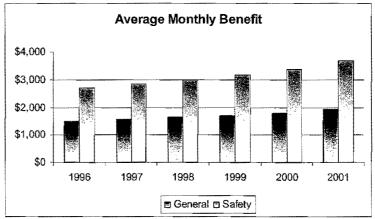
Member Information

Payroll and active member counts have increased since 2000. For 2001, payroll is \$4.469 billion for 87,069 active members. This represents a 4.6% increase in active members and a 7.9% increase in payroll.

Retired member counts and average benefit amounts continue to increase steadily. For 2001, there were 45,396 retired members with an average benefit of \$2,252 per month. This represents a 1.7% increase in count and a 9.2% increase in average monthly benefit. A portion of the increase in the benefits is due to the vesting of the STAR COLA as of March 1, 2001. The average benefit for 2000 did not include STAR COLA payments, since the non-vested STAR benefits are not paid from valuation reserves.

Member Information (continued)





Summary Valuation Results

The following Exhibit 0 presents a summary of key data elements on June 30, 2001 and June 30, 2000, 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.

Exhibit 0: Summary of Significant Valuation Results

		<u>J</u>	une 30, 2001	Jur	ne 30, 2000	Percent Change
******	Total Membership A. Active Members B. Retired Members C. Vested Terminated Members D. Total		87,069 45,396 5,498 137,963		83,204 44,628 <u>5,232</u> 133,064	4.6% 1.7 5.1 3.7%
11.	Annual Salary A. Total (\$millions) B. Average (Monthly)		\$4,469 4,277		\$4,143 4,150	7.9% 3.1%
III.	Average Monthly Benefit to Current Retirees and Beneficiaries A. Service Retirement B. Disability Retirement C. Surviving Spouse and Dependents D. Total		\$2,332 2,676 1,357 \$2,252		\$2,147 2,438 1,196 \$2,062	8.6% 9.8 13.5 9.2%
IV.	Assets A. Market Value of Fund (\$millions) B. Actuarial Value (\$millions) i. Valuation Reserves ii. Non-Valuation Reserves	\$ \$ \$	28,353 26,490 4,437	\$ \$ \$	31,565 25,427 4,308	9.2% (10.2)% 4.2% 3.0%
V.	County Normal Cost for all plans combined as a percent of total Association payroll		9.44%		9.15%	3.2%
VI.	Unfunded Actuarial Accrued Liability or Surplus Funding (\$millions)		\$0		\$(706)	-
VII.	Funded Ratio		100.0%		102.9%	(2.8)%

Section 2: Scope of the Report



This report presents the actuarial valuation of the Los Angeles County Employees Retirement Association as of June 30, 2001. 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. This valuation meets this requirement.

Your particular attention is called for in reading our cover letter, where we refer 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 1-5. Exhibit 4 develops the Actuarial Value of Assets as of June 30, 2001. Exhibit 5 develops the valuation reserves used for funding benefits.

Section 4 describes the benefit obligations of LACERA. Exhibit 6 is the Actuarial Balance Sheet and Exhibit 7 analyzes the change in UAAL (Surplus Funding).

Section 5 discusses the Member contribution rates and 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, 2001.
- Appendix C Schedules of valuation data classified by various categories of plan members.
- Appendix D Member contribution rates by plan.
- Appendix E A glossary of actuarial terms used in this report.

ううきょうこう

Los Angeles County Employees Retirement Association

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, 2001. 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

All dollar arriodres in billions										
Actuarial Value										
Market	Non-									
Value of	Valuation	Valuation	Total Fund							
Total Assets	Reserves	Reserves	Return*							
\$20.2	NA	\$17.7	N/A							
22.9	NA	19.6	17.7%							
25.5	NA	20.9	15.5							
28.0	3.7	23.5	12.9							
31.6	4.3	25.4	15.2							
28.4	4.4	26.5	-5.2							
	Market Value of Total Assets \$20.2 22.9 25.5 28.0 31.6	Market Value of Total Assets Peserves \$20.2 NA 22.9 NA 25.5 NA 28.0 3.7 31.6 Actuarial \ Non-Valuation Reserves NA 4.3	Actuarial Value Market Non- Valuation Valuation Total Assets Reserves Reserves \$20.2 NA \$17.7 22.9 NA 19.6 25.5 NA 20.9 28.0 3.7 23.5 31.6 4.3 25.4							

^{*}As reported in the Investment Section of the CAFR.

On June 30, 2001, the total market value of the fund, less current liabilities, was \$28.4 billion. The actuarial value of the fund was determined to be \$30.9 billion, including the non-valuation reserves. The System's market value of assets grew considerably in the years prior to 2001. Despite the negative return in 2001, the average total fund return for the last five years has been 10.9%.

Financial Exhibits

Exhibit 1 presents a Statement of Plan Net Assets and Exhibit 2 presents a Statement of Changes in Plan Net Assets. Exhibit 3 describes the allocation of LACERA's assets by the various reserve values determined for accounting purposes as disclosed in the annual report.

Exhibits 1-3 are derived from data furnished to us by LACERA in their annual financial report. We have accepted these tables for use in this report without audit, but we have reviewed them for reasonableness and consistency with previous reports.

Actuarial Asset Method

Prior to 1989, LACERA used the book value of assets for funding purposes and for determining the actuarially computed contribution rates. A revised method, the average of the differences between book value and market value, smoothed over a five year period, was adopted for the 1989-1998 valuations.

A new actuarial asset method was adopted for the June 30, 1999 valuation. When the new method was adopted for the 1999 valuation, it applied only to the valuation reserves; all reserves set aside for other purposes were held at book value.

In developing the Interim Funding Policy, the Board decided to apply the actuarial asset method to all reserve values.

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 8.00%, 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, 2001 actuarial value of assets is shown in Exhibit 4. Note, the smoothing process recognized the experience gains from 2000 which helps to offset the experience loss from 2001 due to the decreased market values. The result is an actuarial value of assets greater then the June 30, 2001 market value, but less than the actuarial value if the fund had earned the assumed 8% return.

Interim Actuarial Funding Policy

At the February 14, 2001 Board meeting, the following Interim Actuarial Funding Policy was adopted:

Earnings for a Plan Year, 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 equal to one year's interest at the assumed interest rate used in the actuarial valuation as of the preceding Valuation Date.
- Priority 2: Allocate to the Employer Reserve an amount equal to one year's interest at the assumed interest rate used in the actuarial valuation as of the preceding Valuation Date.
- Priority 3: Allocate to the Contingency Reserve an amount equal to 1% of Actuarial Value of Assets.
- Priority 4: Allocate to the Contribution Credit Reserve an amount equal to one year's interest at the assumed interest rate used in the actuarial valuation as of the preceding Valuation Date.
- Priority 5: Allocate to the Employer Reserve an amount, if necessary, when combined with other valuation Reserves, to provide 100% funding of the Actuarial Accrued Liability as of the Valuation Date.
- Priority 6: Allocate any remaining Earnings as directed by the Board of Investments.

Under Priority 6, the Board directed, at its January 23, 2002 meeting, that the valuation reserves be set to meet the 100% funding level under Priority 5 and all remaining earnings under Priority 6 were assigned to the Contingency Reserve. Therefore, the Employer Reserve was set equal to the Actuarial Accrued Liability less the Member Reserve, and all remaining earnings were allocated to the Contingency Reserves for funding purposes.

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



Exhibit 1: Statement of Plan Net Assets
For Years Ended June 30, 2000 and 2001
(Dollars in Thousands)

	2001	2000
Assets		
Cash	\$52,620	\$23,862
Collateral on Loaned Securities	1,403,546	1,248,217
Receivables		
Accounts Receivable - Sale of Investments	324,573	195,882
Accrued Interest and Dividends	122,805	140,112
Accounts Receivable - Other	70,031	67,283
Total Receivables	517,409	403,277
Investments at Fair Value		
Stocks	14,266,086	16,755,863
Bonds	7,766,774	8,370,752
Short Term Investments	1,638,688	1,691,210
Real Estate	3,494,232	3,050,785
Alternative Assets	1,485,588	1,934,450
Mortgages	201,826	193,244
Total Investments	28,853,194	31,996,304
Fixed Assets Net of Depreciation	330	750
Total Assets	30,827,099	33,672,410
Liabilities		
Accounts Payable - Purchase of Investments	1,013,021	786,379
Retiree Payroll and Other Payables	51	17,785
Accrued Expenses	20,191	20,951
Leasehold Incentives	0	209
Tax Withholding Payable	11,848	10,727
Obligations under Securities Lending Program	1,403,546	1,248,217
Accounts Payable - Other	25,180	22,794
Total Lizbilities	2,473,837	2,107,062
Net Assets Held in Trust for Pension Benefits	\$28,35 <u>3,</u> 262	\$31,565,348

Exhibit 2: Statement of Changes in Plan Net Assets For the Years Ended June 30, 2000 and 2001 (Dollars in Thousands)

	2001	2000
	.x ////////////////////////////////	······································
Additions		
Contributions		
Employer	\$193,650	\$130,319
Member	216,297	198,618
Total Contributions	409,947	328,937
Investment Income		
From Investing Activities		
Net (Depreciation)/Appreciation in Fair Value of Investments	(3,948,686)	1,835,707
Investment Income	1,644,455	2,556,372
Total Investing Activity Income	(2,304,231)	4,392,079
Less Expenses From Investing Activities	(85,296)	(61,769)
Net Investing Activity Income	(2,389,527)	4,330,310
From Securities Lending Activities		
Securities Lending Income	88,546	64,837
Less Expenses From Securities Lending Activities	(81,567)	(59,206)
Net Securities Lending Income	6,979	5,631
Total Net Investment Income	(2,382,548)	4,335,941
Miscellaneous	2,972	2,536
Total Additions	(1,969,629)	4,667,414
Deductions		
Retiree Payroll	1,136,296	1,046,802
Administrative Expense	33,417	29,401
Refunds	17,640	17,250
Lump Sum Death Benefits	1,734	1,213
Retiree Healthcare Program	52,717	48,611
Miscellaneous	653	2,096
Total Deductions	1,242 <u>,</u> 457	1,145,373
Net Increase/(Decrease)	(3,212,086)	3,522,041
Net Assets Held in Trust for Pension Benefits		
Beginning of Year	31,565,348	28,043,307
End of Year	\$28,353,262	\$ 31,565,348

Exhibit 3: Allocation of Assets by Reserve Amounts (Dollars in Thousands)

	June 30, 2001	June 30, 2000
1, Member Reserves		
a. Active Membersb. Unclaimed Depositsc. Total Member Reserves	\$ 8,210,126 0 \$ 8,210,126	\$ 7,671,157 <u>25</u> \$ 7,671,182
2. Employer Reserves		
a. Actual Employer Contributionsb. Advanced Employer Contributionsc. Total Employer Reserves	\$12,935,367 <u>164,716</u> \$13,100,083	\$ 12,076,144 <u>361,745</u> \$ 12,437,889
3. County Contribution Credit Reserve	\$ 1,486,792	\$ 1,424,159
4. STAR Reserve	669,775	1,005,309
5. Contingency Reserve	<u>1,325,312</u>	<u>1,516,949</u>
6. Total Reserves at Book Value:	\$24,792,088	\$24,055,488
7. Unrealized Investment Portfolio Appreciation 8. Total Reserves at Fair Value	3,561,174	7,509,860
o. Iotal Neselves at Fall Value	\$ 28,353,262	\$ 31,565,348

Note: These amounts were determined for accounting purposes and were reported in the June 30, 2001 CAFR.

Exhibit 4: 3-Year Smoothing of Gains and Losses on Market Value (Dollars in Thousands)

					Cı	ırrent Year - 、	June :	30, 2001					
Plan Year Ending	Co	ntributions		Benefits -		Expected MV		Actual MV		,eeee.	Phase-Out of G	Sain / (Los	s)
06/30/2001	\$	409,947	\$	1,208,387	\$	33,260,813	\$	28,353,262	67%	x	\$ (4,907,551)	= \$	(3,271,701)
06/30/2000		328,937		1,113,876		29,471,039		31,565,348	33%	х	2,094,309	ned Tra	698,103
06/30/1999		287,638		1,049,345		26,739,964		28,043,307	0%	x	1,303,343	geren. Geren	0
06/30/1998								25,492,179					0
								Tot	al Phase	-Out	of Gain / (Loss)	= \$	(2,573,598)
									Total Ma	rket	Value of Assets	yees.	28,353,262
								T	otal Actu	arial	Value of Assets	= \$	30,926,860
Total Actuarial Value of Assets = Total Market Value of Assets less the Total Phase Out amount.													

Exhibit 5: Allocation of Assets (Dollars in Thousands)

	June 30, 2001	June 30, 2000
1. Total Market Value of Assets	\$ 30,827,099	\$ 33,672,410
2. Current Liabilities	2,473,837	2,107,062
3. Net Assets Held in Trust for Pension Benefits	\$ 28,353,262	\$ 31,565,348
4. Market Stabilization Reserve ⁽¹⁾	(2,573,598)	1,830,654
5. Actuarial Value of Fund Assets	\$ 30,926,860	\$ 29,734,694
 6. Non-Valuation Reserves⁽²⁾ a. Unclaimed Deposits b. Contingency Reserve c. Advanced Employer Contributions d. County Contribution Credit Reserve e. Reserve for STAR Program f. Total 	\$ 0 2,115,577 164,716 1,486,792 <u>669,775</u> \$ 4,436,860	\$ 25 1,516,949 361,745 1,424,159 1,005,309 \$ 4,308,187
 7. Valuation Reserves⁽²⁾ a. Member Reserves b. Employer Reserves for Funding Purposes c. Total 	\$ 8,210,126 <u>18,279,874</u> \$ 26,490,000	\$ 7,671,157 <u>17,755,350</u> \$ 25,426,507

⁽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 4.

⁽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 3.

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, 2001. 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, there will almost always be a difference between the actuarial assets and liabilities. 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 made up out of 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.

First, we need to determine the amount of the deficiency. We compare the Actuarial Value of the Valuation Reserves 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.

Actuarial Balance Sheet – Liabilities

Exhibit 6 contains an analysis of the actuarial present value of all future benefits for inactive members, (both retired and vested terminated members), and active members. The analysis is given by class of membership, by plan and by type of benefit.

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 benefits yet to be earned and payable for 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 2001 Investigation of Experience Report. New assumptions were adopted by the Board effective June 30, 2001.

All liabilities reflect the benefits effective through June 30, 2001. This includes the vested STAR COLA adopted for 2001. No further benefit increases are considered in determining the liabilities shown.

Exhibit 6: Actuarial Balance Sheet – June 30, 2001 (Dollars in millions)

					Ge	neral						Sat	fety_			
LIABILITIES		Plan A	Р	an B	PI	an C	<u>F</u>	Plan D	F	Plan E	F	lan A	F	lan B	A	II Plans
Present Value of Benefits - Inactives - Retirees - Vested Terminated	\$	8,363 85	\$	63 13	\$	37 	\$	422 143	\$	266 86	\$	4,458 3_	\$	387 35	\$	13,996 372
- Inactive Total Present Value of Benefits - Actives	***************************************	8,448		76		44		565		352		4,461		422		14,368
- Service Retirement	\$	3,844	\$	183	\$	111	\$	3,921	\$	3,138	\$	1,229	\$	2,105	\$	14,531
- Transfer Service (prior LACERA plan)		25		1		1		8		11		9		2		57
 Disability Retirement 		151		8		5		436		N/A		549		1,755		2,904
- Death		53		3		2		148		N/A		7		34		247
 Termination (No Refund) 		1		*		*		232		213		*		44		490
 Refund of Member Contributions 		0		*		*	***************************************	108		N/A		*		2		110
- Active Total		4,074		195		119		4,853		3,362		1,794		3,942	···	18,339
Total Actuarial Liabilities	\$	12,522	\$	271	\$	163	\$	5,418	\$	3,714	\$	6,255	\$	4,364	\$	32,707
ASSETS																
Valuation Reserves	\$	10,833	\$	286	\$	166	\$	3,233	\$	3,726	\$	5,298	\$	2,948	\$	26,490
PV Future Member Contributions		58		14		9		1,233		0		30		811		2,155
PV Future County Normal Cost Contribs.		320		14		10		1,352		1,056		123		1,187		4,062
UAAL or (Funding Surplus)		1,311		(43)	····	(22)		(400)		(1,068)		804		(582)		0
Total Current and Future Assets	\$	12,522	\$	271	\$	163	\$	5,418	\$	3,714	\$	6,255	\$	4,364	\$	32,707

^{*} Less than \$0.5 million

Actuarial Balance Sheet – Assets

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

- (a) assets currently available to pay benefits, the Valuation Reserves.
- (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:

- A normal cost amount; and
- Whatever amount is left over, which is used to amortize what is called the UAAL.

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 was 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.

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 Liability

The difference between the present value of all future obligations and the present value of the future normal cost contributions is referred to as the "actuarial accrued liability". 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 is summarized below:

(Dollars in millions)	2001	2000	Percent Change		
 A. Actuarial present value of all future benefits for contributing members, former contributing members, and their survivors 	\$32,707	\$29,930	9.3%		
 B. Actuarial present value of total future normal costs for current members 	\$6,217	\$5,209	19.4%		
C. Actuarial accrued liability [A-B]	\$26,490	\$24,721	7.2%		
 D. Valuation Reserves available for benefits 	\$26,490	\$25,427	4.2%		
E. UAAL or Surplus Funding [C-D]	\$ 0	\$ (706)	-		
F. Funded Ratio [D/C]	100.0%	102.9%	(2.8)%		

Actuarial Accrued Liability (continued)

It is interesting to note the maturity of LACERA's fund. Nearly one half, 44% of the total actuarial obligations are for inactive members. Of the \$18.338 billion in obligations for the active members, the cost method allocates almost 70% 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 Reserves is called the UAAL. If a UAAL amount exists, it usually results from prior years' benefit or assumption changes and the net effect of accumulated gains and losses. If the 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 is 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 6 shows how the UAAL, or Surplus Funding, was derived for each level of plan benefits. In the Actuarial Balance sheet, the total actuarial accrued 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 Reserves, as disclosed in Exhibit 6. The allocation is based on the relative value of each plan's employer and member reserves as reported to us by LACERA. Note that only the older, closed off, Plan A for both General and Safety members have a positive UAAL amount, based on this allocation of the assets. These allocations are shown for illustrative purposes only, as the contribution rates are set for 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 Funding Agreement with the County, any positive amount as of June 30, 1999 must be amortized over 10 years. Any increase in the UAAL during the 2000-2008 valuations is to be amortized over five years for each incremental piece. Since there was no positive UAAL for the 1999-2001 valuations, no County contributions have been required to amortize a UAAL amount since the Funding Agreement was adopted.

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

Funding Policy

The Funding Agreement indicated the funding policy to be followed in 1994 through 1998. It only describes the amortization of any UAAL amounts for 1999-2008. During 2000, the Board discussed a long-term funding policy and these discussions are expected to continue. An Interim Funding Policy was adopted as described more fully in Section 3, Assets, and was used for both the 2000 and 2001 valuations.

Based on the results of the 2001 valuation and the Interim Funding Policy, it is recommended that the County contributions for fiscal year 2003 be set to the Normal Cost rate of 9.44%.

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 has remained at approximately 100% for the last seven years. This funding level was the result of asset returns in excess of the assumed rate, positive actuarial experience and the infusion of approximately \$2 billion into the fund, due to the issuance of Pension Obligation Bonds by the County.

The 2001 actuarial valuation indicates that an actuarial loss of \$578 million occurred during the fiscal year just ended. The loss was primarily due a negative return on the market value of assets. The effect of the experience gains and losses on the UAAL or Surplus Funding is shown in Exhibit 7.

Exhibit 7: Analysis of Change in Unfunded Actuarial Accrued Liability (Dollars in millions)

	Α	Amount	As a Percentage of June 30, 2001 Actuarial Accrued Liability
UAAL - June 30, 2000	\$	(706)	(2.7)%
Interest Accrued	φ	(56)	(0.2)%
Benefits Accrued (Normal Cost)		610	2.3%
Contributions (with Assumed Interest) Employer Member Total	\$ 	(201) (225) (426)	(0.8)% <u>(0.8)%</u> (1.6)%
Expected UAAL - June 30, 2001	\$	(578)	(2.2)%
Sources of Change: Changes in Actuarial Assumptions		(239)	(0.9)%
Asset (Gains) and Losses (Gain)/Loss due to investment incomé	\$	690	2.5%
Actuarial Accrued Liability (Gains) and Losses (Gain) / Loss due to Salary Increases New Member Liability (Gain)/Loss All Other (Gains) and Losses Total	\$	40 40 <u>47</u> 127	0.2% 0.2 <u>0.2</u> 0.6%
Change in Actuarial Methodology		0	0.0%
Change in Benefits*		0	0.0%
Total Changes	\$	578	2.2%
Actual UAAL - June 30, 2001	\$	0	0.0%

*In 2001, STAR benefits were vested. The value of the benefits added to the Actuarial Accrued Liability as of June 30, 20001, \$297 million, was offset by an asset transfer from the STAR reserve fund.

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:

	General	Safety		
Plan A	31621.3	31639.5		
Plan B	31621.1	31639.25		
Plans C and D	31621	N/A		

There are no member contributions under Plan E.

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
- Mortality for members on service retirement

Effective with the 2001 valuation, the individual salary increase assumption was changed, necessitating a change in the member normal rates. In general, member rates decreased at younger entry ages under the new assumptions, and increased at older entry ages. These changes to the normal rates were small, with most changes less than 0.20%.

Cost-of-Living Contributions

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

	Current	Recommended		
General Plan A:	73.68%	75.16%		
General Plan B:	21.32%	21.61%		
General Plan C:	22.04%	23.06%		
General Plan D:	20.74%	21.12%		
Safety Plan A	121.61%	102.99%		
Safety Plan B	33.57%	32.72%		

laca0095.doc 12 003 LAC 3B/12,003.LAC.10.2001 / KIS/edc



Cost-of-Living Contributions (continued)

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. Note that there were only small changes in these percentages for all plans except Safety Plan A. This difference is consistent with our findings in our audit of the June 30, 1998 actuarial valuation.

A sample of recommended and current member contributions (normal plus cost-of-living) can be found in Exhibit 8.

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

Exhibit 8: Sample Member Contribution Rates

	Entry	Recommended F	Cost of	Total as a	Prior Rate	Ratio
	Age	Normal	Living	% of Pay	(Total)	(New/Old)
	rigo	110111101		70 011 49	Tiotal	(recijoja)
General Members						
Plan A	25	2.85%	2.14%	4.99%	5.02%	99%
	35	3.42%	2.57%	5.99%	5.91%	101%
	45	4.13%	3.10%	7.23%	6.96%	104%
	55	4.46%	3.35%	7.81%	7.62%	102%
Plan B	25	5.45%	1.18%	6.63%	6.67%	99%
	35	6.53%	1.41%	7.94%	7.86%	101%
	45	7.83%	1.69%	9.52%	9.23%	103%
	55	8.82%	1.91%	10.73%	10.65%	101%
Plan C	25	4.66%	1.07%	5.73%	5.80%	99%
	35	5.60%	1.29%	6.89%	6.83%	101%
	45	6.73%	1.55%	8.28%	8.05%	103%
	55	7.73%	1.78%	9.51%	9.26%	103%
Plan D	25	4.66%	0.98%	5.64%	5.74%	98%
	35	5.60%	1.18%	6.78%	6.76%	100%
	45	6.73%	1.42%	8.15%	7.97%	102%
	55	7.73%	1.63%	9.36%	9.16%	102%
Safety Members						
Plan A	25	3.85%	3.97%	7.82%	8.58%	91%
	35	4.64%	4.78%	9.42%	10.11%	93%
	45	5.47%	5.63%	11.10%	11.79%	94%
	55	5.51%	5.67%	11.18%	12.01%	93%
Plan B	25	7.36%	2.41%	9.77%	10.22%	96%
	35	8.86%	2.90%	11.76%	11.59%	101%
	45	10.17%	3.33%	13.50%	13.09%	103%
	55	10.88%	3.56%	14.44%	14,47%	100%

Note: A portion of the Plan A member contribution rates is paid for the member 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.



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 9 illustrates the Normal Cost Rates by type of benefit and for each plan based on this valuation.

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%). In addition, LACERA and the County agreed to the following funding policy:

- If the funding level of LACERA as of June 30, 1998 is less than 97.5%, the County must make additional payments to LACERA to achieve a 97.5% level amortized over a rolling five-year period. These payments are in addition to the annual Normal Cost contribution required by the County.
- If the funding level as of June 30, 1999 is less than 100%, the County must make additional payments to LACERA (in addition to payments in the prior item) to achieve a 100% funding level amortized over a 10-year period.
- Any additional unfunded liability identified between June 30, 2000 and June 30, 2008 must be discharged by the County over a rolling five-year amortization schedule.

As of June 30, 1998, LACERA's funding level was 99.5%. Therefore, the recommended County contribution rate consisted only of the Normal Cost contribution. Since then, LACERA's funding level has been over 100%. Therefore, the calculated County contribution rate is assumed to equal only the Normal Cost contribution. The calculated contribution rates for each plan, along with a comparison to the prior year's computed rates, can be found in Exhibit 10. The County Contribution rate was 9.04% for fiscal years 1999-2001. For the fiscal year 2002, we are recommending this rate be increased to 9.44%. This is equal to the aggregate calculated normal cost contribution rate, based on the 2001 valuation.

The increase in the calculated normal cost contribution rates from the 2000 valuation to the 2001 valuation is attributable to the following. Note that item (4) had the most significant impact.

- (1) 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 Plans D and E and Safety B.
- (2) A significant experience loss is occurring in the closed plans (Plan A for safety and Plans A, B & C for general members). Since no new members are entering this group, there is a tendency for the average entry age to increase. Members who entered at a younger age have more years of service and are expected to leave active status earlier, leaving the group with members whose average entry age is somewhat older. This tends to increase the normal cost for these plans.
- (3) In addition, a more significant factor is that for members hired prior to April 1973, 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. This statement applies only to Plan A members.
- (4) New assumptions were adopted based on the 2001 Investigation of Experience. This resulted in a 0.19% increase in the normal cost rate.

Exhibit 9: Calculated Normal Cost Contribution Rates - June 30, 2001

	General					
	Plan A	Plan B	Plan C	Plan D	Plan E	Total
Service Retirement	14.64%	12.96%	11.80%	10.67%	5.76%	9.09%
Disability Retirement	1.41	1.28	1.25	1.65	0.00	0.92
Death	0.42	0.40	0.38	0.48	0.00	0.27
Termination (No Refund)	0.32	0.21	0.20	0.94	0.60	0.71
Refund of EEC*	0.11	0.13	0.11	0.60	0.00	0.28
Total	16.90%	14.98%	13.74%	14.34%	6.36%	11.27%
Less Member Contributions	2.86	7.15	6.23	6.82	0.00	3.45
Net County Contributions	14.04%	7.83%	7.51%	7.52%	6.36%	7.82%

	Safety			Grand
	Plan A	Plan B	Total	Total
Service Retirement	- 11.22%	10.87%	10.93%	9.46%
Disability Retirement	14.13	13.56	13.66	3.37
Death	0.29	0.26	0.27	0.27
Termination (No Refund)	0.58	0.50	0.51	0.67
Refund of EEC*	0.09	0.10	0.10	0.24
Total	26.31%	25.29%	25.47%	14.01%
Less Member Contributions	4.78	10.28	9.27	4.57
Net County Contributions	21.53%	15.01%	16.20%	9.44%

Exhibit 10: County Normal Cost Contributions

				General			
		Plan A	Plan B	Plan C	Plan D	Plan E	^
A.	Basic Benefits	9.60%	6.46%	6.26%	6.33%	6.36%	
В.	Cost-Of-Living Benefit	4.44	1.37	1.25	1.19	**	
Ċ.	Total June 30, 2001	14.04%	7.83%	7.51%	7.52%	6.36%	
D.	Total June 30, 2000	13.45%	7.65%	7.37%	7.32%	5.96%	-
E.	Increase (Decrease) as a Percent of Payroll (C) - (D)	0.59%	0.18%	0.14%	0.20%	0.40%	
F.	Ratio of 2001 Rate to 2000 Rate	104%	102%	102%	103%	107%	
			Saf	ety		All Plans	
			Plan A	Plan B			
A.	Basic Benefits		14.86%	12.50%		7.90%	
B.	Cost-Of-Living Benefit		6.67	2.51		1.54	_
C.	Total June 30, 2001		21.53%	15.01%		9.44%	
D.	Total June 30, 2000		21.74%	14.06%		9.15%	-
E.	Increase (Decrease) as a Percent of Payroll (C) - (D)		(0.21)%	0.95%		0.29%	
F.	Ratio of 2001 Rate to 2000 Rate		99%	107%		103%	

Section 7: Accounting Information



For fiscal years beginning after June 15, 1996, revised GASB reporting standards are required for defined benefit pension plan reporting and disclosures (Statement No. 25). The System adopted the revised reporting standards beginning in 1996. The new 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 11, compares actuarial assets and liabilities of the System, based on the actuarial funding method used. The required Schedule of Employer Contributions, Exhibit 12, compares the employer contributions required based on the actuarial valuation (the actuarial required contribution, or ARC) with the employer contributions actually made. 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 new GASB reporting requirements.

For fiscal years beginning after June 15, 1997, 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. Between June 30, 2000 and June 30, 2001, many actuarial assumptions were changed based on the 2001 triennial Investigation of Experience Study (see Appendix A).

Exhibit 13 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 11: Schedule of Funding Progress (All Dollars in Thousands)

Actuarial Valuation Date	(a) Actuarial Value of Valuation Assets	(b) Actuarial Accrued Liabilities	(b-a) Unfunded Actuaria Accrued Liabilities (U	·	(c) Covered Payroll ⁽¹⁾	[(b-a)/c] UAAL as a Percentage of Covered Payroll
June 30, 1993	\$ 12,721,364	\$ 15,048,857	\$ 2,327,493	84.5%	\$ 3,337,583	69.7%
June 30, 1994	15,542,200	15,573,829	31,629	99.8%	3,391,441	0.9%
June 30, 1995	16,503,672	16,391,833	(111,839)	100.7%	3,442,231	-3.2%
June 30, 1996	17,724,744	17,277,651	(447,093)	102.6%	3,355,551	-13.3%
June 30, 1997	19,642,355	19,383,641	(258,714)	101.3%	3,373,314	-7.7%
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	(751,409)	103.3%	3,858,090	-19.5%
June 30, 2000	25,426,507	24,720,380	(706,127)	102.9%	4,107,964	-17.0%
June 30, 2001	26,490,000	26,489,976	(24)	100.0%	4,398,443	0.0%

⁽¹⁾ Covered Payroll includes compensation paid to all active employees on which contributions are calculated. 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.

Exhibit 12: Schedule of Contributions from the Employer (All Dollars In Thousands)

Annual	Actu			
Required Contribution (ARC) %	Cash Payment	Transfer from Reserve Accounts	Total	Percentage of ARC Contributed
\$287,548	\$132,452	\$146,309	\$278,761	97%
277,929	1,168	277,151	278,319	100%
243,489	9,420	239,777	249,197	102%
317,285	84,226	248,403	332,629	105%
342,060	130,319	211,832	342,151	100%
378,655	193,650	. 185,005	378,655	100%
	Required Contribution (ARC) % \$287,548 277,929 243,489 317,285 342,060	Required Contribution (ARC) % Cash Payment \$287,548 \$132,452 277,929 1,168 243,489 9,420 317,285 84,226 342,060 130,319	Required Contribution (ARC) % Cash Payment Transfer from Reserve Accounts \$287,548 \$132,452 \$146,309 277,929 1,168 277,151 243,489 9,420 239,777 317,285 84,226 248,403 342,060 130,319 211,832	Required Contribution (ARC) % Cash Payment Transfer from Reserve Accounts Total \$287,548 \$132,452 \$146,309 \$278,761 277,929 1,168 277,151 278,319 243,489 9,420 239,777 249,197 317,285 84,226 248,403 332,629 342,060 130,319 211,832 342,151

Actuarial Accrued Liabilities for

11,863

12,922

14,368

8,211

8,609

8,802

100

100

100

100

100

100

109

108

100

Exhibit 13: Solvency Test (Dollars In Millions)

Active Members **Portion of Actuarial Accrued** Liabilities Covered by **Actuarial** (Employer Value of Retirees and Financed **Assets Active Member** Beneficiaries⁽¹⁾ Portion) **Actuarial Valuation** Valuation Contributions (B) (C) (B) (A) (A) (C) Date **Assets** 100% 98% July 1, 1998 \$ 20,851 2,643 \$ 11,268 7,049 100%

(1) includes deferred vested members.

23,536

25,427

26,490

2,710

3,190

3,320

July 1, 1999

July 1, 2000

July 1, 2001

Section 8: Supplemental Information

Cash Flow Projection



Exhibits 14a and 14b 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, except for 1995 when the Pension Obligation Bond funds were received. It leveled off somewhat for the past five years, but 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 2002 to 2011.

Note that the actual cash contributions since 1996 do not reflect the transfers made between reserve funds, but only cash coming into the System. Starting in 2002, we assumed no further transfers, only full cash contributions. Thus, the actual contributions in 2001 were significantly less than those in the projections for 2002 and later.

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 9.44% for the entire 10-year projection. This rate is equal to the County normal cost rate as calculated and recommended in the 2001 valuation. The aggregate Member rate is assumed to stay at the calculated rate for June 30, 2001 of 4.57% of payroll. Expenses are based on the expenses for the year ended June 30, 2001, increased annually with the actuarial inflation assumption of 4.00%.

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

- Projected STAR benefits. STAR benefits that were vested as of March 2001 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.

36

Exhibit 14A: Cash Flow History and Projections

		Cash Flow History ⁽¹⁾	
Plan		Benefits &	
Year		Administrative	Net
Ending	Contributions	Expenses ⁽³⁾	Cash Flow
1992	\$ 534	\$ 595	\$ (61)
1993	539	685	(145)
1994	546	749	(203)
1995	2,212	798	1,414
1996	316	857	(541)
1997	172	910	(737)
1998	189	968	(779)
1999	288	1,024	(736)
2000	329	1,094	(765)
2001	410	1,187	(777)

Cash Flow Projections⁽²⁾

Plan			Ben	efits &		
Year			Admir	nistrative	1	let
Ending	Contrib	outions	Expe	Expenses ⁽³⁾		n Flow
2002	\$	628	\$	1,263	\$	(634)
2003		653		1,355		(702)
2004		680		1,452		(773)
2005		707		1,553		(846)
2006		735		1,659		(924)
2007		764		1,770		(1,006)
2008		795		1,886		(1,091)
2009		827		2,004		(1,177)
2010		860		2,124		(1,264)
2011		894		2,250		(1,356)

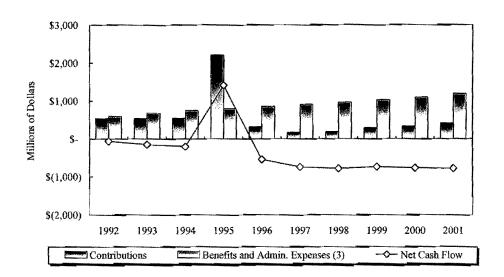
^{(1) 1995} Contributions reflect income from Pension Obligation Bond.

⁽²⁾ Future contributions are assumed to be at the 9.44% normal cost rate with no UAAL payment.

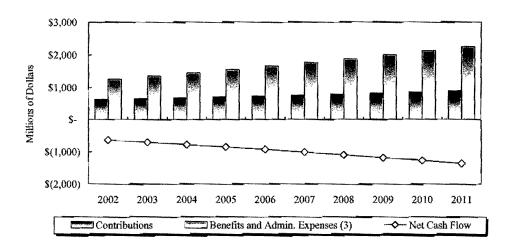
⁽³⁾ Investment expenses are assumed to be covered by investment return.

Exhibit 14B: Cash Flow History and Projections

Cash Flow History(1)



Cash Flow Projections (2)



⁽¹⁾ 1995 Contributions reflect income from Pension Obligation Bond.

⁽²⁾ Future contributions are assumed to be at the 9.44% normal cost rate with no UAAL payment.

⁽³⁾ Investment expenses are assumed to be covered by investment return.

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, 2001 as a result of the 2001 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-17 were developed from the experience as measured by the 2001 Investigation of Experience Study. The rates are the probabilities a member will leave the system for various reasons.

Actuarial Cost Method

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

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

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, if any, is amortized as a level percentage of the projected salaries of present and future members of LACERA during various amortization periods.

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. For Plans which no longer have new members entering (Plan A for safety members, Plans A, B & C for general members), the increasing normal cost rate reflects the maturing of the group.

(

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.

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 this 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.

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 8.00%, compounded annually, net of both investment and administrative expenses.

Post-retirement Benefit Increases

Post-retirement increases of either 3% or 2% per year 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 4.0% per year. Plan E members do not receive post retirement benefit increases.

Interest on Member Contributions

The annual credited interest rate on member contributions is assumed to be 8.0% compounded semi-annually.

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 4.0% per annum rate of increase in the general wage level of the membership. These rates were adopted June 30, 2001.

Effective June 30, 2000, increases are assumed to occur mid-year (i.e., January 1) 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 Plan A, actual prior year annual compensation is used. For other plans, annual information was not available. Due to irregular compensation payments now included as pensionable earnings, actual annual pay is preferred over annualizing a single monthly payment amount.

Social Security Wage Base

Plan E members have their benefits offset by an assumed Social Security Benefit. For valuation funding purposes, we need to project the Social Security Benefit. We assume the current Social Security provisions will continue and the annual Wage Base will increase at the rate of 4% 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.

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-17.

(

(

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 65.

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

The retirement probabilities were revised June 30, 2001.

Disablement

The rates of disablement used in the valuation are also illustrated in Tables A-6 through A-17. These rates were revised June 30, 2001.

Mortality – Other Than Disabled Members

The same post-retirement mortality rates are used in the valuation for active members, members retired for service, and beneficiaries. These rates are illustrated in Table A-2. Beneficiary mortality is assumed to be the same assumption as healthy members. Beneficiaries are assumed to be of the opposite sex.

Males General members: 1983 Group Annuity

Mortality Table for males, multiplied by 85%. Safety members: 1983 Group Annuity Mortality

Table for males, multiplied by 80%.

Females General members: 1983 Group Annuity

Mortality Table for females, multiplied by 95%.

Safety members: 1983 Group Annuity Mortality

Table for males, multiplied by 95%.

Mortality – Disabled Members

For disabled members, the mortality rates used in the valuation rates are illustrated in Table A-3. These rates were adopted June 30, 2001.

Males General members: RP-2000 Combined

Mortality Table for Males, with ages set forward

three years.

Safety members: RP-2000 Combined Mortality

Table for Males, with no age adjustment.

Females General members: RP-2000 Combined Table

for Females with ages set forward one year.

Safety members: RP-2000 Combined Mortality Table for Females with ages set forward three

years.

Other Employment Terminations

Tables A-6 to A-17 show, for all ages, the rates assumed in this valuation for future termination from active service other than for death, disability or retirement. These rates do not apply to members eligible for service retirement. These rates were revised June 30, 2001.

Other Employment Terminations (Continued)

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

(

(

([

(i

(

(

1

(

4

1

(

([

1

([

(

(

1

1

1

(

All terminating members are assumed to not be rehired. Table A-4 gives the assumed probabilities that vested members will withdraw their contributions and elect a refund immediately upon termination and the probability the remaining members will elect a deferred vested benefit. All non-vested members are assumed to elect a refund and withdraw their contributions. These rates were adopted June 30, 1998.

Probability of Marriage and Dependent Children

For members not currently in pay status, 85% of all males and 60% of all females are assumed to have eligible spouses. The spouse is assumed to be four years younger than the male members and four years older than the female members. There is no explicit assumption for children's benefits. We believe the survivor benefits based on this marriage assumption are sufficient to cover children's benefits as they occur.

Valuation of Vested Terminated Members

Complete Final Compensation data is not available to estimate the amount of vested benefit for these members. For valuation purposes, we assume the value of their deferred benefit is equal to three times their accumulated normal contributions plus one times their accumulated COLA contributions as of the valuation date.

Since Plan E is non-contributory, the value of the deferred benefit cannot be estimated under this method. Therefore, for Plan E members who are missing compensation data, Final Compensation is estimated as the average amount for all Plan E members who terminated during the same year and had a valid compensation amount. The retirement benefit is then calculated. The value of the deferred benefit is the value of this benefit deferred to age 65.

Valuation of Annuity Purchases

Over 20 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.

Valuation of Annuity Purchases (continued)

For affected members, the insurance companies are responsible for:

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

LACERA is responsible for:

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

Member Contribution Rate Assumptions

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

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

- A. Annuity factor used for general members is based on a 50% / 50% blend of the male and female annuity factors using current valuation assumptions. For Safety members it is based on the male annuity factor, as 90% of all Safety members are male.
- 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 8%.
- C. The Final Compensation period is based on the salary paid in the one (or three, depending on the plan) year(s) prior to attaining the retirement age.

Example: For a Plan C Member who enters at age 57 or earlier, the Final Compensation at retirement (age 60) will be the average of the salaries during age 57, 58, and 59.

D. The Final Compensation period used is the lesser of the period specified for that Plan, and the difference between the retirement age and the entry age.

Example: For a Plan C Member who enters at age 59, the Final Compensation at retirement (age 60) will be equal to his age 59 salary.

E. 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, 2001

١.	Economic assumptions	
	A. General wage increases	4.00%
	B. Investment earnings	8.00
	C. Growth in membership	0.00

D. Post-retirement benefit increases (varies by plan) 0.00/2.00/3.00

II. Demographic assumptions

E. CPI inflation assumption

A. Salary increases due to service Table A-5

B. Retirement Tables A-6 to A-17
C. Disablement Tables A-6 to A-17

D. Mortality for active members after termination; service Table A-2

retired members, and beneficiaries

Basis – 1983 Group Annuity Mortality Table for respective sexes for general members, as adjusted:

Class of Members	Age <u>Adjustment</u>	Percentage Rate Adjustment
General – males	0 years	85%
General – females	0 years	95%
Safety – males	0 years	80%
Safety – females	0 years	95%

E. Mortality among disabled members

Table A-3

4.00

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

General - males	+3 years	None
General - females	+1 year	None
Safety - males	0 years	None
Safety - females	+3 years	None

F. Other terminations of employment

Tables A-6 to A-17

G. Refund of contributions on vested termination

Table A-4

Table A-2: Mortality for Members Retired for Service and Beneficiaries

	Safety	Safety	General	General
Age	Male	Female	Male	<u>Female</u>
20	0.030%	0.018%	0.032%	0.018%
25	0.037%	0.024%	0.039%	0.024%
30	0.049%	0.033%	0.052%	0.033%
35	0.069%	0.045%	0.073%	0.045%
40	0.099%	0.063%	0.105%	0.063%
45	0.175%	0.096%	0.186%	0.096%
50	0.313%	0.157%	0.332%	0.157%
55	0.490%	0.241%	0.521%	0.241%
60	0.733%	0.403%	0.778%	0.403%
65	1.247%	0.671%	1.325%	0.671%
70	2.202%	1.177%	2.340%	1.177%
75	3.568%	2.279%	3.791%	2.279%
80	5.926%	4.080%	6.296%	4.080%
85	9.187%	6.642%	9.761%	6.642%
90	13.305%	10.616%	14.136%	10.616%

Table A-3: Mortality for Members Retired for Disability

	Safety	Safety	General	General
Age	Male	Female	<u>Male</u>	Female
20	0.035%	0.020%	0.037%	0.019%
25	0.038%	0.023%	0.039%	0.021%
30	0.044%	0.039%	0.063%	0.031%
35	0.077%	0.060%	0.096%	0.051%
40	0.108%	0.094%	0.130%	0.077%
45	0.151%	0.143%	0.186%	0.122%
50	0.214%	0.221%	0.292%	0.185%
55	0.362%	0.392%	0.527%	0.309%
60	0.675%	0.765%	1.001%	0.581%
65	1.274%	1.345%	1.787%	1.095%
70	2.221%	2.297%	3.039%	1.858%
75	3.783%	3.760%	5.212%	3.097%
80	6.437%	6.251%	8.972%	5.078%
85	11.076%	10.730%	15.059%	8.638%
90	18.341%	17.043%	23.366%	14.460%

Table A-4: Immediate Refund of Contributions Upon Termination of Employment While Vested

	Safety	Safety	General	General
Age	Male	Female	Male	Female
25	0%	0%	35%	35%
30	0%	0%	35%	35%
35	0%	0%	35%	35%
40	0%	0%	35%	35%
45	0%	0%	35%	35%
50	0%	0%	35%	35%
55	0%	0%	35%	35%

Table A-5a: Annual Increase in Salary Due to Promotions and Longevity Years of

Comitos	0-6-4	DI A	DI D00	D I D	B. E
Service	Safety	Plan A	Plan B&C	Plan D	Plan E
<1	6.00%	6.00%	6.00%	6.00%	6.00%
1	5.25%	5.25%	5.25%	5.25%	5.25%
2	4.50%	4.50%	4.50%	4.50%	4.50%
3	3.75%	3.75%	3.75%	3.75%	3.75%
4	3.00%	3.00%	3.00%	3.00%	3.00%
5	2.50%	2.50%	2.50%	2.50%	2.50%
6	2.00%	2.00%	2.00%	2.00%	2.00%
7	1.75%	1.75%	1.75%	1.75%	1.75%
8	1.50%	1.50%	1.50%	1.50%	1.50%
9	1.30%	1.30%	1.30%	1.30%	1.30%
10	1.10%	1.10%	1.10%	1.10%	1.10%
11	1.00%	1.00%	1.00%	1.00%	1.00%
12	0.90%	0.90%	0.90%	0.90%	0.90%
13	0.85%	0.85%	0.85%	0.85%	0.85%
14	0.80%	0.80%	0.80%	0.80%	0.80%
15 or more	0.75%	0.75%	0.75%	0.75%	0.75%

Table A-5b: Total Annual Increase in Salary*

			-		
Years of Service	Safety	Plan A	Plan B&C	Plan D	Plan E
<1	10.24%	10.24%	10.24%	10.24%	10.24%
1	9.46%	9.46%	9.46%	9.46%	9.46%
2	8.68%	8.68%	8.68%	8.68%	8.68%
3	7.90%	7.90%	7.90%	7.90%	7.90%
4	7.12%	7.12%	7.12%	7.12%	7.12%
5	6.60%	6.60%	6.60%	6.60%	6.60%
6	6.08%	6.08%	6.08%	6.08%	6.08%
7	5.82%	5.82%	5.82%	5.82%	5.82%
8	5.56%	5.56%	5.56%	5.56%	5.56%
9	5.35%	5.35%	5.35%	5.35%	5.35%
10	5.14%	5.14%	5.14%	5.14%	5.14%
11	5.04%	5.04%	5.04%	5.04%	5.04%
12	4.94%	4.94%	4.94%	4.94%	4.94%
13	4.88%	4.88%	4.88%	4.88%	4.88%
14	4.83%	4.83%	4.83%	4.83%	4.83%
15 or more	4.78%	4.78%	4.78%	4.78%	4.78%

^{*} The total expected increase in salary is the increase due to promotions and longevity, shown in Table A-5a, adjusted for an assumed 4.00% per annum increase in the general wage level of the membership. The total result is compounded rather than additive.



Appendix A: Rates of Separation From Active Service Tables A-6 to A-17

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 Males A-14: General Plan E Males A-7: General Plan A Females A-15: General Plan E Females A-16: Safety Plan A Males A-9: General Plan B Females A-17: Safety Plan A Females

A-9: General Plan B Females
A-10: General Plan C Males
A-11: General Plan C Females
A-17: Safety Plan B Males
A-17: Safety Plan B Females

A-12: General Pan D Males A-13: General Plan D Females

Tables A-6: Rate of Separation From Active Service for General Members Plan A – Male

Age	Service Retirement	Withdrawal	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.0050	0.0003	0.0002	N/A	0.0003
19	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
20	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
21	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
22	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
23	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
24	0.0000	0.0050	0.0003	0.0002	N/A N/A	0.0004 0.0004
25 26	0.0000 0.0000	0.0050 0.0050	0.0003 0.0003	0.0002 0.0002	N/A N/A	0.0004
27	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
28	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
29	0.0000	0.0050	0.0003	0.0002	N/A	0.0005
30	0.0000	0.0050	0.0004	0.0002	N/A	0.0006
31	0.0000	0.0050	0.0004	0.0002	N/A	0.0006
32	0.0000	0.0050	0.0004	0.0002	N/A	0.0007
33	0.0000	0.0050	0.0005	0.0002	N/A N/A	0.0008
34 35	0.0000 0.0000	0.0050 0.0050	0.0005 0.0007	0.0002 0.0002	N/A N/A	8000.0 9000.0
36	0.0000	0.0050	0.0007	0.0002	N/A	0.0009
37	0.0000	0.0050	0.0008	0.0002	N/A	0.0010
38	0.0000	0.0050	0.0009	0.0002	N/A	0.0011
39	0.0000	0.0050	0.0011	0.0002	N/A	0.0011
40	0.0300	0.0050	0.0011	0.0003	N/A	0.0012
41	0.0300	0.0050	0.0012	0.0003	N/A	0.0013
42	0.0300	0.0050	0.0014	0.0003	N/A	0.0014
43 44	0.0300	0.0050	0.0015	0.0004 0.0004	N/A N/A	0.0015
45	0.0300 0.0300	0.0050 0.0050	0.0016 0.0019	0.0004	N/A N/A	0.0016 0.0017
46	0.0300	0.0050	0.0020	0.0005	N/A	0.0019
47	0.0300	0.0050	0.0022	0.0005	N/A	0.0020
48	0.0300	0.0050	0.0023	0.0007	N/A	0.0021
49	0.0300	0.0050	0.0024	0.0008	N/A	0.0023
50	0.0300	0.0050	0.0027	0.0009	N/A	0.0024
51	0.0300	0.0050	0.0028	0.0010	N/A	0.0026
52 53	0.0300 0.0300	0.0050 0.0050	0.0030 0.0032	0.0012 0.0013	N/A N/A	0.0028 0.0030
53 54	0.0450	0.0050	0.0032	0.0015	N/A N/A	0.0030
55	0.0600	0.0050	0.0036	0.0016	N/A	0.0036
56	0.0900	0.0050	0.0038	0.0018	N/A	0.0040
57	0.1200	0.0050	0.0041	0.0019	N/A	0.0044
58	0.1200	0.0050	0.0046	0.0022	N/A	0.0049
59	0.1500	0.0050	0.0051	0.0024	N/A	0.0054
60 61	0.1800 0.2100	0.0050 0.0050	0.0057 0.0062	0.0026 0.0028	N/A N/A	0.0059 0.0065
62	0.3000	0.0050	0.0065	0.0028	N/A N/A	0.0003
63	0.2100	0.0050	0.0066	0.0032	N/A	0.0076
64	0.2800	0.0050	0.0067	0.0033	N/A	0.0081
65	0.3500	0.0050	0.0068	0.0034	N/A	0.0086
66	0.2500	0.0050	0.0069	0.0035	N/A	0.0091
67	0.2500	0.0050	0.0070	0.0036	N/A	0.0095
68	0.2500	0.0050	0.0071	0.0037	N/A	0.0099
69 70	0.2500	0.0050	0.0071	0.0038	N/A	0.0104
70 71	0.2500 0.2500	0.0050 0.0050	0.0071 0.0071	0.0039 0.0040	N/A N/A	0.0112 0.0123
72	0.2500 0.2500	0.0050	0.0071	0.0040	N/A N/A	0.0123
73	0.2500	0.0050	0.0071	0.0041	N/A	0.0151
74	0.2500	0.0050	0.0071	0.0042	N/A	0.0169
75	1.0000	0.0000	0.0000	0.0000	N/A	0.0000



Tables A-7: Rate of Separation From Active Service for General Members Plan A – Female

	FIAII A - I	Ciliale				
Age	Service Retirement	Withdrawal	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
19	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
20	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
21	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
22	0.0000	0.0050	0.0001	0.0001	N/A N/A	0.0002
23	0.0000	0.0050	0.0001	0.0001	N/A N/A	0.0002
24	0.0000	0.0050	0.0001	0.0001	N/A N/A	0.0002
25	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
26	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
27	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
27 28	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
29	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
30	0.0000	0.0050	0.0004	0.0001	N/A	0.0003
31	0.0000	0.0050	0.0004	0.0001	N/A	0.0003
32	0.0000	0.0050	0.0004	0.0001	N/A	0.0003
33	0.0000	0.0050	0.0005	0.0001	N/A	0.0004
34	0.0000	0.0050	0.0007	0.0001	N/A	0.0004
35	0.0000	0.0050	0.0007	0.0001	N/A	0.0005
36	0.0000	0.0050	0.0007	0.0001	N/A	0.0005
37	0.0000	0.0050	0.0007	0.0001	N/A	0.0006
38	0.0000	0.0050	0.0007	0.0002	N/A	0.0006
39	0.0000	0.0050	0.0007	0.0002	N/A	0.0006
40	0.0300	0.0050	0.0008	0.0002	N/A	0.0007
41	0.0300	0.0050	0.0009	0.0002	N/A	0.0008
42	0.0300	0.0050	0.0010	0.0003	N/A	0.0009
43	0.0300	0.0050	0.0010	0.0003	N/A	0.0009
44	0.0300	0.0050	0.0010	0.0004	N/A	0.0010
45	0.0300	0.0050	0.0011	0.0004	N/A	0.0011
46	0.0300	0.0050	0.0012	0.0005	N/A	0.0012
47	0.0300	0.0050	0.0012	0.0005	N/A	0.0013
48	0.0300	0.0050	0.0014	0.0006	N/A	0.0014
49	0.0300	0.0050	0.0015	0.0006	N/A	0.0016
50	0.0300	0.0050	0.0017	0.0008	N/A	0.0017
51	0.0300	0.0050	0.0017	0.0009	N/A	0.0018
52	0.0300	0.0050	0.0018	0.0010	N/A	0.0020
53	0.0400	0.0050	0.0019	0.0011	N/A	0.0021
54	0.0700	0.0050	0.0020	0.0012	N/A	0.0023
55	0.0800	0.0050	0.0021	0.0013	N/A	0.0025
56	0.0900	0.0050	0.0023	0.0015	N/A	0.0028
57	0.1100	0.0050	0.0026	0.0015	N/A	0.0030
58	0.1200	0.0050	0.0027	0.0019	N/A	0.0033
59	0.1400	0.0050	0.0030	0.0021	N/A	0.0036
60	0.1600	0.0050	0.0033	0.0024	N/A	0.0039
61	0.1600	0.0050	0.0037	0.0027	N/A	0.0043
62	0.2400	0.0050	0.0042	0.0030	N/A	0.0047
63	0.2200	0.0050	0.0047	0.0031	N/A	0.0050
64	0.2200	0.0050	0.0053	0.0032	N/A	0.0054
65	0.3000	0.0050	0.0059	0.0033	N/A	0.0058
66	0.2400	0.0050	0.0066	0.0034	N/A	0.0062
67	0.2400	0.0050	0.0073	0.0035	N/A	0.0066
68	0.2400	0.0050	0.0082	0.0036	N/A	0.0069
69	0.2400	0.0050	0.0094	0.0037	N/A	0.0073
70	0.2400	0.0050	0.0094	0.0038	N/A	0.0076
71	0.2400	0.0050	0.0094	0.0039	N/A	0.0079
72	0.2400	0.0050	0.0094	0.0040	N/A	0.0085
73	0.2400	0.0050	0.0094	0.0041	N/A	0.0093
74	0.2400	0.0050	0.0094	0.0042	N/A	0.0103
75	1.0000	0.0000	0.0000	0.0000	N/A	0.0000

Tables A-8: Rate of Separation From Active Service for General Members Plan B – Male

Age	Service Retirement	Withdrawal	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.0050	0.0003	0.0002	N/A	0.0003
19	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
20	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
21	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
22	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
23	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
24	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
25	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
26	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
27	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
28	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
29	0.0000	0.0050	0.0003	0.0002	N/A	0.0005
30	0.0000	0.0050	0.0004 0.0004	0.0002 0.0002	N/A N/A	0.0006 0.0006
31 32	0.0000	0.0050 0.0050	0.0004	0.0002	N/A N/A	0.0007
33	0.0000 0.0000	0.0050	0.0004	0.0002	N/A	0.0007
33 34	0.0000	0.0050	0.0005	0.0002	N/A	0.0008
35	0.0000	0.0050	0.0007	0.0002	N/A	0.0009
36	0.0000	0.0050	0.0007	0.0002	N/A	0.0010
37	0.0000	0.0050	0.0008	0.0002	N/A	0.0010
38	0.0000	0.0050	0.0009	0.0002	N/A	0.0011
39	0.0000	0.0050	0.0011	0.0002	N/A	0.0011
40	0.0300	0.0050	0.0011	0.0003	N/A	0.0012
41	0.0300	0.0050	0.0012	0.0003	N/A	0.0013
42	0.0300	0.0050	0.0014	0.0003	N/A	0.0014
43	0.0300	0.0050	0.0015	0.0004	N/A	0.0015
44	0.0300	0.0050	0.0016	0.0004	N/A	0.0016
45	0.0300	0.0050	0.0019	0.0005	N/A	0.0017
46 47	0.0300 0.0300	0.0050 0.0050	0.0020 0.0022	0.0005 0.0005	N/A N/A	0.0019 0.0020
47 48	0.0300	0.0050	0.0022	0.0007	N/A	0.0020
49	0.0300	0.0050	0.0023	0.0007	N/A	0.0021
50	0.0300	0.0050	0.0027	0.0009	N/A	0.0024
51	0.0300	0.0050	0.0028	0.0010	N/A	0.0026
52	0.0300	0.0050	0.0030	0.0012	N/A	0.0028
53	0.0300	0.0050	0.0032	0.0013	N/A	0.0030
54	0.0450	0.0050	0.0034	0.0015	N/A	0.0033
55	0.0600	0.0050	0.0036	0.0016	N/A	0.0036
56	0.0900	0.0050	0.0038	0.0018	N/A	0.0040
57	0.1200	0.0050	0.0041	0.0019	N/A	0.0044 0.0049
58 59	0.1200 0.1500	0.0050 0.0050	0.0046 0.0051	0.0022 0.0024	N/A N/A	0.0049
60	0.1800	0.0050	0.0057	0.0024	N/A	0.0059
61	0.2100	0.0050	0.0062	0.0028	N/A	0.0065
62	0.3000	0.0050	0.0065	0.0020	N/A	0.0070
63	0.2100	0.0050	0.0066	0.0032	N/A	0.0076
64	0.2800	0.0050	0.0067	0.0033	N/A	0.0081
65	0.3500	0.0050	0.0068	0.0034	N/A	0.0086
66	0.2500	0.0050	0.0069	0.0035	N/A	0.0091
67	0.2500	0.0050	0.0070	0.0036	N/A	0.0095
68	0.2500	0.0050	0.0071	0.0037	N/A	0.0099
69	0.2500	0.0050	0.0071	0.0038	N/A	0.0104
70	0.2500	0.0050	0.0071	0.0039	N/A	0.0112
71 72	0.2500	0.0050	0.0071	0.0040	N/A	0.0123
72 73	0.2500	0.0050	0.0071	0.0041	N/A	0.0137
73 74	0.2500 0.2500	0.0050 0.0050	0.0071 0.0071	0.0042 0.0043	N/A N/A	0.0151 0.0169
74 75	1.0000	0.0000	0.0000	0.0000	N/A N/A	0.0000



Tables A-9: Rate of Separation From Active Service for General Members Plan B – Female

Age	Service Retirement	Withdrawal	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
19	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
20	0.0000	0.0050	0.0001	0.0001	NA	0.0002
21	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
22	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
23	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
24	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
25	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
26	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
27	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
28	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
29 30	0.0000 0.0000	0.0050	0.0001	0.0001	N/A	0.0002
31	0.0000	0.0050 0.0050	0.0004 0.0004	0.0001 0.0001	N/A	0.0003
32	0.0000	0.0050	0.0004	0.0001	N/A N/A	0.0003 0.0003
33	0.0000	0.0050	0.0004	0.0001	N/A	0.0003
34	0.0000	0.0050	0.0007	0.0001	N/A	0.0004
35	0.0000	0.0050	0.0007	0.0001	N/A	0.0004
36	0.0000	0.0050	0.0007	0.0001	N/A	0.0005
37	0.0000	0.0050	0.0007	0.0001	N/A	0.0006
38	0.0000	0.0050	0.0007	0.0002	N/A	0.0006
39	0.0000	0.0050	0.0007	0.0002	N/A	0.0006
40	0.0300	0.0050	8000.0	0.0002	N/A	0.0007
41	0.0300	0.0050	0.0009	0.0002	N/A	8000.0
42	0.0300	0.0050	0.0010	0.0003	N/A	0.0009
43	0.0300	0.0050	0.0010	0.0003	N/A	0.0009
44	0.0300	0.0050	0.0011	0.0004	N/A	0.0010
45	0.0300	0.0050	0.0011	0.0004	N/A	0.0011
46	0.0300	0.0050	0.0012	0.0005	N/A	0.0012
47	0.0300	0.0050	0.0012	0.0005	N/A	0.0013
48 49	0.0300	0.0050	0.0014	0.0006	N/A	0.0014
50	0.0300 0.0300	0.0050 0.0050	0.0015 0.0017	0.0006 0.0008	N/A N/A	0.0016 0.0017
51	0.0300	0.0050	0.0017	0.0008	N/A	0.0017
52	0.0300	0.0050	0.0018	0.0010	N/A	0.0020
53	0.0400	0.0050	0.0019	0.0011	N/A	0.0021
54	0.0700	0.0050	0.0020	0.0012	N/A	0.0023
55	0.0800	0.0050	0.0021	0.0013	N/A	0.0025
56	0.0900	0.0050	0.0023	0.0015	N/A	0.0028
57	0.1100	0.0050	0.0026	0.0015	N/A	0.0030
58	0.1200	0.0050	0.0027	0.0019	N/A	0.0033
59	0.1400	0.0050	0.0030	0.0021	N/A	0.0036
60	0.1600	0.0050	0.0033	0.0024	N/A	0.0039
61	0.1600	0.0050	0.0037	0.0027	N/A	0.0043
62	0.2400	0.0050	0.0042	0.0030	N/A	0.0047
63	0.2200	0.0050	0.0047	0.0031	N/A	0.0050
64 65	0.2200 0.3000	0.0050 0.0050	0.0053 0.0059	0.0032 0.0033	N/A	0.0054 0.0058
66	0.2400	0.0050	0.0059	0.0033	N/A N/A	0.0058
67	0.2400	0.0050	0.0073	0.0034	N/A	0.0062
68	0.2400	0.0050	0.0073	0.0036	N/A	0.0069
69	0.2400	0.0050	0.0094	0.0037	N/A	0.0073
70	0.2400	0.0050	0.0094	0.0038	N/A	0.0076
71	0.2400	0.0050	0.0094	0.0039	N/A	0.0079
72	0.2400	0.0050	0.0094	0.0040	N/A	0.0085
73	0.2400	0.0050	0.0094	0.0041	N/A	0.0093
74	0.2400	0.0050	0.0094	0.0042	N/A	0.0103
75	1.0000	0.0000	0.0000	0.0000	N/A	0.0000



Tables A-10: Rate of Separation From Active Service for General Members Plan C – Male

Age	Service Retirement	Withdrawal	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.0050	0.0003	0.0002	N/A	0.0003
19	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
20	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
21	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
22	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
23	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
24	0.0000	0.0050	0.0003	0.0002	N/A N/A	0.0004 0.0004
25 26	0.0000 0.0000	0.0050 0.0050	0.0003 0.0003	0.0002 0.0002	N/A N/A	0.0004
20 27	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
28	0.0000	0.0050	0.0003	0.0002	N/A	0.0004
29	0.0000	0.0050	0.0003	0.0002	N/A	0.0005
30	0.0000	0.0050	0.0004	0.0002	N/A	0.0006
31	0.0000	0.0050	0.0004	0.0002	N/A	0.0006
32	0.0000	0.0050	0.0004	0.0002	N/A	0.0007
33	0.0000	0.0050	0.0005	0.0002	N/A	0.0008
34	0.0000	0.0050	0.0005	0.0002	N/A N/A	0.0008
35 36	0.0000 0.0000	0.0050 0.0050	0.0007 0.0007	0.0002 0.0002	N/A N/A	0.0009 0.0010
36 37	0.0000	0.0050	0.0007	0.0002	N/A	0.0010
38	0.0000	0.0050	0.0009	0.0002	N/A	0.0011
39	0.0000	0.0050	0.0011	0.0002	N/A	0.0011
40	0.0300	0.0050	0.0011	0.0003	N/A	0.0012
41	0.0300	0.0050	0.0012	0.0003	N/A	0.0013
42	0.0300	0.0050	0.0014	0.0003	N/A	0.0014
43	0.0300	0.0050	0.0015	0.0004	N/A	0.0015
44 45	0.0300	0.0050	0.0016	0.0004	N/A	0.0016
45 46	0.0300 0.0300	0.0050 0.0050	0.0019 0.0020	0.0005 0.0005	N/A N/A	0.0017 0.0019
40 47	0.0300	0.0050	0.0020	0.0005	N/A	0.0019
48	0.0300	0.0050	0.0023	0.0007	N/A	0.0021
49	0.0300	0.0050	0.0024	0.0008	N/A	0.0023
50	0.0300	0.0050	0.0027	0.0009	N/A	0.0024
51	0.0300	0.0050	0.0028	0.0010	N/A	0.0026
52	0.0300	0.0050	0.0030	0.0012	N/A	0.0028
53 54	0.0300	0.0050	0.0032 0.0034	0.0013 0.0015	N/A N/A	0.0030 0.0033
5 4 55	0.0450 0.0600	0.0050 0.0050	0.0034	0.0016	N/A	0.0036
56	0.0900	0.0050	0.0038	0.0018	N/A	0.0040
57	0.1200	0.0050	0.0041	0.0019	N/A	0.0044
58	0.1200	0.0050	0.0046	0.0022	N/A	0.0049
59	0.1500	0.0050	0.0051	0.0024	N/A	0.0054
60	0.1800	0.0050	0.0057	0.0026	N/A	0.0059
61 62	0.2100	0.0050 0.0050	0.0062 0.0065	0.0028 0.0031	N/A N/A	0.0065 0.0070
63	0.3000 0.2100	0.0050	0.0066	0.0031	N/A	0.0076
64	0.2800	0.0050	0.0067	0.0033	N/A	0.0081
65	0.3500	0.0050	0.0068	0.0034	N/A	0.0086
66	0.2500	0.0050	0.0069	0.0035	N/A	0.0091
67	0.2500	0.0050	0.0070	0.0036	N/A	0.0095
68	0.2500	0.0050	0.0071	0.0037	N/A	0.0099
69 70	0.2500	0.0050	0.0071	0.0038	N/A	0.0104
70 71	0.2500	0.0050	0.0071	0.0039	N/A	0.0112 0.0123
71 72	0.2500 0.2500	0.0050 0.0050	0.0071 0.0071	0.0040 0.0041	N/A N/A	0.0123
73	0.2500	0.0050	0.0071	0.0041	N/A	0.0151
74 74	0.2500	0.0050	0.0071	0.0043	N/A	0.0169
75	1.0000	0.0000	0.0000	0.0000	N/A	0.0000



Tables A-11: Rate of Separation From Active Service for General Members Plan C – Female

18	Age	Service Retirement	Withdrawal	Service Disability	Ordinary Disability	Service Death	Ordinary Death
19	18	0.0000	0.0050	0.0001	0.0001	N/A	0.0002
20 0.0000 0.0050 0.0050 0.0001 0.0001 N/A 0.0002 22 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 23 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 24 0.0000 0.0050 0.0050 0.0001 0.0001 N/A 0.0002 24 0.0000 0.0050 0.0050 0.0001 0.0001 N/A 0.0002 25 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 25 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 27 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 27 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 28 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 28 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 29 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 29 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 29 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 30 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 31 0.0000 0.0050 0.0001 0.0001 N/A 0.0003 31 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 32 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 32 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0050 0.0005 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0050 0.0005 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0050 0.0005 0.0001 N/A 0.0003 35 0.0000 0.0050 0.0050 0.0007 0.0001 N/A 0.0003 35 0.0000 0.0050 0.0050 0.0007 0.0001 N/A 0.0003 36 0.0000 0.0050 0.0050 0.0007 0.0001 N/A 0.0003 36 0.0000 0.0050 0.0050 0.0007 0.0001 N/A 0.0003 36 0.0000 0.0050 0.0050 0.0007 0.0001 N/A 0.0004 40 0.0000 0.0050 0.0050 0.0007 0.0001 N/A 0.0005 36 0.0007 0.0001 N/A 0.0005 36 0.0007 0.0001 N/A 0.0005 36 0.0007 0.0001 N/A 0.0005 37 0.0000 0.0050 0.0050 0.0007 0.0001 N/A 0.0005 37 0.0000 0.0050 0.0050 0.0007 0.0001 N/A 0.0005 38 0.0007 0.0001 N/A 0.0005 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 38 0.0007 0.0001 N/A 0.0005 38 0.0007 0.0001 N/A 0.0005 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 N/A 0.0005 0.0005 0.0007 0.0001 N/A 0.0005 N/A 0.0005 0.0005 0.0005 0.0005 0.0005 N/A 0.0005 N/A 0.0005 N/A 0.0005 0.0005 0.0005 N/A	19					N/A	
21 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 23 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 24 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 24 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 25 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 26 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 27 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 28 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 28 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 29 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 30 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 31 0.0000 0.0050 0.0001 0.0001 N/A 0.0003 31 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 32 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 34 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 35 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 36 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 37 0.0000 0.0050 0.0007 0.0001 N/A 0.0003 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0003 39 0.0000 0.0050 0.0007 0.0001 N/A 0.0003 39 0.0000 0.0050 0.0007 0.0001 N/A 0.0003 39 0.0000 0.0050 0.0007 0.0001 N/A 0.0004 40 0.0300 0.0050 0.0050 0.0007 0.0001 N/A 0.0004 41 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 41 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 42 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 44 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 45 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 46 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 47 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 48 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 49 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0050 0.0007 0.0001 N/A 0.0006 50 0.0050 0.0050 0.0011 0.0000 N/A 0.0006 60 0.2400 0.0050		0.0000			0.0001	N/A	
23	21	0.0000	0.0050	0.0001		N/A	
24 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 25 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 26 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 27 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 28 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 29 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 30 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 31 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 31 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 32 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 34 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 35 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0004 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0004 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 37 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 39 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 41 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 42 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 44 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 45 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 46 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 47 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 48 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 49 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 50 0.0000 0.0050 0.0001 0.0003 N/A 0.0009 50 0.0000 0.0050 0.0011 0.0003 N/A 0.0009 50 0.0000 0.0050 0.0011 0.0004 N/A 0.0011 50 0.0300 0.0050 0.0011 0.0004 N/A 0.0015 50 0.0300 0.0050 0.0011 0.0003 N/A 0.0006 50 0.0300 0.0050 0.0011 0.0004 N/A 0.0015 50 0.0300 0.0050 0.0011 0.0004 N/A 0.0015 50 0.0300 0.0050 0.0011 0.0003 N/A 0.0006 50 0.0300 0.0050 0.0011 N/A 0.0006 50 0.00050 0.0015 N/A 0.0006 61 0.0000 0.0050 0.0050 0.00050 0.0015 N/A 0.00066	22					N/A	
25 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 27 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 28 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 29 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 30 0.0000 0.0050 0.0001 0.0001 N/A 0.0003 31 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 32 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 34 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 35 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 36 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 37 0.0000 0.0050 0.0005 0.0001 N/A 0.0003 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0004 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 39 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 41 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 42 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 44 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 45 0.0000 0.0050 0.0007 0.0002 N/A 0.0006 46 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 47 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 48 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 49 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 40 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 41 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 42 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 43 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 44 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 45 0.0300 0.0050 0.0009 0.0002 N/A 0.0008 46 0.0300 0.0050 0.0010 0.0003 N/A 0.0008 47 0.0300 0.0050 0.0011 0.0003 N/A 0.0008 48 0.0300 0.0050 0.0011 0.0003 N/A 0.0008 49 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 40 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 41 0.0300 0.0050 0.0011 0.0003 N/A 0.0008 42 0.0300 0.0050 0.0011 0.0003 N/A 0.0008 43 0.0300 0.0050 0.0011 0.0003 N/A 0.0008 44 0.0300 0.0050 0.0011 0.0003 N/A 0.0008 45 0.0300 0.0050 0.0011 0.0003 N/A 0.0008 46 0.0300 0.0050 0.0011 0.0003 N/A 0.0008 47 0.0008 N/A 0.0011 48 0.0300 0.0050 0.0011 0.0003 N/A 0.0011 49 0.0300 0.0050 0.0050 0.0011 0.0004 N/A 0.0011 40 0.0300 0.0050 0.0050 0.0011 0.0004 N/A 0.0011 40 0.0000 0.0050 0.0011 0.0000 N/A 0.0011 40 0.0000 0.0050 0.0011 0.0011 N/A 0.			0.0050	0.0001	0.0001	N/A	0.0002
26 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 27 0.0000 0.0050 0.0050 0.0001 0.0001 N/A 0.0002 28 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 30 0.0000 0.0050 0.0001 0.0001 N/A 0.0003 31 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 32 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 34 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 35 0.0000 0.0050 0.0005 0.0004 0.0001 N/A 0.0003 36 0.0000 0.0050 0.0005 0.0005 0.0001 N/A 0.0003 37 0.0000 0.0050 0.0007 0.0001 N/A 0.0003 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 39 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 39 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 41 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 42 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 44 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 44 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 45 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 46 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 47 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 48 0.0300 0.0050 0.0008 0.0002 N/A 0.0008 49 0.0300 0.0050 0.0008 0.0002 N/A 0.0008 40 0.0300 0.0050 0.0005 0.0008 N/A 0.0008 41 0.0300 0.0050 0.0050 0.0008 N/A 0.0008 42 0.0300 0.0050 0.0050 0.0008 N/A 0.0008 43 0.0300 0.0050 0.0050 0.0011 0.0003 N/A 0.0008 44 0.0300 0.0050 0.0050 0.0011 0.0003 N/A 0.0008 45 0.0300 0.0050 0.0011 0.0004 N/A 0.0010 46 0.0300 0.0050 0.0050 0.0011 0.0004 N/A 0.0010 47 0.0300 0.0050 0.0050 0.0011 0.0004 N/A 0.0016 50 0.0300 0.0050 0.0011 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0011 0.0006 N/A 0.0015 51 0.0300 0.0050 0.0050 0.0011 0.0004 N/A 0.0016 52 0.0300 0.0050 0.0050 0.0015 0.0015 N/A 0.0015 51 0.0300 0.0050 0.0050 0.0015 N/A 0.0015 52 0.0300 0.0050 0.0050 0.0015 N/A 0.0015 53 0.0400 0.0050 0.0050 0.0015 N/A 0.0015 54 0.0300 0.0050 0.0050 0.0015 N/A 0.0015 56 0.0900 0.0050 0.0050 0.0015 N/A 0.0033 N/A 0.0055 56 0.0900 0.0050 0.0050 0.0015 N/A 0.0035 57 0.1100 0.0050 0.0050 0.0033 N/A 0.0055 56 0.0900 0.0050 0.0050 0.0033 N/A 0.0056 66 0.2400 0.0050 0.0050 0.0055 0.0033 N/						N/A	
27 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 28 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 29 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 31 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 31 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 32 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 34 0.0000 0.0050 0.0005 0.0004 0.0001 N/A 0.0003 35 0.0000 0.0050 0.0007 0.0001 N/A 0.0004 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0004 37 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 41 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 42 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 43 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 44 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 45 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 46 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 47 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 48 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 49 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 40 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 41 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 42 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 43 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 44 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 45 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 46 0.0300 0.0050 0.0050 0.0011 0.0004 N/A 0.0011 50 0.0300 0.0050 0.0050 0.0011 0.0004 N/A 0.0011 51 0.0300 0.0050 0.0050 0.0011 0.0006 N/A 0.0012 51 0.0300 0.0050 0.0050 0.0012 0.0055 N/A 0.0012 51 0.0300 0.0050 0.0050 0.0011 N/A 0.0006 52 0.0300 0.0050 0.0015 0.0011 N/A 0.0006 53 0.0400 0.0550 0.0015 0.0011 N/A 0.0006 54 0.0300 0.0050 0.0050 0.0015 0.0011 N/A 0.0015 52 0.0300 0.0050 0.0050 0.0015 N/A 0.0015 53 0.0400 0.0550 0.0050 0.0015 0.0011 N/A 0.0030 58 0.1400 0.0050 0.0050 0.0015 N/A 0.0014 52 0.0300 0.0050 0.0050 0.0015 N/A 0.0015 53 0.0400 0.0050 0.0050 0.0015 N/A 0.0015 56 0.0900 0.0050 0.0050 0.0015 N/A 0.0050 56 0.00000 0.0050 0.005	25					N/A	
28	26			0.0001	0.0001	N/A	0.0002
29 0.0000 0.0050 0.0001 0.0001 N/A 0.0002 30 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 31 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 32 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 34 0.0000 0.0050 0.0005 0.0001 N/A 0.0004 35 0.0000 0.0050 0.0007 0.0001 N/A 0.0003 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 37 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 39 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 41 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 42 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 43 0.0300 0.0050 0.0009 0.0002 N/A 0.0008 44 0.0300 0.0050 0.0009 0.0002 N/A 0.0008 45 0.0300 0.0050 0.0010 0.0003 N/A 0.0008 46 0.0300 0.0050 0.0011 0.0003 N/A 0.0008 47 0.0300 0.0050 0.0011 0.0003 N/A 0.0008 48 0.0300 0.0050 0.0011 0.0003 N/A 0.0008 49 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 40 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 40 0.0300 0.0050 0.0011 0.0006 N/A 0.0011 40 0.0300 0.0050 0.0011 0.0006 N/A 0.0011 40 0.0300 0.0050 0.0012 0.0056 N/A 0.0013 40 0.0300 0.0050 0.0015 0.0012 0.0006 N/A 0.0015 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0015 51 0.0300 0.0050 0.0017 0.0008 N/A 0.0015 52 0.0300 0.0050 0.0017 0.0008 N/A 0.0015 53 0.0400 0.0050 0.0050 0.0017 0.0008 N/A 0.0015 54 0.0300 0.0050 0.0050 0.0017 0.0008 N/A 0.0015 55 0.0800 0.0050 0.0017 0.0008 N/A 0.0015 56 0.0900 0.0050 0.0017 0.0008 N/A 0.0015 57 0.1100 0.0050 0.0050 0.0017 0.0009 N/A 0.0055 56 0.0900 0.0050 0.0019 0.0011 N/A 0.0055 56 0.0900 0.0050 0.0050 0.0019 0.0011 N/A 0.0055 56 0.0900 0.0050 0.0050 0.0019 0.0011 N/A 0.0055 56 0.0900 0.0050 0.0050 0.0033 N/A 0.0055 56 0.0900 0.0050 0.0050 0.0033	20			0.0001	0.0001		0.0002
30 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 31 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 32 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0005 0.0001 N/A 0.0004 34 0.0000 0.0050 0.0005 0.0001 N/A 0.0004 35 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 37 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 39 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 41 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 42 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 43 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 44 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 45 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 46 0.0300 0.0050 0.0010 0.0003 N/A 0.0006 47 0.0300 0.0050 0.0010 0.0003 N/A 0.0006 48 0.0300 0.0050 0.0010 0.0003 N/A 0.0006 49 0.0300 0.0050 0.0010 0.0003 N/A 0.0006 40 0.0300 0.0050 0.0010 0.0003 N/A 0.0006 41 0.0300 0.0050 0.0010 0.0003 N/A 0.0006 42 0.0300 0.0050 0.0011 0.0003 N/A 0.0006 43 0.0300 0.0050 0.0011 0.0004 N/A 0.0010 45 0.0300 0.0050 0.0011 0.0004 N/A 0.0010 46 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 46 0.0300 0.0050 0.0011 0.0005 N/A 0.0011 46 0.0300 0.0050 0.0011 0.0006 N/A 0.0011 47 0.0300 0.0050 0.0011 0.0006 N/A 0.0011 48 0.0300 0.0050 0.0011 0.0006 N/A 0.0011 50 0.0300 0.0050 0.0011 0.0006 N/A 0.0015 50 0.0300 0.0050 0.0011 0.0006 N/A 0.0015 50 0.0300 0.0050 0.0011 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0019 0.0011 N/A 0.0025 55 0.0800 0.0050 0.0050 0.0017 0.0009 N/A 0.0016 50 0.0300 0.0050 0.0050 0.0017 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0050 0.0017 0.0009 N/A 0.0016 50 0.0300 0.0050 0.0050 0.0017 0.0009 N/A 0.0016 50 0.0300 0.0050 0.0050 0.0017 0.0009 N/A 0.0036 60 0.1600 0.0050 0.0050 0.0059 0.0033 N/A 0.0066 60 0.2400 0.0050 0.0050 0.0059 0.0033 N/A 0.0066 60	20			0.0001		N/A N/A	0.0002
31 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 32 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0005 0.0001 N/A 0.0004 34 0.0000 0.0050 0.0007 0.0001 N/A 0.0004 35 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 37 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 39 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 41 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 42 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 43 0.0300 0.0050 0.0009 0.0002 N/A 0.0006 44 0.0300 0.0050 0.0009 0.0002 N/A 0.0009 45 0.0300 0.0050 0.0009 0.0002 N/A 0.0009 46 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 47 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 48 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 49 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 40 0.0300 0.0050 0.0011 0.0003 N/A 0.0010 41 0.0300 0.0050 0.0011 0.0003 N/A 0.0010 42 0.0300 0.0050 0.0011 0.0004 N/A 0.0010 43 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 44 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 45 0.0300 0.0050 0.0011 0.0006 N/A 0.0011 46 0.0300 0.0050 0.0011 0.0006 N/A 0.0011 47 0.0300 0.0050 0.0012 0.0005 N/A 0.0012 47 0.0300 0.0050 0.0012 0.0005 N/A 0.0012 47 0.0300 0.0050 0.0015 0.0014 0.0006 N/A 0.0014 49 0.0300 0.0050 0.0015 0.0015 N/A 0.0015 50 0.0300 0.0050 0.0017 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0009 N/A 0.0036 60 0.1600 0.0050 0.0050 0.0026 0.0017 N/A 0.0036 60 0.1600 0.0050 0.0050 0.0033 N/A 0.0036 60 0.1600 0.0050 0.0050 0.0035 N/A 0.0058 66 0.2400 0.0050	30						
32 0.0000 0.0050 0.0004 0.0001 N/A 0.0003 33 0.0000 0.0050 0.0005 0.0001 N/A 0.0004 34 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 37 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 39 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 40 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 41 0.0300 0.0050 0.0007 0.0002 N/A 0.0006 42 0.0300 0.0050 0.0008 0.0002 N/A 0.0007 41 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 42 0.0300 0.0050 0.0009 0.0002 N/A 0.0008 42 0.0300 0.0050 0.0009 0.0002 N/A 0.0009 43 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 44 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 45 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 46 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 47 0.0300 0.0050 0.0011 0.0003 N/A 0.0011 48 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 49 0.0300 0.0050 0.0011 0.0005 N/A 0.0011 49 0.0300 0.0050 0.0011 0.0005 N/A 0.0011 49 0.0300 0.0050 0.0011 0.0006 N/A 0.0011 50 0.0300 0.0050 0.0011 0.0006 N/A 0.0011 51 0.0300 0.0050 0.0011 0.0006 N/A 0.0011 52 0.0300 0.0050 0.0011 0.0006 N/A 0.0014 54 0.0300 0.0050 0.0011 0.0006 N/A 0.0014 55 0.0300 0.0050 0.0011 0.0006 N/A 0.0014 50 0.0300 0.0050 0.0011 0.0006 N/A 0.0014 51 0.0300 0.0050 0.0011 N/A 0.0006 50 0.0300 0.0050 0.0011 N/A 0.0006 50 0.0300 0.0050 0.0011 N/A 0.0018 52 0.0300 0.0050 0.0017 0.0008 N/A 0.0018 52 0.0300 0.0050 0.0018 0.0010 N/A 0.0018 52 0.0300 0.0050 0.0019 0.0011 N/A 0.0025 54 0.0700 0.0050 0.0019 N/A 0.0015 55 0.0800 0.0050 0.0019 N/A 0.0015 56 0.0900 0.0050 0.0019 N/A 0.0015 57 0.1100 0.0050 0.0050 0.0021 N/A 0.0033 N/A 0.0025 56 0.0900 0.0050 0.0050 0.0021 N/A 0.0033 N/A 0.0026 57 0.1100 0.0050 0.0050 0.0027 N/A 0.0033 N/A 0.0036 60 0.1600 0.0050 0.0050 0.0027 N/A 0.0036 61 0.1600 0.0050 0.0050 0.0033 N/A 0.0025 66 0.0900 0.0050 0.0050 0.0033 N/A 0.0056 66 0.2400 0.0050 0.0050 0.0033 N/A 0.0056 66 0.2400 0.0050 0.0050 0.0033 N/A 0.0066 67 0.2400 0.0050 0.0050 0.0053 N/A 0.0035 N/A 0.0066	31		0.0050			N/A	0.0003
33	32		0.0050			N/A	0.0003
34 0.0000 0.0050 0.0007 0.0001 N/A 0.0004 35 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 37 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 38 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 39 0.0000 0.0050 0.0007 0.0002 N/A 0.0006 40 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 41 0.0300 0.0050 0.0008 0.0002 N/A 0.0006 42 0.0300 0.0050 0.0009 0.0002 N/A 0.0008 44 0.0300 0.0050 0.0010 0.0003 N/A 0.0008 44 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 45 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 46 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 47 0.0300 0.0050 0.0011 0.0004 N/A 0.0010 48 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 46 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 47 0.0300 0.0050 0.0011 0.0005 N/A 0.0011 48 0.0300 0.0050 0.0012 0.0005 N/A 0.0011 48 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 48 0.0300 0.0050 0.0014 0.0006 N/A 0.0013 48 0.0300 0.0050 0.0014 0.0006 N/A 0.0014 49 0.0300 0.0050 0.0014 0.0006 N/A 0.0013 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0014 51 0.0300 0.0050 0.0017 0.0008 N/A 0.0014 52 0.0300 0.0050 0.0017 0.0008 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0009 N/A 0.0018 52 0.0300 0.0050 0.0017 0.0009 N/A 0.0018 52 0.0300 0.0050 0.0017 N/A 0.0025 53 0.0400 0.0050 0.0017 0.0009 N/A 0.0018 52 0.0300 0.0050 0.0017 N/A 0.0021 53 0.0400 0.0050 0.0050 0.0017 N/A 0.0021 54 0.0700 0.0050 0.0050 0.0017 N/A 0.0021 56 0.0900 0.0050 0.0050 0.0017 N/A 0.0021 57 0.1100 0.0050 0.0050 0.0015 N/A 0.0026 57 0.1100 0.0050 0.0050 0.0021 N/A 0.0026 57 0.1100 0.0050 0.0050 0.0021 N/A 0.0026 60 0.1600 0.0050 0.0050 0.0021 N/A 0.0033 N/A 0.0026 61 0.1600 0.0050 0.0050 0.0033 N/A 0.0026 62 0.2400 0.0050 0.0050 0.0033 N/A 0.0026 63 0.2400 0.0050 0.0050 0.0033 N/A 0.0036 66 0.2400 0.0050 0.0050 0.0053 N/A 0.0036 67 0.2400 0.0050 0.0050 0.0066 0.0033 N/A 0.0066	33					N/A	
35 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 36 0.0000 0.0050 0.0007 0.0001 N/A 0.0005 37 0.0000 0.0050 0.0007 0.0001 N/A 0.0006 38 0.0000 0.0050 0.0007 0.0002 N/A 0.0006 39 0.0000 0.0050 0.0007 0.0002 N/A 0.0006 40 0.0300 0.0050 0.0008 0.0002 N/A 0.0007 41 0.0300 0.0050 0.0009 0.0002 N/A 0.0008 42 0.0300 0.0050 0.0010 0.0003 N/A 0.0008 43 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 44 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 45 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 46 0.0300 0.0050 0.0011 0.0004 N/A 0.0010 47 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 46 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 47 0.0300 0.0050 0.0012 0.0005 N/A 0.0012 47 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 48 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 49 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 49 0.0300 0.0050 0.0015 0.0014 0.0006 N/A 0.0013 50 0.0300 0.0050 0.0015 0.0017 0.0008 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0016 50 0.0300 0.0050 0.0015 0.0017 N/A 0.0016 50 0.0300 0.0050 0.0050 0.0017 N/A 0.0020 53 0.0400 0.0550 0.0050 0.0017 N/A 0.0020 53 0.0400 0.0550 0.0050 0.0017 N/A 0.0020 53 0.0400 0.0050 0.0050 0.0018 N/A 0.0015 54 0.0700 0.0050 0.0050 0.0018 N/A 0.0015 56 0.0900 0.0050 0.0050 0.0012 N/A 0.0025 57 0.1100 0.0050 0.0050 0.0021 N/A 0.0033 58 0.1200 0.0050 0.0050 0.0021 N/A 0.0036 60 0.1600 0.0050 0.0050 0.0033 N/A 0.0024 N/A 0.0036 61 0.1600 0.0050 0.0050 0.0033 N/A 0.0024 N/A 0.0036 62 0.2400 0.0050 0.0050 0.0066 0.0033 N/A 0.0056 63 0.2400 0.0050 0.0050 0.0066 0.0033 N/A 0.0056 66 0.2400 0.0050 0.0050 0.0066 0.0034 N/A 0.0066 67 0.2400 0.0050 0.0050 0.0063 0.0033 N/A 0.0066			0.0050			N/A	
36	35	0.0000	0.0050	0.0007	0.0001	N/A	0.0005
38 0.0000 0.0050 0.0007 0.0002 N/A 0.0006 39 0.0000 0.0050 0.0007 0.0002 N/A 0.0006 40 0.0300 0.0050 0.0009 0.0002 N/A 0.0008 41 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 42 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 43 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 44 0.0300 0.0050 0.0011 0.0004 N/A 0.0019 45 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 46 0.0300 0.0050 0.0012 0.0005 N/A 0.0012 47 0.0300 0.0050 0.0012 0.0005 N/A 0.0012 48 0.0300 0.0050 0.0014 0.0006 N/A 0.0014 49 0.0300 <td< td=""><td>36</td><td></td><td></td><td></td><td>0.0001</td><td>N/A</td><td>0.0005</td></td<>	36				0.0001	N/A	0.0005
39	37				0.0001	N/A	0.0006
40 0.0300 0.0050 0.0008 0.0002 N/A 0.0007 41 0.0300 0.0050 0.0009 0.0002 N/A 0.0008 42 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 43 0.0300 0.0050 0.0011 0.0004 N/A 0.0009 44 0.0300 0.0050 0.0011 0.0004 N/A 0.0010 45 0.0300 0.0050 0.0011 0.0004 N/A 0.0011 46 0.0300 0.0050 0.0012 0.0005 N/A 0.0012 47 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 48 0.0300 0.0050 0.0014 0.0006 N/A 0.0014 49 0.0300 0.0050 0.0017 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0017 51 0.0300 <td< td=""><td>38</td><td></td><td></td><td>0.0007</td><td>0.0002</td><td>N/A</td><td>0.0006</td></td<>	38			0.0007	0.0002	N/A	0.0006
41 0.0300 0.0050 0.0009 0.0002 N/A 0.0008 42 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 43 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 44 0.0300 0.0050 0.0011 0.0004 N/A 0.0010 45 0.0300 0.0050 0.0011 0.0005 N/A 0.0011 46 0.0300 0.0050 0.0012 0.0005 N/A 0.0012 47 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 48 0.0300 0.0050 0.0014 0.0006 N/A 0.0014 49 0.0300 0.0050 0.0015 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0016 51 0.0300 0.0050 0.0017 0.0008 N/A 0.0016 50 0.0300 <td< td=""><td></td><td></td><td>0.0050</td><td></td><td>0.0002</td><td>N/A</td><td>0.0006</td></td<>			0.0050		0.0002	N/A	0.0006
42 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 43 0.0300 0.0050 0.0011 0.0003 N/A 0.0009 44 0.0300 0.0050 0.0011 0.0004 N/A 0.0010 45 0.0300 0.0050 0.0011 0.0005 N/A 0.0011 46 0.0300 0.0050 0.0012 0.0005 N/A 0.0012 47 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 48 0.0300 0.0050 0.0014 0.0006 N/A 0.0014 49 0.0300 0.0050 0.0015 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0018 51 0.0300 0.0050 0.0017 0.0008 N/A 0.0018 52 0.0300 <td< td=""><td></td><td></td><td></td><td></td><td></td><td>N/A</td><td>0.0007</td></td<>						N/A	0.0007
43 0.0300 0.0050 0.0010 0.0003 N/A 0.0009 44 0.0300 0.0050 0.0011 0.0004 N/A 0.0010 45 0.0300 0.0050 0.0011 0.0005 N/A 0.0011 46 0.0300 0.0050 0.0012 0.0005 N/A 0.0012 47 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 48 0.0300 0.0050 0.0014 0.0006 N/A 0.0014 49 0.0300 0.0050 0.0017 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0016 51 0.0300 0.0050 0.0017 0.0008 N/A 0.0018 52 0.0300 0.0050 0.0017 0.0009 N/A 0.0018 52 0.0300 0.0050 0.0018 0.0010 N/A 0.0021 53 0.0400 <td< td=""><td></td><td></td><td>0.0050</td><td></td><td></td><td>N/A</td><td></td></td<>			0.0050			N/A	
44 0.0300 0.0050 0.0011 0.0004 N/A 0.0010 45 0.0300 0.0050 0.0011 0.0005 N/A 0.0011 46 0.0300 0.0050 0.0012 0.0005 N/A 0.0012 47 0.0300 0.0050 0.0014 0.0006 N/A 0.0013 48 0.0300 0.0050 0.0014 0.0006 N/A 0.0014 49 0.0300 0.0050 0.0017 0.0006 N/A 0.0014 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0014 51 0.0300 0.0050 0.0017 0.0008 N/A 0.0018 52 0.0300 0.0050 0.0018 0.0010 N/A 0.0018 52 0.0300 0.0050 0.0018 0.0010 N/A 0.0021 53 0.0400 0.0050 0.0018 0.0010 N/A 0.0021 54 0.0700 <td< td=""><td></td><td>0.0300 0.0300</td><td></td><td>0.0010</td><td>0.0003</td><td>N/A N/A</td><td></td></td<>		0.0300 0.0300		0.0010	0.0003	N/A N/A	
45 0.0300 0.0050 0.0011 0.0005 N/A 0.0011 46 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 47 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 48 0.0300 0.0050 0.0014 0.0006 N/A 0.0014 49 0.0300 0.0050 0.0015 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0017 51 0.0300 0.0050 0.0017 0.0009 N/A 0.0018 52 0.0300 0.0050 0.0018 0.0010 N/A 0.0020 53 0.0400 0.0050 0.0019 0.0011 N/A 0.0021 54 0.0700 0.0050 0.0020 0.0012 N/A 0.0023 55 0.0800 0.0050 0.0021 0.0013 N/A 0.0025 56 0.0900 <td< td=""><td></td><td>0.0300</td><td>0.0000</td><td>0.0010</td><td>0.0003</td><td>N/A N/A</td><td>0.0009</td></td<>		0.0300	0.0000	0.0010	0.0003	N/A N/A	0.0009
46 0.0300 0.0050 0.0012 0.0005 N/A 0.0012 47 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 48 0.0300 0.0050 0.0014 0.0006 N/A 0.0014 49 0.0300 0.0050 0.0015 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0017 51 0.0300 0.0050 0.0017 0.0009 N/A 0.0018 52 0.0300 0.0050 0.0018 0.0010 N/A 0.0020 53 0.0400 0.0050 0.0019 0.0011 N/A 0.0021 54 0.0700 0.0050 0.0020 0.0012 N/A 0.0023 55 0.0800 0.0050 0.0021 0.0013 N/A 0.0025 56 0.0900 0.0050 0.0023 0.0015 N/A 0.0028 57 0.1100 <td< td=""><td></td><td></td><td></td><td>0.0011</td><td>0.0004</td><td>N/A</td><td></td></td<>				0.0011	0.0004	N/A	
47 0.0300 0.0050 0.0012 0.0005 N/A 0.0013 48 0.0300 0.0050 0.0014 0.0006 N/A 0.0014 49 0.0300 0.0050 0.0015 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0016 51 0.0300 0.0050 0.0017 0.0009 N/A 0.0018 52 0.0300 0.0050 0.0018 0.0010 N/A 0.0020 53 0.0400 0.0050 0.0019 0.0011 N/A 0.0021 54 0.0700 0.0050 0.0020 0.0012 N/A 0.0023 55 0.0800 0.0050 0.0021 0.0013 N/A 0.0023 56 0.0900 0.0050 0.0023 0.0015 N/A 0.0028 57 0.1100 0.0050 0.0026 0.0015 N/A 0.0033 58 0.1200 <td< td=""><td></td><td></td><td></td><td>0.0011</td><td>0.0004</td><td>N/A</td><td></td></td<>				0.0011	0.0004	N/A	
48 0.0300 0.0050 0.0014 0.0006 N/A 0.0014 49 0.0300 0.0050 0.0015 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0017 51 0.0300 0.0050 0.0017 0.0009 N/A 0.0018 52 0.0300 0.0050 0.0018 0.0010 N/A 0.0020 53 0.0400 0.0050 0.0019 0.0011 N/A 0.0021 54 0.0700 0.0050 0.0020 0.0012 N/A 0.0023 55 0.0800 0.0050 0.0021 0.0013 N/A 0.0025 56 0.0900 0.0050 0.0023 0.0015 N/A 0.0025 57 0.1100 0.0050 0.0023 0.0015 N/A 0.0030 58 0.1200 0.0050 0.0030 0.0021 N/A 0.0033 59 0.1400 <td< td=""><td></td><td></td><td></td><td>0.0012</td><td>0.0005</td><td>N/A</td><td></td></td<>				0.0012	0.0005	N/A	
49 0.0300 0.0050 0.0015 0.0006 N/A 0.0016 50 0.0300 0.0050 0.0017 0.0008 N/A 0.0017 51 0.0300 0.0050 0.0017 0.0009 N/A 0.0018 52 0.0300 0.0050 0.0018 0.0010 N/A 0.0020 53 0.0400 0.0050 0.0019 0.0011 N/A 0.0021 54 0.0700 0.0050 0.0020 0.0012 N/A 0.0023 55 0.0800 0.0050 0.0021 0.0013 N/A 0.0025 56 0.0900 0.0050 0.0023 0.0015 N/A 0.0028 57 0.1100 0.0050 0.0026 0.0015 N/A 0.0030 58 0.1200 0.0050 0.0027 0.0019 N/A 0.0033 59 0.1400 0.0050 0.0030 0.0021 N/A 0.0036 60 0.1600 <td< td=""><td></td><td>0.0300</td><td>0.0050</td><td>0.0014</td><td>0.0006</td><td>N/A</td><td>0.0014</td></td<>		0.0300	0.0050	0.0014	0.0006	N/A	0.0014
50 0.0300 0.0050 0.0017 0.0008 N/A 0.0017 51 0.0300 0.0050 0.0017 0.0009 N/A 0.0018 52 0.0300 0.0050 0.0018 0.0010 N/A 0.0020 53 0.0400 0.0050 0.0019 0.0011 N/A 0.0021 54 0.0700 0.0050 0.0020 0.0012 N/A 0.0023 55 0.0800 0.0050 0.0021 0.0013 N/A 0.0023 56 0.0900 0.0050 0.0023 0.0015 N/A 0.0028 57 0.1100 0.0050 0.0026 0.0015 N/A 0.0030 58 0.1200 0.0050 0.0027 0.0019 N/A 0.0033 59 0.1400 0.0050 0.0030 0.0021 N/A 0.0036 60 0.1600 0.0050 0.0033 0.0024 N/A 0.0039 61 0.1600 <td< td=""><td></td><td>0.0300</td><td>0.0050</td><td>0.0015</td><td>0.0006</td><td>N/A</td><td>0.0016</td></td<>		0.0300	0.0050	0.0015	0.0006	N/A	0.0016
52 0.0300 0.0050 0.0018 0.0010 N/A 0.0020 53 0.0400 0.0050 0.0019 0.0011 N/A 0.0021 54 0.0700 0.0050 0.0020 0.0012 N/A 0.0023 55 0.0800 0.0050 0.0021 0.0013 N/A 0.0025 56 0.0900 0.0050 0.0023 0.0015 N/A 0.0028 57 0.1100 0.0050 0.0026 0.0015 N/A 0.0038 58 0.1200 0.0050 0.0027 0.0019 N/A 0.0033 59 0.1400 0.0050 0.0030 0.0021 N/A 0.0036 60 0.1600 0.0050 0.0033 0.0024 N/A 0.0039 61 0.1600 0.0050 0.0037 0.0027 N/A 0.0043 62 0.2400 0.0050 0.0037 0.0027 N/A 0.0044 63 0.2200 <td< td=""><td>50</td><td>0.0300</td><td></td><td></td><td></td><td>N/A</td><td>0.0017</td></td<>	50	0.0300				N/A	0.0017
53 0.0400 0.0050 0.0019 0.0011 N/A 0.0021 54 0.0700 0.0050 0.0020 0.0012 N/A 0.0023 55 0.0800 0.0050 0.0021 0.0013 N/A 0.0025 56 0.0900 0.0050 0.0023 0.0015 N/A 0.0028 57 0.1100 0.0050 0.0026 0.0015 N/A 0.0030 58 0.1200 0.0050 0.0027 0.0019 N/A 0.0033 59 0.1400 0.0050 0.0030 0.0021 N/A 0.0036 60 0.1600 0.0050 0.0033 0.0024 N/A 0.0039 61 0.1600 0.0050 0.0037 0.0027 N/A 0.0043 62 0.2400 0.0050 0.0037 0.0027 N/A 0.0044 63 0.2200 0.0050 0.0042 0.0030 N/A 0.0047 64 0.2200 <td< td=""><td>51</td><td></td><td>0.0050</td><td>0.0017</td><td>0.0009</td><td>N/A</td><td>0.0018</td></td<>	51		0.0050	0.0017	0.0009	N/A	0.0018
54 0.0700 0.0050 0.0020 0.0012 N/A 0.0023 55 0.0800 0.0050 0.0021 0.0013 N/A 0.0025 56 0.0900 0.0050 0.0023 0.0015 N/A 0.0028 57 0.1100 0.0050 0.0026 0.0015 N/A 0.0030 58 0.1200 0.0050 0.0027 0.0019 N/A 0.0033 59 0.1400 0.0050 0.0030 0.0021 N/A 0.0036 60 0.1600 0.0050 0.0033 0.0024 N/A 0.0039 61 0.1600 0.0050 0.0037 0.0027 N/A 0.0043 62 0.2400 0.0050 0.0042 0.0030 N/A 0.0047 63 0.2200 0.0050 0.0047 0.0031 N/A 0.0054 64 0.2200 0.0050 0.0053 0.0032 N/A 0.0058 65 0.3000 <td< td=""><td>52</td><td></td><td></td><td></td><td>0.0010</td><td>N/A</td><td></td></td<>	52				0.0010	N/A	
55 0.0800 0.0050 0.0021 0.0013 N/A 0.0025 56 0.0900 0.0050 0.0023 0.0015 N/A 0.0028 57 0.1100 0.0050 0.0026 0.0015 N/A 0.0030 58 0.1200 0.0050 0.0027 0.0019 N/A 0.0033 59 0.1400 0.0050 0.0030 0.0021 N/A 0.0036 60 0.1600 0.0050 0.0033 0.0024 N/A 0.0039 61 0.1600 0.0050 0.0037 0.0027 N/A 0.0043 62 0.2400 0.0050 0.0042 0.0030 N/A 0.0047 63 0.2200 0.0050 0.0047 0.0031 N/A 0.0054 64 0.2200 0.0050 0.0053 0.0032 N/A 0.0054 65 0.3000 0.0050 0.0059 0.0033 N/A 0.0058 66 0.2400 <td< td=""><td></td><td></td><td></td><td></td><td></td><td>N/A</td><td></td></td<>						N/A	
56 0.0900 0.0050 0.0023 0.0015 N/A 0.0028 57 0.1100 0.0050 0.0026 0.0015 N/A 0.0030 58 0.1200 0.0050 0.0027 0.0019 N/A 0.0033 59 0.1400 0.0050 0.0030 0.0021 N/A 0.0036 60 0.1600 0.0050 0.0033 0.0024 N/A 0.0039 61 0.1600 0.0050 0.0037 0.0027 N/A 0.0043 62 0.2400 0.0050 0.0042 0.0030 N/A 0.0047 63 0.2200 0.0050 0.0047 0.0031 N/A 0.0050 64 0.2200 0.0050 0.0053 0.0032 N/A 0.0054 65 0.3000 0.0050 0.0059 0.0033 N/A 0.0058 66 0.2400 0.0050 0.0066 0.0034 N/A 0.0062 67 0.2400 <td< td=""><td>54 55</td><td></td><td></td><td></td><td></td><td>N/A N/A</td><td>0.0023</td></td<>	5 4 55					N/A N/A	0.0023
57 0.1100 0.0050 0.0026 0.0015 N/A 0.0030 58 0.1200 0.0050 0.0027 0.0019 N/A 0.0033 59 0.1400 0.0050 0.0030 0.0021 N/A 0.0036 60 0.1600 0.0050 0.0033 0.0024 N/A 0.0039 61 0.1600 0.0050 0.0037 0.0027 N/A 0.0043 62 0.2400 0.0050 0.0042 0.0030 N/A 0.0047 63 0.2200 0.0050 0.0047 0.0031 N/A 0.0050 64 0.2200 0.0050 0.0053 0.0032 N/A 0.0054 65 0.3000 0.0050 0.0059 0.0033 N/A 0.0058 66 0.2400 0.0050 0.0066 0.0034 N/A 0.0062 67 0.2400 0.0050 0.0073 0.0035 N/A 0.0066				0.0021		N/A	
58 0.1200 0.0050 0.0027 0.0019 N/A 0.0033 59 0.1400 0.0050 0.0030 0.0021 N/A 0.0036 60 0.1600 0.0050 0.0033 0.0024 N/A 0.0039 61 0.1600 0.0050 0.0037 0.0027 N/A 0.0043 62 0.2400 0.0050 0.0042 0.0030 N/A 0.0047 63 0.2200 0.0050 0.0047 0.0031 N/A 0.0050 64 0.2200 0.0050 0.0053 0.0032 N/A 0.0054 65 0.3000 0.0050 0.0059 0.0033 N/A 0.0054 66 0.2400 0.0050 0.0066 0.0034 N/A 0.0062 67 0.2400 0.0050 0.0073 0.0035 N/A 0.0066				0.0026		N/A	
59 0.1400 0.0050 0.0030 0.0021 N/A 0.0036 60 0.1600 0.0050 0.0033 0.0024 N/A 0.0039 61 0.1600 0.0050 0.0037 0.0027 N/A 0.0043 62 0.2400 0.0050 0.0042 0.0030 N/A 0.0047 63 0.2200 0.0050 0.0047 0.0031 N/A 0.0050 64 0.2200 0.0050 0.0053 0.0032 N/A 0.0054 65 0.3000 0.0050 0.0059 0.0033 N/A 0.0054 66 0.2400 0.0050 0.0066 0.0034 N/A 0.0062 67 0.2400 0.0050 0.0073 0.0035 N/A 0.0066						N/A	
60 0.1600 0.0050 0.0033 0.0024 N/A 0.0039 61 0.1600 0.0050 0.0037 0.0027 N/A 0.0043 62 0.2400 0.0050 0.0042 0.0030 N/A 0.0047 63 0.2200 0.0050 0.0047 0.0031 N/A 0.0050 64 0.2200 0.0050 0.0053 0.0032 N/A 0.0054 65 0.3000 0.0050 0.0059 0.0033 N/A 0.0054 66 0.2400 0.0050 0.0066 0.0034 N/A 0.0062 67 0.2400 0.0050 0.0073 0.0035 N/A 0.0066	59		0.0050			N/A	0.0036
62 0.2400 0.0050 0.0042 0.0030 N/A 0.0047 63 0.2200 0.0050 0.0047 0.0031 N/A 0.0050 64 0.2200 0.0050 0.0053 0.0032 N/A 0.0054 65 0.3000 0.0050 0.0059 0.0033 N/A 0.0058 66 0.2400 0.0050 0.0066 0.0034 N/A 0.0062 67 0.2400 0.0050 0.0073 0.0035 N/A 0.0066		0.1600				N/A	
63 0.2200 0.0050 0.0047 0.0031 N/A 0.0050 64 0.2200 0.0050 0.0053 0.0032 N/A 0.0054 65 0.3000 0.0050 0.0059 0.0033 N/A 0.0058 66 0.2400 0.0050 0.0066 0.0034 N/A 0.0062 67 0.2400 0.0050 0.0073 0.0035 N/A 0.0066				0.0037			
64 0.2200 0.0050 0.0053 0.0032 N/A 0.0054 65 0.3000 0.0050 0.0059 0.0033 N/A 0.0058 66 0.2400 0.0050 0.0066 0.0034 N/A 0.0062 67 0.2400 0.0050 0.0073 0.0035 N/A 0.0066							
65 0.3000 0.0050 0.0059 0.0033 N/A 0.0058 66 0.2400 0.0050 0.0066 0.0034 N/A 0.0062 67 0.2400 0.0050 0.0073 0.0035 N/A 0.0066							
66 0.2400 0.0050 0.0066 0.0034 N/A 0.0062 67 0.2400 0.0050 0.0073 0.0035 N/A 0.0066							0.0054
67 0.2400 0.0050 0.0073 0.0035 N/A 0.0066							0.0058
						N/A N/A	
69 0.2400 0.0050 0.0094 0.0037 N/A 0.0073	6Q					N/A N/A	0.0009
70 0.2400 0.0050 0.0094 0.0038 N/A 0.0076						N/A	
71 0.2400 0.0050 0.0094 0.0039 N/A 0.0079	71					N/A	
72 0.2400 0.0050 0.0094 0.0040 N/A 0.0085							
73 0.2400 0.0050 0.0094 0.0041 N/A 0.0093							
74 0.2400 0.0050 0.0094 0.0042 N/A 0.0103	74	0.2400	0.0050	0.0094		N/A	0.0103
75 1.0000 0.0000 0.0000 0.0000 N/A 0.0000	75	1.0000	0.0000	0.0000	0.0000	N/A	0.0000



Tables A-12: Rate of Separation From Active Service for General Members Plan D – Male

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Withdrawal
18	0.0000	0.0003	0.0002	N/A	0.0003	1	0.0600
19	0.0000	0.0003	0.0002	N/A	0.0004	2 3	0.0520
20	0.0000	0.0003	0.0002	N/A	0.0004	3	0.0460
21	0.0000	0.0003	0.0002	N/A	0.0004	4	0.0400
22	0.0000	0.0003	0.0002	N/A	0.0004	5 6	0.0340
23 24	0.0000 0.0000	0.0003 0.0003	0.0002 0.0002	N/A N/A	0.0004 0.0004	4 5 6 7	0.0327 0.0313
2 4 25	0.0000	0.0003	0.0002	N/A	0.0004	8	0.0300
26 26	0.0000	0.0003	0.0002	N/A	0.0004	9	0.0296
27	0.0000	0.0003	0.0002	N/A	0.0004	10	0.0292
28	0.0000	0.0003	0.0002	N/A	0.0004	11	0.0288
29	0.0000	0.0003	0.0002	N/A	0.0005	12	0.0284
30	0.0000	0.0004	0.0002	N/A	0.0006	13	0.0280
31 .	0.0000	0.0004	0.0002	N/A	0.0006	14	0.0280
32	0.0000	0.0004	0.0002	N/A N/A	0.0007 0.0008	15 16	0.0280 0.0280
33 34	0.0000 0.0000	0.0005 0.0005	0.0002 0.0002	N/A N/A	0.0008	17	0.0280
3 4 35	0.0000	0.0003	0.0002	N/A	0.0009	18	0.0280
36	0.0000	0.0007	0.0002	N/A	0.0010	19	0.0280
37	0.0000	0.0008	0.0002	N/A	0.0010	20 & Up	0.0280
38	0.0000	0.0009	0.0002	N/A	0.0011	•	
39	0.0000	0.0011	0.0002	N/A	0.0011		
40	0.0300	0.0011	0.0003	N/A	0.0012		
41	0.0300	0.0012	0.0003	N/A	0.0013		
42 43	0.0300	0.0014	0.0003 0.0004	N/A N/A	0.0014 0.0015		
43 44	0.0300 0.0300	0.0015 0.0016	0.0004	N/A N/A	0.0016		
45	0.0300	0.0010	0.0005	N/A	0.0017		
46	0.0300	0.0020	0.0005	N/A	0.0019		
47	0.0300	0.0022	0.0005	N/A	0.0020		
48	0.0300	0.0023	0.0007	N/A	0.0021		
49	0.0300	0.0024	0.0008	N/A	0.0023		
50	0.0300	0.0027	0.0009	N/A	0.0024		
51 52	0.0300 0.0300	0.0028 0.0030	0.0010 0.0012	N/A N/A	0.0026 0.0028		
53	0.0300	0.0030	0.0012	N/A	0.0020		
54	0.0300	0.0034	0.0015	N/A	0.0033		
55	0.0300	0.0036	0.0016	N/A	0.0036		
56	0.0300	0.0038	0.0018	N/A	0.0040		
57	0.0300	0.0041	0.0019	N/A	0.0044		
58 59	0.0300	0.0046	0.0022	N/A	0.0049		
59 60	0.0300 0.0700	0.0051 0.0057	0.0024 0.0026	N/A N/A	0.0054 0.0059		
61	0.1000	0.0062	0.0028	N/A	0.0065		
62	0.1200	0.0065	0.0031	N/A	0.0070		
63	0.1000	0.0066	0.0032	N/A	0.0076		
64	0.1000	0.0067	0.0033	N/A	0.0081		
65	0.2500	0.0068	0.0034	N/A	0.0086		
66	0.1700	0.0069	0.0035	N/A	0.0091		
67 68	0.1700 0.1700	0.0070 0.0071	0.0036 0.0037	N/A N/A	0.0095 0.0099		
69	0.1700	0.0071	0.0037	N/A N/A	0.0099		
70	0.2500	0.0071	0.0039	N/A	0.0104		
71	0.2500	0.0071	0.0040	N/A	0.0123		
72	0.2500	0.0071	0.0041	N/A	0.0137		
73	0.2500	0.0071	0.0042	N/A	0.0151		
74	0.2500	0.0071	0.0043	N/A	0.0169		
75	1.0000	0.0000	0.0000	N/A	0.0000		



Tables A-13: Rate of Separation From Active Service for General Members Plan D – Female

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Withdrawal
18	0.0000	0.0001	0.0001	N/A	0.0002	1	0.0600
19	0.0000	0.0001	0.0001	N/A	0.0002	ż	0.0520
20	0.0000	0.0001	0.0001	N/A	0.0002	2 3	0.0460
21	0.0000	0.0001	0.0001	N/A	0.0002	4	0.0400
22	0.0000	0.0001	0.0001	N/A	0.0002	5	0.0340
23	0.0000	0.0001	0.0001	N/A	0.0002	6	0.0327
24	0.0000	0.0001	0.0001	N/A	0.0002	4 5 6 7	0.0313
25	0.0000	0.0001	0.0001	N/A	0.0002	8	0.0300
26	0.0000	0.0001	0.0001	N/A	0.0002	9	0.0296
27	0.0000	0.0001	0.0001	N/A	0.0002	10	0.0292
28	0.0000	0.0001	0.0001	N/A	0.0002	11	0.0288
29	0.0000	0.0001	0.0001	N/A	0.0002	12	0.0284
30	0.0000	0.0004	0.0001	N/A	0.0003	13	0.0280
31	0.0000	0.0004	0.0001	N/A	0.0003	14	0.0280
32	0.0000	0.0004	0.0001	N/A	0.0003	15	0.0280
33 34	0.0000	0.0005	0.0001	N/A	0.0004	16	0.0280
3 4 35	0.0000 0.0000	0.0007 0.0007	0.0001	N/A	0.0004	17	0.0280
36	0.0000	0.0007	0.0001 0.0001	N/A N/A	0.0005 0.0005	18 19	0.0280
37	0.0000	0.0007	0.0001	N/A	0.0005	20 & Up	0.0280 0.0280
38	0.0000	0.0007	0.0002	N/A	0.0006	20 a Op	0.0200
39	0.0000	0.0007	0.0002	N/A	0.0006		
40	0.0200	0.0008	0.0002	N/A	0.0007		
41	0.0200	0.0009	0.0002	N/A	0.0008		
42	0.0200	0.0010	0.0003	N/A	0.0009		
43	0.0200	0.0010	0.0003	N/A	0.0009		
44	0.0200	0.0011	0.0004	N/A	0.0010		
45	0.0200	0.0011	0.0004	N/A	0.0011		
46	0.0200	0.0012	0.0005	N/A	0.0012		
47	0.0200	0.0012	0.0005	N/A	0.0013		
48	0.0200	0.0014	0.0006	N/A	0.0014		
49 50	0.0200 0.0200	0.0015 0.0017	0.0006	N/A	0.0016		
50 51	0.0200	0.0017	0.0008 0.0009	N/A N/A	0.0017 0.0018		
52	0.0200	0.0018	0.0010	N/A	0.0018		
53	0.0200	0.0019	0.0011	N/A	0.0021		
54	0.0200	0.0020	0.0012	N/A	0.0023		
55	0.0400	0.0021	0.0013	N/A	0.0025		
56	0.0400	0.0023	0.0015	N/A	0.0028		
57	0.0400	0.0026	0.0015	N/A	0.0030		
58	0.0400	0.0027	0.0019	N/A	0.0033		
59	0.0500	0.0030	0.0021	N/A	0.0036		
60 61	0.0500	0.0033	0.0024	N/A	0.0039		
61 62	0.0800	0.0037	0.0027	N/A	0.0043		
63	0.1000 0.1100	0.0042 0.0047	0.0030 0.0031	N/A N/A	0.0047 0.0050		
64	0.1200	0.0053	0.0031	N/A	0.0054		
65	0.2300	0.0059	0.0032	N/A	0.0058		
66	0.1800	0.0066	0.0034	N/A	0.0062		
67	0.1300	0.0073	0.0035	N/A	0.0066		
68	0.2500	0.0082	0.0036	N/A	0.0069		
69	0.2500	0.0094	0.0037	N/A	0.0073		
70	0.2500	0.0094	0.0038	N/A	0.0076		
71	0.2500	0.0094	0.0039	N/A	0.0079		
72 72	0.2500	0.0094	0.0040	N/A	0.0085		
73 74	0.2500 0.2500	0.0094	0.0041	N/A	0.0093		
74 75	1.0000	0.0094 0.0000	0.0042 0.0000	N/A N/A	0.0103 0.0000		
13	1.0000	0.0000	0.0000	IN/A	0.0000		



Tables A-14: 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	Withdrawal
18	0.0000	N/A	N/A	N/A	0.0004	1	0.1300
19	0.0000	N/A	N/A	N/A	0.0004	ż	0.0700
20	0.0000	N/A	N/A	N/A	0.0004	$\bar{3}$	0.0600
21	0.0000	N/A	N/A	N/A	0.0004	4	0.0500
22	0.0000	N/A	N/A	N/A	0.0004	2 3 4 5 6 7	0.0400
23	0.0000	N/A	N/A	N/A	0.0004	6	0.0373
24	0.0000	N/A	N/A	N/A	0.0004	7	0.0347
25	0.0000	N/A	N/A	N/A	0.0004	8	0.0320
26 27	0.0000	N/A	N/A	N/A	0.0004	9	0.0306
27	0.0000	N/A	N/A	N/A	0.0005	10	0.0292
28	0.0000	N/A	N/A	N/A	0.0006	11	0.0278
29	0.0000	N/A	N/A	N/A	0.0006	12	0.0264
30	0.0000	N/A	N/A	N/A	0.0007	13	0.0250
31	0.0000	N/A	N/A	N/A	0.0008	14	0.0250
32	0.0000	N/A	N/A	N/A	0.0008	15	0.0250
33	0.0000	N/A	N/A	N/A	0.0009	16	0.0250
34	0.0000	N/A	N/A	N/A N/A	0.0010	17 18	0.0250
35	0.0000	N/A	N/A N/A	N/A N/A	0.0010 0.0011	19	0.0250 0.0250
36 37	0.0000 0.0000	N/A N/A	N/A N/A	N/A N/A	0.0011	20 & Up	0.0250
38	0.0000	N/A N/A	N/A	N/A N/A	0.0011	20 & Op	0.0230
39	0.0000	N/A N/A	N/A	N/A N/A	0.0012		
40	0.0000	N/A N/A	N/A	N/A	0.0013		
41	0.0000	N/A	N/A	N/A	0.0015		
42	0.0000	N/A	N/A	N/A	0.0016		
43	0.0000	N/A	N/A	N/A	0.0017		
44	0.0000	N/A	N/A	N/A	0.0019		
45	0.0000	N/A	N/A	N/A	0.0020		
46	0.0000	N/A	N/A	N/A	0.0021		
47	0.0000	N/A	N/A	N/A	0.0023		
48	0.0000	N/A	N/A	N/A	0.0024		
49	0.0000	N/A	N/A	N/A	0.0026		
50 51	0.0000	N/A N/A	N/A N/A	N/A N/A	0.0028 0.0030		
52	0.0000 0.0000	N/A N/A	N/A N/A	N/A N/A	0.0030		
53	0.0000	N/A N/A	N/A	N/A	0.0036		
54	0.0000	N/A	N/A	N/A	0.0040		
55	0.0300	N/A	N/A	N/A	0.0044		
56	0.0300	N/A	N/A	N/A	0.0049		
57 58	0.0300	N/A	N/A	N/A	0.0054		
58	0.0300	N/A	N/A	N/A	0.0059		
59	0.0300	N/A	N/A	N/A	0.0065		
60	0.0300	N/A	N/A	N/A	0.0070		
61	0.0600	N/A	N/A	N/A	0.0076		
62	0.1100	N/A	N/A	N/A	0.0081 0.0086		
63 64	0.0700	N/A	N/A N/A	N/A N/A	0.0091		
65	0.1400 0.2600	N/A N/A	N/A N/A	N/A N/A	0.0091		
66	0.1700	N/A	N/A	N/A	0.0099		
67	0.1700	N/A	N/A	N/A	0.0104		
68	0.1700	N/A	N/A	N/A	0.0112		
69	0.1700	N/A	N/A	N/A	0.0123		
70	0.2500	N/A	N/A	N/A	0.0137		
71	0.2500	N/A	N/A	N/A	0.0151		
72	0.2500	N/A	N/A	N/A	0.0169		
73	0.2500	N/A	N/A	N/A	0.0188		
74	0.2500	N/A	N/A	N/A	0.0208		
75	1.0000	N/A	N/A	N/A	0.0000		



Tables A-15: Rate of Separation From Active Service for General Members Plan E – Female

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Withdrawal
18	0.0000	N/A	N/A	N/A	0.0002	1	0.1300
19	0.0000	N/A	N/A	N/A	0.0002	ż	0.0700
20	0.0000	N/A	N/A	N/A	0.0002	3	0.0600
21	0.0000	N/A	N/A	N/A	0.0002	ă	0.0500
22	0.0000	N/A	N/A	N/A	0.0002	5	0.0400
23	0.0000	N/A	N/A	N/A	0.0002	2 3 4 5 6 7	0.0373
24	0.0000	N/A	N/A	N/A	0.0002	7	0.0373
25	0.0000	N/A	N/A	N/A	0.0002	8	0.0320
26	0.0000	N/A	N/A	N/A	0.0002	9	0.0306
27	0.0000	N/A	N/A	N/A	0.0002	<u>10</u>	0.0292
28	0.0000	N/A	N/A	N/A	0.0003	11	0.0278
29	0.0000	N/A	N/A	N/A	0.0003	12	0.0264
30	0.0000	N/A	N/A	N/A	0.0003	13	0.0250
31	0.0000	N/A	N/A	N/A	0.0004	14	0.0250
32	0.0000	N/A	N/A	N/A	0.0004	15	0.0250
33	0.0000	N/A	N/A	N/A	0.0005	16	0.0250
34	0.0000	N/A	N/A	N/A	0.0005	17	0.0250
35	0.0000	N/A	N/A	N/A	0.0006	18	0.0250
36	0.0000	N/A	N/A	N/A	0.0006	19	0.0250
37	0.0000	N/A	N/A	N/A	0.0006	20 & Up	0.0250
38	0.0000	N/A	N/A	N/A	0.0007	-0 - 0 p	0.0200
39	0.0000	N/A	N/A	N/A	0.0008		
40	0.0000	N/A	N/A	N/A	0.0009		
41	0.0000	N/A	N/A	N/A	0.0009		
42	0.0000	N/A	N/A	N/A	0.0010		
43	0.0000	N/A	N/A	N/A	0.0011		
44	0.0000	N/A	N/A	N/A	0.0012		
45	0.0000	N/A	N/A	N/A	0.0013		
46	0.0000	N/A	N/A	N/A	0.0014		
47	0.0000	N/A	N/A	N/A	0.0016		
48	0.0000	N/A	N/A	N/A	0.0017		
49	0.0000	N/A	N/A	N/A	0.0018		
50	0.0000	N/A	N/A	N/A	0.0020		
51	0.0000	N/A	N/A	N/A	0.0021		
52	0.0000	N/A	N/A	N/A	0.0023		
53	0.0000	N/A	N/A	N/A	0.0025		
54	0.0000	N/A	N/A	N/A	0.0028		
55	0.0400	N/A	N/A	N/A	0.0030		
56	0.0400	N/A	N/A	N/A	0.0033		
57	0.0400	N/A	N/A	N/A	0.0036		
58	0.0400	N/A	N/A	N/A	0.0039		
59	0.0400	N/A	N/A	N/A	0.0043		
60	0.0400	N/A	N/A	N/A	0.0047		
61	0.0600	N/A	N/A	N/A	0.0050		
62	0.0900	N/A	N/A	N/A	0.0054		
63	0.0600	N/A	N/A	N/A	0.0058		
64	0.1500	N/A	N/A	N/A	0.0062		
65	0.2500	N/A	N/A	N/A	0.0066		
66	0.1500	N/A	N/A	N/A	0.0069		
67	0.1500	N/A	N/A	N/A	0.0073		
68	0.1500	N/A	N/A	N/A	0.0076		
69	0.1500	N/A	N/A	N/A	0.0079		
70 71	0.2500	N/A	N/A	N/A	0.0085		
71 72	0.2500	N/A	N/A	N/A	0.0093		
72 73	0.2500	N/A	N/A	N/A	0.0103		
73 74	0.2500	N/A	N/A	N/A	0.0112		
74 75	0.2500 1.0000	N/A	N/A	N/A	0.0124		
70	1.0000	N/A	N/A	N/A	0.0000		

Tables A-16: Rate of Separation From Active Service for Safety Members Plan A & B – Male

Age	Service Retirement	Withdrawal	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
19	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
20	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
21	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
22	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
23	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
24	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
25	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
26	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
27	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
28	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
29	0.0000	0.015	0.0050	0.0003	0.0001	0.0003
30	0.0000	0.014	0.0060	0.0003	0.0001	0.0004
31	0.0000	0.013	0.0070	0.0003	0.0001	0.0004
32	0.0000	0.012	0.0080	0.0003	0.0001	0.0004
33	0.0000	0.011	0.0090	0.0003	0.0001	0.0004
34	0.0000	0.010	0.0100	0.0003	0.0001	0.0004
35	0.0000	0.009	0.0110	0.0004	0.0001	0.0004
36	0.0000	0.008	0.0120	0.0004	0.0001	0.0004
37	0.0000	0.007	0.0125	0.0004	0.0001	0.0004
38	0.0000	0.006	0.0130	0.0004	0.0001	0.0004
39	0.0000	0.005	0.0135	0.0004	0.0001	0.0004
40	0.0100	0.005	0.0140	0.0005	0.0001	0.0005
41	0.0100	0.005	0.0145	0.0005	0.0001	0.0006
42	0.0100	0.005	0.0150	0.0005	0.0001	0.0006
43	0.0100	0.005	0.0155	0.0005	0.0001	0.0007
44	0.0100	0.005	0.0160	0.0006	0.0001	0.0008
45	0.0100	0.005	0.0165	0.0006	0.0001	0.0008
46 47	0.0100	0.005	0.0170	0.0007	0.0001	0.0009
47 49	0.0100	0.005	0.0175	0.0007	0.0001	0.0010
48 49	0.0100	0.005 0.005	0.0180 0.0185	0.0008 0.0010	0.0001 0.0001	0.0010 0.0011
49 50	0.0100 0.0100	0.005	0.0190	0.0010	0.0001	0.0011
50 51	0.0200	0.005	0.0300	0.0011	0.0001	0.0011
52	0.0250	0.005	0.0350	0.0013	0.0001	0.0012
52 53	0.0300	0.005	0.0400	0.0017	0.0001	0.0013
54	0.1300	0.005	0.0450	0.0017	0.0001	0.0014
5 4 55	0.1300	0.005	0.0700	0.0020	0.0001	0.0015
56	0.2500	0.005	0.1200	0.0024	0.0001	0.0017
57	0.1500	0.005	0.1200	0.0027	0.0001	0.0017
58	0.1500	0.005	0.1200	0.0033	0.0001	0.0020
59	0.1500	0.005	0.1200	0.0036	0.0001	0.0021
60	1.0000	0.000	0.0000	0.0000	0.0000	0.0000

Tables A-17: Rate of Separation From Active Service for Safety Members Plan A & B – Female

Age	Service Retirement	Withdrawal	Service Disability	Ordinary Disability	Service Death	Ordinary Death
18	0.0000	0.020	0.0050	0.0003	0.0001	0.0002
19	0.0000	0.020	0.0050	0.0003	0.0001	0.0002
20	0.0000	0.020	0.0050	0.0003	0.0001	0.0002
21	0.0000	0.020	0.0050	0.0003	0.0001	0.0002
22	0.0000	0.020	0.0050	0.0003	0.0001	0.0002
23	0.0000	0.020	0.0050	0.0003	0.0001	0.0002
24 25	0.0000	0.020	0.0050	0.0003	0.0001	0.0002
25 26	0.0000 0.0000	0.020 0.020	0.0050	0.0003	0.0001	0.0002
20 27	0.0000	0.020	0.0050 0.0050	0.0003 0.0003	0.0001	0.0002
28	0.0000	0.020	0.0050	0.0003	0.0001 0.0001	0.0002 0.0002
29	0.0000	0.020	0.0050	0.0003	0.0001	0.0002
30	0.0000	0.019	0.0060	0.0003	0.0001	0.0002
31	0.0000	0.018	0.0070	0.0003	0.0001	0.0003
32	0.0000	0.017	0800.0	0.0003	0.0001	0.0003
33	0.0000	0.016	0.0090	0.0003	0.0001	0.0004
34	0.0000	0.015	0.0100	0.0003	0.0001	0.0004
35	0.0000	0.014	0.0110	0.0004	0.0001	0.0005
36	0.0000	0.013	0.0120	0.0004	0.0001	0.0005
37	0.0000	0.012	0.0125	0.0004	0.0001	0.0006
38	0.0000	0.011	0.0130	0.0004	0.0001	0.0006
39	0.0000	0.010	0.0135	0.0004	0.0001	0.0006
40	0.0100	0.009	0.0140	0.0005	0.0001	0.0007
41 42	0.0100 0.0100	0.008	0.0145	0.0005	0.0001	0.0008
43	0.0100	0.007 0.006	0.0150 0.0155	0.0005	0.0001	0.0009
43 44	0.0100	0.005	0.0160	0.0005 0.0006	0.0001 0.0001	0.0009 0.0010
45	0.0100	0.005	0.0165	0.0006	0.0001	0.0010
46	0.0100	0.005	0.0170	0.0007	0.0001	0.0011
47	0.0100	0.005	0.0175	0.0007	0.0001	0.0013
48	0.0100	0.005	0.0180	0.0008	0.0001	0.0014
49	0.0100	0.005	0.0185	0.0010	0.0001	0.0016
50	0.0100	0.005	0.0190	0.0011	0.0001	0.0017
51	0.0200	0.005	0.0300	0.0013	0.0001	0.0018
52	0.0250	0.005	0.0350	0.0014	0.0001	0.0020
53	0.0300	0.005	0.0400	0.0017	0.0001	0.0021
54 55	0.1600	0.005	0.0450	0.0020	0.0001	0.0023
55 56	0.2000 0.0800	0.005 0.005	0.0700	0.0024	0.0001	0.0025
50 57	0.0600 0.1600	0.005 0.005	0.1200 0.1200	0.0027 0.0030	0.0001 0.0001	0.0028 0.0030
58	0.1000	0.005	0.1200	0.0033	0.0001	0.0030
59	0.2900	0.005	0.1200	0.0036	0.0001	0.0036
60	1.0000	0.000	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, 2001. 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. Only those benefits in effect through July 1, 2001 are considered in this valuation.

Government Code Sections or Board of Investments Bylaws

MEMBERSHIP

Permanent employees of Los Angeles County (County) and participating districts who work ¾ time or more are eligible for membership in LACERA.

(31551, 31552, Bylaws)

Employees eligible for safety membership (law enforcement, 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, D and E and Safety Plans A and B) and two defined contribution plans (General Plan F and Safety Plan F) based on a member's date of entry into LACERA.

(31494.1, 31494.3)

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

Plan B: General members – September 1977 through September

1978. Safety members – September 1977 to present.

Plan C: General members – October 1978 through May 1979.

(31487, 31496)

(31510)

(31489)

(31625.2,

31836.1)

(31591, 31700)

(

(

(

(

RETIREMENT PLANS (Continued)

Plan D: General members – June 1979 through January 3, 1982;

and those hired on or after January 4, 1982 who elect Plan

D instead of Plan E.

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 prior to 1993.

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.

MEMBER CONTRIBUTIONS

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.

Contributions cease when 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.

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.

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

investigation, valuation and recommendation of the actuary.

(31453, 31454

31581)

SERVICE RETIREMENT ALLOWANCE

Eliaibility:	(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: (31662.4,31662.6, Age 50 with 10 years of County service; 31663.25) 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.

Plan E: Age 65 with 10 years of service. A reduced benefit (31491).

is also payable at age 55 with 10 years of service.

Final Compensation: (31462.1)Plan A: Monthly average of a member's compensation

during the last year of service.

(31676.11)Plans B - E: Monthly average of a member's compensation for

the last three years of service.

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, (31671)shall not exceed the dollar limitations in Section 401(a)(17) of Title 26 of the US Code.

Monthly Allowance: (31664)

Safety members: 1 /50 x Final Compensation x Safety age factor x (31676.11)Years of service. (The Safety Plan A and Safety

Plan B age factors are the same.)

(31676.14)Plans A-D: General members:

> 1/60 x Final Compensation x a Plan specific (31676.1)

age factor x years of service.

SERVICE RETIREMENT ALLOWANCE (Continued)

Plan E:

General members: (a)+(b)-(c) where:

a) 2% x Final Compensation x (Years of Service, (up to 35 years), plus

(31491)

(b) 1 % x Final Compensation x Years of Service in excess of 35 (up to 10)

(c) Estimated Primary Insurance Amount (PIA) x Years of Covered Service (up to 35)

divided by 35.

The PIA is calculated based on certain assumptions specified by statute.

If retirement occurs prior to age 65, benefit amount is adjusted by an actuarial equivalent factor (see Sample Plan Age Factors).

Social Security Integration:

Plans A-C:

General Members:

(31808)

(31491)

1

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.

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
General B	0.745	1.000	1.309	1.567
General C&D	0.709	0.895	1.150	1.459
General E	N/A	0.375	0.601	1.000
Safety A&B	1.000	1.310	1.310	1.310

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)

(31761)

(31762)

SERVICE RETIREMENT ALLOWANCE (Continued)

Unmodified Retirement Allowance (Normal Form):

Plans A-D: Life Annuity payable to retired member with 60%

continuance to an eligible surviving spouse (or

eligible children).

Plan E: Life Annuity payable to retired member with 50%

continuance to an eligible surviving spouse (or

eligible children).

Optional Retirement Allowance:

(31760.1,A member may elect to have the actuarial equivalent of the service or disability 31785) retirement allowance applied to a lesser retirement allowance during the retired (31492)

member's life in order to provide an optional survivor allowance.

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.

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.

Option 3: 50% of member's reduced allowance is payable to (31763)

a surviving spouse or beneficiary having an insurable interest in the life of the member.

Option 4: Other % of member's reduced allowance is (31764)

payable to a surviving spouse or beneficiary(ies)

having an insurable interest in the life of the

member.

A member may not revoke and name another beneficiary if the member elects (31782)

Option 2, 3 or 4.

SERVICE RETIREMENT ALLOWANCE (Continued)

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 60% 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.

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 as in the month of

death or the month of retirement.

SERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE

Eligibility: 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.

Plan E: Not available under Plan E.

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

Normal Form Of Payment: Life Annuity with 100% continuance to a surviving

spouse (or eligible children).

(31810, 31811)

(31600)

(31720,

31720.5)

(

(

(

(

1

(

(31487)

(31727.4)

(31760, 31786)

31785)

(31720, 31836)

Eligibility:

Plans A-D: Any age with 5 years of service, and permanently

incapacitated for the performance of duty.

Plan E: Not available under Plan E. (31487)

Monthly Allowance: The monthly allowance is equal to a service (31726, retirement allowance if the member is eligible to 31726.5)

retirement allowance if the member is eligible to retire, otherwise allowance equals (a) or (b) where:

General Members: (a) 90% of 1/60 of Final Compensation x years of (31727(a))

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.

(b) 90% 1/60 of Final Compensation x years of service projected to age 65, not to exceed 1/3 of (31727(b))

service projected to age 65, not to exceed 1/3 of Final Compensation.

Safety members: 1/60 is replaced by 1/50 and age 65 is replaced (31727.2)

by age 55 in (a) and (b) above.

Normal Form Of Payment: Life Annuity with 60% continuance to a surviving (31760,

spouse (or eligible children) 31760.1,

SERVICE-CONNECTED DEATH BENEFITS

Eligibility:

Plans A-D: Active members who die in service as a result of (31787)

injury or disease arising out of and in the course of

employment.

Plan E: Not available under Plan E. (31487)

Monthly Allowance: An annual death allowance is payable monthly to

an eligible surviving spouse (or eligible children) (31787)

equal to 50% of the member's Final Compensation.

SERVICE-CONNECTED DEATH BENEFITS (Continued)

Optional Combined Benefit:

(31781.3)

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

- (a) A lump sum equal to 1/12 of the compensation earned in the preceding 12 months x years of service (benefit not to exceed 50% of the 12 months' compensation), plus
- (b) A monthly payment equal to 50% of the member's Final Compensation, reduced by a monthly amount, which is the actuarial equivalent of (a) above based on the age of surviving spouse.

Death Benefit (Lump Sum):

(31781)

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

Additional Allowance for Children:

(31787.5)

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

(31787.6)

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.

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

NONSERVICE-CONNECTED DEATH BENEFITS

Eligibility:

(31780)

Plans A-D: Active member

Active members who die while in service or while

physically or mentally incapacitated for the

performance of duty.

Plan E:

Not available under Plan E.

NONSERVICE-CONNECTED DEATH BENEFITS (Continued)

Death Benefit (Lump Sum):

(31498)

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:

(31781)

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 disability retirement allowance dies prior to retirement as a result of such disability, the surviving spouse (or eligible children) may elect to receive an optional death allowance equal to 60% of the monthly retirement allowance to which the member would have been entitled as of the date of death.

(31781.1)

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 31765.1 (a 60% continuance).

(31781.2)

Third Optional Death Benefit:

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

(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 60% of the monthly retirement allowance to which the member have been entitled if the member retired or been 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.

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 60% of the monthly retirement allowance to which the member would have been entitled as of the date of death.

(31765.1)

(

(

() ()

(

1

(T

(

(

(

(

0

(

1

1

1

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 \$750 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 \$750 lump-sum payment under Plan E.

(31492)



DEFERRED VESTED BENEFITS

Eligibility: (31700)

Plans A-D: 5 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: (31703, 31704, 31705)

Plans A-D: Same as service retirement allowance;

payable anytime after the member would have been eligible for service retirement.

If a terminated member dies before the effective date of the deferred retirement (31702)

allowance, the member's accumulated contributions are paid to the estate or to the

named beneficiary.

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.

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 Teacher s' Retirement System Defined

Benefit Plan.

(31830, 31840.4, 31840.8)

(31491)

RECIPROCITY (Continued)

Final Compensation may be based on service with CAIPERS or another County retirement system, if greater.

(31835)

Deferred members are eligible for disability and death benefits from LACERA, if disabled while a member of CalPERS or another County retirement system, but combined benefits are limited.

TRANSFER

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

(31657)

COST OF LIVING INCREASES

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

(31870, 31870.1)

(

1

(

1

Plan A:

Members (and their beneficiaries) are limited to a maximum 3% cost-of-living increase (or decrease)

Plans B-D:

Members (and their beneficiaries) are limited to a maximum 2% cost-of-living

(31870, 31870.1)

increase (or decrease)

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:

Not available under Plan E

(31487)

STAR PROGRAM

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

(318874.3(b))

Appendix C: Valuation Data and Schedules



Data on LACERA membership as of June 30, 2001 was supplied to us by staff. On the following table, Exhibit C-1, we present a summary of LACERA membership at June 30, 2001 for active members. Similar information is shown in Exhibit C-2 for retired members.

The number of total active Members increased by 4.6% and the payroll increased by 7.99% since the last valuation. The total number of retired Members and their beneficiaries increased by 1.7%, while the average retirement benefit amount increased by 9.2 %.

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.

Appendix C: Valuation Data and Schedules



Data on LACERA membership as of June 30, 2001 was supplied to us by staff. On the following table, Exhibit C-1, we present a summary of LACERA membership at June 30, 2001 for active members. Similar information is shown in Exhibit C-2 for retired members.

The number of total active Members increased by 4.6% and the payroll increased by 7.99% since the last valuation. The total number of retired Members and their beneficiaries increased by 1.7%, while the average retirement benefit amount increased by 9.2 %.

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.

Exhibit C-1: LACERA Membership – Active Members as of June 30, 2001

	0	Mankad	MawMaadad	Total	Ammuni Calam	Average	M	verage lonthly	Average Credited
	Sex	Vested	NonVested	Number	 Annual Salary	Age		Salary	Service
General	Membei	rs							
Plan A	М	2,826	1	2,827	\$ 204,917,760	56.2	\$	6,040	29.7
	F	3,995	3	3,998	224,737,224	55.0		4,684	29.0
Plan B	M	176	-	176	12,245,928	54.3		5,798	23.7
	F	360	1	361	19,642,332	53.5		4,534	23.2
Plan C	M	128	-	128	8,510,136	53.6		5,540	22.7
	F	269	-	269	13,730,064	53.4		4,253	22.4
Plan D	М	6,603	5,231	11,834	595,694,928	42.6		4,195	7.5
	F	12,155	10,571	22,726	995,783,136	41.3		3,651	7.4
Plan E	M	6,459	7,912	14,371	700,051,788	43.5		4,059	10.7
	F	13,915	4,443	18,358	832,748,508	46.1		3,780	15.7
Total		46,886	28,162	75,048	\$ 3,608,061,804	44.5	\$	4,006	12.3
Safety M	lembers								
Plan A	М	1,559	1	1,560	\$ 143,109,624	53.0	\$	7,645	28.9
	F	150	-	150	12,679,980	51.7		7,044	28.2
Plan B	M	6,567	2,546	9,113	627,943,692	37.6		5,742	10.6
	F	761	437	1,198	77,068,812	35.8		5,361	9.0
Total		9,037	2,984	12,021	\$ 860,802,108	39.6	\$	5,967	13.0
Grand Te	otal	55,923	31,146	87,069	\$ 4,468,863,912	43.9	\$	4,277	12.4

Exhibit C-2: LACERA Membership - Retired Members as of June 30, 2001

	Sex	Number	Annual Allowance	Average Age	Average Monthly Benefit
General Membe	ərs			***************************************	
Plan A	М	12,913	\$ 436,690,213	71.5	\$ 2,818
	F	18,390	380,168,008	73.6	1,723
Plan B	М	105	2,262,739	67.0	1,796
	F	238	3,644,136	68.0	1,276
Plan C	М	79	1,257,015	66.3	1,326
	F	180	2,210,098	67.7	1,023
Plan D	M	886	15,551,202	62.6	1,463
	F	1,460	19,836,856	62.9	1,132
Plan E	М	1,074	13,480,306	68.2	1,046
	F	1,752	15,262,679	67.5	726
Total		37,077	\$ 890,363,252	71.6	\$ 2,001
Safety Member	rs				
Plan A	M	6,289	\$ 324,156,920	64.8	\$ 4,295
	F	1,150	32,593,655	71.0	2,362
Plan B	М	833	24,523,204	43.6	2,453
	F	47	909,126	39.7	1,612
Total		8,319	\$ 382,182,905	63.4	\$ 3,828
Grand Total		45,396	\$ 1,272,546,157	70.1	\$ 2,336

Exhibit C-3: Age Distribution of Active Members as of June 30, 2001

Age Groups 0-29 30-39 40-49 60-69 70+ 50-59 Total General Plans: Plan A 181 2,033 571 42 2,827 Male Female 605 2.690 644 59 3,998 Plan B Male 38 103 33 2 176 Female 125 165 62 9 361 Plan C 33 74 Male 17 4 128 Female 96 110 56 7 269 Plan D Male 1,384 3,676 3,520 2,403 762 89 11,834 Female 3,190 7,588 6,677 4,022 1,152 97 22,726 Plan E Male 1.684 3,909 4,173 3,425 1,047 133 14,371 Female 685 4,149 6,665 5,343 1,374 142 18,358 Safety Plans: Plan A Male 203 1,346 11 1,560 Female 42 107 1 150 Plan B Male 1,283 4,177 3,158 479 16 9,113 Female 246 605 308 39 1,198 **Grand Totals:** 8,472 24,104 25,824 22,339 5,746 584 87,069

Exhibit C-4: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001

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	690	481	233	68	21	2	0	0	0	0	0	0	1,495
25-29	1,319	1,541	1,150	713	320	387	18	0	0	0	0	0	5,448
30-34	1,087	1,317	1,178	921	588	2,477	1,368	34	0	0	0	0	8,970
35-39	813	913	783	650	419	2,397	3,498	829	50	0	0	0	10,352
40-44	723	733	667	486	344	1,850	3,034	1,549	1,164	34	0	0	10,584
45-49	564	576	513	414	271	1,600	2,567	1,497	2,030	1,397	100	0	11,529
50-54	412	380	389	265	245	1,321	1,974	1,260	1,859	2,381	1,338	39	11,863
55-59	205	205	204	153	118	841	1,231	766	1,171	1,486	1,644	481	8,505
60-64	66	79	92	71	76	495	715	455	636	678	551	351	4,265
65 & Over	24	30	26	<u>25</u> .	35	263	440	249	400	281	167	97	2,037
Total Count	5.903	6.255	5.235	3.766	2.437	11.633	14.845	6.639	7.310	6.257	3.800	968	75.048

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	27,068	29,176	28,590	32,226	32,886	34,548	-	-	-	-	-	-	28,310
25-29	32,172	34,599	36,451	39,600	36,944	39,172	40,106	-	-	-	-	-	35,538
30-34	34,906	38,204	38,918	43,703	44,511	46,372	41,652	40,612	-	-	-	-	41,667
35-39	35,696	37,807	38,066	44,709	44,374	48,739	50,055	45,705	43,040	•	-	-	45,688
40-44	36,268	37,820	39,637	44,132	45,639	48,631	54,190	55,740	45,741	48,566	-		48,483
45-49	38,396	40,742	39,466	44,942	46,176	49,005	53,020	58,128	52,416	49,572	53,501	-	50,223
50-54	38,651	42,120	41,230	44,674	45,827	48,658	52,041	57,099	56,698	57,395	56,575	61,773	53,119
55-59	42,226	43,813	40,142	46,331	46,057	47,965	50,987	58,039	54,076	57,401	65,515	61,040	55,450
60-64	42,469	42,817	43,002	46,990	45,870	47,288	48,569	56,447	53,049	52,583	62,713	64,702	53,327
65 & Over	54,422	44,938	53,818	55,988	39,680	46,127	47,903	54,722	49,411	52,723	54,890	68,425	51,085
Avg. Annual Compensation	34,668	37,265	38,299	43,403	43,918	47,748	50,832	55,481	52,535	54,871	61,178	63,138	48,077

lacs0095 Appendix C.doc 12 003 LAC 38/12.003.LAC.10.2001 / KIS/cdc



Exhibit C-4a: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 General Plan A

	Gei	iciai Fiaii	\sim										
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	2	13	0	0	15
45-49	0	0	0	- 0	0	3	3	19	55	634	57	0	771
50-54	0	1	0	0	2	6	23	45	144	1,306	765	22	2,314
55-59	0	0	0	0	1	11	19	40	94	874	1,050	320	2,409
60-64	0	0	0	0	0	2	9	25	47	383	322	187	975
65 & Over	0	0	0	0	0	1	2	9	15	161	97	56	341
Total Count	0	1	0	0	3	23	56	138	357	3,371	2,291	585	6,825
Compensation													
<u> </u>						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	-	_	-	_	_	=	-	-	48,432	46,962	-	-	47,158
45-49	-	_	-	_	_	54,088	37,984	53,078	60,056	51,450	56,962	-	52,470
50-54	-	60,756	-	_	88,008	58,092	66,010	65,602	71,921	60,900	60,940	62,901	61,777
55-59	-	· <u>-</u>	-	_	46,920	68,577	78,620	61,719	67,622	61,280	70,948	64,378	66,324
60-64	-	-	-	_	-	107,790	68,033	82,180	70,960	57,013	70,595	70,956	65,697
65 & Over	-	-	-	-	-	49,740	103,770	75,020	67,094	57,688	61,921	79,998	63,674
Avg. Annual Compensation	-	60,756	-	-	74,312	66,543	70,461	66,370	68,500	58,573	66,827	67,920	62,953

Milliman USA

Exhibit C-4b: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 General Plan B

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	1	31	0	0	0	32
45-49	0	0	0	0	0	1	1	2	117	10	0	0	131
50-54	0	0	1	0	0	0	0	3	138	13	0	0	155
55-59	0	0	0	0	0	0	3	1	100	9	0	0	113
60-64	0	0	0	0	0	0	0	0	65	8	0	0	73
65 & Over	0	0	0	0	0	0	1	0	31	1	0	0	33

482

537

Compensation

Total Count

						Years of	Service						Average
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	<u>15-19</u>	20-24	25-29	30-34	35&Over	Comp.
Under 25	-		*	*	-	**	*	*	-	-	-	**	•
25-29	-	-	**	-	-	-	~	***	-	~	See.	in.	-
30-34	-	-	**	-	_	-	-		-	*	-	-	w
35-39	-	-	1986	-	-	-	āni.	*	-	_	-	•	•
40-44	_	-	***	-	-	-	~	32,628	44,179	-	-	-	43,818
45-49	-		~	-	-	131,892	62,664	64,572	57,685	66,882	-		59,097
50-54	-	-	73,104	-	-	-	-	86,564	64,550	71,865	_	-	65,645
55-59	-	-	**	•••	-	-	67,328	35,184	58,535	62,695	-	***	58,893
60-64	-	**	•	-	-	-	-	-	51,657	86,089	-	**	55,430
65 & Over	-	. #	-	-	-	-	33,132	•	58,199	30,852	-	AN .	56,611
Avg. Annual Compensation	**	•	73,104	-	-	131,892	59,556	65,235	58,178	70,412	-	**	59,382

laca0095 Appendix C.doc 12 003 LAC 38/12.003.LAC.10.2001 / KIS/cdc

Milliman USA

Exhibit C-4c Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001

xnibit C-4c:		: Service ral Plan C		on of Act	ive Memb	ers by C	ount and	Average	Compens	sation as o	of June 3	30, 2001	
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	2	34	0	0	0	36
45-49	0	0	0	0	0	0	0	0	91	2	0	0	93
50-54	0	0	0	0	0	0	1	6	112	2	0	0	121
55-59	0	0	0	0	0	0	0	1	59	3	0	0	63
60-64	0	0	0	0	0	0	0	0	42	4	0	0	46
65 & Over	0	0	0	0	0	0	0	2	31	5	0	0	38
Total Count	0	0	0	0	0	0	1	11	369	16	0	0	397
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	-	-	_	_	_	-	-	39,942	46,016	_	_	_	45,679
45-49	-	-	_	_	_	-	-		62,939	86,268	-	-	63,441
50-54	-	-	_	_	-	_	62,304	72,214	59,460	104,568	_	-	60,862
55-59		_	_	_	_	_		75,972	48,511	103,780	_	_	51,579
00-00	-	-	_	-	-	-	-	10,012	70,011				
60-64	-	- -	-	- -	-	-	-	10,912	50,101	40,533	-	_	49,269

laca0095 Appendix C.doc 12 003 LAC 38/12.003.LAC.10.2001 / KIS/cdc

Avg. Annual

Compensation



62,304

64,297

55,272

67,207

56,021

Exhibit C-4d: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 General Plan D

						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	437	280	148	45	14	1	0	0	0	0	0	0	925
25-29	903	1,014	807	485	203	229	8	0	0	0	0	0	3,649
30-34	753	928	801	628	375	1,468	624	7	0	0	0	0	5,584
35-39	548	622	535	444	284	1,393	1,591	250	13	0	0	0	5,680
40-44	509	491	426	334	226	1,127	1,479	466	285	2	0	0	5,345
45-49	379	387	342	267	188	964	1,323	514	460	25	3	0	4,852
50-54	285	259	262	177	161	852	1,037	442	406	62	17	0	3,960
55-59	115	133	134	101	81	522	718	291	290	37	39	4	2,465
60-64	39	40	51	48	46	322	427	207	160	11	5	4	1,360
65 & Over	8	13	15	13	18	165	261	109	133	4	0	1	740
Total Count	3.976	4.167	3.521	2.542	1.596	7.043	7.468	2.286	1.747	141	64	9	34.560

Comp	ens	ath	nn

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	27,753	29,935	29,200	32,082	33,487	33,768	••	-	-	***	-	*	28,949
25-29	33,116	35,421	37,294	40,257	37,209	40,516	38,494	-	•	_	-	•	36,333
30-34	35,787	38,914	40,158	44,161	45,363	46,727	42,549	38,590	-	-	_		42,154
35-39	37,316	38,874	39,039	45,519	44,730	48,895	49,829	48,823	41,133	-	-	-	45,521
40-44	37,414	38,644	41,195	45,705	47,713	49,135	54,485	56,532	48,104	37,344	~	-	48,214
45-49	39,255	42,244	42,179	45,943	49,066	49,807	54,031	59,688	55,258	54,339	57,244		50,344
50-54	38,963	43,984	42,650	46,015	46,658	50,019	53,283	61,645	57,832	71,884	73,972	-	51,424
55-59	42,697	43,967	40,037	48,255	49,002	48,999	51,808	60,492	54,804	69,764	85,991	51,279	51,675
60-64	48,844	42,174	42,469	51,330	46,544	47,017	50,011	57,674	52,137	77,345	68,633	70,833	50,452
65 & Over	43,857	37,494	61,841	61,569	43,336	44,842	48,017	56,914	51,144	55,671	-	66,456	49,422
Avg. Annual Compensation	35,619	38,235	39,499	44,346	45,204	48,295	51,492	57,958	53,910	67,693	80,095	61,656	46,050

laca0095 Appendix C.doc 12 003 LAC 38/12.003.LAC.10.2001 / KIS/cdc



Exhibit C-4e: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 General Plan E

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	253	201	85	23	7	1	0	0	0	0	0	0	570
25-29	416	527	343	228	117	158	10	0	0	0	0	0	1,799
30-34	334	389	377	293	213	1,009	744	27	0	0	0	0	3,386
35-39	265	291	248	206	135	1,004	1,907	579	37	0	0	0	4,672
40-44	214	242	241	152	118	723	1,555	1,080	812	19	0	0	5,156
45-49	185	189	171	147	83	632	1,240	962	1,307	726	40	0	5, 68 2
50-54	127	120	126	88	82	463	913	764	1,059	998	556	17	5,313
55-59	90	72	70	52	36	308	491	433	628	563	555	157	3,455
60-64	27	39	41	23	30	171	279	223	322	272	224	160	1,811
65 & Over	16	17	11	12	17	97	176	129	190	110	70	40	885
Total Count	1,927	2,087	1,713	1,224	838	4,566	7,315	4,197	4,355	2,688	1,445	374	32,729

pensa	

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	25,886	28,119	27,528	32,507	31,683	35,328	-	-	**	-	_	. •	27,273
25-29	30,125	33,016	34,466	38,203	36,484	37,224	41,395	***	, ma	_	-	•	33,923
30-34	32,921	36,508	36,283	42,720	43,013	45,856	40,899	41,136	•	-	-	-	40,863
35-39	32,347	35,527	35,967	42,965	43,626	48,523	50,244	44,359	43,710	-	=	-	45,891
40-44	33,543	36,149	36,883	40,674	41,667	47,846	53,909	55,449	44,953	50,845	-	-	48,815
45-49	36,637	37,666	34,039	43,124	39,629	47,628	51,970	57,380	49,890	47,429	48,288	_	49,395
50-54	37,949	37,942	38,026	41,977	43,168	46,032	50,266	53,734	52,878	51,626	50,036	60,313	50,070
55-59	41,625	43,530	40,343	42,594	39,406	45,476	48,618	56,062	51,525	50,234	53,797	54,486	50,519
60-64	33,260	43,477	43,664	37,933	44,838	47,092	45,734	52,423	51,554	44,535	51,251	57,240	48,844
65 & Over	59,705	50,631	42,878	49,942	35,808	48,277	47,182	51,386	45,654	45,942	45,147	52,273	47,560
Avg. Annual Compensation	32,706	35,315	35,812	41,444	41,360	46,792	50,001	53,735	49,818	49,245	51,384	55,692	46,833

Exhibit C-4f: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 Safety Plan A

Count													
		·				Years of							Total
Age .	0-1	1-2	2-3	3-4	4-5	5-9	10-14	<u>15-19</u>	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	1	0	0	0	0	0	0	1	0	0	2
45-49	0	0	0	0	0	0	0	4	89	145	5	0	243
50-54	0	0	0	0	0	0	0	2	93	585	267	13	960
55-59	0	0	0	O	0	0	1	1	17	157	266	51	493
60-64	0	0	0	0	0	0	0	0	0	1	9	2	12
65 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Count	0	0	1	0	0	0	1	7	199	889	547	66	1,710
Compensation													
						Years of		·					Average
Age	0-1	1-2	2-3	3-4	4-5	5-9	10-14	<u>15-19</u>	20-24	25-29	30-34	35&Over	Comp.
Under 25	-	•	-	~	-	_	-	•	••	~	-	-	-
25-29		-	-	-	-	-	-	-	•	-	-	-	
30-34	-	**	-	-	-	-	-		-	-	-	-	-
35-39		**	-	<u>.</u>	-	-	-	•		-	-	-	~
40-44	-	-	83,688	-	-	-		•	-	90,912	-	100	87,300
45-49	-		-		-	-	-	78,939	87,891	87,588	86,234	-	87,529
50-54		-	-	-	-	-	•	101,442	86,421	89,290	93,487	99,138	90,338
55-59	-	~	-	-	-	-	89,340	75,096	80,101	89,041	96,221	100,787	93,794
60-64	-	-	-	-	-	-	-	-	-	73,080	116,400	130,038	115,063
65 & Over	•	-	-	-	-	-	•	•	-	¥	-	_	•
Avg. Annual Compensation	•	-	83,688	•		-	89,340	84,819	86,538	88,952	95,127	101,348	91,105

laca0095 Appendix C.doc 12 003 LAC 38/12.003.LAC.10.2001 / KIS/cdc



Exhibit C-4g: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2001 Safety Plan B

Count Years of Service													· ·
Age	0-1	1-2	2-3	3-4	4-5	Years of	10-14	15-19	20-24	25-29	30-34	35&Over	Total Count
Under 25	121	122	34	19	6	0	0	0	0	0	0	0	302
25-29	303	279	176	101	189	179	ő	ŏ	ő	ů.	0	0	1,227
30-34	259	181	161	113	181	840	555	1	Ō	ō	0	0	2,291
35-39	128	61	64	47	70	481	1,329	309	2	Ó	0	0	2,491
40-44	78	22	22	30	21	183	585	912	310	1	0	0	2,164
45-49	43	4	5	16	9	45	193	460	510	16	1	0	1,302
50-54	53	2	1	10	5	13	24	98	213	8	0	0	427
55-59	19	1	2	10	1	4	8	16	29	0	1	0	91
60-64	8	0	1	2	2	0	1	1	0	0	0	0	15
65 & Over	0	0	0	1	0	0	0	. 0	0	0	0	0	1
Total Count	1,012	672	466	349	484	1,745	2,695	1,797	1,064	25	2	0	10,311

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	44,300	45,978	46,598	46,959	49,544		-	-		-	-	_	45,508
25-29	46,519	48,541	50,868	50,371	57,111	64,055	••	-		-	_	**	52,110
30-34	50,262	50,015	57,005	54,387	58,222	67,563	70,273	59,352	_	-	-	-	62,744
35-39	57,114	52,091	56,750	58,413	60,161	69,502	72,322	77,794	77,082		_	-	70,179
40-44	64,740	53,793	60,650	62,000	60,749	70,764	73,895	79,729	80,589	94,056	-	_	76,096
45-49	72,592	56,760	53,570	65,365	57,899	69,776	72,414	78,929	83,782	82,000	69,840	***	78,892
50-54	72,816	64,392	65,916	70,286	66,120	72,666	73,680	76,518	81,570	80,746	-	-	78,032
55-59	81,805	65,916	64,812	81,683	79,080	65,967	91,704	66,276	74,541	~	66,528	***	76,174
60-64	62,964	-	60,060	112,926	59,460	-	69,840	91,932	-	•	-	_	71,354
65 & Over	MARK .	•	-	59,616	-	-	*	-	-	-	-	-	59,616
Avg. Annual Compensation	53,234	49,089	54,087	56,108	58,194	68,164	72,317	78,892	82,144	82,081	68,184	an.	68,375

Exhibit C-5: Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 All Plans

Retirement Year												
Age	Pre-1960	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-01	Total Count	Monthly Benefit
Under 35	0	0	0	0	1	3	0	29	81	31	145	\$1,641
35-39	0	0	0	0	1	0	3	67	130	39	240	2,274
40-44	0	0	0	0	0	6	44	109	153	44	356	2,150
45-49	0	0	0	0	12	55	83	130	190	42	512	2,003
50-54	0	0	0	9	106	180	165	234	557	311	1,562	1,978
55-59	0	1	3	26	198	281	270	672	1,952	1,126	4,529	2,916
60-64	0	0	21	69	216	283	571	1,693	2,559	962	6,374	2,898
65-69	2	9	53	120	265	656	1,336	2,545	2,143	532	7,661	2,547
70-74	3	33	83	148	658	1,479	1,807	2,243	1,194	256	7,904	2,234
75-79	8	43	100	314	1,324	1,884	1,663	1,068	586	161	7,151	1,976
80-84	10	37	100	544	1,432	1,378	568	363	364	120	4,916	1,688
85-89	20	42	204	567	1,005	386	65	132	158	59	2,638	1,394
90-94	25	58	214	459	192	7	3	55	65	20	1,098	1,194
95-99	29	45	78	81	3	1	1	6	13	1	258	1,080
100 & Over	17	16	14	2	0	0	0	2	1	0	52	791
Total Count	114	284	870	2,339	5,413	6,599	6,579	9,348	10,146	3,704	45,396	
Avg Monthly Benefit	\$ 855	\$1,002	\$1,182	\$1,402	\$1,754	\$1,852	\$2,212	\$2,609	\$2,503	\$3,105		\$ 2,252

Exhibit C-5a: Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 General Plan A

					Potirom	ent Year					Total	Average Monthly
Age	Pre-1960	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-01	Count	Benefit
Under 35	0	0	0	0	1	1	0	11	15	6	34	\$ 930
35-39	0	0	0	0	1	0	1	1	3	0	6	1,034
40-44	0	0	0	0	0	1	4	2	8	1	16	1,150
45-49	0	0	0	0	6	17	13	16	29	7	88	1,312
50-54	0	0	0	3	59	61	44	62	267	154	650	1,641
55-59	0	1	1	14	95	117	104	393	929	495	2,149	2,447
60-64	0	0	9	43	128	134	387	1,113	1,429	630	3,873	2,765
65-69	0	2	20	73	172	463	965	1,861	1,311	223	5,090	2,570
70-74	2	15	36	87	478	1,081	1,407	1,774	603	122	5,605	2,214
75-79	4	20	65	220	1,024	1,628	1,494	749	361	114	5,679	1,918
80-84	3	23	63	437	1,325	1,350	500	278	298	96	4,373	1,639
85-89	8	32	143	512	998	382	52	112	133	52	2,424	1,347
90-94	12	51	182	452	192	6	1	50	62	18	1,026	1,143
95-99	18	41	76	81	3	1	1	6	12	1	240	1,057
100 & Over	15	16	14	2	0	0	0	2	1	0	50	775
Total Count	62	201	609	1,924	4,482	5,242	4,973	6,430	5,461	1,919	31,303	
Avg Monthly Benefit	\$ 701	\$ 852	\$ 939	\$1,178	\$1,540	\$1,611	\$2,034	\$2,623	\$2,539	\$3,251		\$ 2,092

Exhibit C-5b: Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 General Plan B

					Retirem	ent Year					Total	Average Monthly
Age	Pre-1960	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-01	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	1	0	0	1	2,293
45-49	0	0	0	0	0	0	1	2	1	0	4	955
50-54	0	0	0	0	0	3	5	5	7	5	25	1,116
55-59	0	0	0	0	0	2	3	4	21	7	37	1,385
60-64	0	0	0	0	0	2	3	8	22	9	44	1,706
65-69	0	0	0	0	0	2	11	15	35	8	71	1,607
70-74	0	0	0	0	0	5	10	40	26	5	86	1,406
75-79	0	0	0	0	0	1	20	21	9	2	53	1,211
80-84	0	0	0	0	0	6	7	4	3	0	20	871
85-89	0	0	0	0	0	0	1	0	0	0	1	686
90-94	0	0	0	0	0	0	0	0	1	0	1	2,835
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	0	21	61	100	125	36	343	
Avg Monthly Benefit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 767	\$ 761	\$1,270	\$1,728	\$2,083		\$1,401

Exhibit C-5c: Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 General Plan C

Retirement Year										Total	Average Monthly	
Age	Pre-1960	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-01	Count	_Benefit
Under 35	0	0	0	0	0	0	0	0	1	0	1	\$1,158
35-39	0	0	0	0	0	0	0	0	0	0	0	₩
40-44	0	0	0	0	0	0	0	0	1	0	1	865
45-49	0	0	0	0	1	1	5	2	3	0	12	939
50-54	0	0	0	0	0	4	2	2	2	7	17	1,229
55-59	0	0	0	0	0	1	2	8	11	1	23	1,182
60-64	0	0	0	0	0	0	7	11	10	5	33	1,020
65-69	0	0	0	0	0	0	5	14	21	12	52	1,307
70-74	0	0	0	0	0	4	11	24	16	1	56	1,214
75-79	0	0	0	0	0	4	11	21	3	1	40	787
80-84	0	0	0	0	0	1	12	5	2	2	22	727
85-89	0	0	0	0	0	0	1	0	1	0	2	1,086
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	1	15	56	87	71	29	259	
Avg Monthly Benefit	\$ -	\$ -	\$ -	\$ -	\$1,111	\$ 663	\$ 676	\$ 952	\$1,428	\$1,637		\$1,083

Exhibit C-5d: Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 General Plan D

					Retirem	ent Year					Total	Average Monthly
Age	Pre-1960	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-01	Count	_Benefit
Under 35	0	0	0	0	0	0	0	6	10	7	23	\$1,090
35-39	0	0	0	0	0	0	0	10	15	7	32	1,349
40-44	0	0	0	0	0	0	6	17	34	15	72	1,491
45-49	0	0	0	0	0	4	10	24	50	11	99	1,510
50-54	0	0	0	0	0	2	20	47	114	70	253	1,274
55-59	0	0	0	0	0	4	14	53	201	72	344	1,285
60-64	0	0	0	0	0	6	19	70	199	106	400	1,340
65-69	0	0	0	0	0	3	23	77	247	98	448	1,284
70-74	0	0	0	0	0	7	23	117	215	48	410	1,121
75-79	0	0	0	0	0	8	29	92	67	7	203	975
80-84	0	0	0	0	0	2	8	27	11	6	54	863
85-89	0	0	0	0	0	1	1	4	1	0	7	769
90-94	0	0	0	0	0	0	1	0	0	0	1	226
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	0	37	154	544	1,164	447	2,346	
Avg Monthly Benefit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 809	\$ 993	\$1,100	\$1,295	\$1,393		\$1,241

Exhibit C-5e: Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 General Plan E

)いいけ**ょせらっ**っいといしいしょしんにしょしょとしょ

Retirement Year										Total	Average Monthly	
Age	Pre-1960	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-01	Count	Benefit
Under 35	0	0	0	0	0	0	0	0	2	0	2	\$ 591
35-39	0	0	0	0	0	0	0	0	0	0	0	-
40-44	0	0	0	0	0	0	0	0	0	1	1	741
45-49	0	0	0	0	0	0	0	0	2	1	3	705
50-54	0	0	0	0	0	0	0	1	9	1	11	348
55-59	0	0	0	0	0	0	0	2	194	141	337	434
60-64	0	0	0	0	0	0	1	77	348	136	562	687
65-69	0	0	0	0	0	1	34	166	442	175	818	1,082
70-74	0	0	0	0	0	6	48	211	278	59	602	980
75-79	0	0	0	0	0	12	76	160	93	20	361	812
80-84	0	0	0	0	0	9	41	30	22	3	105	686
85-89	0	0	0	0	0	3	10	5	3	0	21	661
90-94	0	0	0	0	0	1	1	1	0	0	3	380
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	0	32	211	653	1,393	537	2,826	
Avg Monthly Benefit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 310	\$ 403	\$ 709	\$ 876	\$1,150		\$ 848

Average

Exhibit C-5f: Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 Safety Plan A

Retirement Year									Total	Monthly		
Age	Pre-1960	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-01	Count	Benefit
Under 35	0	0	0	0	0	2	0	2	8	1	13	\$1,179
35-39	0	0	0	0	0	0	0	1	1	0	2	1,880
40-44	0	0	0	0	0	0	1	2	3	0	6	3,577
45-49	0	0	0	0	5	20	21	17	41	10	114	2,570
50-54	0	0	0	6	47	103	75	90	128	63	512	2,796
55-59	0	0	2	12	103	153	146	201	577	407	1,601	4,487
60-64	0	0	12	26	88	141	152	411	547	74	1,451	4,625
65-69	2	7	33	47	93	187	296	408	86	16	1,175	4,061
70-74	1	18	47	61	180	375	307	74	56	20	1,139	3,518
75-79	4	23	35	94	300	230	33	25	53	17	814	3,256
80-84	7	14	37	107	107	10	0	19	28	13	342	2,860
85-89	12	10	61	55	7	0	0	11	20	7	183	2,127
90-94	13	7	32	7	0	0	0	4	2	2	67	1,989
95-99	11	4	2	0	0	0	0	0	1	0	18	1,398
100 & Over	2	0	0	0	0	0	0	0	0	0	2	1,178
Total Count	52	83	261	415	930	1,221	1,031	1,265	1,551	630	7,439	
Avg Monthly Benefit	\$1,040	\$1,365	\$1,748	\$2,440	\$2,787	\$3,003	\$3,840	\$4,450	\$ 4,844	\$5,747		\$ 3,847

-



Exhibit C-5g: Distribution of Retired Members by Age and Retirement Year as of June 30, 2001 Safety Plan B

	Retirement Year											Average Monthly
Age	Pre-1960	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-01	Total Count	Benefit
Under 35	0	0	0	0	0	0	0	10	45	17	72	\$2,272
35-39	0	0	0	0	0	0	2	55	111	32	200	2,464
40-44	0	0	0	0	0	5	33	87	107	27	259	2,372
45-49	0	0	0	0	0	13	33	69	64	13	192	2,345
50-54	0	0	0	0	0	7	19	27	30	11	94	2,295
55-59	0	0	0	0	0	4	1	11	19	3	38	2,553
60-64	0	0	0	0	0	0	2	3	4	2	11	2,262
65-69	0	0	0	0	0	0	2	4	1	0	7	2,416
70-74	0	0	0	0	0	1	1	3	0	1	6	664
75-79	0	0	0	0	0	1	0	0	0	0	1	802
80-84	0	0	0	0	0	0	0	0	0	0	0	-
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	0	31	93	269	381	106	880	
Avg Monthly Benefit	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,433	\$1,682	\$2,327	\$2,560	\$2,621		\$ 2,364

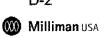
Appendix D: Member Contribution Rates

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

Normal Member Contribution Rates

			Safety*			
Entry Age	Plan A	Gene Plan B	Plan C	Plan D	Plan A	Plan B
16	2.42%	4.62%	3.95%	3.95%	3.39%	6.48%
17	2.46%	4.70%	4.02%	4.02%	3.39%	6.48%
18	2.51%	4.79%	4.10%	4.10%	3.39%	6.48%
19	2.56%	4.88%	4.18%	4.18%	3.45%	6.60%
20	2.60%	4.97%	4.25%	4.25%	3.52%	6.72%
21	2.65%	5.06%	4.33%	4.33%	3.58%	6.84%
22	2.70%	5.16%	4.41%	4.41%	3.65%	6.97%
23	2.75%	5.25%	4.50%	4.50%	3.72%	7.10%
24	2.80%	5.35%	4.58%	4.58%	3.78%	7.23%
25	2.85%	5.45%	4.66%	4.66%	3.85%	7.36%
26	2.90%	5.55%	4.75%	4.75%	3.92%	7.49%
27	2.96%	5.65%	4.84%	4.84%	4.00%	7.63%
28	3.01%	5.75%	4.93%	4.93%	4.07%	7.77%
29	3.07%	5.86%	5.02%	5.02%	4.14%	7.92%
30	3.12%	5.96%	5.11%	5.11%	4.22%	8.06%
31	3.18%	6.07%	5.20%	5.20%	4.30%	8.22%
32	3.24%	6.18%	5.30%	5.30%	4.38%	8.37%
33	3.30%	6.30%	5.40%	5.40%	4.47%	8.53%
34	3.36%	6.42%	5.49%	5.49%	4.55%	8.69%
35	3.42%	6.53%	5.60%	5.60%	4.64%	8.86%
36	3.49%	6.66%	5.70%	5.70%	4.73%	9.02%
37	3.55%	6.78%	5.80%	5.80%	4.82%	9.19%
38	3.62%	6.91%	5.91%	5.91%	4.91%	9.36%
39	3.69%	7.04%	6.02%	6.02%	5.01%	9.52%
40	3.76%	7.18%	6.13%	6.13%	5.10%	9.67%
41	3.83%	7.31%	6.25%	6.25%	5.18%	9.81%
42	3.91%	7.45%	6.37%	6.37%	5.27%	9.94%
43	3.98%	7.58%	6.49%	6.49%	5.34%	10.05%
44	4.06%	7.71%	6.61%	6.61%	5.41%	10.13%
45	4.13%	7.83%	6.73%	6.73%	5.47%	10.17%
46	4.20%	7.95%	6.86%	6.86%	5.50%	10.17%
47	4.27%	8.06%	6.99%	6.99%	5.51%	10.17%
48	4.33%	8.14%	7.11%	7.11%	5.51%	10.48%
49	4.39%	8.21%	7.24%	7.24%	5.51%	10.88%
50	4.43%	8.24%	7.35%	7.35%	5.51%	10.88%
51	4.46%	8.24%	7.46%	7.46%	5.51%	10.88%
52	4.46%	8.24%	7.56%	7.56%	5.51%	10.88%
53	4.46%	8.49%	7.64%	7.64%	5.51%	10.88%
54	4.46%	8.82%	7.70%	7.70%	5.51%	10.88%
55	4.46%	8.82%	7.73%	7.73%	5.51%	10.88%
56	4.46%	8.82%	7.73%	7.73%	5.51%	10.88%
57 52	4.46%	8.82%	7.73%	7.73%	5.51%	10.88%
58	4.46%	8.82%	7.97%	7.97%	5.51%	10.88%
59	4.46%	8.82%	8.27%	8.27%	5.51%	10.88%
60	4.46%	8.82%	8.27%	8.27%	5.51%	10.88%

^{*}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



Normal Plus Cost-Of-Living Member Contribution Rates

		Gene		Safety*			
Entry Age	Plan A	Plan B	Plan C	Plan D	Plan A	Plan B	
16	4.24%	5.62%	4.86%	4.78%	6.88%	8.60%	
17	4.31%	5.72%	4.95%	4.87%	6.88%	8.60%	
18	4.40%	5.83%	5.05%	4.97%	6.88%	8.60%	
19	4.48%	5.93%	5.14%	5.06%	7.00%	8.76%	
20	4.55%	6.04%	5.23%	5.15%	7.15%	8.92%	
21	4.64%	6.15%	5.33%	5.24%	7.27%	9.08%	
22	4.73%	6.28%	5.43%	5.34%	7.41%	9.25%	
23	4.82%	6.38%	5.54%	5.45%	7.55%	9.42%	
24	4.90%	6.51%	5.64%	5.55%	7.67%	9.60%	
25	4.99%	6.63%	5.73%	5.64%	7.82%	9.77%	
26	5.08%	6.75%	5.85%	5.75%	7.96%	9.94%	
27	5.18%	6.87%	5.96%	5.86%	8.12%	10.13%	
28	5.27%	6.99%	6.07%	5.97%	8.26%	10.31%	
29	5.38%	7.13%	6.18%	6.08%	8.40%	10.51%	
30	5.46%	7.25%	6.29%	6.19%	8.57%	10.70%	
31	5.57%	7.38%	6.40%	6.30%	8.73%	10.91%	
32	5.68%	7.52%	6.52%	6.42%	8.89%	11.11%	
33	5.78%	7.66%	6.65%	6.54%	9.07%	11.32%	
34	5.89%	7.81%	6.76%	6.65%	9.24%	11.53%	
35	5.99%	7.94%	6.89%	6.78%	9.42%	11.76%	
36	6.11%	8.10%	7.01%	6.90%	9.60%	11.97%	
37	6.22%	8.25%	7.14%	7.02%	9.78%	12.20%	
38	6.34%	8.40%	7.27%	7.16%	9.97%	12.42%	
39	6.46%	8.56%	7.41%	7.29%	10.17%	12.63%	
40	6.59%	8.73%	7.54%	7.42%	10.35%	12.83%	
41	6.71%	8.89%	7.69%	7.57%	10.51%	13.02%	
42	6.85%	9.06%	7.84%	7.72%	10.70%	13.19%	
43	6.97%	9.22%	7.99%	7.86%	10.84%	13.34%	
44	7.11%	9.38%	8.13%	8.01%	10.98%	13.44%	
45	7.23%	9.52%	8.28%	8.15%	11.10%	13.50%	
46	7.36%	9.67%	8.44%	8.31%	11.16%	13.50%	
47	7.48%	9.80%	8.60%	8.47%	11.18%	13.50%	
48	7.58%	9.90%	8.75%	8.61%	11.18%	13.91%	
49	7.69%	9.98%	8.91%	8.77%	11.18%	14.44%	
50	7.76%	10.02%	9.04%	8.90%	11.18%	14.44%	
51	7.81%	10.02%	9.18%	9.04%	11.18%	14.44%	
52	7.81%	10.02%	9.30%	9.16%	11.18%	14.44%	
53	7.81%	10.32%	9.40%	9.25%	11.18%	14.44%	
54	7.81%	10.73%	9.48%	9.33%	11.18%	14.44%	
55	7.81%	10.73%	9.51%	9.36%	11.18%	14.44%	
56	7.81%	10.73%	9.51%	9.36%	11.18%	14.44%	
57	7.81%	10.73%	9.51%	9.36%	11.18%	14.44%	
58	7.81%	10.73%	9.81%	9.65%	11.18%	14.44%	
59	7.81%	10.73%	10.18%	10.02%	11.18%	14.44%	
60	7.81%	10.73%	10.18%	10.02%	11.18%	14.44%	

6



^{*}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: Glossary

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

Accrued Benefit

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

Actuarial Accrued Liability

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

Actuarial Assumptions

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

Actuarial Gain (Loss)

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

Actuarial Present Value

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

Actuarial Valuation

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

Actuarial Value of Assets

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

Actuarially Equivalent

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

Amortization Payment

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

1

(

(

(

(

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 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.

Member Reserve

The accumulation of member contributions. Additions include member contributions and related earnings. Deductions include annuity payments to retirees and refunds to members.

Non-Valuation Reserves

Reserves excluded from the calculation of contribution rates, including the Contingency Reserve, the STAR reserve, the County Contribution Credit Reserve, and any other reserves specifically excluded by the Board of Investments.

Normal Cost

That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

Plan Year

A twelve-month period beginning July 1 and ending June 30.

Projected Benefits	Those pension	plan benefit	amounts which	are expected to	be paid
--------------------	---------------	--------------	---------------	-----------------	---------

at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation

and service credits.

STAR Reserve Reserves accumulated for the payment of cost-of-living benefits as

defined in California Government Code Section 31874.3.

Supplemental Targeted Adjustment for Retirees (STAR) Benefits

Supplemental cost-of-living payments to retired members to restore purchasing power at a specified percentage level, as described in California Government Code Section 31874.3

Surplus Funding The excess, if any, of the Actuarial Value of Assets over the

Actuarial Accrued Liability. Standard actuarial terminology defines this as the "Funding Excess". LACERA uses the term "Surplus

Funding".

Unfunded Actuarial Accrued Liability The excess, if any, of the Actuarial Accrued Liability over the Actuarial Value of Assets.

Valuation Date The date upon which the Normal Cost, Actuarial Accrued Liability,

and Actuarial Value of Assets are determined. Generally, the Valuation Date will coincide with the ending of a Plan Year.

Valuation Reserves All reserves excluding the Non-Valuation Reserves.

