MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION And Special Districts ANNUAL ACTUARIAL VALUATION June 30, 2004 REVISED



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GABRIEL, ROEDER, SMITH & COMPANY CONSULTANTS & ACTUARIES

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April 1, 2005

REVISED

Board of Retirement Marin County Employees' Retirement Association 3501 Civic Center Drive, Room 408 San Rafael, CA 94903

Members of the Board:

Results of the Annual <u>Actuarial Valuation as of June 30, 2004</u> of Marin County Employees' Retirement Association are summarized. The valuation is intended to provide a measure of the funding status of the retirement system. This valuation also forms the basis for the contribution rates for the year beginning July 1, 2005.

MARIN COUNTY

		Safety				Miscellaneous			
	Tier 1	Tier 1A	Tier 2	Tier 2A	Tier 1	Tier 2	Tier 3		
Normal Costs	22.53%	22.28%	18.19%	12.30%	16.35%	11.27%	10.17%	11.48%	
Unfunded Amortization	21.40%	21.29%	2.81%	5.64%	9.90%	2.49%	2.38%	4.00%	
TOTAL	43.93%	43.57%	21.00%	17.94%	26.25%	13.76%	12.55%	15.48%	

Before Assumption								
Changes	30.42%	30.51%	20.79%	16.75%	18.48%	13.63%	11.54%	13.87%

ALL EMPLOYERS

Normal Costs	11.81%
Unfunded Amortization	4.60%
TOTAL	16.41%
Before Assumption	14 7194
Changes	14.71%

Board of Retirement Marin County Employees' Retirement Association April 1, 2005 Page Two

Contributions	Court Tier 1	Court Tier 2	Court Tier 3	Southern Marin Fire Safety	Southern Marin Fire Misc.	MAD	Tamalpais CSD	Marin City CSD	LAFCO
Normal Costs	15.29%	11.36%	10.02%	27.99%	17.73%	14.57%	13.57%	13.07%	11.39%
Unfunded Amortization	21.85%	14.82%	4.51%	17.20%	10.08%	15.89%	11.20%	5.38%	3.60%
TOTAL	37.14%	26.18%	14.53%	45.19%	27.81%	30.46%	24.77%	18.45%	14.99%
Before Assumption Changes	28.63%	26.01%	13.05%	41.53%	25.89%	27.45%	22.38%	16.54%	14.14%

SPECIAL DISTRICTS

The member statistical data on which the valuation was based was furnished by staff, together with pertinent data on financial operations. Data was reviewed for reasonableness, but was not audited by the actuary.

There was an overall actuarial loss of \$54.6 million, which reflects 6.4% of related actuarial accrued liabilities as of June 30, 2003.

The cooperation of staff in furnishing materials requested for this complex valuation is deeply acknowledged with appreciation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

Rick Rolder

Rick A. Roeder, E.A., F.S.A., M.A.A.A.

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Marin County and Special Districts

Summary of Significant Valuation Results

	June 30, 2003	June 30, 2004	Percent Change
I. Total Membership			
A. Active Members	2,145	2,136	(0.4)%
B. Pensioners & Beneficiaries	1,490	1,555	4.4%
C. Vested Deferreds	<u>417</u>	<u>461</u>	<u>10.6%</u>
D. Total	4,052	4,152	2.5%
II. Salaries at June 30			
A. Total Annual Payroll	\$138,004,183	\$143,107,261	3.7%
B. Average Annual Compensation	\$64,338	\$66,998	4.1%
III. Benefits to Current Pensioners and			
Beneficiaries			
A. Total Annual Benefits	\$35,444,592	\$38,831,008	9.6%
B. Average Monthly Benefit Amount	\$1,982	\$2,081	5.0%
IV. Total Assets			
A. Actuarial Value	\$828,438,394	\$843,169,071	1.8%
B. Market Value	\$699,913,862	\$811,690,803	16.0%
V. Unfunded Actuarial Accrued	\$20,545,447	\$95,042,207	362.6%
Liability/(Surplus)			
VI. Budget Items	FY 2004-2005	FY 2005-2006	
1. Normal Cost as a Percent of Pay	11.05%	11.81%	6.9%
2. Amortization of UAAL	1.03%	4.60%	346.6%
3. Total Contribution	12.08%	16.41%	35.8%
VII. Funded Ratio (Based on Actuarial	98%	90%	(8.2)%
Value of Assets)			
VIII. Funded Ratio (Based on Market Value	82%	87%	6.1%
of Assets)			

Marin County Employees' Retirement Association Contribution Reconciliation for June 30, 2004 Valuation

County and Special Districts

June 30, 2004 Valuation Payroll Projected Payroll for 2005-2006	\$143,107,261 \$152,326,606					
<u>Contribution Reconciliation</u> Based on Rate from 2003 Valuation	Expected Unfunded \$16,376,457				Contribution \$18,401,054	<u>Rate</u> 12.08%
	Change in Unfunded Accrued Liability	Change in <u>Normal Cost</u>	Change in <u>Rate</u>	2005-2006 <u>Contribution</u>		
Gains and Losses						
Investment losses	\$40,159,256	\$0	1.95%	\$2,970,369		
COLA losses/(gains)	(\$5,552,974)	\$0	-0.27%	(\$411,282)		
Pay increase losses/(gains)	\$1,165,766	\$0	0.06%	\$91,396		
Retirant mortality and data						
refinement losses/(gains)	\$1,374,299	\$0	0.07%	\$106,629		
Other demographic losses/(gains)	\$17,497,100	<u>\$0</u>	<u>0.84%</u>	<u>\$1,279,543</u>		
Subtotal	\$54,643,447	\$0	2.65%	\$4,036,655	\$22,437,709	14.73%
Other Factors						
Miscellaneous ²	*	\$0	-0.23%	(\$350,351)		
Change in Normal Cost due to demographic factors		(\$533,143)	-0.23%	(\$533,143)		
Subtotal	<u>\$0</u> *	(\$533,143)	-0.58%	(\$883,494)	\$21,554,215	14.15%
Subtotal		(\$555,145)	-0.38%	(\$863,494)	\$21,334,213	14.1370
Benefit Increase	\$11,008,587	\$60,931	0.56%	\$853,029	\$22,407,244	14.71%
Assumption Change						
Tier 1 COLA from 3.65% to 3.80%	\$5,129,458	\$45,698	0.27%	\$411,282		
Change in withdrawal assumption for Misc. with 5+ years	(\$9,662)	(\$91,396)	-0.06%	(\$91,396)		
Other ³	\$7,893,920	\$411,282	1.49%	\$2,269,667		
Subtotal	\$13,013,716	\$365,584	1.70%	\$2,589,553	\$24,996,797	16.41%
		<i>4000,001</i>	1.7070	<i>4_,000,000</i>		
Total from 2004 Valuation	\$95,042,207				\$24,996,797	16.41%

¹ 6/30/2003 Unfunded Accrued Liability of \$20,545,447 adjusted for interest and contributions during the year

² Reflects impact of contribution rate lag and impact of unexpected changes in payroll on amortization contribution

³ Including other assumption changes from experience study and change to mid-year decrements

* Included in Expected Unfunded

Marin County and Special Districts

Comments & Recommendations

June 30, 2004

<u>COMMENT A:</u> At the March 9 meeting of the Retirement Board, MCERA elected to change the average annual assumed COLA to 3.8%. This necessitated the issuance of a new valuation report. The overall County rate increased significantly from 11.06% to 15.48% of payroll. In the original report, the overall rate was 16.23%. The incorporation of new actuarial assumptions produced an increase in rates of 1.61% of payroll. Other factors increasing costs were "3% at 50" benefits for Safety members (These members are shown as "Tier 1A" and "Tier 2A" in this report) and losses relating to the actuarial value of assets.

<u>COMMENT B</u>: The good news in the valuation is that the System's deferred loss (the excess of actuarial value over market value) was reduced from \$172 million to \$42 million due to high market returns. The County's share of the deferred loss is roughly \$31.5 million. This reflects the excellent market returns for FYE2003. However, the actuarial smoothing process heavily reflects the 2000-03 bear market.

<u>COMMENT C</u>: Even without assumption changes, the computed rate would have significantly increased to 13.87%. This was primarily due to investment losses, using the actuarial value of assets, of \$40 million. The portion of the rate increase, attributable to such investment losses, is 1.94%. The actuarial rate of return was 3.45%. For actuarial loss purposes, we compare to the System's 8.25% assumption, not zero.

MCERA elected to retain the 8.25% investment assumption. However, the economic assumptions were made more conservative in one regard. We are assuming higher COLAs that are more consistent with a static 4.25% inflation assumption. This served to increase the computed rate by 0.27%. We view this as a reasonable middle ground in "strengthening assumptions." Ironically, there will be an actuarial gain in the 2005 valuation due to the low 2004 COLA of 1.0%.

We have also assumed slightly lower rates of employee turnover. The lower rate of recent employee turnover, in practice, is demonstrated by the increase in the attained age of 0.7 of a year for the 1262 actives in the biggest valuation group, General Tier 3 during the past year.

Last year, we attempted to mimic the assumptions used by Mercer for the sake of continuity. This year's assumption changes include a refinement to explicitly reflect employee contributions (and the cessation of contributions after 30 years of service) in a manner that we feel is best practice.

Marin County and Special Districts

Comments & Recommendations

June 30, 2004

<u>COMMENT D</u>: The overall funded ratio decreased from 98% to 90% using the actuarial value of assets. Using market value of assets, the funded ratio increased from 82% to 87%.

<u>COMMENT E:</u> We have an elaborate estimation procedure to estimate the allocation of assets between General, Fire and Police employees. There are now 18 valuation groups, <u>excluding</u> the additional groups in the City of San Rafael and Novato Fire District valuations. This estimation process is taking significant GRS time, which, in turn, slows down our turnaround ability. We would also encourage the creation of accounting processes to more accurately track allocated assets if the highest degree of accuracy is desired. For either of the first two years, we have not charged MCERA for this work.

The bigger issue is that the increased complexity of the number of different employers with different benefits, different employee contribution rate structures, and different subvention (pick up) agreements have significantly increased administrative burdens on MCERA staff.

<u>COMMENT F</u>: There are differing contribution levels for Safety members by bargaining unit who are eligible for "3% at 50". In such cases, contributions were increased by either 2.80% or 3.53%.

<u>COMMENT G</u>: The increases for Tier 1 groupings, as a percent of pay, tend to be higher than for other Tiers. This is because of their relative decline in payroll.

COMMENT H: The County has requested that we calculate the overall rate if the contribution increase due to the assumption change was phased in over two or three years. The portion of the overall rate increase, attributable to assumption changes, is 1.70%. If the impact of the assumption changes were spread over two years, the 2004 overall rate would decline by 0.85%. If the impact of the assumption changes were spread over three years, the overall rate would decline by 1.13%. While any such change could vary by employer, the Board may wish to take a pragmatic view if they choose to grant the County's request.

This is not an unreasonable approach since there is an arbitrary element to the year in which assumption changes occur. However, there are two disadvantages in phasing in the increase. First, it means that rates, more likely than not, will increase next year. There is still a residual deferred investment loss from the 2000-02 bear market. Second, it may mean the reflection of a Net Pension Obligation liability on the financials of the plan sponsors to the extent that the actuarially computed contribution is not made.

FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES

Marin County Employees' Retirement Association Marin County and Special Districts Financial Principles and Operational Techniques

<u>Promises Made, and To Be Paid For</u>. As each year is completed, the Retirement System in effect hands an "IOU" to each member then acquiring a year of service credit – the "IOU" says: "Marin County Employees' Retirement Association owes you one year's worth of retirement benefits, payments in cash commencing when you qualify for retirement."

The related key financial questions are:

Which generation of taxpayers contributes the money to cover the IOU?

The present taxpayers, who receive the benefit of the member's present year of service?

<u>Or the future taxpayers</u>, who happen to be in Marin County at the time the IOU becomes a cash demand, years and decades later?

<u>The principle of level percent of payroll financing intends that this year's taxpayers contribute</u> <u>the money to cover the IOUs being handed out this year</u>. By following this principle, <u>the</u> <u>employer contribution rate will remain approximately level from generation to generation</u> (after funding of the System's initial unfunded liability is addressed) – our children and our grandchildren will contribute the same percents of active payroll we contribute now.

(There are systems which have a design for deferring contributions to future taxpayers, lured by a lower contribution rate now and putting aside the consequence that the contribution rate must then relentlessly grow much greater over decades of time.)

An inevitable by-product of the level-cost design is the accumulation of reserve assets, for decades, and income produced when the assets are invested. Invested assets are a by-product and not the objective. Investment income becomes, in effect, the 3^{rd} contributor for benefits to employees, and is interlocked with the contribution amounts required from employees and employer.

(Concluded)

Translated to actuarial terminology, this level-cost objective means that the contribution rates must total at least the following:

Current Cost (the cost of members' service being rendered this year) . . .

plus. . .

Interest on Unfunded Accrued Liabilities (unfunded accrued liabilities are the difference between (i) liabilities for service already rendered and (ii) the accrued assets of the plan).

<u>Computing Contributions To Support System Benefits</u>. From a given schedule of benefits and from the employee data and asset data furnished, the actuary determines the contribution rates to support the benefits, by means of <u>an actuarial valuation and a funding method</u>.

An actuarial valuation has a number of ingredients such as: the rate of investment return which plan assets will earn; rates of withdrawal of active members who leave covered employment; rates of mortality; rates of disability; rates of pay increases; and the assumed age or ages at actual retirement. In an actuarial valuation assumptions must be made as to what the above rates will be, for the next year and for decades in the future. Only the subsequent actual experience of the plan can indicate the degree of accuracy of the assumptions.

<u>Reconciling Differences Between Assumed Experience and Actual Experience</u>. Once actual experience has occurred and been observed, it will not coincide exactly with assumed experience, regardless of the wisdom behind the various financial assumptions or the skill of the actuary and the millions of calculations made. The future can be predicted with considerable but not complete precision, except for <u>inflation which defies reliable prediction</u>.

The System copes with these continually changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is continual adjustments in the computed employer contribution rates.

THE ACTUARIAL VALUATION PROCESS

<u>The financing diagram</u> on the following page shows the relationship between the two fundamentally different philosophies of paying for retirement benefits: the method where contributions match cash benefit payments (or barely exceed cash benefit payments, as in the Federal Social Security program) which is an <u>increasing contribution method</u>; and the <u>level</u> <u>contribution method</u> which equalizes contributions between the generations.

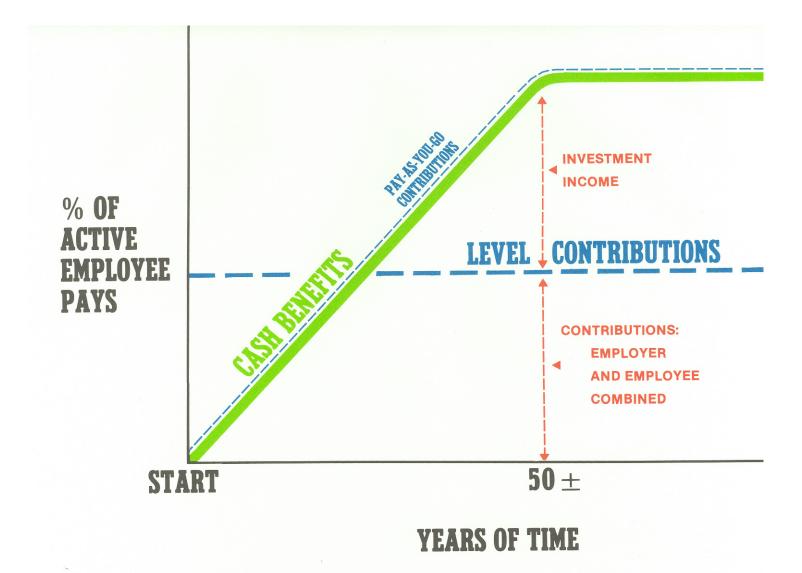
The <u>actuarial valuation</u> is the mathematical process by which the level contribution rate is determined. The flow of activity constituting the valuation may be summarized as follows:

A. Covered people data, furnished by the System including:

Retired lives now receiving benefits Former employees with vested benefits not yet payable Active employees

- B. + Asset data (cash & investments), furnished by the System
- C. + <u>Assumptions concerning future experience in various risk areas</u>, which are established by the Board after consulting with the actuary
- D. + <u>The funding method</u> for employer contributions (the long-term, planned pattern for employer contributions)
- E. + Mathematically combining the assumptions, the funding method, and the data
- F. = <u>Determination of:</u> Plan Financial Position and/or

Employer's New Contribution Rate



CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

Economic Risk Areas

Rates of investment return Rates of pay increase Changes in active member group size Non-Economic Risk Areas Ages at actual retirement Rates of mortality Rates of withdrawal of active members (turnover) Rates of disability Marin County Employees' Retirement Association Marin County and Special Districts June 30, 2004

FUNDING OBJECTIVE

The funding objective of the Retirement System is to establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level from year to year and will not have to be increased for future generations of citizens.

CONTRIBUTION RATES

The System is supported by member contributions, employer contributions, and investment income from Fund assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are intended to:

- 1. cover the actuarial present value of benefits allocated to the current year by the actuarial cost method (the normal cost); and
- 2. finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (unfunded actuarial accrued liability).

Computed contributions for the fiscal year beginning July 1, 2004 are shown on the following pages.

Marin County and Special Districts

Computed Contribution Rates

(Expressed as Percents of Active Payroll)

Total Employer Contribution

Valuation Date	<u>2004</u>	<u>2003</u>
Fiscal Year	2005-2006	2004-2005
Marin County		
Safety	20.88	13.95
Miscellaneous	13.92	10.35
Courts	17.62	15.43
Southern Marin Fire		
Safety	45.19	39.78
Miscellaneous	27.81	22.77
Mosquito Abatement (MAD)	30.46	22.63
Tamalpais CSD	24.77	22.14
Marin City CSD	18.45	16.56
LAFCO	14.99	16.31

The above contributions are **exclusive** of applicable "picked up" employee contributions and assume contributions are made, on average, mid-year.

Ongoing unfunded actuarial accrued liabilities (UAAL) are a byproduct of actuarial gains and losses, as well as benefit, assumption and methodology changes. Each valuation generates an actuarial gain (loss) for each group valued. Each year's gain (loss) is amortized over 22 years for the following entities: County of Marin, Courts, Southern Marin Fire Protection District, and LAFCO. 13-year amortization is used for the remainder of special districts.

Amortization is expressed as a percent-of-payroll and added to (or subtracted from) computed normal costs.

Marin County and Special Districts

Computed Contribution Rates

June 30, 2004

(Expressed as Percents of Active Payroll)

Elements of County Normal Cost

	<u>Saf</u>	<u>ety</u> ³	N	Miscellaneous		<u>Overall</u>
	Tier 1	Tier 2	<u>Tier 1</u>	<u>Tier 2</u>	Tier 3	
Normal Retirement	17.02%	17.31%	14.14%	15.16%	13.29%	14.31%
Vested Deferred Retirement	4.78%	2.49%	2.99%	0.80%	1.81%	2.04%
Death-In-Service ¹	0.77%	0.71%	0.28%	0.25%	0.24%	0.34%
Disability ¹	7.15%	7.83%	2.47%	2.54%	2.16%	3.37%
Contribution Refunds	0.66%	0.55%	0.40%	0.34%	0.37%	0.42%
Total Normal Cost	30.38%	28.89%	20.28%	19.09%	17.87%	20.48%
Less						
Employee Contributions ²	<u>8.09%</u>	<u>15.53%</u>	3.93%	7.82%	7.70%	9.00%
Equals						
Employer Normal Cost	22.29%	13.36%	16.35%	11.27%	10.17%	11.48%

¹ These figures could be viewed as overstated, and Normal Retirement figures understated, since, in many cases, an active member, who dies or becomes disabled will have significant service credit accrued and may be eligible for service retirement at time of disability or death benefit grant.

² Shown employee contributions will be reduced by applicable employee pick ups (subventions).
 ³ Benefits for 31664.1 and 31664.2 combined under proper Tier.

Marin County Employees' Retirement Association Marin County and Special Districts Member Contributions as of June 30, 2004

Please refer to Appendix A for a detailed list of these rates.

	(Percents of Pay)			
	Weighted Employ	ee Contribution		
	<u>2003</u>	<u>2004</u>		
County weighted employee contribution rate	9.01%	9.00 %		

The above averages are shown prior to any pick ups of employee contributions. The following pick up agreements exist:

County, Courts, LAFCO:	50% of employee's contribution
Marin City CSD:	None
Southern Marin Fire:	30% of employee rate
Tamalpais CSD:	None
Mosquito Abatement:	None

Marin County Employees' Retirement Association Marin County and Special Districts Unfunded Actuarial Accrued Liability June 30, 2004

Derivation of Experience Gain (Loss)

The actuarial gains or losses realized in the operation of the System provide an experience test. Gains and losses are expected to cancel each other over a period of years and sizable year-toyear fluctuations are common.

(1)	UAAL* at beginning of year	\$20,545,447
(2)	Expected UAAL payment	5,636,284
(3)	Interest accrual: [(1) * .0825 - (2) * .0404]	1,467,294
(4)	Increase due to Benefit Improvements	11,008,587
(5)	Increase Due to Change in Assumptions	13,013,716
(6)	Expected UAAL at end of year: $(1) - (2) + (3) + (4) + (5)$	40,398,760
(7)	Actual UAAL at end of year	95,042,207
(8)	Gain (loss) from actuarial experience: (6) - (7)	(54,643,447)
(9)	Gain (loss) as percentage of actuarial accrued	
	liabilities at beginning of year	(6.44)%

Marin County Employees' Retirement Association Marin County and Special Districts Gain/Loss on Unfunded Accrued Liability June 30, 2004

Components of Actuarial (Gain)/Loss for the Year Ending June 30, 2004

Estimated (Gain)/Loss attributed to pay increases	\$1,165,766
Estimated (Gain)/Loss attributed to COLA increase	(5,552,974)
Estimated (Gain)/Loss attributed to employee turnover, mortality, retirement incidence, and miscellaneous	
factors	17,497,100
Estimated (Gain)/Loss due to Retirant Mortality	1,374,299
Estimated (Gain)/Loss attributed to investment experience	40,159,256
Total Estimated Experience (Gain)/Loss	\$54,643,447

Unfunded Actuarial Accrued Liability

Total actuarial accrued liabilities	\$938,211,278
Assets allocated to funding	843,169,071
Unfunded Actuarial Accrued Liability	\$95,042,207



Marin County Employees' Retirement Association Marin County and Special Districts Funding Progress Indicators June 30, 2004

There is no single all-encompassing indicator which measures a retirement system's funding progress and current funded status. A traditional measure has been the relationship of valuation assets to unfunded actuarial accrued liability – a measure that is influenced by the choice of actuarial cost method.

<u>We believe a better understanding</u> of funding progress and status can be achieved using the following indicators which are independent of the actuarial cost method.

- 1. <u>The ratio of valuation assets to the actuarial present value of credited projected benefits</u> allocated in the proportion accrued service is to projected total service a plan continuation indicator.
- 2. <u>The ratio of the unfunded actuarial present value of credited projected benefits to member payroll</u> a plan continuation indicator. In a soundly financed retirement system, the amount of the unfunded actuarial present value of credited projected benefits will be controlled and prevented from increasing in the absence of benefit improvements or strengthening of actuarial assumptions. However, in an inflationary environment it is seldom practical to impose this control on dollar amounts which are depreciating in value. The ratio is a relative index of condition where inflation is present in both items. The ratio is expected to decrease in the absence of benefit improvements or strengthening.

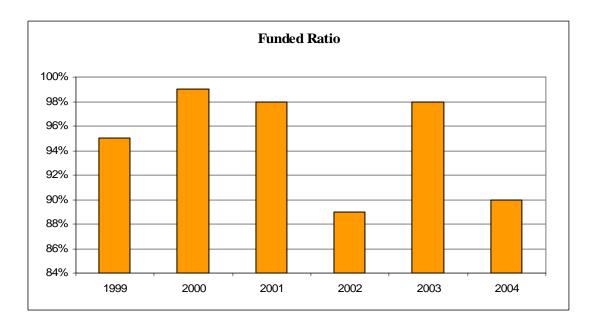
Marin County and Special Districts

Funding Progress Indicators – Historic Comparison

Valuation <u>Assets</u>	Actuarial Accrued <u>Liability</u>	Unfunded <u>AAL</u>	Funded <u>Ratio</u>	Member <u>Payroll</u>	UAAL Ratio to <u>Payroll</u>
557,216	583,890	28,674	95%	107,689	26.6%
634,412	644,262	9,850	99%	114,700	8.6%
690,320	701,223	10,903	98%	122,253	8.9%
711,789	798,404	86,615	89%	136,974	63.2%
828,438	848,984	20,545	98%	138,004	14.9%
843,169	914,189	71,020	92%	143,107	49.6%
843,169	938,211	95,042	90%	143,107	66.4%
	<u>Assets</u> 557,216 634,412 690,320 711,789 828,438 843,169	Valuation <u>Assets</u> Accrued <u>Liability</u> 557,216583,890634,412644,262690,320701,223711,789798,404828,438848,984843,169914,189	Valuation <u>Assets</u> Accrued <u>Liability</u> Unfunded <u>AAL</u> 557,216583,89028,674634,412644,2629,850690,320701,22310,903711,789798,40486,615828,438848,98420,545843,169914,18971,020	Valuation <u>Assets</u> Accrued <u>Liability</u> Unfunded <u>AAL</u> Funded <u>Ratio</u> 557,216583,89028,67495%634,412644,2629,85099%690,320701,22310,90398%711,789798,40486,61589%828,438848,98420,54598%843,169914,18971,02092%	Valuation AssetsAccrued LiabilityUnfunded AALFunded RatioMember Payroll557,216583,89028,67495%107,689634,412644,2629,85099%114,700690,320701,22310,90398%122,253711,789798,40486,61589%136,974828,438848,98420,54598%138,004843,169914,18971,02092%143,107

(\$ in Thousands)

¹ Reflects May 2003 issuance of \$109,826,000 Pension Obligation Bond.
 ² Before Assumption Changes and "3% at 50" Safety benefit enhancement.



Marin County Employees' Retirement Association Marin County and Special Districts Actuarial Balance Sheet – June 30, 2004

Present Resources and Expected Future Resources

A. Actuarial value of system assets	<u>Total</u> \$843,169,071
B. Present value of expected future contributions	124 429 400
1. For normal costs for present actives ¹	134,428,409
 For unfunded actuarial accrued liability Totals 	<u>95,042,207</u> 229,470,616
C. Present value of expected future member	
contributions ¹	<u>101,148,535</u>
D. Total Present and Expected Future Resources	\$1,173,788,222
Present Value of Expected Future Benefit Payments an	
A. To retirants and beneficiaries	\$474,803,036
B. To vested terminated members	35,972,320
C. To present active members	
 Allocated to service rendered prior to valuation date Allocated to convice likely to be rendered 	427,435,922
2. Allocated to service likely to be rendered after valuation date	235,576,944
3. Totals	663,012,866
D. Total Present Value of Expected Future	
Benefit Payments	\$1,173,788,222

¹ Prior to any employer pick-up contributions (subventions)

SUMMARY OF BENEFIT PROVISIONS

&

VALUATION DATA SUBMITTED BY RETIREMENT SYSTEM

Marin County Employees' Retirement Association Marin County and Special Districts

Brief Summary of Benefit Provisions Evaluated

Effective June 30, 2004

1. <u>Membership Requirements</u> – First day of employment.

2. Final Compensation for Benefit Determination

Highest consecutive twelve months of compensation earnable for all except highest 36 consecutive months for County employees hired after June 30, 1980 and Local 535.

3. Service Requirement

- A. <u>Eligibility</u>: Age 50 with 10 years of service, Safety members after 20 years of service, regardless of age, or Miscellaneous members after 30 years of service, regardless of age.
- B. Benefit Formula Per Year of Service

Miscellaneous Tier 1 - (Section 31676.14) County employees hired on or prior to June 30, 1980 and Mosquito Abatement District. (One-sixtieth times years of service times retirement age factor).

Miscellaneous Tier 2 - (Section 31676.1) Those Miscellaneous electing to not pay increased employee contribution rates pursuant to an agreement effective June 2002. (One-sixtieth times years of service times retirement age factor).

Miscellaneous Tier 3 - (Section 31676.16) Southern Marin Fire District, LAFCO and County employees not electing Tier 2 status will be covered under Section 31676.16. (One-fiftieth times years of service times retirement age factor).

Other Miscellaneous - Section 31676.11 shall apply to Marin City CSD and Tamalpais CSD.

Safety - 3% at 55 (Section 31664.2) except for selected bargaining groups and Southern Marin Fire District (3% at 50 per Section 31664.1).

Above formulas will generally vary by attained age. See Appendix B for Retirement Age Factor.

C. Maximum Benefit - 100% of Final Average Compensation

Marin County and Special Districts

Brief Summary of Benefit Provisions Evaluated

Effective June 30, 2004

(Continued)

4. Ordinary Disability

- A. <u>Eligibility</u> Five years of continuous service.
- B. <u>Benefit Formula</u> 1.5% (1.8% for Safety members) of Final Compensation for each year of service (including projected years to age 65 for Miscellaneous members (age 55 for Safety members), subject to a maximum of 1/3 of Final Compensation. Notwithstanding, the benefit shall not be less than any service retirement benefit eligible to be received at time of disability.

5. <u>Duty Disability</u>

- A. <u>Eligibility</u> Immediate
- B. <u>Benefit Formula</u> Minimum of 50% of Final Compensation or service retirement benefit, eligible to be received at time of disability.

6. Pre-retirement Death Benefit

- A. <u>Eligibility</u> None.
- B. <u>Benefit</u> Refund of employee contributions with interest plus one month of final compensation for each year of service to a maximum of six years

or

A1. <u>Eligibility</u> - Duty-related death <u>Benefit</u> - 50% of Final Compensation to a spouse

or

- A2. Eligibility Qualified for Service Retirement or Ordinary Disability.
- B2. <u>Benefit</u> 60% survivor benefit based on benefit due on member's date of death.

Marin County and Special Districts

Brief Summary of Benefit Provisions Evaluated

Effective June 30, 2004

(Continued)

7. Death After Retirement

- A. Service or Disability Retirement
- 60% of member's unmodified allowance continued to eligible spouse or modified optional continuance selected by the member at the time of retirement.
- \$5,000 lump sum benefit payable to member's beneficiary (\$10,000 for County employees with 20 plus years of service)
- If applicable, return of any unused employee contributions and interest

8. Withdrawal Benefits

A. Less than Five Years of Service

Refund of accumulated employee contributions with interest.

B. Five or More Years of Service

If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire.

9. Post-retirement Cost-of-Living Benefits

Each April 1, benefits are increased based on increases in the local CPI, subject to the following maximum increase:

4% for those hired on or prior to June 30, 19802% for County and Court employees hired after June 30, 19804% for Special District employees

10. Employer Contributions

Determined by Entry Age Normal cost method with funding of each year's actuarial gain (loss) spread as a level percent of payroll over 22 years for the County, Courts, Southern Marin Fire Protection District, and LAFCO with 13-year amortization for other Employers.

(Concluded on Next Page)

Marin County and Special Districts

Brief Summary of Benefit Provisions Evaluated

Effective June 30, 2004

(Concluded)

11. Member Contributions

Please refer to Appendix A for entry-age based rates. Due to June 2002 benefit enhancements, rate increases for affected Safety and Miscellaneous Tier 3 members will be increased by 3.64% and 1.14%, respectively. Due to 2005 benefit increases, Safety employees eligible for 31664.1 will pay 2.80% or 3.53% additional.

NOTE: The summary of major plan provisions is designed to outline principal plan benefits. If retirement staff or any Employer should find the plan summary not in accordance with the actual provisions, the actuary should be IMMEDIATELY alerted so they can both be sure the proper provisions are valued.

Summary of Reported Asset Information

Submitted for the June 30, 2004 Valuation

Reported Market Value of Assets

Net Market Value	\$1,082,852,758
Liabilities	181,043,881
Total Market Value	1,263,896,639
T (1 M 1 (17 1	1 2/2 00/ /20
Miscellaneous	<u>1,207,053</u>
Real Estate	92,720,000
Real Estate	02 720 000
Bonds	258,298,417
Stocks	752,395,144
Receivables	6,283,532
Cash/Short-term	\$152,992,493

Revenues and Disbursements Among Applicable Reserves

Balance – Beginning of year	\$935,491,460
Revenues	
Employees' contributions	10,247,043
Employer contributions	26,890,964
Distributed & undistributed investment	
income (net of expenses)	<u>169,502,785</u>
Total Revenues	206,640,792
Disbursements	
Benefit payments	57,304,486
Refunds	592,660
Administrative Expense	<u>1,382,348</u>
Total Disbursements	59,279,494
Balance – End of year	\$1,082,852,758

Actuarial Value of Assets As of June 30, 2004

Fisca Yea <u>Ending</u>	Count Contributions	Membe Contributions	Tota Contributions	Tota <u>Benefit</u>	Marke <u>Value</u>	Average <u>Value</u>	(1) Tota Marke <u>Return</u>	(2) Expecte Marke <u>Return</u>	(1-2) Investment <u>Gain</u>	Deferre <u>Factor</u>	Deferre <u>Return</u>
2000-01	18,064,245	7,324,467	25,388,712	38,936,735	911,123,573	954,447,152	(31,431,780)	78,741,920	(110,173,700)	0.2	(\$22,034,740)
2001-02	21,985,559	8,316,789	30,302,348	45,347,094	833,821,520	909,123,622	(62,167,307)	75,002,699	(137,170,006)	0.4	(54,868,002)
2002-03	134,960,478	10,348,913	145,309,391	1 51,211,890	935,491,460	852,252,760	7,572,439	70,310,853	(62,738,414)	0.6	(37,643,048)
2003-04	26,890,964	10,247,043	37,138,007	57,897,146	1,082,852,758	938,557,373	168,120,437	77,430,983	90,689,454	0.8	72,551,563
1. Total de	ferred										(41,994,228)
2. Market	Value										1,082,852,758
3. Smoothe	ed Market Value (Item 2 - Item									1,124,846,986
4. Corridor	Limit										
a. 80% c	of Net Market										866,282,206
b. 120%	of Net Market Va	alue									1,299,423,310
			d) Inclusive of Heal	th Insurance Reser	ve	-					1,124,846,986
			,								, , -,

6. Reserves at Market

	Reserv	Actuaria	Actuaria
	Value	Value Ratio	Value
Marin County and Special	\$811,690,803	1.0388	\$843,169,071
City of San Rafael	\$181,901,594	1.0388	\$188,955,939
Novato Fire Protection District	\$81,647,512	1.0388	\$84,813,892
Health Insurance	\$7,612,849	1.0388	\$7,908,084
Tota	\$1,082,852,758		\$1,124,846,986

Recognition of				
ed				
Amount to be				
Recognize				
(\$43,878,533)				
(21,843,793)				
5,590,208				
18,137,891				
(\$41,994,228)				

\$1,082,852,758

¹ Includes \$109,826,000 Pension Obligation Bond

Summary of Reserves and Other Liabilities June 30, 2004

Employer Reserves	\$32,778,787
Employee Reserves	97,557,420
Death Benefit Reserves	671,291
Article 15.5 Reserves	1,611,424
Reserve for Pre 7/1/77 San Rafael Retirees	9,676,412
Retired Employees Reserve	265,033,408
Cost of Living Adjustment Reserves	218,606,966
Health Insurance Reserves	7,612,849
Contingency and other Reserves	54,142,638
Unrestricted Reserves	395,161,564
Security Deposits Payable	745,487
County Contribution Payable	601,146
Investments Payable	50,245,403
Other Payables	1,593,977

Total Liabilities

\$1,136,038,771

Allocation of Actuarial Value of Assets and Accrued Liability June 30, 2004

	Accrued <u>Liability</u>	<u>Assets</u>
Assets allocated to retirees:	\$474,803,036	\$474,803,036
Assets allocated to inactives:	\$35,972,320	\$35,972,320
Assets allocated to actives:		
Marin County		
Miscellaneous Tier 1	\$88,821,997	\$73,242,807
Miscellaneous Tier 2	\$20,143,232	\$16,893,258
Miscellaneous Tier 3	\$156,766,884	\$127,951,661
Safety Tier 1	\$12,271,015	\$9,430,678
Safety Tier 1A	\$32,627,848	\$25,075,573
Safety Tier 2	\$7,033,028	\$5,257,460
Safety Tier 2A	\$64,221,000	\$48,007,673
Special Districts		
Courts Tier 1	\$5,751,242	\$3,349,491
Courts Tier 2	\$1,831,378	\$72,165
Courts Tier 3	\$13,048,271	\$8,600,155
South Marin Fire General	\$184,502	\$93,187
South Marin Fire Safety	\$17,489,218	\$10,397,010
Mosquito Abatement	\$5,211,875	\$2,761,924
LAFCO	\$201,836	\$119,641
Tamalpais CSD	\$1,654,151	\$1,022,244
Marin City CSD	<u>\$178,445</u>	<u>\$118,788</u>
Total	\$938,211,278	\$843,169,071

Marin County and Special Districts

Annual Benefit and Membership Distribution County and Special Districts Safety Retirees and Beneficiaries

Age			У	ears of Re	tirement				
Group	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35+</u>	<u>Total</u>
30- NO.	2	0	0	0	0	0	0	0	2
AVG AMT	25,105	0	0	0	0	0	0	0	25,105
30-34 NO.	0	0	0	0	0	0	0	0	0
AVG AMT	0	0	0	0	0	0	0	0	0
35-39 NO.	9	0	0	0	0	0	0	0	9
AVG AMT	36,208	0	0	0	0	0	0	0	36,208
40-44 NO.	9	1	3	1	0	0	0	0	14
AVG AMT	28,901	25,718	34,396	27,302	0	0	0	0	29,737
45-49 NO.	8	2	3	0	0	0	0	0	13
AVG AMT	29,149	7,257	21,113	0	0	0	0	0	23,927
50-54 NO.	10	5	5	5	1	0	0	0	26
AVG AMT	39,973	33,682	31,156	17,533	27,486	0	0	0	32,272
55-59 NO.	28	8	8	2	3	3	1	0	53
AVG AMT	71,459	17,104	34,657	28,116	23,653	19,564	17,592	0	49,404
60-64 NO.	13	17	8	8	3	2	0	0	51
AVG AMT	72,190	63,699	26,665	27,329	30,112	18,108	0	0	50,585
65-69 NO.	0	0	17	4	3	5	0	0	29
AVG AMT	0	0	44,931	24,085	30,389	19,003	0	0	36,081
70-74 NO.	2	1	1	5	8	5	1	0	23
AVG AMT	28,026	130,542	36,952	41,487	30,065	32,452	19,350	0	37,092
75-79NO.	0	0	0	2	7	4	1	2	16
AVG AMT	0	0	0	27,926	36,447	35,560	10,125	15,833	30,938
80-84 NO.	0	0	0	0	1	6	1	0	8
AVG AMT	0	0	0	0	12,196	29,771	29,210	0	27,504
85-89 NO.	0	0	0	0	1	1	2	1	5
AVG AMT	0	0	0	0	16,199	30,454	14,745	24,030	20,035
90+ NO.	0	0	0	0	0	0	0	0	0
AVG AMT	0	0	0	0	0	0	0	0	0
Total NO.	81	34	45	27	27	26	6	3	249
AVG AMT	52,648	45,850	35,859	27,757	29,777	27,058	17,628	18,565	39,580

Marin County and Special Districts

Annual Benefit and Membership Distribution County and Special Districts Miscellaneous Retirees and Beneficiaries

Age	Years of Retirement								
Group	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35+</u>	Tota
30-34 NO.	1	0	1	0	0	0	0	0	/
AVG AMT	22,816	0	4,048	0	0	0	0	0	13,432
35-39 NO.	0	0	0	0	0	0	0	0	(
AVG AMT	0	0	0	0	0	0	0	0	C
40-44 NO.	5	3	0	0	0	1	0	0	Ç
AVG AMT	25,814	21,336	0	0	0	10,700	0	0	22,642
45-49 NO.	9	4	2	1	0	0	0	0	16
AVG AMT	21,388	11,565	22,518	7,579	0	0	0	0	18,211
50-54 NO.	22	11	3	2	0	0	0	0	38
AVG AMT	28,619	14,363	12,487	15,443	0	0	0	0	22,525
55-59 NO.	95	28	8	6	1	1	0	0	139
AVG AMT	21,142	19,117	20,588	15,378	3,453	17,959	0	0	20,303
60-64 NO.	107	59	33	3	1	2	0	0	205
AVG AMT	33,228	25,543	14,890	17,765	211	25,615	0	0	27,603
65-69 NO.	57	77	44	26	3	3	1	0	211
AVG AMT	30,723	30,342	25,979	12,905	15,105	27,916	40,497	0	27,184
70-74 NO.	20	51	64	47	19	7	1	1	210
AVG AMT	24,010	26,657	29,193	20,771	11,032	17,938	7,510	28,383	24,073
75-79NO.	4	11	50	54	51	18	5	1	194
AVG AMT	14,390	18,249	24,646	18,329	15,928	12,433	16,697	2,725	18,571
80-84 NO.	3	5	27	44	49	34	3	0	165
AVG AMT	19,113	21,504	21,087	17,493	17,209	14,421	5,439	0	17,296
85-89 NO.	0	0	2	6	29	33	11	2	83
AVG AMT	0	0	13,544	16,333	14,024	21,260	11,558	9,517	16,621
90+ NO.	0	0	0	1	2	16	8	7	34
AVG AMT	0	0	0	29,179	9,058	17,179	8,785	13,917	14,408
Total NO.	323	249	234	190	155	115	29	11	1,306
AVG AMT	27,505	25,360	23,858	17,802	15,090	17,215	11,905	13,415	22,186

Marin County and Special Districts

Summary of Monthly Allowances Being Paid

Submitted for the June 30, 2004 Valuation

	Annual Allowances				
Service Retirement	Number	Total	Average		
Unmodified	959	\$22,791,605	\$23,766		
Option 1	43	706,793	16,437		
Option 2	22	380,818	17,310		
Option 3	3	25,828	8,609		
Total	1,027	23,905,043	23,277		
Ordinary Disability					
Unmodified	37	504,560	13,637		
Option 1	2	12,421	6,210		
Option 2	1	10,932	10,932		
Option 3	0	0	0		
Total	40	527,912	13,198		
Duty Disability					
Unmodified	69	1,926,138	27,915		
Option 1	2	21,116	10,558		
Option 2	1	11,585	11,585		
Option 3	0	0	0		
Total	72	1,958,838	27,206		
Beneficiary					
Unmodified	166	2,554,197	15,387		
Option 1	0	0	0		
Option 2	1	29,569	29,569		
Option 3	0	0	0		
Total	167	2,583,766	15,472		
TOTAL	1,306	\$28,975,560	\$22,186		

Miscellaneous

Marin County and Special Districts

Summary of Monthly Allowances Being Paid

Submitted for the June 30, 2004 Valuation

<u>Safety</u>

	Annual Allowances				
Service Retirement	<u>Number</u>	<u>Total</u>	<u>Average</u>		
Unmodified	106	\$5,421,480	\$51,146		
Option 1	2	104,855	52,427		
Option 2	4	67,612	16,903		
Option 3	3	104,304	34,768		
Total	115	5,698,251	49,550		
Ordinary Disability					
Unmodified	2	43,190	21,595		
Option 1	0	0	0		
Option 2	0	0	0		
Option 3	0	0	0		
Total	2	43,190	21,595		
Duty Disability					
Unmodified	87	2,914,881	33,504		
Option 1	2	42,872	21,436		
Option 2	0	0	0		
Option 3	1	30,608	30,608		
Total	90	2,988,361	33,204		
Beneficiary					
Unmodified	42	1,125,645	26,801		
Option 1	0	0	0		
Option 2	0	0	0		
Option 3	0	0	0		
Total	42	1,125,645	26,801		
TOTAL	249	\$9,855,447	\$39,580		

Marin County and Special Districts

Summary of Retired Members and Beneficiaries Included

In the June 30, 2004 Actuarial Valuation

			Average				New Retirees Only		
		Annual	Annual	Attained	Age at		Average	Average	
	<u>No.</u>	Allowance	<u>Allowance</u>	Age	Retirement	<u>No.</u>	<u>Allowance</u>	Age	
Miscellaneous Membe	ers								
Retirees									
6/30/2003	1,101	\$24,287,606	\$22,060	70.5	58.7	43	\$28,691	60.1	
6/30/2004	1,139	\$26,391,794	\$23,171	70.6	58.6	59	\$32,237	58.8	
Increase	3.5%	8.7%	5.0%						
Beneficiaries									
6/30/2003	159	\$2,365,006	\$14,874	72.8	NA	NA	NA	NA	
6/30/2004	167	\$2,583,766	\$15,472	72.9	NA	NA	NA	NA	
Increase	5.0%	9.2%	4.0%						
Total									
6/30/2003	1,260	\$26,652,612	\$21,153	70.8	58.7	43	\$28,691	60.1	
6/30/2004	1,306	\$28,975,560	\$22,186	70.9	58.6	59	\$32,237	58.8	
Increase	3.7%	8.7%	4.9%						
Safety Members									
Service Retirement									
6/30/2003	186	\$7,678,687	\$41,283	59.9	49.0	20	\$66,475	55.6	
6/30/2004	207	\$8,729,802	\$42,173	59.6	49.0	17	\$44,395	50.8	
Increase	11.3%	13.7%	2.2%						
Beneficiaries									
6/30/2003	44	\$1,113,303	\$25,302	67.2	NA	NA	NA	NA	
6/30/2004	42	\$1,125,645	\$26,801	67.3	NA	NA	NA	NA	
Increase	(4.5)%	1.1%	5.9%						
Total									
6/30/2003	230	\$8,791,990	\$38,226	61.3	49.0	20	\$66,475	55.6	
6/30/2004	249	\$9,855,447	\$39,580	60.9	49.0	17	\$44,395	50.8	
Increase	8.3%	12.1%	3.5%						
Grand Total 6/30/03	1,490	\$35,444,602	\$23,788	69.3	57.2	63	\$40,686	58.7	
Grand Total 6/30/04	1,555	\$38,831,008	\$24,972	69.3	57.1	76	\$34,956	57.0	
Increase	4.4%	9.6%	5.0%						

Marin County and Special Districts

Active Membership Summary

In the June 30, 2004 Actuarial Valuation

County Safety Members

		-	Averages		
		Annual	Annual		
	<u>No.</u>	Compensation	Compensation	Age	<u>Service</u>
Tier 1	7	\$905,888	\$129,413	53.2	30.6
Tier 2	67	\$4,317,824	\$64,445	42.0	4.8
Tier 1A	26	\$2,421,155	\$93,121	50.8	28.5
Tier 2A	<u>251</u>	<u>\$19,620,739</u>	<u>\$78,170</u>	38.9	9.6
Total	351	\$27,265,606	\$77,680	40.6	10.5

County Miscellaneous Members

		-	Averages		
		Annual	Annual		
	<u>No.</u>	Compensation	Compensation	Age	<u>Service</u>
Tier 1	135	\$10,736,488	\$79,530	56.8	25.9
Tier 2	162	\$8,914,769	\$55,029	59.3	10.0
Tier 3	1,262	<u>\$82,662,367</u>	<u>\$65,501</u>	46.3	8.4
Total	1,559	\$102,313,624	\$65,628	48.6	10.1

Active Membership Summary

In the June 30, 2004 Actuarial Valuation

(continued)

Special Districts

	-	Aver	rages	
	Annual	Annual		
<u>No.</u>	Compensation	Compensation	Age	<u>Service</u>
-				24.9
	,	\$57,854		8.3
124	\$6,735,264	\$54,317	45.2	8.3
4	\$110,110	\$27,528	39.6	5.8
1	\$61,822	\$61,822	56.0	9.9
26	\$1,531,298	\$58,896	43.7	10.8
2	\$155,654	\$77,827	52.6	5.3
<u>10</u>	<u>\$560,315</u>	<u>\$56,032</u>	49.2	10.5
191	\$10,714,399	\$56,096	46.8	9.6
35	\$2,813,632	\$80,389	41.8	13.0
226	\$13,528,031	\$59,858	46.0	10.1
2,145	\$138,004,183	\$64,338	46.6	9.7
2,136	\$143,107,261	\$66,998	47.0	10.2
(0.4)%	3.7%	4.1%		
	10 14 124 4 1 26 2 <u>10</u> 191 35 226 2,145 2,136	No. Compensation 10 \$749,978 14 \$809,958 124 \$6,735,264 4 \$110,110 1 \$61,822 26 \$1,531,298 2 \$155,654 10 \$560,315 191 \$10,714,399 35 \$2,813,632 226 \$13,528,031 235 \$138,004,183 2,145 \$138,004,183	Annual No.Annual CompensationAnnual Compensation10\$749,978\$74,99814\$809,958\$57,854124\$6,735,264\$54,3174\$110,110\$27,5281\$61,822\$61,82226\$1,531,298\$58,8962\$155,654\$77,82710\$560,315\$56,032191\$10,714,399\$56,03635\$2,813,632\$80,389226\$13,528,031\$59,8582,145\$138,004,183\$64,3382,136\$143,107,261\$66,998	No. Compensation Compensation Age 10 \$749,978 \$74,998 54.6 14 \$809,958 \$57,854 59.7 124 \$6,735,264 \$54,317 45.2 4 \$110,110 \$27,528 39.6 1 \$61,822 \$661,822 56.0 26 \$1,531,298 \$58,896 43.7 2 \$155,654 \$77,827 52.6 10 \$560,315 \$56,032 49.2 191 \$10,714,399 \$56,096 46.8 35 \$2,813,632 \$80,389 41.8 226 \$13,528,031 \$59,858 46.0 2,145 \$138,004,183 \$64,338 46.6 2,136 \$143,107,261 \$66,998 47.0

Vested Deferreds and Recipients

6/30/2003 Total	417	NA	NA	46.6	6.2
6/30/2004 Total	461	NA	NA	46.1	5.9

Active Members June 30, 2004

By Attained Ages and Years of Service

County Safety

Age					Y	ears of Accru	ued Service						
Group	<u>0-1</u>	<u>1-2</u>	<u>2-3</u>	<u>3-4</u>	<u>4-5</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	20-24	<u>25-29</u>	<u>30-34</u>	<u>35 & Up</u>	Total
20-24 NO.	2	2	0	0	1	0	0	0	0	0	0	0	5
TOT PAY	127,833	128,640	0	0	74,097	0	0	0	0	0	0	0	330,571
AVG PAY	63,917	64,320	0	0	74,097	0	0	0	0	0	0	0	66,114
25-29 NO.	11	8	6	6	2	4	0	0	0	0	0	0	37
TOT PAY	607,254	550,806	379,578	420,408	153,898	285,875	0	0	0	0	0	0	2,397,819
AVG PAY	55,205	68,851	63,263	70,068	76,949	71,469	0	0	0	0	0	0	64,806
30-34 NO.	6	9	12	8	6	14	8	0	0	0	0	0	63
TOT PAY	321,345	571,225	765,334	508,507	452,753	1,086,541	670,239	0	0	0	0	0	4,375,944
AVG PAY	53,558	63,469	63,778	63,563	75,459	77,610	83,780	0	0	0	0	0	69,459
35-39 NO.	3	4	5	2	7	10	22	4	0	0	0	0	57
TOT PAY	153,834	252,193	359,899	119,285	499,229	762,601	1,816,351	332,337	0	0	0	0	4,295,729
AVG PAY	51,278	63,048	71,980	59,643	71,318	76,260	82,561	83,084	0	0	0	0	75,364
40-44 NO.	0	1	9	2	1	13	16	17	5	0	0	0	64
TOT PAY	0	65,131	643,741	147,777	87,486	1,013,061	1,239,505	1,517,154	455,010	0	0	0	5,168,864
AVG PAY	0	65,131	71,527	73,889	87,486	77,928	77,469	89,244	91,002	0	0	0	80,764
45-49 NO.	0	1	6	1	3	3	5	19	13	6	0	0	57
TOT PAY	0	50,388	420,388	74,036	231,132	249,002	469,829	1,580,349	1,089,394	624,555	0	0	4,789,073
AVG PAY	0	50,388	70,065	74,036	77,044	83,001	93,966	83,176	83,800	104,093	0	0	84,019
50-54 NO.	2	1	7	0	2	0	4	11	8	8	6	0	49
TOT PAY	76,084	47,508	471,908	0	131,265	0	294,149	903,691	715,342	814,306	674,884	0	4,129,139
AVG PAY	38,042	47,508	67,415	0	65,633	0	73,537	82,154	89,418	101,788	112,481	0	84,268
55-59 NO.	0	1	2	1	0	1	1	2	0	4	1	1	14
TOT PAY	0	84,690	213,185	86,435	0	72,866	83,433	187,462	0	374,313	74,449	164,722	1,341,553
AVG PAY	0	84,690	106,593	86,435	0	72,866	83,433	93,731	0	93,578	74,449	164,722	95,825
60-64 NO.	0	0	4	0	0	0	0	0	0	0	0	0	4
TOT PAY	0	0	320,167	0	0	0	0	0	0	0	0	0	320,167
AVG PAY	0	0	80,042	0	0	0	0	0	0	0	0	0	80,042
65-99 NO.	0	0	0	0	0	0	0	0	0	0	0	1	1
TOT PAY	0	0	0	0	0	0	0	0	0	0	0	116,748	116,748
AVG PAY	0	0	0	0	0	0	0	0	0	0	0	116,748	116,748
TOT NO.	24	27	51	20	22	45	56	53	26	18	7	2	351
TOT AMT	1,286,350	1,750,581	3,574,199	1,356,447	1,629,860	3,469,946	4,573,506	4,520,994	2,259,747	1,813,173	749,333	281,470	27,265,606
AVG AMT	53,598	64,836	70,082	67,822	74,085	77,110	81,670	85,302	86,913	100,732	107,048	140,735	77,680

Marin County and Special Districts

Active Members June 30, 2004

By Attained Ages and Years of Service

County Miscellaneous

Age						Years of Acc	rued Service						
Group	<u>0-1</u>	<u>1-2</u>	<u>2-3</u>	<u>3-4</u>	<u>4-5</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	25-29	<u>30-34</u>	<u>35 & Up</u>	<u>Total</u>
20-24 NO.	2	3	3	1	0	0	0	0	0	0	0	0	9
TOT PAY	79,528	132,615	127,827	43,713	0	0	0	0	0	0	0	0	383,682
AVG PAY	39,764	44,205	42,609	43,713	0	0	0	0	0	0	0	0	42,631
25-29 NO.	7	9	15	5	3	1	0	0	0	0	0	0	40
TOT PAY	353,396	393,836	841,437	241,829	137,115	77,603	0	0	0	0	0	0	2,045,217
AVG PAY	50,485	43,760	56,096	48,366	45,705	77,603	0	0	0	0	0	0	51,130
30-34 NO.	16	11	19	26	19	28	3	0	0	0	0	0	122
TOT PAY	845,654	573,709	987,736	1,597,681	1,178,856	1,688,898	162,244	0	0	0	0	0	7,034,779
AVG PAY	52,853	52,155	51,986	61,449	62,045	60,318	54,081	0	0	0	0	0	57,662
35-39 NO.	8	9	21	17	8	64	21	3	0	0	0	0	151
TOT PAY	381,387	512,070	1,393,091	987,657	577,190	4,277,175	1,224,621	161,743	0	0	0	0	9,514,933
AVG PAY	47,673	56,897	66,338	58,097	72,149	66,831	58,315	53,914	0	0	0	0	63,013
40-44 NO.	13	13	29	19	15	59	34	22	6	0	0	0	210
TOT PAY	657,191	757,245	1,805,863	1,188,926	870,777	3,740,939	2,521,897	1,399,113	381,532	0	0	0	13,323,485
AVG PAY	50,553	58,250	62,271	62,575	58,052	63,406	74,173	63,596	63,589	0	0	0	63,445
45-49 NO.	5	15	20	30	18	63	27	35	18	7	0	0	238
TOT PAY	256,512	1,047,903	1,295,590	2,063,492	1,077,839	4,209,449	1,755,016	2,338,459	1,346,036	445,682	0	0	15,835,976
AVG PAY	51,302	69,860	64,780	68,783	59,880	66,817	65,001	66,813	74,780	63,669	0	0	66,538
50-54 NO.	9	11	24	27	18	55	44	48	42	11	2	0	291
TOT PAY	551,959	834,714	1,328,435	1,825,513	1,085,690	3,699,859	2,963,597	3,588,820	3,432,440	914,789	111,624	0	20,337,440
AVG PAY	61,329	75,883	55,351	67,612	60,316	67,270	67,354	74,767	81,725	83,163	55,812	0	69,888
55-59 NO.	6	6	19	16	13	61	45	46	32	23	20	0	287
TOT PAY	301,194	415,769	1,068,256	950,705	797,283	4,070,575	2,761,887	3,325,608	2,457,445	1,820,182	1,895,357	0	19,864,262
AVG PAY	50,199	69,295	56,224	59,419	61,329	66,731	61,375	72,296	76,795	79,138	94,768	0	69,213
60-64 NO.	3	5	12	5	6	28	29	25	14	10	7	2	146
TOT PAY	242,344	233,989	874,344	300,251	311,680	1,845,059	1,882,677	1,867,861	1,110,072	881,029	567,444	175,053	10,291,802
AVG PAY	80,781	46,798	72,862	60,050	51,947	65,895	64,920	74,714	79,291	88,103	81,063	87,527	70,492
65-99 NO.	0	0	2	2	1	13	15	13	14	4	0	1	65
TOT PAY	0	0	83,828	102,379	71,017	662,942	752,845	791,882	773,831	345,703	0	97,623	3,682,050
AVG PAY	0	0	41,914	51,190	71,017	50,996	50,190	60,914	55,274	86,426	0	97,623	56,647
TOT NO.	69	82	164	148	101	372	218	192	126	55	29	3	1559
TOT AMT	3,669,166	4,901,850	9,806,407	9,302,146	6,107,447	24,272,499	14,024,784	13,473,485	9,501,353	4,407,385	2,574,425	272,675	102,313,624
AVG AMT	53,176	59,779	59,795	62,852	60,470	65,249	64,334	70,174	75,408	80,134	88,773	90,892	65,628

Marin County and Special Districts

Active Members June 30, 2004

By Attained Ages and Years of Service

Special Districts Safety

Age						Years of .	Accrued Ser	vice					
Group	<u>0-1</u>	<u>1-2</u>	<u>2-3</u>	<u>3-4</u>	<u>4-5</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35 & Up</u>	Total
20-24 NO.	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT PAY	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG PAY	0	0	0	0	0	0	0	0	0	0	0	0	0
25-29 NO.	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT PAY	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG PAY	0	0	0	0	0	0	0	0	0	0	0	0	0
30-34 NO.	1	1	2	2	0	2	0	0	0	0	0	0	8
TOT PAY	55,301	79,437	145,252	150,672	0	137,043	0	0	0	0	0	0	567,704
AVG PAY	55,301	79,437	72,626	75,336	0	68,521	0	0	0	0	0	0	70,963
35-39 NO.	0	0	0	3	0	1	1	0	0	0	0	0	5
TOT PAY	0	0	0	205,956	0	74,416	81,375	0	0	0	0	0	361,747
AVG PAY	0	0	0	68,652	0	74,416	81,375	0	0	0	0	0	72,349
40-44 NO.	0	0	0	0	0	4	1	2	0	0	0	0	7
TOT PAY	0	0	0	0	0	308,675	74,225	152,600	0	0	0	0	535,500
AVG PAY	0	0	0	0	0	77,169	74,225	76,300	0	0	0	0	76,500
45-49 NO.	0	0	0	0	0	4	1	0	2	2	0	0	9
TOT PAY	0	0	0	0	0	368,922	70,059	0	175,772	241,152	0	0	855,905
AVG PAY	0	0	0	0	0	92,231	70,059	0	87,886	120,576	0	0	95,101
50-54 NO.	0	0	0	0	0	0	0	0	0	4	0	0	4
TOT PAY	0	0	0	0	0	0	0	0	0	317,590	0	0	317,590
AVG PAY	0	0	0	0	0	0	0	0	0	79,397	0	0	79,397
55-59 NO.	0	0	0	0	0	0	0	0	0	1	1	0	2
TOT PAY	0	0	0	0	0	0	0	0	0	88,815	86,372	0	175,187
AVG PAY	0	0	0	0	0	0	0	0	0	88,815	86,372	0	87,593
60-64 NO.	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT PAY	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG PAY	0	0	0	0	0	0	0	0	0	0	0	0	0
65-99 NO.	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT PAY	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG PAY	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT NO.	1	1	2	5	0	11	3	2	2	7	1	0	35
TOT AMT	55,301	79,437	145,252	356,628	0	889,056	225,659	152,600	175,772	647,556	86,372	0	2,813,632
AVG AMT	55,301	79,437	72,626	71,326	0	80,823	75,220	76,300	87,886	92,508	86,372	0	80,389

Marin County and Special Districts

Active Members June 30, 2004

By Attained Ages and Years of Service

Special Districts Miscellaneous

Age						Years of Ac	crued Service						
Group	<u>0-1</u>	<u>1-2</u>	<u>2-3</u>	<u>3-4</u>	<u>4-5</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35 & Up</u>	<u>Total</u>
20-24 NO.	0	0	1	0	0	0	0	0	0	0	0	0	1
TOT PAY	0	0	35,164	0	0	0	0	0	0	0	0	0	35,164
AVG PAY	0	0	35,164	0	0	0	0	0	0	0	0	0	35,164
25-29 NO.	4	1	3	3	1	2	0	0	0	0	0	0	14
TOT PAY	128,655	54,529	120,590	146,050	42,885	99,402	0	0	0	0	0	0	592,111
AVG PAY	32,164	54,529	40,197	48,683	42,885	49,701	0	0	0	0	0	0	42,294
30-34 NO.	3	1	4	5	3	3	0	0	0	0	0	0	19
TOT PAY	96,429	49,930	146,593	217,909	175,982	140,789	0	0	0	0	0	0	827,631
AVG PAY	32,143	49,930	36,648	43,582	58,661	46,930	0	0	0	0	0	0	43,560
35-39 NO.	5	1	0	5	0	2	1	3	0	0	0	0	17
TOT PAY	275,020	42,723	0	178,983	0	113,955	52,716	146,570	0	0	0	0	809,967
AVG PAY	55,004	42,723	0	35,797	0	56,978	52,716	48,857	0	0	0	0	47,645
40-44 NO.	3	1	4	3	2	4	7	1	1	0	0	0	26
TOT PAY	116,878	78,991	198,197	137,273	87,457	268,232	488,138	52,365	50,227	0	0	0	1,477,759
AVG PAY	38,959	78,991	49,549	45,758	43,729	67,058	69,734	52,365	50,227	0	0	0	56,837
45-49 NO.	4	0	2	3	0	11	3	3	6	1	0	0	33
TOT PAY	183,216	0	104,937	141,908	0	685,494	244,925	152,183	393,277	55,597	0	0	1,961,536
AVG PAY	45,804	0	52,469	47,303	0	62,318	81,642	50,728	65,546	55,597	0	0	59,440
50-54 NO.	1	0	1	5	1	7	2	7	4	2	1	0	31
TOT PAY	30,342	0	84,420	279,302	38,451	391,599	130,637	483,186	241,894	169,605	66,413	0	1,915,851
AVG PAY	30,342	0	84,420	55,860	38,451	55,943	65,319	69,027	60,474	84,803	66,413	0	61,802
55-59 NO.	0	1	0	1	1	6	3	5	4	1	0	1	23
TOT PAY	0	54,709	0	37,711	97,961	379,133	148,094	375,564	231,847	56,563	0	81,333	1,462,913
AVG PAY	0	54,709	0	37,711	97,961	63,189	49,365	75,113	57,962	56,563	0	81,333	63,605
60-64 NO.	1	1	2	0	1	3	7	4	2	0	0	0	21
TOT PAY	100,068	45,257	84,779	0	38,236	144,423	440,753	269,676	93,071	0	0	0	1,216,265
AVG PAY	100,068	45,257	42,390	0	38,236	48,141	62,965	67,419	46,536	0	0	0	57,917
65-99 NO.	0	0	0	0	1	1	2	1	0	0	1	0	6
TOT PAY	0	0	0	0	47,284	57,969	105,398	78,528	0	0	126,026	0	415,205
AVG PAY	0	0	0	0	47,284	57,969	52,699	78,528	0	0	126,026	0	69,201
TOT NO.	21	6	17	25	10	39	25	24	17	4	2	1	191
TOT AMT	930,608	326,138	774,680	1,139,136	528,256	2,280,995	1,610,661	1,558,073	1,010,315	281,765	192,438	81,333	10,714,399
AVG AMT	44,315	54,356	45,569	45,565	52,826	58,487	64,426	64,920	59,430	70,441	96,219	81,333	56,096

ACTUARIAL COST METHODS, ACTUARIAL ASSUMPTIONS

AND

DEFINITIONS OF TECHNICAL TERMS

Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an individual entry age actuarial cost method having the following characteristics:

(i) the annual normal costs for each active member, payable from the date of entry into the system to the date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;

(ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

<u>Financing of Unfunded Actuarial Accrued Liability</u>. The Unfunded Actuarial Accrued Liability is funded (or credited, if negative) in 22 remaining installments for the County, Southern Marin Fire Protection District and LAFCO and 13 years for other Employers.

Active member payroll in aggregate is assumed to increase 4.25% a year for the purpose of determining the level percent contributions, although individual annual pay increase rates will increase by greater percentages per year for the purpose of projecting individual pays.

<u>Deferred Member Actuarial Accrued Liability</u>. Data provided includes date of hire, date of birth, date of termination, last pay and an indicator if the deferred member is known to work with a reciprocal employer. Service credit, highest average salary, and deferred retirement age were estimated, based on the data provided. The estimates were used to compute the retirement benefit, upon which the liabilities are based.

Marin County and Special Districts

Actuarial Assumptions Used for the June 30, 2004 Valuation

The contribution requirements and benefit values of the Fund are calculated by applying actuarial assumptions to the benefit provisions and member information furnished, using the actuarial cost methods described on the previous page.

The principal areas of financial risk which require assumptions about future experiences are:

- (i) long-term rates of investment return to be generated by the assets of the Fund.
- (ii) patterns of pay increases to members.
- (iii) rates of mortality among members, retirants, and beneficiaries.
- (iv) rates of withdrawal of active members (without entitlement to a retirement benefit).
- (v) rates of disability among members.
- (vi) the age patterns of actual retirements.

In making a valuation, the monetary effect of each assumption is calculated for as long as a present covered person survives -- a period of time which can be as long as a century.

Actual experience of the System will not coincide exactly with assumed experience, regardless of the choice of the assumptions, the skill of the actuary and the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate. From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations).

(Continued on Next Page)

Marin County and Special Districts

Actuarial Assumptions Used for the June 30, 2004 Valuation

(Continued)

<u>The Entry Age Normal Actuarial Cost Method</u> was used in conjunction with the following actuarial assumptions.

<u>The investment return rate</u> used for the actuarial valuation calculations was 8.25% a year, net of administrative expenses, compounded annually. This assumption, used to equate the value of payments due at different points in time, is adopted by the Retirement Board. The rate is comprised of two elements:

Inflation	4.25%
Real Rate of Return	4.00%
Total	8.25%

<u>The general inflation rate</u> used for the actuarial valuation calculations was 4.25% per year, compounded annually. It represents the difference between the investment return rate and the assumed real rate of return.

Inflation actually experienced, as measured by the Consumer Price Index for urban wage earners, has been as follows:

Consumer Price Index Urban Wage Earners and Clerical Workers Before 1978 All Urban Consumers After 1977 10 Year Moving Averages

June 30, 1964	1.4%
June 30, 1974	4.7
June 30, 1984	7.8
June 30, 1994	3.6
June 30, 2004	2.5

50-Year Average 4.0%

Marin County and Special Districts

Actuarial Assumptions Used for the June 30, 2004 Valuation

(Continued)

<u>Compensation increase rates</u> used to project current pays to those, upon which a benefit will be based, are represented by the following table.

Annual Rate of	Compensation Increase
	.

	Inflation	4.25%
	plus	
	Merit & Longevity	See Table Below for Sample Ages
Age	Miscellaneous	<u>Safety</u>
20	6.62%	5.13%
25	4.08%	3.34
30	3.37%	2.48
35	2.46%	1.40
40	2.09%	0.89
45	1.89%	0.97
50	1.46%	0.78
55	0.95%	0.70
60	0.90%	N/A
65	0.54%	N/A

Marin County and Special Districts

Actuarial Assumptions Used for the June 30, 2004 Valuation

(Continued)

<u>Rates of separation from active membership</u> are shown below (rates do not include separation on account of retirement). This assumption measures the probabilities of members remaining in employment.

% of Active Members Separating Within Next Year (less than 5 years)

Years of Completed Service	Miscellaneous	<u>Safety</u>
0	15%	10%
1	9	5
2	7	4
3	6	4
4	6	4

Marin County and Special Districts

Actuarial Assumptions Used for the June 30, 2004 Valuation

(Continued)

% of Active Members Separating with Next Year

(at least 5 years)					Pre-Retire	ement
Retirement	Withdraw	al	Vested Defe	erred	Deat	h
Ages	Miscellaneous	Safety	Miscellaneous	<u>Safety</u>	Male	Female
20	2.30%	1.13%	3.00%	2.06%	.05%	.03%
25	2.30%	1.13%	3.00%	2.24%	.06%	.03%
30	2.30%	0.75%	3.00%	3.53%	.08%	.03%
35	2.00%	0.56%	2.50%	3.41%	.09%	.04%
40	1.20%	0.56%	2.00%	1.14%	.10%	.06%
45	0.80%	0.56%	1.70%	1.70%	.13%	.09%
50	0.00%	0.00%	1.40%	0.27%	.20%	.12%
55	0.00%	0.00%	0.80%	0.00%	.35%	.19%
60	0.00%	0.00%	0.80%	0.00%	.60%	.31%
65	0.00%	0.00%	0.00%	0.00%	1.09%	.63%

	Ordinary Disability		Duty Disa	bility
	Miscellaneous	<u>Safety</u>	Miscellaneous	<u>Safety</u>
20	.000%	.020%	.050%	.110%
25	.005%	.030%	.080%	.150%
30	.010%	.050%	.130%	.360%
35	.015%	.070%	.160%	.550%
40	.025%	.160%	.210%	1.180%
45	.045%	.260%	.260%	1.140%
50	.090%	.360%	.310%	1.280%
55	.155%	.460%	.330%	3.900%
60	.255%	.000%	.370%	.000%
65	.395%	.000%	.390%	.000%

Actuarial Assumptions Used for the June 30, 2004 Valuation

(Continued)

<u>The post-retirement mortality table</u> used were the 1994 Group Annuity Mortality Basic Tables, with one-year setback for Males. This assumption is used to measure the probabilities of members dying after retirement and the probabilities of each benefit payment being made after retirement. The male 1994 Uninsured Pensioner Mortality Table was set forward three years for disabled retirees. Related values are shown below.

		e Expectancy ears)	% Dying With	in Next Year
Sample Ages	Men	Women	Men	Women
45	35.6	39.0	.16%	.10%
50	30.9	34.2	.25	.15
55	26.4	29.5	.43	.25
60	22.0	25.0	.76	.48
65	18.0	20.7	1.39	.93
70	14.4	16.8	2.34	1.48
75	11.3	13.1	3.66	2.44

Non-Disabled Retirees

Disabled Retirees

Sample <u>Ages</u>	Future Life Expectancy (Years)	% Dying Within Next Year
45	31.9	0.23%
50	27.3	0.39
55	22.9	0.68
60	18.8	1.23
65	15.1	2.14
70	11.9	3.35
75	9.0	5.40

Actuarial Assumptions Used for the June 30, 2004 Valuation

(Continued)

<u>The rates of retirement</u> used to measure the probability of eligible members retiring during the next year.

Retirement Ages	Miscellaneous	Retirement Ages	Saf	ety
			<u>3% at 55</u>	<u>3% at 50</u>
50	6%	50	7%	33%
51	2%	51	6%	25%
52	2%	52	12%	25%
53	2%	53	25%	33%
54	3%	54	25%	33%
55	4%	55	50%	50%
56	6%	56	50%	50%
57	8%	57	50%	50%
58	9%	58	50%	50%
59	12%	59	50%	50%
60	19%	60	100%	100%
61	16%			
62	24%			
63	20%			
64	23%			
65	44%			
66	30%			
67	31%			
68	29%			
69	34%			
70	100%			

Those members, whose accrued benefit is 100% of their final compensation, are assumed to retire immediately.

Marin County Employees' Retirement Association Marin County and Special Districts Actuarial Assumptions Used for the June 30, 2004 Valuation

(Continued)

<u>Survivor Benefits.</u> Marital status and spouses' census data were imputed with respect to active and deferred members.

<u>Marital Status</u> - 80% of male and 60% of female members are assumed to be married at retirement.

Spouse Census - Spouses are assumed to be 3 years younger than members.

For current deferred vested members, we assume that benefits will commence at the later of age 55 (50 for Safety) or current attained age. We assume that 50% (was 60%) of the deferred vested members are reciprocal.

<u>Post-Retirement COLA Assumed</u> – 3.8% (was 3.65%) for Tier 1 and Special Districts; 2% for Tier 2 and Tier 3.

<u>Accumulated Employee Contributions</u> - Credited semiannual interest using the assumed inflation assumption.

Definitions of Technical Terms

<u>Actuarial Accrued Liability</u>. The difference between the actuarial present value of system benefits and the actuarial value of future normal costs. Also referred to as "accrued liability" or "actuarial liability".

<u>Actuarial Assumptions</u>. Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Actuarial assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

<u>Accrued Service</u>. Service credited under the System which was rendered before the date of the actuarial valuation.

<u>Actuarial Equivalent</u>. A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

<u>Actuarial Cost Method</u>. A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement system benefits between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

<u>Actuarial Gain (Loss)</u>. The difference between actual experience and actuarial assumption anticipated experience during the period between two actuarial valuation dates.

<u>Actuarial Present Value</u>. The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

<u>Amortization</u>. Paying off an interest-discounted amount with periodic payments of interest and principal -- as opposed to paying off with lump sum payment.

<u>Normal Cost</u>. The actuarial present value of retirement system benefits allocated to the current year by the actuarial cost method.

(Concluded on Next Page)

Marin County Employees' Retirement Association Marin County and Special Districts Definitions of Technical Terms

(Concluded)

<u>Unfunded Actuarial Accrued Liability</u>. The difference between actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded actuarial liability" or "unfunded accrued liability".

Most retirement systems have unfunded actuarial accrued liability. They arise each time new benefits are added and each time an actuarial loss is realized.

The existence of unfunded actuarial accrued liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liability and the trend in its amount (after due allowance for devaluation of the dollar). Unfunded actuarial accrued liability should be controlled.

DISCLOSURES REQUIRED BY STATEMENTS NO. 25 AND 27 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD

Marin County and Special Districts

GASB No. 25 Disclosure Schedule of Funding Progress Retirement Benefits

(\$ in Thousands)

Valuation <u>Date</u> 6/30/99	Valuation <u>Assets</u> 557,216	Actuarial Accrued <u>Liability</u> 583,890	Unfunded <u>AAL</u> 28,674	Funded <u>Ratio</u> 95%	Member <u>Payroll</u> 107,689	UAAL Ratio to <u>Payroll</u> 26.6%
6/30/00	634,412	644,262	9,850	99%	114,700	8.6%
6/30/01	690,320	701,223	10,903	98%	122,253	8.9%
6/30/02	711,789	798,404	86,615	89%	136,974	63.2%
6/30/03 ¹	828,438	848,984	20,545	98%	138,004	14.9%
6/30/04	843,169	938,211	95,042	90%	143,107	66.4%

¹ Reflects issuances of Pension Obligation Bond

APPENDIX A:

MEMBER CONTRIBUTION RATES

Contribution Rates Assumed for Members

Miscellaneous Tier 1

Age	Basic	COL	Limited to 1.58%	<u>Total</u>
16	6.16%	3.31%	1.58%	7.74%
17	6.18%	3.32%	1.58%	7.76%
18	6.20%	3.33%	1.58%	7.78%
19	6.22%	3.34%	1.58%	7.80%
20	6.24%	3.35%	1.58%	7.82%
21	6.26%	3.36%	1.58%	7.84%
22	6.28%	3.37%	1.58%	7.86%
23	6.30%	3.38%	1.58%	7.88%
24	6.33%	3.40%	1.58%	7.91%
25	6.36%	3.41%	1.58%	7.94%
26	6.40%	3.43%	1.58%	7.98%
27	6.44%	3.46%	1.58%	8.02%
28	6.48%	3.48%	1.58%	8.06%
29	6.53%	3.50%	1.58%	8.11%
30	6.57%	3.53%	1.58%	8.15%
31	6.63%	3.56%	1.58%	8.21%
32	6.68%	3.58%	1.58%	8.26%
33	6.74%	3.62%	1.58%	8.32%
34	6.80%	3.65%	1.58%	8.38%
35	6.86%	3.68%	1.58%	8.44%
36	6.93%	3.72%	1.58%	8.51%
37	7.00%	3.76%	1.58%	8.58%
38	7.07%	3.79%	1.58%	8.65%
39	7.14%	3.83%	1.58%	8.72%
40	7.22%	3.87%	1.58%	8.80%
41	7.30%	3.92%	1.58%	8.88%
42	7.38%	3.96%	1.58%	8.96%
43	7.46%	4.00%	1.58%	9.04%
44	7.54%	4.05%	1.58%	9.12%
45	7.63%	4.09%	1.58%	9.21%
46	7.72%	4.14%	1.58%	9.30%
47	7.82%	4.20%	1.58%	9.40%
48	7.91%	4.24%	1.58%	9.49%
49	8.01%	4.30%	1.58%	9.59%
50	8.12%	4.36%	1.58%	9.70%
51	8.22%	4.41%	1.58%	9.80%
52	8.33%	4.47%	1.58%	9.91%
53	8.44%	4.53%	1.58%	10.02%
55 54	8.55%	4.59%	1.58%	10.13%
55	8.55%	4.59%	1.58%	10.13%
55 56	8.55%	4.59%	1.58%	10.13%
50 57	8.55%	4.59%	1.58%	10.13%
58	8.55%	4.59%	1.58%	10.13%
58 59	8.55%	4.59%	1.58%	10.13%
60	8.55%	4.59%	1.58%	10.13%

Contribution Rates Assumed for Members

Miscellaneous Tier 2

Age	New Basic	New COL	Limited to 1.58%	<u>New Total</u>
16	5.01%	1.07%	1.07%	6.08%
17	5.02%	1.07%	1.07%	6.09%
18	5.03%	1.07%	1.07%	6.10%
19	5.04%	1.07%	1.07%	6.11%
20	5.05%	1.07%	1.07%	6.12%
21	5.06%	1.08%	1.08%	6.14%
22	5.08%	1.08%	1.08%	6.16%
23	5.11%	1.09%	1.09%	6.20%
24	5.14%	1.09%	1.09%	6.23%
25	5.17%	1.10%	1.10%	6.27%
26	5.20%	1.11%	1.11%	6.31%
27	5.23%	1.11%	1.11%	6.34%
28	5.27%	1.12%	1.12%	6.39%
29	5.23%	1.13%	1.13%	6.45%
30	5.36%	1.14%	1.14%	6.50%
31	5.41%	1.15%	1.15%	6.56%
32	5.45%	1.16%	1.16%	6.66%
33	5.51%	1.17%	1.17%	6.68%
34	5.56%	1.18%	1.18%	6.74%
35	5.62%	1.20%	1.20%	6.82%
36	5.67%	1.21%	1.21%	6.88%
37	5.73%	1.22%	1.22%	6.95%
38	5.80%	1.23%	1.23%	7.03%
39	5.86%	1.25%	1.25%	7.11%
40	5.93%	1.26%	1.26%	7.19%
41	5.99%	1.27%	1.27%	7.26%
42	6.07%	1.29%	1.29%	7.36%
43	6.14%	1.31%	1.31%	7.45%
44	6.21%	1.32%	1.32%	7.53%
45	6.29%	1.34%	1.34%	7.63%
46	6.37%	1.35%	1.35%	7.72%
47	6.45%	1.37%	1.37%	7.82%
48	6.54%	1.39%	1.39%	7.93%
49	6.63%	1.41%	1.41%	8.04%
50	6.71%	1.43%	1.43%	8.14%
51	6.81%	1.45%	1.45%	8.26%
52	6.90%	1.47%	1.47%	8.37%
53	7.00%	1.49%	1.49%	8.49%
54	7.10%	1.51%	1.51%	8.61%
55	7.20%	1.53%	1.53%	8.73%
56	7.30%	1.55%	1.55%	8.85%
57	7.40%	1.57%	1.57%	8.97%
58	7.70%	1.64%	1.58%	9.28%
59	8.01%	1.70%	1.58%	9.59%
60	8.01%	1.70%	1.58%	9.59%
'				

Contribution Rates Assumed for Members

Miscellaneous Tier 3

			Limited to	Cost Sharing Under	
Age	Basic	COL	1.58%	Enhanced Formula	Total
16	5.01%	1.07%	1.07%	1.14%	7.22%
17	5.02%	1.07%	1.07%	1.14%	7.23%
18	5.03%	1.07%	1.07%	1.14%	7.24%
19	5.04%	1.07%	1.07%	1.14%	7.25%
20	5.05%	1.07%	1.07%	1.14%	7.26%
21	5.06%	1.08%	1.08%	1.14%	7.28%
22	5.08%	1.08%	1.08%	1.14%	7.30%
23	5.11%	1.09%	1.09%	1.14%	7.34%
24	5.14%	1.09%	1.09%	1.14%	7.37%
25	5.17%	1.10%	1.10%	1.14%	7.41%
26	5.20%	1.11%	1.11%	1.14%	7.45%
27	5.23%	1.11%	1.11%	1.14%	7.48%
28	5.27%	1.12%	1.12%	1.14%	7.53%
29	5.23%	1.13%	1.13%	1.14%	7.59%
30	5.36%	1.14%	1.14%	1.14%	7.64%
31	5.41%	1.15%	1.15%	1.14%	7.70%
32	5.45%	1.16%	1.16%	1.14%	7.75%
33	5.51%	1.17%	1.17%	1.14%	7.82%
34	5.56%	1.18%	1.18%	1.14%	7.88%
35	5.62%	1.20%	1.20%	1.14%	7.96%
36	5.67%	1.21%	1.21%	1.14%	8.02%
37	5.73%	1.22%	1.22%	1.14%	8.09%
38	5.80%	1.23%	1.23%	1.14%	8.17%
39	5.86%	1.25%	1.25%	1.14%	8.25%
40	5.93%	1.26%	1.26%	1.14%	8.33%
41	5.99%	1.27%	1.27%	1.14%	8.40%
42	6.07%	1.29%	1.29%	1.14%	8.50%
43	6.14%	1.31%	1.31%	1.14%	8.59%
44	6.21%	1.32%	1.32%	1.14%	8.67%
45	6.29%	1.34%	1.34%	1.14%	8.77%
46	6.37%	1.35%	1.35%	1.14%	8.86%
47	6.45%	1.37%	1.37%	1.14%	8.96%
48	6.54%	1.39%	1.39%	1.14%	9.07%
49	6.63%	1.41%	1.41%	1.14%	9.18%
50	6.71%	1.43%	1.43%	1.14%	9.28%
51	6.81%	1.45%	1.45%	1.14%	9.40%
52	6.90%	1.47%	1.47%	1.14%	9.51%
53	7.00%	1.49%	1.49%	1.14%	9.63%
54	7.10%	1.51%	1.51%	1.14%	9.75%
55	7.20%	1.53%	1.53%	1.14%	9.87%
56	7.30%	1.55%	1.55%	1.14%	9.99%
57	7.40%	1.57%	1.57%	1.14%	10.11%
58	7.70%	1.64%	1.58%	1.14%	10.42%
59	8.01%	1.70%	1.58%	1.14%	10.73%
60	8.01%	1.70%	1.58%	1.14%	10.73%

Contribution Rates Assumed for Members

Miscellaneous Special Districts

			Implicit	Limited to	
Age	Basic	COL	<u>COL</u>	Implicit COL	Total
16	6.16%	2.76%	0.09%	0.09%	6.25%
17	6.18%	2.77%	0.15%	0.15%	6.33%
18	6.20%	2.78%	0.20%	0.20%	6.40%
19	6.22%	2.79%	0.25%	0.25%	6.47%
20	6.24%	2.80%	0.29%	0.29%	6.53%
21	6.26%	2.81%	0.33%	0.33%	6.59%
22	6.28%	2.82%	0.38%	0.38%	6.66%
23	6.30%	2.83%	0.43%	0.43%	6.73%
24	6.33%	2.84%	0.46%	0.46%	6.79%
25	6.36%	2.85%	0.51%	0.51%	6.87%
26	6.40%	2.87%	0.54%	0.54%	6.94%
27	6.44%	2.89%	0.60%	0.60%	7.04%
28	6.48%	2.91%	0.63%	0.63%	7.11%
29	6.53%	2.93%	0.68%	0.68%	7.21%
30	6.57%	2.95%	0.72%	0.72%	7.29%
31	6.63%	2.97%	0.76%	0.76%	7.39%
32	6.68%	3.00%	0.80%	0.80%	7.48%
33	6.74%	3.02%	0.84%	0.84%	7.58%
34	6.80%	3.05%	0.89%	0.89%	7.69%
35	6.86%	3.08%	0.93%	0.93%	7.79%
36	6.93%	3.11%	0.96%	0.96%	7.89%
37	7.00%	3.14%	1.00%	1.00%	8.00%
38	7.07%	3.17%	1.04%	1.04%	8.11%
39	7.14%	3.20%	1.07%	1.07%	8.21%
40	7.22%	3.24%	1.11%	1.11%	8.33%
41	7.30%	3.27%	1.15%	1.15%	8.45%
42	7.38%	3.31%	1.18%	1.18%	8.56%
43	7.46%	3.35%	1.23%	1.23%	8.69%
44	7.54%	3.38%	1.27%	1.27%	8.81%
45	7.63%	3.42%	1.30%	1.30%	8.93%
46	7.72%	3.46%	1.35%	1.35%	9.07%
47	7.82%	3.51%	1.38%	1.38%	9.20%
48	7.91%	3.55%	1.43%	1.43%	9.34%
49	8.01%	3.59%	1.45%	1.45%	9.46%
50	8.12%	3.64%	2.23%	2.23%	10.35%
51	8.22%	3.69%	2.07%	2.07%	10.29%
52	8.33%	3.74%	1.91%	1.91%	10.24%
53	8.44%	3.79%	1.74%	1.74%	10.18%
54	8.55%	3.84%	1.56%	1.56%	10.11%
55	8.55%	3.84%	1.56%	1.56%	10.11%
56	8.55%	3.84%	1.56%	1.56%	10.11%
57	8.55%	3.84%	1.56%	1.56%	10.11%
58	8.55%	3.84%	1.56%	1.56%	10.11%
59	8.55%	3.84%	1.56%	1.56%	10.11%
60	8.55%	3.84%	1.56%	1.56%	10.11%

Contribution Rates Assumed for Members

Safety Tier 1*

			Limited	Cost Sharing Under	
Age	Basic	COL	<u>to 3.10%</u>	Enhanced Formula	Total
16	7.36%	4.36%	3.10%	3.64%	14.10%
17	7.39%	4.38%	3.10%	3.64%	14.13%
18	7.42%	4.40%	3.10%	3.64%	14.16%
19	7.45%	4.41%	3.10%	3.64%	14.19%
20	7.48%	4.43%	3.10%	3.64%	14.22%
21	7.51%	4.45%	3.10%	3.64%	14.25%
22	7.56%	4.48%	3.10%	3.64%	14.30%
23	7.61%	4.51%	3.10%	3.64%	14.35%
24	7.66%	4.54%	3.10%	3.64%	14.40%
25	7.72%	4.57%	3.10%	3.64%	14.46%
26	7.78%	4.61%	3.10%	3.64%	14.52%
27	7.86%	4.66%	3.10%	3.64%	14.60%
28	7.93%	4.70%	3.10%	3.64%	14.67%
29	8.01%	4.75%	3.10%	3.64%	14.75%
30	8.10%	4.80%	3.10%	3.64%	14.84%
31	8.20%	4.86%	3.10%	3.64%	14.94%
32	8.30%	4.92%	3.10%	3.64%	15.04%
33	8.41%	4.98%	3.10%	3.64%	15.15%
34	8.52%	5.05%	3.10%	3.64%	15.26%
35	8.64%	5.12%	3.10%	3.64%	15.38%
36	8.76%	5.19%	3.10%	3.64%	15.50%
37	8.89%	5.27%	3.10%	3.64%	15.63%
38	9.02%	5.35%	3.10%	3.64%	15.76%
39	9.15%	5.42%	3.10%	3.64%	15.89%
40	9.28%	5.50%	3.10%	3.64%	16.02%
41	9.41%	5.58%	3.10%	3.64%	16.15%
42	9.55%	5.66%	3.10%	3.64%	16.29%
43	9.69%	5.74%	3.10%	3.64%	16.43%
44	9.83%	5.83%	3.10%	3.64%	16.57%
45	9.98%	5.91%	3.10%	3.64%	16.72%
46	10.12%	6.00%	3.10%	3.64%	16.86%
47	10.27%	6.09%	3.10%	3.64%	17.01%
48	10.43%	6.18%	3.10%	3.64%	17.17%
49 50	10.58%	6.27%	3.10%	3.64%	17.32%
50	10.58%	6.27%	3.10%	3.64%	17.32%
51	10.58%	6.27%	3.10%	3.64%	17.32%
52	10.58%	6.27%	3.10%	3.64%	17.32%
53	10.58%	6.27%	3.10%	3.64%	17.32%
54	10.58%	6.27%	3.10%	3.64%	17.32%
55	10.58%	6.27%	3.10%	3.64%	17.32%
56	10.58%	6.27%	3.10%	3.64%	17.32%
57	10.58%	6.27%	3.10%	3.64%	17.32%
58	10.58%	6.27%	3.10%	3.64%	17.32%
59	10.58%	6.27%	3.10%	3.64%	17.32%
60	10.58%	6.27%	3.10%	3.64%	17.32%

* Those members eligible for 31664.1 are paying an additional 2.80% or 3.53% per agreement.

Contribution Rates Assumed for Members

Safety Tier 2*

			Limited	Cost Sharing Under	
Age	Basic	COL	to 3.10%	Enhanced Formula	<u>Total</u>
16	7.00%	1.78%	1.78%	3.64%	12.42%
17	7.03%	1.79%	1.79%	3.64%	12.46%
18	7.06%	1.79%	1.79%	3.64%	12.49%
19	7.09%	1.80%	1.80%	3.64%	12.53%
20	7.12%	1.81%	1.81%	3.64%	12.57%
21	7.15%	1.82%	1.82%	3.64%	12.61%
22	7.19%	1.83%	1.83%	3.64%	12.66%
23	7.24%	1.84%	1.84%	3.64%	12.72%
24	7.29%	1.85%	1.85%	3.64%	12.78%
25	7.35%	1.87%	1.87%	3.64%	12.86%
26	7.41%	1.88%	1.88%	3.64%	12.93%
27	7.48%	1.90%	1.90%	3.64%	13.02%
28	7.55%	1.92%	1.92%	3.64%	13.11%
29	7.63%	1.94%	1.94%	3.64%	13.21%
30	7.71%	1.96%	1.96%	3.64%	13.31%
31	7.80%	1.98%	1.98%	3.64%	13.42%
32	7.90%	2.01%	2.01%	3.64%	13.55%
33	8.00%	2.03%	2.03%	3.64%	13.67%
34	8.11%	2.06%	2.06%	3.64%	13.81%
35	8.22%	2.09%	2.09%	3.64%	13.95%
36	8.34%	2.12%	2.12%	3.64%	14.10%
37	8.46%	2.15%	2.15%	3.64%	14.25%
38	8.58%	2.18%	2.18%	3.64%	14.40%
39	8.71%	2.21%	2.21%	3.64%	14.56%
40	8.83%	2.24%	2.24%	3.64%	14.71%
41	8.96%	2.28%	2.28%	3.64%	14.88%
42	9.09%	2.31%	2.31%	3.64%	15.04%
43	9.22%	2.34%	2.34%	3.64%	15.20%
44	9.36%	2.38%	2.38%	3.64%	15.38%
45	9.49%	2.41%	2.41%	3.64%	15.54%
46	9.63%	2.45%	2.45%	3.64%	15.72%
47	9.78%	2.49%	2.49%	3.64%	15.91%
48	10.17%	2.59%	2.59%	3.64%	16.40%
49 50	10.58%	2.69%	2.69%	3.64%	16.91%
50	10.58%	2.69%	2.69%	3.64%	16.91%
51 52	10.58%	2.69%	2.69%	3.64%	16.91%
52	10.58%	2.69%	2.69%	3.64%	16.91%
53 54	10.58%	2.69%	2.69%	3.64%	16.91%
54 55	10.58%	2.69%	2.69%	3.64%	16.91%
55 56	10.58%	2.69%	2.69%	3.64%	16.91%
56 57	10.58%	2.69%	2.69%	3.64%	16.91%
57 58	10.58%	2.69%	2.69%	3.64%	16.91% 16.01%
58 50	10.58%	2.69%	2.69%	3.64%	16.91%
59 60	10.58%	2.69%	2.69%	3.64%	16.91% 16.01%
60	10.58%	2.69%	2.69%	3.64%	16.91%

* Those members eligible for 31664.1 are paying an additional 2.80% or 3.53% per agreement.

Contribution Rates Assumed for Members

Safety Special Districts

			Implicit	Limited to	
<u>Age</u>	Basic	COL	COL	Implicit COL	<u>Total</u>
16	7.36%	4.36%	1.77%	1.77%	9.13%
17	7.39%	4.38%	1.72%	1.72%	9.11%
18	7.42%	4.40%	1.66%	1.66%	9.08%
19	7.45%	4.41%	1.60%	1.60%	9.05%
20	7.48%	4.43%	1.54%	1.54%	9.02%
21	7.51%	4.45%	1.47%	1.47%	8.98%
22	7.56%	4.48%	1.54%	1.54%	9.10%
23	7.61%	4.51%	1.58%	1.58%	9.19%
24	7.66%	4.54%	1.64%	1.64%	9.30%
25	7.72%	4.57%	1.69%	1.69%	9.41%
26	7.78%	4.61%	1.74%	1.74%	9.52%
27	7.86%	4.66%	1.78%	1.78%	9.64%
28	7.93%	4.70%	1.83%	1.83%	9.76%
29	8.01%	4.75%	1.86%	1.86%	9.87%
30	8.10%	4.80%	1.91%	1.91%	10.01%
31	8.20%	4.86%	1.92%	1.92%	10.12%
32	8.30%	4.92%	1.96%	1.96%	10.26%
33	8.41%	4.98%	1.98%	1.98%	10.39%
34	8.52%	5.05%	2.00%	2.00%	10.52%
35	8.64%	5.12%	2.03%	2.03%	10.67%
36	8.76%	5.19%	2.06%	2.06%	10.82%
37	8.89%	5.27%	2.09%	2.09%	10.98%
38	9.02%	5.35%	2.11%	2.11%	11.13%
39	9.15%	5.42%	2.13%	2.13%	11.28%
40	9.28%	5.50%	2.16%	2.16%	11.44%
41	9.41%	5.58%	2.17%	2.17%	11.58%
42	9.55%	5.66%	2.20%	2.20%	11.75%
43	9.69%	5.74%	2.23%	2.23%	11.92%
44	9.83%	5.83%	2.27%	2.27%	12.10%
45	9.98%	5.91%	3.24%	3.24%	13.22%
46	10.12%	6.00%	3.04%	3.04%	13.16%
47	10.27%	6.09%	2.83%	2.83%	13.10%
48	10.43%	6.18%	2.62%	2.62%	13.05%
49	10.58%	6.27%	2.40%	2.40%	12.98%
50	10.58%	6.27%	2.40%	2.40%	12.98%
51	10.58%	6.27%	2.40%	2.40%	12.98%
52	10.58%	6.27%	2.40%	2.40%	12.98%
53	10.58%	6.27%	2.40%	2.40%	12.98%
54	10.58%	6.27%	2.40%	2.40%	12.98%
55	10.58%	6.27%	2.40%	2.40%	12.98%
56	10.58%	6.27%	2.40%	2.40%	12.98%
57	10.58%	6.27%	2.40%	2.40%	12.98%
58	10.58%	6.27%	2.40%	2.40%	12.98%
59	10.58%	6.27%	2.40%	2.40%	12.98%
60	10.58%	6.27%	2.40%	2.40%	12.98%

APPENDIX B:

RETIREMENT AGE FACTORS

Retirement Age Factor

Miscellaneous

Tier 2				Tier 1		Tier 3	
<u>31676.1</u>		<u>31676.11</u>		31676.14		31676.16	
Age	Fraction	Age	Fraction	Age	Fraction	Age	Fraction
50	0.7091	50	0.7454	50	0.8850	50	0.713
51	0.7457	51	0.7882	51	0.9399	51	0.761
52	0.7816	52	0.8346	52	1.0000	52	0.814
53	0.8181	53	0.8850	53	1.0447	53	0.871
54	0.8556	54	0.9399	54	1.1048	54	0.933
55	0.8954	55	1.0000	55	1.1686	55	1.000
56	0.9382	56	1.0447	56	1.2365	56	1.026
57	0.9846	57	1.1048	57	1.3093	57	1.052
58	1.0350	58	1.1686	58	1.3608	58	1.078
59	1.0899	59	1.2365	59	1.4123	59	1.105
60	1.1500	60	1.3093	60	1.4638	60	1.131
61	1.1947	61	1.3608	61	1.5153	61	1.157
62	1.2548	62	1.4123	62+	1.5668	62	1.183
63	1.3186	63	1.4638			63+	1.209
64	1.3865	64	1.5153				
65+	1.4593	65	1.5668				

Safety

<u>31</u>	<u>664.1</u>	<u>316</u>	<u>31664.2</u>		
Age	Fraction	Age	Fraction		
41	0.6258	41	0.4777		
42	0.6625	42	0.5058		
43	0.7004	43	0.5347		
44	0.7397	44	0.5647		
45	0.7805	45	0.5958		
46	0.8226	46	0.6280		
47	0.8678	47	0.6625		
48	0.9085	48	0.6936		
49	0.9522	49	0.7269		
50+	1.0000	50	0.7634		
		51	0.8028		
		52	0.8457		
		53	0.8926		
		54	0.9418		
		55+	1.0000		