

**MARIN COUNTY EMPLOYEES'
RETIREMENT ASSOCIATION
Novato Fire Protection District
ANNUAL ACTUARIAL VALUATION
June 30, 2003**



Marin County Employees' Retirement Association

Novato Fire Protection District

June 30, 2003 Actuarial Valuation

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December 19, 2003

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 Actuarial Valuation as of June 30, 2003 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, 2004.

	Safety	Miscellaneous	Overall
Normal Costs	23.91%	11.39%	23.49%
Unfunded Amortization	(0.03)%	(0.01)%	(0.03)%
TOTAL	23.88%	11.38%	23.46%

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 \$8.9 million, which reflects 11.4% of related actuarial accrued liabilities as of June 30, 2002.

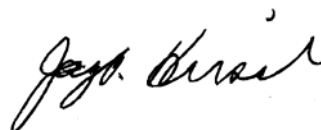
The cooperation of staff in furnishing materials requested for this valuation is deeply acknowledged with appreciation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY



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



Jay D. Hirsch, E.A. F.S.A.

Marin County Employees' Retirement Association
Novato Fire Protection District

Summary of Significant Valuation Results

	<u>June 30, 2002</u>	<u>June 30, 2003</u>	<u>Percent Change</u>
I. Total Membership			
A. Active Members	78	86	7.5%
B. Pensioners & Beneficiaries	59	68	15.3%
C. Vested Deferreds	<u>8</u>	<u>11</u>	37.5%
D. Total	145	165	13.8%
II. Salaries at June 30			
A. Total Annual Payroll	\$6,119,227	\$6,811,488	11.3%
B. Average Annual Compensation	\$78,452	\$79,203	1.0%
III. Benefits to Current Pensioners and Beneficiaries			
A. Total Annual Benefits	\$2,822,512	\$3,490,723	23.7%
B. Average Monthly Benefit Amount	\$3,987	\$4,278	7.3%
IV. Total Assets			
A. Actuarial Value	\$87,496,776	\$84,865,795	(3.0)%
B. Market Value	\$73,153,000	\$71,699,654	(1.9)%
V. Unfunded Actuarial Accrued Liability/(Surplus)	\$(9,332,318)	\$(23,811)	(99.7)%
VI. Budget Items	FY 2003-2004	FY 2004-2005	
A. Normal Cost as a Percent of Pay	23.22%	23.49%	1.2%
B. Amortization of UAAL	(12.66)%	(0.03)%	99.8%
C. Total Contribution	10.56%	23.46%	122.2%
VII. Funded Ratio (Based on Actuarial Value of Assets)	112%	100%	
VIII. Funded Ratio (Based on Market Value of Assets)	94%	85%	

Marin County Employees' Retirement Association

Novato Fire Protection District

Comments & Recommendations

June 30, 2003

COMMENT A: The District's contribution rate significantly increased from 10.56% to 23.46%. There was a \$6.0 million dollar investment loss on actuarial value of assets and heavier retirement incidence at early ages than assumed (presumably due to the relatively new "3% at 50" benefit). The actuarial rate of return was 1.56%. For actuarial loss purposes, we compare to the System's 8.25% assumption not zero.

COMMENT B: The overall funded ratio, using actuarial value of assets, decreased from 112% to 100%. Using market value, the funded ratio decreased from 94% to 85%.

COMMENT C: Heads Up! Please apprise all interested parties that it is close to certain that rates will increase in next year's 2004 valuation. System-wide, there are \$172 million in deferred losses, not reflected in the 2003 valuation, due to actuarial smoothing of assets.

COMMENT D: We valued the same benefits as in the 2002 valuation report summary.

COMMENT E: In the 2002 valuation policy, the amortization period was stated as remaining at 16 years as long as valuation assets exceeded accrued liabilities. Next year, it is doubtful that the funded ratio will remain above 100%. Thus, it may be appropriate to review the amortization period policy.

COMMENT F: In addition to the high number of new retirements, there were a very large number of new hires (22), given that the total number of actives at the valuation date was 86.

COMMENT G: We have estimated the contribution made for GASB purposes, based on interpolated valuation payroll and the computed rates in the June 30, 2001 valuation.

**FINANCIAL PRINCIPLES
AND
OPERATIONAL TECHNIQUES**

Novato Fire Protection District

Financial Principles and Operational Techniques

Promises Made, and To Be Paid For. 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?

Or the future taxpayers, who happen to be in Novato at the time the IOU becomes a cash demand, years and decades later?

The principle of level percent of payroll financing intends that this year’s taxpayers contribute the money to cover the IOUs being handed out this year. By following this principle, the employer contribution rate will remain approximately level from generation to generation (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 3rd 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).

Computing Contributions To Support System Benefits. 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 an actuarial valuation and a funding method.

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.

Reconciling Differences Between Assumed Experience and Actual Experience. 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 inflation which defies reliable prediction.

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

The financing diagram 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 increasing contribution method; and the level contribution method which equalizes contributions between the generations.

The actuarial valuation 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. + Assumptions concerning future experience in various risk areas, which are established by the Board after consulting with the actuary

D. + The funding method for employer contributions (the long-term, planned pattern for employer contributions)

E. + Mathematically combining the assumptions, the funding method, and the data

F. = Determination of:

Plan Financial Position and/or

Employer's New Contribution Rate

VALUATION RESULTS

Novato Fire Protection District

June 30, 2003

FUNDING OBJECTIVE

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

CONTRIBUTION RATES

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

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

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

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

Marin County Employees' Retirement Association

Novato Fire Protection District

Computed Contribution Rates

(Expressed as Percents of Active Payroll)

Total Employer Contribution

Valuation Date	<u>2003</u>	<u>2002</u>
Fiscal Year	2004-2005	2003-2004
Miscellaneous	11.38%	11.59%
Safety	23.88%	10.48%
Overall	23.46%	10.56%

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.

Marin County Employees' Retirement Association

Novato Fire Protection District

Computed Contribution Rates

June 30, 2003

(Expressed as Percents of Active Payroll)

Elements of County Normal Cost

	<u>Safety</u>	<u>Miscellaneous</u>	<u>Overall</u>
Normal Retirement	21.56	14.16	21.31
Vested Deferred Retirement	3.88	3.08	3.85
Death-In-Service ¹	0.47	0.41	0.47
Disability	8.75	2.94	8.55
Contribution Refunds	<u>0.45</u>	<u>0.37</u>	<u>0.45</u>
Total Normal Cost	35.11	20.96	34.63
Less			
Employee Contributions ²	<u>11.20</u>	<u>9.57</u>	<u>11.14</u>
Equals			
Employer Normal Cost	23.91	11.39	23.49

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, 2003

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

	(Percents of Pay)	
	<u>Weighted Employee Contribution</u>	
	<u>2002</u>	<u>2003</u>
Weighted employee contribution rate	12.00%	11.14 %

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, 2003

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-to-year fluctuations are common. Numbers are in thousands.

(1) UAAL* at beginning of year	\$ (9,332,318)
(2) Expected UAAL payment	(1,129,478)
(3) Interest accrual	(724,285)
(4) Expected UAAL at end of year: (1) - (2) + (3)	(8,927,125)
(5) Actual UAAL at end of year	(23,811)
(6) Gain (loss) from actuarial experience: (4) - (5)	(8,903,314)
(7) Gain (loss) as percentage of actuarial accrued liabilities at beginning of year	(11.4)%
Investment Loss	6,005,709
Loss from non-investment areas	2,921,416

Marin County Employees' Retirement Association

Novato Fire Protection District

Gain/Loss on Unfunded Accrued Liability

June 30, 2003

Components of Actuarial (Gain)/Loss for the Year Ending June 30, 2003

Estimated (Gain)/Loss attributed to pay increases	\$14,500
Estimated (Gain)/Loss attributed to employee turnover, mortality, retirement incidence, and miscellaneous factors	2,906,916
Estimated (Gain)/Loss attributed to investment experience	<u>6,005,709</u>
Total Estimated Experience (Gain)/Loss	\$8,927,125

Unfunded Actuarial Accrued Liability

Total actuarial accrued liabilities	\$84,841,984
Assets allocated to funding	<u>84,865,795</u>
Unfunded Actuarial Accrued Liability	\$(23,811)



Novato Fire Protection District

Funding Progress Indicators

June 30, 2003

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.

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

1. The ratio of valuation assets to the actuarial present value of credited projected benefits allocated in the proportion accrued service is to projected total service – a plan continuation indicator.
2. The ratio of the unfunded actuarial present value of credited projected benefits to member payroll – 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 of actuarial assumptions.

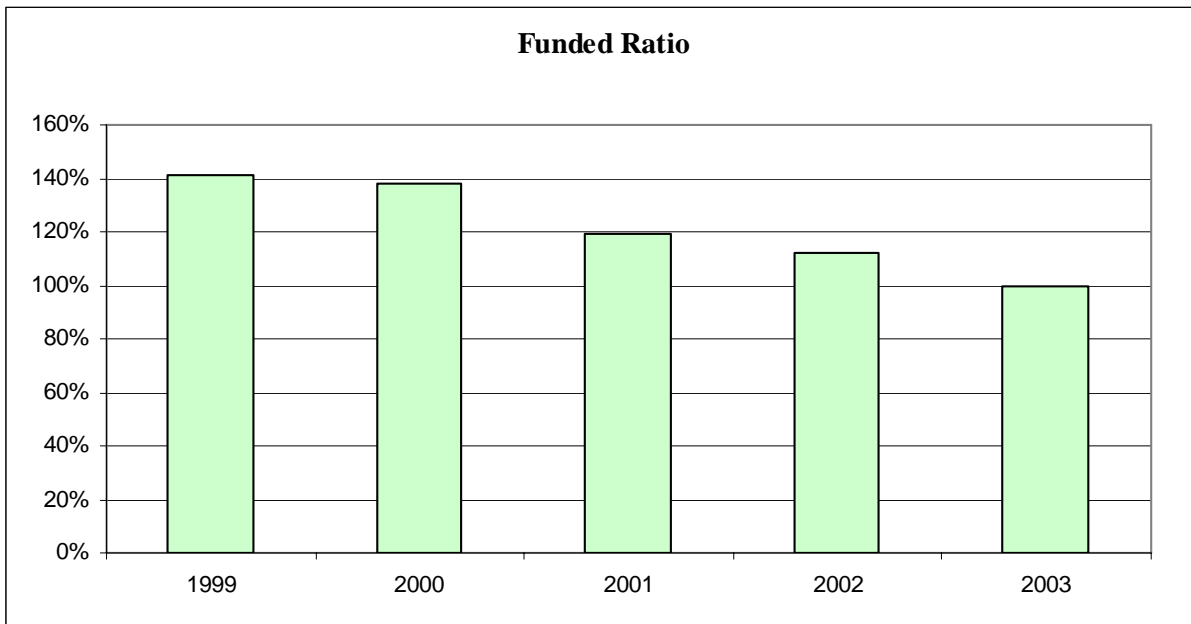
Marin County Employees' Retirement Association

Novato Fire Protection District

Funding Progress Indicators – Historic Comparison

(\$ in Thousands)

<u>Valuation Date</u>	<u>Valuation Assets</u>	<u>Actuarial Accrued Liability</u>	<u>Unfunded AAL</u>	<u>Funded Ratio</u>	<u>Member Payroll</u>	<u>UAAL Ratio to 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)%



Marin County Employees' Retirement Association

Novato Fire Protection District

Actuarial Balance Sheet – June 30, 2003

Present Resources and Expected Future Resources

	<u>Total</u>
A. Actuarial value of system assets	\$84,865,795
B. Present value of expected future contributions	
1. For normal costs for present actives ¹	12,773,497
2. For unfunded actuarial accrued liability	<u>(23,811)</u>
3. Totals	12,749,686
C. Present value of expected future member contributions ¹	<u>6,057,759</u>
D. Total Present and Expected Future Resources	\$103,673,240

Present Value of Expected Future Benefit Payments and Reserve

A. To retirants and beneficiaries	\$55,604,342
B. To vested terminated members	565,250
C. To present active members	
1. Allocated to service rendered prior to valuation date	28,672,392
2. Allocated to service likely to be rendered after valuation date	<u>18,831,256</u>
3. Totals	47,503,648
D. Total Present Value of Expected Future Benefit Payments	\$103,673,240

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, 2003

1. Membership Requirements – First day of employment.

2. Final Compensation for Benefit Determination
Highest consecutive twelve months of compensation earnable.

3. Service Requirement
 - A. Eligibility: 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. Eligibility – Five years of continuous service.
 - B. Benefit Formula – 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, 2003

(Continued)

5. Duty Disability

A. Eligibility – Immediate

B. Benefit Formula – Minimum of 50% of Final Compensation or service retirement benefit, eligible to be received at time of disability.

6. Pre-retirement Death Benefit

A. Eligibility – None.

B. Benefit – 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. Eligibility – Duty-related death

Benefit – 50% of Final Compensation to a spouse

or

A2. Eligibility – Qualified for Service Retirement or Ordinary Disability.

B2. Benefit – 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, 2003

(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
 - 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)

Marin County Employees' Retirement Association

Novato Fire Protection District

Brief Summary of Benefit Provisions Evaluated

Effective June 30, 2003

(Concluded)

11. Member Contributions

Please refer to Appendix A for entry-age based rates.

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.

Marin County Employees' Retirement Association

Summary of Reported Asset Information

Submitted for the June 30, 2003 Valuation

(in thousands)

Reported Market Value of Assets

Cash/Short-term	\$136,614,869
Receivables	11,339,913
Stocks	624,103,902
Bonds	227,641,887
Real Estate	92,300,000
Miscellaneous	<u>1,153,415</u>
Total Market Value	1,093,153,986
Liabilities	157,662,526
Net Market Value	\$935,491,460

Revenues and Disbursements Among Applicable Reserves

Balance – Beginning of year	\$833,821,520
Revenues	
Employees' contributions	10,348,913
Employer contributions	134,960,478
Distributed & undistributed investment income (net of expenses)	<u>8,589,782</u>
Total Revenues	153,899,173
Disbursements	
Benefit payments	50,719,302
Refunds	492,588
Administrative Expense	<u>1,017,343</u>
Total Disbursements	52,229,231
Balance – End of year	\$935,491,460

Marin County Employees' Retirement Association

Actuarial Value of Assets As of June 30, 2003

Fiscal Year Ending	County Contributions	Member Contributions	Total Contributions	Total Benefits	Market Value	Average Value	(1) Total Market Return (Net)	(2) Expected Market Return (Net)	(1-2) Investment Gain (Loss)	Deferred Factor	Deferred Return
1999-00	18,399,413	7,102,424	25,501,837	36,071,898	956,103,376	871,000,728	95,751,495	71,857,560	23,893,935	0.2	4,778,787
2000-01	18,064,245	7,324,467	25,388,712	38,936,735	911,123,573	954,447,152	(31,431,780)	78,741,920	(110,173,700)	0.4	(44,069,480)
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)	0.6	(82,302,004)
2002-03	134,960,478 ¹	10,348,913	145,309,392 ¹	51,211,890	935,491,460	852,252,760	7,572,439	70,310,853	(62,738,414)	0.8	(50,190,731)

1. Total deferred return	(\$171,783,428)
2. Market Value	935,491,460
3. Smoothed Market Value (Item 2 - Item 1)	1,107,274,888
4. Corridor Limit	
a. 80% of Net Market Value	748,393,168
b. 120% of Net Market Value	1,122,589,752
5. Actuarial Value (Item 3 after corridor applied) Inclusive of Health Insurance Reserve	1,107,274,888
6. Reserves at Market Value	935,491,460

	Reserve Value	Actuarial Value Ratio	Actuarial Value
Marin County and Special Districts	\$699,280,311	1.1847	\$828,438,395
San Rafael	\$156,691,161	1.1847	\$185,632,244
Novato Fire Protection District	\$71,634,753	1.1847	\$84,865,795
Health Insurance Reserve	<u>\$7,038,443</u>	1.1847	<u>\$8,338,454</u>
Total	\$934,644,668		\$1,107,274,888

Recognition of Deferred Return	
Valuation Date	Amount to be Recognized
6/30/2004	(57,237,637)
6/30/2005	(62,016,424)
6/30/2006	(39,981,684)
6/30/2007	<u>(12,547,683)</u>
Total	(171,783,428)

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

Marin County Employees' Retirement Association

Summary of Reserves and Other Liabilities

June 30, 2003

Employer Reserves	\$45,163,072
Employee Reserves	92,934,684
Death Benefit Reserves	648,721
Article 15.5 Reserves	1,589,184
Reserve for Pre 7/1/77 San Rafael Retirees	9,416,084
Retired Employees Reserve	256,060,027
Cost of Living Adjustment Reserves	207,966,042
Health Insurance Reserves	7,038,443
Contingency and other Reserves	46,732,233
Unrestricted Reserves	267,096,177
Security Deposits Payable	702,276
County Contribution Payable	479,643
Investments Payable	48,223,265
Other Payables	<u>6,278,845</u>
Total Liabilities	<u>\$990,328,698</u>

Marin County Employees' Retirement Association

Novato Fire Protection District

Summary of Reserves and Other Liabilities

June 30, 2003

	<u>Accrued Liability</u>	<u>Assets</u>
Miscellaneous	\$1,120,232	\$1,120,546
Safety	<u>\$83,721,752</u>	<u>\$83,745,249</u>
Total	\$84,841,984	\$84,865,795

Novato Fire Protection District Retirees and Beneficiaries
Miscellaneous and Safety

Age Group	Years of Retirement					Total
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	
40-44	1 34,647		1 31,519			2 33,083
45-49			1 31,863			1 31,863
50-54	10 63,014	3 35,477	2 31,350		1 28,444	16 51,732
55-59	17 67,241	2 58,776		1 30,656	2 28,525	22 61,289
60-64	6 54,378	8 63,315	2 33,639	2 27,207	3 25,206	21 49,052
65-69			2 19,172		1 45,060	3 27,801
70-74						
75-79				1 33,436		1 33,436
80-84					2 34,847	2 34,847
Total	34 62,769	13 56,192	8 28,963	4 29,626	9 30,652	68 51,334

Marin County Employees' Retirement Association

Novato Fire Protection District

Summary of Monthly Allowances Being Paid

Submitted for the June 30, 2003 Valuation

Miscellaneous and Safety

<u>Service Retirement</u>	<u>Annual Allowances</u>		
	<u>Number</u>	<u>Total</u>	<u>Average</u>
Unmodified	38	2,436,422	64,116
Option 1	0	0	0
Option 2	1	6,769	6,769
Option 3	0	0	0
Total	39	2,443,191	62,646
<u>Ordinary Disability</u>			
Unmodified	0	0	0
Option 1	0	0	0
Option 2	0	0	0
Option 3	0	0	0
Total	0	0	0
<u>Duty Disability</u>			
Unmodified	27	981,177	36,340
Option 1	0	0	0
Option 2	0	0	0
Option 3	0	0	0
Total	27	981,177	36,340
<u>Beneficiary</u>			
Unmodified	2	66,355	33,178
Option 1	0	0	0
Option 2	0	0	0
Option 3	0	0	0
Total	2	66,355	33,178
TOTAL	68	3,490,723	51,334

Marin County Employees' Retirement Association

Novato Fire Protection District

Active Membership Summary

In the June 30, 2003 Actuarial Valuation

Active Miscellaneous

			Averages		
	<u>No.</u>	<u>Annual Compensation</u>	<u>Annual Compensation</u>	<u>Age</u>	<u>Service</u>
6/30/2002	6	\$362,740	\$60,123	47.7	6.0
6/30/2003	4	\$238,378	\$59,595	47.2	8.4
Increase	(33.3) oz	(34.3)%	(0.9)%		

Active Safety

			Averages		
	<u>No.</u>	<u>Annual Compensation</u>	<u>Annual Compensation</u>	<u>Age</u>	<u>Service</u>
6/30/2002	72	\$5,756,487	\$79,951	39.5	11.4
6/30/2003	82	\$6,573,110	\$80,160	37.2	8.9
Increase	13.9%	14.2%	0.3%		

TOTAL ACTIVE

			Averages		
	<u>No.</u>	<u>Annual Compensation</u>	<u>Annual Compensation</u>	<u>Age</u>	<u>Service</u>
6/30/2002	80	\$6,119,227	\$76,490	40.1	11.0
6/30/2003	86	\$6,811,488	\$79,203	37.7	8.9
Increase	7.5%	11.3%	3.5%		

Marin County Employees' Retirement Association
Novato Fire Protection District
Active Members June 30, 2003
By Attained Ages and Years of Service

Safety

Age Group	Years of Accrued Service												Total
	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Up	
20-24 NO.	1	0	0	0	0	0	0	0	0	0	0	0	1
TOT PAY	70,325	0	0	0	0	0	0	0	0	0	0	0	70,325
AVG PAY	70,325	0	0	0	0	0	0	0	0	0	0	0	70,325
25-29 NO.	10	4	2	2	0	0	0	0	0	0	0	0	18
TOT PAY	702,352	286,587	149,220	153,720	0	0	0	0	0	0	0	0	1,291,879
AVG PAY	70,235	71,647	74,610	76,860	0	0	0	0	0	0	0	0	71,771
30-34 NO.	6	2	2	2	2	3	2	0	0	0	0	0	19
TOT PAY	423,883	141,929	148,510	166,172	152,456	233,957	167,631	0	0	0	0	0	1,434,539
AVG PAY	70,647	70,965	74,255	83,086	76,228	77,986	83,816	0	0	0	0	0	75,502
35-39 NO.	2	0	1	1	1	3	9	0	0	0	0	0	17
TOT PAY	115,196	0	74,610	76,228	77,459	235,833	706,568	0	0	0	0	0	1,285,893
AVG PAY	57,598	0	74,610	76,228	77,459	78,611	78,508	0	0	0	0	0	75,641
40-44 NO.	2	0	0	1	2	0	1	2	0	0	0	0	8
TOT PAY	148,005	0	0	78,825	152,260	0	105,646	171,126	0	0	0	0	655,862
AVG PAY	74,003	0	0	78,825	76,130	0	105,646	85,563	0	0	0	0	81,983
45-49 NO.	0	1	0	0	0	1	1	3	2	2	0	0	10
TOT PAY	0	71,641	0	0	0	110,098	76,813	331,244	160,345	217,316	0	0	967,457
AVG PAY	0	71,641	0	0	0	110,098	76,813	110,415	80,173	108,658	0	0	96,746
50-54 NO.	0	0	0	0	0	0	0	0	0	5	0	0	5
TOT PAY	0	0	0	0	0	0	0	0	0	464,079	0	0	464,079
AVG PAY	0	0	0	0	0	0	0	0	0	92,816	0	0	92,816
55-59 NO.	0	0	0	0	0	0	0	0	0	1	1	1	3
TOT PAY	0	0	0	0	0	0	0	0	0	90,182	114,183	118,039	322,404
AVG PAY	0	0	0	0	0	0	0	0	0	90,182	114,183	118,039	107,468
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	80,672	0	0	80,672
AVG PAY	0	0	0	0	0	0	0	0	0	80,672	0	0	80,672
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.	21	7	5	6	5	7	13	5	2	9	1	1	82
TOT AMT	1,459,761	500,157	372,340	474,944	382,174	579,889	1,056,658	502,370	160,345	852,249	114,183	118,039	6,573,110
AVG AMT	69,512	71,451	74,468	79,157	76,435	82,841	81,281	100,474	80,173	94,694	114,183	118,039	80,160

Marin County Employees' Retirement Association
Novato Fire Protection District
 Active Members June 30, 2003
 By Attained Ages and Years of Service

Miscellaneous

Age Group	Years of Accrued Service												Total
	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Up	
30-34 NO.	1	0	0	0	0	0	0	0	0	0	0	0	1
TOT PAY	70,325	0	0	0	0	0	0	0	0	0	0	0	70,325
AVG PAY	70,325	0	0	0	0	0	0	0	0	0	0	0	70,325
35-39 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
40-44 NO.	0	0	0	1	0	0	0	0	0	0	0	0	1
TOT PAY	0	0	0	44,488	0	0	0	0	0	0	0	0	44,488
AVG PAY	0	0	0	44,488	0	0	0	0	0	0	0	0	44,488
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	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
55-59 NO.	0	0	1	0	0	0	0	0	0	0	0	0	1
TOT PAY	0	0	42,917	0	0	0	0	0	0	0	0	0	42,917
AVG PAY	0	0	42,917	0	0	0	0	0	0	0	0	0	42,917
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	80,648	0	0	80,648
AVG PAY	0	0	0	0	0	0	0	0	0	80,648	0	0	80,648
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	0	1	1	0	0	0	0	0	1	0	0	4
TOT AMT	70,325	0	42,917	44,488	0	0	0	0	0	80,648	0	0	238,378
AVG AMT	70,325	0	42,917	44,488	0	0	0	0	0	80,648	0	0	59,594

ACTUARIAL COST METHODS, ACTUARIAL ASSUMPTIONS

AND

DEFINITIONS OF TECHNICAL TERMS

Marin County Employees' Retirement Association

Novato Fire Protection District

Actuarial Cost Methods - June 30, 2003

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.

Financing of Unfunded Actuarial Accrued Liability. 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.

Deferred Member Actuarial Accrued Liability. 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, 2003 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)

Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2003 Valuation

(Continued)

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

The investment return rate 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%

The general inflation rate 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	
<u>10 Year Moving Averages</u>	
June 30, 1963	1.4%
June 30, 1973	3.7%
June 30, 1983	8.4%
June 30, 1993	3.8%
June 30, 2003	2.4%
50-Year Average	3.9%

Marin County Employees' Retirement Association

Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2003 Valuation

(Continued)

Compensation increase rates 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

<u>Age</u>	<u>Miscellaneous</u>	<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, 2003 Valuation

(Continued)

Rates of separation from active membership 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	<u>Miscellaneous Men</u>		
	Attained Age		
	<u>Under 40</u>	<u>40-49</u>	<u>50-60</u>
0	12.0%	9.0%	7.0%
1	9.0	7.0	7.0
2	5.5	5.5	5.5
3	5.0	5.0	5.0
4	4.0	4.0	4.0

Years of Completed Service	<u>Miscellaneous Women</u>				
	Attained Age				
	<u>Under 35</u>	<u>35-40</u>	<u>40-44</u>	<u>45-49</u>	<u>50-60</u>
0	15.0%	15.0%	15.0%	10.0%	10.0%
1	13.5	11.0	9.0	6.0	6.0
2	6.0	6.0	6.0	6.0	6.0
3	6.0	6.0	6.0	6.0	5.0
4	5.0	5.0	5.0	5.0	5.0

Years of Completed Service	<u>Safety</u>					
	Attained Age					
	<u>Under 25</u>	<u>25-30</u>	<u>30-55</u>	<u>35-40</u>	<u>45-50</u>	<u>50-60</u>
0	10.0%	10.0%	8.0%	8.0%	6.0%	6.0%
1	5.0	4.5	4.5	6.0	6.0	6.0
2	5.0	4.0	4.0	5.0	5.0	5.0
3	5.0	4.0	4.0	4.0	4.0	4.0
4	4.0	4.0	4.0	4.0	4.0	2.5

Marin County Employees' Retirement Association

Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2003 Valuation

(Continued)

% of Active Members
Separating with Next Year

(at least 5 years)

Retirement Ages							Pre-Retirement		
	<u>Withdrawal</u>			<u>Vested Deferred</u>			<u>Death</u>		
	<u>Miscellaneous</u>		<u>Safety</u>	<u>Miscellaneous</u>		<u>Safety</u>	<u>Miscellaneous</u>		<u>Safety</u>
	<u>Male</u>	<u>Female</u>		<u>Male</u>	<u>Female</u>		<u>Male</u>	<u>Female</u>	<u>(Duty)</u>
20	3.00%	3.00%	1.13%	3.00%	4.75%	2.06%	0.05%	0.03%	0.04%
25	3.00%	3.00%	1.13%	3.00%	4.75%	2.24%	0.07%	0.03%	0.04%
30	3.00%	3.00%	0.75%	3.00%	4.65%	3.53%	0.09%	0.04%	0.04%
35	3.00%	2.50%	0.56%	2.70%	3.75%	3.41%	0.09%	0.05%	0.05%
40	1.50%	1.75%	0.56%	2.70%	2.75%	1.14%	0.12%	0.08%	0.06%
45	1.00%	1.00%	0.56%	1.70%	2.75%	1.70%	0.17%	0.10%	0.08%
50	0.00%	0.00%	0.00%	1.20%	2.25%	0.27%	0.28%	0.15%	0.10%
55	0.00%	0.00%	0.00%	1.10%	1.00%	0.00%	0.48%	0.25%	0.18%
60	0.00%	0.00%	0.00%	1.10%	1.00%	0.00%	0.86%	0.48%	0.00%
65	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.56%	0.93%	0.00%

Ordinary Disability

Duty Disability

	<u>Ordinary Disability</u>			<u>Duty Disability</u>		
	<u>Miscellaneous</u>		<u>Safety</u>	<u>Miscellaneous</u>		<u>Safety</u>
	<u>Male</u>	<u>Female</u>		<u>Male</u>	<u>Female</u>	
20	.00%	.00%	.02%	.04%	.05%	.11%
25	.01%	.01%	.03%	.05%	.10%	.15%
30	.02%	.02%	.05%	.10%	.15%	.36%
35	.03%	.03%	.07%	.11%	.20%	.55%
40	.05%	.05%	.16%	.16%	.25%	1.18%
45	.09%	.09%	.26%	.21%	.30%	1.14%
50	.18%	.18%	.36%	.26%	.35%	1.28%
55	.31%	.31%	.46%	.31%	.35%	3.9%
60	.51%	.51%	-0-	.41%	.35%	-0-
65	.7900%	.7900%	.0000%	.4600%	.3500%	.0000%

Marin County Employees' Retirement Association
Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2003 Valuation

(Continued)

The post-retirement mortality table used were the 1994 Group Annuity Mortality Basic Tables, with one-year setback for Males. This assumption is used to measure the probabilities of members dying after retirement and the probabilities of each benefit payment being made after retirement. The 1981 Disabled Life Mortality Tables are used for disabilitants, with a one-year setback for Safety and two-year setback for Miscellaneous. Related values are shown below.

Sample	Future Life Expectancy (Years)		% Dying Within Next Year	
	Non-disabled Retirees		Non-disabled Retirees	
<u>Ages</u>	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
45	35.8	39.2	.15%	.10%
50	31.1	34.4	.23	.14
55	26.5	29.7	.40	.23
60	22.2	25.1	.71	.44
65	18.1	20.8	1.29	.86
70	14.5	16.8	2.17	1.37
75	11.2	13.1	3.41	2.27

Sample	Future Life Expectancy (Years)		% Dying Within Next Year	
	Disabled Retirees		Disabled Retirees	
<u>Ages</u>	<u>Misc.</u>	<u>Safety</u>	<u>Misc.</u>	<u>Safety</u>
45	24.1	27.9	1.94%	0.64 %
50	21.6	23.9	2.29	0.86
55	19.1	20.0	2.67	1.30
60	16.8	16.7	3.12	2.60
65	14.5	14.1	3.58	3.50
70	12.2	11.7	4.11	4.22
75	9.7	9.2	4.96	5.22

Marin County Employees' Retirement Association
Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2003 Valuation

(Continued)

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

<u>Retirement Ages</u>	<u>Miscellaneous</u>		<u>Retirement Ages</u>	<u>Safety</u>
	<u>Male</u>	<u>Female</u>		
50	4.48%	6.76%	50	33%
51	2.21	2.40	51	25
52	1.86	2.10	52	25
53	1.92	2.50	53	33
54	2.00	2.91	54	33
55	3.40	3.87	55	50
56	4.90	6.94	56	50
57	8.65	7.50	57	50
58	11.21	8.00	58	50
59	16.50	8.50	59	50
60	30.00	12.19	60	100
61	14.89	16.55		
62	30.00	20.00		
63	21.21	20.00		
64	26.56	20.00		
65	50.00	40.00		
66	37.27	25.00		
67	39.51	25.00		
68	35.92	25.00		
69	35.92	25.00		
70	100.00	100.00		

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, 2003 Valuation

(Continued)

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

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

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

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

Post-Retirement COLA Assumed: 3.65%

Definitions of Technical Terms

Actuarial Accrued Liability. 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".

Actuarial Assumptions. 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.

Accrued Service. Service credited under the System which was rendered before the date of the actuarial valuation.

Actuarial Equivalent. 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.

Actuarial Cost Method. 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".

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

Actuarial Present Value. 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.

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

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

(Concluded on Next Page)

Novato Fire Protection District

Definitions of Technical Terms

(Concluded)

Unfunded Actuarial Accrued Liability. 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**

Marin County Employees' Retirement Association

Novato Fire Protection District

**GASB No. 25 Disclosure
Schedule of Funding Progress
Retirement Benefits**

(\$ in Thousands)

<u>Valuation Date</u>	<u>Valuation Assets</u>	<u>Actuarial Accrued Liability</u>	<u>Unfunded AAL</u>	<u>Funded Ratio</u>	<u>Member Payroll</u>	<u>UAAL Ratio to 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)%

Marin County Employees' Retirement Association

Novato Fire Protection District

**GASB No. 25 Disclosure
Schedule of Employer Contributions
Retirement Benefits**

<u>Year Ended June 30</u>	Actuarially Required Contributions <u>(ARC)</u> (000's)	<u>Percentage Contributed</u>
1998	327	100%
1999	252	100%
2000	273	100%
2001	301	100%
2002	383	100%
2003 ¹	301	100%

¹Estimate of ARC for 2003 is based on interpolated payroll and overall rate of 4.66%

APPENDIX A:
MEMBER CONTRIBUTION RATES

Marin County Employees' Retirement Association
Novato Fire Protection District

Contribution Rates Assumed for Members

Safety

<u>Age</u>	<u>Basic</u>	<u>COL</u>	Implicit <u>COL</u>	Limited To <u>Implicit COL</u>	<u>Total</u>
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%

Marin County Employees' Retirement Association
Novato Fire Protection District

Contribution Rates Assumed for Members

Miscellaneous

<u>Age</u>	<u>Basic</u>	<u>COL</u>	<u>Implicit COL</u>	<u>Limited To Implicit COL</u>	<u>Total</u>
16	6.16%	2.66%	0.14%	0.14%	6.30%
17	6.18%	2.67%	0.21%	21.00%	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%	10.40%	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%

APPENDIX B:
RETIREMENT AGE FACTORS

Marin County Employees' Retirement Association
Novato Fire Protection District

Retirement Age Factors

Miscellaneous

31676.16

2% at 55

<u>Age</u>	<u>Fractio n</u>
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	1.072
59	1.105
60	1.131
61	1.157
62	1.183
63+	1.209

Safety

31664.1

3% at 50

<u>Age</u>	<u>Fractio n</u>
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