MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION Novato Fire Protection District ANNUAL ACTUARIAL VALUATION June 30, 2005



Marin County Employees' Retirement Association **Novato Fire Protection District** June 30, 2005 Actuarial Valuation

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November 14, 2005

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, 2005</u> of Marin County Employees' Retirement Association (Novato Fire Protection District) 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, 2006.

	Safety	Miscellaneous	Overall
Normal Costs	25.94%	13.68%	25.16%
Unfunded Amortization	13.54%	3.11%	12.86%
TOTAL	39.48%	16.79%	38.02%

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 \$5.4 million, which reflects 5.9% of related actuarial accrued liabilities as of June 30, 2004.

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

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

Rich Roeden

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Marin County Employees' Retirement Association Novato Fire Protection District

Summary of Significant Valuation Results

	June 30, 2004	June 30, 2005	Percent Change
I. Total Membership			
A. Active Members	94	91	(3.2)%
B. Pensioners & Beneficiaries	75	76	1.3%
C. Vested Deferreds	<u>14</u>	<u>16</u>	14.3%
D. Total	183	183	0.0%
II. Salaries at June 30			
A. Total Annual Payroll	\$7,616,417	\$7,889,395	3.6%
B. Average Annual Compensation	\$81,026	\$86,697	7.0%
III. Benefits to Current Pensioners and			
Beneficiaries			
A. Total Annual Benefits	\$4,244,866	\$4,272,676	0.7%
B. Average Monthly Benefit Amount	\$4,717	\$4,685	(0.7)%
IV. Total Assets			
A. Actuarial Value	\$84,813,892	\$86,839,016	2.4%
B. Market Value	\$81,647,512	\$87,738,457	7.5%
V. Unfunded Actuarial Accrued	\$6,046,893	\$11,948,090	97.6%
Liability/(Surplus)			
VI. Budget Items	FY 2005-2006	FY 2006-2007	
A. Normal Cost as a Percent of Pay	25.08%	25.16%	0.3%
B. Amortization of UAAL	6.74%	12.86%	90.8%
C. Total Contribution	31.82%	38.02%	19.5%
VII. Funded Ratio (Based on Actuarial Value			
of Assets)	93%	88%	(5.4)%
VIII. Funded Ratio (Based on Market Value			
of Assets)	90%	89%	(1.1)%

Marin County Employees' Retirement Association Contribution Reconciliation for June 30, 2005 Valuation

Novato Fire Protection District

June 30, 2005 Valuation Payroll	\$7,889,395					
Projected Payroll for 2006-2007	\$8,397,651					
Contribution Reconciliation	Expected Unfunded				Contribution	Rate
Based on Rate from 2004 Valuation	\$6,548,182				\$2,672,132	31.82%
	Change in Unfunded	Change in	Change in	2006-2007		
	Accrued Liability	Normal Cost	<u>Rate</u>	Contribution		
Gains and Losses						
Investment losses	\$3,413,217	\$0	3.67%	\$308,194		
COLA gains	(\$1,809,049)	\$0	(1.95)	(\$163,754)		
Pay increase losses	\$983,941	\$0	1.06	\$89,015		
Retirant mortality and data						
refinement losses	\$1,694,926	\$0	1.82	\$152,837		
Other demographic losses	<u>\$1,116,873</u>	<u>\$0</u>	<u>1.20</u>	<u>\$100,772</u>		
Subtotal	\$5,399,908	\$0	5.80	\$487,064	\$3,159,196	37.62%
Other Factors						
Miscellaneous ¹	*	\$0	0.32	\$26,872		
Change in Normal Cost due to demographic factors	$\frac{\$0}{*}$	\$6,718	0.08	\$6,718		
Subtotal	*	\$6,718	0.40	\$33,591	\$3,192,787	38.02%
Total from 2005 Valuation	\$11,948,090	\$6,718	6.20%	\$520,654	\$3,192,787	38.02%

¹ Reflects impact of contribution rate lag and impact of unexpected changes in payroll on amortization contribution

* Included in Expected Unfunded

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<u>COMMENT A:</u> The District's contribution rate again significantly increased from 31.82% to 38.02%.

<u>COMMENT B</u>: There was a \$3.4 million dollar investment loss on actuarial value of assets. MCERA's actuarial rate of return was 4.3%. For actuarial loss purposes, we compare the actuarial rate of return to the System's 8.25% assumption, not zero.

<u>COMMENT C</u>: The overall funded ratio, using actuarial value of assets, decreased from 93% to 88%. Using market value, the funded ratio decreased from 90% to 89%.

<u>COMMENT D</u>: We valued the same benefits as in the 2004 valuation report summary. Please advise us if this is inaccurate.

<u>COMMENT E:</u> In the prior valuation policy, the amortization period was stated as remaining at 16 years as long as valuation assets exceeded accrued liabilities. This is no longer true. Thus, it may be appropriate to review the amortization period policy.

<u>COMMENT F:</u> All parties should understand that the 8.25% assumed investment return is a rate <u>net</u> of administrative expenses, investment expenses and payments made directly to retirants for retiree medical premium reimbursement (except for those payments made from the current Health Insurance Reserve).

FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES

Marin County Employees' Retirement Association Novato Fire Protection District 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: "Novato Fire Protection District 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 Novato 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.

Novato Fire Protection District

Financial Principles and Operational Techniques

(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 contribution method</u> which equalizes contributions between the generations.

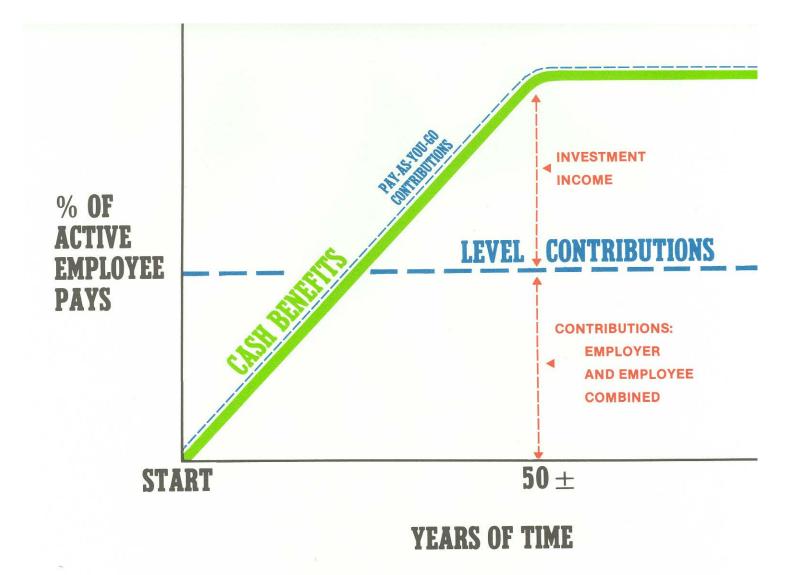
The <u>actuarial valuation</u> is the mathematical process by which the level contribution rate is determined. The flow of activity constituting the valuation may be summarized as follows:

A. <u>Covered people data, furnished by the System including:</u>

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 VALUATION RESULTS

Marin County Employees' Retirement Association **Novato Fire Protection District** June 30, 2005

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, 2006 are shown on the following pages.

Novato Fire Protection District

Computed Contribution Rates

(Expressed as Percents of Active Payroll)

Total Employer Contribution

Valuation Date	<u>2004</u>	<u>2005</u>
Fiscal Year	2005-2006	2006-2007
Miscellaneous	15.55%	16.79%
Safety	32.79%	39.48%
Overall	31.82%	38.02%

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. This year's gain (loss) is amortized over 16 years.

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

Novato Fire Protection District

Computed Contribution Rates

June 30, 2005

(Expressed as Percents of Active Payroll)

Elements of County Normal Cost

	<u>Safety</u>	Miscellaneous	<u>Overall</u>
Normal Retirement	22.46	16.93	22.10
Vested Deferred Retirement	3.71	2.28	3.62
Death-In-Service ¹	0.90	0.39	0.87
Disability	9.68	2.85	9.24
Contribution Refunds	0.51	0.36	0.50
Total Normal Cost	37.26	22.81	36.33
Less			
Employee Contributions ²	<u>11.32</u>	<u>9.13</u>	<u>11.17</u>
Equals			
Employer Normal Cost	25.94	13.68	25.16

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).

Marin County Employees' Retirement Association Novato Fire Protection District Member Contributions as of June 30, 2005

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

	(Percents of Pay)		
	Weighted Employee Contribution		
	<u>2004</u> <u>2005</u>		
Weighted employee contribution rate	11.21%	11.17%	

The above averages are shown prior to the 5% pick ups of employee contributions (subventions) that generally apply. We understand some management contributions are entirely picked up. For this purpose, we used employee rates supplied on the data tape given us by MCERA.

Marin County Employees' Retirement Association Novato Fire Protection District Unfunded Actuarial Accrued Liability June 30, 2005

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	\$6,046,893
(2)	Expected UAAL payment	(2,326)
(3)	Interest accrual [(1) * .0825 - (2) * .0404]	498,963
(4)	Expected UAAL at end of year: $(1) - (2) + (3)$	6,548,182
(5)	Actual UAAL at end of year	11,948,090
(6)	Gain (loss) from actuarial experience: (4) - (5)	(5,399,908)
(7)	Gain (loss) as percentage of actuarial accrued	
	liabilities at beginning of year	(5.94)%

Marin County Employees' Retirement Association **Novato Fire Protection District Gain/Loss on Unfunded Accrued Liability** June 30, 2005

Components of Actuarial Gain/(Loss) for the Year Ending June 30, 2005

Estimated Gain/(Loss) attributed to pay increases	(\$983,941)
Estimated Gain/(Loss) due to COLA increases	1,809,049
Estimated Gain/(Loss) attributed to employee turnover, mortality, retirement incidence, and miscellaneous factors	(1,116,873)
Estimated Gain/(Loss) due to retirant mortality and retirant data refinements	(1,694,926)
Estimated Gain/(Loss) attributed to investment experience	(3,413,217)
Total Estimated Experience Gain/(Loss)	(\$5,399,908)

Unfunded Actuarial Accrued Liability

Total Actuarial Accrued Liabilities	\$98,787,106
Asset allocated to funding	<u>86,839,016</u>
Unfunded Actuarial Accrued Liability	11,948,090



June 30, 2005

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.

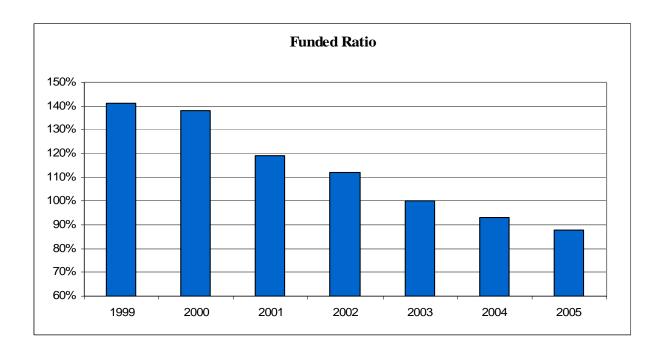
Novato Fire Protection District

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>
6/30/97	\$51,687	\$45,163	\$(6,524)	114%	4,459	(146.3)%
6/30/98	59,276	45,171	(14,105)	131%	5,097	(276.7)%
6/30/99	68,394	48,570	(19,824)	141%	5,199	(381.3)%
6/30/00	77,643	56,197	(21,446)	138%	5,726	(374.5)%
6/30/01	84,806	71,471	(13,335)	119%	6,331	(210.6)%
6/30/02	87,497	78,164	(9,333)	112%	6,119	(152.5)%
6/30/03	84,866	84,842	(24)	100%	6,811	(0.4)%
6/30/04*	84,814	88,626	3,812	96%	7,616	50.1%
6/30/04	84,814	90,861	6,047	93%	7,616	79.4%
6/30/05	86,839	98,787	11,948	88%	7,889	151.5%

(\$ in Thousands)

* Before assumption changes



Novato Fire Protection District

Actuarial Balance Sheet – June 30, 2005

Present Resources and Expected Future Resources

		<u>Total</u>
A. Actuarial value of system assets		\$86,839,016
B. Present value of expected future contributions		
1. For normal costs for present actives ¹	17,240,831	
2. For unfunded actuarial accrued liability	11,948,090	
3. Totals		29,188,921
C. Present value of expected future member		
contributions ¹		7,656,438
D. Total Present and Expected Future Resources		<u>\$123,684,375</u>

Present Value of Expected Future Benefit Payments and Reserve

A. To retirants and beneficiaries		\$68,575,519
B. To vested terminated members		746,510
C. To present active members		
1. Allocated to service rendered prior to		
valuation date	29,465,077	
2. Allocated to service likely to be rendered		
after valuation date	24,897,269	
3. Totals		54,362,346
D. Total Present Value of Expected Future		

D. Total Present Value of Expected Future Benefit Payments

<u>\$123,684,375</u>

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

SUMMARY OF BENEFIT PROVISIONS

&

VALUATION DATA SUBMITTED BY RETIREMENT SYSTEM

Marin County Employees' Retirement Association Novato Fire Protection District

Brief Summary of Benefit Provisions Evaluated

Effective June 30, 2005

- 1. <u>Membership Requirements</u> First day of employment.
- 2. <u>Final Compensation for Benefit Determination</u>

Highest consecutive twelve months of compensation earnable.

- 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 – Section 31676.16 (One-fiftieth times years of service times retirement age factor) will apply.

Safety - 3% at 50 (Section 31664.1)

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

- C. Maximum Benefit 100% of Final Average Compensation
- 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.

(Continued on Next Page)

Novato Fire Protection District

Brief Summary of Benefit Provisions Evaluated

Effective June 30, 2005

(Continued)

- 5. <u>Duty Disability</u>
 - A. <u>Eligibility</u> Immediate
 - B. <u>Benefit Formula</u> The greater 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
- B1. <u>Benefit</u> 50% of Final Compensation to a spouse
 - or
- A2. <u>Eligibility</u> Qualified for Service Retirement or Ordinary Disability.
- B2. <u>Benefit</u> 60% survivor benefit based on benefit due on member's date of death.

(Continued on Next Page)

Novato Fire Protection District

Brief Summary of Benefit Provisions Evaluated

Effective June 30, 2005

(Continued)

7. Death After Retirement

- A. Service or Disability Retirement
 - 60% of member's unmodified allowance (100% if Duty Disability) 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
 - 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 a 4% maximum increase.

10. Employer Contributions

Determined by Entry Age Normal cost method with funding of the Unfunded Actuarial Accrued Liability spread as a level percent of payroll over 16 years.

(Concluded on Next Page)

Novato Fire Protection District

Brief Summary of Benefit Provisions Evaluated

Effective June 30, 2005

(Concluded)

11. Member Contributions

Please refer to Appendix A for entry-age based rates. Member contributions cease upon attainment of 30 years of service.

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, 2005 Valuation

Reported Market Value of Assets

Cash/Short-term	\$25,748,719
Receivables	20,350,652
Stocks	841,357,695
Bonds	235,750,906
Real Estate	98,000,000
Miscellaneous	<u>1,148,530</u>
Total Market Value	<u>\$1,222,356,502</u>
Liabilities	<u>60,360,398</u>
Net Market Value	\$1,161,996,104

Revenues and Disbursements Among Applicable Reserves

Balance - Beginning of year	\$1,082,852,758
Revenues	
Employees' contributions	11,619,180
Employer contributions	30,877,430
Distributed & undistributed investment	
income (net of expenses)	103,507,009
Total Revenues	146,003,619
Disbursements	
Benefit payments	65,269,313
Refunds	276,913
Administrative Expense	<u>1,314,047</u>
Total Disbursements	<u>66,860,273</u>
Balance - End of year	\$1,161,996,104

Actuarial Value of Assets As of June 30, 2005

Fiscal							(1) Total	(2) Expected	(1-2)	Deferre	
Year	County	Member	Total	Total	Market	Average	Market	Market	Investment	d	Deferred
Ending	Contributions	Contributions	Contributions	Benefits	Value	Value	Return	Return	Gain	Factor	<u>Return</u>
2001.02	21 095 550	0.216.790	20 202 248	45 247 004	822 821 520	000 122 (22	((2) 1 (7, 207)	75 000 (00	(127 170 000)	0.2	(27.424.001)
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)	0.2	(27,434,001)
$2002-03^{1}$	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)	0.4	(25,095,366)
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	0.6	54,413,672
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	0.8	10,027,770
1. Total def	erred return										11,912,075
2. Market V	/alue										1,161,996,104
3. Smoothe	d Market Value (Ite	em 2 - Item 1)									1,150,084,029
4. Corridor	Limit										
a. 80% o	f Net Market Value	9									929,596,883
b. 120%	of Net Market Valu	le									1,394,395,325

5. Actuarial Value (Item 3 after corridor applied) Inclusive of Health Insurance Reserve

6. Reserves at Market Value

	Reserve	Actuarial	Actuarial
	Value	Value Ratio	Value
Marin County and Special Districts	\$867,972,374	0.9887	\$858,182,894
City of San Rafael	\$197,930,231	0.9887	\$195,697,862
Novato Fire Protection District	\$87,829,608	0.9887	\$86,839,016
Health Insurance Reserve	\$9,471,077	0.9887	\$9,364,257
Total	\$1,163,203,290		\$1,150,084,029

Recognition of						
Deferre	Deferred Return					
Valuation	Amount to be					
Date	Recognized					
6/30/2006	(\$19,336,851)					
6/30/2007	8,097,150					
6/30/2008	20,644,833					
6/30/2009	2,506,942					
Total	\$11,912,075					

1,150,084,029 \$1,163,203,290

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

Summary of Reserves and Other Liabilities June 30, 2005

Reserves and Liabilities

Employer Reserves	\$3,776,616
Employee Reserves	103,710,549
Death Benefit Reserves	674,401
Article 15.5 Reserves	1,693,674
Reserve for Pre 7/1/77 San Rafael Retirees	10,952,178
Retired Employees Reserve	318,771,774
Cost of Living Adjustment Reserves	244,703,809
Health Insurance Reserves	9,471,077
Contingency and other Reserves	58,160,164
Unrestricted Reserves	411,289,047
Security Deposits Payable	728,807
County Contribution Payable	673,630
Investments Payable	163,165,617
Other Payables	6,913,812
Total Liabilities	\$1,334,685,155

Novato Fire Protection District Summary of Reserves and Other Liabilities June 30, 2005

Total	\$98,787,106	\$86,839,016
Safety	<u>\$97,226,436</u>	<u>\$85,467,106</u>
Miscellaneous	\$1,560,670	\$1,371,910
	Accrued Liability	Assets

Novato Fire Protection District

Annual Benefit and Membership Distribution

Miscellaneous and Safety 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>Total</u>
35-39 NO.	1						1
AVG AMT	55,540						55,540
40-44 NO.	1		1				2
AVG AMT	35,694		34,655				35,175
45-49 NO.			1				1
AVG AMT			33,541				33,541
50-54 NO.	10	2	1		2		15
AVG AMT	73,057	37,467	30,222		29,621		59,664
55-59 NO.	16	3	1				20
AVG AMT	71,508	39,708	36,377				64,982
60 64 NO	5	10	2	4	2	1	24
60-64 NO. AVG AMT	,72,736	70,940	2 50,685	4 31,277	27,881	31,015	24 57,764
AVUAMI	72,750	70,740	50,005	51,277	27,001	51,015	57,704
65-69 NO.	2	1	3	1	2		9
AVG AMT	28,314	42,402	65,228	34,161	36,687		44,694
70-74 NO.				1	1		2
AVG AMT				33,606	20,049		26,827
1110111				55,000	20,017		20,027
75-79NO.					1		1
AVG AMT					34,446		34,446
80-84 NO.					1		1
AVG AMT					41,966		41,966
					,		,
Total NO.	35	16	9	6	9	1	76
AVG AMT	68,178	59,116	47,983	32,146	31,649	31,015	56,219

Novato Fire Protection District

Summary of Monthly Allowances Being Paid

Submitted for the June 30, 2005 Valuation

	Annual Allowances					
Service Retirement	<u>Number</u>	Total	<u>Average</u>			
Unmodified	42	2,941,019	70,024			
Option 1	0	0	0			
Option 2	1	6,973	6,973			
Option 3	0	0	0			
Total	43	2,947,992	68,558			
Ordinary Disability						
Unmodified	0	0	0			
Option 1	0	0	0			
Option 2	0	0	0			
Option 3	0	0	0			
Total	0	0	0			
Duty Disability						
Unmodified	28	1,151,372	41,120			
Option 1	0	0	0			
Option 2	0	0	0			
Option 3	0	0	0			
Total	28	1,151,372	41,120			
Beneficiary						
Unmodified	5	173,311	34,662			
Option 1	0	0	0			
Option 2	0	0	0			
Option 3	0	0	0			
Total	5	173,311	34,662			
TOTAL	76	\$ 4,272,676	\$ 56,219			

Miscellaneous and Safety

Novato Fire Protection District

Summary of Retired Members and Beneficiaries Included

In the June 30, 2005 Actuarial Valuation

		_	Averages			New Retirees Only		
Miscellaneous Members Annual		Annual	Annual	Attained	Age at		Average	Average
Retirees	<u>No.</u>	Allowance	Allowance	Age	Retirement	<u>No.</u>	Allowance	Age
6/30/2004	71	\$4,102,916	\$57,788	58.8	51.1	6	\$74,530	54.8
6/30/2005	71	\$4,099,365	\$57,738	59.7	51.3	1	\$57,738	50.4
Increase	0.0%	(0.1)%	(0.1)%					
Beneficiaries								
6/30/2004	4	\$141,950	\$35,488	61.1	N/A	N/A	N/A	N/A
6/30/2005	5	\$173,311	\$34,662	60.3	N/A	N/A	N/A	N/A
Increase	25.0%	22.1%	(2.3)%					
Total								
6/30/2004	75	\$4,244,866	\$56,598	58.9	51.1	6	\$74,530	54.8
6/30/2005	76	\$4,272,676	\$56,219	59.7	51.3	1	\$57,738	50.4
Increase	1.3%	0.7%	(0.7)%					

Novato Fire Protection District

Active Membership Summary

In the June 30, 2005 Actuarial Valuation

Active Miscellaneous

		_	Averages		
		Annual	Annual		
					Servic
	<u>No.</u>	Compensation	Compensation	Age	<u>e</u>
6/30/2004	7	\$423,264	\$60,466	44.7	5.6
6/30/2005	8	\$514,963	\$64,370	43.8	5.8
				(2.0)	
Percent Change	14.3%	21.7%	6.5%	%	3.6%

Active Safety

			Averages					
		Annual	Annual					
					Servic			
	<u>No.</u>	Compensation	Compensation	Age	<u>e</u>			
6/30/2004	87	\$7,193,152	\$82,680	36.1	7.6			
6/30/2005	83	\$7,374,432	\$88,849	37.2	8.6			
	(4.6)							
Percent Change	%	2.5%	7.5%	3.0%	13.2%			

Total Active

		_	Averages				
		Annual	Annual				
					Servic		
	<u>No.</u>	Compensation	Compensation	Age	<u>e</u>		
6/30/2004 Total	94	\$7,616,417	\$81,026	36.8	7.4		
6/30/2005 Total	91	\$7,889,395	\$86,697	37.8	8.3		
	(3.2)						
Percent Change	%	3.6%	7.0%	2.7%	12.2%		

Vested Deferreds and Reciprocals

		Valuation	Average Valuation		Servic
	<u>No.</u>	Compensation	Compensation	Age	<u>e</u>
6/30/2004 Total	14	\$818,682	\$58,477	39.3	3.3
6/30/2005 Total	16	\$919,372	\$57,461	39.2	2.8

Marin County Employees' Retirement Association Novato Fire Protection District Active Members June 30, 2005

By Attained Ages and Years of Service

Safety

Age						Years of Acc	crued Servic	e					
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>
25-29 NO.	0	4	7	1	2	1	0	0	0	0	0	0	15
TOT PAY	0	305,271	573,174	79,612	168,239	83,868	0	0	0	0	0	0	1,210,164
AVG PAY	0	76,318	81,882	79,612	84,119	83,868	0	0	0	0	0	0	80,678
30-34 NO.	0	5	9	4	1	5	0	0	0	0	0	0	24
TOT PAY	0	381,538	728,021	336,477	84,119	426,233	0	0	0	0	0	0	1,956,387
AVG PAY	0	76,308	80,891	84,119	84,119	85,247	0	0	0	0	0	0	81,516
35-39 NO.	0	0	1	1	2	7	5	1	0	0	0	0	17
TOT PAY	0	0	83,029	84,119	167,987	621,578	465,344	95,369	0	0	0	0	1,517,425
AVG PAY	0	0	83,029	84,119	83,993	88,797	93,069	95,369	0	0	0	0	89,260
40-44 NO.	0	0	2	0	0	2	1	4	0	0	0	0	9
TOT PAY	0	0	194,550	0	0	187,580	116,130	386,491	0	0	0	0	884,751
AVG PAY	0	0	97,275	0	0	93,790	116,130	96,623	0	0	0	0	98,306
45-49 NO.	0	1	0	1	0	2	0	3	1	0	0	0	8
TOT PAY	0	89,401	0	84,119	0	168,237	0	300,132	83,900	0	0	0	725,789
AVG PAY	0	89,401	0	84,119	0	84,118	0	100,044	83,900	0	0	0	90,724
50-54 NO.	0	0	0	0	0	1	0	2	1	2	1	0	7
TOT PAY	0	0	0	0	0	122,467	0	267,779	95,369	171,151	111,390	0	768,156
AVG PAY	0	0	0	0	0	122,467	0	133,890	95,369	85,575	111,390	0	109,737
55-59 NO.	0	0	0	0	0	0	0	0	0	2	0	0	2
TOT PAY	0	0	0	0	0	0	0	0	0	190,662	0	0	190,662
AVG PAY	0	0	0	0	0	0	0	0	0	95,331	0	0	95,331
60-64 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	121,097	121,097
AVG PAY	0	0	0	0	0	0	0	0	0	0	0	121,097	121,097
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.	0	10	19	7	5	18	6	10	2	4	1	1	83
TOT AMT	0	776,210	1,578,773	584,328	420,345	1,609,961	581,474	1,049,772	179,269	361,813	111,390	121,097	7,374,432
AVG AMT	0	77,621	83,093	83,475	84,069	89,442	96,912	104,977	89,634	90,453	111,390	121,097	88,849

Active Members June 30, 2005

By Attained Ages and Years of Service

Miscellaneous

Age					Ye	ars of Accru	ed 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>	Total
25-29 NO.	0	1	0	0	0	0	0	0	0	0	0	0	1
TOT PAY	0	49,310	0	0	0	0	0	0	0	0	0	0	49,310
AVG PAY	0	49,310	0	0	0	0	0	0	0	0	0	0	49,310
30-34 NO.	1	0	0	0	0	0	0	0	0	0	0	0	1
TOT PAY	45,437	0	0	0	0	0	0	0	0	0	0	0	45,437
AVG PAY	45,437	0	0	0	0	0	0	0	0	0	0	0	45,437
35-39 NO.	0	1	1	0	0	0	0	0	0	0	0	0	2
TOT PAY	0	49,017	78,686	0	0	0	0	0	0	0	0	0	127,703
AVG PAY	0	49,017	78,686	0	0	0	0	0	0	0	0	0	63,851
40-44 NO.	0	0	0	0	0	1	0	0	0	0	0	0	1
TOT PAY	0	0	0	0	0	51,283	0	0	0	0	0	0	51,283
AVG PAY	0	0	0	0	0	51,283	0	0	0	0	0	0	51,283
45-49 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
50-54 NO.	0	1	0	0	0	0	0	0	0	0	0	0	1
TOT PAY	0	100,289	0	0	0	0	0	0	0	0	0	0	100,289
AVG PAY	0	100,289	0	0	0	0	0	0	0	0	0	0	100,289
55-59 NO.	0	0	0	0	1	0	0	0	0	0	0	0	1
TOT PAY	0	0	0	0	49,310	0	0	0	0	0	0	0	49,310
AVG PAY	0	0	0	0	49,310	0	0	0	0	0	0	0	49,310
60-64 NO.	0	0	0	0	0	0	0	0	0	1	0	0	1
TOT PAY	0	0	0	0	0	0	0	0	0	91,631	0	0	91,631
AVG PAY	0	0	0	0	0	0	0	0	0	91,631	0	0	91,631
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	3	1	0	1	1	0	0	0	1	0	0	8
TOT AMT	45,437	198,616	78,686	0	49,310	51,283	0	0	0	91,631	0	0	514,963
AVG AMT	45,437	66,205	78,686	0	49,310	51,283	0	0	0	91,631	0	0	64,370

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 16 remaining installments.

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.

Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2005 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 Employees' Retirement Association

Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2005 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	<u>4.00%</u>
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

1.7%
5.4
7.2
3.5
2.5

50-Year Average 4.1%

Actuarial Assumptions Used for the June 30, 2005 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 Employees' Retirement Association

Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2005 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

Actuarial Assumptions Used for the June 30, 2005 Valuation

(Continued)

% of Active Members Separating with Next Year

		Pre-Retirement					
Retirement	<u>Withdraw</u>	val Vested Deferred			Death		
Ages	Miscellaneous	<u>Safety</u>	<u>Miscellaneous</u>	<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 Di	sability	Duty Disa	ability
	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, 2005 Valuation

(Continued)

<u>The post-retirement mortality table</u> used was 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 Tears)	% Dying Within Next Year		
Sample <u>Ages</u>	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, 2005 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	<u>Safety</u>
			<u>3% at 50</u>
50	6%	50	33%
51	2%	51	25%
52	2%	52	25%
53	2%	53	33%
54	3%	54	33%
55	4%	55	50%
56	6%	56	50%
57	8%	57	50%
58	9%	58	50%
59	12%	59	50%
60	19%	60	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

Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2005 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.

<u>Spouse Census</u> – 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% of the deferred vested members are reciprocal.

Post-Retirement COLA – Assumed 3.8%.

Accumulated Employee Contributions – Credited semiannual interest at 8.25%.

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				4-year
6/30/05	<u>6/30/04</u>	<u>6/30/03</u>	6/30/02	Average	<u>Average</u>
1.1%	1.4%	1.6%	1.2%	1.4%	1.3%
				4.25	4.25
7.0	2.3	1.0	2.8	3.4	3.3
				4.25	4.25
5.9	0.9	(0.6)	1.6	2.0	1.9
				0.5	0.5
3.6	11.8	11.3	(3.3)	8.8	5.7
				4.25	4.25
4.3	3.5	1.6	4.7	3.1	3.5
				8.25	8.25
3.2	2.1	0.0	3.5	1.8	2.2
				4.0	4.0
	1.1% 7.0 5.9 3.6 4.3	6/30/05 6/30/04 1.1% 1.4% 7.0 2.3 5.9 0.9 3.6 11.8 4.3 3.5	6/30/05 6/30/04 6/30/03 1.1% 1.4% 1.6% 7.0 2.3 1.0 5.9 0.9 (0.6) 3.6 11.8 11.3 4.3 3.5 1.6	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	6/30/05 $6/30/04$ $6/30/03$ $6/30/02$ Average $1.1%$ $1.4%$ $1.6%$ $1.2%$ $1.4%$ $1.1%$ $1.4%$ 4.25 4.25 7.0 2.3 1.0 2.8 3.4 7.0 2.3 1.0 2.8 3.4 4.25 1.6 2.0 0.5 5.9 0.9 (0.6) 1.6 2.0 5.9 0.9 (0.6) 1.6 2.0 3.6 11.8 11.3 (3.3) 8.8 4.25 4.3 3.5 1.6 4.7 3.2 2.1 0.0 3.5 1.8

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

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

Marin County Employees' Retirement Association Novato Fire Protection District 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)

<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 must be controlled.

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

Novato Fire Protection District

GASB No. 25 Disclosure Schedule of Funding Progress Retirement Benefits

(\$ in Thousands)

Valuation Date	Valuation <u>Assets</u>	Actuarial Accrued <u>Liability</u>	Unfunded \underline{AAL}	Funded <u>Ratio</u>	Member <u>Payroll</u>	UAAL Ratio to <u>Payroll</u>
6/30/98	\$59,276	\$45,171	\$(14,105)	131%	\$5,097	(276.7)%
6/30/99	68,394	48,570	(19,824)	141%	5,199	(381.3)%
6/30/00	77,643	56,197	(21,446)	138%	5,726	(374.5)%
6/30/01	84,806	71,471	(13,335)	119%	6,331	(210.6)%
6/30/02	87,497	78,164	(9,333)	112%	6,119	(152.5)%
6/30/03	84,866	84,842	(24)	100%	6,811	(0.4)%
6/30/04*	84,814	88,626	3,812	96%	7,616	50.1%
6/30/04	84,814	90,861	6,047	93%	7,616	79.4%
6/30/05	86,839	98,787	11,948	88%	7,889	151.5%

* Before assumption changes

GASB No. 25 Disclosure Schedule of Employer Contributions Retirement Benefits

	Actuarially
Year	Required
Ended	Contributions
June 30	(ARC)
	(000's)
1999	252
2000	273
2001	301
2002	383
2003 ¹	301
2004^{2}	762
2005 ³	1,819

¹ Estimate of ARC for 2003 is based on interpolated payroll and overall rate of 4.66%
² Estimate of ARC for 2004 is based on interpolated payroll and overall rate of 10.56%
³ Estimate of ARC for 2005 is based on interpolated payroll and overall rate of 23.46%

APPENDIX A:

MEMBER CONTRIBUTION RATES

Contribution Rates Assumed for Members

Safety

			Implicit	Limited To	
Age	Basic	COL	COL	Implicit COL	Total
16	7.36%	5.42%	3.45%	3.45%	10.81%
17	7.39%	5.44%	3.40%	3.40%	10.79%
18	7.42%	5.46%	3.34%	3.34%	10.76%
19	7.45%	5.49%	3.28%	3.28%	10.73%
20	7.48%	5.51%	3.22%	3.22%	10.70%
21	7.51%	5.53%	3.15%	3.15%	10.66%
22	7.56%	5.57%	3.22%	3.22%	10.78%
23	7.61%	5.60%	3.28%	3.28%	10.89%
24	7.66%	5.64%	3.35%	3.35%	11.01%
25	7.72%	5.68%	3.41%	3.41%	11.13%
26	7.78%	5.73%	3.47%	3.47%	11.25%
27	7.86%	5.79%	3.52%	3.52%	11.38%
28	7.93%	5.84%	3.56%	3.56%	11.49%
29	8.01%	5.90%	3.61%	3.61%	11.62%
30	8.10%	5.96%	3.65%	3.65%	11.75%
31	8.20%	6.04%	3.69%	3.69%	11.89%
32	8.30%	6.11%	3.72%	3.72%	12.02%
33	8.41%	6.19%	3.76%	3.76%	12.17%
34	8.52%	6.27%	3.79%	3.79%	12.31%
35	8.64%	6.36%	3.82%	3.82%	12.46%
36	8.76%	6.45%	3.86%	3.86%	12.62%
37	8.89%	6.55%	3.91%	3.91%	12.80%
38	9.02%	6.64%	3.95%	3.95%	12.97%
39	9.15%	6.74%	3.99%	3.99%	13.14%
40	9.28%	6.83%	4.04%	4.04%	13.32%
41	9.41%	6.93%	4.08%	4.08%	13.49%
42	9.55%	7.03%	4.13%	4.13%	13.68%
43	9.69%	7.13%	4.18%	4.18%	13.87%
44	9.83%	7.24%	4.24%	4.24%	14.07%
45	9.98%	7.35%	5.42%	5.42%	15.40%
46	10.12%	7.45%	5.21%	5.21%	15.33%
47	10.27%	7.56%	5.02%	5.02%	15.29%
48	10.43%	7.68%	4.82%	4.82%	15.25%
49	10.58%	7.79%	4.64%	4.64%	15.22%
50+	10.58%	7.79%	4.64%	4.64%	15.22%

Contribution Rates Assumed for Members

Miscellaneous

			Implicit	Limited To	
Age	Basic	COL	COL	Implicit COL	Total
16	6.16%	2.66%	0.14%	0.14%	6.30%
17	6.18%	2.67%	0.21%	0.21%	6.39%
18	6.20%	2.67%	0.28%	0.28%	6.48%
19	6.22%	2.68%	0.34%	3.40%	6.56%
20	6.24%	2.69%	0.39%	0.39%	6.63%
21	6.26%	2.70%	0.45%	0.45%	6.71%
22	6.28%	2.71%	0.52%	0.52%	6.80%
23	6.30%	2.72%	0.59%	0.59%	6.89%
24	6.33%	2.73%	0.65%	0.65%	6.98%
25	6.36%	2.74%	0.72%	0.72%	7.08%
26	6.40%	2.76%	0.79%	0.79%	7.19%
27	6.44%	2.78%	0.88%	0.88%	7.32%
28	6.48%	2.80%	0.95%	0.95%	7.43%
29	6.53%	2.82%	1.04%	1.04%	7.57%
30	6.57%	2.83%	1.12%	1.12%	7.69%
31	6.63%	2.86%	1.20%	1.20%	7.83%
32	6.68%	2.88%	1.29%	1.29%	7.97%
33	6.74%	2.91%	1.38%	1.38%	8.12%
34	6.80%	2.93%	1.48%	1.48%	8.28%
35	6.86%	2.96%	1.57%	1.57%	8.43%
36	6.93%	2.99%	1.66%	1.66%	8.59%
37	7.00%	3.02%	1.76%	1.76%	8.76%
38	7.07%	3.05%	1.86%	1.86%	8.93%
39	7.14%	3.08%	1.95%	1.95%	9.09%
40	7.22%	3.11%	2.05%	2.05%	9.27%
41	7.30%	3.15%	2.15%	2.15%	9.45%
42	7.38%	3.18%	2.25%	2.25%	9.63%
43	7.46%	3.22%	2.37%	2.37%	9.83%
44	7.54%	3.25%	2.48%	2.48%	10.02%
45	7.63%	3.29%	2.58%	2.58%	10.21%
46	7.72%	3.33%	2.70%	2.70%	10.42%
47	7.82%	3.37%	2.80%	2.80%	10.62%
48	7.91%	3.41%	2.92%	2.92%	10.83%
49	8.01%	3.46%	3.01%	3.01%	11.02%
50	8.12%	3.50%	4.00%	3.50%	11.62%
51	8.22%	3.55%	3.88%	3.55%	11.77%
52	8.33%	3.59%	3.76%	3.59%	11.92%
53	8.44%	3.64%	3.62%	3.62%	12.06%
54	8.55%	3.69%	3.47%	3.47%	12.02%
55+	8.55%	3.69%	3.47%	3.47%	12.02%
<i>33</i> ⁺	0.5570	5.07/0	J. + //0	J. + //0	12.02/0

APPENDIX B:

RETIREMENT AGE FACTORS

Retirement Age Factors

Miscellaneous

<u>31676.16</u>		
2%	at 55	
Age	Fract	
50	0.	

Age	Fraction
50	0.713
51	0.761
52	0.814
53	0.871
54	0.933
55	1.000
56	1.026
57	1.052
58	1.078
59	1.105
60	1.131
61	1.157
62	1.183
63+	1.209

Safety

<u>316</u>	<u>664.1</u>
3%	at 50
e	Frac

Age	Fraction
41	0.6258
42	0.6625
43	0.7004
44	0.7397
45	0.7805
46	0.8226
47	0.8678
48	0.9085
49	0.9522
50+	1.0000

NOTE: All rates are assumed to be non-integrated