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## TO: ALL PUBLIC AGENCIES

## SUBJECT: NEW 3\% @ 55 AND 3\% @ 50 FORMULAS, AND CHANGE IN BENEFITS CAP FOR SAFETY MEMBERS

The purpose of this letter is to provide information regarding the financial impacts of recently enacted legislation. Senate Bill 800 (SB 800) of the 1999 Legislative Session, signed by the Governor in October 1999 affects the service retirement benefits of public agency safety members who retire on or after January 1, 2000. This legislation raised the existing cap on safety member service retirement benefits from $75 \%$ of final compensation to $85 \%$ of final compensation. In addition, Senate Bill 400 (SB 400) added two new optional service retirement formulas to the menu available to public agency safety members: the $3 \%$ @ 55 and $3 \%$ @ 50 formulas. It should be noted that a drafting error in SB 400 set the employee contribution rate for public agency safety members subject to the $3 \%$ @ 55 formula as $8 \%$ of pay in excess of $\$ 238$ per month. It is the intent of the CalPERS Board to seek urgency legislation to establish the employee contribution rate at $9 \%$ of pay for both the $3 \%$ @ 55 and the $3 \%$ @ 50 formulas. (Note that for the Modified formula, the legislation will continue to provide that no employee contributions are made on the first $\$ 133.33$ of pay per month.) Public agencies may amend their contracts for these new safety formulas after January 1, 2000.

Because SB 800 was enacted after CalPERS had completed a large percentage of employer rates for fiscal 2000-2001, we are continuing to produce rates for fiscal year 2000-2001 without recognizing the impact of this increase in the benefit cap. However, from this point forward, we are including the impact of the $85 \%$ benefit cap in all contract amendment cost estimates and for plans that amend their contract, we will implement the new rate that recognizes the increase in benefit cap.

In an effort to provide some quick guidance on the financial impact of this new legislation, we have determined the impact on a sample of sixteen safety plans representing a cross section of safety plans at CalPERS.

The remainder of this letter summarizes the financial results of those sample safety plans. Based on this sample, it appears that the cost effect due to the increase in the benefits cap to $85 \%$ of final compensation is minimal. We have also performed a cost analysis of adopting the $3 \%$ @ 55 or the $3 \%$ @ 50 formula for our sample of public agency safety plans.

Described below are three measures of the "cost" of a change in plan provisions or actuarial methods. For our sample of sixteen agencies, Section A of this circular letter shows these three measures for the change from the $75 \%$ benefit cap to the $85 \%$ benefit cap. Section B shows the three measures for the change from current benefits with an $85 \%$ cap to the new 3\% @ 55 formula for our sixteen sample agencies. Section C shows the three measures for the change from current benefits with an $85 \%$ cap to the new $3 \%$ @ 50 formula for our sixteen sample agencies.

The three different measures of the "cost" of a change in plan provisions or actuarial methods that are disclosed are:

1. the change in the Present Value of Benefits (PVB);
2. the change in the Accrued Liability;
3. the change in employer rate (change in employer's Normal Cost and change in employer's Unfunded Liability Cost).

The first measure of the cost of a plan change to be disclosed is the change in the Present Value of Benefits (PVB). The PVB is the total dollars needed today to fund all future benefits for current members of the plan without regard to future employees. The difference between this amount and current plan assets must be paid by future contributions from current employees and from the employer. As such, the change in the PVB due to the plan change represents the "cost" of the plan amendment. However, for plans with excess assets, current excess assets may already cover some or all of this "cost".

Plan assets offset plan costs. There are two critical values placed on plan assets. The first is the market value of the plan's assets. The second is the Actuarial Value of Assets (AVA) which is used to determine the employer's rate for the coming year. The AVA is traces market value over time but smoothes the fluctuations that occur in the market value to reduce the fluctuation in the employer's contribution rate. The AVA for the current year is determined by bringing forward the prior year's AVA at the actuarially assumed $8.25 \%$ investment return and then adding in one-third of the difference between Market Value and this preliminary asset value. In order to make sure that the AVA remains close to the plan's market value of assets, the final AVA is limited to be no less than $90 \%$ nor greater than $110 \%$ of the true market value of the plan's assets. For the June 30, 1998 actuarial valuation (which determines the fiscal year 2000-2001 employer rates), the AVA would have been below the $90 \%$ of market value limit and so it was raised to $90 \%$ of market value.

Under it's benefit equity package, the CalPERS Board took action at its November meeting regarding the AVA for the fiscal year 2000-2001 employer rates in order to assist public agency employers with the cost of improving benefits. The CalPERS Board approved a one time change (for the June 30, 1998 valuation only) in the AVA to $95 \%$ of market value for those agencies amending their plan to improve benefits during CalPERS fiscal years $7 / 1 / 1999-6 / 30 / 2000$ or $7 / 1 / 2000-6 / 30 / 2001$. This increase in the AVA is included in the disclosures presented for the new safety plan formulas (3\% at 55 and $3 \%$ at 50). This change in AVA does not apply to the increase in the benefit cap from $75 \%$ to $85 \%$.

Returning to the discussion of plan costs, it is not required, nor necessarily desirable, to
accumulate assets sufficient to cover the total PVB until there are no longer any active employees. 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 PVB 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 PVB. The resulting "desirable" level of assets is called the accrued liability. This change in accrued liability is the second measure of the "cost" of improving benefits.

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 in excess of the total PVB is called super-funded, and neither future employer or employee contributions are required for current plan members. Of course, events such as plan amendments and investment or demographic gains or losses can change a plan's condition from year 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 third measure of the "cost" of changes in benefits or actuarial methods is the change in the employer contribution rate. It is CalPERS policy to amortize changes in unfunded liability/(excess assets) due to plan changes or changes in actuarial methods over a period of 20 years from the effective date of the change. All other components of the plan's unfunded liability/(excess assets) continue to be amortized separately.

However, special rules have to be applied to plans with a current employer contribution rate of zero. The pre-amendment excess assets in these plans are 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. If there are still excess assets (i.e. if the plan is still ahead of schedule) after the plan amendment, the remaining excess assets are spread over the greater of 5 years or the number of years for which the excess assets would keep the employer rate equal to zero. If the amendment uses up all excess assets and creates an unfunded liability (i.e. from being ahead of schedule to behind schedule), the post-amendment unfunded liability is amortized over 20 years.

It is CalPERS' intention to process amendment requests for the $3 \%$ @ 55 and the $3 \%$ @ 50 formulas immediately. Our target completion time frame for amendment analysis requests is 45 days from day of receipt of request. We process requests in the order in which they are received. If you have any questions regarding any of the information provided in this letter, please contact your contracts staff person or your plan actuary.

Ron Seeling, Chief Actuary<br>Actuarial \& Employer Services Division

## Section A

## Effect of the Change from the 75\% Benefit Cap to the 85\% Benefit Cap

Shown below is the first measure of "cost", the Change in the Present Value of Benefits $(\boldsymbol{P V B})$, due to the change from a benefit cap of $75 \%$ of final compensation to $85 \%$ of final compensation. There is no change in the Actuarial Value of Assets (AVA) for this change in benefits.

Plans Currently Contracting for the $\mathbf{2 \%}$ @ 50 Formula

|  | With 75\% Benefit Cap, the 2\% @ 50 formula, and $90 \%$ of Market Value |  |  | With 85\% Benefit Cap, the 2\% @ 50 formula, and $90 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Present Value of Benefits | Actuarial Value of Assets | PVB Minus AVA | Present Value of Benefits | Actuarial Value of Assets | PVB Minus AVA | Percent Change in PVB |
| Plan 1 | 60,655,348 | 56,263,318 | 4,392,030 | 61,066,247 | 56,263,318 | 4,802,929 | 0.68\% |
| Plan 2 | 18,781,731 | 17,858,999 | 922,732 | 18,892,202 | 17,858,999 | 1,033,203 | 0.59\% |
| Plan 3 | 16,389,891 | 13,859,530 | 2,530,361 | 16,524,580 | 13,859,530 | 2,665,050 | 0.82\% |
| Plan 4 | 5,659,298 | 3,629,362 | 2,029,936 | 5,636,616 | 3,629,362 | 2,007,254 | -0.40\% |
| Plan 5 | 140,785,843 | 113,916,274 | 26,869,569 | 142,665,474 | 113,916,274 | 28,749,200 | 1.34\% |
| Plan 6 | 378,243,623 | 308,176,592 | 70,067,031 | 382,806,356 | 308,176,592 | 74,629,764 | 1.21\% |
| Plan 7 | 66,641,809 | 66,109,799 | 532,010 | 67,380,487 | 66,109,799 | 1,270,688 | 1.11\% |
| Plan 8 | 98,239,055 | 92,155,644 | 6,083,411 | 99,441,717 | 92,155,644 | 7,286,073 | 1.22\% |
| Plan 9 | 15,582,608 | 13,553,055 | 2,029,553 | 15,647,948 | 13,553,055 | 2,094,893 | 0.42\% |
| $\begin{aligned} & \text { Plan } \\ & 10 \end{aligned}$ | 38,419,278 | 34,491,461 | 3,927,817 | 38,574,350 | 34,491,461 | 4,082,889 | 0.40\% |
| Plan $11$ | 56,562,395 | 41,242,411 | 15,319,984 | 57,140,473 | 41,242,411 | 15,898,062 | 1.02\% |

Plans Currently Contracting for the $2 \%$ @ 55 Formula

| With 75\% Benefit Cap, the 2\% @ 55 formula, and $90 \%$ of Market Value |  |  | With $\mathbf{8 5 \%}$ Benefit Cap, the 2\% @ 55 formula, and $90 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Present Value of Benefits | Actuarial Value of Assets | PVB Minus AVA | Present Value of Benefits | Actuarial Value of Assets | PVB Minus AVA | Percent Change in PVB |


| Plan 12 | 1,134,135 | 1,120,880 | 13,255 | 1,134,135 | 1,120,880 | 13,255 | 0.00\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plan 13 | 539,983 | 540,492 | (509) | 539,983 | 540,492 | (509) | 0.00\% |
| Plan 14 | 1,172,971 | 1,031,801 | 141,170 | 1,171,349 | 1,031,801 | 139,548 | -0.14\% |
| Plan 15 | 1,774,608 | 1,741,683 | 32,925 | 1,774,562 | 1,741,683 | 32,879 | 0.00\% |
| Plan 16 | 575,989 | 547,229 | 28,760 | 575,989 | 547,229 | 28,760 | 0.00\% |

## Effect of the Change from the 75\% Benefit Cap to the 85\% Benefit Cap

Shown below is the second measure of "cost", the Change in the Accrued Liability due to the change from a benefit cap of $75 \%$ of final compensation to $85 \%$ of final compensation. There is no change in assets for this change in benefits.

Plans Currently Contracting for the 2\% @ 50 Formula

|  | With 75\% Benefit Cap, the $\mathbf{2 \%}$ @ 50 formula, and $90 \%$ of Market Value |  |  | With $\mathbf{8 5 \%}$ Benefit Cap, the $\mathbf{2 \%}$ @ 50 formula, and $90 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Accrued Liability | Actuarial Value of Assets | Accrued Liability Minus Assets | Accrued Liability | Actuarial Value of Assets | Accrued Liability Minus Assets | Percent Change in Accrued Liability |
| Plan 1 | 45,415,581 | 56,263,318 | $(10,847,737)$ | 45,325,602 | 56,263,318 | $(10,937,716)$ | -0.20\% |
| Plan 2 | 14,240,292 | 17,858,999 | $(3,618,707)$ | 14,226,562 | 17,858,999 | $(3,632,437)$ | -0.10\% |
| Plan 3 | 12,680,643 | 13,859,530 | $(1,178,887)$ | 12,692,118 | 13,859,530 | $(1,167,412)$ | 0.09\% |
| Plan 4 | 3,766,693 | 3,629,362 | 137,331 | 3,723,853 | 3,629,362 | 94,491 | -1.14\% |
| Plan 5 | 109,100,660 | 113,916,274 | $(4,815,614)$ | 109,563,478 | 113,916,274 | $(4,352,796)$ | 0.42\% |
| Plan 6 | 297,436,223 | 308,176,592 | $(10,740,369)$ | 298,261,542 | 308,176,592 | $(9,915,050)$ | 0.28\% |
| Plan 7 | 56,464,575 | 66,109,799 | $(9,645,224)$ | 56,503,719 | 66,109,799 | $(9,606,080)$ | 0.07\% |
| Plan 8 | 77,329,454 | 92,155,644 | $(14,826,190)$ | 77,603,979 | 92,155,644 | $(14,551,665)$ | 0.36\% |
| Plan 9 | 11,641,099 | 13,553,055 | $(1,911,956)$ | 11,581,601 | 13,553,055 | $(1,971,454)$ | -0.51\% |
| Plan 10 | 28,531,142 | 34,491,461 | $(5,960,319)$ | 28,383,367 | 34,491,461 | $(6,108,094)$ | -0.52\% |
| Plan 11 | 37,626,159 | 41,242,411 | $(3,616,252)$ | 37,602,548 | 41,242,411 | $(3,639,863)$ | -0.06\% |

Plans Currently Contracting for the $\mathbf{2 \%}$ @ 55 Formula

|  | With 75\% Benefit Cap, the $\mathbf{2 \%}$ @ 55 formula, and $90 \%$ of Market Value |  |  | With $\mathbf{8 5 \%}$ Benefit Cap, the $\mathbf{2 \%}$ @ 55 formula, and $90 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Accrued Liability | Actuarial <br> Value of Assets | Accrued Liability Minus Assets | Accrued Liability | Actuarial Value of Assets | Accrued Liability Minus Assets | Percent Change in Accrued Liability |
| Plan 12 | 593,483 | 1,120,880 | $(527,397)$ | 593,483 | 1,120,880 | $(527,397)$ | 0.00\% |
| Plan 13 | 365,704 | 540,492 | $(174,788)$ | 365,704 | 540,492 | $(174,788)$ | 0.00\% |
| Plan 14 | 942,413 | 1,031,801 | $(89,388)$ | 940,447 | 1,031,801 | $(91,354)$ | -0.21\% |
| Plan 15 | 1,321,141 | 1,741,683 | $(420,542)$ | 1,320,363 | 1,741,683 | $(421,320)$ | -0.06\% |
| Plan 16 | 330,316 | 547,229 | $(216,913)$ | 330,316 | 547,229 | $(216,913)$ | 0.00\% |

## Effect of the Change from the $\mathbf{7 5 \%}$ Benefit Cap to the 85\% Benefit Cap

The table below shows the third measure of cost, the Change in the Employer's
Contribution Rate due to the change from a benefit cap of $75 \%$ of final compensation to $85 \%$ of final compensation for our sixteen sample agencies.

Plans Currently Contracting for the $2 \%$ @ 50 Formula

|  | With 75\% Benefit Cap, the 2\% @ 50 formula, and $90 \%$ of Market Value |  |  |  | With $\mathbf{8 5 \%}$ Benefit Cap, the $\mathbf{2 \%}$ @ 50 formula, and $90 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Normal Cost Rate | Unfunded Liability/ (Surplus) Rate | Total Employer Rate | Amort. Period | Normal Cost Rate | Unfunded Liability/ (Surplus) Rate | Total Employer Rate | Amort. <br> Period |
| Plan 1 | 13.754\% | -13.754\% | 0.000\% | 14 | 13.732\% | -13.732\% | 0.000\% | 14 |
| Plan 2 | 13.248\% | -13.248\% | 0.000\% | 19 | 13.257\% | -13.257\% | 0.000\% | 20 |
| Plan 3 | 11.437\% | -6.031\% | 5.406\% | Multiple | 11.383\% | -5.995\% | 5.388\% | Multiple |
| Plan 4 | 13.524\% | 1.206\% | 14.730\% | Multiple | 13.298\% | 0.771\% | 14.069\% | Multiple |
| Plan 5 | 13.230\% | -5.948\% | 7.282\% | Multiple | 13.248\% | -5.706\% | 7.542\% | Multiple |
| Plan 6 | 15.213\% | -6.043\% | 9.170\% | Multiple | 15.215\% | -5.856\% | 9.359\% | Multiple |
| Plan 7 | 12.442\% | -12.442\% | 0.000\% | 23 | 12.547\% | -12.547\% | 0.000\% | 22 |
|  |  |  |  |  |  |  |  |  |


| Plan 8 | 12.221\% | -12.221\% | 0.000\% | 17 | 12.330\% | -12.330\% | 0.000\% | 16 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plan 9 | 11.503\% | -11.503\% | 0.000\% | 10 | 11.381\% | -11.381\% | 0.000\% | 11 |
| $\begin{aligned} & \text { Plan } \\ & 10 \end{aligned}$ | 13.065\% | -13.065\% | 0.000\% | 10 | 12.943\% | -12.943\% | 0.000\% | 11 |
| $\begin{aligned} & \text { Plan } \\ & 11 \end{aligned}$ | 13.897\% | -5.025\% | 8.872\% | Multiple | 13.846\% | -5.057\% | 8.789\% | Multiple |

Plans Currently Contracting for the 2\% @ 55 Formula

|  | With 75\% Benefit Cap, the 2\% @ 55 formula, and $90 \%$ of Market Value |  |  |  | With $85 \%$ Benefit Cap, the $2 \%$ @ 55 formula, and $90 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Normal Cost Rate | Unfunded Liability/ (Surplus) Rate | Total Employer Rate | Amort. Period | Normal Cost Rate | Unfunded Liability/ (Surplus) Rate | Total Employer Rate | Amort. Period |
| Plan 12 | 8.427\% | -8.427\% | 0.000\% | 34 | 8.427\% | -8.427\% | 0.000\% | 34 |
| Plan 13 | 9.417\% | -9.417\% | 0.000\% | 19 | 9.417\% | -9.417\% | 0.000\% | 19 |
| Plan 14 | 5.997\% | -5.997\% | 0.000\% | 12 | 5.957\% | -5.957\% | 0.000\% | 13 |
| Plan 15 | 6.822\% | -6.822\% | 0.000\% | 78 | 6.820\% | -6.820\% | 0.000\% | 79 |
| Plan 16 | 7.530\% | -7.530\% | 0.000\% | 37 | 7.530\% | -7.530\% | 0.000\% | 37 |

## Section B

## Effect of Change from the Current Benefit Formula with an $\mathbf{8 5 \%}$ Benefit Cap

 to the $\mathbf{3 \%}$ @ 55 Formula with an $\mathbf{8 5 \%}$ Benefit CapShown below is the first measure of cost, the Change in the PVB due to the change from the current formula with an $85 \%$ benefit cap to the $\mathbf{3 \%}$ @ 55 formula with an $85 \%$ benefit cap. Also shown is the Change in the Actuarial Value of Assets (from 90\% of market value to $95 \%$ of market value of assets - a $5.56 \%$ increase in the actuarial value of assets to offset the increase in the PVB).

Plans Currently Contracting for the 2\% @ 50 Formula


|  | Present <br> Value of <br> Benefits | Actuarial Value of Assets | PVB Minus AVA | Present <br> Value of <br> Benefits | Actuarial Value of Assets | PVB Minus AVA | Percent Change in PVB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plan 1 | 61,066,247 | 56,263,318 | 4,802,929 | 64,864,894 | 59,389,058 | 5,475,836 | 6.22\% |
| Plan 2 | 18,892,202 | 17,858,999 | 1,033,203 | 19,918,783 | 18,851,166 | 1,067,617 | 5.43\% |
| Plan 3 | 16,524,580 | 13,859,530 | 2,665,050 | 17,693,193 | 14,629,504 | 3,063,689 | 7.07\% |
| Plan 4 | 5,636,616 | 3,629,362 | 2,007,254 | 5,991,760 | 3,830,993 | 2,160,767 | 6.30\% |
| Plan 5 | 142,665,474 | 113,916,274 | 28,749,200 | 150,860,188 | 120,244,956 | 30,615,232 | 5.74\% |
| Plan 6 | 382,806,356 | 308,176,592 | 74,629,764 | 404,392,169 | 325,297,514 | 79,094,655 | 5.64\% |
| Plan 7 | 67,380,487 | 66,109,799 | 1,270,688 | 70,864,597 | 69,782,566 | 1,082,031 | 5.17\% |
| Plan 8 | 99,441,717 | 92,155,644 | 7,286,073 | 105,034,969 | 97,275,402 | 7,759,567 | 5.62\% |
| Plan 9 | 15,647,948 | 13,553,055 | 2,094,893 | 16,564,734 | 14,306,003 | 2,258,731 | 5.86\% |
| $\begin{aligned} & \text { Plan } \\ & 10 \end{aligned}$ | 38,574,350 | 34,491,461 | 4,082,889 | 41,040,033 | 36,407,653 | 4,632,380 | 6.39\% |
| $\begin{aligned} & \text { Plan } \\ & 11 \end{aligned}$ | 57,140,473 | 41,242,411 | 15,898,062 | 61,174,957 | 43,533,656 | 17,641,301 | 7.06\% |

Plans Currently Contracting for the $\mathbf{2 \%}$ @ 55 Formula

|  | With 85\% Benefit Cap, 2\% @ 55, and $90 \%$ of Market Value |  |  | With 85\% Benefit Cap, 3\% @ 55, and $95 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Present Value of Benefits | Actuarial Value of Assets | PVB Minus AVA | Present Value of Benefits | Actuarial Value of Assets | PVB Minus AVA | Percent Change in PVB |
| Plan 12 | 1,134,135 | 1,120,880 | 13,255 | 1,708,218 | 1,183,151 | 525,067 | 50.62\% |
| Plan 13 | 539,983 | 540,492 | (509) | 768,756 | 570,520 | 198,236 | 42.37\% |
| Plan 14 | 1,171,349 | 1,031,801 | 139,548 | 1,503,648 | 1,089,123 | 414,525 | 28.37\% |
| Plan 15 | 1,774,562 | 1,741,683 | 32,879 | 2,335,187 | 1,838,443 | 496,744 | 31.59\% |
| Plan 16 | 575,989 | 547,229 | 28,760 | 796,674 | 577,630 | 219,044 | 38.31\% |

Effect of Change from the Current Benefit Formula with an $\mathbf{8 5 \%}$ Benefit Cap to the $3 \%$ @ 55 Formula with an $85 \%$ Benefit Cap

Shown below is the second measure of cost, the Change in the Accrued Liability due to the change from the current formula with an $85 \%$ benefit cap to the $3 \%$ @ 55 formula with an $85 \%$ benefit cap. Also shown is the Change in the Actuarial Value of Assets (from $90 \%$ of market value to $95 \%$ of market value of assets - a $5.56 \%$ increase in the actuarial value of assets to offset the increase in the PVB).

Plans Currently Contracting for the 2\% @ 50 Formula

|  | With 85\% Benefit Cap, 2\% @ 50, and 90\% of Market Value |  |  | With 85\% Benefit Cap, 3\% @ 55, and 95\% of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Accrued Liability | Actuarial Value of Assets | Unfunded Liability / (Excess Assets) | Accrued Liability | Actuarial Value of Assets | Unfunded Liability / (Excess Assets) | Percent Change in <br> Accrued <br> Liability |
| Plan 1 | 45,325,602 | 56,263,318 | $(10,937,716)$ | 48,699,395 | 59,389,058 | $(10,689,663)$ | 7.44\% |
| Plan 2 | 14,226,562 | 17,858,999 | $(3,632,437)$ | 15,073,200 | 18,851,166 | $(3,777,966)$ | 5.95\% |
| Plan 3 | 12,692,118 | 13,859,530 | $(1,167,412)$ | 13,770,335 | 14,629,504 | $(859,169)$ | 8.50\% |
| Plan 4 | 3,723,853 | 3,629,362 | 94,491 | 3,994,505 | 3,830,993 | 163,512 | 7.27\% |
| Plan 5 | 109,563,478 | 113,916,274 | $(4,352,796)$ | 114,923,869 | 120,244,956 | $(5,321,087)$ | 4.89\% |
| Plan 6 | 298,261,542 | 308,176,592 | $(9,915,050)$ | 317,655,632 | 325,297,514 | $(7,641,882)$ | 6.50\% |
| Plan 7 | 56,503,719 | 66,109,799 | $(9,606,080)$ | 59,849,691 | 69,782,566 | $(9,932,875)$ | 5.92\% |
| Plan 8 | 77,603,979 | 92,155,644 | $(14,551,665)$ | 82,579,435 | 97,275,402 | $(14,695,967)$ | 6.41\% |
| Plan 9 | 11,581,601 | 13,553,055 | $(1,971,454)$ | 12,310,178 | 14,306,003 | $(1,995,825)$ | 6.29\% |
| $\begin{aligned} & \text { Plan } \\ & 10 \end{aligned}$ | 28,383,367 | 34,491,461 | $(6,108,094)$ | 30,568,311 | 36,407,653 | $(5,839,342)$ | 7.70\% |
| $\begin{aligned} & \text { Plan } \\ & 11 \end{aligned}$ | 37,602,548 | 41,242,411 | $(3,639,863)$ | 40,796,454 | 43,533,656 | $(2,737,202)$ | 8.49\% |

Plans Currently Contracting for the $\mathbf{2 \%}$ @ 55 Formula

| With 85\% Benefit Cap, 2\% @ 55, and 90\% of Market Value |  |  | With 85\% Benefit Cap, 3\% @ 55, and $95 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Accrued Liability | Actuarial Value of Assets | Unfunded Liability / (Excess Assets) | Accrued Liability | Actuarial Value of Assets | Unfunded Liability / (Excess Assets) | Percent Change in Accrued Liability |


| Plan 12 | 593,483 | $1,120,880$ | $(527,397)$ | 900,941 | $1,183,151$ | $(282,210)$ |
| :--- | ---: | ---: | ---: | ---: | ---: | :---: |
| Plan 13 | 365,704 | 540,492 | $(174,788)$ | 504,145 | 570,520 | $(66,375)$ |
| Plan 14 | 940,447 | $1,031,801$ | $(91,354)$ | $1,157,543$ | $1,089,123$ | 68,420 |
| Plan 15 | $1,320,363$ | $1,741,683$ | $(421,320)$ | $1,628,291$ | $1,838,443$ | $(210,152)$ |
| Plan 16 16 | 330,316 | 547,229 | $(216,913)$ | 463,269 | 577,630 | $(114,361)$ |

## Effect of Change from the Current Benefit Formula with an $\mathbf{8 5 \%}$ Benefit Cap to the 3\% @ 55 Formula with an $\mathbf{8 5 \%}$ Benefit Cap

The table below provides the third measure of cost, the Change in the Employer Contribution Rate. The change in rate reflects both the change from the current formula with an $85 \%$ benefit cap to the $3 \%$ @ 55 formula with an $85 \%$ benefit cap and the change in the Actuarial Value of Assets from $90 \%$ of market value to $95 \%$ of market value.

Plans Currently Contracting for the $\mathbf{2 \%}$ @ 50 Formula

|  | With $85 \%$ Benefit Cap, $2 \%$ @ 50 Formula, and $90 \%$ of Market Value |  |  |  | With 85\% Benefit Cap, 3\% @ 55 formula, and $95 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Normal Cost Rate | Unfunded Liability/ (Surplus) Rate | Total Employer Rate | Amort. <br> Period | Norma Cost Rate | Unfunded Liability/ (Surplus) Rate | Total Employer Rate | Amort. <br> Period |
| Plan 1 | 13.732\% | -13.732\% | 0.000\% | 14 | 16.132\% | -16.132\% | 0.000\% | 11 |
| Plan 2 | 13.257\% | -13.257\% | 0.000\% | 20 | 15.751\% | -15.751\% | 0.000\% | 16 |
| Plan 3 | 11.383\% | -5.995\% | 5.388\% | Multiple | 13.633\% | -4.465\% | 9.168\% | Multiple |
| Plan 4 | 13.298\% | 0.771\% | 14.069\% | Multiple | 15.922\% | 1.822\% | 17.744\% | Multiple |
| Plan 5 | 13.248\% | -5.706\% | 7.542\% | Multiple | 16.978\% | -5.629\% | 11.349\% | Multiple |
| Plan 6 | 15.215\% | -5.856\% | 9.359\% | Multiple | 17.783\% | -4.945\% | 12.838\% | Multiple |
| Plan 7 | 12.547\% | -12.547\% | 0.000\% | 22 | 14.923\% | -14.923\% | 0.000\% | 17 |
| Plan 8 | 12.330\% | -12.330\% | 0.000\% | 16 | 14.339\% | -14.339\% | 0.000\% | 13 |
| Plan 9 | 11.381\% | -11.381\% | 0.000\% | 11 | 13.921\% | -13.921\% | 0.000\% | 8 |
| $\begin{aligned} & \text { Plan } \\ & 10 \end{aligned}$ | 12.943\% | -12.943\% | 0.000\% | 11 | 15.304\% | -15.304\% | 0.000\% | 8 |
| Plan | 13.846\% | -5.057\% | 8.789\% | Multiple | 16.351\% | -3.742\% | 12.609\% | Multiple |



Plans Currently Contracting for the $\mathbf{2 \%}$ @ 55 Formula

|  | With 85\% Benefit Cap, 2\% @ 55 Formula, and $90 \%$ of Market Value |  |  |  | With 85\% Benefit Cap, 3\% @ 55 formula, and $95 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Normal Cost Rate | Unfunded Liability/ (Surplus) Rate | Total Employer Rate | Amort. Period | Normal Cost Rate | Unfunded Liability/ (Surplus) Rate | Total Employer Rate | Amort. Period |
| Plan 1 | 8.427\% | -8.427\% | 0.000\% | 34 | 14.439\% | -13.344\% | 1.095\% | 5 |
| Plan 2 | 9.417\% | -9.417\% | 0.000\% | 19 | 15.669\% | -6.164\% | 9.505\% | 5 |
| Plan 3 | 5.957\% | -5.957\% | 0.000\% | 13 | 13.145\% | 5.151\% | 18.296\% | 20 |
| Plan 4 | 6.820\% | -6.820\% | 0.000\% | 79 | 11.984\% | -11.984\% | 0.000\% | 6 |
| Plan 5 | 7.530\% | -7.530\% | 0.000\% | 37 | 14.633\% | -14.633\% | 0.000\% | 6 |

## Section C

## Effect of Change from the Current Benefit Formula with an $\mathbf{8 5 \%}$ Benefit Cap to the $\mathbf{3 \%}$ @ 50 Formula with an $\mathbf{8 5 \%}$ Benefit Cap

Shown below is the first measure of cost, the Change in the PVB due to the change from the current formula with an $85 \%$ benefit cap to the $3 \%$ @ 50 formula with an $85 \%$ benefit cap. Also shown is the Change in the Actuarial Value of Assets (from $90 \%$ of market value to $95 \%$ of market value of assets - a $5.56 \%$ increase in the actuarial value of assets to offset the increase in the PVB).

Plans Currently Contracting for the $\mathbf{2 \%}$ @ 50 Formula

|  | With 85\% Benefit Cap, 2\% @ 50, and $90 \%$ of Market Value |  |  | With 85\% Benefit Cap, 3\% @ 50, and $95 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Present Value of Benefits | Actuarial Value of Assets | PVB Minus AVA | Present <br> Value of <br> Benefits | Actuarial Value of Assets | PVB Minus AVA | Percent Change in PVB |
| Plan 1 | 61,066,247 | 56,263,318 | 4,802,929 | 68,055,959 | 59,389,058 | 8,666,901 | 11.45\% |
| Plan 2 | 18,892,202 | 17,858,999 | 1,033,203 | 20,805,009 | 18,851,166 | 1,953,843 | 10.12\% |
|  |  |  |  |  |  |  |  |


| Plan 3 | 16,524,580 | 13,859,530 | 2,665,050 | 18,694,712 | 14,629,504 | 4,065,208 | 13.13\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plan 4 | 5,636,616 | 3,629,362 | 2,007,254 | 6,239,443 | 3,830,993 | 2,408,450 | 10.69\% |
| Plan 5 | 142,665,474 | 113,916,274 | 28,749,200 | 158,348,147 | 120,244,956 | 38,103,191 | 10.99\% |
| Plan 6 | 382,806,356 | 308,176,592 | 74,629,764 | 422,328,985 | 325,297,514 | 97,031,471 | 10.32\% |
| Plan 7 | 67,380,487 | 66,109,799 | 1,270,688 | 73,672,705 | 69,782,566 | 3,890,139 | 9.34\% |
| Plan 8 | 99,441,717 | 92,155,644 | 7,286,073 | 111,410,082 | 97,275,402 | 14,134,680 | 12.04\% |
| Plan 9 | 15,647,948 | 13,553,055 | 2,094,893 | 17,348,284 | 14,306,003 | 3,042,281 | 10.87\% |
| $\begin{aligned} & \text { Plan } \\ & 10 \end{aligned}$ | 38,574,350 | 34,491,461 | 4,082,889 | 42,914,885 | 36,407,653 | 6,507,232 | 11.25\% |
| $\begin{aligned} & \text { Plan } \\ & 11 \end{aligned}$ | 57,140,473 | 41,242,411 | 15,898,062 | 64,838,488 | 43,533,656 | 21,304,832 | 13.47\% |

Plans Currently Contracting for the $\mathbf{2 \%}$ @ 55 Formula

|  | With $85 \%$ Benefit Cap, 2\% @ 55, and 90\% of Market Value |  |  | With 85\% Benefit Cap, 3\% @ 50, and $95 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Present <br> Value of <br> Benefits | Actuarial Value of Assets | PVB Minus AVA | Present <br> Value of Benefits | Actuarial Value of Assets | PVB Minus AVA | Percent Change in PVB |
| Plan 1 | 1,134,135 | 1,120,880 | 13,255 | 1,841,917 | 1,183,151 | 658,766 | 62.41\% |
| Plan 2 | 539,983 | 540,492 | (509) | 804,795 | 570,520 | 234,275 | 49.04\% |
| Plan 3 | 1,171,349 | 1,031,801 | 139,548 | 1,571,242 | 1,089,123 | 482,119 | 34.14\% |
| Plan 4 | 1,774,562 | 1,741,683 | 32,879 | 2,487,340 | 1,838,443 | 648,897 | 40.17\% |
| Plan 5 | 575,989 | 547,229 | 28,760 | 868,400 | 577,630 | 290,770 | 50.77\% |

## Effect of Change from the Current Benefit Formula with an 85\% Benefit Cap to the 3\% @ 50 Formula with an $\mathbf{8 5 \%}$ Benefit Cap

Shown below is the second measure of cost, the Change in the Accrued Liability due to the change from the current formula with an $85 \%$ benefit cap to the $3 \%$ @ 50 formula with an $85 \%$ benefit cap. Also shown is the Change in the Actuarial Value of Assets (from $90 \%$ of market value to $95 \%$ of market value of assets - a $5.56 \%$ increase in the actuarial value of assets to offset the increase in the PVB).

Plans Currently Contracting for the 2\% @ 50 Formula

|  | With 85\% Benefit Cap, 2\% @ 50, and $90 \%$ of Market Value |  |  | With 85\% Benefit Cap, 3\% @ 50, and $95 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Accrued Liability | Actuarial Value of Assets | Unfunded Liability / (Excess Assets) | Accrued Liability | Actuarial Value of Assets | Unfunded Liability / (Excess Assets) | Percent Change in Accrued Liability |
| Plan 1 | 45,325,602 | 56,263,318 | (10,937,716) | 51,214,601 | 59,389,058 | $(8,174,457)$ | 12.99\% |
| Plan 2 | 14,226,562 | 17,858,999 | $(3,632,437)$ | 15,786,612 | 18,851,166 | $(3,064,554)$ | 10.97\% |
| Plan 3 | 12,692,118 | 13,859,530 | (1,167,412) | 14,651,814 | 14,629,504 | 22,310 | 15.44\% |
| Plan 4 | 3,723,853 | 3,629,362 | 94,491 | 4,172,993 | 3,830,993 | 342,000 | 12.06\% |
| Plan 5 | 109,563,478 | 113,916,274 | $(4,352,796)$ | 121,658,101 | 120,244,956 | 1,413,145 | 11.04\% |
| Plan 6 | 298,261,542 | 308,176,592 | $(9,915,050)$ | 332,384,809 | 325,297,514 | 7,087,295 | 11.44\% |
| Plan 7 | 56,503,719 | 66,109,799 | $(9,606,080)$ | 62,361,028 | 69,782,566 | $(7,421,538)$ | 10.37\% |
| Plan 8 | 77,603,979 | 92,155,644 | $(14,551,665)$ | 88,055,780 | 97,275,402 | (9,219,622) | 13.47\% |
| Plan 9 | 11,581,601 | 13,553,055 | $(1,971,454)$ | 12,975,008 | 14,306,003 | $(1,330,995)$ | 12.03\% |
| $\begin{aligned} & \text { Plan } \\ & 10 \end{aligned}$ | 28,383,367 | 34,491,461 | $(6,108,094)$ | 32,028,997 | 36,407,653 | $(4,378,656)$ | 12.84\% |
| $\begin{aligned} & \text { Plan } \\ & 11 \end{aligned}$ | 37,602,548 | 41,242,411 | $(3,639,863)$ | 43,717,474 | 43,533,656 | 183,818 | 16.26\% |

Plans Currently Contracting for the 2\% @ 55 Formula

|  | With 85\% Benefit Cap, 2\% @ 55, and $90 \%$ of Market Value |  |  | With 85\% Benefit Cap, 3\% @ 50, and 95\% of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Accrued Liability | Actuarial Value of Assets | Unfunded Liability / (Excess Assets) | Accrued Liability | Actuarial Value of Assets | Unfunded Liability / (Excess Assets) | Percent Change in Accrued Liability |
| Plan 1 | 593,483 | 1,120,880 | $(527,397)$ | 1,000,878 | 1,183,151 | $(182,273)$ | 68.64\% |
| Plan 2 | 365,704 | 540,492 | $(174,788)$ | 528,948 | 570,520 | $(41,572)$ | 44.64\% |
| Plan 3 | 940,447 | 1,031,801 | $(91,354)$ | 1,218,550 | 1,089,123 | 129,427 | 29.57\% |
|  |  |  |  |  |  |  |  |


| Plan 4 | $1,320,363$ | $1,741,683$ | $(421,320)$ | $1,733,396$ | $1,838,443$ | $(105,047)$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Plan 5 | 330,316 | 547,229 | $(216,913)$ | 504,486 | 577,630 | $(73,144)$ |

## Effect of Change from the Current Benefit Formula with an 85\% Benefit Cap to the $\mathbf{3 \%}$ @ 50 Formula with an $\mathbf{8 5 \%}$ Benefit Cap

The table below provides the third measure of cost, the Change in the Employer
Contribution Rate. The change in rate reflects both the change from the current formula with an $85 \%$ benefit cap to the $3 \%$ @ 50 formula with an $85 \%$ benefit cap and the change in the Actuarial Value of Assets from $90 \%$ of market value to $95 \%$ of market value.

Plans Currently Contracting for the $\mathbf{2 \%}$ @ 50 Formula

|  | With $\mathbf{8 5} \%$ Benefit Cap, $\mathbf{2 \%}$ @ 50 Formula, and $90 \%$ of Market Value |  |  |  | With 85\% Benefit Cap, 3\% @ 50 formula, and $95 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Normal Cost Rate | Unfunded Liability/ (Surplus) Rate | Total <br> Employer Rate | Amort. <br> Period | Normal Cost Rate | Unfunded Liability/ (Surplus) Rate | Total Employer Rate | Amort. <br> Period |
| Plan 1 | 13.732\% | -13.732\% | 0.000\% | 14 | 18.217\% | -18.217\% | 0.000\% | 6 |
| Plan 2 | 13.257\% | -13.257\% | 0.000\% | 20 | 18.067\% | -18.067\% | 0.000\% | 9 |
| Plan 3 | 11.383\% | -5.995\% | 5.388\% | Multiple | 15.761\% | -0.756\% | 15.005\% | Multiple |
| Plan 4 | 13.298\% | 0.771\% | 14.069\% | Multiple | 17.564\% | 3.743\% | 21.307\% | Multiple |
| Plan 5 | 13.248\% | -5.706\% | 7.542\% | Multiple | 19.287\% | -1.790\% | 17.497\% | Multiple |
| Plan 6 | 15.215\% | -5.856\% | 9.359\% | Multiple | 20.387\% | -1.212\% | 19.175\% | Multiple |
| Plan 7 | 12.547\% | -12.547\% | 0.000\% | 22 | 17.598\% | -17.598\% | 0.000\% | 9 |
| Plan 8 | 12.330\% | -12.330\% | 0.000\% | 16 | 16.848\% | -16.848\% | 0.000\% | 5 |
| Plan 9 | 11.381\% | -11.381\% | 0.000\% | 11 | 16.254\% | -11.117\% | 5.137\% | 5 |
| $\begin{aligned} & \text { Plan } \\ & 10 \end{aligned}$ | 12.943\% | -12.943\% | 0.000\% | 11 | 17.299\% | -14.161\% | 3.138\% | 5 |
| $\begin{aligned} & \text { Plan } \\ & 11 \end{aligned}$ | 13.846\% | -5.057\% | 8.789\% | Multiple | 18.701\% | -0.377\% | 18.324\% | Multiple |

Plans Currently Contracting for the $\mathbf{2 \%}$ @ 55 Formula

|  | With $85 \%$ Benefit Cap, $2 \%$ @ 55 Formula, and $90 \%$ of Market Value |  |  |  | With 85\% Benefit Cap, 3\% @ 50 formula, and $95 \%$ of Market Value |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Normal Cost Rate | Unfunded Liability/ (Surplus) Rate | Total Employer Rate | Amort. <br> Period | Normal Cost Rate | Unfunded Liability/ (Surplus) Rate | Total Employer Rate | Amort. <br> Period |
| Plan 1 | 8.427\% | -8.427\% | 0.000\% | 34 | 16.328\% | -5.374\% | 10.954\% | 5 |
| Plan 2 | 9.417\% | -9.417\% | 0.000\% | 19 | 17.008\% | -1.469\% | 15.539\% | 5 |
| Plan 3 | 5.957\% | -5.957\% | 0.000\% | 13 | 15.146\% | 8.664\% | 23.810\% | 20 |
| Plan 4 | 6.820\% | -6.820\% | 0.000\% | 79 | 14.356\% | -5.495\% | 8.861\% | 5 |
| Plan 5 | 7.530\% | -7.530\% | 0.000\% | 37 | 16.716\% | -5.098\% | 11.618\% | 5 |

