# REVISED



MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION And Special Districts ANNUAL ACTUARIAL VALUATION June 30, 2006

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February 13, 2007

### 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, 2006</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, 2007.

# MARIN COUNTY

		Sat	fety		Miscellaneous			Overall
	Tier 1	Tier 1A	Tier 2	Tier 2A	Tier 1	Tier 2	Tier 3	
Normal Costs	19.38%	20.54%	16.08%	12.56%	14.96%	10.95%	9.33%	10.50%
Unfunded Amortization	1.05%	14.10%	14.08%	11.34%	24.88%	7.14%	6.07%	8.57%
TOTAL	20.43%	34.64%	30.16%	23.90%	39.84%	18.09%	15.40%	19.07%

### **ALL EMPLOYERS**

Normal Costs	10.81%
Unfunded Amortization	8.97%
TOTAL	19.78%

Board of Retirement Marin County Employees' Retirement Association February 13, 2007 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	12.83%	11.34%	9.15%	26.82%	15.25%	12.32%	12.71%	10.21%	10.54%
Unfunded Amortization	25.17%	15.50%	5.57%	17.22%	9.69%	21.94%	22.21%	7.81%	3.42%
TOTAL	38.00%	26.84%	14.72%	44.04%	24.94%	34.26%	34.92%	18.02%	13.96%

#### 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 gain of \$1.1 million, which reflects 0.11% of related actuarial accrued liabilities as of June 30, 2005.

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

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

Rick Roeden

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, 2005	June 30, 2006	Percent Change
I.	Total Membership			
	A. Active Members	2,168	2,224	2.6%
	B. Pensioners & Beneficiaries	1,643	1,723	4.9%
	C. Vested Deferreds	<u>494</u>	<u>523</u>	5.9%
	D. Total	4,305	4,470	3.8%
II.	Compensation at June 30			
	A. Total Annual Payroll	\$141,271,671	\$149,527,030	5.8%
	B. Average Annual Compensation	\$65,162	\$67,233	3.2%
III.	Benefits to Current Pensioners & Beneficiaries			
111.	A. Total Annual Benefits	\$43,216,823	\$47,179,247	9.2%
	B. Average Monthly Benefit Amount	\$2,192	\$2,282	4.1%
	D. Average wonany benefit Amount	$\psi 2, 1 \mathcal{I} \mathcal{I}$	Ψ2,202	7.170
IV.	Total Assets			
	A. Actuarial Value	\$858,182,894	\$908,766,634	5.9%
	B. Market Value	\$867,071,582	\$957,803,042	10.5%
V.	Unfunded Actuarial Accrued Liability/(Surplus)	\$134,043,421	\$181,577,531	35.5%
VI.	Budget Items	FY 2006-2007	FY 2007-2008	
	1. Normal Cost as a Percent of Pay	11.89%	10.81%	(9.1)%
	2. Amortization of UAAL	6.79%	8.97%	32.1%
	3. Total Contribution	18.68%	19.78%	5.9%
VII.	Funded Ratio (Based on Actuarial Value of Assets)	86%	83%	(3.5)%
VIII.	Funded Ratio (Based on Market Value of Assets)	87%	88%	1.1%

#### Marin County Employees' Retirement Association Contribution Reconciliation for June 30, 2006 Valuation

#### **County and Special Districts**

June 30, 2006 Valuation Payroll Projected Payroll for 2007-2008	\$149,527,030 \$158,587,779					
<u>Contribution Reconciliation</u> Based on Rate from 2005 Valuation	Expected Unfunded <sup>1</sup> \$139,293,101				<u>Contribution</u> <b>\$29,624,197</b>	<u>Rate</u> 18.68%
	Change in Unfunded Accrued Liability	Change in <u>Normal Cost</u>	Change in <u>Rate</u>	2006-2007 <u>Contribution</u>		
<u>Changes</u>	<b>\$25.016.252</b>	ф. <del></del>	1 (00)	<b>\$2.551.075</b>		
Reduction in inflation assumption	\$25,916,252	\$676,321	1.68%	\$2,664,275		
Other assumption changes Valuation of Accrued Sick Time	\$13,551,995	(\$2,206,894)	(0.72)%	(\$1,141,832)		
Valuation of Accrued Sick Time	<u>\$3,949,099</u> \$42,417,246	(\$1,520,572)	<u>0.19%</u>	\$301,317 \$1,822,760	¢21 447 057	19.83%
Gains and Losses	\$43,417,346	(\$1,530,573)	1.15%	\$1,823,760	\$31,447,957	19.85%
<u>Gains and Losses</u> Investment losses	\$7,264,416	\$0	0.36%	\$570,916		
	(\$6,373,325)	\$0 \$0	(0.30%)	(\$491,622)		
COLA gains Pay increase gains	(\$9,512,039)	\$0 \$0	(0.31)% (0.47)%	(\$491,022) (\$745,363)		
Retirant mortality and data refinement losses	(\$9,512,039) \$685,745	\$0 \$0	0.03%	(\$743,303) \$47,576		
Health Payments	\$8,997,912	\$0 \$0	0.03%	\$697,786		
Other demographic gains	(\$2,195,625)	\$0 <u>\$0</u>	(0.11)%	(\$174,447)		
Subtotal	(\$1,132,916)	<u>\$0</u> \$0	(0.06)%	(\$95,154)	\$31,352,803	19.77%
Subtotal	(\$1,132,910)	φU	(0.00)%	(\$95,154)	\$51,552,805	19.7770
Other Factors						
Miscellaneous <sup>2</sup>	*	\$0	0.12%	\$190,305		
Change in Normal Cost due to demographic factors	<u>\$0</u>	(\$174,447)	(0.11)%	(\$174,447)		
Subtotal	*	(\$174,447)	0.01%	\$15,858	\$31,368,661	19.78%
				. ,		
Total from 2006 Valuation	\$181,577,531	(\$1,705,020)	1.10%	\$1,744,464	\$31,368,661	19.78%

<sup>1</sup> 6/30/2005 Unfunded Accrued Liability of \$134,043,421 adjusted for interest and contributions during the year

<sup>2</sup> Reflects impact of contribution rate lag and impact of unexpected changes in payroll on amortization contribution

\* Included in Expected Unfunded

#### **Marin County and Special Districts**

#### **Comments & Recommendations**

June 30, 2006

**<u>COMMENT A</u>**: The Retirement Board has requested that our earlier valuation report be revised to reflect updated employee contribution rates. We requested receipt of Memorandums of Understanding ("MOUs") so that we could better understand if any limitations existed on the amount of COLA-related contributions paid by the employees. During our review, we noted that most of the County MOUs have language which allows for conversion of accrued, unused sick time to retirement service credit. Based on recently received data, we have increased most accrued liabilities for active members by 1.0% to reflect estimated increases in retirement service due to potential sick leave conversion.

We still have not been furnished with MOUs for the Special Districts. Thus, we do not know the level, if any, to which such employees do not pay their full share of the contribution relating to COLA. Nor do we know if they have any sick leave conversion credit. Staff has asked us to prepare the report based on what was known. If desired, the rates for Special Districts can be addressed later at the point that all MOUs are available and analyzed.

For some of the Special Districts, the change in employee rates was greater than changes for the larger valuation groups. Part of this volatility could be attributed to the extremely small size of most Special Districts. Another element of volatility relates to the removal of the cap on employee-related contributions for COLA. A third possible element relates to the methodology we used in computing the updated rates. We based our work on entry age. In the original valuation, we read the employee rate from provided data.

**<u>COMMENT B</u>**: The overall County rate increased significantly from 17.64% to 19.07% of payroll. The impact of the updated employee rates and the sick leave conversion was to increase the rate in the original valuation from 18.96% to 19.07%. For all the employers in the plan the contribution rate increased from 18.68% to 19.78%. Page (iv) of this report details the effect of the various factors in the increase.

**<u>COMMENT C</u>**: The biggest reason for the contribution increases relate to assumption changes made by the Retirement Board in September. Among changes made were to reduce the inflation component of the assumed investment return from 4.25% to 4%. Also, there is a reflection of earlier assumed retirement ages for Miscellaneous members – likely due, in part, to recent benefit enhancements. Overall actuarial experience was very close to expected in this valuation resulting in a small \$1.1 million actuarial gain.

**COMMENT D:** The good news in the valuation is that the System's deferred gains (the excess of actuarial value over market value) again increased. There is now a deferred gain of \$49 million. Deferred gains and losses are a byproduct of your asset smoothing policy.

**<u>COMMENT E:</u>** The overall funded ratio decreased from 86% to 83% using the actuarial value of assets. Using market value of assets, the funded ratio increased from 87% to 88%.

#### Marin County Employees' Retirement Association Marin County and Special Districts

#### **Comments & Recommendations**

June 30, 2006

**<u>COMMENT F</u>**: We have a complex 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 encourage the creation of accounting processes to more accurately track allocated assets if the highest degree of accuracy is desired.

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 G</u>**: The County will commence to pay directly for retiree health premiums. This is beneficial to the System in that it will end a practice which resulted in a recurring source of actuarial loss to the MCERA Trust.

**<u>COMMENT H</u>**: The amortization period has decreased to 11 years for some Special Districts. This policy should be reviewed in the near future. If this financing period for actuarial gains and losses becomes much shorter, then a year of significant gain (loss) will have a significant impact on the rates.

We would recommend at some point in the near future to stop the decline in the amortization period for those entities with 11-year amortization and study the possibility of changing the amortization period.

**<u>COMMENT I</u>**: A significant Pension Obligation Bond ("POB") of \$109.8 million was issued in 2003. It is important for all parties to understand that these computed rates do not reflect overall pension costs for the County. Our understanding is that the County's POB debt financing for the recently-ended fiscal year was \$5.93 million or 4.41% of active member payroll. Thus, a much truer cost of County pension costs would be 23.48%, which would include the pension debt financing.

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.

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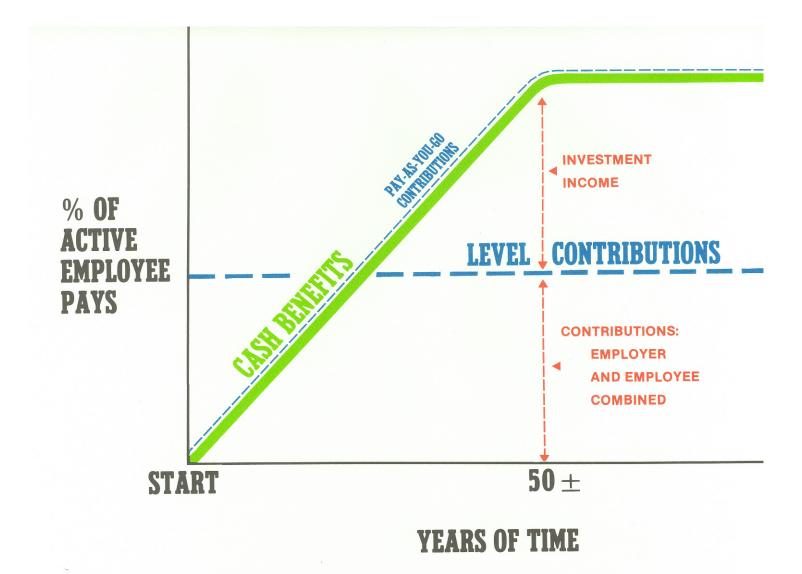
The <u>actuarial valuation</u> is the mathematical process by which the level contribution rate is determined. The flow of activity constituting the valuation may be summarized as follows:

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
- $F. = \underline{\text{Determination of:}}$

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, 2006

#### **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, 2007 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>2006</u> *	2005
Fiscal Year	2007-2008	2006-2007
Marin County		
Safety	25.28% (23.73%)	23.17%
Miscellaneous	17.44 (16.59)	16.09
Courts	17.76 (17.74)	19.71
Southern Marin Fire		
Safety	44.04 (42.36)	46.92
Miscellaneous	24.94 (26.65)	26.41
Mosquito Abatement (MAD)	34.26 (35.57)	33.18
Tamalpais CSD	34.92 (35.72)	33.01
Marin City CSD	18.02 (20.24)	18.83
LAFCO	13.96 (16.94)	16.53

\* Numbers in parenthesis are before assumption changes.

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 20 years for the following entities: County of Marin, Courts, Southern Marin Fire Protection District, and LAFCO. 11-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, 2006

#### (Expressed as Percents of Active Payroll)

#### **Elements of County Normal Cost**

	<u>Safety</u>			Miscellaneous			<u>Overall</u>	
	<u>Tier 1</u>	<u>Tier 1A</u>	Tier 2	Tier 2A	<u>Tier 1</u>	<u>Tier 2</u>	Tier 3	
Normal Retirement	12.70%	16.08%	16.67%	16.91%	12.18%	14.85%	12.67%	13.61%
Vested Deferred Retirement	3.69%	4.84%	1.56%	2.69%	2.65%	0.82%	1.65%	1.86%
Death-In-Service <sup>1</sup>	0.46%	0.43%	0.45%	0.42%	0.27%	0.32%	0.28%	0.31%
Disability <sup>1</sup>	7.38%	7.48%	10.71%	8.02%	2.30%	2.58%	2.19%	3.55%
Contribution Refunds	0.72%	<u>0.87%</u>	<u>0.55%</u>	<u>0.69%</u>	<u>0.57%</u>	<u>0.39%</u>	<u>0.45%</u>	<u>0.50%</u>
<b>Total Normal Cost</b>	24.95%	29.70%	29.94%	28.73%	17.97%	18.96%	17.24%	19.83%
Less								
Employee Contributions <sup>2</sup>	<u>5.57%</u>	<u>9.16%</u>	13.86%	<u>16.17%</u>	<u>3.01%</u>	<u>8.01%</u>	<u>7.91%</u>	<u>9.33%</u>
Equals <b>Employer Normal Cost</b>	19.38%	20.54%	16.08%	12.56%	14.96%	10.95%	9.33%	10.50%

<sup>1</sup> 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.

<sup>2</sup> Shown employee contributions will be reduced by applicable employee pick ups (subventions).

# Marin County Employees' Retirement Association Marin County and Special Districts Member Contributions as of June 30, 2006

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

	(Percents of Pay)		
	Weighted Employ	vee Contribution	
	<u>2006</u>	<u>2005</u>	
County weighted employee contribution rate	9.33%	8.99 %	

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

County, Courts, Marin City CSD, LAFCO:	Up to 50% of employee's contribution
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, 2006

#### **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	\$134,043,421
(2)	Expected UAAL payment	5,583,335
(3)	Interest accrual: [(1) * .0825 - (2) * .0404)]	10,833,015
(4)	Increase due to reduction in inflation assumption	25,916,252
(5)	Increase due to other assumption changes	13,551,995
(6)	Valuation of Accrued Sick Time	3,949,099
(7)	Expected UAAL at end of year: $(1) - (2) + (3) + (4) + (5) + (6)$	182,710,447
(8)	Actual UAAL at end of year	181,577,531
(9)	Gain (loss) from actuarial experience: (7) - (8)	1,132,916
(10	Gain (loss) as percentage of actuarial accrued liabilities at beginning of year	0.11%

# Marin County Employees' Retirement Association Marin County and Special Districts Gain/Loss on Unfunded Accrued Liability June 30, 2006

## Components of Actuarial Gain/(Loss) for the Year Ending June 30, 2006

Estimated Gain/(Loss) attributed to pay increases	\$9,512,039
Estimated Gain/(Loss) attributed to COLA increase	6,373,325
(Loss) due to Payment of Health Benefits	(8,997,912)
Estimated Gain/(Loss) attributed to employee turnover, mortality, retirement incidence, and miscellaneous factors	2,195,625
Estimated Gain/(Loss) due to Retirant Mortality and Retiree Data refinements	(685,745)
Estimated Gain/(Loss) attributed to investment experience	(7,264,416)
Total Estimated Experience Gain/(Loss)	1,132,916

# **Unfunded Actuarial Accrued Liability**

Total actuarial accrued liabilities	\$1,090,344,165
Assets allocated to funding	<u>908,766,634</u>
Unfunded Actuarial Accrued Liability	\$181,577,531



# Marin County Employees' Retirement Association Marin County and Special Districts Funding Progress Indicators June 30, 2006

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.

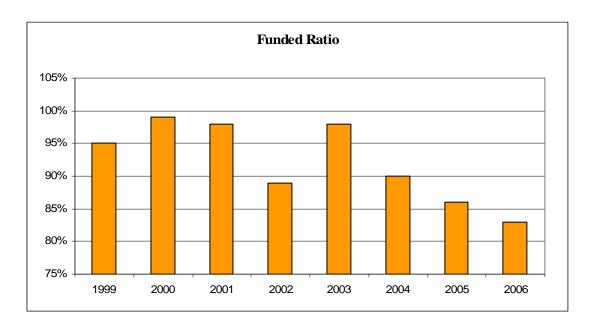
# **Marin County and Special Districts**

# **Funding Progress Indicators – Historic Comparison**

Valuation Date	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>
6/30/99	557,216	583,890	28,674	95%	107,689	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%
6/30/031	828,438	848,984	20,545	98%	138,004	14.9%
6/30/04 <sup>2</sup>	843,169	914,189	71,020	92%	143,107	49.6%
6/30/04	843,169	938,211	95,042	90%	143,107	66.4%
6/30/05	858,183	992,226	134,043	86%	141,272	94.9%
6/30/06 <sup>3</sup>	908,767	1,046,927	138,160	87%	149,527	92.4%
6/30/06	908,767	1,090,344	181,578	83%	149,527	121.4%

## (\$ in Thousands)

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



# Marin County Employees' Retirement Association Marin County and Special Districts Actuarial Balance Sheet – June 30, 2006

# **Present Resources and Expected Future Resources**

			<u>Total</u>
A.	Actuarial value of system assets		\$908,766,634
B.		116,562,013 <u>181,577,531</u>	\$298,139,544
C.	Present value of expected future member contributions		<u>\$100,172,165</u>
D.	<b>Total Present and Expected Future Resources</b>		<u>\$1,307,078,343</u>
<u>Pre</u> A.	sent Value of Expected Future Benefit Payments and Reser To retirants and beneficiaries	<u>ve</u>	\$609,482,238
B.	To vested terminated members		\$40,545,091
C.	<ol> <li>Allocated to service rendered prior to valuation date</li> <li>Allocated to service likely to be rendered</li> </ol>	440,316,836 <u>216,734,178</u>	\$657,051,014
D.	Total Present Value of Expected Future		
	Benefit Payments		<u>\$1,307,078,343</u>

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# **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, 2006

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

#### 2. <u>Final Compensation for Benefit Determination</u>

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 and Court employees whose membership date is prior to July 1, 1980 and all Mosquito Abatement members regardless of membership date. (One-sixtieth times years of service times retirement age factor).

Miscellaneous Tier 2 - (Section 31676.1) Those County and Court Miscellaneous members 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, County and Court 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 (2% at age 58.5) 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 hired prior to July 1, 2005 (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

(Continued on Next Page)

**Marin County and Special Districts** 

#### **Brief Summary of Benefit Provisions Evaluated**

Effective June 30, 2006

(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, 2006

(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, or the ability to leave contributions on deposit and retire at age 70.

## 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 adjusted based upon adjustments in the local CPI, subject to the following maximum increase:

4% for County and Court employees whose membership is prior to July 1, 1980.2% for County and Court employees whose membership is on or after July 1, 1980.

4% 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 20 years for the County, Courts, Southern Marin Fire Protection District, and LAFCO with 11-year amortization for other Employers.

(Concluded on Next Page)

#### **Marin County and Special Districts**

#### **Brief Summary of Benefit Provisions Evaluated**

Effective June 30, 2006

#### (Concluded)

#### 11. Unused Sick Leave

For County employees, a percentage of unused sick leave is credited according to the applicable bargaining agreement.

### 12. 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 an additional 2.60%, 3.53%, or 3.885%.

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, 2006 Valuation

# Reported Market Value of Assets

Cash/Short-term	\$39,001,160
Receivables	28,979,904
Stocks	907,722,543
Bonds	263,913,330
Real Estate	145,992,241
Miscellaneous	<u>757,651</u>
Total Market Value	\$1,386,366,829
Liabilities	98,283,704
Net Market Value	\$1,288,083,125

# Revenues and Disbursements Among Applicable Reserves

<b>Balance - Beginning of year</b>	\$1,163,203,289
Revenues	
Employees' contributions	13,042,829
Employer contributions	43,626,549
Distributed & undistributed investment	
income (net of expenses)	140,614,190
Total Revenues	197,283,568
Disbursements	
Benefit payments	70,203,441
Refunds	821,943
Administrative Expense	<u>1,378,348</u>
Total Disbursements	72,403,732
Balance - End of year	\$1,288,083,125

#### Actuarial Value of Assets As of June 30, 2006

Fiscal							(1) Total	(2) Expected	(1-2)		
Year <u>Ending</u>	Employer Contributions	Member Contributions	Total <u>Contributions</u>	Total <u>Benefits</u>	Market <u>Value</u>	Average <u>Value</u>	Market <u>Return</u>	Market <u>Return</u>	Investment <u>Gain</u>	Deferre d <u>Factor</u>	Deferred <u>Return</u>
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)	0.0	0
$2002-03^{1}$	134,960,478	10,348,913	145,309,391	51,211,890	935,491,460	852,252,760	7,572,439	70,310,853	(62,738,414)	0.2	(12,547,683)
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	0.4	36,275,782
2004-05	30,877,430	11,619,180	42,496,610	65,546,226	1,161,996,104	1,086,766,665	102,192,962	89,658,250	12,534,712	0.6	7,520,827
2005-06	43,626,549	13,042,829	56,669,378	71,025,384	1,288,083,125	1,176,631,376	140,443,027	97,072,088	43,370,939	0.8	34,696,751
1. Total def	erred return										65,945,677
2. Market V	alue										1,288,083,125
3. Smoothed	d Market Value (Iten	n 2 - Item 1)									1,222,137,448
4. Corridor	Limit										
a. 80% o	of Net Market Value										1,030,466,500
b. 120% o	of Net Market Value										1,545,699,750
5. Actuarial	Value (Item 3 after	corridor applied) Inclu	sive of Health Insu	rance Reserve							1,222,137,448
6. Reserves	at Market Value										\$1,288,083,054
								Recog	nition of		

	Reserve	Actuarial	Actuarial
	Value	Value Ratio	Value
Marin County and Special Districts	\$957,802,989	0.9488	\$908,766,634
City of San Rafael	\$221,105,017	0.9488	\$209,785,169
Novato Fire Protection District	\$97,375,428	0.9488	\$92,390,127
Health Insurance Reserve	\$11,799,620	0.9488	<u>\$11,195,518</u>
Total	\$1,288,083,054		\$1,222,137,448

Recognition of			
Deferre	ed Return		
Valuation	Amount to be		
Date	<b>Recognized</b>		
6/30/2006	\$16,771,338		
6/30/2007	29,319,021		
6/30/2008	11,181,130		
6/30/2009	<u>8,674,188</u>		
Total	\$65,945,677		

<sup>1</sup> Includes \$109,826,000 Pension Obligation Bond

# Summary of Reserves and Other Liabilities June 30, 2006

## **Reserves and Liabilities**

\$2,059,837
\$113,364,109
\$668,657
\$1,780,735
\$12,260,812
\$361,455,221
\$278,301,792
\$11,799,690
\$64,404,156
\$441,988,116
\$723,647
\$918,385
\$5,144,448
\$206,452,768
\$2,064,315

**Total Reserves and Liabilities** 

\$1,503,386,688

# Allocation of Actuarial Value of Assets and Accrued Liability June 30, 2006

	Accrued Liability	Assets
Assets allocated to retirees:	\$609,482,238	\$609,482,238
Assets allocated to inactives:	\$40,545,091	\$40,545,091
Assets allocated to actives:		

# Marin County

LAFCO

Miscellaneous Tier 1	\$80,354,190	\$50,016,609
Miscellaneous Tier 2	\$20,920,431	\$13,151,247
Miscellaneous Tier 3	\$179,325,726	\$104,400,544
Safety Tier 1*	\$6,535,358	\$6,470,488
Safety Tier 1A*	\$19,408,646	\$16,840,171
Safety Tier 2	\$16,368,492	\$5,396,573
Safety Tier 2A	\$71,160,897	\$39,166,742
Special Districts		
Courts Tier 1	\$5,708,520	\$2,648,910
Courts Tier 2	\$1,551,243	\$323,191
Courts Tier 3	\$13,278,528	\$7,565,248
South Marin Fire General	\$263,671	\$107,677
South Marin Fire Safety	\$15,795,722	\$8,714,343

Marin City CSD	<u>\$223,440</u> <b>\$1,090,344,165</b>	<u>\$131,310</u> <b>\$908,766,634</b>
Tamalpais CSD	\$2,228,262	\$928,289
Marin City CSD	\$223,440	\$131,310

\$234,169

\$146,160

\* Reflects transfer of two employees

# Marin County Employees' Retirement Association Marin County and Special Districts

Annual Benefit and Membership Distribution

#### **Safety Retirees and Beneficiaries**

Age	Years of Retirement									
<u>Group</u>	<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>35-39</u>	<u>40-44</u>	<u>Total</u>
25-29 No. AVG AMT	1 22,025									1 22,025
30-34 No. AVG AMT	1 29,700									1 29,700
35-39 No. AVG AMT	3 24,977	1 11,678								4 21,652
40-44 No. AVG AMT	15 30,555	5 34,774	1 49,969	1 21,367						22 31,979
45-49 No. AVG AMT	6 30,227	1 10,527	1 15,251	3 30,106						11 27,041
50-54 No. AVG AMT	29 60,993	5 30,276	3 21,140	7 23,905	1 28,317					45 48,428
55-59 No. AVG AMT	30 65,883	8 32,423	3 30,528	3 18,993		4 20,265				48 51,365
60-64 No. AVG AMT	18 68,294	14 72,891	16 29,612	6 30,375	5 27,986	2 18,093	2 24,214			63 49,688
65-69 No. AVG AMT	5 93,295	3 77,529	19 57,002	2 16,733	3 29,165	7 25,025	1 24,948			40 52,580
70-74 No. AVG AMT	1 30,289	1 28,027	4 53,658	8 36,545	6 31,115	5 35,820	2 34,273			27 37,024
75-79 No. AVG AMT				1 51,694	5 29,904	4 42,006	4 20,645		1 14,364	15 31,079
80-84 No. AVG AMT				1 5,845		7 35,851	6 24,740	1 19,885		15 28,342
85-89 No. AVG AMT					1 16,688		2 15,949	1 25,991		4 18,644
Total No. AVG AMT	109 57,227	38 49,682	47 42,376	32 28,175	21 28,983	29 30,707	17 23,814	2 22,938	1 14,364	296 43,862

# Marin County Employees' Retirement Association Marin County and Special Districts

Annual Benefit and Membership Distribution

#### **Miscellaneous Retirees and Beneficiaries**

Age	Years of Retirement									
<u>Group</u>	<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>35-39</u>	<u>40-44</u>	<u>Total</u>
25-29 No.		1								1
AVG AMT		3,691								3,691
30-34 No. AVG AMT		2 15,851								2 15,851
35-39 No. AVG AMT	2 23,503		1 4,170							3 17,059
40-44 No. AVG AMT	3 25,287	2 24,641				1 11,573				6 22,786
45-49 No. AVG AMT	4 20,712	8 22,386		1 7,917						13 20,758
50-54 No. AVG AMT	29 20,819	16 16,607	6 22,647	1 20,094	1 24,395					53 19,808
55-59 No. AVG AMT	116 28,087	24 18,160	5 19,211	5 17,978	2 16,959		1 26,684			153 25,755
60-64 No. AVG AMT	107 35,417	89 23,711	39 19,533	4 16,176	4 7,623	1 19,424				244 27,772
65-69 No. AVG AMT	64 31,221	74 36,670	50 27,160	28 16,577	2 33,463	1 53,077	2 23,068			221 30,317
70-74 No. AVG AMT	24 20,733	54 23,149	72 30,195	39 18,182	25 9,687	6 18,328	5 23,610			225 22,671
75-79 No. AVG AMT	2 22,884	14 18,545	52 32,835	58 26,266	39 15,639	21 17,018	3 21,856	1 30,699		190 24,210
80-84 No. AVG AMT	2 17,820	3 18,662	24 24,586	54 18,687	51 16,723	37 15,478	4 4,152		1 2,948	176 17,818
85-89 No. AVG AMT		1 10,105	3 13,629	10 18,616	31 16,391	39 19,190	12 20,139	1 11,887	1 5,760	98 17,888
90-94 No. AVG AMT				1 24,567	2 21,676	18 18,152	6 10,552	1 6,513		28 16,589
95-99 No. AVG AMT						3 14,067	8 13,109	2 12,668		13 13,262
100+ No. AVG AMT							1 9,725			1 9,725
Total No. AVG AMT	353 29,559	288 25,573	252 27,255	201 20,393	157 15,364	127 17,649	42 16,491	5 14,887	2 4,354	1,427 23,964

# **Marin County and Special Districts**

# **Summary of Monthly Allowances Being Paid**

Submitted for the June 30, 2006 Valuation

# **Miscellaneous**

	Annual Allowances					
Service Retirement	<u>Number</u>	<u>Total</u>	Average			
Unmodified	1052	\$27,125,644	\$25,785			
Option 1	42	721,779	17,185			
Option 2	22	374,922	17,042			
Option 3	4	76,625	19,156			
Total	1,120	28,298,970	25,267			
Ordinary Disability						
Unmodified	34	520,374	15,305			
Option 1	2	12,901	6,451			
Option 2	1	11,912	11,912			
Option 3	0	0	0			
Total	37	545,187	14,735			
Duty Disability						
Unmodified	78	2,263,854	29,024			
Option 1	2	22,676	11,338			
Option 2	1	11,935	11,935			
Option 3	0	0	0			
Total	81	2,298,465	28,376			
Beneficiary						
Unmodified	188	3,022,735	16,078			
Option 1	0	0	0			
Option 2	1	30,764	30,764			
Option 3	0	0	0			
Total	189	3,053,499	16,156			
TOTAL	1,427	\$34,196,121	\$23,964			

# **Marin County and Special Districts**

# **Summary of Monthly Allowances Being Paid**

Submitted for the June 30, 2006 Valuation

# <u>Safety</u>

	Annual Allowances				
Service Retirement	Number	<u>Total</u>	Average		
Unmodified	138	\$7,943,824	\$57,564		
Option 1	2	104,975	52,488		
Option 2	4	71,295	17,824		
Option 3	3	107,454	35,818		
Total	147	8,227,548	55,970		
Ordinary Disability					
Unmodified	3	67,145	22,382		
Option 1	0	0	0		
Option 2	0	0	0		
Option 3	0	0	0		
Total	3	67,145	22,382		
Duty Disability					
Unmodified	95	3,262,194	34,339		
Option 1	2	44,483	22,242		
Option 2	0	0	0		
Option 3	1	32,232	32,232		
Total	98	3,338,909	34,071		
Beneficiary					
Unmodified	48	1,349,525	28,115		
Option 1	0	0	0		
Option 2	0	0	0		
Option 3	0	0	0		
Total	48	1,349,525	28,115		
TOTAL	296	\$12,983,127	\$43,862		

# **Marin County and Special Districts**

# Summary of Retired Members and Beneficiaries Included

## In the June 30, 2006 Actuarial Valuation

			Averages			New Retirees Only		
<b>Miscellaneous Members</b>		Annual	Annual	Attained	Age at		Average	Average
Retirees	<u>No.</u>	Allowance	Allowance	Age	Retirement	<u>No.</u>	Allowance	Age
6/30/2006	1,238	\$31,142,621	\$25,156	70.3	58.6	72	\$27,316	59.8
6/30/2005	1,194	\$29,035,335	\$24,318	70.3	58.6	90	\$31,118	59.2
Increase	3.7%	7.3%	3.4%					
Beneficiaries								
6/30/2006	189	\$3,053,499	\$16,156	73.4	N/A	N/A	N/A	N/A
6/30/2005	177	\$2,781,250	\$15,713	73.0	N/A	N/A	N/A	N/A
Increase	6.8%	9.8%	2.8%					
Total								
6/30/2006	1,427	\$34,196,120	\$23,964	70.7	58.6	72	\$27,316	59.8
6/30/2005	1,371	\$31,816,585	\$23,207	70.6	58.6	90	\$31,118	59.2
Increase	4.1%	7.5%	3.3%					

			Averages				New Retirees Only		
Safety Members		Annual	Annual	Attained	Age at		Average	Average	
Retirees	<u>No.</u>	Allowance	<u>Allowance</u>	Age	Retirement	<u>No.</u>	<u>Allowance</u>	Age	
6/30/2006	248	\$11,633,602	\$46,910	59.7	49.3	19	\$69,636	52.7	
6/30/2005	228	\$10,237,097	\$44,900	59.7	49.3	22	\$62,957	51.7	
Increase	8.8%	13.6%	4.5%						
Beneficiaries									
6/30/2006	48	\$1,349,525	\$28,115	69.9	N/A	N/A	N/A	N/A	
6/30/2005	44	\$1,163,141	\$26,435	68.8	N/A	N/A	N/A	N/A	
Increase	9.1%	16.0%	6.4%						
Total									
6/30/2006	296	\$12,983,127	\$43,862	61.4	49.3	19	\$69,636	52.7	
6/30/2005	272	\$11,400,238	\$41,913	61.2	49.3	22	\$62,957	51.7	
Increase	8.8%	13.9%	4.7%						
Grand Total 6/30/2006	1,723	\$47,179,247	\$27,382	69.1	57.0	91	\$36,152	58.3	
Grand Total 6/30/2005	1,643	\$43,216,823	\$26,304	69.1	57.2	112	\$37,372	57.7	
Increase	4.9%	9.2%	4.1%						

### **Marin County and Special Districts**

# Active Membership Summary

In the June 30, 2006 Actuarial Valuation

# **County Safety Members**

		-	Averages				
		Annual	Annual				
	<u>No.</u>	Compensation	Compensation	Age	<u>Service</u>		
Tier 1	3	\$450,510	\$150,170	54.1	32.6		
Tier 2	81	\$5,658,486	\$69,858	42.0	7.5		
Tier 1A	13	\$1,322,834	\$101,756	51.2	29.0		
Tier 2B	260	<u>\$20,482,732</u>	\$78,780	39.3	9.7		
Total	357	\$27,914,562	\$78,192	40.5	10.1		

### **County Miscellaneous Members**

			Averages				
		Annual	Annual				
	<u>No.</u>	<b>Compensation</b>	<b>Compensation</b>	Age	Service		
Tier 1	109	\$8,853,562	\$81,225	58.1	27.1		
Tier 2	138	\$7,896,393	\$57,220	60.4	11.6		
Tier 3	<u>1,370</u>	<u>\$89,689,459</u>	<u>\$65,467</u>	46.9	8.5		
Total	1,617	\$106,439,414	\$65,825	<b>48.8</b>	10.0		

# **Active Membership Summary**

In the June 30, 2006 Actuarial Valuation

(continued)

### **Special Districts**

			Averages		
		Annual	Annual		
					<u>Servic</u>
	<u>No.</u>	Compensation	<u>Compensation</u>	<u>Age</u>	<u>e</u>
<b>Miscellaneous</b>					
Court Tier 1	10	\$882,796	\$88,280	54.9	22.2
Court Tier 2	9	\$575,229	\$63,914	61.5	9.7
Court Tier 3	139	\$7,446,399	\$53,571	45.4	7.9
Marin City CSD	3	\$133,560	\$44,520	44.7	6.4
Southern Marin Fire	2	\$116,920	\$58,460	51.2	6.9
Mosquito Abatement	37	\$2,182,106	\$58,976	44.3	9.1
LAFCO	3	\$186,721	\$62,240	45.3	3.3
Tamalpais CSD	<u>12</u>	<u>\$662,783</u>	<u>\$55,232</u>	<u>52.2</u>	<u>10.6</u>
Total	215	\$12,186,514	\$56,681	<b>46.7</b>	<b>8.9</b>
<u>Safety</u>					
Southern Marin Fire	<u>35</u>	<u>\$2,986,542</u>	<u>\$85,330</u>	<u>40.2</u>	<u>10.2</u>
Total	250	\$15,173,056	\$60,692	45.8	9.1
6/30/2006 Total	2,224	\$149,527,032	\$67,233	47.1	9.9
6/30/2005 Total	2,168	\$141,271,671	\$65,162	46.9	10.1
Increase	2.6%	5.8%	3.2%	0.4%	(2.0)%

### **Vested Deferreds and Reciprocals**

6/30/2006 Total	523	NA	NA	46.0	5.3
6/30/2005 Total	494	NA	NA	46.1	5.6

#### Marin County and Special Districts

Active Members June 30, 2006

By Attained Ages and Years of Service

#### **County Safety**

Age						Years of Acc	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 &amp; Up</u>	<u>Total</u>
20-24 NO.	4	1	0	0	0	0	0	0	0	0	0	0	5
TOT PAY	254,426	65,021	0	0	0	0	0	0	0	0	0	0	319,447
AVG PAY	63,607	65,021	0	0	0	0	0	0	0	0	0	0	63,889
25-29 NO.	9	6	6	4	2	4	0	0	0	0	0	0	31
TOT PAY	590,430	377,885	403,100	298,761	142,287	296,882	0	0	0	0	0	0	2,109,344
AVG PAY	65,603	62,981	67,183	74,690	71,143	74,220	0	0	0	0	0	0	68,043
30-34 NO.	7	2	4	7	2	22	3	0	0	0	0	0	47
TOT PAY	465,518	99,428	232,885	494,729	142,188	1,630,373	222,688	0	0	0	0	0	3,287,809
AVG PAY	66,503	49,714	58,221	70,676	71,094	74,108	74,229	0	0	0	0	0	69,953
35-39 NO.	6	1	3	4	8	17	16	6	0	0	0	0	61
TOT PAY	440,453	66,862	152,410	259,563	533,386	1,307,051	1,342,596	576,265	0	0	0	0	4,678,586
AVG PAY	73,409	66,862	50,803	64,891	66,673	76,885	83,912	96,044	0	0	0	0	76,698
40-44 NO.	3	2	1	1	4	8	9	13	4	0	0	0	45
TOT PAY	222,211	145,844	76,486	70,476	287,886	657,639	702,727	1,149,028	399,547	0	0	0	3,711,845
AVG PAY	74,070	72,922	76,486	70,476	71,972	82,205	78,081	88,387	99,887	0	0	0	82,485
45-49 NO.	0	0	0	0	5	6	6	15	15	5	0	0	52
TOT PAY	0	0	0	0	415,781	521,561	521,759	1,298,133	1,335,516	436,211	0	0	4,528,961
AVG PAY	0	0	0	0	83,156	86,927	86,960	86,542	89,034	87,242	0	0	87,095
50-54 NO.	1	1	0	1	0	0	0	3	10	10	4	0	30
TOT PAY	75,882	75,721	0	49,218	0	0	0	253,888	903,231	996,122	520,309	0	2,874,370
AVG PAY	75,882	75,721	0	49,218	0	0	0	84,629	90,323	99,612	130,077	0	95,812
55-59 NO.	1	1	1	1	0	1	1	2	1	0	1	1	11
TOT PAY	147,534	64,064	45,157	87,138	0	62,523	85,878	209,420	95,708	0	98,954	179,275	1,075,651
AVG PAY	147,534	64,064	45,157	87,138	0	62,523	85,878	104,710	95,708	0	98,954	179,275	97,786
60-64 NO.	0	0	0	0	0	1	0	1	0	0	0	0	2
TOT PAY	0	0	0	0	0	74,522	0	76,734	0	0	0	0	151,255
AVG PAY	0	0	0	0	0	74,522	0	76,734	0	0	0	0	75,628
65-99 NO.	0	0	0	0	1	0	0	0	0	0	0	0	1
TOT PAY	0	0	0	0	74,734	0	0	0	0	0	0	0	74,734
AVG PAY	0	0	0	0	74,734	0	0	0	0	0	0	0	74,734
TOT NO.	31	14	15	18	22	59	35	40	30	15	5	1	285
TOT AMT	2,196,454	894,826	910,039	1,259,884	1,596,261	4,550,550	2,875,649	3,563,468	2,734,003	1,432,333	619,263	179,275	22,812,003
AVG AMT	70,853	63,916	60,669	69,994	72,557	77,128	82,161	89,087	91,133	95,489	123,853	179,275	80,042

Marin County and Special Districts

Active Members June 30, 2006

By Attained Ages and Years of Service

#### **County Miscellaneous**

Age						Years of Accr	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>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35 &amp; Up</u>	Total
15-19 NO.	2	0	0	0	0	0	0	0	0	0	0	0	2
TOT PAY	77,191	0	0	0	0	0	0	0	0	0	0	0	77,191
AVG PAY	38,596	0	0	0	0	0	0	0	0	0	0	0	38,596
20-24 NO.	3	1	0	1	1	0	0	0	0	0	0	0	6
TOT PAY	123,535	46,349	0	45,097	38,274	0	0	0	0	0	0	0	253,256
AVG PAY	41,178	46,349	0	45,097	38,274	0	0	0	0	0	0	0	42,209
25-29 NO.	22	25	4	7	6	6	0	0	0	0	0	0	70
TOT PAY	1,063,647	1,201,625	189,609	316,114	360,058	273,664	0	0	0	0	0	0	3,404,717
AVG PAY	48,348	48,065	47,402	45,159	60,010	45,611	0	0	0	0	0	0	48,639
30-34 NO.	23	20	12	8	15	27	3	0	0	0	0	0	108
TOT PAY	1,258,616	1,083,353	659,127	443,371	831,841	1,772,757	165,465	0	0	0	0	0	6,214,530
AVG PAY	54,722	54,168	54,927	55,421	55,456	65,658	55,155	0	0	0	0	0	57,542
35-39 NO.	21	11	5	8	18	62	25	4	0	0	0	0	154
TOT PAY	1,051,189	633,886	361,311	471,101	1,109,082	4,130,738	1,640,249	248,199	0	0	0	0	9,645,754
AVG PAY	50,057	57,626	72,262	58,888	61,616	66,625	65,610	62,050	0	0	0	0	62,635
40-44 NO.	15	9	14	9	24	64	35	28	4	0	0	0	202
TOT PAY	684,374	565,608	742,564	491,930	1,664,510	4,135,909	2,405,811	1,840,485	260,472	0	0	0	12,791,664
AVG PAY	45,625	62,845	53,040	54,659	69,355	64,624	68,737	65,732	65,118	0	0	0	63,325
45-49 NO.	17	14	4	7	22	74	34	32	22	4	0	0	230
TOT PAY	1,077,310	977,422	249,473	513,626	1,603,637	4,821,286	2,387,815	2,230,710	1,416,031	271,684	0	0	15,548,993
AVG PAY	63,371	69,816	62,368	73,375	72,893	65,153	70,230	69,710	64,365	67,921	0	0	67,604
50-54 NO.	24	22	10	17	16	74	43	42	30	21	4	0	303
TOT PAY	1,569,253	1,338,546	647,597	1,137,831	841,358	5,016,774	2,967,443	2,941,135	2,487,893	1,638,800	441,928	0	21,028,559
AVG PAY	65,386	60,843	64,760	66,931	52,585	67,794	69,010	70,027	82,930	78,038	110,482	0	69,401
55-59 NO.	11	12	6	9	19	81	58	35	30	26	15	2	304
TOT PAY	794,693	600,972	333,139	790,853	1,150,010	5,470,582	3,661,311	2,601,584	2,288,460	2,169,988	1,243,640	134,866	21,240,098
AVG PAY	72,245	50,081	55,523	87,873	60,527	67,538	63,126	74,331	76,282	83,461	82,909	67,433	69,869
60-64 NO.	7	4	3	6	13	31	27	26	22	8	14	2	163
TOT PAY	434,921	230,490	234,614	355,788	777,697	1,814,523	1,809,819	1,782,034	1,626,781	730,099	1,214,585	225,609	11,236,961
AVG PAY	62,132	57,622	78,205	59,298	59,823	58,533	67,030	68,540	73,945	91,262	86,756	112,804	68,938
65-99 NO.	1	0	0	0	5	10	13	21	14	5	5	1	75
TOT PAY	97,873	0	0	0	394,743	591,272	837,793	1,204,382	1,016,745	295,132	458,351	101,399	4,997,691
AVG PAY	97,873	0	0	0	78,949	59,127	64,446	57,352	72,625	59,026	91,670	101,399	66,636
TOT NO.	146	118	58	72	139	429	238	188	122	64	38	5	1,617
TOT AMT	8,232,603	6,678,252	3,417,433	4,565,713	8,771,210	28,027,507	15,875,705	2,848,529	9,096,382	5,105,703	3,358,504	461,873	106,439,414
AVG AMT	56,388	56,595	58,921	63,413	63,102	65,332	66,705	68,343	74,561	79,777	88,382	92,375	65,825

#### Marin County Employees' Retirement Association Marin County and Special Districts Active Members June 30, 2006 By Attained Ages and Years of Service

#### Special Districts Safety

Age						Years of Ac	crued Service	e					
<u>Group</u>	<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 &amp; Up</u>	<u>Total</u>
25-29 NO.	3	1	0	0	0	0	0	0	0	0	0	0	4
TOT PAY	203,408	69,465	0	0	0	0	0	0	0	0	0	0	272,873
AVG PAY	67,803	69,465	0	0	0	0	0	0	0	0	0	0	68,218
30-34 NO.	0	1	1	1	2	2	0	0	0	0	0	0	7
TOT PAY	0	76,875	74,391	89,950	159,094	147,197	0	0	0	0	0	0	547,507
AVG PAY	0	76,875	74,391	89,950	79,547	73,598	0	0	0	0	0	0	78,215
35-39 NO.	1	0	0	0	0	4	0	0	0	0	0	0	5
TOT PAY	88,927	0	0	0	0	307,615	0	0	0	0	0	0	396,541
AVG PAY	88,927	0	0	0	0	76,904	0	0	0	0	0	0	79,308
40-44 NO.	0	1	0	0	0	2	3	1	0	0	0	0	7
TOT PAY	0	67,796	0	0	0	178,412	254,996	87,603	0	0	0	0	588,807
AVG PAY	0	67,796	0	0	0	89,206	84,999	87,603	0	0	0	0	84,115
45-49 NO.	0	0	0	0	0	1	3	3	1	0	0	0	8
TOT PAY	0	0	0	0	0	87,146	333,321	222,472	93,849	0	0	0	736,788
AVG PAY	0	0	0	0	0	87,146	111,107	74,157	93,849	0	0	0	92,099
50-54 NO.	0	0	0	0	0	0	0	0	1	1	2	0	4
TOT PAY	0	0	0	0	0	0	0	0	94,892	75,419	273,715	0	444,026
AVG PAY	0	0	0	0	0	0	0	0	94,892	75,419	136,857	0	111,006
TOT NO.	4	3	1	1	2	9	6	4	2	1	2	0	35
TOT AMT	292,334	214,136	74,391	89,950	159,094	720,369	588,318	310,075	188,741	75,419	273,715	0	2,986,542
AVG AMT	73,084	71,379	74,391	89,950	79,547	80,041	98,053	77,519	94,370	75,419	136,857	0	85,330

#### Marin County Employees' Retirement Association Marin County and Special Districts Active Members June 30, 2006

By Attained Ages and Years of Service

#### **Special Districts Miscellaneous**

Age						Years of Accr	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 &amp; Up</u>	Total
20-24 NO.	1	0	0	0	0	0	0	0	0	0	0	0	1
TOT PAY	32,544	0	0	0	0	0	0	0	0	0	0	0	32,544
AVG PAY	32,544	0	0	0	0	0	0	0	0	0	0	0	32,544
25-29 NO.	2	6	2	0	2	1	0	0	0	0	0	0	13
TOT PAY	64,591	240,455	70,975	0	93,832	45,543	0	0	0	0	0	0	515,395
AVG PAY	32,295	40,076	35,487	0	46,916	45,543	0	0	0	0	0	0	39,646
30-34 NO.	4	2	2	2	2	9	0	0	0	0	0	0	21
TOT PAY	165,214	115,628	69,653	108,585	80,445	465,646	0	0	0	0	0	0	1,005,170
AVG PAY	41,303	57,814	34,826	54,293	40,223	51,738	0	0	0	0	0	0	47,865
35-39 NO.	1	3	3	1	2	7	1	0	0	0	0	0	18
TOT PAY	81,735	132,167	143,329	44,272	77,566	386,765	69,564	0	0	0	0	0	935,398
AVG PAY	81,735	44,056	47,776	44,272	38,783	55,252	69,564	0	0	0	0	0	51,967
40-44 NO.	3	8	1	0	3	7	3	4	1	0	0	0	30
TOT PAY	146,731	373,041	33,834	0	144,558	375,968	215,312	218,638	52,881	0	0	0	1,560,963
AVG PAY	48,910	46,630	33,834	0	48,186	53,710	71,771	54,660	52,881	0	0	0	52,032
45-49 NO.	2	6	5	1	2	7	4	7	6	2	0	0	42
TOT PAY	136,463	250,787	191,497	84,443	87,174	393,526	281,125	481,348	351,956	149,010	0	0	2,407,328
AVG PAY	68,231	41,798	38,299	84,443	43,587	56,218	70,281	68,764	58,659	74,505	0	0	57,317
50-54 NO.	5	3	2	0	2	11	3	4	2	2	1	0	35
TOT PAY	438,519	133,411	113,437	0	163,265	576,847	237,186	345,457	130,632	127,501	83,425	0	2,349,679
AVG PAY	87,704	44,470	56,718	0	81,632	52,441	79,062	86,364	65,316	63,750	83,425	0	67,134
55-59 NO.	3	1	0	0	0	8	4	5	3	2	2	0	28
TOT PAY	167,004	47,341	0	0	0	461,056	245,138	258,228	207,267	114,818	197,468	0	1,698,320
AVG PAY	55,668	47,341	0	0	0	57,632	61,284	51,646	69,089	57,409	98,734	0	60,654
60-64 NO.	1	0	1	1	1	4	3	7	1	1	0	1	21
TOT PAY	68,910	0	108,805	47,740	46,254	241,940	157,378	445,075	84,011	56,988	0	86,925	1,344,027
AVG PAY	68,910	0	108,805	47,740	46,254	60,485	52,459	63,582	84,011	56,988	0	86,925	64,001
65-99 NO.	0	1	0	0	0	1	2	2	0	0	0	0	6
TOT PAY	0	33,303	0	0	0	47,664	175,912	80,808	0	0	0	0	337,688
AVG PAY	0	33,303	0	0	0	47,664	87,956	40,404	0	0	0	0	56,281
TOT NO.	22	30	16	5	14	55	20	29	13	7	3	1	215
TOT AMT	1,301,710	1,326,133	731,529	285,040	693,094	2,994,955	1,381,616	1,829,554	826,747	448,317	280,893	86,925	12,186,513
AVG AMT	59,169	44,204	45,721	57,008	49,507	54,454	69,081	63,088	63,596	64,045	93,631	86,925	56,681

# **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 20 remaining installments for the County, Southern Marin Fire Protection District and LAFCO and 11 years for other Employers.

Active member payroll in aggregate is assumed to increase 4.00% 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, 2006 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.

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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, 2006 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 8.00%\* 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	4.00%*
Real Rate of Return	<u>4.00%</u>
Total	8.00%*

<u>The general inflation rate</u> used for the actuarial valuation calculations was 4.00%\* 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 in the Bay area, has been as follows:

Consumer Price Index Urban Wage Earners and Clerical Workers Before 1978 All Urban Consumers After 1977 <u>10 Year Moving Averages</u>									
	June 30, 1966	1.8%							
	June 30, 1976	5.8							
	June 30, 1986	6.8							
	June 30, 1996	3.6							
	June 30, 2006	2.6							

50-Year Average 4.1%

## **Marin County and Special Districts**

### Actuarial Assumptions Used for the June 30, 2006 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	n Increase*

Inflation 4.00%

### PLUS

Years of Service at <u>Valuation Date</u>	Miscellaneous	<u>Safety</u>
0	3.00%	8.00%
1	2.25	3.00
2	1.50	1.50
3	0.75	1.00
4 or more	0.50	0.75

No merit increases are assumed upon attainment of age 60.

### **Marin County and Special Districts**

### Actuarial Assumptions Used for the June 30, 2006 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	21%*	14%*
1	9	5
2	7	4
3	6	4
4	6	4

## **Marin County and Special Districts**

### Actuarial Assumptions Used for the June 30, 2006 Valuation

(Continued)

## % of Active Members Separating with Next Year

	(at least 5 years)					rement
	Withdraw	al	Vested Defe	rred	Deat	<u>h*</u>
Ages	Miscellaneous	<u>Safety</u>	Miscellaneous	<u>Safety</u>	Male	<u>Female</u>
20	2.30%	1.13%	3.00%	2.06%	.03%	.02%
25	2.30%	1.13%	3.00%	2.24%	.04%	.02%
30	2.30%	0.75%	3.00%	3.53%	.04%	.02%
35	2.00%	0.56%	2.50%	3.41%	.06%	.04%
40	1.20%	0.56%	2.00%	1.14%	.09%	.06%
45	0.80%	0.56%	1.70%	1.70%	.12%	.09%
50	0.00%	0.00%	1.40%	0.27%	.17%	.13%
55	0.00%	0.00%	0.80%	0.00%	.27%	.20%
60	0.00%	0.00%	0.80%	0.00%	.47%	.35%
65	0.00%	0.00%	0.00%	0.00%	.88%	.67%

	Ordinary Disability		Duty Disa	ability
	Miscellaneous	<u>Safety</u>	Miscellaneous	<u>Safety*</u>
20	.000%	.020%	.050%	.121%
25	.005%	.030%	.080%	.165%
30	.010%	.050%	.130%	.396%
35	.015%	.070%	.160%	.605%
40	.025%	.160%	.210%	1.298%
45	.045%	.260%	.260%	1.254%
50	.090%	.360%	.310%	1.408%
55	.155%	.460%	.330%	4.290%
60	.255%	.000%	.370%	.000%
65	.395%	.000%	.390%	.000%

#### Actuarial Assumptions Used for the June 30, 2006 Valuation

(Continued)

<u>The post-retirement mortality tables</u> used were the RP-2000 Combined Healthy Mortality Basic Tables, with one-year setback for Males and a two-year setback for Females.\* 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 RP-2000 Combined Healthy Mortality Table was set forward three years\* for disabled retirees. Related values are shown below.

		e Expectancy ears)*	% Dying Withi	n Nevt Vear*
Sample <u>Ages</u>	<u>Men</u>	Women	<u>Men</u>	<u>Women</u>
45	36.7	40.3	.14%	.09%
50	31.7	35.6	.20	.14
55	27.1	30.8	.32	.22
60	22.6	26.2	.59	.39
65	18.4	21.8	1.13	.76
70	14.6	17.8	1.98	1.34
75	11.2	14.1	3.39	2.30

#### **Non-Disabled Retirees**

#### **Disabled Retirees**

Sample <u>Ages</u>	Future Life Expectancy (Years)*	% Dying Within Next Year*
45	32.7	0.19%
50	28.0	0.29
55	23.5	0.53
60	19.2	1.00
65	15.3	1.79
70	11.8	3.04
75	8.8	5.21

## Actuarial Assumptions Used for the June 30, 2006 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	7.8%*	50	7%	33%
51	2.6%*	51	6%	25%
52	2.6%*	52	12%	25%
53	2.6%*	53	25%	33%
54	3.9%*	54	25%	33%
55	5.2%*	55	50%	50%
56	7.8%*	56	50%	50%
57	10.4%*	57	50%	50%
58	11.7%*	58	50%	50%
59	15.6%*	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, 2006 Valuation

(Continued)

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

Marital Status - 80% of male and 50%\* of female members are assumed to have a qualified beneficiary of opposite sex at retirement.

Qualified Beneficiary Census – Females are assumed to be 3 years younger than males.

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 40%\* of the deferred vested members are reciprocal.

Post-Retirement COLA Assumed – 3.8% for Tier 1 and Special Districts; 2% for Tier 2 and Tier 3.

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

<u>Accumulated Sick Time</u>\* - Most active County member accrued liabilities loaded by 1.0% for conversion from sick leave to retirement service credit. (This is a new assumption with the revised 2006 valuation).

### **Comparison of Selected Actuarial Assumptions To Actual Experience**

(Continued)

The salary increase assumptions project annual increases in total member payroll of 4.25%, the inflation portion of the individual pay increase assumptions. In effect, this assumes no change in the number of active members. Changes actually experienced in areas related to these assumptions have been as follows:

		Year Ended				3-year	5-year
	6/30/06	6/30/05	6/30/04	6/30/03	6/30/02	<u>Average</u>	<u>Average</u>
Inflation <sup>1</sup>	3.9%	1.1%	1.4%	1.6%	1.2%	2.1%	1.8%
Assumed						4.25	4.25
Average Pay Increase	3.2	(2.7)	4.1	0.6	6.6	1.5	2.3
Assumed						4.25	4.25
Merit & Longevity Increase	(0.7)	(3.8)	2.7	(1.0)	5.4	(0.6)	0.5
Assumed						0.5	0.5
Total Payroll	9.2	(1.3)	3.7	0.8	12.0	3.8	4.8
Assumed						4.25	4.25
Investment Return Rate <sup>2</sup>	7.4	4.3	3.5	1.6	4.7	5.1	4.3
Assumed						8.25	8.25
Real Rate of Investment Return <sup>2</sup>	3.5	3.2	2.1	0.0	3.5	2.9	2.5
Assumed						4.0	4.0

<sup>1</sup> Based on Consumer Price Index for San Francisco-Oakland-San Jose Area (1982-1984 base period).

<sup>2</sup> Based on actuarial value of assets <u>NOT</u> market value or book value.

# Marin County Employees' Retirement Association Marin County and Special Districts 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 Date	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>
6/30/99	557,216	583,890	28,674	95%	107,689	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 <sup>1</sup>	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%
6/30/05	858,183	992,226	134,043	86%	141,272	94.9%
6/30/06 <sup>2</sup>	908,767	1,046,933	138,166	87%	149,527	92.4%
6/30/06	908,767	1,090,344	181,578	83%	149,527	121.4%

<sup>1</sup> Reflects issuances of Pension Obligation Bond

<sup>2</sup> Before changes in actuarial assumptions

**APPENDIX** A:

**MEMBER CONTRIBUTION RATES** 

Contribution Rates Assumed for Members

(Prior to July 1, 2007)

Age	Basic	COL	Limited to 1.58%	Total
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%
54	8.55%	4.59%	1.58%	10.13%
55+	8.55%	4.59%	1.58%	10.13%

Contribution Rates Assumed for Members

(After July 1, 2007)

Entry <u>Age</u>	<u>Basic</u>	<u>COL</u>	Limited to <u>1.58%</u>	<u>Total</u>
16	5.35%	2.63%	1.58%	6.93%
17	5.38%	2.65%	1.58%	6.96%
18	5.42%	2.67%	1.58%	7.00%
19	5.45%	2.68%	1.58%	7.03%
20	5.47%	2.69%	1.58%	7.05%
21	5.49%	2.70%	1.58%	7.07%
22	5.51%	2.71%	1.58%	7.09%
23	5.52%	2.72%	1.58%	7.10%
24	5.53%	2.72%	1.58%	7.11%
25	5.53%	2.72%	1.58%	7.11%
26	5.64%	2.77%	1.58%	7.22%
27	5.75%	2.83%	1.58%	7.33%
28	5.86%	2.88%	1.58%	7.44%
29	5.97%	2.94%	1.58%	7.55%
30	6.08%	2.99%	1.58%	7.66%
31	6.20%	3.05%	1.58%	7.78%
32	6.32%	3.11%	1.58%	7.90%
33	6.44%	3.17%	1.58%	8.02%
34	6.56%	3.23%	1.58%	8.14%
35	6.68%	3.29%	1.58%	8.26%
36	6.80%	3.35%	1.58%	8.38%
37	6.93%	3.41%	1.58%	8.51%
38	7.06%	3.47%	1.58%	8.64%
39	7.19%	3.54%	1.58%	8.77%
40	7.32%	3.60%	1.58%	8.90%
41	7.45%	3.67%	1.58%	9.03%
42	7.59%	3.74%	1.58%	9.17%
43	7.73%	3.80%	1.58%	9.31%
44	7.87%	3.87%	1.58%	9.45%
45	8.02%	3.95%	1.58%	9.60%
46	8.17%	4.02%	1.58%	9.75%
47	8.32%	4.09%	1.58%	9.90%
48	8.48%	4.17%	1.58%	10.06%
49	8.64%	4.25%	1.58%	10.22%
50	8.81%	4.34%	1.58%	10.39%
51	9.01%	4.43%	1.58%	10.59%
52	9.20%	4.53%	1.58%	10.78%
53	9.35%	4.60%	1.58%	10.93%
54+	9.46%	4.66%	1.58%	11.04%

Contribution Rates Assumed for Members

## (Prior to July 1, 2007)

Age	New Basic	New COL	Limited to 1.58%	New Total
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

(After July 1, 2007)

Entry <u>Age</u>	Basic	<u>COL</u>	Limited to <u>1.58%</u>	<u>Total</u>
16	4.59%	0.91%	0.91%	5.50%
10	4.63%	0.91%	0.91%	5.55%
18	4.68%	0.92%	0.92%	5.61%
18	4.08%	0.93%	0.93%	5.66%
20	4.72%	0.94%	0.94%	5.71%
20	4.79%	0.95%	0.95%	5.74%
21	4.83%	0.96%	0.96%	5.79%
22	4.86%	0.97%	0.97%	5.83%
23	4.88%	0.97%	0.97%	5.85%
24	4.91%	0.98%	0.98%	5.89%
26	4.93%	0.98%	0.98%	5.91%
20	4.94%	0.98%	0.98%	5.92%
28	4.95%	0.99%	0.99%	5.94%
20	4.96%	0.99%	0.99%	5.95%
30	4.96%	0.99%	0.99%	5.95%
31	5.06%	1.01%	1.01%	6.07%
32	5.15%	1.03%	1.03%	6.18%
33	5.25%	1.05%	1.05%	6.30%
34	5.35%	1.07%	1.07%	6.42%
35	5.45%	1.09%	1.09%	6.54%
36	5.56%	1.11%	1.11%	6.67%
37	5.66%	1.13%	1.13%	6.79%
38	5.77%	1.15%	1.15%	6.92%
39	5.88%	1.17%	1.17%	7.05%
40	5.99%	1.19%	1.19%	7.18%
41	6.10%	1.22%	1.22%	7.32%
42	6.21%	1.24%	1.24%	7.45%
43	6.33%	1.26%	1.26%	7.59%
44	6.44%	1.28%	1.28%	7.72%
45	6.56%	1.31%	1.31%	7.87%
46	6.68%	1.33%	1.33%	8.02%
47	6.81%	1.36%	1.36%	8.16%
48	6.93%	1.38%	1.38%	8.31%
49	7.06%	1.41%	1.41%	8.47%
50	7.19%	1.43%	1.43%	8.62%
51	7.32%	1.46%	1.46%	8.78%
52	7.46%	1.49%	1.49%	8.94%
53	7.60%	1.51%	1.51%	9.11%
54	7.73%	1.54%	1.54%	9.28%
55	7.85%	1.56%	1.56%	9.41%
56	7.96%	1.59%	1.58%	9.54%
57	8.08%	1.61%	1.58%	9.66%
58	8.47%	1.69%	1.58%	10.05%
59+	8.86%	1.77%	1.58%	10.44%

Contribution Rates Assumed for Members

### (Prior to July 1, 2007)

			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%
50 57	7.40%	1.57%	1.57%	1.14%	10.11%
58	7.70%	1.64%	1.58%	1.14%	10.11%
59	8.01%	1.70%	1.58%	1.14%	10.73%
60	8.01%	1.70%	1.58%	1.14%	10.73%
00	0.01/0	1./0/0	1.30/0	1.17/0	10.75/0

Contribution Rates Assumed for Members

### (After July 1, 2007)

Entry <u>Age</u>	<b>Basic</b>	<u>COL</u>	Limited to <u>1.58%</u>	Cost Sharing Under Enhanced Formula	<u>Total</u>
16	4.59%	0.91%	0.91%	1.14%	6.64%
17	4.63%	0.92%	0.92%	1.14%	6.69%
18	4.68%	0.93%	0.93%	1.14%	6.75%
19	4.72%	0.94%	0.94%	1.14%	6.80%
20	4.76%	0.95%	0.95%	1.14%	6.85%
21	4.79%	0.95%	0.95%	1.14%	6.88%
22	4.83%	0.96%	0.96%	1.14%	6.93%
23	4.86%	0.97%	0.97%	1.14%	6.97%
24	4.88%	0.97%	0.97%	1.14%	6.99%
25	4.91%	0.98%	0.98%	1.14%	7.03%
26	4.93%	0.98%	0.98%	1.14%	7.05%
27	4.94%	0.98%	0.98%	1.14%	7.06%
28	4.95%	0.99%	0.99%	1.14%	7.08%
29	4.96%	0.99%	0.99%	1.14%	7.09%
30	4.96%	0.99%	0.99%	1.14%	7.09%
31	5.06%	1.01%	1.01%	1.14%	7.21%
32	5.15%	1.03%	1.03%	1.14%	7.32%
33	5.25%	1.05%	1.05%	1.14%	7.44%
34	5.35%	1.07%	1.07%	1.14%	7.56%
35	5.45%	1.09%	1.09%	1.14%	7.68%
36	5.56%	1.11%	1.11%	1.14%	7.81%
37	5.66%	1.13%	1.13%	1.14%	7.93%
38	5.77%	1.15%	1.15%	1.14%	8.06%
39	5.88%	1.17%	1.17%	1.14%	8.19%
40	5.99%	1.19%	1.19%	1.14%	8.32%
41	6.10%	1.22%	1.22%	1.14%	8.46%
42	6.21%	1.24%	1.24%	1.14%	8.59%
43	6.33%	1.26%	1.26%	1.14%	8.73%
44	6.44%	1.28%	1.28%	1.14%	8.86%
45	6.56%	1.31%	1.31%	1.14%	9.01%
46	6.68%	1.33%	1.33%	1.14%	9.15%
47	6.81%	1.36%	1.36%	1.14%	9.31%
48	6.93%	1.38%	1.38%	1.14%	9.45%
49	7.06%	1.41%	1.41%	1.14%	9.61%
50	7.19%	1.43%	1.43%	1.14%	9.76%
51	7.32%	1.46%	1.46%	1.14%	9.92%
52	7.46%	1.49%	1.49%	1.14%	10.09%
53	7.60%	1.51%	1.51%	1.14%	10.25%
54	7.73%	1.54%	1.54%	1.14%	10.41%
55	7.85%	1.56%	1.56%	1.14%	10.55%
56	7.96%	1.59%	1.58%	1.14%	10.68%
57	8.08%	1.61%	1.58%	1.14%	10.80%
58	8.47%	1.69%	1.58%	1.14%	11.19%
59+	8.86%	1.77%	1.58%	1.14%	11.58%

Contribution Rates Assumed for Members

### (Prior to July 1, 2007)

## **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%

# Contribution Rates Assumed for Members

### (After July 1, 2007)

## **Miscellaneous Special Districts**

Entry				Entry			
Age	<b>Basic</b>	COL	<u>Total</u>	Age	<b>Basic</b>	COL	<u>Total</u>
16	5.35%	2.63%	7.98%	38	7.06%	3.47%	10.53%
17	5.38%	2.65%	8.03%	39	7.19%	3.54%	10.73%
18	5.42%	2.67%	8.09%	40	7.32%	3.60%	10.92%
19	5.45%	2.68%	8.13%	41	7.45%	3.67%	11.12%
20	5.47%	2.69%	8.16%	42	7.59%	3.74%	11.33%
21	5.49%	2.70%	8.19%	43	7.73%	3.80%	11.53%
22	5.51%	2.71%	8.22%	44	7.87%	3.87%	11.74%
23	5.52%	2.72%	8.24%	45	8.02%	3.95%	11.97%
24	5.53%	2.72%	8.25%	46	8.17%	4.02%	12.19%
25	5.53%	2.72%	8.25%	47	8.32%	4.09%	12.41%
26	5.64%	2.77%	8.41%	48	8.48%	4.17%	12.65%
27	5.75%	2.83%	8.58%	49	8.64%	4.25%	12.89%
28	5.86%	2.88%	8.74%	50	8.81%	4.34%	13.15%
29	5.97%	2.94%	8.91%	51	9.01%	4.43%	13.44%
30	6.08%	2.99%	9.07%	52	9.20%	4.53%	13.73%
31	6.20%	3.05%	9.25%	53	9.35%	4.60%	13.95%
32	6.32%	3.11%	9.43%	54+	9.46%	4.66%	14.12%
33	6.44%	3.17%	9.61%				
34	6.56%	3.23%	9.79%				
35	6.68%	3.29%	9.97%				
36	6.80%	3.35%	10.15%				
37	6.93%	3.41%	10.34%				

### Contribution Rates Assumed for Members

### (Prior to July 1, 2007)

# Safety Tier 1\*

			Limited	Cost Sharing Under	
Age	<b>Basic</b>	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	10.58%	6.27%	3.10%	3.64%	17.32%
50+	10.58%	6.27%	3.10%	3.64%	17.32%

\* Those members eligible for 31664.1 are paying an additional contribution per agreement.

Contribution Rates Assumed for Members

# (After July 1, 2007)

# Safety Tier 1\*

Entry <u>Age</u>	<u>Basic</u>	<u>COL</u>	Limited to <u>3.10%</u>	Cost Sharing Under Enhanced Formula	<u>Total</u>
16	7.20%	3.80%	3.10%	3.64%	13.94%
10	7.20%				
		3.80%	3.10%	3.64%	13.94%
18	7.20%	3.80%	3.10%	3.64%	13.94%
19 20	7.19%	3.79%	3.10%	3.64%	13.93%
20	7.18%	3.78%	3.10%	3.64%	13.92%
21	7.30%	3.85%	3.10%	3.64%	14.04%
22	7.43%	3.92%	3.10%	3.64%	14.17%
23	7.57%	3.99%	3.10%	3.64%	14.31%
24	7.70%	4.06%	3.10%	3.64%	14.44%
25	7.84%	4.13%	3.10%	3.64%	14.58%
26	7.97%	4.20%	3.10%	3.64%	14.71%
27	8.11%	4.28%	3.10%	3.64%	14.85%
28	8.25%	4.35%	3.10%	3.64%	14.99%
29	8.40%	4.43%	3.10%	3.64%	15.14%
30	8.54%	4.50%	3.10%	3.64%	15.28%
31	8.69%	4.58%	3.10%	3.64%	15.43%
32	8.84%	4.66%	3.10%	3.64%	15.58%
33	8.99%	4.74%	3.10%	3.64%	15.73%
34	9.15%	4.82%	3.10%	3.64%	15.89%
35	9.30%	4.91%	3.10%	3.64%	16.04%
36	9.46%	4.99%	3.10%	3.64%	16.20%
37	9.63%	5.08%	3.10%	3.64%	16.37%
38	9.79%	5.16%	3.10%	3.64%	16.53%
39	9.96%	5.25%	3.10%	3.64%	16.70%
40	10.13%	5.34%	3.10%	3.64%	16.87%
41	10.31%	5.44%	3.10%	3.64%	17.05%
42	10.50%	5.54%	3.10%	3.64%	17.24%
43	10.69%	5.64%	3.10%	3.64%	17.43%
44	10.90%	5.75%	3.10%	3.64%	17.64%
45	11.12%	5.86%	3.10%	3.64%	17.86%
46	11.37%	6.00%	3.10%	3.64%	18.11%
47	11.64%	6.14%	3.10%	3.64%	18.38%
48	11.96%	6.31%	3.10%	3.64%	18.70%
49+	12.29%	6.48%	3.10%	3.64%	19.03%

Contribution Rates Assumed for Members

# (Prior to July 1, 2007)

# Safety Tier 2\*

			Limited	Cost Sharing Under	
Age	<b>Basic</b>	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	10.58%	2.69%	2.69%	3.64%	16.91%
50+	10.58%	2.69%	2.69%	3.64%	16.91%

\* Those members eligible for 31664.1 are paying an additional contribution per agreement.

Contribution Rates Assumed for Members

(After July 1, 2007)

## Safety Tier 2\*

Entry <u>Age</u>	<u>Basic</u>	<u>COL</u>	Limited to <u>3.10%</u>	Cost Sharing Under <u>Enhanced Formula</u>	<u>Total</u>
16	6.88%	1.61%	1.61%	3.64%	12.13%
17	6.88%	1.61%	1.61%	3.64%	12.13%
18	6.88%	1.61%	1.61%	3.64%	12.13%
19	6.87%	1.61%	1.61%	3.64%	12.12%
20	6.86%	1.60%	1.60%	3.64%	12.10%
21	6.98%	1.63%	1.63%	3.64%	12.25%
22	7.10%	1.66%	1.66%	3.64%	12.40%
23	7.23%	1.69%	1.69%	3.64%	12.56%
24	7.36%	1.72%	1.72%	3.64%	12.72%
25	7.49%	1.75%	1.75%	3.64%	12.88%
26	7.62%	1.78%	1.78%	3.64%	13.04%
27	7.75%	1.81%	1.81%	3.64%	13.20%
28	7.88%	1.84%	1.84%	3.64%	13.36%
29	8.02%	1.88%	1.88%	3.64%	13.54%
30	8.16%	1.91%	1.91%	3.64%	13.71%
31	8.30%	1.94%	1.94%	3.64%	13.88%
32	8.44%	1.98%	1.98%	3.64%	14.06%
33	8.59%	2.01%	2.01%	3.64%	14.24%
34	8.74%	2.04%	2.04%	3.64%	14.42%
35	8.89%	2.08%	2.08%	3.64%	14.61%
36	9.04%	2.12%	2.12%	3.64%	14.80%
37	9.19%	2.15%	2.15%	3.64%	14.98%
38	9.35%	2.19%	2.19%	3.64%	15.18%
39	9.52%	2.23%	2.23%	3.64%	15.39%
40	9.68%	2.27%	2.27%	3.64%	15.59%
41	9.85%	2.31%	2.31%	3.64%	15.80%
42	10.03%	2.35%	2.35%	3.64%	16.02%
43	10.21%	2.39%	2.39%	3.64%	16.24%
44	10.39%	2.43%	2.43%	3.64%	16.46%
45	10.57%	2.47%	2.47%	3.64%	16.68%
46	10.69%	2.50%	2.50%	3.64%	16.83%
47	10.59%	2.48%	2.48%	3.64%	16.71%
48	11.31%	2.65%	2.65%	3.64%	17.60%
49+	12.29%	2.88%	2.88%	3.64%	18.81%

Contribution Rates Assumed for Members

### (Prior to July 1, 2007)

# **Safety Special Districts**

			Implicit	Limited to	
Age	Basic	COL	COL	Implicit COL	Total
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%

Contribution Rates Assumed for Members

(After July 1, 2007)

## **Safety Special Districts**

Entry				Entry			
Age	<b>Basic</b>	COL	<u>Total</u>	Age	<b>Basic</b>	<u>COL</u>	<u>Total</u>
16	7.20%	3.80%	11.00%	33	8.99%	4.74%	13.73%
17	7.20%	3.80%	11.00%	34	9.15%	4.82%	13.97%
18	7.20%	3.80%	11.00%	35	9.30%	4.91%	14.21%
19	7.19%	3.79%	10.98%	36	9.46%	4.99%	14.45%
20	7.18%	3.78%	10.96%	37	9.63%	5.08%	14.71%
21	7.30%	3.85%	11.15%	38	9.79%	5.16%	14.95%
22	7.43%	3.92%	11.35%	39	9.96%	5.25%	15.21%
23	7.57%	3.99%	11.56%	40	10.13%	5.34%	15.47%
24	7.70%	4.06%	11.76%	41	10.31%	5.44%	15.75%
25	7.84%	4.13%	11.97%	42	10.50%	5.54%	16.04%
26	7.97%	4.20%	12.17%	43	10.69%	5.64%	16.33%
27	8.11%	4.28%	12.39%	44	10.90%	5.75%	16.65%
28	8.25%	4.35%	12.60%	45	11.12%	5.86%	16.98%
29	8.40%	4.43%	12.83%	46	11.37%	6.00%	17.37%
30	8.54%	4.50%	13.04%	47	11.64%	6.14%	17.78%
31	8.69%	4.58%	13.27%	48	11.96%	6.31%	18.27%
32	8.84%	4.66%	13.50%	49	12.29%	6.48%	18.77%

**APPENDIX B:** 

**RETIREMENT AGE FACTORS** 

# **Retirement Age Factor**

# Miscellaneous

	Tier 1		ier 2		Fier 3		
	676.14		<u>676.1</u>		<u>676.16</u>		<u> 576.11</u>
1.66	7% @ 52	1.667	% @ 57	2%	6 @ 55	1.667	% @ 55
Age	<b>Fraction</b>	Age	<b>Fraction</b>	Age	<b>Fraction</b>	Age	<b>Fraction</b>
50	0.8850	50	0.7091	50	0.713	50	0.7454
51	0.9399	51	0.7457	51	0.761	51	0.7882
52	1.0000	52	0.7816	52	0.814	52	0.8346
53	1.0447	53	0.8181	53	0.871	53	0.8850
54	1.1048	54	0.8556	54	0.933	54	0.9399
55	1.1686	55	0.8954	55	1.000	55	1.0000
56	1.2365	56	0.9382	56	1.026	56	1.0447
57	1.3093	57	0.9846	57	1.052	57	1.1048
58	1.3608	58	1.0350	58	1.078	58	1.1686
59	1.4123	59	1.0899	59	1.105	59	1.2365
60	1.4638	60	1.1500	60	1.131	60	1.3093
61	1.5153	61	1.1947	61	1.157	61	1.3608
62+	1.5668	62	1.2548	62	1.183	62	1.4123
		63	1.3186	63+	1.209	63	1.4638
		64	1.3865			64	1.5153
		65+	1.4593			65	1.5668

Safety

-	<u>664.1</u> 6 at 50	-	6 <b>64.2</b> at 55
Age	<b>Fraction</b>	Age	<b>Fraction</b>
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