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October 12, 2011

Retirement Board Seattle City Employees' Retirement System 720 Third Avenue, Suite 1000 Seattle, WA 98104

Re: Projected Total Contribution Rate Reflecting Proposed New Member Contribution Interest Crediting Rate

Dear Members of the Board:

As requested by SCERS staff, we are providing you with a revised schedule of the projected total contribution rate for SCERS, reflecting the revised member contribution crediting policy adopted by the Board on October 5, 2011. This analysis compares to Section 8 of our January 1, 2011 actuarial valuation. The purpose of this letter is to provide these revised projections reflecting the new interest crediting policy.

Member Crediting Policy Revision

On October 5, 2011, the Board adopted a revised member contribution interest crediting rate policy. The interest crediting rate has a financial impact for SCERS because, in addition to the impact on the refund benefit, SCERS has a minimum benefit that is equal to twice the value of the member contribution account (SMC Sections 4.36.200, 4.36.210 and 4.36.260). Currently this minimum applies fairly frequently (although less than half the time), particularly in cases of deferred retirements, older retirees, and retirees with many years of service who reach the 30-year maximum based on the regular formula benefit. It will become even more significant in the future as the member contribution rate is increasing to 10.03% (from 8.03%), so the members' accounts will be larger relative to what they are now.

The revised member crediting policy adopted by the Board stipulates that:

- 1) Each year, the Board will set a rate of interest for all contributions made after December 31, 2011.
- 2) The target for this rate will be the prior 12 months' average yield on 30-year US Treasury Bonds plus 0.25%, with a maximum credit interest rate equal to 5.75%.

For the 2012 calendar year, all member contributions made on or prior to December 31, 2011 will continue to be credited 5.75% interest, and all member contributions made after December 31, 2011 will be credited 4.47% annual interest.



Member Crediting Policy Revision—Actuarial Valuation Assumption

The revised member crediting policy targets a moving rate for the interest credited to member contributions made after December 31, 2011. Therefore, it is necessary to develop an actuarial assumption for the credited rate of interest to member contributions made after that date for valuation purposes.

Although the recent economic environment has been one of low inflation and low yields on US Treasuries, the actuarial assumptions used in the valuation take a long-term view of economic and demographic environments.

Based on an analysis of forecasted yields on 30-year US Treasury Bonds over a 15 to 30 year time horizon, and taking into consideration both the 0.25% premium targeted by SCERS, as well as the 5.75% cap on the credited rate, we recommend using a 5.00% long-term actuarial assumption for the rate credited to post-December 31, 2011 member contributions. We have used this assumption in our analysis.

We will continue to assume 5.75% credited interest on all member contributions made on or prior to December 31, 2011.

Revised Projected Total Contribution Rate

In our letter dated September 6, 2011, we outlined the potential actuarial cost impact to SCERS, based on the January 1, 2011 actuarial valuation, if various new member crediting policies were adopted. As shown in that letter, the scenario in which 5.00% was credited to member contributions made on or after December 31, 2011 resulted in the following changes to certain key valuation measurements:

| Change in Key Measurements* Crediting Rate Changed for Contributions Made After 12/31/2011 | | | | | | |
|---|---------------------|--|--|-----------------|--|--|
| Member Account Interest Crediting Rate | Normal Cost Rate | Contribution Rate To Amortize UAAL Over 30 Years | Total Increase/(Decrease) in Rate Needed | Funded Ratio | | |
| 5.0% | -0.20% | -0.06% | -0.26% | 0.2% | | |

*Changes relative to the January 1, 2011 actuarial valuation results.

In Section 8 (Contribution Rate Projections and Increases) of the January 1, 2011 actuarial valuation report, we performed a 5-year projection of the Total Contribution Rate needed to amortize the Unfunded Actuarial Accrued Liability (UAAL) over 30 years on a rolling basis. This projected was performed under 3 different scenarios:

- 1) Assuming that the investment return assumption is met in each future year.
- 2) Assuming that the assets return at the 5th percentile.
- 3) Assuming that the assets return at the 95^{th} percentile.



The result is effectively a 90% confidence interval (based on asset returns) of the projected contribution rates in these years.

In this letter, we have performed a similar projection using the results of revised January 1, 2011 actuarial valuation calculations, which reflect the new member crediting policy and the associated cost savings. The results of this revised projection are shown below.



Projected Total Contribution Rate Needed***

| Projected Total Contribution Rate Needed ^{**} | | | | | |
|--|--|--|--|--|--|
| Assuming 7.7 ntile Future Retur | 75% rns 5th Percentile | | | | |
| 04% 21.0 | 04% 21.04% | | | | |
| 80% 22.2 | 27% 21.61% | | | | |
| 62% 23.4 | 41% 21.84% | | | | |
| 11% 23. | 12% 20.41% | | | | |
| 82% 22.9 | 98% 18.92% | | | | |
| 69% 22.9 | 94% 17.39% | | | | |
| | Assuming 7.7 ntile Future Return 04% 21.0 80% 22.2 62% 23.4 11% 23.7 82% 22.5 69% 22.5 | | | | |

* Contribution year lags calculation year by 1. For example: Contribution Year 2012 is based on the

2011 valuation results, amortized over 30 years beginning in 2011, if the increase takes place in 2012.

** Assumes actual total contribuiton rate is 18.06% in 2011 and 20.06% in 2012 and later.

***Projected total rate needed to pay Normal Cost, and amortize projected UAAL over 30 year period.



Please note that the numeric exhibit shown in the valuation report Section 8 (page 32 of the January 1, 2011 valuation) inadvertently reversed the 5th and 95th percentile column labels, so that should be taken into consideration when comparing this exhibit with the one shown in the valuation report. The 95th percentile refers to the lower asset returns, and higher Total Contribution Rate numbers. The graph shown on that page, as well as all other percentile numbers shown throughout the report, were labeled correctly.

As in the valuation report, the following percentile returns were assumed for this projection, based on analysis of SCERS' investments:

| Compounded average return for period | | | | |
|--------------------------------------|------------|-------|--|--|
| | Percentile | | | |
| | 5th | 95th | | |
| 1-Year Period | 29.2% | -9.5% | | |
| 2-Year Period | 22.7% | -4.6% | | |
| 3-Year Period | 19.9% | -2.4% | | |
| 4-Year Period | 18.2% | -1.0% | | |
| 5-Year Period | 17.1% | -0.1% | | |

Prospective-Only Crediting Rate Changes: Comments on Cost Effect over Time

As discussed in our September 6, 2011 letter, when the member crediting rate is changed only for future contributions, a portion of the Total Contribution Rate savings to SCERS will tend to increase over time.

The savings in the Total Contribution Rate is comprised of two components:

- 1) Normal Cost savings, and
- 2) UAAL Contribution Rate savings.

The Normal Cost savings shown in this letter reflect the savings for the current population of SCERS participants. These participants will in general be receiving some interest crediting at 5.75% and some interest crediting at the new reduced rate. However, for new entrants who become participants of SCERS after December 31, 2011, none of their contributions will receive the old 5.75% crediting rate. Therefore, over the entire career of these new entrants, the individual normal cost savings will be greater than the individual career normal cost savings for current participants.

Over a long-term time horizon, participants entering SCERS after December 31, 2011 will comprise a larger and larger proportion of the total SCERS population. As this occurs, the projected normal cost savings being realized by SCERS will increase. Any increase in normal cost savings will only occur to the extent new entrants enter the plan.



The effect of such potential increase in savings is not expected have a material impact over the projection period shown in this letter. We have not pre-recognized any of the potential increase in future savings over the 5-year period following the valuation.

Actuarial Certification

The cost estimates shown in this letter reflect the data, methods and assumptions used for the January 1, 2011 actuarial valuation except where noted. These cost estimates are subject to the uncertainties of a regular actuarial valuation; the costs are inexact because they are based on assumptions that are themselves necessarily inexact, even though we consider them reasonable. Thus, the emerging costs may vary from those presented in this letter to the extent actual experience differs from that projected by the actuarial assumptions.

The cost estimates presented in this letter are based on the January 1, 2011 actuarial valuation report. In preparing that report, we relied without audit on information (some oral and some in writing) supplied by SCERS' staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We used SCERS' benefit provisions as stated in our January 1, 2011 Actuarial Valuation report, except for the adjustment to the interest crediting rate. In our examination, after discussion with SCERS and certain adjustments, we have found the data to be reasonably consistent and comparable with data used for other purposes. Since the valuation results, as well as the estimates shown in this letter, are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our determinations might need to be revised.

The emerging costs will vary from those presented in this letter to the extent that actual experience differs from that projected by the actuarial assumptions. Future actuarial measurements may differ significantly from the current measurements presented in this letter due to a number of factors. Due to the scope of this assignment, we did not perform an analysis of the potential range of such measurements. Actuarial computations presented in this letter are for purposes of studying the impact of alternative asset smoothing methods. Determinations for other purposes may be significantly different from the results contained in this letter.

Milliman's work is prepared solely for the internal business use of SCERS. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

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The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this letter is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices.

I, Nick Collier, am a member of the American Academy of Actuaries and an Associate of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

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Nick J. Collier, ASA, EA, MAAA Consulting Actuary NJC/nlo