

CONTRACT AMENDMENT COST ANALYSIS - VALUATION BASIS: JUNE 30, 2002
MISCELLANEOUS PLAN FOR COUNTY OF NAPA

EMPLOYER NUMBER 221

Benefit Description: 21354.4, 2.5% @ 55 Full & Modified Formula (Includes All Active Local Miscellaneous Members Only)

Present Value of Projected Benefits

The table below shows the change in the total present value of benefits for the proposed plan amendment. The present value of benefits represents the total dollars needed today to fund all future benefits for *current* members of the plan, i.e. without regard to future employees. The difference between this amount and current plan assets must be paid by future employee and employer contributions. As such, the change in the present value of benefits due to the plan amendment represents the "cost" of the plan amendment. However, for plans with excess assets some or all of this "cost" may already be covered by current excess assets.

As of June 30, 2002	Current Plan	Post-Amendment
Total Assets at Market Value (MVA)	\$ 219,533,277	\$ 219,533,277
Actuarial Value of Assets (AVA)	241,486,605	241,486,605
AVA / MVA	110.0%	110.0%
Present Value of Projected Benefits (PVB)	\$ 304,446,498	\$ 328,963,434
Actuarial Value of Assets (AVA)	<u>241,486,605</u>	<u>241,486,605</u>
Present Value of Future Employer and Employee Contributions (PVB - AVA)	\$ 62,959,893	\$ 87,476,829
Change to PVB		24,516,936

Accrued Liability

It is not required, nor necessarily desirable, to have accumulated assets sufficient to cover the total present value of benefits until every member has left employment. Instead, the actuarial funding process calculates a regular contribution schedule of employee contributions and employer contributions (called normal costs) which are designed to accumulate with interest to equal the total present value of benefits by the time every member has left employment. As of each June 30, the actuary calculates the "desirable" level of plan assets as of that point in time by subtracting the present value of scheduled future employee contributions and future employer normal costs from the total present value of benefits. The resulting "desirable" level of assets is called the *accrued liability*.

A plan with assets exactly equal to the plan's accrued liability is simply "on schedule" in funding that plan, and only future employee contributions and future employer normal costs are needed. A plan with assets below the accrued liability is "behind schedule", or is said to have an *unfunded liability*, and must temporarily increase contributions to get back on schedule. A plan with assets in excess of the plan's accrued liability is "ahead of schedule", or is said to have *excess assets*, and can temporarily reduce future contributions. A plan with assets (AVA) in excess of the total present value of benefits is called *super-funded*, and neither future employer nor employee contributions are required. Of course, events such as plan amendments and investment or demographic gains or losses can change a plan's condition from year

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to year. For example, a plan amendment could cause a plan to move all the way from being super-funded to being in an unfunded position.

The changes in your plan's accrued liability, unfunded accrued liability, and the funded ratio as of June 30, 2002 due to the plan amendment are shown in the table below.

As of June 30, 2002	Current Plan	Post-Amendment
Entry Age Normal Accrued Liability (AL)	\$ 224,356,323	\$ 238,838,122
Actuarial Value of Assets (AVA)	<u>241,486,605</u>	<u>241,486,605</u>
Unfunded Liability/(Excess Assets) (UAL = AL - AVA)	\$ (17,130,282)	\$ (2,648,483)
Funded Ratio (AVA / AL)	107.6%	101.1%
Change to AL		14,481,799

Total Employer Contribution Rate

While the tables above give the changes in the accrued liability and funded status of the plan due to the amendment, there remains the question of what will happen to the employer contribution rate because of the change in plan provisions.

CalPERS policy is to implement rate changes due to plan amendments immediately on the effective date of the change in plan benefits. This change is displayed as the "Change to Total Employer Rate" on the following page. If the contract amendment effective date is on or before June 30, 2004, the change in the employer contribution rate should be added to the employer's current rate. In general, the policy also provides that the change in unfunded liability due to the plan amendment will be separately amortized over a period of 20 years from the effective date of the amendment and all other components of the plan's unfunded liability/excess assets will continue to be amortized separately.

However, your actuary may choose to apply different rules to plans with a current employer contribution rate of zero. The pre-amendment excess assets in these plans were sufficient to cover the employer's normal cost for one or more years into the future. A plan amendment will use up some or all of the pre-amendment excess assets. In order to maintain our goal of providing rates that are relatively stable, while taking into account known or expected future events, your actuary may decide to spread any remaining excess assets over a single number of years. This is known as a "fresh start" and will generally be for a period not less than 15 years, and in no case less than 5 years. You may call your actuary to discuss further alternative financing options. If the amendment uses up all excess assets and creates an unfunded liability (i.e. from being ahead of schedule to behind schedule), the total post-amendment unfunded liability may be amortized over 20 years.

In no case may the annual contribution with regard to a positive unfunded liability be less than the amount which would be required to amortize that unfunded liability, as a level percent of pay, over 30 years.

The table on the following page shows the change in your plan's employer contribution rate due to the plan amendment for fiscal 2004-2005.

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As of June 30, 2002	Current Plan	Post-Amendment
2004-2005 Employer Rate		
Payment for Normal Cost	7.912%	9.255%
Payment on Amortization Bases	-0.975%	1.248%
Payment for 1959 Survivor Benefit Program	0.000%	0.000%
Total Employer Rate	6.937%	10.503%
Change to Normal Cost		1.343%
Change to Total Employer Rate		3.566%
Current Amortization Base ¹	20-year	
Amendment Amortization Base		
- Fresh Start ²		N/A
- Multiple Base ³		20-year
2004-2005 Employee Rate		
Total Employee Rate	7.000%	8.000%
Change to Total Employee Rate		1.000%
2005-2006		
Estimated Employer Rate ⁴ (recognizing 4% investment return for 2002-2003)	8.8%	12.4%
Projection Amortization Base	Multiple Base	Multiple Base

1 - Details of the current amortization base are shown on page 10 of June 30, 2002 annual valuation report. If you have adopted any other subsequent amendments, the current amortization base is the schedule after these adopted amendments.

2 - If a fixed number of years is shown, it means that the current unfunded actuarial liability is projected and amortized over this fixed number of years. This amortization replaces the amortization schedule shown in your June 30, 2002 annual valuation and any other subsequent amendments you have adopted.

3 - If 20-year is shown, it means that the change in liability due to plan amendments is amortized separately over a 20-year period. This amortization schedule is in addition to the amortization schedule shown in the June 30, 2002 annual valuation and any other subsequent amendments you have adopted.

4 - Excludes 1959 Survivor Benefit Program rate.

In the above table, the information shown in the 2004-2005 box represents the actual initial contribution rate that will apply during fiscal 2004-2005 if you adopt the amendment. However, these figures do not incorporate the 4% investment return in 2002-2003. The estimated employer rates shown in the 2005-2006 box will give you a good estimate of what to expect in 2005-2006

Note that the change in normal cost in the table above may be much more indicative of the long term change in the employer contribution rate due to the plan amendment. The plan's payment on amortization bases shown in the table above is a temporary adjustment to the employer contribution to "get the plan back on schedule". This temporary adjustment to the employer rate varies in duration from plan to plan. For example, a plan with initial excess assets being amortized over a short period of time will typically experience a large rate increase when excess assets are fully amortized. While a plan amendment for such a plan may produce little or no increase in the employer contribution rate now, the change in normal cost due to the plan amendment will become fully reflected in the employer contribution rate as soon as initial excess assets are fully amortized.

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Disclosure

If your agency is requesting cost information for two or more benefit changes, the cost of adopting more than one of these changes may not be obtained by adding the individual costs. Instead, a separate valuation must be done to provide a cost analysis for the combination of benefit changes. If the proposed plan amendment applies to only some of the employees in the plan, the rate change due to the plan amendment still applies to the entire plan, and is still based on the total plan payroll.

Any mandated benefit improvements not included in the June 30, 2002 annual valuation have not been incorporated into this cost analysis.

Please note that the cost analysis provided in this document may not be relied upon once the CalPERS actuarial staff have completed the next annual valuation, that is, the annual valuation as of June 30, 2003. If you have not taken action to amend your contract, and we have already completed the June 30, 2003 annual valuation report, you must contact our office for an updated cost analysis, based on the new annual valuation.

Descriptions of the actuarial methodologies, actuarial assumptions, and plan benefit provisions may be found in the appendices of the June 30, 2002 annual report. Please note that the results shown here are subject to change if any of the data or plan provisions change from what was used in this study.

Certification

This actuarial valuation for the proposed plan amendment is based on the participant, benefits, and asset data used in the June 30, 2002 annual valuation, with the benefits modified if necessary to reflect what is currently provided under your contract with CalPERS, and further modified to reflect the proposed plan amendment. The valuation has been performed in accordance with standards of practice prescribed by the Actuarial Standards Board, and the assumptions and methods are internally consistent and reasonable for this plan, as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

Barbara J. Ware, F.S.A., M.A.A.A.
Enrolled Actuary
Senior Pension Actuary, CalPERS

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Summary of Plan Amendments Valued

COVERAGE GROUP 70101

Pre-Amendment

- The Service Retirement benefit calculated for service earned by this group of members is a monthly allowance equal to the product of the 2% @ 55 benefit factor, years of service, and final compensation. (Final compensation is reduced by \$133.33 per month for members with a modified formula). The benefit factors for retirement at integral ages are shown below:

Retirement Age	2% at 55 Factor	Retirement Age	2% at 55 Factor
50	1.426%	57	2.104%
51	1.522%	58	2.156%
52	1.628%	59	2.210%
53	1.742%	60	2.262%
54	1.866%	61	2.314%
55	2.000%	62	2.366%
56	2.052%	63 and older	2.418%

- This group of members is required to contribute 7% of reportable earnings. (Members with a modified formula contribute 7% of reportable earnings in excess of \$133.33 per month).

Post-Amendment

- The Service Retirement benefit calculated for service earned by this group of members (applying to active members only) is a monthly allowance equal to the product of the 2.5% @ 55 benefit factor, years of service, and final compensation. (Final compensation is reduced by \$133.33 per month for members with a modified formula). The benefit factors for retirement at integral ages are shown below:

Retirement Age	2.5% at 55 Factor
50	2.000%
51	2.100%
52	2.200%
53	2.300%
54	2.400%
55 and older	2.500%

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COVERAGE GROUP 70001

Pre-Amendment

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Probability of Retirement for New Miscellaneous Benefit Formulas

The introduction of the three new miscellaneous formulas will affect future retirement behavior. As a result, we developed 3 sets of probability of retirements to reflect the estimated changes in retirement pattern. At this point, we cannot know the exact impact the new formulas will have. As we perform experience studies in the future, we will modify our retirement assumptions accordingly. The table below contains the new probability of retirement.

Retirement Age	2.5% @ 55		2.7% @ 55		3% @ 60	
	Male	Female	Male	Female	Male	Female
50	5%	7%	5%	7%	5%	7%
51	2%	5%	2%	5%	2%	5%
52	3%	5%	3%	5%	3%	5%
53	3%	5%	3%	6%	3%	5%
54	4%	5%	4%	6%	4%	5%
55	8%	9%	9%	10%	8%	9%
56	6%	7%	7%	8%	7%	8%
57	7%	6%	8%	7%	8%	7%
58	8%	10%	8%	10%	9%	11%
59	9%	9%	10%	9%	11%	10%
60	16%	12%	17%	13%	19%	15%
61	15%	10%	16%	11%	17%	12%
62	26%	21%	28%	23%	31%	25%
63	22%	18%	23%	20%	26%	22%
64	15%	13%	16%	14%	18%	16%
65	25%	25%	27%	27%	30%	30%
66	14%	15%	15%	16%	17%	18%
67	12%	14%	13%	16%	14%	17%
68	12%	11%	13%	12%	15%	13%
69	9%	13%	10%	14%	11%	15%
70	100%	100%	100%	100%	100%	100%