

MARIN COUNTY EMPLOYEES'
RETIREMENT ASSOCIATION
Novato Fire Protection District
ANNUAL ACTUARIAL VALUATION

June 30, 2004

REVISED



Marin County Employees' Retirement Association

Novato Fire Protection District

June 30, 2004 Actuarial Valuation

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GABRIEL, ROEDER, SMITH & COMPANY
CONSULTANTS & ACTUARIES

9171 Towne Centre Drive • Suite 440 • San Diego, California 92122 • 858-535-1300 • FAX 858-535-1415

April 1, 2005

REVISED

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

Members of the Board:

Results of the Annual Actuarial Valuation as of June 30, 2004 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, 2005.

| | Safety | Miscellaneous | Overall |
|-----------------------|---------------|----------------------|----------------|
| Normal Costs | 25.76% | 13.75% | 25.08% |
| Unfunded Amortization | 7.03% | 1.80% | 6.74% |
| TOTAL | 32.79% | 15.55% | 31.82% |

| | | | |
|---------------------------|--------|--------|--------|
| Before Assumption Changes | 28.57% | 13.67% | 27.73% |
|---------------------------|--------|--------|--------|

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 \$2.9 million, which reflects 3.4% of related actuarial accrued liabilities as of June 30, 2003.

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, 2003</u> | <u>June 30, 2004</u> | <u>Percent Change</u> |
|--|----------------------|----------------------|-----------------------|
| I. Total Membership | | | |
| A. Active Members | 86 | 94 | 9.3% |
| B. Pensioners & Beneficiaries | 68 | 75 | 10.3% |
| C. Vested Deferreds | <u>11</u> | <u>14</u> | 27.3% |
| D. Total | 165 | 183 | 10.9% |
| II. Salaries at June 30 | | | |
| A. Total Annual Payroll | \$6,811,488 | \$7,616,417 | 11.8% |
| B. Average Annual Compensation | \$79,203 | \$81,026 | 2.3% |
| III. Benefits to Current Pensioners and Beneficiaries | | | |
| A. Total Annual Benefits | \$3,490,723 | \$4,244,866 | 21.6% |
| B. Average Monthly Benefit Amount | \$4,278 | \$4,717 | 10.3% |
| IV. Total Assets | | | |
| A. Actuarial Value | \$84,865,795 | \$84,813,892 | (0.1)% |
| B. Market Value | \$71,699,654 | \$81,647,512 | 13.9% |
| V. Unfunded Actuarial Accrued Liability/(Surplus) | \$(23,811) | \$6,046,893 | Not Calculable |
| VI. Budget Items | FY 2004-2005 | FY 2005-2006 | |
| A. Normal Cost as a Percent of Pay | 23.49% | 25.08% | 6.8% |
| B. Amortization of UAAL | (0.03)% | 6.74% | Not Calculable |
| C. Total Contribution | 23.46% | 31.82% | 35.6% |
| VII. Funded Ratio (Based on Actuarial Value of Assets) | 100% | 93% | (7.0)% |
| VIII. Funded Ratio (Based on Market Value of Assets) | 85% | 90% | 5.9% |

**Marin County Employees' Retirement Association
Novato Fire Protection District
Contribution Reconciliation for June 30, 2004 Valuation**

| | |
|--|-------------|
| June 30, 2004 Valuation Payroll | \$7,616,417 |
| Projected Payroll for 2005-2006 | \$8,107,087 |

| <u>Contribution Reconciliation</u> | <u>Expected Unfunded</u> | | | | <u>Contribution</u> | <u>Rate</u> |
|--|---|----------------------------------|---------------------------|-----------------------------------|---------------------|---------------|
| Based on Rate from 2003 Valuation | \$924,407 | | | | \$1,901,923 | 23.46% |
| | <u>Change in Unfunded Accrued Liability</u> | <u>Change in Normal Cost</u> | <u>Change in Rate</u> | <u>2005-2006 Contribution</u> | | |
| <u>Gains and Losses</u> | | | | | | |
| Investment losses | \$4,113,942 | \$0 | 4.59% | \$372,115 | | |
| COLA losses/(gains) | (\$1,052,317) | \$0 | -1.17% | (\$94,853) | | |
| Pay increase losses/(gains) | \$283,648 | \$0 | 0.32% | \$25,943 | | |
| Retirant mortality and data refinement losses/(gains) | \$1,099,160 | \$0 | 1.23% | \$99,717 | | |
| Other demographic losses/(gains) | <u>(\$1,556,862)</u> | <u>\$0</u> | <u>-1.75%</u> | <u>(\$141,874)</u> | | |
| Subtotal | \$2,887,571 | \$0 | 3.22% | \$261,048 | \$2,162,971 | 26.68% |
| <u>Other Factors</u> | | | | | | |
| Miscellaneous ² | * | \$0 | 1.04% | \$79,211 | | |
| Change in Normal Cost due to demographic factors | <u>\$0</u> | <u>\$811</u> | <u>0.01%</u> | <u>\$811</u> | | |
| Subtotal | * | \$811 | 1.05% | \$80,022 | \$2,242,992 | 27.73% |
| <u>Assumption Change</u> | | | | | | |
| Tier 1 COLA from 3.65% to 3.80% | \$1,961,395 | \$48,643 | 2.78% | \$225,377 | | |
| Change in withdrawal assumption for Misc. with 5+ years | \$136 | \$0 | 0.03% | \$2,432 | | |
| Other ³ | <u>\$273,384</u> | <u>\$81,071</u> | <u>1.28%</u> | <u>\$103,771</u> | | |
| Subtotal | \$2,234,915 | \$129,714 | 4.09% | \$331,580 | \$2,574,572 | 31.82% |
| Total from 2004 Valuation | \$6,046,893 | | | | \$2,574,572 | 31.82% |

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

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

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

* Included in Expected Unfunded

Marin County Employees' Retirement Association

Novato Fire Protection District

Comments & Recommendations

June 30, 2004

COMMENT A: At their March 9 meeting, the MCERA Retirement Board decided to change the average annual assumed COLA to 3.8%. This necessitated a revised valuation. The District's contribution rate significantly increased from 23.46% to 31.82%. In the original valuation issued in February, the rate was 35.03%. The MCERA Board had changed selected assumptions pursuant to an Experience Investigation study. Prior to assumption changes, the rate was 27.73%. The biggest part of the assumption rate increase has to do with increasing the assumed COLA adjustment from 3.65% to 3.8% -- this had an impact of increasing the rate by 2.78%. The District may wish to analyze whether employee rates should be increased to reflect any potential impact by such assumption change. Currently, employee contributions are less than 1/3 of the total normal cost.

COMMENT B: There was a \$4.1 million dollar investment loss on actuarial value of assets. The actuarial rate of return was 3.45%. For actuarial loss purposes, we compare to the System's 8.25% assumption not zero.

COMMENT C: The overall funded ratio, using actuarial value of assets, decreased from 100% to 93%. Using market value, the funded ratio increased from 85% to 90%.

COMMENT D: We valued the same benefits as in the 2003 valuation report summary.

COMMENT E: The annual retirement allowances increased by 21.6% from what was reported to us in the 2003 valuation.

COMMENT F: 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.

**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 grand-children 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.

Marin County Employees' Retirement Association
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

**% OF
ACTIVE
EMPLOYEE
PAYS**

START

50 ±

YEARS OF TIME

CASH BENEFITS

**PAY-AS-YOU-GO
CONTRIBUTIONS**

LEVEL CONTRIBUTIONS

**INVESTMENT
INCOME**

**CONTRIBUTIONS:
EMPLOYER
AND EMPLOYEE
COMBINED**

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

Novato Fire Protection District

June 30, 2004

FUNDING OBJECTIVE

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

CONTRIBUTION RATES

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

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

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

Computed contributions for the fiscal year beginning July 1, 2005 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>2004</u> | <u>2003</u> |
|--------------------|------------------|------------------|
| Fiscal Year | 2005-2006 | 2004-2005 |
| Miscellaneous | 15.55% | 11.38% |
| Safety | 32.79% | 23.88% |
| Overall | 31.82% | 23.46% |

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, 2004

(Expressed as Percents of Active Payroll)

Elements of County Normal Cost

| | <u>Safety</u> | <u>Miscellaneous</u> | <u>Overall</u> |
|-------------------------------------|---------------|----------------------|----------------|
| Normal Retirement | 22.38 | 17.20 | 22.09 |
| Vested Deferred Retirement | 3.73 | 2.20 | 3.65 |
| Death-In-Service ¹ | 0.89 | 0.39 | 0.86 |
| Disability | 9.63 | 2.89 | 9.25 |
| Contribution Refunds | <u>0.45</u> | <u>0.34</u> | <u>0.44</u> |
| Total Normal Cost | 37.08 | 23.02 | 36.29 |
| Less | | | |
| Employee Contributions ² | <u>11.32</u> | <u>9.27</u> | <u>11.21</u> |
| Equals | | | |
| Employer Normal Cost | 25.76 | 13.75 | 25.08 |

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, 2004

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

| | (Percents of Pay) | |
|-------------------------------------|---------------------------------------|-------------|
| | <u>Weighted Employee Contribution</u> | |
| | <u>2003</u> | <u>2004</u> |
| Weighted employee contribution rate | 11.14% | 11.21% |

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, 2004

Derivation of Experience Gain (Loss)

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

| | |
|---|-------------|
| (1) UAAL* at beginning of year | \$(23,811) |
| (2) Expected UAAL payment | (913,286) |
| (3) Interest accrual $[(1) * .0825 - (2) * .0404]$ | 34,932 |
| (4) Impact of assumption changes | 2,234,915 |
| (5) Expected UAAL at end of year: $(1) - (2) + (3) + (4)$ | 3,159,322 |
| (6) Actual UAAL at end of year | 6,046,893 |
| (7) Gain (loss) from actuarial experience: $(5) - (6)$ | (2,887,571) |
| (8) Gain (loss) as percentage of actuarial accrued liabilities at beginning of year | (3.40)% |

Marin County Employees' Retirement Association

Novato Fire Protection District

Gain/Loss on Unfunded Accrued Liability

June 30, 2004

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

| | |
|---|------------------|
| Estimated (Gain)/Loss attributed to pay increases | \$283,648 |
| Estimated (Gain)/Loss due to COLA increases | (1,052,317) |
| Estimated (Gain)/Loss attributed to employee turnover, mortality, retirement incidence, and miscellaneous factors | (1,556,862) |
| Estimated (Gain)/Loss due to retirant mortality and retirant data refinements | 1,099,160 |
| Estimated (Gain)/Loss attributed to investment experience | <u>4,113,942</u> |
| Total Estimated Experience (Gain)/Loss | \$2,887,571 |

Unfunded Actuarial Accrued Liability

| | |
|--------------------------------------|-------------------|
| Total Actuarial Accrued Liabilities | \$90,860,785 |
| Asset allocated to funding | <u>84,813,892</u> |
| Unfunded Actuarial Accrued Liability | \$6,046,893 |



Novato Fire Protection District

Funding Progress Indicators

June 30, 2004

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

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

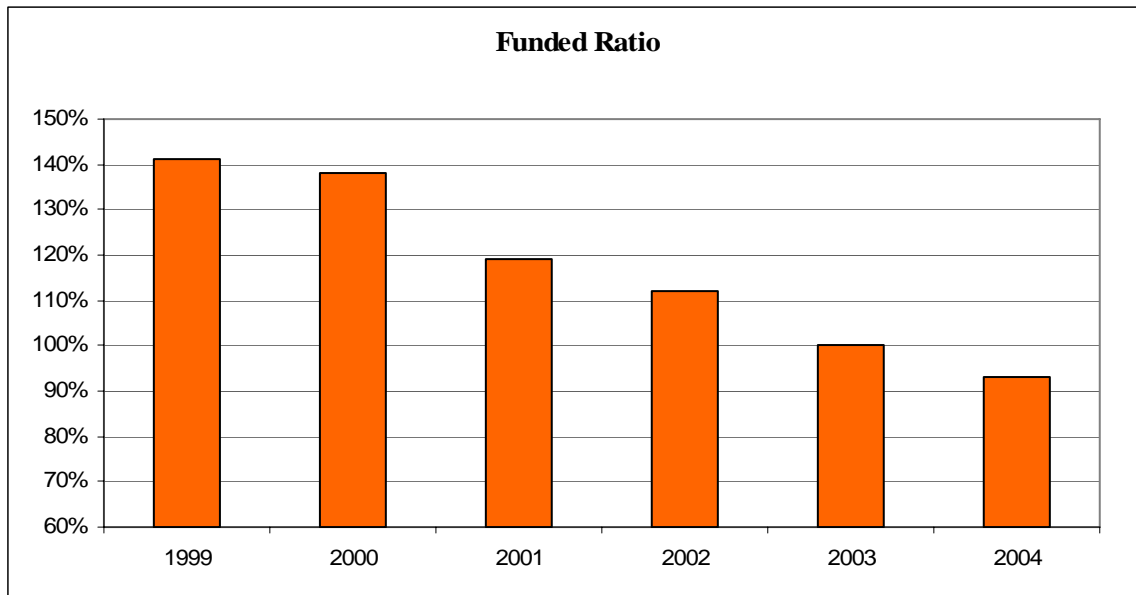
Novato Fire Protection District

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)% |
| 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% |

* Before assumption changes



Marin County Employees' Retirement Association

Novato Fire Protection District

Actuarial Balance Sheet – June 30, 2004

Present Resources and Expected Future Resources

| | | <u>Total</u> |
|---|------------------|-----------------------------|
| A. Actuarial value of system assets | | \$84,813,892 |
| B. Present value of expected future contributions | | |
| 1. For normal costs for present actives ¹ | 16,900,005 | |
| 2. For unfunded actuarial accrued liability | <u>6,046,893</u> | |
| 3. Totals | | 22,946,898 |
| C. Present value of expected future member contributions ¹ | | <u>7,552,229</u> |
| D. Total Present and Expected Future Resources | | <u>\$115,313,019</u> |

Present Value of Expected Future Benefit Payments and Reserve

| | | |
|--|-------------------|-----------------------------|
| A. To retirants and beneficiaries | | \$63,219,668 |
| B. To vested terminated members | | 687,470 |
| C. To present active members | | |
| 1. Allocated to service rendered prior to valuation date | 26,953,647 | |
| 2. Allocated to service likely to be rendered after valuation date | <u>24,452,234</u> | |
| 3. Totals | | <u>51,405,881</u> |
| D. Total Present Value of Expected Future Benefit Payments | | <u>\$115,313,019</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, 2004

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, 2004

(Continued)

5. Duty Disability

A. Eligibility - Immediate

B. Benefit Formula - 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. 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, 2004

(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, 2004

(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.

Marin County Employees' Retirement Association

Summary of Reported Asset Information

Submitted for the June 30, 2004 Valuation

Reported Market Value of Assets

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

Revenues and Disbursements Among Applicable Reserves

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

Marin County Employees' Retirement Association

Actuarial Value of Assets As of June 30, 2004

| Fisca | | | | | | | (1) | (2) | (1-2) | | |
|--|--------------------------|----------------------|--------------------------|----------------|---------------|--------------|---------------|---------------|---------------|---------------|-----------------|
| Yea | Count | Membe | Tota | Tota | Marke | Average | Tota | Expecte | Investmen | Deferre | Deferre |
| <u>Ending</u> | <u>Contributions</u> | <u>Contributions</u> | <u>Contributions</u> | <u>Benefit</u> | <u>Value</u> | <u>Value</u> | <u>Return</u> | <u>Return</u> | <u>Gai</u> | <u>Factor</u> | <u>Return</u> |
| 2000-01 | 18,064,245 | 7,324,467 | 25,388,712 | 38,936,735 | 911,123,573 | 954,447,152 | (31,431,780) | 78,741,920 | (110,173,700) | 0.2 | (\$22,034,740) |
| 2001-02 | 21,985,559 | 8,316,789 | 30,302,348 | 45,347,094 | 833,821,520 | 909,123,622 | (62,167,307) | 75,002,699 | (137,170,006) | 0.4 | (54,868,002) |
| 2002-03 | 134,960,478 ¹ | 10,348,913 | 145,309,391 ¹ | 51,211,890 | 935,491,460 | 852,252,760 | 7,572,439 | 70,310,853 | (62,738,414) | 0.6 | (37,643,048) |
| 2003-04 | 26,890,964 | 10,247,043 | 37,138,007 | 57,897,146 | 1,082,852,758 | 938,557,373 | 168,120,437 | 77,430,983 | 90,689,454 | 0.8 | 72,551,563 |
| 1. Total deferred | | | | | | | | | | | (41,994,228) |
| 2. Market Value | | | | | | | | | | | 1,082,852,758 |
| 3. Smoothed Market Value (Item 2 - Item | | | | | | | | | | | 1,124,846,986 |
| 4. Corridor Limit | | | | | | | | | | | |
| a. 80% of Net Market | | | | | | | | | | | 866,282,206 |
| b. 120% of Net Market Value | | | | | | | | | | | 1,299,423,310 |
| 5. Actuarial Value (Item 3 after corridor applied) Inclusive of Health Insurance Reserve | | | | | | | | | | | 1,124,846,986 |
| 6. Reserves at Market | | | | | | | | | | | \$1,082,852,758 |

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

| Recognition of Deferred | |
|----------------------------|----------------------------------|
| Valuation <u>Date</u> | Amount to be <u>Recognize</u> |
| 6/30/2005 | (\$43,878,533) |
| 6/30/2006 | (21,843,793) |
| 6/30/2007 | 5,590,208 |
| 6/30/2008 | <u>18,137,891</u> |
| Tota | (\$41,994,228) |

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

Marin County Employees' Retirement Association

Summary of Reserves and Other Liabilities

June 30, 2004

| | |
|--|----------------------------|
| Employer Reserves | \$32,778,787 |
| Employee Reserves | 97,557,420 |
| Death Benefit Reserves | 671,291 |
| Article 15.5 Reserves | 1,611,424 |
| Reserve for Pre 7/1/77 San Rafael Retirees | 9,676,412 |
| Retired Employees Reserve | 265,033,408 |
| Cost of Living Adjustment Reserves | 218,606,966 |
| Health Insurance Reserves | 7,612,849 |
| Contingency and other Reserves | 54,142,638 |
| Unrestricted Reserves | 395,161,564 |
| Security Deposits Payable | 745,487 |
| County Contribution Payable | 601,146 |
| Investments Payable | 50,245,403 |
| Other Payables | <u>1,593,977</u> |
| Total Liabilities | <u>\$1,136,038,771</u> |

Marin County Employees' Retirement Association

Novato Fire Protection District

Summary of Reserves and Other Liabilities

June 30, 2004

| | <u>Accrued Liability</u> | <u>Assets</u> |
|---------------|--------------------------|---------------------|
| Miscellaneous | \$1,345,630 | \$1,256,077 |
| Safety | <u>\$89,515,155</u> | <u>\$83,557,815</u> |
| Total | \$90,860,785 | \$84,813,892 |

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> | <u>25-29</u> | |
| 35-39 NO. | 1 | | | | | | 1 |
| AVG AMT | 54,990 | | | | | | 54,990 |
| 40-44 NO. | 1 | | 1 | | | | 2 |
| AVG AMT | 35,340 | | 32,150 | | | | 33,745 |
| 45-49 NO. | | | 1 | | | | 1 |
| AVG AMT | | | 32,500 | | | | 32,500 |
| 50-54 NO. | 12 | 2 | 1 | | 1 | | 16 |
| AVG AMT | 67,549 | 36,907 | 29,318 | | 29,582 | | 58,957 |
| 55-59 NO. | 14 | 3 | 1 | | 1 | | 19 |
| AVG AMT | 69,108 | 39,080 | 34,635 | | 29,073 | | 60,445 |
| 60-64 NO. | 6 | 10 | 1 | 5 | 2 | 1 | 25 |
| AVG AMT | 82,480 | 60,330 | 49,024 | 31,079 | 27,604 | 29,822 | 55,505 |
| 65-69 NO. | 2 | 2 | 1 | 1 | 2 | | 8 |
| AVG AMT | 28,034 | 80,675 | 6,904 | 32,206 | 130,114 | | 64,594 |
| 70-74 NO. | | | | | 1 | | 1 |
| AVG AMT | | | | | 19,277 | | 19,277 |
| 75-79NO. | | | | | 1 | | 1 |
| AVG AMT | | | | | 34,105 | | 34,105 |
| 80-84 NO. | | | | | 1 | | 1 |
| AVG AMT | | | | | 40,352 | | 40,352 |
| Total NO. | 36 | 17 | 6 | 6 | 9 | 1 | 75 |
| AVG AMT | 67,205 | 56,218 | 30,755 | 31,267 | 51,981 | 29,822 | 56,598 |

Marin County Employees' Retirement Association

Novato Fire Protection District

Summary of Monthly Allowances Being Paid

Submitted for the June 30, 2004 Valuation

Miscellaneous and Safety

| Service Retirement | Annual Allowances | | |
|---------------------|-------------------|---------------------|------------------|
| | <u>Number</u> | <u>Total</u> | <u>Average</u> |
| Unmodified | 43 | \$ 2,901,592 | \$ 67,479 |
| Option 1 | 0 | 0 | 0 |
| Option 2 | 1 | 6,904 | 6,904 |
| Option 3 | 0 | 0 | 0 |
| Total | 44 | 2,908,496 | 66,102 |
| | | | |
| 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 | 27 | 1,194,419 | 44,238 |
| Option 1 | 0 | 0 | 0 |
| Option 2 | 0 | 0 | 0 |
| Option 3 | 0 | 0 | 0 |
| Total | 27 | 1,194,419 | 44,238 |
| | | | |
| Beneficiary | | | |
| Unmodified | 4 | 141,950 | 35,488 |
| Option 1 | 0 | 0 | 0 |
| Option 2 | 0 | 0 | 0 |
| Option 3 | 0 | 0 | 0 |
| Total | 4 | 141,950 | 35,488 |
| | | | |
| TOTAL | 75 | \$ 4,244,866 | \$ 56,598 |

Marin County Employees' Retirement Association

Novato Fire Protection District

Summary of Retired Members and Beneficiaries Included

In the June 30, 2004 Actuarial Valuation

| Average | | | | | | New Retirees Only | | |
|----------------------------------|--------|-------------|-----------|----------|------------|-------------------|-----------|---------|
| | | Annual | Annual | Attained | Age at | Average | | Average |
| | No. | Allowance | Allowance | Age | Retirement | No. | Allowance | Age |
| Miscellaneous and Safety Members | | | | | | | | |
| Retirees | | | | | | | | |
| 6/30/2003 | 66 | \$3,424,368 | \$51,884 | 58.5 | 50.9 | 8 | \$67,061 | 56.7 |
| 6/30/2004 | 71 | \$4,102,916 | \$57,788 | 58.8 | 51.1 | 6 | \$74,530 | 54.8 |
| Increase | 7.6% | 19.8% | 11.4% | | | | | |
| Beneficiaries | | | | | | | | |
| 6/30/2003 | 2 | \$66,355 | \$33,178 | 66.1 | NA | NA | NA | NA |
| 6/30/2004 | 4 | \$141,950 | \$35,488 | 61.1 | NA | NA | NA | NA |
| Increase | 100.0% | 113.9% | 7.0% | | | | | |
| Total 6/30/03 | 68 | \$3,490,723 | \$51,334 | 58.7 | 50.9 | 8 | \$67,061 | 56.7 |
| Total 6/30/04 | 75 | \$4,244,866 | \$56,598 | 58.9 | 51.1 | 6 | \$74,530 | 54.8 |
| Increase | 10.3% | 21.6% | 10.3% | | | | | |

Marin County Employees' Retirement Association

Novato Fire Protection District

Active Membership Summary

In the June 30, 2004 Actuarial Valuation

Active Miscellaneous

| | <u>No.</u> | <u>Annual Compensation</u> | <u>Averages</u> | | |
|----------------|------------|--------------------------------|--------------------------------|------------|----------------|
| | | | <u>Annual Compensation</u> | <u>Age</u> | <u>Service</u> |
| 6/30/2003 | 4 | \$238,378 | \$59,595 | 47.2 | 8.4 |
| 6/30/2004 | 7 | \$423,264 | \$60,466 | 44.7 | 5.6 |
| Percent Change | 75.0% | 77.6% | 1.5% | (5.3)% | (33.1)% |

Active Safety

| | <u>No.</u> | <u>Annual Compensation</u> | <u>Averages</u> | | |
|----------------|------------|--------------------------------|--------------------------------|------------|----------------|
| | | | <u>Annual Compensation</u> | <u>Age</u> | <u>Service</u> |
| 6/30/2003 | 82 | \$6,573,110 | \$80,160 | 37.2 | 8.9 |
| 6/30/2004 | 87 | \$7,193,152 | \$82,680 | 36.1 | 7.6 |
| Percent Change | 6.1% | 9.4% | 3.1% | (2.8)% | (15.1)% |

Total Active

| | <u>No.</u> | <u>Annual Compensation</u> | <u>Averages</u> | | |
|-----------------|------------|--------------------------------|--------------------------------|------------|----------------|
| | | | <u>Annual Compensation</u> | <u>Age</u> | <u>Service</u> |
| 6/30/2003 Total | 86 | \$6,811,488 | \$79,203 | 37.7 | 8.9 |
| 6/30/2004 Total | 94 | \$7,616,417 | \$81,026 | 36.8 | 7.4 |
| Percent Change | 9.3% | 11.8% | 2.3% | | |

Vested Deferreds and Recipients

| | | | | | |
|------------------------|-----------|-----------|-----------|-------------|------------|
| 6/30/2003 Total | 11 | NA | NA | 40.1 | 4.0 |
| 6/30/2004 Total | 14 | NA | NA | 39.3 | 3.3 |

Marin County Employees' Retirement Association
Novato Fire Protection District
Active Members June 30, 2004
By Attained Ages and Years of Service

Safety

| Age | Years of Accrued Service | | | | | | | | | | | | Total |
|-----------|--------------------------|-----------|---------|---------|---------|-----------|---------|---------|---------|---------|-------|---------|-----------|
| Group | 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 | 64,904 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64,904 |
| AVG PAY | 64,904 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 64,904 |
| 25-29 NO. | 5 | 8 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| TOT PAY | 332,780 | 597,107 | 155,248 | 160,068 | 79,415 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,324,617 |
| AVG PAY | 66,556 | 74,638 | 77,624 | 80,034 | 79,415 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73,590 |
| 30-34 NO. | 4 | 10 | 4 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| TOT PAY | 268,338 | 742,420 | 310,496 | 79,307 | 247,407 | 241,054 | 0 | 0 | 0 | 0 | 0 | 0 | 1,889,023 |
| AVG PAY | 67,085 | 74,242 | 77,624 | 79,307 | 82,469 | 80,351 | 0 | 0 | 0 | 0 | 0 | 0 | 75,561 |
| 35-39 NO. | 0 | 1 | 0 | 2 | 1 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 17 |
| TOT PAY | 0 | 73,626 | 0 | 158,039 | 78,732 | 505,322 | 619,921 | 0 | 0 | 0 | 0 | 0 | 1,435,639 |
| AVG PAY | 0 | 73,626 | 0 | 79,019 | 78,732 | 84,220 | 88,560 | 0 | 0 | 0 | 0 | 0 | 84,449 |
| 40-44 NO. | 0 | 2 | 0 | 0 | 1 | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 9 |
| TOT PAY | 0 | 184,742 | 0 | 0 | 79,307 | 81,142 | 81,998 | 381,768 | 0 | 0 | 0 | 0 | 808,957 |
| AVG PAY | 0 | 92,371 | 0 | 0 | 79,307 | 81,142 | 81,998 | 95,442 | 0 | 0 | 0 | 0 | 89,884 |
| 45-49 NO. | 1 | 0 | 1 | 0 | 0 | 2 | 1 | 4 | 0 | 0 | 0 | 0 | 9 |
| TOT PAY | 78,783 | 0 | 77,624 | 0 | 0 | 194,488 | 82,245 | 419,938 | 0 | 0 | 0 | 0 | 853,078 |
| AVG PAY | 78,783 | 0 | 77,624 | 0 | 0 | 97,244 | 82,245 | 104,985 | 0 | 0 | 0 | 0 | 94,786 |
| 50-54 NO. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 6 |
| TOT PAY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 166,198 | 429,706 | 0 | 0 | 595,904 |
| AVG PAY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83,099 | 107,427 | 0 | 0 | 99,317 |
| 55-59 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 | 91,546 | 0 | 0 | 91,546 |
| AVG PAY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 91,546 | 0 | 0 | 91,546 |
| 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 | 129,484 | 129,484 |
| AVG PAY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 129,484 | 129,484 |
| 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. | 11 | 21 | 7 | 5 | 6 | 12 | 9 | 8 | 2 | 5 | 0 | 1 | 87 |
| TOT AMT | 744,806 | 1,597,894 | 543,368 | 397,414 | 484,860 | 1,022,006 | 784,164 | 801,706 | 166,198 | 521,253 | 0 | 129,484 | 7,193,152 |
| AVG AMT | 67,710 | 76,090 | 77,624 | 79,483 | 80,810 | 85,167 | 87,129 | 100,213 | 83,099 | 104,251 | 0 | 129,484 | 82,680 |

Marin County Employees' Retirement Association
Novato Fire Protection District
Active Members June 30, 2004
By Attained Ages and Years of Service

Miscellaneous

| Age Group | Years of Accrued Service | | | | | | | | | | | | Total |
|--------------|--------------------------|------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------------|---------|
| | <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> | |
| 20-24 NO. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOT PAY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AVG PAY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25-29 NO. | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOT PAY | 48,151 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48,151 |
| AVG PAY | 48,151 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48,151 |
| 30-34 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 |
| 35-39 NO. | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| TOT PAY | 41,021 | 67,663 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108,684 |
| AVG PAY | 41,021 | 67,663 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54,342 |
| 40-44 NO. | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOT PAY | 0 | 0 | 0 | 0 | 47,372 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47,372 |
| AVG PAY | 0 | 0 | 0 | 0 | 47,372 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47,372 |
| 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. | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOT PAY | 88,830 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88,830 |
| AVG PAY | 88,830 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 88,830 |
| 55-59 NO. | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOT PAY | 0 | 0 | 0 | 46,283 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46,283 |
| AVG PAY | 0 | 0 | 0 | 46,283 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46,283 |
| 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 | 83,943 | 0 | 0 | 83,943 |
| AVG PAY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83,943 | 0 | 0 | 83,943 |
| 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. | 3 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 7 |
| TOT AMT | 178,003 | 67,663 | 0 | 46,283 | 47,372 | 0 | 0 | 0 | 0 | 83,943 | 0 | 0 | 423,264 |
| AVG AMT | 59,334 | 67,663 | 0 | 46,283 | 47,372 | 0 | 0 | 0 | 0 | 83,943 | 0 | 0 | 60,466 |

ACTUARIAL COST METHODS, ACTUARIAL ASSUMPTIONS

AND

DEFINITIONS OF TECHNICAL TERMS

Marin County Employees' Retirement Association

Novato Fire Protection District

Actuarial Cost Methods - June 30, 2004

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, 2004 Valuation

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

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

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

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

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

(Continued on Next Page)

Marin County Employees' Retirement Association

Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2004 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, 1964 | 1.4% |
| June 30, 1974 | 4.7 |
| June 30, 1984 | 7.8 |
| June 30, 1994 | 3.6 |
| June 30, 2004 | 2.5 |
| 50-Year Average | 4.0% |

Marin County Employees' Retirement Association
Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2004 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, 2004 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)

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

Marin County Employees' Retirement Association

Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2004 Valuation

(Continued)

% of Active Members
Separating with Next Year

| Retirement Ages | (at least 5 years) | | | | Pre-Retirement Death | |
|--------------------|----------------------|---------------|------------------------|---------------|-------------------------|---------------|
| | <u>Withdrawal</u> | | <u>Vested Deferred</u> | | <u>Male</u> | <u>Female</u> |
| | <u>Miscellaneous</u> | <u>Safety</u> | <u>Miscellaneous</u> | <u>Safety</u> | | |
| 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% |

| | <u>Ordinary Disability</u> | | <u>Duty Disability</u> | |
|----|----------------------------|---------------|------------------------|---------------|
| | <u>Miscellaneous</u> | <u>Safety</u> | <u>Miscellaneous</u> | <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% |

Marin County Employees' Retirement Association
Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2004 Valuation

(Continued)

The post-retirement mortality table 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.

Non-Disabled Retirees

| Sample Ages | Future Life Expectancy (Years) | | % Dying Within Next Year | |
|----------------|-----------------------------------|-------|--------------------------|-------|
| | 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 |

Disabled Retirees

| Sample Ages | 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 | |

Marin County Employees' Retirement Association
Novato Fire Protection District

Actuarial Assumptions Used for the June 30, 2004 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>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, 2004 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 50% (was 60%) of the deferred vested members are reciprocal.

Post-Retirement COLA Assumed – 3.8% (was 3.65%).

Accumulated Employee Contributions - Credited semiannual interest using the assumed inflation assumption.

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)

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)% |
| 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% |

* Before assumption changes

Marin County Employees' Retirement Association

Novato Fire Protection District

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

| Year Ended <u>June 30</u> | Actuarially Required Contributions <u>(ARC)</u> (000's) |
|--|--|
| 1999 | 252 |
| 2000 | 273 |
| 2001 | 301 |
| 2002 | 383 |
| 2003 ¹ | 301 |
| 2004 ² | 762 |

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%

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% | 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% |

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>Fraction</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>Fraction</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