State of Minnesota \ LEGISLATIVE COMMISSION ON PENSIONS AND RETIREMENT

2010 Financial Sustainability Bills

S.F. 2499 (Betzold)	H.F. 2953 (Murphy, M., by request)
S.F. 2573 (Betzold)	H.F. 2953 (Murphy, M.)
S.F. 2631 (Betzold)	H.F. 2999 (Murphy, M., by request)
S.F. 2672 (Betzold)	H.F. XXXX

Executive Summary of Commission Staff Materials

Affected Pension Plan(s): Defined benefit plans administered by MSRS, PERA, and TRA
Relevant Provisions of Law: Minnesota Statutes, Chapters 3A, 352, 352B, 352F, 353F, 354, and 356
General Nature of Proposal: Financial sustainability recommendations
Date of Summary: February 25, 2010

Specific Proposed Changes

- S.F. 2499 (Betzold); H.F. 2953 (Murphy, M., by request): Teachers Retirement Association (TRA)
  - Member Contribution Rate Increases. (Sec. 1)
  - Employer Contribution Rate Increases. (Sec. 2)
  - Contribution Rate Stabilizer Added. (Sec. 3-6)
  - Two-Year Suspension in Annual Automatic Post-Retirement Adjustments. (Sec. 10-11)
  - Reduced Future Annual Automatic Post-Retirement Adjustments. (Sec. 10-11)
  - Reduced Interest Rate on Refunds. (Sec. 7-8)
  - Elimination of Interest on Reemployed Annuitant Earnings Limitation Deferral Amounts. (Sec. 12)
  - Reduced Deferred Annuity Augmentation Rate. (Sec. 9)

- S.F. 2573 (Betzold); H.F. 2952 (Murphy, M.): Minnesota State Retirement System (MSRS)
  - Contribution Increases. (Sec. 15)
  - Post-Retirement Increase Rate Reduction. (Sec. 29-30)
  - Reinstitution of Minimum Waiting Period for the Initial Post-Retirement Adjustment. (Sec. 32)
  - Refund Interest Rate Reduction. (Sec. 5, 21)
  - Deferred Annuity Augmentation Rate Reduction. (Sec. 1, 6, 9, and 20)
  - Elimination of the Reemployed Retiree Earnings Limitation Deferral Account Interest. (Sec. 31)
  - Increased Vesting Requirements. (Sec. 2-4, 7, 10-14, 16-19, 21, and 23-27)
  - Increased Early Retirement Reduction Factor. (Sec. 11, 17)
  - Reduced Benefit Accrual Formula Percentage Rate. (Sec. 28)
  - Extends Amortization Date. (Sec. 22)

- S.F. 2631 (Betzold); H.F. 2999 (Murphy, M., by request): Public Employees Retirement Association (PERA)
  - Contribution Increases. (Sec. 2-4, 13-14)
  - Post-Retirement Increase Rate Reduction. (Sec. 29)
  - Refund Interest Rate Reduction. (Sec. 7, 10-11)
  - Deferred Annuity Augmentation Rate Reduction. (Sec. 20)
  - Elimination of Reemployed Retiree Earnings Limitation Deferral Account Interest. (Sec. 30)
  - Increased Vesting Requirements. (Sec. 1, 5-6, 8-9, 12, 15-19, 21-25, 27, and 31)
  - Revised Salary Increase Actuarial Assumption. (Sec. 26)

- S.F. 2672 (Betzold); H.F. XXXX: Public Employees Police and Fire Retirement Plan (PERA-P&F) *(MPPOA)*
  - Deferred Annuity Augmentation Elimination. (Sec. 5)
  - Increased Vesting Requirement. (Sec. 3-4, 6)
  - Increased Member and Employer Contributions. (Sec. 1-2)
  - Revised Post-Retirement Adjustment Mechanism. (Sec. 7-8)

Policy Issues Raised by the Proposed Legislation

Policy Issues Generally Applicable to All Financial Sustainability Proposals

1. Accuracy of the perception of funding crisis for the various statewide defined benefit retirement plans.
2. Likelihood of near-term pension benefit payment defaults.
3. Function of public retirement funds as employer self-insurance pools.
4. Appropriate allocation of responses to the plan funding problems.
5. Appropriateness of proposed benefit reductions.

6. Appropriateness of omitting other benefit elements from reduction to address the Minnesota statewide defined benefit plan retirement plans financial and actuarial condition.
7. Unaddressed liability producing provisions.
8. Appropriateness of mandatory or optional defined contribution plan retirement coverage as remedy for the funding problems of the statewide defined benefit plan retirement plans.
9. Lack of apparent consideration of retirement plan consolidations/reformulations as alternative potential resolutions.
10. Inconsistency of the application of emergency remedies without similar measures for MERF, DTRFA, & SPTRFA.
11. Appropriateness of the lack of uniformity in financial sustainability proposals.

<u>General Policy Issues on Specific Financial Sustainability Recommendations In Common</u>

12. Appropriateness of the reduction in post-retirement adjustments.
13. Appropriateness of different post-retirement adjustment percentage annual increase rates for different plans.
14. Appropriateness of using different pension fund financial stability triggers for full post-retirement adjustment percentage restoration.
15. Appropriateness of basing the post-retirement adjustment rate revision mechanism trigger on a market value of assets funded ratio.
16. Revised actuarial valuation filing date is incompatible with the post-retirement rate modification trigger.
17. Appropriateness of the proposed rate reduction on refund interest payments.
18. Appropriateness of the proposed elimination of the interest on reemployed annuitant earnings limitation retirement annuity deferral accounts.
19. Appropriateness of the proposed reduction in the deferred annuity augmentation rates.
20. Appropriateness of the delayed effective date for the proposed benefit reductions.

<u>Policy Issues Relevant to Specific MSRS Financial Sustainability Recommendations</u>

21. Appropriateness of reinstating a minimum receipt period to qualify for a post-retirement adjustment.
22. Appropriateness of lack of contribution rate increases for most MSRS-administered retirement plans.
23. Appropriateness of creating an employer additional contribution for the State Patrol Retirement Plan.
24. Appropriateness of revised early retirement reduction rates.
25. Appropriateness of limiting revised early retirement reduction rates to only the State Patrol and the MSRS-Correctional retirement plans.
26. Appropriateness of reducing a defined benefit plan retirement plan benefit accrual rate.
27. Appropriateness of limiting benefit accrual rate reductions to only the MSRS-Correctional retirement plan.
28. Appropriateness of the proposed extension of the MSRS-General amortization period.
29. Appropriateness of continuing to require the calculation of amortization contributions on a level percentage of covered pay basis.

<u>Policy Issues Relevant to Specific TRA Financial Sustainability Recommendations</u>

30. Appropriateness of creating a TRA contribution stabilizer.
31. Appropriateness of suspending automatic post-retirement adjustments.
32. Appropriateness of the proposed trigger for the proposed restoration of the full post-retirement adjustment rate.
33. Appropriateness of the proposed TRA member contribution rate increase.
34. Appropriateness of the proposed TRA employer contribution rate increase.
35. Appropriateness of the length of the contribution increase phase-in.
36. Actuarial estimate of actuarial liability and required contribution impact of proposed TRA financial sustainability measures.

<u>Policy Issues Relevant to Specific PERA Financial Sustainability Recommendations</u>

37. Appropriateness of considering the PERA-General salary increase and payroll growth assumption changes without considering all other actuarial assumption change recommendations.

<u>Policy Issues Relevant to the Minnesota Police and Peace Officers Association Recommendations</u>

38. Appropriateness of basing post-retirement adjustments on Consumer Price Index increases.
39. Appropriateness of the proposed elimination of the augmentation of deferred annuities.

<u>Policy Issues Relevant to Specific MSRS, PERA, and the MPPOA Recommendations for PERA-P&F</u>

40. Appropriateness of increasing vesting requirements.

<u>Policy Issues Relevant to Specific PERA and the MPPOA Recommendations (PERA-P&F)</u>

41. Appropriateness of shifting from cliff vesting to partial vesting with shorter service scaling up to full vesting with longer service.

Potential Substantive Amendments

<u>LCPR10-1A</u> replaces calculated "actuarial value" of retirement plan assets with market value of assets.

<u>LCPR10-2A</u> makes the full economic actuarial assumption changes recommended in the 2004-2008 experience studies for MSRS-General, PERA-General, and TRA.

<u>LCPR10-3A</u> implements some additional inconsistent or unusual liability producing provisions identified by the Commission staff.

Comparison of MSRS, PERA, TRA, and Minnesota Police and Peace Officers Association Financial Sustainability Proposals

	SF2573/HF2952						SF2631/HF2999			SF2672/HFxxxx	SF2499/HF2953
	MSRS-General	MSRS-Correct.	State Patrol	Judges	Legislators	ESO	PERA-General	PERA- Correct.	PERA-P&F	PERA-P&F	TRA
a. Contributions											
1. Member	--	--	+0.8%	--	--	--	+0.25%	--	+0.2%	+0.2%	+2.0%
2. Employer	--	--	+1.2%	--	--	--	+0.25%	--	+0.3%	+0.3%	+2.0%
3. Empl'er add'l	--	--	+10.0%	--	--	--	--	--	--	--	--
4. Contribution rate stabilizer	--	--	--	--	--	--	Modified	--	--	--	Added
b. Post-retirement adjustments	Reduced from 2.5% to 2.0%, restored when 90% funded on MVB,* 6-mo. waiting period imposed for initial increase.	Reduced from 2.5% to 2.0%, restored when 90% funded on MVB,* 6-mo. waiting period imposed for initial increase.	Reduced from 2.5% to 2.0%, restored when 90% funded on MVB,* 6-mo. waiting period imposed for initial increase.	Reduced from 2.5% to 2.0%, restored when 90% funded on MVB,* 6-mo. waiting period imposed for initial increase.	Reduced from 2.5% to 2.0%, restored once MSRS-Gen'l is 90% funded on MVB,* 6-mo. waiting period for initial increase.	Reduced from 2.5% to 2.0%, restored once MSRS-Gen'l is 90% funded on MVB,* 6-mo. waiting period for initial increase.	Reduced from 2.5% to 1.0%, restored when 90% funded on MVB,* rate reduced if fund later declines from 90% funded.	Reduced from 2.5% to 1.0%, restored when 90% funded on MVB,* rate reduced if fund later declines from 90% funded.	Reduced from 2.5% to 1.0%, restored when 90% funded on MVB,* rate reduced if fund later declines from 90% funded.	Changed to CPI increase to a 1.5% max, 2.5% max when 90% funded on MVB,* max reduced to 1.5% if fund declines from 90%	Adjustments suspended for 1/1/2011 & 1/1/2012, reduced from 2.5% to 1.5%, restored when 80% funded on MVB.*
c. Interest on refunds	Reduced from 6% to 4% after 6/30/2011	Reduced from 6% to 4% after 6/30/2011	Reduced from 6% to 4% after 6/30/2011	Reduced from 6% to 4% after 6/30/2011	Reduced from 6% to 4% after 6/30/2011	--	Reduced from 6% to 4% after 6/30/2011	Reduced from 6% to 4% after 6/30/2011	Reduced from 6% to 4% after 6/30/2011	--	Reduced from 6% to 4% after 6/30/2011
d. Deferred annuities augmentation	Reduced from 5, 3, or 2.5% to 2% after 12/31/2010	Reduced from 5, 3, or 2.5% to 2% after 12/31/2010	Reduced from 5, 3, or 2.5% to 2% after 12/31/2010	Reduced from 5, 3, or 2.5% to 2% after 12/31/2010	Reduced from 5, 3, or 2.5% to 2% after 12/31/2010	--	Reduced from 5, 3, or 2.5% to 2% after 12/31/2010	Reduced from 5, 3, or 2.5% to 2% after 12/31/2010	Reduced from 5, 3, or 2.5% to 2% after 12/31/2010	Eliminated after 6/30/2010	Reduced from 5, 3, or 2.5% to 2% after 12/31/2010
e. Reempl. annuitant earnings limitation deferral account interest	Eliminated after 1/1/2011	Eliminated after 1/1/2011	Eliminated after 1/1/2011	--	--	--	Eliminated after 12/31/2010	Eliminated after 12/31/2010	Eliminated after 12/31/2010	--	Eliminated after 12/31/2010
f. Vesting service requirement	For new members after 6/30/2010, increased from 3 years to 5 years.	For new members after 6/30/2010, increased from 3 years to 5 years.	For new members after 6/30/2010, increased from 3 years to 5 years.	--	--	--	For new members after 6/30/2010, increased from 3 years to 5 years.	For new members after 6/30/2010, incr. from 3 yrs to 50% vested w/ 5 yrs – 100% w/10 yrs.	For new members after 6/30/2010, incr. from 3 yrs to 50% vested w/ 5 yrs – 100% w/10 yrs.	For new members after 6/30/2010, incr. from 3 yrs to 50% vested w/ 5 yrs – 100% w/10 yrs.	--
g. Early retirement reduction factor, per year under age 55	--	For new members after 6/30/2010, increased from 2.4% to 5.0%	For pre-6/30/2010 members retiring after 6/30/2015 & for new members after 6/30/ 2010, increased from 2.4% to 5.0%	--	--	--	--	--	--	--	--
h. Benefit accrual rate percentage, per year of high-5avg. salary	--	For new members after 6/30/2010, reduced from 2.4% to 2.2%	--	--	--	--	--	--	--	--	--

*MVB = Market Value Basis

State of Minnesota \ LEGISLATIVE COMMISSION ON PENSIONS AND RETIREMENT

TO: Members of the Legislative Commission on Pensions and Retirement

FROM: Lawrence A. Martin, Executive Director

RE: Retirement Plans Financial Sustainability Proposals:
S.F. 2499 (Betzold); H.F. 2953 (Murphy, M., by request): TRA
S.F. 2573 (Betzold); H.F. 2952 (Murphy, M.): MSRS
S.F. 2631 (Betzold); H.F. 2999 (Murphy, M., by request): PERA
S.F. 2672 (Betzold); H.F. xxxx: PERA-P&F

DATE: February 23, 2010

General Summary of S.F. 2499 (Betzold); H.F. 2953 (Murphy, M., by request)

S.F. 2499 (Betzold); H.F. 2953 (Murphy, M., by request) contains the following benefit and contribution changes formulated and recommended by the Teachers Retirement Association (TRA) Board of Trustees:

1. Member Contribution Rate Increases. Member contribution rates would be increased on a phase-in basis by two percent of covered salary over four years, with 0.5 percent increases occurring every July 1 beginning July 1, 2011. *(Sec. 1)*
2. Employer Contribution Rate Increases. Employing unit contribution rates would be increased by two percent of covered salary on a phase-in basis over four years, with 0.5 percent increases occurring every July 1 beginning July 1, 2011. *(Sec. 2)*
3. Contribution Rate Stabilizer Added. After July 1, 2015, if the TRA actuarial valuation indicates a contribution rate deficiency (i.e., total support as a percentage of covered salary compared to total financial requirements expressed as a percentage of covered salary) of at least 0.5 percent of covered payroll, with the approval of (or inaction by) the Legislative Commission on Pensions and Retirement, the member contribution rate will increase by 0.25 percent of covered salary and the employer contribution rate will increase by 0.25 percent of covered salary, with the downward adjustment if there is a contribution sufficiency. *(Sec. 3-6)*
4. Two-Year Suspension in Annual Automatic Post-Retirement Adjustments. The automatic 2.5 percent annual post-retirement adjustment enacted in 2008 and implemented in 2009 with the dissolution of the Minnesota Post Retirement Investment Fund, is suspended for January 1, 2011, and for January 1, 2012. *(Sec. 10-11)*
5. Reduced Future Annual Automatic Post-Retirement Adjustments. The automatic 2.5 percent annual post-retirement adjustment is reduced to two percent beginning on January 1, 2013. *(Sec. 10-11)*
6. Reduced Interest Rate on Refunds. The interest rate payable on refunds of member contributions is reduced from six percent annual compound interest to four percent annual compound interest. *(Sec. 7-8)*
7. Elimination of Interest on Reemployed Annuitant Earnings Limitation Deferral Amounts. The current six percent interest payable on amounts withheld and deferred because an annuitant exceeds the reemployed annuitant earnings limitation is eliminated. *(Sec. 12)*
8. Reduced Deferred Annuity Augmentation Rate. The current deferred annuity augmentation rates of three percent per year until age 55 and five percent per year after age 55 for pre-July 1, 2006, hires and of 2.5 percent for post-June 30, 2006, hires are reduced to two percent per year. *(Sec. 9)*

General Summary of S.F. 2573 (Betzold); H.F. 2952 (Murphy, M.)

S.F. 2573 (Betzold); H.F. 2952 (Murphy, M.) contains the various financial sustainability measures assembled by and recommended by the Board of Directors of the Minnesota State Retirement System (MSRS), as follows:

1. Contribution Increases. The member contribution rate for the State Patrol Retirement Plan is increased by 0.8 percent of salary, the employer contribution rate for the State Patrol Retirement Plan is increased by 1.2 percent of salary, and an additional employer contribution of 8.0 percent of salary is created for the State Patrol Retirement Plan. *(Sec. 15)*
2. Post-Retirement Increase Rate Reduction. Until the respective plan achieves a 90 percent funding ratio (actuarial value of assets as a percentage of actuarial accrued liability), the annual post-retirement adjustment rate is reduced from 2.5 percent to 2.0 percent for the General State Employees

Retirement Plan of the Minnesota State Retirement System (MSRS-General), the Correctional Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional), the Legislators Retirement Plan, the Constitutional Officers Retirement Plan, the State Patrol Retirement Plan, and the Judges Retirement Plan. *(Sec. 29-30)*

3. Reinstitution of Minimum Waiting Period for the Initial Post-Retirement Adjustment. A retiree or other benefit recipient of any retirement plan administered by MSRS would be required to be in receipt of the annuity or benefit for at least six months before qualifying for the initial post-retirement adjustment. *(Sec. 32)*
4. Refund Interest Rate Reduction. The rate of interest on refunds paid from any retirement plan administered by MSRS is reduced from six percent annually to four percent annually. *(Sec. 5, 21)*
5. Deferred Annuity Augmentation Rate Reduction. The rate of compound increase during the deferred period on deferred retirement annuities is reduced from its current rates (three percent before age 55 and five percent after age 54 for pre-2006 hires and 2.5 percent at any age for post-2005 hires) to two percent for the Legislators Retirement Plan, MSRS-General, MSRS-Correctional, and the State Patrol Retirement Plan. *(Sec. 1, 6, 9, and 20)*
6. Elimination of the Reemployed Retiree Earnings Limitation Deferral Account Interest. The interest payable on the deferred benefit account for reemployed retirees who exceed the earnings limitation, set at a six percent compound rate, is eliminated for MSRS-General and MSRS-Correctional. *(Sec. 31)*
7. Increased Vesting Requirements. The minimum allowable service credit required to obtain entitlement to a retirement annuity or other retirement benefit is increased from three years to five years for plan members newly hired after June 30, 2010, for MSRS-General and the State Patrol Retirement Plan, and from three years to ten years for plan members newly hired after June 30, 2010, for MSRS-Correctional. *(Sec. 2-4, 7, 10-14, 16-19, 21, and 23-27)*
8. Increased Early Retirement Reduction Factor. The amount of the retirement annuity per year before the normal retirement age is reduced upon early retirement is increased from 1.2 percent to 2.4 percent for members of the State Patrol Retirement Plan newly hired after June 30, 2010, and from 2.4 percent to 5.0 percent for members of MSRS-Correctional if employed before July 1, 2010, and retiring after June 30, 2015, or if employed after June 30, 2010. *(Sec. 11, 17)*
9. Reduced Benefit Accrual Formula Percentage Rate. The percentage rate applied to a final average salary and multiplied by the number of years of allowable service in calculating a single-life retirement annuity for MSRS-Correctional is reduced from 2.4 percent per year to 2.2 percent per year for newly hired plan members after June 30, 2010. *(Sec. 28)*
10. Extends Amortization Date. The amortization date for MSRS-General is extended from 2020 to 2040. *(Sec. 22)*

General Summary of S.F. 2631 (Betzold); H.F. 2999 (Murphy, M., by request)

S.F. 2631 (Betzold); H.F. 2999 (Murphy, M., by request) contains the various sustainability measures assembled by and recommended by the Board of Trustees of the Public Employees Retirement Association (PERA), as follows:

1. Contribution Increases. The member contribution rate for the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General) is increased from 6.0 percent to 6.25 percent and for the Public Employees Police and Fire Retirement Plan (PERA-P&F) is increased from 9.4 percent to 9.6 percent. The employer contribution rate for PERA-General is increased from 6.0 percent to 6.25 percent and for PERA-P&F is increased from 14.1 percent to 14.4 percent. The automatic PERA-General contribution adjustment provision enacted in 2006 is modified to cover larger potential contribution increases in the event of large contribution deficiencies. *(Sec. 2-4, 13-14)*
2. Post-Retirement Increase Rate Reduction. Until the respective retirement plan achieves a 90 percent funding ratio on a market value basis, the annual post-retirement adjustment rate is reduced from 2.5 percent to 1.0 percent for PERA-General, PERA-P&F, and the Local Government Correctional Service Retirement Plan (PERA-Correctional). *(Sec. 29)*
3. Refund Interest Rate Reduction. The rate of interest on refunds is reduced from six percent annual compound rate to a four percent annual compound rate. *(Sec. 7, 10-11)*
4. Deferred Annuity Augmentation Rate Reduction. The rate of compound increase during the deferral period on deferred retirement annuities is reduced from current rates (three percent before age 55 and five percent after age 54 for pre-2006 hires and 2.5 percent at any age for post-2005 hires) to one percent for PERA-General, PERA-P&F, and PERA-Correctional. *(Sec. 20)*

5. Elimination of Reemployed Retiree Earnings Limitation Deferral Account Interest. The interest payable on the deferred benefit amount account for reemployed retirees who exceed the applicable earnings limitation, currently set at a six percent compound rate, is eliminated for PERA-General, PERA-P&F, and PERA-Correctional. *(Sec. 30)*
6. Increased Vesting Requirements. For post-June 30, 2010, hires covered by PERA-General, the vesting period for retirement annuity and other benefit entitlement is increased from the current three years to five years of allowable service. For post-June 30, 2010, hires covered by PERA-P&F and PERA-Correctional, the vesting period for retirement annuity and certain other benefit entitlements is shifted from three-year cliff vesting to scaling-up vesting (50 percent with five years of allowable service to 100 percent with ten years of allowable service. *(Sec. 1, 5-6, 8-9, 12, 15-19, 21-25, 27, and 31)*
7. Revised Salary Increase Actuarial Assumption. The PERA-General salary increase and payroll increase assumptions are revised as recommended by its consulting actuary in the 2004-2008 PERA-General Quadrennial Experience Study. *(Sec. 26)*

General Summary of S.F. 2672 (Betzold); H.F. xxxx

S.F. 2672 (Betzold); H.F. xxxx contains the various Public Employees Police and Fire Retirement Plan (PERA-P&F) financial sustainability measures assembled and recommended by the Minnesota Police and Peace Officers Association and the Minnesota Professional Fire Fighters, as follows:

1. Deferred Annuity Augmentation Elimination. The compounding increase in the amount of deferred retirement annuities during the deferral period, currently set at three percent before age 55 and five percent after age 54 for most PERA-P&F members, would be eliminated for public safety personnel who become PERA-P&F members after June 30, 2010. *(Sec. 5)*
2. Increased Vesting Requirement. For public safety personnel who become PERA-P&F members after June 30, 2010, the current three years of allowable service 100 percent vesting requirement for a retirement annuity would be increased to five years of allowable service for 50 percent vesting up to ten years of allowable service for 100 percent vesting. *(Sec. 3-4, 6)*
3. Increased Member and Employer Contributions. Effective for calendar year 2011, the PERA-P&F member contribution for all members increases from 9.4 percent of covered salary to 9.6 percent of covered salary and the PERA-P&F employer contribution with respect to all members increases from 14.1 percent of covered salary to 14.4 percent of covered salary. *(Sec. 1-2)*
4. Revised Post-Retirement Adjustment Mechanism. The current 2.5 percent annual automatic post-retirement adjustment, payable each January 1, is modified for PERA-P&F to be the percentage increase in the federal Consumer Price Index (CPI) for the most recent July 1-June 30 period not to exceed 1.5 percent annually until the PERA-P&F fund regains a 90 percent funding ratio on a market value of assets basis and then not to exceed 2.5 percent annually. *(Sec. 7-8)*

Section-by-Section Summaries of the Proposed Legislation

Section-by-section summaries of the four pieces of proposed financial sustainability legislation are attached.

Background Information

Background information on relevant topics related to the proposed legislation is presented in the following attachments:

A. 2008-2009 Statewide Retirement Plan Post-Retirement Adjustment Procedure. The post-retirement adjustment procedure established and implemented by the 2008 and 2009 Legislatures to replace the Minnesota Post Retirement Investment Fund is summarized in **Attachment A**.

B. Member Contribution Refunds and Refund Interest. The retirement plan benefit of a refund of accumulated member contributions and interest by the statewide and major local retirement plans is summarized in **Attachment B**.

C. Reemployed Annuitant Earnings Limitations and Earnings Limitations Deferral Accounts. The limits applicable to Minnesota public employee retirement plans and the disposition of annuity amounts in excess of the limits are summarized in **Attachment C**.

D. Deferred Annuity Augmentation. The Minnesota public employee retirement plan practice of augmenting deferred annuities during the deferral period is summarized in **Attachment D**.

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E. Vesting Requirements. The requirements for coverage by the major statewide and Minnesota public employee retirement plans, the requirements for benefit eligibility and vesting by those retirement plans, and the probability of receipt of a retirement annuity by a member of one of those retirement plans are summarized in **Attachment E**.

F. Early Retirement Reductions. The practice and policy considerations relevant to reduction factors for early retirements in Minnesota defined benefit plan public employee retirement plans is summarized in **Attachment F**.

G. Benefit Accrual Rates. Background information on benefit accrual rates and defined benefit plan retirement plan retirement annuity adequacy is summarized in **Attachment G**.

H. Actuarial Value of Public Pension Plan Assets. Background information on the computation and use of the actuarial value of public pension plan assets is set forth in **Attachment H**.

I. Funded Status of MSRS-General 1983-2009. The actuarial work for the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General) from July 1, 1983, to July 1, 2009, is summarized in **Attachment I**.

J. Funded Status of PERA-General 1983-2009. The actuarial work for the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General) from July 1, 1983, to July 1, 2009, is summarized in **Attachment J**.

K. Funded Status of the Teachers Retirement Association 1983-2009. The actuarial work for the Teachers Retirement Association (TRA) from July 1, 1983, until July 1, 2009, is summarized in **Attachment K**.

L. Funded Status of the State Patrol Retirement Plan 1983-2009. The actuarial work for the State Patrol Retirement Plan from July 1, 1983, until July 1, 2009, is summarized in **Attachment L**.

M. Funded Status of PERA-P&F 1983-2009. The actuarial work for the Public Employees Police and Fire Retirement Plan (PERA-P&F) from July 1, 1983, until July 1, 2009, is summarized in **Attachment M**.

N. Funded Status of MSRS-Correctional 1983-2009. The actuarial work for the Correctional State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional) from July 1, 1983, until July 1, 2009, is summarized in **Attachment N**.

O. Funded Status of PERA-Correctional 1999-2009. The actuarial work for the State Patrol Retirement Plan from July 1, 1999, until July 1, 2009, is summarized in **Attachment O**.

P. Funded Status of the Judges Retirement Plan 1983-2009. The actuarial work for the Judges Retirement Plan from July 1, 1983, until July 1, 2009, is summarized in **Attachment P**.

Discussion and Analysis

S.F. 2499 (Betzold); H.F. 2953 (Murphy, M., by request), S.F. 2573 (Betzold); H.F. 2952 (Murphy, M.), S.F. 2631 (Betzold); H.F. 2999 (Murphy, M., by request), and S.F. 2672 (Betzold); H.F. xxxx implement the contribution and benefit changes recommended by the governing boards of the three statewide retirement plan administrations and of the organization representing local government public safety employees to address the significant negative impact of the various statewide defined benefit plan retirement plans of the recent economic recession and investment market declines.

The four pieces of proposed legislation raise a variety of public pension and related public policy issues for Commission consideration and potential discussion, at large and specifically, as follows:

Policy Issues Generally Applicable to All Financial Sustainability Proposals

1. Accuracy of the Perception of Funding Crisis for the Various Statewide Defined Benefit Retirement Plans. The policy issue is the accuracy of the perception of the governing boards and of the various retirement systems and administrations that the retirement plans face a financial crisis of the scale and magnitude that demands the response provided for in the proposed legislation. One plan, the Teachers Retirement Association (TRA) has had its consulting actuary prepare a number of projections of the total financial requirements and funded status of the retirement plan based on the July 1, 2008, TRA actuarial valuation rather than the July 1, 2009, TRA actuarial valuation, with an assumed investment loss of 19 percent to represent July 1, 2009, and using a variety of investment performance assumptions, benefit reductions, and contribution increases. Without investment performance above

the 8.5 percent interest rate actuarial assumption, the projections indicate relatively low funded ratios and relatively high total financial requirements until 2036. The Mercer projections appear to be the basis for TRA's conclusion that drastic increases in contributions and significant benefit reductions are necessary to restore fiscal health to that retirement plan. The other retirement systems may have had similar projections prepared by Mercer, but those have not been provided to the Commission staff. Given the limitations of the TRA projections and given the unavailability of similar projections for the remaining eight actuarially funded statewide defined benefit plan retirement plans, it would be wise for the Commission to take extensive testimony from interested parties about the prospects for a future economic recovery and future investment performance, including even an analysis by the state's economist, before it concludes that the economic future will be as dismal as the three retirement systems appear to believe it will be.

2. Likelihood of Near-Term Pension Benefit Payment Defaults. The policy issue is the likelihood that a Minnesota defined benefit public employee retirement plan could default in the payment of retirement benefits in the near term. Based on a very unsophisticated measure of imminence of default (adequacy of current retirement assets compared to current annuities payable) by the Commission staff, the following rough potential default occurrence pattern is discernable, organized from shortest period until potential default to longest period until potential default:

Retirement Plan	Potential Default Date
Minneapolis Employees Retirement Fund (MERF)	2018
Virginia Fire Department Relief Association	2020
Judges Retirement Plan	2023
Minneapolis Police Retirement Association (MPRA)	2024
Minneapolis Firefighters Retirement Association (MFRA)	2026
Fairmont Police Relief Association	2026
St. Paul Teachers Retirement Fund Association (SPTRFA)	2027
Teachers Retirement Association (TRA)	2028
State Patrol Retirement Plan	2029
Duluth Teachers Retirement Fund Association (DTRFA)	2030
PERA General Employee Retirement Plan (PERA-General)	2032
Public Employees Police and Fire Retirement Plan (PERA-P&F)	2034
MSRS Correctional State Employees Retirement Plan (MSRS-Correctional)	2036
MSRS General State Employees Retirement Plan (MSRS-General)	2039
Bloomington Fire Department Relief Association	2047
PERA Local Government Correctional Service Retirement Plan (PERA-Correctional)	2109+

Although the measure is not very sophisticated and does not adjust for future increased member and employer contributions based on actuarial work, the rough measure does provide some indication of the relative danger of nearer-term future benefit defaults, even if the measure underestimates or overestimates those potential future benefit defaults. Of the retirement plans covered by the four pieces of proposed legislation, the Judges Retirement Plan (2033 potential default date), the Teachers Retirement Association (2028 potential default date), and the State Patrol Retirement Plan (2029 potential default date), are in the greatest date of a potential default and in the greatest financial difficulty. The extent of that financial difficulty does not appear to be so great at this time that drastic emergency remedies rather than modest remedies are required to extend the potential default date or to largely eliminate the potential for default.

3. Function of Public Retirement Funds as Employer Self-Insurance Pools. The policy issue is the appropriateness of the packages of fiscal sustainability measures beyond employer contribution rate increases because of the various retirement plans' function as self-insurance risk pools. Although Minnesota public employee retirement coverage in its earliest forms were arrangements devised, proposed, and ultimately established by public employers, Minnesota public employee retirement coverage has become and employer-sponsored employment benefit used to recruit new employees, retaining existing employees, and provide greater employment predictability by encouraging a systematic out-transitioning of public employees at the end of a "normal" employment career. As such, Minnesota public retirement funds are asset risk pools that represent self-insurance for Minnesota public employers. These self-insurance pools, with mandated employer financial support, reduce the ultimate cost to be borne by employers by providing opportunities to obtain significant amounts of investment income. The rationale presented to the Commission for the dissolution of the Minnesota Post Retirement Investment Fund and the discontinuation of the prior practice of investment performance-based post-retirement adjustments was to retain any investment experience gains during

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up-market investment years to offset investment experience losses during down-market investment years. Since the current financial difficulties are almost wholly a function of a severe recession and a significant investment market devaluation following dot.com and real estate market bubbles, the entities that primarily benefit from the self-insurance pool logically should bear the primary burden of placing the pool back on sound financial footings.

4. Appropriate Allocation of Responses to the Plan Funding Problems. The policy issue is the appropriateness of allocating the burden of addressing the perceived Minnesota defined benefit plan retirement plans funding problem among employers, active members, retired members, deferred members, and other inactive members, with the largest portion of the burden borne by the active membership of each retirement plan.

   The Minnesota State Retirement System (MSRS), on its website (see **Attachment R**), summarizes its proposed changes without detailing any policy argument for its recommendations, allocating the burden of the changes as follows:

   - Employers are proposed to bear an 11.2 percent increase in contributions to the State Patrol Retirement Plan only.
   - Active Members would have a reduction in future post-retirement adjustments, reductions in deferred annuity augmentation rates, and the elimination of deferred reemployed annuitant earnings limitation account interest. Members of the State Patrol Retirement Plan also have 0.8 percent increase in contributions to that plan. MSRS-General active members and State Patrol Retirement Plan active members after July 1, 2010, would have their vesting requirement increased to five years of service, and MSRS-Correctional active members after July 1, 2010, would have their vesting requirement increased to ten years. The early retirement reduction factors would be doubled for State Patrol Retirement Plan and new MSRS-Correctional members after July 1, 2010. The benefit accrual rate for new MSRS-Correctional members after July 1, 2010, would be reduced by 8.4 percent (from 2.4 percent per year to 2.2 percent per year).
   - Retired Members would have reductions in future post-retirement adjustments and the elimination of deferred reemployed annuitant earnings limitation account interest. The minimum period for the receipt of a post-retirement adjustment is lengthened to six months.
   - Deferred Members would have their augmentation rate/rates reduced. Inactive members would have interest on refunds reduced or deferred annuity augmentation rate/rates reduced.

   The Public Employees Retirement Association (PERA), on its website (see **Attachment S**), sets forth a brief summary of its proposed changes, also without setting forth any detailed policy argument, allocating the burden of changes as follows:

   - Employers are proposed to have a 0.25 percent increase in contributions to PERA-General and to have a 0.30 percent increase in contributions to PERA-P&F.
   - Active Members would have a reduction in future post-retirement adjustments, reductions in deferred annuity augmentation rates, and the elimination of deferred reemployed earnings limitation account interest. PERA-General members have a 0.25 percent increase in contributions and PERA-P&F members have a 0.20 percent increase in contributions. Vesting for PERA-General members is increased from three years of service to five years and, for PERA-P&F and PERA-Correctional members, to phased vesting of 50 percent of the accrued benefit at five years of service to 100 percent at ten years of service.
   - Retired Members would have reductions in future post-retirement adjustments and the elimination of deferred reemployed annuitant earnings limitation account interest.
   - Deferred Members would have their augmentation rate/rates reduced. Inactive members would have interest on refunds reduced or deferred annuity augmentation rate/rates reduced.

   Without detailing any policy argument for the proposition, the TRA Board of Trustees position on financial sustainability, **Attachment Q**, indicates that the short-term efforts to stabilize the financial situation of the TRA fund are a combination of measures representing a shared sacrifice approach to the problem, as follows:

   - Employers are proposed to bear a two percent of covered payroll increase over the four-year period July 1, 2011, to July 1, 2014, plus potential additional one-half of one percent of covered payroll or one-quarter of one percent of covered payroll contribution increases after 2014 if TRA still has a contribution deficiency.

- Active TRA members would have member contribution increases identical in amount and timing to the employer contribution increases, plus reductions in future post-retirement adjustments, reductions in deferred annuity augmentation rates, and elimination of interest payable on deferred annuity amounts in excess of the reemployed annuitant earnings limitations (referred to by TRA as earnings limitation savings accounts or ELSA accounts).
- Retired TRA members would have post-retirement adjustments suspended for two years and reduced thereafter, plus the elimination of interest payable on ELSA accounts.
- Deferred TRA annuitants would have their augmentation rate/rates reduced. Inactive TRA members would have interest on refunds reduced or deferred annuity augmentation rates reduced.

The current fiscal problems faced by MSRS and PERA are primarily a function of investment market declines, affecting member assets and resulting in the disestablishment of the Minnesota Post Retirement Investment Fund. The current fiscal problems faced by TRA are primarily a function of investment market declines, affective active member assets and resulting in the disestablishment of the Minnesota Post Retirement Investment Fund, with some impact of the 2006 consolidation of the Minneapolis Teachers Retirement Fund Association (MTRFA) into TRA and of the 2006 TRA prospective service benefit accrual rate increase. The Commission should consider requesting that the various retirement system administrators address the allocation of their proposed burden sharing where the heaviest burden arguably is borne by the active membership.

5. Appropriateness of Proposed Benefit Reductions. The policy issue is the appropriateness of the benefit reductions proposed in each of the four "financial sustainability" legislation bills.

The Minnesota State Retirement System (MSRS) Board of Directors is recommending five benefit changes that could or will reduce benefits for existing MSRS-administered retirement plan members:

i. Post-retirement adjustment rate reduction.
ii. Reinstitution of six-month minimum waiting period for the initial post-retirement adjustment.
iii. Refund interest rate reduction after June 30, 2011.
iv. Reduced deferred annuity augmentation rate after December 31, 2010.
v. Elimination of the reemployed retiree earnings limitation deferral account interest.

The Public Employees Retirement Association (PERA) Board of Trustees is recommending four benefit changes that could or will reduce benefits for existing PERA-administered retirement plan members:

i. Post-retirement adjustment rate reduction.
ii. Refund interest rate reduction after June 30, 2011.
iii. Reduced deferred annuity augmentation rate after December 31, 2010.
iv. Elimination of the reemployed retiree earnings limitation deferral account interest.

The Teachers Retirement Association (TRA) Board of Trustees is recommending four benefit changes that could or will reduce benefits for existing TRA retirement plan members:

i. Post-retirement adjustment rate reduction.
ii. Refund interest rate reduction after June 30, 2011.
iii. Reduced deferred annuity augmentation rate after December 31, 2010.
iv. Elimination of the reemployed retiree earnings limitation deferral account interest.

The Minnesota Police and Peace Officers Association is recommending two benefit changes that could or will reduce benefits for members of the Public Employees Police and Fire Retirement Plan:

i. Post-retirement adjustment rate reduction.
ii. Elimination deferred annuity augmentation rate after June 30, 2010.

If properly characterized as a benefit reduction, the proposed legislation could be open to a successful future legal challenge by disgruntled portions of the membership of the affected retirement plan. In its most recent judgments, the Minnesota Supreme Court has followed a quasi contract or promissory estoppel theory of public employee pension rights, treating pension benefit coverage as if it were a properly formed contractual arrangement if there has been membership reliance on the coverage and not permitting many or any adverse modifications by the Legislature. The Minnesota Supreme Court has not yet clearly adopted the actuarial funding need exception to a contract theory of public pension coverage utilized by the Pennsylvania Supreme Court and other state supreme courts. The Minnesota Supreme Court, in a 1973 decision Anderson v. State, 298 Minn. 158 (1973), has upheld a benefit reduction in two of the judicial retirement plans then in existence that was made in an informally bargained group trade for a different beneficial plan change, despite its finding that judicial retirement benefits were a unilateral contractual right in Sylvestre v. State, 298 Minn. 142 (1973). Anderson may mean that informally negotiated swaps of adverse and beneficial retirement provisions that did not advantage every member of the group may be part of the Minnesota law on public pensions and may permit this proposed change. The proposed legislation, however, does not propose any new benefit provision in trade for the post-retirement adjustment reduction. The resolution of the current statewide retirement plan funding crisis could be viewed as a benefit to the membership of sufficient importance that it could constitute the type of swap permitted under Anderson. The Commission's Pension Policy Principals (Principle II.C.22) provides:

> 22. No Intended Ultimate Benefit Diminutions
>   1. In recommending benefit plan modifications, the imposition of reductions in overall benefit coverage for existing pension plan members should not be recommended.
>   2. The imposition of a reduction in overall benefit coverage may be imposed for new pension plan members in order to achieve sound pension policy goals.
>   3. A reduction in some aspect or aspects of benefit coverage may be recommended in combination with a proposed benefit increase or benefit increases in implementing sound pension policy goals.

If the state is to have a potential Anderson defense to a challenge to the proposed post-retirement adjustment reduction in the proposed legislation, the value of the resolution of the current funding problem to the current active and retired membership of the affected retirement plans and the understanding of the retirement plan membership of the actual or potential post-retirement adjustment reduction when the proposed legislation is being processed may be very important. The Commission should consider taking testimony from representatives of the retirement plan memberships about their view of the current funding problem and their understanding of the benefit changes under the proposed legislation.

6. Appropriateness of Omitting Other Benefit Elements from Reduction to Address the Minnesota Statewide Defined Benefit Plan Retirement Plans Financial and Actuarial Condition. The policy issue is the appropriateness of omitting other potential benefit reductions in attempting to address the financial and actuarial issues that the various retirement boards and interest groups believe have befallen the various statewide Minnesota defined benefit plan retirement plans. TRA, for instance, is proposing to suspend post-retirement adjustments for two years, reduce post-retirement adjustments by one-half of one percent until TRA returns to 80 percent funded, reduce interest on member refunds, eliminate interest on the deferred annuities under the TRA reemployed annuitant earnings limitations, and reducing the deferred annuity augmentation rate by one or three percent, depending on age, to a flat two percent. The TRA board position on the restoration of financial sustainability indicates that it would not support any core benefit reductions, such as reducing the benefit accrual rate, or switching to a defined contribution plan or a hybrid plan, indicating that those changes would worsen inequities for post-1989 hires or would worsen the TRA financial condition. The TRA board elected not to address the plan's normal retirement ages, early retirement ages, subsidized early retirement reduction rate, benefit accrual rates, annuity receipt period before qualification for post-retirement adjustments, service credit definition, or salary credit definition. The financial stabilization measures proposed by the TRA board appear to be borne most significantly by active members (i.e., contribution increases, post-retirement adjustment changes, earnings limitation deferral interest changes, and deferred annuity augmentation change). The measures also include several targeting short-term or employment-mobile members (refund interest rate and deferred annuity augmentation change). If the goal is to identify changes that produce significant actuarial gains, without addressing the palatability of the changes to the TRA membership, making changes in the age and service retirement benefit would produce the largest actuarial impact, as indicated by the breakdown of the TRA normal cost components:

TRA Normal Cost Components
(% of Payroll and Dollar)
as of July 1, 2009

Retirement Benefits	7.05%	$285,553,000
Disability Benefits	0.20%	$8,234,000
Survivor Benefits	0.09%	$3,557,000
Deferred Retirement Benefits	0.99%	$39,864,000
Refunds	0.55%	$22,371,000
Total Normal Cost	8.88%	$359,579,000

7. Unaddressed Liability Producing Provisions. The policy issue is the appropriateness of the four pieces of proposed legislation when there are several unaddressed benefit provisions that produce discernable retirement plan liabilities and that either are unusual or depart from broader Commission Pension Policy Principle goals. If some retirement plan benefit plan provisions are to be diminished or dispensed with while there are other benefit plan provisions that also produce pension plan liabilities and are unusual or produce problematic results, those differing benefit provisions at least

should be identified and their non-inclusion addressed by the respective retirement system administrators. Five examples inconsistent or alternative retirement plan benefit provisions that the Commission staff can identify for consideration and explanation are:

i. Actuarial Equivalent Early Retirement Reduction Including Hypothetical Deferred Annuity Augmentation. Minnesota Statutes, Sections 352.116, Subdivision 1a (MSRS-General), 353.30, Subdivision 5 (PERA-General), and 354.44, Subdivision 6, Paragraph (e) (TRA), include the deferred annuity augmentation between the early retirement age and the normal retirement age in calculating the actuarial required reserves for the annuity to which the early retirement annuity is to be equated to in reduction. This overstating the normal retirement annuity value thus understates the actuarial equivalent early retirement reduction.

ii. Deferred Annuity Augmentation on Combined Service Annuities. Minnesota Statutes, Section 356.30, Subdivision 1, Paragraph (b), provides for the augmentation of a deferred combined service annuity for all of the statewide retirement plans. When the combined service annuity portability provision was enacted in 1975 (Laws 1975, Chapter 232, Section 1), the election of a combined service annuity was in lieu of any deferred annuity augmentation. Deferred annuity augmentation was added to the combined service annuity portability provision in 1992 (Laws 1992, Chapter 432, Article 2, Section 45) as part of PERA administrative provisions.

iii. Three Months Free Allowable Service Credit When On Authorized Temporary or Seasonal Layoff. Minnesota Statutes, Section 353.01, Subdivision 16, Paragraph (a), Clause (6), provides three months of PERA-General, PERA-P&F, and PERA-Correctional allowable service credit, without any payment of member contributions or employer contributions, each calendar year if the person has three months of post-layoff public service.

iv. Full Month Allowable Service Credit for Part-Time Employment. Minnesota Statutes, Sections 352.01, Subdivision 11, Paragraph (a), Clause (2) (MSRS-General and MSRS-Correctional), 352B.01, Subdivision 3, Paragraph (a), Clause (1) (State Patrol Retirement Plan), and 353.01, Subdivision 16, Paragraph (a), Clause (1) (PERA-General, PERA-P&F, and PERA-Correctional) grant a full period of allowable service credit for any period during which member contributions were made, meaning that a full month of allowable service is credited if a member earns covered salary for as short as one day and member contributions are deducted.

v. Subsidization of the Bounce-Back Feature of Joint and Survivor Optional Annuity Forms. Minnesota Statutes, Sections 352.116, Subdivision 3a (MSRS-General), 352.116, Subdivision 3b (MSRS-Correctional and State Patrol Retirement Plan), 353.30, Subdivision 3a (PERA-General and PERA-Correctional), 353.30, Subdivision 3b (PERA-P&F), and 354.45, Subdivision 1a (TRA), provide that a joint and survivor optional annuity is recomputed to the single life annuity amount of the designated optional annuity beneficiary predeceases the retirement plan member without requiring any additional actuarial equivalent reduction for the future.

Amendment LCPR10-2A makes these changes in the identified inconsistent or unusual liability-producing provisions.

8. Appropriateness of Mandatory or Optional Defined Contribution Plan Retirement Coverage as Remedy for the Funding Problems of the Statewide Defined Benefit Plan Retirement Plans. The policy issue is the appropriateness of attempting to resolve the current funding problems of the defined benefit plan retirement plans administered by the Minnesota State Retirement System (MSRS), the Public Employees Retirement Association (PERA), and the Teachers Retirement Association (TRA) by replacing current Minnesota public employee retirement coverage with defined contribution plan retirement plan coverage. Defined benefit plans, because they fix the eventual retirement benefit through the use of a formula, have variable contribution requirements and will have unfunded actuarial accrued liabilities when there is a significant investment market panic as occurred in 2008-2009. Defined contribution plans, because they fix the amount of the retirement plan contributions, have variable retirement benefit payments and will cause considerable retirement planning dismay and retirement benefit worry by senior employee groups when there is a significant investment market panic akin to 2008-2009. A mandatory replacement of the current defined benefit plan coverage with defined contribution plan coverage for the 675,000 statewide retirement plan active and retired membership groups when the amassed assets of the various retirement plans is less than 75 percent of the value of their amassed annuities and benefits will mean benefit reductions for some or all membership groups, which would unlikely be upheld on subsequent litigation by the Minnesota Supreme Court unless the Court reverts to its pre-1973 gratuity theory of public employee pension coverage. If the defined contribution plan coverage is to be accomplished on an individual

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option basis, the "deal" would require some sweeteners to induce current plan members, especially retirees, to forgo their current accrued benefit value, adding to the cost of the solution, or the prospects of ever revitalizing the current retirement plans and funds must be so dismal that public pension plan members would be willing to take the available money and run en masse. If defined contribution plan coverage is to be instituted for public safety employee groups, who retire at earlier ages than other public employees because of the nature of their employment, the funding and investment period for the coverage will be shorter, requiring higher contributions, and the provision of disability or survivorship coverage for short service public safety employees will never be met by the slow accumulation of contributions and investment income, also requiring higher contribution requirements. If defined contribution plan coverage is to be required for new hires, phasing out the current defined benefit plan coverage, the withdrawal/turnover gains attributable to early career employees will be lost to their portable defined contribution plan accounts and will significantly increase the cost of the defined benefit plan phase out on top of the additional funding needed to overcome the results of the recent economic and investment panic.

9. Lack of Apparent Consideration of Retirement Plan Consolidations and Reformulations as Alternative Potential Resolutions. The policy issue is the lack of any apparent consideration by the retirement systems and membership groups of more significant alternative potential resolutions to the recent economic and investment panic, such as more extensive plan and system consolidations or comparable reformulations. The Wisconsin Retirement System and the Wisconsin Department of Employee Trust Funds could be an example of a more significant alternative resolution through consolidations and reformulations. The Wisconsin Retirement System is a single retirement plan covering all Wisconsin public employees other than Milwaukee County employees. The Wisconsin Department of Employee Trust Funds is the aggregation of the retirement plan administrations and the State Board of Investment into a single line state agency. If this really is the most severe economic downturn that has occurred since the 1930s, when one Minnesota public retirement plan went bankrupt, slashed retirement annuities already in pay status, and exempted blocks of active employees from retirement coverage, bold action may be necessary to revitalize and right size both the coverage provided to and the administration serving Minnesota public employees. The Commission should consider requesting additional information from the retirement system administrators about the various potential recommendations their governing boards actually put under serious consideration, and, if the potential recommendations appear to the Commission to be too timid, an explanation why little imagination was used in addressing the funding problems.

10. Inconsistency of the Application of Emergency Remedies without Similar Measures for MERF, DTRFA, and SPTRFA. The policy issue is the appropriateness of the inconsistency that could occur if the emergency remedies included in the four pieces of proposed legislation were enacted without the imposition of similar emergency remedies for the Minneapolis Employees Retirement Fund (MERF), the Duluth Teachers Retirement Fund Association (DTRFA), and the St. Paul Teachers Retirement Fund Association (SPTRFA). With the exception of the Judges Retirement Plan, the Teachers Retirement Association (TRA), and the State Patrol Retirement Plan, MERF, DTRFA, and SPTRFA are among the Minnesota public pension plan with the greatest potential for a future benefit default. To premise the significant benefit reductions included in the proposed legislation on the severity of the financial difficulties currently being experienced by the eleven statewide retirement plans in order to speed legislative action and presumably to convince the Minnesota Supreme Court to adopt the "actuarial emergency" exception to its "promissory estoppel"-based prohibition on legislative modification of retirement benefits without also addressing MERF, DTRFA, and SPTRFA would be inconsistent as a matter of policy and could undermine the legal argument. The Commission should consider requesting that the three statewide retirement system administrators address this potential inconsistency and its consistency with the Commission's Pension Policy Principle of uniformity and equal benefit treatment among and between retirement plans (Policy Principle II.C.6.).

11. Appropriateness of the Lack of Uniformity in Financial Sustainability Proposals. The issue is the lack of uniformity in the various benefit plans of the statewide retirement plan if the proposed legislation sponsored by the Minnesota State Retirement System (MSRS), the Public Employees Retirement Association (PERA), the Teachers Retirement Association (TRA), and the Minnesota Police and Peace Officers Association (relating to the Public Employees Police and Fire Retirement Plan) is enacted. If all four pieces of proposed legislation were enacted as currently drafted, the current uniformity of benefit treatment in at least five benefit areas, post-retirement adjustments, refund interest, deferred annuities augmentation, the reemployed annuity limitation deferral account interest, and retirement annuity and benefit vesting requirements. In 1997, arguing strongly that "uniformity" in benefit treatment was the appropriate goal, the sponsors of the "financial sustainability" proposals sought and obtained legislative approval for the most significant benefit increases in Minnesota since

1973. For whatever reason, the three retirement plans and one membership group sponsoring the four pieces of proposed legislation were unable to include the goal of uniformity in fashioning the benefit reductions and contribution increases that they believe are necessary to obtain fiscal stability. Following the enactment of the four pieces of proposed legislation, if that should be the decision of the 2010 Legislature, it would be even more difficult to obtain more uniformity in benefit treatment for Minnesota public employees and retirees. The Commission's Principles of Pension Policy (Principle II.C.6.) provide for uniformity between plans, as follows:

> II.C.6. Uniformity and Equal Benefit Treatment Among Plans
>
> There should be equal pension treatment in terms of the relationship between benefits and contributions among the various plans and, as nearly as practicable, within the confines of plan demographics, retirement benefits and member contributions should be uniform.

General Policy Issues on Specific Financial Sustainability Recommendations In Common

12. Appropriateness of the Reduction in Post-Retirement Adjustments. The policy issue is the appropriateness of the proposed reduction in the automatic post-retirement adjustment rates for the various retirement plans until the fund obtains a designated funding ratio of percent. The proposed reductions vary. Principle II.C.22 of the Principles of Pension Policy of the Legislative Commission on Pensions and Retirement provides that the Commission should not knowingly recommend the diminution of ultimate retirement benefits, suggesting that benefit components could be reduced if accompanied by an offsetting increase in other benefit components. Although the post-retirement adjustment rate reduction is presumably temporary, being restored to 2.5 percent when the retirement plan returns to financial stability, either an 80 percent funded ratio or a 90 percent funded ratio (i.e., assets equal to 80 or 90 percent of actuarial accrued liabilities), for the duration until financial stability is reached, there will be a benefit reduction under the proposal. The proposed change also re-entwines post-retirement adjustments with investment performance and would apply to only one of the ten retirement plans currently covered by the automatic post-retirement adjustment in Minnesota Statutes, Section 356.415.

13. Appropriateness of Different Post-Retirement Adjustment Percentage Annual Increase Rates for Different Plans. The policy issue is the appropriateness, if all four pieces of proposed legislation were enacted, of having different post-retirement adjustment rates for different retirement plans. For the various statewide retirement plans, since shortly after the creation of the predecessor of the Minnesota Post Retirement Investment Fund in 1969, the rate of increase for post-retirement adjustments was identical. Differing post-retirement adjustment mechanisms and rates were permitted for the first class city teacher retirement plans, since 1979 for the St. Paul Teachers Retirement Fund Association (SPTRFA), since 1981 for the Minneapolis Teachers Retirement Fund Association (MTRFA), and since 1990 for the Duluth Teachers Retirement Fund Association (DTRFA), and for the Minneapolis Employees Retirement Fund (MERF) since 1981, but the post-retirement adjustment mechanisms and rates have been maintained identically for the statewide plans. The three retirement systems and one interest group, the Minnesota Police and Peace Officers Association, are proposing for the first time since 1969, when differing mortality experience and mortality assumptions last caused different post-retirement adjustment rates, to have different rates and, in the Minnesota Police and Peace Officers Association proposed legislation for the Public Employees Police and Fire Retirement Plan (PERA-P&F), to use a different adjustment mechanism. The following compares the post-retirement adjustment rates provided for in the four pieces of proposed legislation:

	2011	2012	2013	After the trigger funded percentage is achieved	If funded rate falls below trigger funded percentage
MSRS-administered plans	2.0%	2.0%	2.0%	2.5%	2.5%
PERA-administered plans	1.0%	1.0%	1.0%	2.5%	1.0%
PERA-P&F (MPPOA)	CPI up to 1.5% cap	CPI up to 1.5% cap	CPI up to 1.5% cap	CPI up to 2.5% cap	CPI up to 1.5% cap
TRA	0.0%	0.0%	2.0%	2.5%	2.5%

The four sponsors of the pieces of the proposed legislation have not provided any explicit policy rationale for Balkanizing the amount of future post-retirement adjustments other than the adjustment rate amounts are the choices of their governing boards. If the current uniform rate of post-retirement adjustment for the statewide retirement plans reflects some combination of Commission Pension Policy Principle (Principles II.C.6. (uniformity) and II.C.8. (post-retirement adjustments)), the proponents of the varying post-retirement adjustment rates provided for in the four pieces of proposed legislation should be able to provide a coherent policy rationale for differing treatments.

14. Appropriateness of Using Different Pension Fund Financial Stability Triggers for Full Post-Retirement Adjustment Percentage Restoration. The policy issue is the differences proposed in the four pieces of proposed legislation as a trigger for the restoration of the full 2008 legislation percentage rate post-retirement adjustment. All four pieces of proposed legislation utilize the percentage funded ratio as the trigger for the post-retirement adjustment percentage increase restoration. The Teachers Retirement Association (TRA) trigger is set at the achievement of an 80 percent funded ratio. The Public Employees Retirement Association (PERA), Minnesota State Retirement System (MSRS), and Minnesota Police and Peace Officers Association proposal for the Public Employees Police and Fire Retirement Plan (PERA-P&F) triggers are set at the achievement of a 90 percent funded ratio. Upon achievement of the funded ratio in each proposal, the 2.5 percent annual automatic post-retirement adjustment would again become payable. Under the PERA proposed legislation and under the Minnesota Police and Peace Officers Association proposed legislation, the reduced annual percentage rate automatic post-retirement adjustment amounts again go into effect until the specified funding ratio is again achieved. Under the MSRS proposed legislation and under the PERA proposed legislation, once the triggering funded ratio is achieved, the full percentage annual post-retirement adjustment is restored permanently thereafter. There is a considerable likely timing difference between the achievement of an 80 percent funding ratio and the achievement of a 90 percent funding ratio, meaning that TRA could have its full post-retirement adjustment restored significantly earlier than the other retirement systems. Also, if TRA required its full post-retirement adjustment percentage earlier than the PERA General Employee Retirement Plan (PERA-General), the Public Employees Police and Fire Retirement Plan (PERA-P&F) , and the PERA Local Government Correctional Service Retirement Plan (PERA-Correctional), it would retain the full percentage post-retirement adjustment even if its funded ratio fell while the PERA-administered retirement plans would revert to a lower post-retirement adjustment rate if their funded ratios fell.

15. Appropriateness of Basing the Post-Retirement Adjustment Rate Revision Mechanism Trigger on a Market Value of Assets Funded Ratio. The policy issue is the appropriateness of basing the proposed rate revisions trigger on the funded ratio of each retirement plan determined using the market value of assets rather than the actuarial value of assets. The assets of statewide and major local Minnesota retirement plans have never been valued at their unadjusted market value in actuarial valuations. The current actuarial value of assets definition was enacted in 2000, at the recommendation of the consulting actuarial firm then retained by the Legislative Commission on Pensions and Retirement, Milliman & Robertson, which argued that the recommended actuarial value of assets formula would limit the volatility-related shifts in asset values and would insulate the State Board of Investment and other retirement fund investment authorities from actuarial concerns in undertaking investment transactions. The market value of assets was the second choice of the consulting actuarial firm if the Commission did not endorse the actuarial value of assets definition. The Commission staff observed in 2000 that the historic pattern of volatility in the equity markets has been over a period shorter than one year and over periods longer than five or seven years, which both fall outside the current actuarial value of assets formula. No actual evidence of actuarial concerns in investment transactions that the current actuarial value of assets formula allegedly attempts to relieve was ever presented with respect to the State Board of Investment or other retirement plan investment authority. With the possible exception of the Minneapolis Employees Retirement Fund (MERF) among the statewide and major local retirement plans, no plan actually has its contributions in the following year directly affected by a change in asset values because all other plans have statutory contribution rates requiring legislative action to change. The use of the market value of assets in determining funded ratios for the imposition of post-retirement adjustment rate reductions is a clear admission of the inadequacy of the actuarial value of assets. The use of the actuarial value of assets also confuses rather than clarifies pension funding, since in upwardly moving markets, interested parties all know the market value of plan assets and use those higher market values to argue for benefit modifications and rely on the actuarial value of assets in downwardly moving markets to minimize policymakers' concerns, even when those concerns are well-founded.

    If the Commission wishes to shift to an unadjusted market value for retirement plan assets, **Amendment LCPR10-3A** would make that change.

16. Revised Actuarial Valuation Filing Date is Incompatible with the Post-Retirement Rate Modification Trigger. The policy issue is the compatibility with the proposed post-retirement adjustment rate restoration funding stability triggers with the actuarial valuation reporting date proposed by the statewide retirement system administrators and included as Article 8 in the 2010 Omnibus Retirement Bill as of February 12, 2010. Earlier this legislative session, the Legislative Commission on Pensions and Retirement approved a request by the statewide retirement system administrators to reinstate an actuarial valuation filing deadline that had been eliminated in 2008 legislation (Laws 2008, Chapter

349, Article 10, Section 12) and to reset the actuarial valuation filing deadline date from the longstanding first day of the sixth month following the actuarial valuation date (typically December 1 annually) to the last day of the sixth month following the actuarial valuation date (typically December 31 annually). Post-retirement adjustments are currently payable (and would continue to be payable under the proposed funding stability triggers) on January 1, the day following the new actuarial valuation reporting deadline date. When funding stability is achieved, it is not official until the actuarial valuation reports are completed and filed with the Commission and other entities. Post-retirement adjustment amounts will need to be known somewhat in advance of the January 1 payment date in order to process checks or implement automatic bank account deposits. Either the actuarial valuation filing deadline date will need to be revised earlier, post-retirement adjustment payment dates will need to be set back later, or late (or even timely) actuarial work will result in a one-year delay in the restoration of the full post-retirement adjustment rate or a one-year delay in subsequent post-retirement adjustment downsizing.

17. Appropriateness of the Proposed Rate Reduction on Refund Interest Payments. The policy issue is the appropriateness of the proposal for reducing the interest rate on refund payments. The proposal is to continue the current interest rate on termination or death refunds of member contributions at six percent until June 30, 2011, and reduce the interest rate on those refunds to four percent after June 30, 2011.

    - Prior to 1984, TRA provided no interest on refunds, has provided five percent interest on refunds from 1984 until 1989, and has provided six percent interest on refunds after 1989.
    - Prior to 1973, MSRS-General provided no interest on the refund of member contributions unless the terminating employee was age 65, and then interest was set at 3.5 percent compounded annually.
    - Prior to 1973, PERA General provided no interest on the refund of member contributions.
    - In 1973, MSRS-General and PERA-General refunds were reset at 3.5 percent annual compound interest on all refunds, in 1984, were increased to five percent annual compound interest, and, in 1989, were again increased to six percent annual compound interest.

    The proposal is a benefit reduction for members who typically terminate with less service credit than the current three years of allowable service vesting requirement. The Commission's Principles of Pension Policy (II.C.22) provides that the Commission should avoid recommending intended ultimate benefit reductions in defined benefit retirement plans. Short service members of a retirement plan logically have the least interest in retirement plan developments, likely will be the least vocal in protesting a benefit reduction aimed at them, and will have the smallest likely dollar value of damages from a benefit reduction, meaning that litigation over this proposed benefit reduction is less likely than the post-retirement adjustment rate reductions, but the proposal still is potentially problematic.

    The Commission should consider taking testimony on the proposed change from the retirement system administrators and affected parties and, if convinced that the change is an appropriate response to the consequences of a set of investment losses and that short service retirement plan members are the appropriate target for benefit changes to moderate those investment losses, seek to build a sufficient record to assist in any eventual court litigation.

18. Appropriateness of the Proposed Elimination of the Interest on Reemployed Annuitant Earnings Limitation Retirement Annuity Deferral Accounts. The policy issue is the appropriateness of eliminating interest on retirement annuity amounts in excess of the reemployed annuitant earnings limitation that were deferred in a special account, referred to by TRA as the "earnings limitation savings account." The reemployed annuitant earnings limitation retirement annuity deferral accounts were created under legislation enacted in 2000 (Laws 2000, Chapter 461, Article 2, Section 10) and replaced legislation that required the forfeiture for the benefit of the respective retirement plan of retirement annuities in excess of the reemployed annuitant earnings limit. The change in the reemployed annuitant earnings limitation excess retirement annuity amount disposition was recommended by the Commission instead of proposed legislation that would have eliminated any reemployed annuitant earnings limitation. The elimination of interest on those benefit deferral accounts is a benefit reduction, would be contrary to the Pension Policy Principles of the Legislative Commission on Pensions and Retirement (Principle II.C.22) regarding no intended ultimate benefit reductions, and, before recommendation by the Commission, should have a full public record on its need, its connection to the current fiscal problems of the statewide retirement systems, and its impact developed.

19. Appropriateness of the Proposed Reduction in the Deferred Annuity Augmentation Rates. The policy issue is the appropriateness of a proposed reduction in the rates of deferred annuities augmentation. The deferred annuity augmentation rates were reduced once previously, in 1978 (Laws 1978, Chapter

796, Sections 10, 11, 15, 40, and 43), effective on January 1, 1981, from five percent to three percent annually, apparently prompted in part by a legislative determination that some of the original purpose for the deferred annuities augmentation was accomplished by the 1975 enactment of the Combined Service Annuity portability provision and in part by a perceived need to reduce defined benefit pension plan actuarial accrued liabilities. Akin to other proposed benefit changes, this proposal is a benefit reduction and is contrary to the Commission's Pension Policy Principles (Principle II.C.22). Akin to its concerns with the other benefit reductions in the proposed legislation, the Commission will likely need to build a significant record that the actuarial and financial condition of the statewide retirement systems is significantly impaired and that this particular change is well designed to address that problem, is directly connected with the problem, and is not an arbitrary and capricious choice of potential remedies even though deferred statewide retirement plan members likely have reduced information about and incentive to monitor retirement plan activities and have little voice in retirement plan policy determinations.

20. Appropriateness of the Delayed Effective Date for the Proposed Benefit Reductions. The policy issue is the appropriateness of the delay of more than one year in the benefit reductions proposed by the various retirement systems. TRA indicates that the delay is needed in order to have the benefit changes reflected in the annual benefit statement before they become fully implemented. If the financial and actuarial condition of the three statewide retirement systems is as severe and dire as it has been portrayed, arguably, corrective measures should be implemented without delay, but those systems have elected to otherwise. The statewide retirement system administrators should be queried by the Commission about the necessity of the delay and the impact of the delay on the actuarial and financial condition of the retirement plans that they administer.

Policy Issues Relevant to Specific MSRS Financial Sustainability Recommendations

21. Appropriateness of Reinstating a Minimum Receipt Period to Qualify for a Post-Retirement Adjustment. The policy issue is the appropriateness of reinstating a minimum period of annuity or benefit receipt for a retiree to qualify for a post-retirement adjustment. Before 1989 (Laws 1989, Chapter 319, Article 14, Section 1), retirees were required to receive a retirement annuity or a retirement benefit for at least one year before the preceding June 30, and the minimum period was reset to one month as of the preceding June 30. The Minnesota State Retirement System (MSRS) is proposing a reinstatement of the six-month minimum receipt period for the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the Correctional Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional), the State Patrol Retirement Plan, the Elective State Officers Retirement Plan, and the Judges Retirement Plan and sets the minimum period at six months as of the preceding June 30. The other retirement systems are not proposing a similar change. Although the Commission's Pension Policy Principles do not specifically address the minimum annuity or benefit duration period for the initial post-retirement adjustment, Policy Principle II.C.8. indicates that the purpose for post-retirement adjustments is to maintain the purchasing power of the retirement annuity or benefit, suggesting that some minimum period longer than one month during which an annuitant or benefit recipient has experienced inflation would be appropriate. While the proponents of shortening the minimum receipt period in S.F. 2573 (Betzold); H.F. 2952 (Murphy, M.) do not appear to have specifically or extensively addressed the rationale for the change beyond accommodating complaining benefit recipients and annuitants, it is likely that the change was motivated in part to reduce the pressure for retirement no later than June 30 annually. If a minimum waiting period was restored, beyond the cost savings from delaying the initial post-retirement adjustments for some segment of the new retirees each year, the change would tend to load up June 1 retirements.

22. Appropriateness of Lack of Contribution Rate Increases for Most MSRS-Administered Retirement Plans. The policy issue is the appropriateness of the recommendation by the Board of Directors of the Minnesota State Retirement System (MSRS) not to increase the member and employer contributions of any of the retirement plans it administers other than the State Patrol Retirement Plan. Increased member contributions have been recommended by the governing boards of the Public Employees Retirement Association (PERA) for two if its three defined benefit retirement plans, the PERA General Employees Retirement Plan (PERA-General) and the Public Employees Police and Fire Retirement Plan (PERA-P&F), and by the governing board of the Teachers Retirement Association (TRA) for the TRA retirement plan. MSRS has indicated in its presentations about the financial sustainability proposal that the MSRS Board of Directors rejected further member and employer contribution increases after 2007 because the current set of contribution increases have not totally been implemented and because the contribution increases would adversely affect both member and employer financial health. The rationale does not really distinguish the MSRS-administered retirement plans from the PERA-administered retirement plans and from TRA, where contribution

increases also occurred recently and where both members and employers would have reduced revenue for other activities by virtue of the contribution increases. The Commission should consider pressing MSRS for a better and a singularly applicable rationale for omitting the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the Correctional Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional), and the Judges Retirement Plan from contribution increases.

23. Appropriateness of Creating an Employer Additional Contribution for the State Patrol Retirement Plan. The policy issue is the appropriateness of adding to the State Patrol Retirement Plan an employer additional contribution equal to ten percent of covered salary. Consistent with the Commission's Principles of Pension Policy (Principle II.D.3.d.), the current contribution rates for statewide public safety employee retirement plan members are 40 percent of the total contributions and for statewide public safety employee retirement plan employers are 60 percent of the total contributions, without any employer additional contribution rate. For the State Patrol Retirement Plan, the proposed employer additional contribution rate would represent $6.7 million applied to the July 1, 2009, plan payroll and would increase the employer share of the total contribution from 60 percent to 70.53 percent. The following compares the contribution rates of the four statewide public safety employee retirement plans and the portion of the respective plan's total actuarial requirements paid by those rates:

	State Patrol		PERA-P&F		MSRS-Correctional	PERA-Correctional
	Current	Proposed	Current	Proposed		
	%	%	%	%	%	%
Member Contribution Rate	10.4	11.2	9.4	9.6	7.7	5.83
Employer Contribution Rate	15.6	16.8	14.10	14.4	11.1	8.75
Additional Employer Rate	--	10.0	--	--	--	--
Normal Cost	25.37	25.37	22.07	22.07	18.22	13.26
Expense	0.16	0.16	0.13	0.13	0.20	0.13
Normal Cost & Expense	25.53	25.53	22.20	22.20	18.42	13.39
Amortization Requirements	12.63	12.63	7.79	7.79	6.43	0.64
Total Financial Requirements	38.16	38.16	43.8	56.1	29.4	70.2
Portion of Normal Cost & Expense						
• Member	40.7	43.8	42.3	43.2	41.8	43.5
• Employer	59.3	56.1	57.7	56.8	58.2	56.5
Portion of Total Financial Requirements						
• Member	27.3	29.4	31.3	32.0	31.0	41.6
• Employer	40.9	70.2	47.0	48.0	44.7	62.4

If the 40 percent member and 60 percent employer split on statewide public safety employee retirement plan total support is to be observed and the current contributions were to match the current total actuarial financial requirements, the member contribution should increase from 10.4 percent of covered pay to 15.26 percent of covered pay and the employer contribution should increase from 15.6 percent of covered pay to 22.90 percent of covered pay.

24. Appropriateness of Revised Early Retirement Reduction Rates. The policy issue is the appropriateness of revising early retirement reduction rates. The recommendations of the Board of Directors of the Minnesota State Retirement System (MSRS) for financial stability reacquisition for the State Patrol Retirement Plan would increase the early retirement reduction rate for post-June 30, 2010, hires from 1.2 percent per year before normal retirement age to 2.4 percent per year before normal retirement age and for the Correctional Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional) would increase the early retirement reduction for post-June 30, 2010, hires from 2.4 percent per year before normal retirement age to five percent per year before normal retirement age. Defined benefit plan retirement plans specify an age or set of ages at which a benefit is payable based on the formula set forth in the plan document, known as the normal retirement age. Typically, for retirement ages earlier than that normal retirement age or set of normal retirement ages, defined benefit plan retirement plans typically adjust downward the amount of the retirement annuity payable to account for that early benefit payment start date and the consequent lengthening of the receipt period, known as the early retirement reduction factor. Early retirement reduction factors, frequently referred to by constituents as the early retirement penalty, can be actuarially equivalent (reduction equal to the present value of the early benefit commencement), can be actuarially punitive (reduction greater than the present value of the early benefit commencement), or can be a subsidy (reduction less than the present value of the early benefit commencement). The MSRS-Correctional Retirement Plan and the State Patrol Retirement Plan early retirement reduction factors provide a subsidy to early retirees, thereby encouraging the use of early retirement provisions. The proposed early retirement reduction factor increases would roughly end the subsidy for the

MSRS-Correctional Retirement Plan and roughly cut the subsidy by one-third for the State Patrol Retirement Plan. The subsidization of early retirement appears to have been in response to membership/constituent demand rather than a reflection of the best pension policy. With the advent of improved equipment, with improved public safety employee procedures, with the growing need to obtain medical insurance coverage through continued employment, there may be less need to subsidize early retirement. If no subsidy is intended, dropping a monthly or annual factor in favor of a direct actuarial equivalent calculation would be preferable.

25. Appropriateness of Limiting Revised Early Retirement Reduction Rates to Only the State Patrol and the MSRS-Correctional Retirement Plans. The policy issue is the appropriateness of modifying the early retirement reduction factors for the State Patrol Retirement Plan and the MSRS-Correctional Retirement Plan and not making the same change for other financially troubled retirement plans. Even within the State Patrol Retirement Plan and the MSRS-Correctional Retirement Plan, the early retirement reduction rate change is limited to new hires, so it produces no significant actuarial accrued liability savings for several years. Because early retirement is frequently subsidized by Minnesota defined benefit plan public employee retirement plans and increases a retirement plan's liability considerably when utilized, the early retirement reduction rates of the various statewide retirement plans could be modified to obtain actuarial accrued liability reductions that could improve the funding position of the affected retirement plans. Unlike the post-retirement reduction rate reductions proposed by each retirement system or membership group, where the affected population has no option to avoid the benefit diminution, a change in early retirement reduction rates for all participants (current members as well as future members) would allow affected members to continue in employment if they cannot abide a greater early retirement reduction or would allow affected members to seek a disability benefit if early retirement is a remedy for medical or physical difficulties. The Commission could request information from the various retirement system administrators about how seriously their boards considered early retirement reduction rate changes in formulating their recommendations, how significant an accrued actuarial liability reduction could be obtained by an early retirement reduction rate change, and what policy rationale was voiced by the boards in declining to recommend widespread early retirement reduction rate changes.

26. Appropriateness of Reducing a Defined Benefit Plan Retirement Plan Benefit Accrual Rate. The policy issue is the appropriateness of a reduction in the benefit accrual rate for a defined benefit plan public employee retirement plan. The proposal recommended by the Board of Directors for the Minnesota State Retirement System (MSRS) includes a reduction in the benefit accrual rate for new hires after June 30, 2010, covered by the Correctional Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional). The benefit accrual rate for MSRS-Correctional is 2.4 percent of the retiree's highest five successive years' average salary for current members and would be 2.2 percent of the retiree's highest five successive years' average salary for new members after June 30, 2010, an 8.33 percent reduction in the retirement annuities of correctional state employees hired after June 30, 2010. The benefit accrual rate is the primary element in a defined benefit plan and should be established based on a sense of what constitutes an adequate retirement income and what portion of that adequate retirement income is to be borne by the retirement plan compared to Social Security coverage and personal savings. For the MSRS-Correctional Retirement Plan, the following compares what percentage of a retiree's highest five successive years' average salary and final average salary is replaced at various lengths of service by the current benefit accrual rate and by the proposed benefit accrual rate:

	10 Years		15 Years		20 Years		25 Year		30 Years	
	High 5	Final*	High 5	Final*	High 5	Final*	High 5	Final*	High 5	Final*
Current 2.4% benefit accrual rate	24.0	21.9	36.0	32.9	48.0	43.8	60.0	54.8	72.0	65.7
Revised 2.2% benefit accrual rate	22.0	20.0	33.0	30.1	44.0	40.2	55.0	50.2	66.0	60.2

** Based on the salary increase actuarial assumption under M.S., Sec. 356.215, Subd. 8, Para. (b), Clause (3), for MSRS-Correctional for ages 51-55.*

The current 2.4 percent of final average salary benefit accrual rate was enacted in 1997 (Laws 1997, Chapter 233, Article 1, Section 55, Subdivision 5) and replaced a prior two-part formula (2.5 percent of final average salary per year of allowable service, not to exceed 75 percent in total, payable for 84 months, and 1.5 percent of final average salary per year of allowable service after 84 months, payable for life). The 1997 benefit accrual rate change was made as part of the "benefit uniformity" legislation, was recommended by the MSRS Board of Directors, but was not accompanied by any clear policy findings or other supporting research. The Commission should consider requesting that the MSRS Executive Director characterize the deliberations that the MSRS Board of Directors had on this issue, what alternatives were considered by them, and what policy principles or supporting research underlies the recommendation.

27. Appropriateness of Limiting Benefit Accrual Rate Reductions to Only the MSRS-Correctional Retirement Plan. The policy issue is the appropriateness of modifying the benefit accrual rate of only one statewide retirement plan and not making the same change for other financially troubled retirement plans. Even with the Correctional Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional), the benefit accrual rate reduction is limited to new hires, so it will produce no immediate fiscal relief for that retirement plan. If the current MSRS-Correctional rates are deemed by the MSRS Board of Directors as being inappropriately large by whatever measure was used by that board to make that assessment, potentially other benefit accrual rates are more than minimally adequate and should be similarly evaluated. The Commission should consider pressing the MSRS Executive Director for the criteria that the MSRS Board used in determining that the MSRS-Correctional benefit accrual rate is excessively generous and merits revision in order to determine if any other financially troubled statewide retirement plan is in a similar condition.

28. Appropriateness of the Proposed Extension of the MSRS-General Amortization Period. The policy issue is the appropriateness of the proposal on behalf of the Board of Directors of the Minnesota State Retirement System (MSRS) to extend the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General) amortization target date from 2020 to 2040. The following demonstrates the variations in amortization target dates from the operation of the automatic revisions caused by the adjustment procedure in Minnesota Statutes, Section 356.215, Subdivision 11, and from revised amortization target dates set legislatively upon the occurrence of other events or for other reasons:

Retirement Plan	Amortization Target Date
MSRS-Correctional	2038
PERA-P&F	2038
State Patrol	2036
PERA-Correctional	2023
MSRS-General	2020
PERA-General	2031
TRA	2037
MERF	2020
DTRFA	2035*
SPTRFA	Rolling 25-year amortization
Judges	2038

* *2020 according to M.S., Sec. 356.215, Subd. 11, and 2035 according to the plan*

The theory underlying good actuarial funding suggests that an unfunded actuarial accrued liability should be amortized over a period that does not exceed the average remaining working lifetime of the active membership. The unfunded actuarial accrued liability basically represents past normal cost contributions that were either not recognized, as would occur if actuarial assumptions are incorrect, or were not made in a timely fashion, as would occur if there is a contribution deficiency. Since normal costs should be funded over the working lifetimes of active members, the amortization of the unfunded actuarial accrued liability derived from unpaid normal costs should similarly be funded over the remaining active working lifetime. The following compares the average remaining working lifetimes of retirement plan active members with the remaining period before the current amortization target date:

Retirement Plan	(1) 2009 Average Age (Actives)	(2) Normal Retirement Age	(3) Remaining Work Period	(4) Years Until Current Full Funding Date	(5) Difference
MSRS-Correctional	41.0	55	14.0	28	14.0
PERA-P&F	39.6	55	15.4	28	12.6
State Patrol	41.1	55	13.9	26	12.1
PERA-Correctional	39.7	55	15.3	13	-2.3
MSRS-General: current assumptions	46.7	65	18.3	10	-8.3
MSRS-General: proposed assumptions	46.7	65	18.3	30	11.7
PERA-General	46.9	65	18.1	21	2.9
TRA	42.9	65	21.1	27	5.9
MERF	59.2	60	0.8	10	9.2
DTRFA	47.6	65	17.4	25	7.6
Judges	56.9	65	18.1	28	9.9

The amortization target date change for MSRS-General is premature, since the MSRS-General amortization target date will be reset based on the actuarial assumption changes expected to occur later this spring. The investment losses from the Economic Panic of 2008-2009 also will reverse with an economic recovery that economists say is underway.

29. Appropriateness of Continuing to Require the Calculation of Amortization Contributions on a Level Percentage of Covered Pay Basis. The policy issue is the appropriateness of continuing to amortize most Minnesota unfunded actuarial accrued liabilities on a level percentage of an increasing covered payroll basis rather than on a level-dollar basis. Since 1984, Minnesota has used a level percentage of covered payroll amortization rather than the prior level-dollar amortization requirement. A level-dollar amortization requirement is the way that home mortgages are paid off, with payments based on interest on the principal amount of the debt plus a portion of the principal amount. A level percentage of an increasing covered payroll amortization requirement, combined with the normal cost of the retirement benefit plan, also set as a percentage of covered pay, provides contribution requirement stability over time as a percentage of covered pay. The level percentage of covered pay amortization procedure provides potential contribution rate stability over time when compared to the level-dollar amortization period over time, but has the effect of deferring much of the actual payments to reduce the principal amount of the unfunded actuarial accrued liability to the second half of the amortization period, with early period payments less than full interest on the unfunded actuarial accrued liability and with the unfunded actuarial accrued liability actually increasing in amount during the early portion of the amortization period.

The table below illustrates this effect for some retirement plans administered by MSRS, PERA, and TRA. For plans with a distant amortization date, they are in the early years of paying off unfunded actuarial accrued liabilities and the amortization contribution is less than an interest-only payment (8.5 percent of the unfunded actuarial accrued liability). For plans with a less distant final amortization date, the amortization requirement is more than an interest-only payment. Only two plans, the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General) with its current-law 2020 amortization date and the Local Government Correctional Service Retirement Plan (PERA-Correctional) with its 2023 amortization date, have a calculated amortization requirement which exceeds an interest-only payment. All remaining plans have amortization dates of 2031 or later, and all of these plans have a calculated amortization requirement in the official 2009 actuarial valuation which is less than an interest only payment on the unfunded actuarial accrued liability. Because the interest requirement on the unfunded actuarial accrued liability is not being fully covered, this will add to the total unfunded actuarial accrued liabilities in the subsequent actuarial valuation.

Plan	Amortization Target Date	Unfunded Actuarial Accrued Liability	Calculated Amortization Requirement in 2009 Actuarial Valuation	8.5% Interest on Unfunded Actuarial Accrued Liability	Difference
MSRS-General	2020	$1,482,359,000	$168,840,000	$126,000,515	$42,839,485
MSRS-Correctional	2038	230,911,000	13,399,000	19,627,435	-6,228,435
Judges	2038	94,695,000	5,801,000	8,049,075	-2,248,075
State Patrol	2036	140,833,000	8,515,000	11,970,805	-3,455,805
PERA-General	2031	5,640,926,000	386,312,000	479,478,710	-93,166,710
PERA-Correctional	2023	11,806,000	1,109,000	1,003,510	105,490
PERA-P&F	2038	1,056,419,000	61,298,000	89,795,615	-28,497,615
TRA	2037	5,232,394,000	310,170,000	444,753,490	-134,583,490

Policy Issues Relevant to Specific TRA Financial Sustainability Recommendations

30. Appropriateness of Creating a TRA Contribution Stabilizer. The policy issue is the appropriateness of creating an automatic procedure for increasing member and employer contributions. The procedure, referred by the Teachers Retirement Association (TRA) as the "contribution stabilizer," is similar to contribution increase procedures already enacted for the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General) in 2006 (Laws 2006, Chapter 271, Article 1, Section 3), and for the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General) in 2005 (First Special Session Laws 2005, Chapter 8, Article 5, Section 4). A component-by-component comparison of the two existing and one proposed provisions is set forth as **Attachment T**. The proposed TRA contribution stabilizer differs from the other two stabilizers in some significant regards. The proposed TRA stabilizer contribution increases (or decreases) are permissive and not mandatory, allowing the TRA executive director discretion in addressing a funding problem, allows for increases of one-half of one percent in some instances rather than one-quarter in all instances, and triggers the mechanism based on a single actuarial valuation result rather than the results of two actuarial valuations. If a contribution stabilizer is a reasonable approach to variable contribution requirements, the stabilizer mechanism should be generally

applicable and should be uniform unless particular retirement plans can persuasively demonstrate that its special circumstances require an adjusted mechanism. A single stabilizer mechanism in Minnesota Statutes, Chapter 356, would be preferable to three or more repetitious provisions in other retirement chapters. The stabilizer, at best, represents an attempt to mechanically implement a flexible approach to adjusting retirement plan contribution rate increases and decreases based on the trend line of the actuarial results of a retirement plan, replicating what the Legislative Commission on Pensions and Retirement and the legislative process had done for the previous half century. Unless the retirement plans can demonstrate a persuasive pattern of inattention to funding by the Legislative Commission on Pensions and Retirement and the Legislature that would be remedied by the stabilizer procedure, the proposed mechanism and its predecessors are unnecessary.

31. Appropriateness of Suspending Automatic Post-Retirement Adjustments. The policy issue is the appropriateness of the proposed two-year (January 1, 2011, and January 1, 2012) suspension of the automatic 2.5 percent post-retirement adjustment for all Teachers Retirement Association (TRA) retirees. The Commission's Pension Policy Principles (Principle II.C.22) indicates that the Commission should not recommend any intended ultimate benefit diminutions. A two-year suspension of the automatic post-retirement adjustment mechanism for the TRA retirees clearly is an ultimate benefit diminution. While the suspension of post-retirement adjustments will produce an actuarial gain that will offset some of the recent investment experience losses that TRA recently incurred, the gain is not a result of a fortuitous event, but is produced by a temporary benefit reduction. The benefit reduction occurs very shortly after the 2009 Commission-recommended was enacted that divorced post-retirement adjustments in Minnesota from investment performance, in a new proposal that attempts to counter recent poor investment performance by a temporary discontinuation of post-retirement adjustments. The post-retirement adjustment suspension proposed by TRA also would apply only to TRA retirees. The 2008 post-retirement adjustment mechanism, akin to its predecessor, applies identically to all statewide retirement plans, but the proposal would apply to only one of the ten retirement plans covered by Minnesota Statutes, Section 356.415. The rationale for treating TRA retirees differently from other statewide retirement plan retirees has not been presented and the Commission may wish to take testimony from the TRA administration and others one the proposed suspension.

32. Appropriateness of the Proposed Trigger for the Proposed Restoration of the Full Post-Retirement Adjustment Rate. The policy issue is the appropriateness of the trigger included in the Teachers Retirement Association (TRA) post-retirement adjustment reduction proposal for the restoration of adjustments back to the full 2.5 percent rate. The trigger is set at TRA achieving a funded ratio (actuarial value of assets as a percentage of actuarial accrued liability) of 80 percent. The post-retirement adjustment reduction is the sole component of the TRA package of retirement benefit reductions that is restored upon an improvement in the TRA funding ratio. The funding ratio is not the only measure of the fiscal health of a retirement plan and is not necessarily the best measure of the fiscal health of a retirement plan, any more than a person's equity in their house is a good measure of the state of their home ownership. Even if the funding ratio was a better measure than the size of any contribution deficiency or sufficiency (member and employer contribution rates and state aid compared to the retirement plan total actuarial requirement), setting the trigger at 80 percent is arbitrary. The post-retirement adjustment rate reduction, if accounted for by the plan actuary in calculating the accrued liability of the retirement plan in a manner other than recognizing experience gains after the post-retirement adjustment payment date, upon restoration once the 80 percent funding ratio is met, will likely drop the funding ratio below 80 on that date, raising the possibility for the post-retirement adjustment to blink on and blink off repeatedly.

    Because larger Minnesota public retirement plans are amortized on a percentage of covered payroll basis rather than on a level dollar payment basis since 1984, much of the actual amortization of public pension plan unfunded actuarial accrued liability mechanically occurs towards the very last portion of the amortization period and the supplemental (amortization) contribution rate for much of the amortization period does not equal or exceed interest on the unfunded actuarial accrued liability, meaning that the unfunded actuarial accrued liability will actually grow for a significant portion of the amortization period. The amortization period for TRA as of July 1, 2009, was 27 years and the level percentage amortization factor used for the July 1, 2009, actuarial valuation was 0.059270792, while the level dollar amortization factor for the same period would be 0.0937496. Translated into dollars for the July 1, 2009, TRA unfunded actuarial accrued liability of $5,232,394,000, the amortization contribution was $310,170,000, the 8.5 percent interest contribution, freezing that unfunded actuarial accrued liability as a dollar amount would be $444,753,000 ($134,583,000 million greater), and the level dollar amortization contribution would be $490,535,000 ($180,365,000 million greater).

The TRA administration and actuary should be provided with an opportunity to explain why they picked the TRA funding ratio as the trigger measure for a post-retirement adjustment rate mechanism, why they set an 80 percent TRA funding ratio as the precise trigger for that rate restoration, why they believe that the proposed trigger will not lead to blinking on and off post-retirement adjustment rate reductions, and when the retirement plan could be expected to reach an 80 percent funding ratio if the plan has consistent 8.5 percent investment returns for the future.

33. Appropriateness of the Proposed TRA Member Contribution Rate Increase. The policy issue is the appropriateness of the proposed increase in the TRA member contribution rate. The proposed legislation would increase the TRA member contribution by two percent over four years. The Commission's Principles of Pension Policy (Principles II.D.3.a and II.D.3.b) provide that:

> II.D.3. Allocation of Funding Burden Between Members and Employers
>
> a. The actuarial cost of retirement benefit coverage should be financed on a shared basis between the public employee and the public employer.
>
> b. For general public employee retirement plans that are not closed to new members, the employee and employer should make matching contributions to meet the normal cost and the administrative expenses of the defined benefit pension plan. Both the employee and the employer also may be required to share some financial responsibility for funding the amortization requirement of the defined benefit pension plan.

The increase in the TRA member contribution rate from 5.5 percent to 7.5 percent by 2014 may place a disproportionate share of the funding burden on TRA members compared to the state's other two statewide general employee retirement plans and the other two teacher retirement plans, as follows:

Retirement plan	Memb. Contr. Rate	* Empl. Contr. Rate	Normal Cost	Expenses	Normal Cost & Exp.	Amortization Req.	Total Financial Req.	Portion of Normal Cost & Expenses Mem.	Portion of Normal Cost & Expenses Empl.	Portion of Total Financial Req. Mem.	Portion of Total Financial Req. Empl.
	%	%	%	%	%	%	%	%	%	%	%
MSRS-General	4.75	4.75	7.86	0.22	8.08	6.77	14.85	58.8 /	41.2	32.0 /	68.0
PERA-General	6.00	6.88	7.82	0.20	8.02	7.53	15.55	74.8 /	25.2	38.6 /	61.4
TRA											
– Current	5.50	5.69	8.88	0.28	9.16	7.65	16.81	60.0 /	40.0	32.7 /	67.3
– Proposed	7.50	7.69	8.88	0.28	9.16	7.65	16.81	81.9 /	18.1	44.6 /	55.4
DTRFA	5.50	5.79	7.42	0.85	8.27	9.55	17.82	66.5 /	33.5	30.9 /	69.1
SPTRFA	5.58	10.06	8.52	0.24	8.76	9.64	18.40	63.7 /	36.3	30.3 /	69.7

** Includes state aid where applicable*

Before 1980, the Commission's Principles provided that members and employers split equally the normal cost and expenses of the retirement plan. After 1980, the Commission's Principles provided for an allocation of a portion of the amortization requirement of the retirement plan in addition to normal cost and expenses, but the Commission never has formally indicated what portion of the debt service of the retirement plan's unfunded actuarial accrued liability was to be the burden of the plan membership. While currently the allocation of the full actual cost to plan active members ranges from a low of 30.3 percent to a high of 38.6 percent, the TRA financing proposal would expand the high end of the range to 44.6 percent.

34. Appropriateness of the Proposed TRA Employer Contribution Rate Increase. The policy issue is the appropriateness of the proposed increase in the TRA employer contribution rate. The proposed legislation would increase the TRA employer contribution by two percent over four years without any offsetting increase in the state education aid. Beyond providing for a sharing of the retirement plan financial requirements, the Commission's policy principles do not specifically address the setting of the total employer contribution rate and do not specifically address the role or extent of state aid for public pension plans or for defraying public pension plan costs by public sector employees. The proposed legislation will have a significant financial impact on the financing of school districts and other public educational employers (i.e., the Minnesota State Colleges and Universities System (MnSCU), the Minnesota Department of Education, and the TRA). The TRA actuary, in the most recent experience study of the retirement plan, suggests that the TRA total covered payroll will increase by four percent per year, rather than the current assumed 4.5 percent. The following indicates the total dollar amount increase likely to be caused by the proposed TRA employer contribution increase at a four percent covered payroll increase or at a 4.5 percent covered payroll increase:

Fiscal Year	TRA Employer Contribution Increase	TRA Covered Payroll	TRA Employer Contribution Increase	TRA Covered Payroll	TRA Employer Contribution Increase
	%	$	$	$	$
2010	--	4,049,217,000	--	4,049,217,000	--
2011	--	4,211,185,680	--	4,231,431,765	--
2012	0.5	4,379,633,107	21,898,166	4,421,846,194	22,109,231
2013	1.0	4,554,818,431	45,548,184	4,620,829,272	46,208,293
2014	1.5	4,737,011,168	71,055,168	4,828,766,589	72,431,499
2015	2.0	4,926,491,614	98,529,832	5,046,061,085	10,0921,222

It would be appropriate to take testimony from the Minnesota School Boards Association, from the Minnesota Association of School Administrators, from the Minnesota State Colleges and Universities System (MnSCU), or from specific school districts about the fiscal impact of the proposed employer contribution increase.

35. Appropriateness of the Length of the Contribution Increase Phase-In. The policy issue is the appropriateness of a one-year delay in making contribution increases and of a four-year phase-in of the member and employer contribution increases recommended by the TRA Board of Trustees and proposed in the draft proposed legislation. The member and employer contribution rate increases do not begin until July 1, 2011, and then are phased in over four years (July 1, 2011, through July 1, 2014). If the TRA funding difficulties are as serious as portrayed by the TRA Board of Trustees and the TRA administration, it would seem prudent to make the contribution increases as fast as possible, which the proposal clearly does not. A phase-in of contribution increases clearly makes the increase more palatable, but the four-year phase-in will deprive TRA of at least $242.4 million in assets compared to an immediate contribution increase without considering the effect of investment income foregone. The one-year delay likely is an accommodation to school district budgetary concerns, providing TRA employing units with time to accommodate the fiscal impact of an employer contribution increase. The one-year delay in beginning the phase-in, however, will deprive TRA of $40.4 million of additional assets based on a four-year phase-in or of $161.6 million of additional assets based on an immediate contribution increase implementation. If TRA is in dire financial straits, immediate action rather than a package of delays would be a better course of action.

36. Actuarial Estimate of Actuarial Liability and Required Contribution Impact of Proposed TRA Financial Sustainability Measures. The policy issue is the adequacy of the proposed TRA financial sustainability measures as assessed by the consulting actuary retained by TRA, Mercer. As of January 11, 2010, TRA has supplied actuarial cost estimates for two different deferred annuity augmentation rate changes (to 2.0 percent (November 12, 2009) and to 1.5 percent (December 16, 2009)) and for one post-retirement adjustment rate change for different recipients (December 16, 2009). No actuarial cost estimate has been supplied for the entire set of proposed changes, although the Commission staff has requested TRA to provide additional estimates. The table on the following page sets forth the incomplete actuarial impact estimates that TRA has provided through February 22, 2010.

    Although requested to provide their actuarial cost estimates for their proposed benefit changes by the Commission staff on behalf of the Commission, neither MSRS nor PERA provided the Commission staff with the requested cost estimates by 4:00 p.m. on February 22, 2010.

Actuarial Cost Information: TRA Financial Sustainability Recommendations

			Actuarial Impact of:						Actuarial Impact of:		
	2009 Valuation		Full Set of Contribution Increases		Deferred Annuity Augmentation		Interim Assessment of Actuarial Valuation Results		Post-Retirement Adjustments	Earnings Limitation Account Interest Changes	Total Actuarial Impact of Proposed Changes
Membership											
Active Members		77,786		--		--		77,786	NOT AVAILABLE	NOT AVAILABLE	NOT AVAILABLE
Service Retirees		46,108		--		--		46,108			
Disabilitants		624		--		--		624			
Survivors		3,476		--		--		3,476			
Deferred Retirees		12,490		--		--		12,490			
Nonvested Former Members		23,073		--		--		23,073			
Total Membership		163,557		--		--		163,557			
Funded Status											
Accrued Liability		$23,114,802,000		--		($239,074,000)		$22,875,728,000			
Current Assets		$17,882,408,000		--		--		$17,882,408,000			
Unfunded Accrued Liability		$5,232,394,000		--		($239,074,000)		$4,993,320,000			
Funding Ratio	77.36%		--		0.71%		78.17%				
Financing Requirements											
Covered Payroll		$4,049,217,000		--		--		$4,049,217,000			
Benefits Payable		$1,381,366,000		--		--		$1,381,366,000			
Normal Cost	8.88%	$359,579,000	--	--	(0.40%)	($16,197,000)	8.48%	$343,422,000			
Administrative Expenses	0.28%	$11,338,000	--	--	--	--	0.28%	$11,338,000			
Amortization	7.66%	$310,170,000	--	--	(0.35%)	($14,172,000)	7.31%	$295,998,000			
Total Requirements	16.82%	$681,087,000	--	--	(0.75%)	($30,369,000)	16.07%	$650,758,000			
Employee Contributions	5.50%	$222,860,000	(2.00%)	($80,984,000)	--	--	7.50%	$303,844,000			
Employer Contributions	5.69%	$230,325,000	(2.00%)	($80,984,000)	--	--	7.69%	$311,309,000			
Direct State Funding	0.44%	$17,948,000	--	--	--	--	0.44%	$17,948,000			
Other Govt. Funding	0.06%	$2,500,000	--	--	--	--	0.06%	$2,500,000			
Total Contributions	11.70%	$473,633,000	(4.00%)	($161,968,000)	--	--	15.70%	$635,601,000			
Total Requirements	16.82%	$681,087,000	--	--	(0.75%)	($30,369,000)	16.07%	$650,758,000			
Total Contributions	11.70%	$473,633,000	(4.00%)	($161,968,000)	--	--	15.70%	$635,601,000			
Deficiency (Surplus)	5.12%	$207,454,000	(4.00%)	($161,968,000)	(0.75%)	($30,369,000)	0.37%	$15,157,000			
Amortization Target Date	2037						2037				

Policy Issues Relevant to Specific PERA Financial Sustainability Recommendations

37. Appropriateness of Considering the PERA-General Salary Increase and Payroll Growth Assumption Changes without Considering All Other Actuarial Assumption Change Recommendations. The policy issue is the appropriateness of considering the salary increase and payroll growth assumption changes recommended by the actuary retained by the Public Employees Retirement Association (PERA) for the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General) without considering all of the actuarial assumption change recommendations arising out of the 2004-2008 experience studies of the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), PERA-General, and the Teachers Retirement Association (TRA). The 2004-2008 experience studies were provided to the Legislative Commission on Pensions and Retirement six months late. The experience studies have been submitted for review to the reviewing actuary retained by the Commission on December 3, 2009, and the review is due by May 1, 2010, under the Commission's contract with Milliman. The three experience studies included recommendations for changes in 38 of the 39 actuarial assumptions covered extensively in the experience studies. The three experience studies have various procedural departures from statute and Commission Standards for Actuarial Work and substantive problems identified by the Commission staff. The experience studies cover three actuarial assumptions that require statutory changes (interest rate/investment performance actuarial assumptions, salary increase actuarial assumption, and payroll growth actuarial assumption) and ten actuarial assumptions that require Commission approval to implement. The experience study review by Milliman is expected to be considered by the Commission on or before the next actuarial valuation date.

    If the Commission wishes to consider the MSRS-General and TRA salary increase and payroll increase actuarial assumptions, **Amendment LCPR10-4A** includes the 2004-2008 experience study salary increase and payroll increase assumption changes for MSRS-General and TRA in the proposed legislation.

Policy Issues Relevant to the Minnesota Police and Peace Officers Association Recommendations

38. Appropriateness of Basing Post-Retirement Adjustments on Consumer Price Index Increases. The policy issue is the appropriateness of returning to the practice of basing post-retirement increases on the Consumer Price Index. The Minnesota Police and Peace Officers Association is proposing basing the post-retirement adjustments for the Public Employees Police and Fire Retirement Plan (PERA-P&F) on increases in the federal Bureau of Commerce Consumer Price Index, up to 1.5 percent annually from 2011 until PERA-P&F becomes 90 percent funded, when the maximum annual adjustment becomes 2.5 percent. Before 2009 and the enactment of Laws 2008, Chapter 349, Articles 1 and 2, the legislation providing for the dissolution of the Minnesota Post Retirement Investment Fund, the post-retirement adjustment mechanism was based initially on the increase in the federal Consumer Price Index (and secondarily, on the investment performance of the Minnesota Post Retirement Investment Fund assets). The introduction of post-retirement adjustments based on Consumer Price Index in 1992 (Laws 1992, Chapter 530) was promoted by administrators of the Minnesota State Retirement System (MSRS), the Public Employees Retirement Association (PERA), and the Teachers Retirement Association (TRA) as a more appropriate basis for adjusting retirement benefits during retirement. The administrators of the same retirement systems were the proponents of the 2008 legislation providing for the dissolution of the Minnesota Post Retirement Investment Fund and its replacement by a flat annual automatic percentage adjustment irrespective of post-retirement inflation. Although the issue was raised in 2008 about departing from the Consumer Price Index as the basis for post-retirement adjustments, the sponsoring retirement administrators never provided any extensive rationale for shifting away from the Consumer Price Index as the measure for post-retirement adjustments. Basing post-retirement adjustments on the increases of the Consumer Price Index is more consistent with the Commission's Pension Policy Principles than the current flat percentage adjustment formula. Policy Principle II.C.8 provides that

> II.C.8. Postretirement Benefit Increases
>
> a. Retirement benefits should be increased during the period of retirement to offset the impact of economic inflation over time in order to maintain a retirement benefit that was adequate at the time of retirement.

39. Appropriateness of the Proposed Elimination of the Augmentation of Deferred Annuities. The policy issue is the appropriateness of eliminating deferred annuities augmentation. The Minnesota Police and Peace Officers Association is proposing the elimination of deferred annuity augmentation for all Public Employees Police and Fire Retirement Plan (PERA-P&F) deferred retirees after June 30, 2010. Minnesota is unique or largely unique among states and public employee retirement plans nationally in augmenting deferred annuities. Deferred annuitants are former public employees who have sufficient service credit to meet the vesting requirements, who have left public employment covered by the applicable retirement plan, and who are younger than the normal retirement age for the applicable plan.

During their deferral period, after the termination of public employment and before the start of the retirement annuity, the annuity amount increases by an annual percentage amount. Deferred annuity augmentation was instituted in 1971 (Laws 1971, Chapter 274, Section 3), and was included in the same provision frequently referred to as the "service in more than one plan" provision, which was initially enacted in 1961 (Extra Session Laws 1961, Chapter 67, Section 22). Augmentation functions to keep the initial retirement annuity more current for a person with public employment covered by two or more public retirement plans. In 1978 (Laws 1978, Chapter 796, Section 10), the deferred annuities augmentation rate was reduced as part of a cost savings measure at that time, but the rate for post-age 55 deferrals was restored at the request of the fund administrators of the three retirement systems in 1989 (Laws 1989, Chapter 319, Article 13), apparently to meet some perceived or articulated need of the plan members. The total elimination of deferred annuities augmentation runs totally counter to the policy of maintaining some portion of the purchasing power of deferred annuities. As a clear benefit diminution, contrary to the Commission Pension Policy Principles (Principle II.C.22.), the Commission should consider taking testimony that will support the contributions that the benefit diminution will have in restoring financial stability and its acceptability to the public pension community.

Policy Issues Relevant to Specific MSRS, PERA, and the Minnesota Police and Peace Officers Association Recommendations for PERA-P&F

40. Appropriateness of Increasing Vesting Requirements. The policy issue is the appropriateness of increasing the period of service required to vest for a Minnesota statewide retirement plan.

    - The Minnesota State Retirement System (MSRS) is proposing increasing the vesting period for new hires for the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General) and for the State Patrol Retirement Plan from three years of allowable service credit to five years of allowable service credit and is proposing increasing the vesting period for new hires for the Correctional Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional) from three years of allowable service credit to ten years of allowable service credit.
    - The Public Employees Retirement Association (PERA) is proposing increasing the vesting period for new hires for the General Employees Retirement Plan of the Public Employees Retirement Association (PERA-General) from three years of allowable service credit to five years of service credit and is proposing increasing the vesting period for new hires for the Public Employees Police and Fire Retirement Plan (PERA-P&F) and for the Local Government Correctional Service Retirement Plan (PERA-Correctional) from three years for full vesting to five years of allowable service credit for 50 percent vesting scaling up to full vesting with ten years of allowable service credit.
    - The Teachers Retirement Association (TRA) has declined to propose any vesting change.
    - The Minnesota Police and Peace Officers Association is proposing the same new hire vesting change for PERA-P&F as PERA is proposing.

    Before 1987, the standard vesting period for all Minnesota defined benefit plans, other than the local police and fire retirement plans, the Elective State Officers Retirement Plan, and the Legislators Retirement Plan, was ten years of allowable service. In 1987 (Laws 1987, Chapter 372, Article 9), the MSRS, PERA, and TRA retirement system administrators sponsored the reduction of the ten years of allowable service credit vesting requirements to five years of allowable service credit, arguing that the change was better retirement policy. In a handout without a designated source that accompanied the proposed legislation initially introduced on behalf of the PERA-administered retirement plans only, seven arguments were offered for the change, as follows:

ARGUMENTS SUPPORTING FIVE-YEAR VESTING

- Fewer than 15 percent of all employees becoming members ever draw retirement, survivor, or disability benefits.
- 25,000 current active members would become immediately vested (16,000 female members and 9,000 male members).
- Recognizes a mobile work force.
- Recent federal tax law changes limit contributions to IRA's and adds an excise tax of ten percent to members electing to take a refund of contributions prior to age 59 1/2.
- Recent federal tax law change requires five-year vesting for private sector employees.
- Diffuses increasing political pressure from groups wishing to pull out of PERA.
- Very low cost to PERA: .11 percent of payroll and would not require increased contributions (cost to Police and Fire Fund would be .16 percent of payroll).

In 1989 (Laws 1989, Chapter 319, Article 13), the MSRS, PERA, and TRA retirement system administrators again sponsored a reduction in the vesting requirement for most of the statewide defined benefit retirement plans, from five years of allowable service credit to three years of allowable service credit, as part of a larger set of benefit changes that also included extending the "Rule of 90" early normal retirement age provision from PERA-General to MSRS-General and TRA. No specific arguments for the three-year vesting requirement are contained in the Commission files on the initial proposed legislation (1989 S.F. 1329 (Pogemiller); 1989 H.F. 1302 (Simoneau)), but the actuarial cost estimate provided for the proposal implicitly makes the argument that the actuarial cost was very modest (ranging from 1/100th of one percent of pay for TRA to 5/100ths of one percent for the St. Paul Teachers Retirement Fund Association (SPTRFA). Most or all of the 1987 arguments for lowered vesting still exist now and if they were persuasive in 1987, they should still have some traction 23 years later. If the actuarial cost of the three-year vesting was so de minimis in 1989, when the change applied to current plan members as well as new members, the potential for actual savings now in a proposal to regain fiscal stability when the change is limited to only future (post-June 30, 2010) plan members should be expected to be very modest, perhaps too modest to be worth the effort.

Policy Issues Relevant to Specific PERA and the Minnesota Police and Peace Officers Association Recommendations (PERA-P&F)

41. Appropriateness of Shifting from Cliff Vesting to Partial Vesting with Shorter Service Scaling Up to Full Vesting with Longer Service. The policy issue is the appropriateness in shifting from "all or nothing" cliff vesting to a progressively increasing scaled up vesting percentage with longer service credit. Minnesota defined benefit public pension plans, other than volunteer firefighter relief associations after the late 1970s, have utilized cliff vesting since their establishment. The Public Employees Retirement Association (PERA) Board of Trustees, for the Public Employees Police and Fire Retirement Plan (PERA-P&F) and for the Local Government Correctional Service Retirement Plan (PERA-Correctional), and the Minnesota Police and Peace Officers Association for PERA-P&F, are proposing a departure from cliff vesting and utilizing 50 percent vesting at five years of service credit to 100 percent vesting at ten years of service credit. Cliff vesting would be retained for the public safety retirement plans administered by the Minnesota State Retirement System (MSRS) and for the statewide general employee retirement plans administered by PERA and by the Teachers Retirement Association (TRA). It is unclear if the shift to scaling up vesting from cliff vesting for PERA-P&F and PERA-Correctional for post-June 30, 2010, hires saves any significant actuarial cost, since PERA has not forwarded any actuarial cost estimate for its proposals, and it is unclear what impact the vesting change will have on employee recruitment and retention, which are two of the three reasons for having public employee retirement plans under the Commission's Principles of Pension Policy (under Principle II.A.1.). The Commission should consider requesting testimony from PERA and the Minnesota Police and Peace Officers Association about the policy rationales that they identify for their vesting proposal and should consider requesting testimony from the police and paid fire community about their interest in the proposal and their sense of the impact of the vesting change.

Section-by-Section Summary of S.F. 2499 (Betzold); H.F. 2953 (Murphy, M., by request): TRA

Sec.	Pg.Ln	Retirement Plan	Stat. Provision	Summary
1	1.12	TRA	354.42, Subd. 2	Increases the Basic member contribution rate from 9% to 11% and the Coordinated member contribution rate from 5.5% to 7.5% in 0.5% annual increments from 7/1/2011, until 7/1/2014.
2	2.10	TRA	354.42, Subd. 3	Increases the employer contribution rate for Basic members from 9.5% to 11.5% and for Coordinated members from 5.5% to 7.5% in 0.5% annual increments from 7/1/2011, until 7/1/2014.
3	3.9	TRA	354.42, New Subd. 4a	Creates a procedure for determining whether or not there is a contribution deficiency or a contribution sufficiency.
4	3.26	TRA	354.42, New Subd. 4b	Provides for an automatic member and employer contribution rate increase of 0.25% each if there is a 2.00% of covered pay or smaller contribution deficiency and of 0.50% each if there is a greater than 2.00% of covered pay contribution deficiency.
5	4.11	TRA	354.42, New Subd. 4c	Requires that any contribution sufficiency of up to one percent of pay be reserved to offset any future funding requirement increase and requires any future proposed benefit increase include a recommendation on the additional funding for the modification.
6	5.1	TRA	354.42, New Subd. 4c	Requires Legislative Commission on Pensions and Retirement review and approval (or inaction) of any automatic member and employer contribution rate increase under sections 3 and 4.
7	5.11	TRA	354.47, Subd. 1	Reduces the interest on a refund payable upon the death of an active member where no larger survivor benefit is payable from 6% to 4%.
8	6.6	TRA	354.49, Subd. 2	Reduces the interest on a refund payable upon termination from 6% to 4%.
9	6.21	TRA	354.55, Subd. 11	Reduces the deferred annuity augmentation rate from 3% before age 56 and 5% after age 55 for pre-7/1/2006 hires and from 2.5% for post-6/30/2006 hires to 2%.
10	8.13	TRA	356.415, Subd. 1	Excludes TRA retirees from the general statewide retirement plan post-retirement adjustment provision.
11	9.6	TRA	356.415, New Subd. 1a	Creates a separate TRA retiree post-retirement adjustment amount, with no adjustment payable in 2011 and 2012, and with a 2.00% adjustment payable after 2012.
12	10.16	TRA	356.47, Subd. 3	Eliminates any interest credited to the annuity amounts payable for TRA retirees who exceeded the reemployed annuitant earnings limitation from the current 6% rate.
13	11.6	--	Effective Date	The proposed legislation is effective 7/1/2010.

Section-by-Section Summary of S.F. 2573 (Betzold); H.F. 2952 (Murphy, M.): MSRS

Sec.	Pg.Ln	Retirement Plan	Stat. Provision	Summary
1	1.20	Legislators Retirement Plan	3A.02, Subd. 4	The rate of compound increase during the deferred period on deferred retirement annuities is reduced from its current rates (3% before age 55 and 5% after age 54 for pre-2006 hires and 2.5% at any age for post-2005 hires) to 2%.
2	2.7	MSRS-General	352.113, Subd. 1	The minimum allowable service credit required to obtain entitlement to a disability benefit is increased from three years to five years for plan members newly hired after 6/30/2010.
3	2.18	MSRS-General	352.115, Subd. 1	The minimum allowable service credit required to obtain entitlement to a retirement annuity is increased from three years to five years for plan members newly hired after 6/30/2010.
4	2.25	MSRS-General	352.12, Subd. 2	The minimum allowable service credit required to obtain entitlement to a survivor benefit is increased from three years to five years for plan members newly hired after 6/30/2010.
5	3.32	MSRS- General	352.22, Subd. 2	The rate of interest on refunds is reduced from 6% annually to 4% annually.
6	4.7	MSRS-General	352.22, Subd. 3	The minimum allowable service credit required to obtain entitlement to a deferred retirement annuity is increased from three years to five years for plan members newly hired after 6/30/2010.
7	4.28	MSRS-General	352.72, Subd. 1	The minimum allowable service credit required to obtain entitlement to a retirement annuity with multiple retirement plan service credit is increased from three years to five years for plan members newly hired after 6/30/2010.
8	5.18	MSRS-General	352.72, Subd. 2	The rate of compound increase during the deferred period on deferred retirement annuities is reduced from its current rates (3% before age 55 and 5% after age 54 for pre-2006 hires and 2.5% at any age for post-2005 hires) to 2%.
9	6.21	MSRS-General	352.75, Subd. 4	The rate of compound increase during the deferred period on deferred retirement annuities is reduced from its current rates (3% before age 55 and 5% after age 54 for pre-2006 hires and 2.5% at any age for post-2005 hires) to 2%.
10	7.22	MSRS-Correctional	352.93, Subd. 1	The minimum allowable service credit required to obtain entitlement to a retirement annuity is increased from three years to ten years for plan members newly hired after 6/30/2010.
11	7.34	MSRS-Correctional	352.93, Subd. 2a	The minimum allowable service credit required to obtain entitlement to a retirement annuity is increased from three years to ten years for plan members newly hired after 6/30/2010, and the amount of the retirement annuity per year before the normal retirement age is reduced upon early retirement is increased from 2.4% to 5% for plan members if employed before 7/1/2010 and retiring after 6/30/2015 or if employed after 6/30/2010.
12	8.13	MSRS-Correctional	352.93, Subd. 3a	Clarifies the age parameters for the Social Security leveling optional annuity form.
13	8.21	MSRS-Correctional	352.931, Subd. 1	The minimum allowable service credit required to obtain entitlement to a surviving spouse benefit is increased from three years to ten years for plan members newly hired after 6/30/2010.
14	9.17	MSRS-Correctional	352.95, Subd. 2	The minimum allowable service credit required to obtain entitlement to a disability benefit is increased from three years to ten years for plan members newly hired after 6/30/2010.
15	10.1	State Patrol Retirement Plan	352B.02	The member contribution rate is increased by 0.8% of salary, the employer contribution rate is increased by 1.2% of salary, and an additional employer contribution of 10% of salary is imposed.
16	11.15	State Patrol Retirement Plan	352B.08, Subd. 1	The minimum allowable service credit required to obtain entitlement to a retirement annuity is increased from three years to five years for plan members newly hired after 6/30/2010.
17	11.27	State Patrol Retirement Plan	352B.08, Subd. 2a	The minimum allowable service credit required to obtain entitlement to an early retirement annuity is increased from three years to five years for plan members newly hired after 6/30/2010.
18	12.3	State Patrol Retirement Plan	352B.11, Subd. 2a	The minimum allowable service credit required to obtain entitlement to a survivor benefit is increased from three years to five years for plan members newly hired after 6/30/2010.
19	12.30	State Patrol Retirement Plan	352B.30, Subd. 1	The minimum allowable service credit required to obtain entitlement to a retirement annuity with multiple retirement plan service credit is increased from three years to five years for plan members newly hired after 6/30/2010.
20	13.16	State Patrol Retirement Plan	352B.30, Subd. 2	The rate of compound increase during the deferred period on deferred retirement annuities is reduced from its current rates (3% before age 55 and 5% after age 54 for pre-2006 hires and 2.5% at any age for post-2005 hires) to 2%.
21	13.31	MSRS Privatized Employees	352F.07	The rate of interest on refunds is reduced from 6% annually to 4% annually.
22	14.8	MSRS-General	356.215, Subd. 11	The amortization target date is extended from 2020 to 2040.
23	16.32	Combined service annuity	356.30, Subd. 1	Accommodates longer MSRS-administered retirement plan vesting requirements in qualifying for a combined service annuity.
24	18.29	Combined service disability benefit	356.302, Subd. 3	Accommodates longer MSRS-administered retirement plan vesting requirements in qualifying for a combined service disability benefit for general employees.
25	19.14	Combined service disability benefit	356.302, Subd. 4	Accommodates longer MSRS-administered retirement plan vesting requirements in qualifying for a combined service disability benefit for public safety employees.

Sec.	Pg.Ln	Retirement Plan	Stat. Provision	Summary
26	19.31	Combined service disability benefit	356.302, Subd. 5	Accommodates longer MSRS-administered retirement plan vesting requirements in qualifying for a combined service disability benefit for combined general and public safety employees.
27	20.9	Combined service survivor benefit	356.303, Subd. 2	Accommodates longer MSRS-administered retirement plan vesting requirements in qualifying for a combined service survivor benefit.
28	20.24	MSRS-Correctional	356.315, Subd. 5	The percentage rate applied to a final average salary and multiplied by the number of years of allowable service in calculating a single-life retirement annuity is reduced from 2.4 percent per year to 2.2 percent per year for newly hired plan members after June 30, 2010.
29	20.28	MSRS-administered retirement plans	356.415, Subd. 1	Excludes the MSRS-administered retirement plans from the general statewide retirement plan post-retirement adjustment provision.
30	21.26	MSRS-administered retirement plans	356.415, New Subd. 3	Until the respective plan achieves a 90% funding ratio (actuarial value of assets as a percentage of actuarial accrued liability), the annual post-retirement adjustment rate is reduced from 2.5% to 2.0%. A retiree or other benefit recipient of any retirement plan administered by MSRS would be required to be in receipt of the annuity or benefit for at least six months before qualifying for the initial post-retirement adjustment.
31	22.30	MSRS-General, MSRS-Correctional	356.47, Subd. 3	The interest payable on the deferred benefit account for reemployed retirees who exceed the earnings limitation, set at a 6% compound rate, is eliminated.
32	23.22	--	Effective date	The proposed legislation is effective upon final enactment.

Section-by-Section Summary of S.F. 2631 (Betzold); H.F. 2999 (Murphy, M., by request): PERA

Sec.	Pg.Ln	Retirement Plan	Stat. Provision	Summary
1	1.16	PERA-administered defined benefit plans	353.01, New Subd. 47	Adds a definition of "vesting," set at three years for pre-July 1, 2010, PERA-General plan members, five years for post-6/30/2010, PERA-General plan members, and scaled-up vesting between five years and ten years for PERA-P&F and PERA-Correctional plan members.
2	2.18	PERA-General	353.27, Subd. 2	Increases the coordinated program member contribution from 6.00% to 6.25%, effective on 1/1/2011.
3	2.30	PERA-General	353.27, Subd. 3	Increases the coordinated program employer contribution from 6.00% to 6.25%, effective on 1/1/2011.
4	3.7	PERA-General	353.27, Subd. 3b	Modifies the 2006 automatic contribution rate revision provision, provides for 0.5 or 0.75% of pay contribution increases with significant contribution deficiencies, requires a 1% of pay reserve if there is a future contribution sufficiency, requires implementation of any experience study related actuarial assumption changes before reducing contribution rates upon having a contribution sufficiency, and requires that funding for any future benefit increases be provided upon any future benefit increase proposal.
5	5.32	PERA-General	353.29, Subd. 1	Makes retirement annuity entitlement vesting consistent with vesting change in Sec. 1.
6	6.3	PERA-General	353.30, Subd. 1c	Makes retirement annuity entitlement vesting consistent with vesting change in Sec. 1.
7	6.12	PERA-General	353.32, Subd. 1	Makes refund interest rate change for death-related refund consistent with Sec. 11.
8	6.25	PERA-General	353.32, Subd. 1a	Makes the surviving spouse optional annuity entitlement vesting consistent with the vesting change in Sec. 1.
9	8.9	PERA-General	353.33, Subd. 1	Makes the disability benefit entitlement vesting consistent with the vesting change in Sec. 1.
10	8.19	PERA-General	353.34, Subd. 1	Makes refund interest rate change for post-termination refund consistent with Sec. 11.
11	9.3	PERA-administered retirement plans	353.34, Subd. 2	Reduces the refund interest rate from 6% to 4% for the post-June 20, 2011, period.
12	9.16	PERA-General	353.34, Subd. 3	Makes the deferred annuitant annuity entitlement vesting consistent with the vesting change in Sec. 1.
13	9.32	PERA-P&F	353.65, Subd. 2	Increases the member contribution rate from 9.4% of salary to 9.6% of salary beginning for calendar year 2011.
14	10.7	PERA-P&F	353.65, Subd. 3	Increases the employer contribution rate from 14.1% of salary to 14.4% of salary beginning for calendar year 2011.
15	10.13	PERA-P&F	353.651, Subd. 1	Makes the retirement annuity entitlement vesting consistent with the vesting change in Sec. 1.
16	10.19	PERA-P&F	353.651, Subd. 4	Makes the early reduced retirement annuity entitlement vesting consistent with the vesting change in Sec. 1.
17	10.32	PERA-P&F	353.657, Subd. 1	Makes the not-in-line-of-duty death survivor benefit entitlement vesting consistent with the vesting change in Sec. 1.
18	11.17	PERA-P&F	353.657, Subd. 2a	Makes the death-while-eligible death survivor benefit entitlement vesting consistent with the vesting change in Sec. 1.
19	12.20	PERA-administered retirement plans	353.71, Subd. 1	Makes the service-in-more-than-one-plan retirement annuity entitlement vesting consistent with the vesting change in Sec. 1.
20	13.6	PERA-administered retirement plans	353.71, Subd. 2	Reduces the deferred annuity augmentation rates to 1% for post-12/31/2010, deferral periods.
21	14.18	PERA-Correctional	353E.04, Subd. 1	Makes the retirement annuity entitlement vesting consistent with the vesting change in Sec. 1.
22	14.26	PERA-Correctional	353E.04, Subd. 4	Makes the reduced early retirement entitlement vesting consistent with the vesting change in Sec. 1.
23	15.1	PERA-Correctional	353E.07, Subd. 1	Makes the over age 49 disability benefit entitlement vesting consistent with the vesting change in Sec. 1.
24	15.11	PERA-Correctional	353E.07, Subd. 2	Makes the under age 50 disability benefit entitlement vesting consistent with the vesting change in Sec. 1.
25	15.21	Privatized employee provisions	353F.03	Makes a special vesting provision reference consistent with the vesting change in Sec. 1.
26	15.28	Retirement plan actuarial work	356.215, Subd. 8	Replaces the PERA-General age-related select and ultimate select and ultimate future salary increase actuarial assumption with a service-related salary increase actuarial assumption.

Sec.	Pg.Ln	Retirement Plan	Stat. Provision	Summary
27	21.5	Combined service annuity provision	356.30, Subd. 1	Makes the portability provision entitlement vesting consistent with the vesting change in Sec. 1.
28	23.1	PERA-administered retirement plans	356.415, Subd. 1	Excludes the PERA-administered retirement plans from the general statewide retirement plan post-retirement adjustment provision.
29	23.31	PERA-administered retirement plans	356.415, New Subd. 1a	Reduces PERA-administered retirement plan adjustment rate from 2.5% to 1.0% until funding stability is restored.
30	25.11	PERA-administered retirement plans	356.47, Subd. 3	Eliminates interest on reemployed annuitant earnings limitation deferral account amounts for PERA-administered retirement plans after 12/31/2010.
31	26.3	Privatized employee provisions	Repealer	Repeals Section 353.34, Subd. 3a, a privatized hospital employee vesting provision deemed obsolete by PERA.
32	26.5	--	Effective Date	The proposed legislation is effective upon final enactment.

Section-by-Section Summary of S.F. 2672 (Betzold); H.F. xxxx: PERA-P&F *(MPPOA)*

Sec.	Pg.Ln	Retirement Plan	Stat. Provision	Summary
1	1.11	PERA-P&F	353.65, Subd. 2	Increases the member contribution rate from 9.4% of salary to 9.6% of salary beginning for calendar year 2011.
2	1.21	PERA-P&F	353.65, Subd. 3	Increases the employer contribution rate from 14.1% of salary to 14.4% of salary beginning for calendar year 2011.
3	2.5	PERA-P&F	353.651, Subd. 1	Increases the vesting requirement for post-6/30-2010 hires from three years of allowable service for full vesting to five years of allowable service with 50% vesting to ten years of allowable service for full vesting.
4	2.23	Various PERA-administered plans	353.71, Subd. 1	Modifies the service-in-more-than-one-retirement-plan provision to accommodate lengthened vesting requirement for PERA-P&F under Sec. 3.
5	3.6	PERA-P&F	353.71, Subd. 2	Excludes PERA-P&F members hired after 6/30/2010 from deferred annuities augmentation.
6	4.9	Combined service annuity	356.30	Modifies the retirement annuity portability provision to accommodate the lengthened vesting requirement for PERA-P&F under Sec. 3.
7	6.5	PERA-P&F	356.415, Subd. 1	Excludes PERA-P&F from the general statewide retirement plan post-retirement adjustment provision.
8	6.33	PERA-P&F	356.415, New Subd. 1a	Provides 2011 and thereafter Consumer Price Index increase adjustments capped at 1.5% until PERA-P&F becomes 90 percent funded on a market value basis and capped at 2.5% when 90% funded on a market value basis.
9	8.13	--	Effective Date	The proposed legislation is effective upon final enactment.

Background Information on the 2008-2009 Statewide Retirement Plan Post-Retirement Adjustment Procedure

a. Introduction. In 2008-2009, the prior post-retirement adjustment mechanism for the various statewide public employee retirement plans was dissolved and was replaced by a different post-retirement adjustment procedure. The following information summarizes the pre-2008 post-retirement adjustment mechanism for the various statewide public employee retirement plans, the dissolution of that mechanism, and the replacement post-retirement adjustment procedure.

b. The Minnesota Post Retirement Investment Fund (MPRIF). The predecessor to the Minnesota Post Retirement Investment Fund (MPRIF) was created in 1969 (Laws 1969, Chapter 485, Section 32) and was replaced by the MPRIF in1980 (Laws 1980, Chapter 607, Article 14, Section 16). The initial version of the MPRIF funded post-retirement adjustments from investment yield (i.e. realized gains on equities and interest on debt) in excess of five percent and determined the amount of the annual adjustment on the basis of that "excess" investment performance. The MPRIF was substantially altered in 1992 (Laws 1992, Chapter 530) and 1997 (Laws 1997, Chapter 233, Article 1, Section 5). The 1992 revision provided two adjustment components, with an inflation component annual post-retirement increase matching inflation, but not to exceed 3.5 percent annually, and an investment-based component based on total investment performance, not just realized gains, and for the most recent five-year period, rather than for a single year when investment performance exceeded 8.5 percent and by the amount of that "excess" investment return smoothed by being credited over a five-year period. The 1997 revision trimmed the inflation match component maximum from 3.5 percent to 2.5 percent as part of a package to increase active member benefits at the time of retirement.

c. 2008-2009 Post-Retirement Adjustment Changes. In 2008 (Laws 2008, Chapter 349, Article 1, Sections 1 to 4, and Article 2, Sections 1 and 2) the Minnesota Post Retirement Investment Fund (MPRIF) was further modified, a trigger was provided for the potential dissolution of the MPRIF, and a trigger was provided for additional post-retirement adjustments in the event that the MPRIF became significantly overfunded. The total benefit increase to be provided by the MPRIF to benefit recipients was capped at the rate of inflation or five percent, whichever is less. An additional benefit increase may be provided to any individuals who have lost purchasing power compared to the value of the benefit they initially received when their benefit first commenced. This additional benefit increase can only be paid if the MPRIF funding ratio is at least 90 percent, if the rate of return earned on MPRIF assets exceeds 8.5 percent for the year, and if the inflation rate certified for the year is less than 2.5 percent. The amount of this additional increase, when combined with the inflation adjustment authorized for the year, cannot exceed 2.5 percent in total. If the MPRIF funding ratio is less than 80 percent in any one year, or less than 85 percent in two consecutive years, the MPRIF must be dissolved, and assets will be transferred back to the applicable retirement plan and be merged with the active member assets for that plan. If the MPRIF is dissolved, notwithstanding any other law, the benefit recipients will receive an annual 2.5 percent increase in lieu of any other benefit increase. By November 30 following the dissolution of the MPRIF, the executive directors of the applicable plans must propose legislation needed to revise statutes to conform to the dissolved MPRIF. If the MPRIF funding ratio exceeds 115 percent after 2008, the MSRS, PERA, and TRA boards must report to the Legislative Commission on Pensions and Retirement by the next January 15 with recommendations regarding benefits and funding of the retirement funds for active employees and benefit recipients.

In 2009 (Laws 2009, Chapter 169, Article 1, Sections 6 to 8, 70 to 73, and 77) after the 2008 one-year dissolution trigger for the MPRIF occurred, numerous changes implementing and conforming to the MPRIF dissolution were enacted, including:

1. A State Board of Investment (SBI) Investment Advisory Council (IAC) provision was revised to conform to the dissolution of the MPRIF, by stating that the IAC will include a retiree receiving benefits from a statewide retirement plan rather than a retiree receiving benefits from the MPRIF;
2. Two SBI asset investment provisions were revised to eliminate language requiring transfer assets to the MPRIF;
3. The actuarial value of assets computation provision in Minnesota Statutes, Section 356.215, Subdivision 1, was revised by redefining the actuarial value of assets to use a consistently applied 8.5 percent investment earnings assumption and by incorporating a five-year phase in of market value asset recognition for the dissolved former MPRIF;
4. A provision specifying how amortization contributions are to be determined for most plans in Minnesota Statutes, Section 356.215, Subdivision 11, was revised by eliminating an obsolete requirement relating to the MPRIF;
5. A retirement incentive provision, Minnesota Statutes, Section 356.351, was revised by specifying that annuity factors used in calculation must be determined by the plan's actuary, and by removing references to the MPRIF; and
6. The MPRIF-specific provisions of the various statewide retirement plans were repealed.

A new provision, replacing the MPRIF adjustment was created specifying post-retirement adjustments applicable to statewide retirement plans, commencing on January 1, 2010. The increase is 2.5 percent annually. Individuals retired less than one year received a prorated increase.

Background Information on the Refund of Public Pension Plan Member Contributions

a. Member Contribution Refunds Generally. Although not frequently viewed by many policymakers and public employees as a benefit provided by the public pension plan, the refund of accumulated member contributions and interest to a public pension plan member who terminates before reaching retirement age is a benefit generally provided by the various statewide and major local retirement plans. All Minnesota public pension plans, with the exception of some local police and paid firefighter relief associations, provide a refund of member contributions, plus interest, upon application, to plan members who have terminated active employment giving rise to pension plan coverage.

If public pension plans were not contributory plans, meaning that the public employees make member contributions to the plan, there would be no need for a refund benefit and none likely would be provided.

The adequacy of the refund benefit depends on the commitment of the public pension plan to plan members who do not vest or who vest (have sufficient service to qualify for a deferred annuity, generally three years in Minnesota) but elect not to retain their deferred retirement annuity rights. Some public pension plans in Minnesota (some first class city public safety plans) do not provide any refund of member contributions. Other public pension plans in Minnesota (mostly second class city police relief associations) provide a refund equal to only three-quarters of the total member contributions previously paid. Some public pension plans in Minnesota (the Teachers Retirement Association (TRA) in the past and some local public safety plans) provide or provided a refund of accumulated member contributions without any interest on that amount. The remaining Minnesota public pension plans (statewide and major local) pay a refund of accumulated member contributions plus interest at a compound rate of six percent per year (the Minneapolis Employees Retirement Fund (MERF) provides a rate of interest unspecified in statute). The refund results in a forfeiture of prior plan service credit.

Given Minnesota's generally short service credit vesting requirement (three years) and augmentation of deferred retirement annuities (three percent until age 55 and five percent thereafter), which represent a commitment to short service terminating employees, it is unclear how great an additional commitment its public pension plans should make in paying interest on refunds of accumulated member contributions.

b. Development of Member Contribution Refund Provisions. Prior to 1973, the statewide Minnesota public employee retirement plans provided for refund of member contributions to individuals who terminated active plan membership in lieu of a retirement annuity or a deferred retirement annuity, but that member contribution refund was payable without interest. The lack of interest on refunds likely represented a view that retirement plan contribution accumulations were not equivalent to a bank savings account, but were intended to fund group retirement benefits, and limited the retirement plan administration staff from the complexity of computing interest on a stream of periodic contributions.

In 1973 (Laws 1973, Chapters 653, Section 35; and 753, Section 49), interest at the annual compound interest rate of 3.5 percent was added to refunds paid by the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the Correctional Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional), the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General), and the Public Employees Police and Fire Plan (PERA-P&F). No interest on refunds from the Teachers Retirement Association (TRA) or from the State Patrol Retirement Plan were made payable until 1984. A refund of member contributions was payable to terminating members of the Minneapolis Employees Retirement Fund (MERF) with interest at an unspecified annual rate in 1973 (Laws 1973, Chapter 133, Section 22), but that provision simply recodified a pre-1955 provision.

In 1984 (Laws 1984, Chapter 564, Sections 12, 18, 27, 37, 39, and 40), interest was added to TRA and State Patrol Retirement Plan member contribution refunds for the first time and the interest rate was set at an annual compound interest rate of five percent, and the MSRS-General, MSRS-Correctional, PERA-General, and PERA-P&F member contribution refund interest rate was increased from a 3.5 percent annual compound interest rate to five percent.

In 1989 (Laws 1989, Chapter 319, Article 13, Sections 14, 26, 40, 68, and 87), the annual compound interest rate on member contribution refunds was increased from five percent to six percent.

Comparison of Current Member Contribution Refund Provisions

Provision	MSRS-General	PERA-General	TRA	First Class City Teacher Plans	MERF
Refund Eligibility	Cessation of status of "state employee" by virtue of employment termination or layoff and no resumption of that status (352.22, Subd. 1).	Becoming a former member by the termination of public service or the termination of membership without returning to public service (353.34, Subd. 1).	Cessation of teaching service in any school or institution covered by the retirement plan without resumption of teaching service (354.49, Subds. 1 and 4).	Cessation of teaching service for the school district covered by the teachers retirement fund association and the passage of 30 days without the resumption of teaching service (354A.37, Subd. 1).	Separates from active covered employment before reaching age 60 (422A.22, Subd. 1).
Base Refund Amount	Accumulated member contributions, any refund repayment amount, and any interest paid on the refund repayment (352.22, Subd. 2).	Accumulated member contribution deductions, any refund repayment amounts, and any interest paid on the refund repayments (353.34, Subd. 2).	Accumulated member contribution deductions (354.49, Subd. 2).	Member's accumulated contributions (354A.37, Subd. 3).	Net accumulated amount of member contribution deductions (422A.23, Subd. 1).
Interest on Refund	Six percent annual interest, compounded daily from the date of the contribution to the date of the refund payment (352.22, Subd. 2).	Six percent annual compound interest on fiscal year balances to the first day of the month in which the refund is processed (353.34, Subd. 2).	Six percent annual compound interest on fiscal year balances to the first day of the month in which the refund is issued (354.49, Subd. 2).	Six percent per annum interest compounded annually (354A.37, Subd. 3).	Six percent annual compound interest (422A.22, Subd. 1).
Refund Payment Time Limit	No time limit.	Refund must be paid within 120 days following receipt of the refund application (353.34, Subd. 1).	Refund must be paid within 45 days of the later of the receipt of the refund application, the receipt of regular annual member reporting data, or the receipt of regular payroll cycle data (354.49, Subd. 1).	Refund must not be paid earlier than 30 days after teaching service termination and must be paid within 90 days of receipt of the refund application (354A.37, Subd. 1).	No time limit.
Consequence of Refund	Acceptance of a refund terminates all service credit and all rights and benefits of the employee before the refund (352.23).	Acceptance of a refund terminates all service credit and all rights and benefits of the person before the refund (353.35, Subd. 1).	Acceptance of a refund terminates all service credit the member was entitled to prior to the refund (354.50, Subd. 1).	Application for and acceptance of a refund terminates all allowable service credit of the member or former member (354A.38, Subd. 1).	No specific provision.
Treatment of Untaken Refunds	Right to a refund has no statute of limitation. If refund is not applied for within five years of last member contribution deduction where person does not qualify for a deferred annuity, the refund cancels to the retirement fund, but if more than $25 and if the person again becomes covered by the retirement plan or if the person applies for a deferred annuity or under the service in more than one fund provision, the amount is restored (352.22, subds. 5 and 8).	Right to a refund has no time limit and is not subject to a statute of limitation (353.34, Subd. 5).	No specific provision.	If a refund has not been applied for within five years of the end of the fiscal year following the end of teaching services and if the amount is under $500, the amount cancels to the retirement fund, but if the person resumes active service and the amount is at least $5 or if the person applies for a deferred annuity, an annuity under the service-in-more-than-one fund provision, or an annuity under the combined service annuity and the amount is at least $5, the amount is restored (354A.37, Subd. 5).	No specific provision.

Background Information on Reemployed Annuitant Exempt Earnings Limits

1. Reemployed Annuitant Earnings Limitations under Social Security. Since the creation of the Old Age and Survivors Insurance Program (Social Security) in the 1930s, Social Security benefits have been subject to an employment earnings limitation, known as the earnings test. The Social Security Administration maximum salary earnings limitations for continued receipt of full benefit amounts under the federal Old Age, Survivors and Disability Insurance Program are used by the Social Security Administration to determine whether Social Security benefits must be reduced because the individual has salary or self-employment income in excess of the maximums permitted under federal law for continued full receipt of those benefits.

   The following table summarizes the annual maximum earnings permissible by Social Security benefit recipients for each year from 1985 onward, which a benefit recipient may receive without incurring a reduction in Social Security benefits. In the table these maximums are referred to as exempt amounts, since they indicate the highest salary earnings, which are exempt from a penalty—a reduction in the Social Security benefits that otherwise would be received. Under Social Security law, the exempt amount differs with the age of the individual. If an individual is under the Social Security full retirement age, once 65 and now between age 65 and age 67, depending on the person's year of birth, but drawing Social Security Old Age Insurance benefits, the maximums are fairly low. The exempt amount for the year in which the Social Security full retirement age is reached is notably higher. The following table has three columns, which are the applicable year, the maximum (exempt) amount under age 65 (before 2000) or under the full normal retirement age (after 1999), and the maximum amount for age 65-69 (before 2000) or for the full normal retirement age year (after 1999):

Year	Under Age 65	Age 65-69
1985	$5,400	$7,320
1986	$5,760	$7,800
1987	$6,000	$8,160
1988	$6,120	$8,400
1989	$6,480	$8,880
1990	$6,840	$9,360
1991	$7,080	$9,720
1992	$7,440	$10,200
1993	$7,680	$10,560
1994	$8,040	$11,160
1995	$8,160	$11,280
1996	$8,280	$12,500
1997	$8,640	$13,500
1998	$9,120	$14,500
1999	$9,600	$15,500

Year	Prior to Year of Full Retirement Age	Year of Full Retirement Age
2000	$10,080	$17,000
2001	$10,680	$25,000
2002	$11,280	$30,000
2003	$11,520	$30,720
2004	$11,640	$31,080
2005	$12,000	$31,800
2006	$12,480	$33,240
2007	$12,960	$34,440
2008	$13,560	$36,120

   If the Social Security benefit recipient is under the full retirement age, the reduction is one dollar of Social Security benefits for each two dollars of earnings in excess of the maximum amount earned. For the year in which the full retirement age is attained, the reduction is one dollar for each three dollars of earnings in excess of the maximum amount earned.

2. Reemployed Annuitant Earnings Limitations under the Minnesota Public Pension Plans. Among Minnesota public pension plans, but unlike Social Security, the public employee must terminate from active public employment with the employing unit to initially qualify to receive the public employee retirement annuity. If the individual's public pension plan has a reemployed annuitant earnings limit provision, the individual often (but not always) will be subject to that reemployed earnings limit if the individual returns to public employment with pension coverage in the same public pension system.

   These reemployed annuitant provisions in Minnesota public pension plans bear a great similarity to the Social Security System but are far less global in scope. Under Social Security, the benefit reductions would be applied to any Social Security benefit recipient under the full retirement age who exceeded the maximum permissible exempt salary earnings, regardless of the employer, applicable for the individual's age. In contrast, if a Minnesota public pension plan has a reemployed annuitant earnings provision, reductions or suspension of the annuity by the plan will occur for those with salary income in excess of exempt amounts only from employment covered by the same pension plan or system. An annuitant from the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General) who becomes reemployed in a position covered by the Minnesota State Retirement System (MSRS), the Teachers Retirement Association (TRA), or any other public pension system, would not be subject to the reemployed annuitant provisions in PERA law. Also, no Minnesota public pension plan benefit reductions would occur if the annuitant becomes employed by a governmental employer in another state, by the federal government, or in the private sector.

Even within the same public pension system, reemployed annuitant reductions may not apply if the individual becomes employed in a position covered by another plan within the system. Typically, the laws have been constructed or interpreted in a way that applies reemployed annuitant earnings provisions if an annuitant from one plan in a system becomes employed by another plan in that same system providing that both plans were originally created within that system. A Public Employees Police and Fire Retirement Plan (PERA-P&F) annuitant who becomes employed in PERA-General covered employment will be subject to PERA's reemployed annuitant provision because PERA-P&F was spun out of PERA-General in 1959. However, a retiree from the State Patrol Retirement Plan who becomes reemployed in an MSRS-General covered position faces no reemployed annuitant penalties because the State Patrol Plan was originally not administered by MSRS, but was moved into MSRS for administrative purposes in 1969. The State Patrol Retirement Plan has no reemployed annuitant earnings provision in the plan, and the provision in MSRS-General law has been interpreted as not applying to State Patrol annuitants.

Reemployed annuitant earnings limitations in Minnesota law support the requirement that a public employee must terminate the employment relationship in order to receive a retirement benefit. The limitations ensure that politically connected public employees cannot manipulate the personnel system and also maximize their income by drawing a full retirement benefit along with a full salary. In doing this, the reemployed annuitant earnings limitations follow one of the traditional purposes for a retirement plan, which is to assist the personnel system in producing an orderly and systematic outtransitioning of senior employees who have reached the end of their normal working lifetime.

However, when reemployed annuitant earnings limitations do not apply uniformly, when some plans have no limits, when the limitations impact differently when applicable, or when no limitations apply to most reemployed annuitant situations (i.e., a public plan annuitant employed by a private sector employer or by a public sector employer of a different level or branch of government), the basic fairness of the limitations can be questioned.

The following chart provides information on the reemployed annuitant earnings limitation laws in Minnesota's public plans:

Retirement Plan	Applicable Compensation	Limit Threshold	Effect After Threshold Exceeded	Reemployment Period Retirement Coverage	Exceptions
General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General)	Salary or wages from state of from employer of MSRS-General members	Social Security maximums ($13,560 annually if under the Social Security normal retirement age; $36,120 in year in which Social Security normal retirement age is reached; no limit thereafter)	Suspension of annuity for the balance of the calendar year or until reemployment termination, with the suspended annuity amounts deposited in a separate account, earning six percent compound annual interest, payable at the later of age 65 or one year after the reemployment ends	No retirement coverage	No application to service as temporary legislative employee. Suspension lifted during any sick leave
MSRS Correctional State Employees Retirement Plan (MSRS-Corr.)	Same as MSRS-General	Same as MSRS-General	Same as MSRS-General	Same as MSRS-Gen.	Same as MSRS-General
State Patrol Retirement Plan	No provision	No provision	No provision	No provision	No provision
Legislators Retirement Plan*	No provision	No provision	No provision	No provision	No provision
Elective State Officers Retirement Plan	No provision	No provision	No provision	No provision	No provision
Judges Retirement Plan	No provision	No provision	No provision	No provision	No provision

Retirement Plan	Applicable Compensation	Limit Threshold	Effect After Threshold Exceeded	Reemployment Period Retirement Coverage	Exceptions
MSRS Unclassified State Employees Retirement Program (MSRS-Unclassified)	No provision	No provision	No provision	No provision	No provision
Public Employees Retirement Association (PERA)	Salary from governmental subdivision employment or public employee labor union employment	Social Security maximums ($13,560 annually if under the Social Security normal retirement age; $36,120 in year in which Social Security normal retirement age is reached; no limit thereafter)	Suspension or reduction, whichever produces higher annual amount. Suspension of amount is for the balance of the calendar year or until reemployment termination. Reduction is one-half of the excess over the maximum if under the Social Security full retirement age and one-third of the excess over the maximum if at the Social Security full retirement age. The reduction or suspended amount is deposited in a separate account, earning six percent compound annual interest, payable at the later of age 65 or one year after the reemployment ends.	No retirement coverage	No application to service as a local government elected official
Public Employees Police & Fire Fund (PERA-P&F)	Same as PERA	Same as PERA	Same as PERA	Same as PERA	Same as PERA
Teachers Retirement Association (TRA)	Income from teaching for employing unit covered by TRA, income from consultant or independent contractor teaching services for employing unit covered by TRA, or income received by comparable position if greater than actual income received	Social Security maximums ($13,560 annually if under the Social Security normal retirement age; $36,120 in year in which Social Security normal retirement age is reached; no limit thereafter)	Reduction in following calendar year annuity of one-half of the excess over the maximum, with the annuity reduction amount deposited in a separate account earning six percent compound annual interest, payable at the later of age 65 or one year after the reemployment ends	No retirement coverage	No application to interim superintendents during a lifetime limit of three 90-day exemption periods or to reemployed retired Minnesota State Colleges and Universities faculty working between 33.3 and 66.7 percent of full time with salary under $46,000 or application to higher education salary over $46,000 if total higher education salary is greater than $46,000
First Class City Teacher Retirement Fund Associations	Same as TRA, except for applicable employers	Same as TRA	Same as TRA, except reduction is one-third of excess over the maximum	Same as TRA	Same as TRA
Minneapolis Employees Retirement Fund (MERF)	No provision	No provision	No provision	No provision	No provision
Local Police or Salaried Firefighter Relief Associations	Typically no provision	Typically no provision	Typically no provision	Typically no provision	Typically no provision

3. <u>Example of Teachers Retirement Association (TRA) Reemployed Annuitant Earnings Limitation Provision</u>. The current TRA limit, Minnesota Statutes, Section 354.44, Subdivision 5, provides for a reduction in the subsequent year's annuity of one dollar for every two dollars earned in excess of the Social Security limitation, which is $13,560 annually ($1,130 monthly on a 12-month basis or $1,507 monthly on a nine-month basis) in 2008 for retirees before the year in which Social Security normal retirement age is reached (between age 65 and age 66 for retirees with birth years between 1937 and 1955) and is $36,120 for the year of attaining the Social Security full retirement age.

TRA Annuitant Retiring at Age 63

Final Five Years' Salary

Year 1	48,430
Year 2	50,850
Year 3	53,390
Year 4	56,060
Year 5	58,858

Highest Five Successive Years Average Salary	$53,517.65
Benefit Accrual Percentage (30 Years x 1.7)	x .51
	$27,294 ($2,274.50/month)[1]

	Situation 1		Situation 2		Situation 3	
	TRA Annuitant without any Reemployment		TRA Annuitant with $25,000 Reemployment, Current Law[2]		TRA Annuitant with $25,000 Reemployment, Reemployment Earning Limit of $46,000	
Year 1			Reemployed Earnings	$25,000	Reemployed Earnings	$25,000
	TRA Annuity	$27,294	TRA Annuity	27,294	TRA Annuity	27,294
	Total	$27,294	Total	$52,294	Total	$52,294
Year 2			Reemployed Earnings	$25,000	Reemployed Earnings	$25,000
	TRA Annuity	$27,294	TRA Annuity:		TRA Annuity:	
			Year 1 Earnings	$25,000	Year 1 Earnings	$25,000
			Earnings Limit	13,560	Earnings Limit	46,000
			Excess Amount	$11,440	Excess Amount	$0
			$1 for $2 Deferral[3]	$5,720	$1 for $2 Deferral[3]	$0
			TRA Base Annuity	$27,294	TRA Base Annuity	$27,294
			Deferred Amount	5,720	Deferred Amount	0
			Remaining Annuity	$21,574	Remaining Annuity	$27,294
	Total	$27,294	Total	$46,574	Total	$54,794

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[1] *Does not include any reduction due to early receipt of the annuity*

[2] *Year 2 annuity amount assumes no Minnesota Post Retirement Investment Fund (Post Fund) post-retirement adjustments and assumes no increase in the Social Security earnings test amount, although both are likely.*

[3] *Reduction amount is deposited in a separate account, credited with six percent compound interest annually, payable at the later of age 65 or one year after termination of the reemployment.*

Background Information on Deferred Annuities Augmentation

a. Definition. Deferred annuity augmentation refers to increasing the amount of a deferred retirement annuity by a percentage or dollar amount over time prior to receipt. This replaces all or part of any lost purchasing power in the unpaid retirement annuity due to inflation. Under current law, for members who terminate from PERA coverage after 1989 and who have a right to a deferred annuity due to their covered service, the deferred annuity increases (augments) by three percent annually until the first of the year after the individual turns age 55, and by five percent per year thereafter. Deferred annuity augmentation was added in 1971 to PERA plans, Minnesota State Retirement System (MSRS) plans, the Teachers Retirement Association (TRA), and was also added to first class city teacher plans in 1989, and is also found in the Minneapolis Employees Retirement Fund (MERF).

Minnesota public pension plans are relatively unique among public and private defined benefit plans in providing deferred annuities augmentation. To the best knowledge of the Commission staff, only the Oregon statewide public employee defined benefit plans also provide deferred annuity augmentation.

The Minnesota and Oregon plans that have deferred annuities augmentation are defined benefit plans. Defined benefit plans utilize a fixed formula to determine pension benefit amounts (typically years of service multiplied by a percentage benefit accrual rate amount and applied to a final salary or final average salary base). Since the benefit is fixed or specified in law from the individual's salary and service, the variable element is the contributions needed to fund those benefits. Defined benefit plans are distinguished from defined contribution plans, such as the Higher Education Individual Retirement Account Plan (IRAP), Individual Retirement Accounts (IRAs), or Section 401(k) plans, where the fixed element is the level of contributions funding the plan, and the variable element is the benefit to be derived, which is dependent on the investment earnings over time on the stream of contributions and the age of the individual at retirement. When an individual covered by a defined contribution plan changes employment and thus is no longer eligible for the employer's plan, the value of the account will continue to increase over time due to investment earnings on the account. Thus, the eventual retirement annuity that can be supported by the account's value will increase. Deferred annuity augmentation in a defined benefit plan provides a somewhat comparable effect. The individual's deferred retirement annuity is not locked in amount at the time the individual leaves covered service. It continues to grow over time by the percentages specified in law.

Having deferred annuity augmentation in a defined benefit plans does add to plan cost. Because of the augmentation, the deferred annuitants receive higher benefits at the time of retirement than would be the case if the benefit were fixed at the time of termination of the covered employment.

b. Application in Service in More than One Plan Provisions. When deferred annuities augmentation was first added to various Minnesota plans in 1971, the record suggests that the Legislature wanted to add a tool to complement the service in more than one retirement plan provisions (Minnesota Statutes, Section 352.72 (MSRS-General); Minnesota Statutes, Section 353.71 (PERA); and Minnesota Statutes, Section 354.60 (TRA)), to make that portability provision more adequate. However, the Legislature did not restrict its use solely to that provision. Deferred annuity augmentation applied to all deferred annuities, including those where the service in more than one plan provisions do not apply.

The service in more than one plan provisions were early portability provisions, preceding the Combined Service Annuity provision, Minnesota Statutes, Section 356.30, which was enacted in 1975. The service in more than one plan provisions, which still exist in law, allow service with one of the plans covered by these provisions to be used for purposes of vesting in another covered plan. This was an important feature back in the 1970s and early 1980s because vesting normally required ten years of service. Without the service in more than one plan provisions, individuals who were job mobile, moving to various positions covered by various Minnesota public plans within different systems, might fail to vest in some of the plans due to the long vesting requirement. By allowing service in one fund to be used for purposes of vesting in another, the service in more than one plan provisions helped job mobile individuals to vest in the applicable plan or plans and made them eligible to receive benefits.

While this helped job mobile individuals to vest, these individuals still faced a problem. The value of the benefit from the early plans would erode considerably in value over time if the benefit was fixed at the time the individual left that service. Deferred annuities augmentation addressed that problem by allowing the annuity from the early plan or plans that provided coverage to increase over time, providing a benefit at retirement that was at least somewhat similar to what would have occurred if coverage had been provided by a single plan for the individual's entire public service.

To demonstrate, the following compares the total retirement annuity of a public employee with 30 years of public service under three different scenarios. Scenario A shows coverage by three different plans and without deferred annuity augmentation. Scenario B shows coverage by three different plans with deferred annuity augmentation. Scenario C shows coverage by one plan for all service. The individual is assumed to begin service in 1970 with TRA coverage, and the individual leaves that service after ten years with a high-five average salary of $22,500. The individual then moves to PERA-covered employment, having that coverage until 1990, with a high-five from that service of $33,100. The individual then moves to MSRS-covered employment, retiring in 2000 with a high-five of $46,660. Without deferred annuities augmentation, Scenario A, the sum of the three retirement annuities is $13,492 per year. Under Scenario B, deferred annuities augmentation is applied and it boosts the value of the TRA and PERA pensions, creating a total from the three plans of $17,117 per year. Under Scenario C, the individual spends all 30 years of employment under a single plan, the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General). The individual's pension is $23,796 per year. While deferred annuities augmentation does help, in this example it falls short of providing the same pension that would have occurred if all service had been under a single plan.

Scenario A		**Scenario B**		**Scenario C**	
Coverage by TRA, 1970-1980		Coverage by TRA, 1970-1980		Coverage by MSRS, 1970-2000	
Final Average Salary	$22,500	Final Average Salary	$22,500	Final Average Salary	$46,660
Annual Deferred Retirement Annuity	$2,250	Initial Annual Deferred Retirement Annuity	$2,250	Annual Retirement Annuity	$23,796.60
		Augmented Deferred Retirement Annuity	$4,503.60		
Coverage by PERA, 1980-1990		Coverage by PERA, 1980-1990			
Final Average Salary	$33,100	Final Average Salary	$33,100		
Annual Deferred Retirement Annuity	$3,310	Initial Annual Deferred Retirement Annuity	$3,310		
		Augmented Deferred Retirement Annuity	$4,682.00		
Coverage by MSRS, 1990-2000		Coverage by MSRS, 1990-2000			
Final Average Salary	$46,660	Final Average Salary	$46,660		
Annual Retirement Annuity	$7,932	Annual Retirement Annuity	$7,932		
Total Annual Annuity		Total Annual Annuity			
TRA Annuity	$2,250.00	TRA Annuity	$4,503.60		
PERA Annuity	$3,310.00	PERA Annuity	$4,682.00		
MSRS Annuity	$7,932.00	MSRS Annuity	$7,932.00		
Total	$13,492.00	Total	$17,117.60		

c. Combined Service Annuity Provision. Service in more than one fund provisions are less used now than in the distant past. In 1975, the Legislature enacted the Combined Service Annuities law, Section 356.30, which was an improvement in many cases over the service in more than one fund provisions. The Combined Service Annuities law applies to those Minnesota public defined benefit plans which base annuities on the high-five average salary. Local police or paid fire plans are not included under the Combined Service Annuities provision because those plans base their annuities on the salary of a certain position, usually a top grade patrol officer or firefighter. The Combined Service Annuities calculation begins by determining the high-five average salary of the individual, which could include service under more than one employer, and that common high-five average salary is then used to compute the annuities from all the plans included in the calculation. Thus, the salary used to compute the annuities from the earlier plan or plans may be much higher than the salary the individual was receiving before terminating that earlier employment. The benefit computed from each of the applicable plans is determined using the most recent version of law, thus allowing the individual to access any benefit improvements that occurred in the earlier plans after the individual left service covered by the applicable plan. The individual must begin drawing annuities from all the plans included in the person's Combined Service Annuities benefit calculation within a one-year period. The use of Combined Service Annuities is in lieu of deferred annuities augmentation from the earlier covered plans.

Some individuals have service in more than one of the plans covered by the Combined Service Annuities law, but choose not to use that provision. In these cases, deferred annuity augmentation would apply if the plan has an applicable provision. This can occur in cases where the normal retirement ages in the plans that provided coverage to the individual are very different. If an individual age 55 had prior Public Employees Police and Fire Plan (PERA-P&F) coverage (a plan with normal retirement age of 55), and the individual is now covered by the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General) (which has an age of 65 or 66 normal retirement age), the individual may be reluctant to leave current employment in order to use the Combined Service Annuities provision. The individual would face a stiff early retirement penalty from the MSRS plan if he begins drawing an MSRS annuity at age 55. Instead, the individual may choose to draw the PERA-P&F annuity, including any deferred annuity augmentation on that benefit, and continue working in MSRS-General covered employment.

Thus, at the current time, deferred annuities augmentation is used by individuals who could be covered by the Combined Service Annuities but choose not to use that provision, by individuals moving among Minnesota public plans not all of which are included in the Combined Service Annuities law, and by individuals who move from public to private sector employment.

d. Actuary Commentary from 1978, on Augmentation Provisions. Dr. Franklin C. Smith, an actuary who provided advice to the Commission during the 1970s, in 1978 noted that following the addition of the Combined Service Annuities provision in 1975, deferred annuities augmentation provisions were no longer of much use to individuals who move to different positions within the public sector. Its main value is to assist those who move to non-public employment. Since protecting that group had not been stated as a priority by the Legislature, he suggested that the Legislature consider repealing augmentation provisions. The Legislature did not act on the suggestion of Dr. Smith.

e. Deferred Annuities Augmentation Provisions, as Amended Over Time. Deferred annuities augmentation was initially provided in 1971 (Laws 1971, Chapter 87, Section 1; Chapter 274, Section 3; and Chapter 412, Section 5). The 1971 legislation specified that deferred annuities will augment at the same rate as the investment earnings assumption used by the plan. The level of deferred annuities augmentation therefore changed as the investment return assumption was revised. That assumption was 3.5 percent in 1971, but was revised in 1973 (Laws 1973, Chapter 653, Section 45) to five percent and was added to the Minneapolis Employees Retirement Fund (Laws 1973, Chapter 770, Section 11).

Deferred annuity augmentation provisions were revised again by the 1978 Legislature (Laws 1978, Chapter 796, Sections 6, 10, 15, 40, 43, and 45), which amended the deferred annuity augmentation provisions by removing the tie of the augmentation rate to the investment return assumption, and instead set the augmentation rate at three percent per year after January 1, 1981. By using a January 1, 1981, effective date on the deferred annuities augmentation provision, the 1978 Legislature provided a few years of lead time on the benefit reduction.

The 1989 Legislature (Laws 1989, Chapter 319, Article 13, Sections 17, 47, and 69) again revised the provisions, this time enhancing the deferred augmentation provisions by increasing augmentation after age 55 and was added for the first class city teacher retirement fund associations (Laws 1989, Chapter 319, Art. 13, Section 86). As revised in 1989, the provisions provided three percent per year augmentation until the first of the year after the individual turns age 55, and five percent annually thereafter. The 1989 revisions were part of a major benefit increase bill which in part increased the accrual rates in many plans, created subsidized joint-and-survivor annuities, and enhanced the deferred annuity augmentation provisions.

In 2006 (Laws 2006, Chapter 277, Article 2), the deferred annuities augmentation rate as set by the 1989 Legislature was limited to public employees hired before July 1, 2006, and the deferred annuities augmentation rate for post-June 30, 2006, public employees was set at a flat 2.5 percent for all ages during the deferral period.

f. Plans with Deferred Annuity Augmentation Provisions

The deferred annuity augmentation provisions in law for pre-July 1, 2006, employees are:

- Minnesota Statutes, Section 3A.02, Subdivision 4. Applies to the Legislators Retirement Plan and is substantively identical to the PERA/PERA-P&F provision (Minnesota Statutes, Section 353.741, Subdivision 2).
- Minnesota Statutes, Section 352.72, Subdivision 2. Applies to MSRS-General and MSRS-Correctional, and is substantively identical to the PERA/PERA-P&F provision.

- Minnesota Statutes, Section 352B.30, Subdivision 2. Applies to the State Patrol Retirement Plan, and provides three percent augmentation per year until age 55, which is the normal retirement age for the plan. The State Patrol Retirement Plan and PERA-P&F, which are nearly identical plans, have slightly different deferred annuity augmentation treatments specified in law. The State Patrol Plan provides three percent annual augmentation to age 55, but no augmentation after that age. This may cause no difference in practice, though, because the normal retirement age for this plan and for PERA-P&F is age 55.
- Minnesota Statutes, Section 352C.033. This provision is substantively identical to that found in PERA law and applies to the Elected State Officers Plan.
- Minnesota Statutes, Section 353.71, Subdivision 2. This is the PERA/PERA-P&F provision, which provides three percent augmentation per year until the year in which the individual turns age 55, and five percent per year thereafter. The provision was probably also meant to apply to PERA-Correctional members, although the applicable law is somewhat unclear.
- Minnesota Statutes, Section 354.55, Subdivision 11. This is the TRA provision, which is substantively identical to the PERA/PERA-P&F provision.
- Minnesota Statutes, Section 354A.37, Subdivision 2. This is the first class city teacher provision, which is substantively identical to the PERA/PERA-P&F provision.
- Minnesota Statutes, Section 422A.16, Subdivision 10. This is the MERF provision, providing three percent augmentation per year.
- Minnesota Statutes, Chapter 490. The Judges Retirement Plan has no deferred annuities augmentation provision. That may reflect an assumption that Judges will continue in office until retirement.

The deferred annuity augmentation provisions in law applicable to post-June 30, 2006, employees are the same as set forth above, except that the augmentation rate for all ages is 2.5 percent.

Attachment E

Background Information on Pension Plan Coverage, Benefit Eligibility, Vesting Requirements, and the Probability of Benefit Receipt at or After Age 59

Pension Plan Coverage, Benefit Eligibility

The three statewide public employee pension plans, the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the Public Employees Retirement Association (PERA), and the Teachers Retirement Association (TRA), provide pension coverage to most, but not all, public employees within the potential membership group of each.

In MSRS-General, pension plan coverage is generally provided to employees of the state, the University of Minnesota, and employees of metropolitan agencies. However, there are 35 exceptions to MSRS-General coverage, including irregular employees, employees with other pension coverage, or short duration employees. In PERA, pension plan coverage is generally provided to county, city, township, and non-certificated (non-teaching) school district employees. There are however, 20 exceptions to PERA coverage, principally including professional service providers, short-duration employees, low-paid employees, employees with other pension coverage, and full-time employees. In TRA, pension plan coverage is provided to certificated (teaching) school district employees and pre-1988 state university or community college teaching personnel. There are eight exceptions to TRA coverage, principally independent contractors, University of Minnesota faculty, post-1987 state university or community college teaching personnel, and teachers with other pension coverage.

Vesting Requirements

The three statewide public employee pension plans require relatively short service in order to become eligible for a retirement annuity referred to as vesting. Before 1987, ten years of service was typically required for a public employee covered by MSRS, PERA or TRA in order to vest for a retirement annuity. In 1987, the service requirement to obtain a vested retirement annuity was reduced from ten years to five years. In 1989, the vesting service requirement was further reduced to three years of service credit in MSRS, PERA or TRA.

Probability of Public Employee Retirement Benefit Receipt

In attempting to assess the likelihood of public employees ultimately receiving benefits from one of the three major statewide general employee pension plans without having access to the files of the plans, the Commission staff has utilized the withdrawal rate actuarial assumption for each of the plans in the early 1990s to estimate the percentage of public employees entering at various ages who will remain covered by the plan at age 59.

The actuarial assumptions as to the probability of withdrawal are broadly indicative of likely actual turnover. As with other actuarial assumptions, the withdrawal actuarial assumption is monitored in periodic experience studies. The 1989 experience study, in comparing the actual numbers of withdrawing participants to the expected number of withdrawing members under the applicable assumption, indicated that the MSRS and PERA somewhat overestimated turnover. The MSRS withdrawal assumption predicted 93.27 percent of the actual three year period turnover for males, 126.72 percent for females, and 115.59 percent for the entire group. The PERA withdrawal assumption was less accurate in its predictions, in that it predicted 128.53 percent of the actual three year period turnover for males, 162.63 percent for females, and 152.82 percent for the entire group. Based on the 1989 experience study, the TRA withdrawal actuarial assumption was modified to make it more accurate in reflecting recent experience. The TRA withdrawal actuarial assumption adopted in 1990 would have predicted 107 percent of the actual 1986-1989 turnover for the entire group if it had been applicable.

Based on the current withdrawal actuarial assumptions for MSRS, PERA, and TRA, the percentage of plan members entering public service and plan membership at various ages who would be expected not to withdraw from public employment and plan membership and would be expected to remain members at age 59, an age approaching the usual period for retirement, is as follows:

	MSRS		PERA		TRA	
Entrance Age	Male	Female	Male	Female	Male	Female
Age 25	11.4%	1.41%	11.93%	3.95%	40.05%	40.05%
Age 30	23.61	6.34	24.01	10.04	54.46	54.46
Age 35	37.77	17.40	41.16	21.83	71.17	71.17
Age 40	52.57	32.95	56.09	35.18	84.26	84.26
Age 45	67.23	49.74	70.75	51.30	92.50	92.50
Age 50	81.26	66.42	79.22	62.09	98.01	98.01

The calculated likelihood a public pension plan member reaching the threshold of the retirement period presents a useful analysis, but underestimates the likelihood of the receipt of any benefit from public pension plan membership to some unmeasurable degree. The reasons for the underestimate, which should caution against conclusions solely on the basis of the table presented above, are as follows:

1. Withdrawal Assumption Overestimates Turnover to Some Degree. The MSRS, PERA and TRA withdrawal actuarial assumptions likely overestimate turnover to some degree, based on the 1989 experience study. The TRA withdrawal assumption, reset in 1990, appears to have the least overestimate of turnover (seven percent over prediction), with MSRS and PERA reflecting greater overestimates (15.6 percent and 52.8 percent respectively). Thus, the table is a broadly indicative indirect way of measuring the phenomenon, but does not represent exact measures.

2. Turnover May Be From Public Pension Plan A to Public Pension Plan B. The MSRS, PERA and TRA withdrawal actuarial assumptions are fund specific, meaning that no differentiation in the assumption is made between public pension plan members who terminate membership in favor of future non-Minnesota public employment and members who terminate membership in one plan only to gain membership in another Minnesota public pension plan. Those persons will eventually draw benefits from the two Minnesota public pension plans under the Combined Service Annuity, Minnesota Statutes, Section 356.30, even though the pension systems themselves may not be aware of the multiple Minnesota public pension plan service. The actuary retained by the Commission, Thomas Custis of the actuarial firm of Milliman & Robertson, is planning to develop a Combined Service Annuity utilization actuarial valuation assumption to incorporate the liability and funding costs for that benefit as part of the upcoming 1993 Experience Study. However, a Combined Service Annuity utilization actuarial assumption would offset a portion of the impact of the withdrawal actuarial assumption rather than refining the withdrawal actuarial assumption.

3. Withdrawal Assumption Does Not Differentiate Between Refund Recipients and Deferred Annuitants. Pension plan members who leave the pension system before reaching the retirement age period can either take a refund of their accumulated member contributions, plus interest, or have their contributions and eventually receive a deferred (augmented) retirement annuity. The MSRS, PERA, and TRA withdrawal actuarial assumptions, by themselves, do not differentiate between the two scenarios. The total actuarial process, including the assumptions, does differentiate between the two in calculating liabilities and funding costs, but that cannot be reflected in the Commission staff estimates summarized here. A refund recipient provides a substantial gain to the system usually, by leaving the accumulated employer contribution and interest in the pension plan after the refund, while a deferred retiree provides a more modest gain to the system, based on the margin by which the interest actuarial assumption rate exceeds the deferred annuity augmentation rate.

4. Estimated Turnover Does Not Account For Refund Repayments. Pension plan members who withdraw from plan membership before retirement and subsequently return to any public service and public pension plan membership are permitted under current law to repay that prior refund and reinstate their service credit and benefit coverage. The MSRS, PERA and TRA turnover assumptions do not include any allowance for refund repayers, who would ultimately benefit from their earlier pension plan membership even though they withdraw from public pension plan membership sometime mid-career.

   Two potentially interesting conclusions can be drawn from the Commission staff's calculated likelihood of continuation by the plan member to age 59.

   The first potentially interesting conclusion is the very low number of probable beneficiaries of public pension coverage at early entry ages (ages 25, 30, and 35), especially among female MSRS and PERA members. Since the MSRS withdrawal actuarial assumption appears to provide the least overestimate of turnover, the MSRS early entrant age female member results are particularly troubling. While high turnover among younger plan members can be expected as a demographic phenomenon, the disparity between male and female results are particularly pronounced in MSRS. Since the pension plan membership primarily reflects the personnel system of covered employing units, rather than operating independently, the obvious conclusion is that there is something about state employment that does not well suit young females or that there is some self-selecting characteristic about young females recruited into state employment that leads to exceptionally high turnover rates.

   The second potentially interesting conclusion is the difference in probable beneficiary results between plans, especially TRA as compared to MSRS and PERA. An age 25 new TRA member, male or female, has a greater likelihood of being a plan member at age 59 than an entry age 35 new male MSRS member, an entry age 40 new female MSRS member, an entry age 30 new male PERA member, or an entry age 40 new female PERA member. TRA has a higher normal cost for its benefit plan than MSRS or PERA, even though the benefit plan provisions of the three are virtually identical. A major factor in explaining that higher TRA normal cost (9.73% for TRA, as compared to 6.58% for MSRS and 6.91% for PERA) is undoubtedly the lack of high early entry age turnover, which produces an actuarial gain that ultimately finances the benefits paid to long duration pension plan members.

Background Information on Early Retirement Reductions

Early Retirement Reductions

1. Definition. An "early retirement reduction" is the factor or calculation procedure that governs the determination of the amount of a retirement annuity that commences at an age younger than the normal retirement age.

2. Commission Principles of Pension Policy Provision. Principle II.C.5 of the Principles of Pension Policy of the Legislative Commission on Pensions and Retirement indicates that Minnesota public pension plans should not subsidize early retirement benefits and that, unless it is a part of an appropriately designed early retirement incentive, the early retirement reduction should be calculated on an actuarial equivalent basis.

   Specifically, the applicable principle states:

   > II.C.5. Appropriate Early Retirement Reductions
   >
   > Public employee pension plans should not subsidize early retirement benefits and, except for appropriately designed early retirement incentive programs, retirement benefits should be actuarially reduced for retirement before any applicable normal retirement age.

   The current set of principles, last revisited by the Commission in 1996-1996, in this particular principle, indicates that early retirement should not be subsidized by the public pension plan other than as part of an appropriately designed early retirement incentive and that early retirement benefits should be actuarially reduced. The 1995-1996 principle was a slight modification of the 1980 principles, which indicated that retirement benefits should be reduced on an actuarially equivalent basis for retirement at an age earlier than the normal retirement age, except for retirement by long service employees at age 62 with 30 years of service credit. That long service early retirement eligibility was first authorized by the Legislature in 1973.

   Legislative changes since 1996 have been potentially at variance with the principle to some degree with respect to the State Patrol Retirement Plan, the Correctional State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-Correctional), and the Public Employees Police and Fire Retirement Plan (PERA-P&F). In 1997, the actuarial equivalent early (pre-age 55) retirement reduction for the State Patrol Retirement Plan was replaced by a subsidized reduction factor (Laws 1997, Chapter 233, Article 1, Section 32). In 1999, for the State Patrol Retirement Plan, the MSRS State Correctional Employees Retirement Plan (MSRS-Correctional), and the PERA Police and Fire Retirement Plan (PERA-P&F), the early (pre-age 55) retirement reduction was subsidized, with the MSRS-Correctional reduction factor changed from an actuarial equivalency reduction and with the State Patrol Retirement Plan and PERA-P&F reduction factor both further subsidized (Laws 1999, Chapter 222, Articles 13, Section 5, and 14, Sections 1 and 3). The State Patrol Retirement Plan and PERA-P&F reduction factors are very slight after the 1997 and 1999 changes, making the early retirement annuity amount almost identical to the normal retirement annuity amount.

3. Policy Considerations Respecting Early Retirement Reductions. A defined benefit retirement plan is intended to provide the greatest benefit value to its members (and to incur its greatest actuarial accrued liability) at the normal retirement age. The use of actuarial equivalent early retirement reduction factors is intended to provide access to a benefit at an earlier age and, presumably, for a corresponding longer period of time of receipt without increasing that pension value for the retiree and the corresponding actuarial accrued liability for the retirement plan.

   Minnesota public pension plans currently do not uniformly and rigorously require actuarial equivalent early retirement reduction factors, thereby generally subsidizing early retirement by actually providing the governmental employee retiring before the normal retirement age with a somewhat greater pension value (and imposing on the pension plan a greater actuarial accrued liability) than would occur at the normal retirement age. The 1997 and 1999 public safety employee retirement plan early retirement reduction factor legislation furthers that subsidization for those plans. The following identifies the various Minnesota public retirement plan early retirement reduction rates currently imposed:

   a. Reduction Method: Actuarial equivalent value of annuity deferred to the normal retirement age and augmented at three percent per year of imputed deferral.

Plans Involved:

- MSRS General State Employees Retirement Plan (MSRS-General) level benefit tier
- PERA General Employees Retirement Plan (PERA-General) level benefit tier
- Teachers Retirement Association (TRA) level benefit tier
- Duluth Teachers Retirement Fund Association (DTRFA) Old Law or New Law Plan level benefit tier
- St. Paul Teachers Retirement Fund Association (SPTRFA) Basic or Coordinated Program level benefit tier
- Legislators Retirement Plan

b. Reduction Method: One-half of one percent per month (six percent per year) that the retiree is under the normal retirement age.

Plans Involved:

- Elective State Officers Retirement Plan
- Judges Retirement Plan

c. Reduction Method: One-quarter of one percent per month (three percent per year) that the retiree is under the normal retirement age.

Plans Involved:

- MSRS-General Rule of 90 tier
- PERA-General Rule of 90 tier
- TRA Rule of 90 tier
- DTRFA Old Law or New Law Plan Rule of 90 tier
- MTRFA Basic or Coordinated Program Rule of 90 tier
- SPTRFA Basic or Coordinated Program Rule of 90 tier

d. Reduction Method: Two-tenths of one percent per month (2.4 percent per year) that the retiree is under age 55.

Plan Involved:

- Correctional State Employees Retirement Plan (MSRS-Correctional)

e. Reduction Method: One-tenth of one percent per month (1.2 percent per year) that the retiree is under age 55.

Plans Involved:

- State Patrol Retirement Plan
- Public Employees Police and Fire Retirement Plan (PERA-P&F)

f. Reduction Method: Defined contribution plan (two dollar bill and annuity) benefit for early retirement.

Plan Involved:

- Minneapolis Employees Retirement Fund (MERF)

The wide variety of the reductions imposed by the various retirement plans and the extent of the subsidizations provided calls adherence to the current Commission policy principle into question.

Background Information on Benefit Accrual Rates

1. Definition. "Benefit accrual rate" is the percentage of final salary or final average salary amount per year of covered (allowable) service, unit value per year of covered service, or the dollar multiple amount per year of covered service used in the retirement annuity or retirement benefit calculation in a defined benefit retirement plan. The benefit accrual rate is sometimes known as the "formula multiplier." The term does not apply to defined contribution retirement plans.

2. Commission Principles of Pension Policy Provision. The Principles of Pension Policy of the Legislative Commission on Pensions and Retirement does not address the subject specifically, but does address the topic based on the role that the benefit accrual rates play in the provision of ultimate retirement annuities or benefits. The Commission's principles provide that there should be equal treatment within pension plans (Principle II.C.3), that there should be equal uniformity and equal treatment among pension plans (Principle II.C.6), and that there should be adequate benefits at the time of retirement (Principle II.C.7).

   Specifically, the applicable policy principles provide:

   II.C.3. Equal Treatment Within Pension Plans

   There should be equal pension treatment of public employees in terms of the relationship between benefits and contributions.

   II.C.6. Uniformity and Equal Benefit Treatment Among Plans

   There should be equal pension treatment in terms of the relationship between benefits and contributions among the various plans and, as nearly as practicable, within the confines of plan demographics, retirement benefits and member contributions should be uniform.

   II.C.7. Adequacy of Benefits at Retirement

   a. Benefit adequacy requires that retirement benefits respond to changes in the economy.

   b. The retirement benefit should be adequate at the time of retirement.

   c. Except for local police or firefighter relief associations, the retirement benefit should be related to an individual's final average salary, determined on the basis of the highest five successive years' average salary unless a different averaging period is designated by the Legislature.

   d. Except for local police or firefighter relief associations, the measure of retirement benefit adequacy should be at a minimum of thirty years ser-vice, which would be a reasonable public employment career, and at the generally applicable normal retirement age.

   e. Retirement benefit adequacy must be a function of the Minnesota public pension plan benefit and any Social Security benefit payable on account of Minnesota public employment.

   The equal treatment within pension plans and the uniformity/equal benefit treatment among pension plans principles have been part of the Commission's principles since the Commission first adopted and articulated the Principles of Pension Policy in 1961. The equal treatment and uniformity principles appear to have their foundation in funding concerns, the principal orientation of the Commission since its creation as an interim commission in 1955, and appear to be an attempt to avoid "extra" publicly financed retirement benefits, to avoid discontent between groups of public employees, and to avoid demands for similar extra treatment because some members receive a better return on their contribution dollar than others and because differentials disrupt pension financing. In their purest sense, the principles would argue for identical benefit accrual rates for identical or similarly situated public employee groups.

   The adequacy of benefits at retirement principle generally suggests that normal retirement benefits should respond to economic changes, should be adequate as of retirement, measured on the basis of the retiree's final salary, with 30 years of service as a reasonable public employment career, at the normal retirement age, and should reflect any Social Security benefit earned during public employment in providing total retirement income.

3. Policy Considerations Respecting Benefit Accrual Rates. The 1995-1996 Principles of Pension Policy essentially continue the 1980 Principles that provide that the retirement benefit provided by a Minnesota public pension plan should be adequate during the period of retirement and that benefit adequacy at the time of retirement should be measured for an employee at age 65 with 30 years of service credit. A principal factor, but not the sole factor, in determining an adequate retirement benefit is the benefit accrual rate or rates that apply.

The Commission principles indicate that the Minnesota public pension plans only have an obligation to provide an adequate retirement benefit for career public employees who retire at the normal retirement age and, consequently, do not have an obligation to provide a fully adequate pension benefit to public employees who retire at an earlier age or who retire with less than a full public service career. The Principles indicate that retirement benefit adequacy should be determined on the basis of the person's highest five successive years' average salary and should be measured at the generally applicable normal retirement age with 30 years of service credit. The Principles also indicate that retirement benefit adequacy must be a function of the public pension plan retirement benefit and Social Security benefits earned during public employment.

If pre-retirement income replacement rates are a well-designed measure of benefit adequacy, a replacement ratio target for a 30-years-of-service public employee at the normal retirement age provides a mechanism for determining the appropriate benefit accrual rate or rates.

In 1980-1981, the President's Commission on Pension Policy addressed the question of benefit adequacy, indicating that the replacement of pre-retirement disposable income from all sources is a desirable retirement income goal. That panel indicated that the precise replacement of pre-retirement disposable income was too difficult to quantify, but that a reliable rough sense of the rates for the replacement of gross immediate pre-retirement income can be identified, as follows:

Gross Pre-Retirement	Single Person Replacement of Gross Pre-Retirement Income		Married Couple Replacement of Gross Pre-Retirement Income	
Income	As $ amount	As %	As $ amount	As %
$ 6,500	$ 5,167	79%	$ 5,567	86%
10,000	7,272	73	7,786	78
15,000	9,941	66	10,684	71
20,000	12,282	61	13,185	66
30,000	17,391	58	18,062	60
50,000	25,675	51	27,384	55

Derived from Tables 19 and 20 of Coming of Age: Toward a National Retirement Income Policy, Report of the President's Commission on Pension Policy, prepared by Preston C. Bassett, Consulting Actuary (1980).

More recently, addressing the same question of the replacement percentage of pre-retirement earnings, the National Retirement Income Policy Committee of the American Society of Pension Actuaries, in a 1994 study, recommended that income during retirement from a combination of defined benefit plans, defined contribution plans, and Social Security should provide between 70 percent and 80 percent of pre-retirement earnings.

As part of research published in 1993 for the American Society of Pension Actuaries, a target pre-retirement income replacement ratio was suggested of combining two parts, one part 85 percent of the final year's rate of pay up to an amount equal to 300 percent of the poverty rate and the other part 70 percent of the final year's rate of pay in excess of an amount equal to 300 percent of the poverty rate. Translating the 1993 American Society of Pension Actuaries suggested replacement ratio into a comparable table to that of the 1980-1981 President's Commission on Pension Policy provides the following table:

Gross Pre-Retirement Income	Single Person Replacement of Gross Pre-Retirement Income		Married Couple Replacement of Gross Pre-Retirement Income	
	As $ amount	As %	As $ amount	As %
$ 30,000	$25,000.00	84.0%	$ 25,500.00	85.0%
50,000	39,189.50	78.4	40,620.50	81.2
70,000	53,189.50	76.0	54,620.50	78.0
90,000	67,189.50	74.7	68,620.50	76.2
150,000	109,189.50	72.8	110,620.50	73.7
200,000	144,189.50	72.1	145,620.50	72.8
250,000	179,189.50	71.7	180,620.50	72.2

In 1997, Flora L. Williams and Helen Zhou of Purdue University and Deloitte & Touche LLP, respectively, in "Income and Expenditures in Two Phases of Retirement," surveyed the basis for generalization in the literature about replacement ratio goals and compared three other research reports, as follows:

Replacement Rate Percentages

Pre-Retirement Income	*Employee Benefit Plan Review* Report (1990)	Alexander & Alexander Consulting Group Report (1993)	Bruce A. Palmer, Ph.D. Georgia State University Report (1989)
$15,000	78%	82%	82%
20,000	71	76	
25,000	65		71
35,000	55		
40,000		71	68
45,000	50		
55,000	46		
60,000		72	66
80,000		76	68

Note: *While not specifically disclosed in the paper, the results appear to relate to a single individual rather than to a couple.*

In 1998, Glenn Cooper and Peter Scherer, in the Organization for Economic Cooperation and Development article "Can We Afford to Grow Old," compare replacement ratios in total and replacement ratios for Social Security-akin programs across various countries, concluding that the replacement target for couples in the United States ranges between 70 percent and 90 percent of the pre-retirement income level.

In 1999, the National Endowment for Financial Education, adapting the work of Kenn Tacchino and Cynthia Saltzman, professors at Widener College, suggesting that retiree expenses decrease as retirees get older and that a blended income replacement rate is appropriate, and where an 80 percent replacement rate at retirement translates to a 69.3 percent replacement rate if the retiree lives for 30 years after retirement.

In 2003, Karen Ellers Lahey, Doseong Kim, and Melinda L. Newman, in "Household Income, Asset Allocation, and the Retirement Decision" in the Financial Services Review conclude that the applicable literature on the retirement income replacement target indicates a result between 70 percent and 90 percent.

In 2004, the California State Teachers Retirement System (CalSTRS) conducted a study of the necessary replacement ratio for its retirees, concluding that a range of between 81 percent and 88 percent of pre-retirement income is necessary if the former employer provides the same health care insurance funding to retirees as provided to current employees and a higher percentage replacement if the former employer does not provide the same level of health care insurance funding for retirees.

Also in 2004, Aon Consulting and Georgia State University released its sixth update of a study of retirement income needs for a retired couple, with an age 65 wage earner and an age 62 spouse. The following compares the 2004 results with the Aon Consulting/Georgia State University 2001 results:

Pre-Retirement Income Level	2001 Replacement Ratio	2004 Replacement Ratio
$20,000	83%	89%
30,000	78	84
40,000	76	80
50,000	74	77
60,000	75	75
70,000	75	76
80,000	75	77
90,000	76	78
150,000	85	85
200,000	86	88
250,000	87	88

Source: Replacement Ratio Study: A Measurement Tool for Retirement Planning.

In 2005, John E. Bartel of Bartel Associates LLC, conducted a replacement ratio study presentation for the League of California Cities that summarized the results of a 2001 California Public Employee Retirement System (CalPERS) target replacement ratio study, summarized the 2004 Aon/Georgia State University replacement ratio study and compared the two for both general California employees and public safety California employees. The CalPERS replacement ratio study indicated a range of ratios (with and without Social Security and public safety), as follows:

Pre-Retirement Income Level	Target Replacement Ratio Range	With Social Security Actual Replacement Ratio Range	Without Social Security Actual Replacement Ratio Range
$ 30,000	73-81%	95-107%	70-81%
40,000	67-75	90-100	68-75
50,000	64-71	86-95	66-71
60,000	61-73	80-89	65-70
70,000	57-65	75-83	64-68
80,000	56-63	70-80	63-67
90,000	55-62	66-78	62-66

The Bartel analysis concludes that for CalPERS plans without Social Security coverage, the actual replacement ratio is a close match to the CalPERS target, but falls below the 2004 Aon/Georgia State University study replacement result for general employees and is a close match for public safety employees, and that for CalPERS plans with Social Security coverage, the actual replacement ratio significantly exceeds the CalPERS target, but is a close match to the 2004 Aon/Georgia State University study replacement result for general employees and greatly exceeds the Aon/Georgia State University study replacement result for public safety employees. The CalPERS study and the Bartel analysis looked only at the Social Security benefit derived from public employment, if any, and the public pension plan coverage, without any benefit derived from personal savings and investments.

Although the replacement ratio approach is simple and is relatively easy to translate into a benefit accrual rate or rates, it is not the only way to measure adequacy at the time of retirement and does not necessarily address the relationship between retirement age benefit adequacy and retirement benefit adequacy needs after retirement.

All of the replacement ratio results summarized above suggest that the target or appropriate ratio differs over the range of compensation, generally with the highest replacement ratio being at the lowest compensation portion of the range, differs based on age, and differs based on marital status. These differences are largely based on features of the Social Security program, which is part of virtually all private sector retirement benefit coverage and which is generally applicable to public sector retirement benefit coverage. Social Security, created in the depths of the Great Depression of the early 1930s, attempted to eliminate old people as the greatest segment of the population in poverty by providing older workers and their spouses with a subsistence income.

While Social Security attempts to provide a subsistence income safety net, the purest rendition of a pre-retirement income replacement ratio represents an attempt to maintain the pre-retirement standard of living. While the Minnesota Legislative Commission on Pensions and Retirement has not specifically articulated its retirement benefit adequacy goal, in practice, the Commission's goal has been to provide a reasonable margin above subsistence that, combined with personal savings or other investments, would allow the retired individual or couple to retain a reasonable standard of living in retirement after completing a normal working career.

The President's Commission on Pension Policy also attempted to provide a sense of the relative role of the three sources of retirement income in providing an adequate benefit in the form of the replacement of pre-retirement disposable income. The three sources of retirement income are Social Security, employee pension coverage, and personal savings and investments. That panel's 1981 report included a chart that attempted to provide a general sense of the relative contribution to an adequate retirement benefit that should be made from the three sources, as follows:

Relative Contribution to an Adequate Retirement Benefit
from Various Sources of Retirement Income

Gross Pre-Retirement Income	Social Security	Employee Pension Plan	Personal Savings and Investments
$15,000	58%	42%	0%
20,000	54	46	0
25,000	54	46	0
30,000	52	44	4
35,000	49	44	7
40,000	46	46	8
45,000	43	47	10
50,000	42	46	12
55,000	40	45	15
60,000	39	41	20

Derived from Chart 7 of Coming of Age: Toward a National Retirement Income Policy, Report of the President's Commission on Pension Policy (1981)

The table reflects the weighting of benefit coverage in favor of the lower compensated employees present in Social Security and reflects a policy decision that personal savings should provide an ever greater proportion of total retirement income at higher compensation levels. The table also reflects an ever-reducing replacement percentage required as gross income increases.

The pre-retirement replacement ratio model of retirement benefit adequacy also has been challenged by commentators based on a more differentiated or nuanced view of income needs during retirement. The replacement ratio model assumes that the need for retirement income is unchanged during retirement, requiring only that the cost of living be replaced or substantially replaced. Some commentators have applied the life cycle hypothesis of consumption levels In 1997, in "Income and Expenditures in Two Phases of Retirement," Flora L. Williams and Helen Zhou reviewed the empirical bases for the "common guideline" of a 70 percent pre-retirement income replacement ratio, finding that there was little empirical evidence to support that guideline, and reviewed consumption pattern surveys for periods ages 45-75 and over, identifying two retirement phases (phase 1: ages 65-74 and phase 2: ages 75 and over) with decidedly different expenditure levels. In 2005, in "Age Bonding: A Model for Planning Retirement Needs," Somnath Basu suggests that expenditure patterns need to be analyzed for the 30-year period that a retiree is likely to receive benefits, looking at each of the three decades, and finds that leisure expenses are initially high and decline over the retirement period, that health care expenses initially rival leisure expenditures and grow significantly over the retirement period, that basic living expenses are initially the greatest portion of expenditures and halve over the retirement period, and that taxes are initially the second greatest expenditure item and remain relatively constant over the retirement period. In 2006, in "Change in Retirement Adequacy, 1995-2001: Accounting for Stages of Retirement," Chen-Chung Chen and Sherman D. Hanna criticize prior retirement adequacy studies has having ignored the complexities of retirement stages and suggest multiple stages, which is any period during retirement when real income is constant. In Spring 2006, the Society of Actuaries issued a call for papers on the topic of retirement spending and changing needs during the retirement period, indicating that the prior uniform pre-retirement income replacement model fails to recognize early retirement, post-retirement employment during the initial retirement period, the payment of lump sum retirement benefits, and the general elimination of early retirement subsidies, especially health care insurance coverage. The Society of Actuaries will review submitted papers, present the papers at a conference in May 2007, and then publish the papers later in 2007.

Attachment H

Background Information on the Actuarial Value of Public Pension Plan Assets

Since the actuarial valuation of assets determination procedure was initially codified in 1965, with the initial codification of public pension plan financial and actuarial reporting requirements, Minnesota public pension plans have utilized two different ways to establish the value of assets for determining the existence of and the size of unfunded actuarial accrued liabilities.

From 1965 to 1983, Minnesota Statutes, Sections 356.20 and 356.215, required that pension plan assets at book value be used in making a comparison of plan assets with plan liabilities. Book value is the generally initial purchase price of the investment security or other marketable asset. For bonds (debt instruments), the investment value was at amortized cost. For stocks (equity investments), the investment value was at cost. For equipment, the investment was at cost less any accrued depreciation. For real estate, the statute was unclear.

In 1984, at the initiation of the Department of Finance, among various actuarial assumption and actuarial method changes, the actuarial value of assets determination procedure changed. The method defined the actuarial value of assets as the cost value of investments plus one-third of the difference between the cost value of investments and the market value of investments. The proposal for the actuarial value of assets determination procedure change was generated external to the Commission, and the rationale for the change is not well reflected in Commission staff files for Laws 1984, Chapter 564. The change, however, clearly was an attempt to capture some of the stock and bond market appreciation that had occurred in the late 1970s and early 1980s and to have the actuarial value of assets more closely reflect market value than the prior book value definition of the actuarial value of assets.

In 2000 (Laws 2000, Chapter 461, Article 1, Section 3), at the recommendation of the consulting actuarial firm retained by the Legislative Commission on Pensions and Retirement under Minnesota Statutes, Section 3.85, Milliman & Robertson, Inc., the actuarial value of assets determination procedure changed again. The actuarial value of assets, termed "current assets," is the market value of assets as of the end of the fiscal year reduced by a percentage of the difference between the actuarial net return on the market value of assets and the asset return expected during the fiscal year based on the interest rate assumption determined at the close of each of four preceding fiscal years. The percentage reduction is ten percent for the least recent applicable year, 40 percent for the next least recent applicable year, 60 percent for the year two years previous, and 80 percent for the immediate prior year. The recommendation from the Commission's retained actuary, as represented by testimony from the actuary before the Commission, was intended to bring the value of assets closer to market value while using a smoothing device that would minimize or eliminate short-term market volatility.

The following compares the pre-1984 asset valuation determination procedure, the post-1984/pre-2000 asset valuation determination procedure and the current asset valuation determination procedure for a representative statewide retirement plan, the Teachers Retirement Association (TRA), and a representative local retirement plan, the St. Paul Teachers Retirement Fund Association (SPTRFA), for the fiscal year ending on June 30, 2006:

Teachers Retirement Association (TRA)

	Pre-1984 Method	**Post-1984/Pre-2000 Method**	**Current Method**
Summary	Book or cost value of investment securities.	Cost value of investment securities plus one-third of the difference between the cost value and the market value of the investment securities.	Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets at the asset return expected during that fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year).
Result	$19,649,139,143	$19,694,665,406	$19,035,611,839
Calculation	Book Value $19,649,139,143	Market Value $19,785,671,584 Book Value $19,649,139,143 Difference $136,532,441 Difference $136,532,441 One-Third x .3333 Market Adjust. $45,506,263 Book Value $19,649,159,143 Market Adjust $45,506,263 Actuar. Value $19,694,665,406	1. Market value of assets available for benefits $19,785,671,584 Original Amount / % Not Recognized 2. Calculation of unrecognized return (a) Year ended 6/30/06 $653,165,303 80% $522,532,242 (b) Year ended 6/30/05 $179,823,045 60% $107,893,827 (c) Year ended 6/30/04 $499,642,191 40% $199,856,876 (d) Year ended 6/30/03 ($401,116,000) 20% ($80,223,200) (e) Year ended 6/30/02 $750,059,745 3. Actuarial value of assets: (1) - (2e) ("Current Assets") $19,035,611,839

Teachers Retirement Association (TRA)

	Pre-1984 Method	Post-1984/Pre-2000 Method	Current Method
Funding Impact	Act. Liab. $20,679,110,879 Assets $19,649,139,143 UAL $1,029,971,736 Funding Ratio 95.02% Normal Cost $349,678,399 Expenses $12,236,072 Amort. $54,374,990 Act. Req. $416,289,461	Act. Liab. $20,679,110,879 Assets $19,694,658,742 UAL $984,452,137 Funding Ratio 95.23% Normal Cost $349,678,399 Expenses $12,236,072 Amort. $51,971,886 Act. Req. $413,886,357	Act. Liab. $20,679,110,879 Assets $19,035,611,839 UAL $1,643,499,040 Funding Ratio 92.05% Normal Cost $349,678,399 Expenses $12,236,072 Amort. $86,764,874 Act. Req. $448,679,345

St. Paul Teachers Retirement Fund Association (SPTRFA)

	Pre-1984 Method	Post-1984/Pre-2000 Method	Current Method
Summary	Book or cost value of investment securities.	Cost value of investment securities plus one-third of the difference between the cost value and the market value of the investment securities.	Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets at the asset return expected during that fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year).
Result	$740,961,588	$829,213,976	$938,919,005
Calculation	Book Value $740,961,588	Market Value $1,005,745,229 Book Value $740,961,588 Difference $264,783,641 Difference $264,783,641 One-Third x .3333 Market Adjust. $88,252,388 Book Value $740,961,588 Market Adjust $88,252,388 Actuar. Value $829,213,976	1. Market value of assets available for benefits $1,005,745,229 Original Amount % Not Recognized 2. Calculation of unrecognized return (a) Year ended 6/30/06 $36,135,488 80% $28,908,390 (b) Year ended 6/30/05 $26,860,009 60% $16,116,005 (c) Year ended 6/30/04 $82,512,072 40% $33,004,829 (d) Year ended 6/30/03 ($56,015,000) 20% ($11,203,000) (e) Year ended 6/30/02 $66,826,224 3. Actuarial value of assets: (1) - (2e) ("Current Assets") $938,919,005
Funding Impact	Act. Liab. $1,358,619,906 Assets $740,961,588 UAL $617,658,318 Funding Ratio 54.54% Normal Cost $21,575,645 Expenses $608,955 Amort. $53,598,227 Act. Req. $75,782,827	Act. Liab. $1,358,619,916 Assets $829,252,388 UAL $529,367,528 Funding Ratio 61.04% Normal Cost $21,575,645 Expenses $608,955 Amort. $45,936,661 Act. Req. $68,121,261	Act. Liab. $1,358,619,906 Assets $938,919,005 UAL $419,700,901 Funding Ratio 69.11% Normal Cost $21,575,645 Expenses $608,955 Amort. $36,420,175 Act. Req. $58,604,775

Using an actuarial value of assets rather than the market value of assets for a pension plan apparently is not uncommon among public pension plans and complies with generally accepted accounting principles under Government Accounting Standards Board pronouncements. Using a smoothing method that shaves off short-term market volatility is particularly advantageous from a policy perspective if the pension plan funding procedures immediately translate actuarial results into modified employer contribution amounts in the following year, where short-term value changes would produce highly variable contribution levels year to year. In Minnesota, this is a consideration only for Minneapolis Employees Retirement Fund (MERF) and for the five remaining local police and paid firefighter relief associations. The use of a smoothing mechanism may be sensible policy where the smoothing period reflects the actual pattern of market volatility, which tends to be either less than one year or longer than five years based on long-term stock market return data from Ibbotson Associates. Even if the smoothing period matches market cycles, an actuarial value of pension assets definition does nothing more than delay the recognition of actual market changes.

The following compares the actuarial value of assets and the market value of assets for the various statewide and major local retirement plans as of June 30, 2006:

Plan	Actuarial Value of Assets	Market Value of Assets	Actuarial Value as % of Market Value
MSRS-General	$8,486,756,016	$8,767,249,551	96.8%
MSRS-Correctional	535,356,819	549,986,069	97.3
Judges	151,850,386	154,151,618	98.5

Plan	Actuarial Value of Assets	Market Value of Assets	Actuarial Value as % of Market Value
State Patrol	618,990,349	633,419,202	97.7
PERA-General	12,495,207,148	12,828,990,072	97.4
PERA-Correctional	125,775,917	131,696,690	95.5
PERA-P&F	5,017,950,719	5,167,417,402	97.1
TRA	19,035,611,839	19,785,671,584	96.2
DTRFA	270,925,689	281,950,173	96.1
SPTRFA	938,919,005	1,005,745,229	93.4
MERF	1,490,280,063	1,494,046,146	99.7
Total	$49,167,623,950	$50,800,323,736	96.8%

The valuation of both pension liabilities and pension assets is problematic because they are estimates of potential real life occurrences in advance of experiencing the occurrences. In valuing pension liabilities, the time separation from the estimation of the magnitude of the liability and the actual discharge of the liability can be considerable and the only "real" or "accurate" determination of a pension plan's ultimate pension liabilities occurs when all of the pension plan's obligations have been paid and the pension plan is terminated. In valuing pension assets, time is not the primary problem, but the primary problem is an assumption that the final market price of an investment sold by someone else on a given date by a market reporting mechanism could also be obtained by the pension plan if the plan sold all of its investments on that same date, even though an increase in the supply of investments for sale by that action should have a dampening effect on the available price. The problem of valuing pension plan assets is compounded by the considerable variability in market values from day to day, which makes the comparison of asset values on a predetermined date with the low variability of pension plan liabilities on a given date less reliable.

Funded Status of MSRS-General 1983-2009

Actuarial Valuation Data State Employees Retirement Fund (MSRS)

	2009		2008		2007*		2007**		2006		2005		2004	
Membership														
Active Members		48,989		48,823		48,379		48,379		48,000		47,125		46,899
Service Retirees		22,457		21,736		20,880		20,880		19,903		19,202		18,672
Disabilitants		1,656		1,620		1,547		1,547		1,508		1,434		1,397
Survivors		3,230		3,090		2,919		2,919		2,793		2,731		2,585
Deferred Retirees		15,210		14,951		14,751		14,751		14,217		13,592		13,784
Nonvested Former Members		6,912		6,865		7,007		7,007		6,828		7,702		12,741
Total Membership		98,454		97,085		95,483		95,483		93,249		91,786		96,078
Funded Status														
Accrued Liability		$10,512,760,000		$9,994,602,000		$9,627,304,704		$9,627,304,704		$8,819,160,917		$8,455,335,998		$7,878,362,792
Current Assets		$9,030,401,000		$9,013,456,000		$8,904,516,772		$9,171,066,094		$8,486,756,016		$8,081,736,374		$7,884,984,028
Unfunded Accrued Liability		$1,482,359,000		$981,146,000		$722,787,932		$456,238,610		$332,404,901		$373,599,624		($6,621,236)
Funding Ratio	85.90%		90.18%		92.49%		95.26%		96.23%		95.58%		100.08%	
Financing Requirements														
Covered Payroll		$2,493,948,000		$2,378,816,000		$2,241,738,286		$2,241,738,286		$2,157,579,057		$2,084,561,802		$2,066,680,651
Benefits Payable		$445,792,000		$418,757,000		$392,058,387		$392,058,387		$366,797,030		$347,959,178		$328,545,403
Normal Cost	7.86%	$196,091,000	7.78%	$185,140,000	8.40%	$188,716,922	8.40%	$188,716,922	8.52%	$183,605,603	8.79%	$183,131,914	9.13%	$188,614,832
Administrative Expenses	0.22%	$5,419,000	0.23%	$5,471,000	0.23%	$5,155,998	0.23%	$5,155,998	0.21%	$4,530,916	0.21%	$4,377,580	0.22%	$4,546,697
Normal Cost & Expense	8.08%	$201,510,000	8.01%	$190,611,000	8.63%	$193,872,920	8.63%	$193,872,920	8.73%	$188,136,519	9.00%	$187,509,494	9.35%	$193,161,529
Normal Cost & Expense	8.08%	$201,510,000	8.01%	$190,611,000	8.63%	$193,872,920	8.63%	$193,872,920	8.73%	$188,136,519	9.00%	$187,509,494	9.35%	$193,161,529
Amortization	6.77%	$168,840,000	4.38%	$104,192,000	3.13%	$70,166,408	1.98%	$44,386,418	1.38%	$29,774,591	1.55%	$32,310,708	(0.02%)	($413,336)
Total Requirements	14.85%	$370,350,000	12.39%	$294,803,000	11.76%	$264,039,328	10.61%	$238,259,338	10.11%	$217,911,110	10.55%	$219,820,202	9.33%	$192,748,193
Employee Contributions	4.75%	$118,462,000	4.50%	$107,047,000	4.25%	$95,273,877	4.25%	$95,273,877	4.00%	$86,303,162	4.00%	$83,382,472	4.00%	$82,667,226
Employer Contributions	4.75%	$118,462,000	4.50%	$107,047,000	4.25%	$95,273,877	4.25%	$95,273,877	4.00%	$86,303,162	4.00%	$83,382,472	4.00%	$82,667,226
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	9.50%	$236,924,000	9.00%	$214,094,000	8.50%	$190,547,754	8.50%	$190,547,754	8.00%	$172,606,324	8.00%	$166,764,944	8.00%	$165,334,452
Total Requirements	14.85%	$370,350,000	12.39%	$294,803,000	11.76%	$264,039,328	10.61%	$238,259,338	10.11%	$217,911,110	10.55%	$219,820,202	9.33%	$192,748,193
Total Contributions	9.50%	$236,924,000	9.00%	$214,094,000	8.50%	$190,547,754	8.50%	$190,547,754	8.00%	$172,606,324	8.00%	$166,764,944	8.00%	$165,334,452
Deficiency (Surplus)	5.35%	$133,426,000	3.39%	$80,709,000	3.26%	$73,491,574	2.11%	$47,711,584	2.11%	$45,304,786	2.55%	$53,055,258	1.33%	$27,413,741
Amortization Target Date	2020		2020		2020		2020		2020		2020		2034	
Actuary	Mercer		Mercer		Segal		Segal		Segal		Segal		Segal	

** Reflects 2007 Asset Valuation Method change* *** Current Assets and Amortization results do not reflect the 2007 Asset Valuation Method change*

Actuarial Valuation Data

State Employees Retirement Fund

(MSRS)

	2003		2002		2001		2000		1999		1998		1997	
Membership														
Active Members		48,136		49,099		49,229		47,920		47,168		46,299		46,289
Service Retirees		17,774		17,279		16,766		16,276		15,670		15,185		14,718
Disabilitants		1,275		1,218		1,127		1,070		1,007		948		905
Survivors		2,405		2,308		2,085		1,955		1,811		1,697		1,574
Deferred Retirees		12,679		11,939		11,452		11,125		10,663		9,775		9,775
Nonvested Former Members		8,626		8,224		8,111		7,772		8,220		6,447		6,447
Total Membership		90,895		90,067		88,770		86,118		84,539		80,351		79,708
Funded Status														
Accrued Liability		$7,830,671,000		$7,340,397,000		$6,573,193,000		$6,105,703,000		$5,464,207,000		$5,005,165,000		$4,519,542,000
Current Assets		$7,757,292,000		$7,673,028,000		$7,366,673,000		$6,744,165,000		$5,968,692,000		$5,390,526,000		$4,664,519,000
Unfunded Accrued Liability		$73,379,000		($332,631,000)		($793,480,000)		($638,462,000)		($504,485,000)		($385,361,000)		($144,977,000)
Funding Ratio	99.06%		104.53%		112.07%		110.46%		109.23%		107.70%		103.21%	
Financing Requirements														
Covered Payroll		$2,138,858,000		$2,040,390,000		$1,967,814,000		$1,900,124,000		$1,757,716,000		$1,664,588,000		$1,612,662,000
Benefits Payable		$311,472,000		$296,687,000		$270,558,000		$237,825,000		$207,962,000		$182,562,000		$150,676,000
Normal Cost	9.03%	$193,153,000	9.02%	$183,888,000	8.76%	$172,402,000	8.72%	$165,591,000	7.52%	$131,986,000	7.58%	$126,150,000	7.48%	$120,589,000
Administrative Expenses	0.21%	$4,492,000	0.20%	$4,081,000	0.20%	$3,936,000	0.21%	$3,990,000	0.15%	$2,637,000	0.15%	$2,497,000	0.13%	$2,096,000
Normal Cost & Expense	9.24%	$197,645,000	9.22%	$187,969,000	8.96%	$176,338,000	8.93%	$169,581,000	7.67%	$134,623,000	7.73%	$128,647,000	7.61%	$122,685,000
Normal Cost & Expense	9.24%	$197,645,000	9.22%	$187,969,000	8.96%	$176,338,000	8.93%	$169,581,000	7.67%	$134,623,000	7.73%	$128,647,000	7.61%	$122,685,000
Amortization	0.19%	$4,064,000	(0.88%)	($17,955,000)	(2.17%)	($42,702,000)	(1.81%)	($34,392,000)	0.00%	$0	0.00%	$0	0.00%	$0
Total Requirements	9.43%	$201,709,000	8.34%	$170,014,000	6.79%	$133,636,000	7.12%	$135,189,000	7.67%	$134,623,000	7.73%	$128,647,000	7.61%	$122,685,000
Employee Contributions	4.00%	$85,554,000	4.00%	$81,616,000	4.00%	$78,712,000	4.00%	$76,005,000	4.00%	$70,309,000	4.00%	$66,584,000	4.00%	$64,506,000
Employer Contributions	4.00%	$85,554,000	4.00%	$81,616,000	4.00%	$78,712,000	4.00%	$76,005,000	4.00%	$70,309,000	4.00%	$66,584,000	4.00%	$64,506,000
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	8.00%	$171,108,000	8.00%	$163,232,000	8.00%	$157,424,000	8.00%	$152,010,000	8.00%	$140,618,000	8.00%	$133,168,000	8.00%	$129,012,000
Total Requirements	9.43%	$201,709,000	8.34%	$170,014,000	6.79%	$133,636,000	7.12%	$135,189,000	7.67%	$134,623,000	7.73%	$128,647,000	7.61%	$122,685,000
Total Contributions	8.00%	$171,108,000	8.00%	$163,232,000	8.00%	$157,424,000	8.00%	$152,010,000	8.00%	$140,618,000	8.00%	$133,168,000	8.00%	$129,012,000
Deficiency (Surplus)	1.43%	$30,601,000	0.34%	$6,782,000	(1.21%)	($23,788,000)	(0.88%)	($16,821,000)	(0.33%)	($5,995,000)	(0.27%)	($4,521,000)	(0.39%)	($6,327,000)
Amortization Target Date	2032		2032		2031		2030		2020		2020		2020	
Actuary	Milliman USA		Milliman USA		Milliman USA		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson	

Actuarial Valuation Data   State Employees Retirement Fund   (MSRS)

	1996		1995		1994		1993		1992		1991		1990	
Membership														
Active Members		49,914		49,705		49,365		48,830		49,214		49,718		49,576
Service Retirees		14,368		14,004		13,924		13,171		12,835		12,335		11,810
Disabilitants		857		824		800		779		743		726		676
Survivors		1,447		1,313		1,207		1,117		1,023		946		899
Deferred Retirees		6,118		5,518		4,818		3,839		2,769		2,216		1,824
Nonvested Former Members		5,744		5,242		4,744		4,492		4,256		4,152		4,638
Total Membership		78,448		76,606		74,858		72,228		70,840		70,093		69,423
Funded Status														
Accrued Liability		$4,087,273,000		$3,795,926,000		$3,876,584,000		$3,563,492		$3,125,299,000		$2,883,603,000		$2,707,968,000
Current Assets		$3,975,832,000		$3,462,098,000		$3,158,068,000		$2,905,578		$2,613,472,000		$2,304,312,000		$2,108,210,000
Unfunded Accrued Liability		$111,441,000		$333,828,000		$718,516,000		$657,914,000		$511,827,000		$579,291,000		$599,758,000
Funding Ratio	97.27%		91.21%		81.47%		81.54%		83.62%		79.91%		77.85%	
Financing Requirements														
Covered Payroll		$1,643,049,000		$1,611,687,000		$1,789,033,000		$1,694,520,000		$1,658,792,000		$1,612,238,000		$1,513,522,000
Benefits Payable		$136,522,000		$126,831,000		$116,071,000		$104,362,000		$95,010,000		$85,977,000		$76,040,000
Normal Cost	6.67%	$109,591,368	6.69%	$107,821,860	6.67%	$119,328,501	6.93%	$117,430,236	6.58%	$109,148,514	5.98%	$96,411,832	6.10%	$92,324,842
Administrative Expenses	0.12%	$1,971,659	0.11%	$1,772,856	0.12%	$2,146,840	0.11%	$1,863,972	0.23%	$3,815,222	0.22%	$3,546,924	0.29%	$4,389,214
Normal Cost & Expense	6.79%	$111,563,027	6.80%	$109,594,716	6.79%	$121,475,341	7.04%	$119,294,208	6.81%	$112,963,735	6.20%	$99,958,756	6.39%	$96,714,056
Normal Cost & Expense	6.79%	$111,563,027	6.80%	$109,594,716	6.79%	$121,475,341	7.04%	$119,294,208	6.81%	$112,963,735	6.20%	$99,958,756	6.39%	$96,714,056
Amortization	0.42%	$6,900,806	1.25%	$20,146,088	2.36%	$42,221,179	1.89%	$32,026,428	1.46%	$24,218,363	1.66%	$26,763,151	1.78%	$26,940,692
Total Requirements	7.21%	$118,463,833	8.05%	$129,740,804	9.15%	$163,696,520	8.93%	$151,320,636	8.27%	$137,182,098	7.86%	$126,721,907	8.17%	$123,654,747
Employee Contributions	4.07%	$66,872,094	4.07%	$65,595,661	4.07%	$72,813,643	4.07%	$68,966,964	4.07%	$67,512,834	4.15%	$66,907,877	4.15%	$62,811,163
Employer Contributions	4.20%	$69,008,058	4.20%	$67,690,854	4.20%	$75,139,386	4.20%	$71,169,840	4.20%	$69,669,264	4.29%	$69,165,010	4.29%	$64,930,094
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	8.27%	$135,880,152	8.27%	$133,286,515	8.27%	$147,953,029	8.27%	$140,136,804	8.27%	$137,182,098	8.44%	$136,072,887	8.44%	$127,741,257
Total Requirements	7.21%	$118,463,833	8.05%	$129,740,804	9.15%	$163,696,520	8.93%	$151,320,636	8.27%	$137,182,098	7.86%	$126,721,907	8.17%	$123,654,747
Total Contributions	8.27%	$135,880,152	8.27%	$133,286,515	8.27%	$147,953,029	8.27%	$140,136,804	8.27%	$137,182,098	8.44%	$136,072,887	8.44%	$127,741,257
Deficiency (Surplus)	(1.06%)	($17,416,319)	(0.22%)	($3,545,711)	0.88%	$15,743,490	0.66%	$11,183,832	0.00%	$0	(0.58%)	($9,350,980)	(0.27%)	($4,086,509)
Amortization Target Date	2020		2020		2020		2020		2020		2020		2020	
Actuary	Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Wyatt	

Actuarial Valuation Data State Employees Retirement Fund (MSRS)

	1989		1988		1987		1986		1985		1984		1983	
Membership														
Active Members		48,653		47,040		45,707		45,172		44,399		44,158		43,191
Service Retirees		11,564		11,455		10,994		10,601		10,155		10,843		10,477
Disabilitants		665		669		676		670		683		0		0
Survivors		850		753		671		599		529		0		0
Deferred Retirees		1,355		1,162		1,014		957		910		852		983
Nonvested Former Members		3,924		4,084		4,496		4,402		4,878		5,495		4,881
Total Membership		67,011		65,163		63,558		62,401		61,554		61,348		59,532
Funded Status														
Accrued Liability		$2,456,686,000		$2,115,476,000		$1,894,142,000		$1,656,860,000		$1,489,214,000		$1,267,662,330		$1,127,574,029
Current Assets		$1,871,542,000		$1,644,145,000		$1,518,483,000		$1,313,155,000		$1,109,815,000		$955,850,470		$866,438,610
Unfunded Accrued Liability		$585,144,000		$471,331,000		$375,659,000		$343,705,000		$379,399,000		$311,811,860		$261,135,419
Funding Ratio	76.18%		77.72%		80.17%		79.26%		74.52%		75.40%		76.84%	
Financing Requirements														
Covered Payroll		$1,418,160,000		$1,316,671,000		$1,208,043,000		$1,135,260,000		$1,047,928,000		$902,667,264		$857,061,120
Benefits Payable		$69,604,000		$63,698,000		$57,057,000		$48,325,000		$43,144,000		$35,472,030		$31,295,880
Normal Cost	6.10%	$86,507,760	5.47%	$72,021,904	5.45%	$65,838,344	5.15%	$58,465,890	5.12%	$53,653,914	6.13%	$55,333,503	6.96%	$59,651,454
Administrative Expenses	0.23%	$3,261,768	0.26%	$3,423,345	0.27%	$3,261,716	0.27%	$3,065,202	0.28%	$2,934,198	0.18%	$1,624,801	0.18%	$1,542,710
Normal Cost & Expense	6.33%	$89,769,528	5.73%	$75,445,248	5.72%	$69,100,060	5.42%	$61,531,092	5.40%	$56,588,112	6.31%	$56,958,304	7.14%	$61,194,164
Normal Cost & Expense	6.33%	$89,769,528	5.73%	$75,445,248	5.72%	$69,100,060	5.42%	$61,531,092	5.40%	$56,588,112	6.31%	$56,958,304	7.14%	$61,194,164
Amortization	1.81%	$25,668,696	1.88%	$24,753,415	1.58%	$19,087,079	1.54%	$17,483,004	1.78%	$18,653,118	1.64%	$14,803,743	2.03%	$17,398,341
Total Requirements	8.14%	$115,438,224	7.61%	$100,198,663	7.30%	$88,187,139	6.96%	$79,014,096	7.18%	$75,241,230	7.95%	$71,762,047	9.17%	$78,592,505
Employee Contributions	4.34%	$61,548,144	3.73%	$49,111,828	3.73%	$45,060,004	3.73%	$42,345,198	3.73%	$39,087,714	3.73%	$33,669,489	3.73%	$31,968,380
Employer Contributions	4.51%	$63,959,016	3.90%	$51,350,169	3.90%	$47,113,677	3.90%	$44,275,140	3.90%	$40,869,192	3.90%	$35,204,023	3.73%	$31,968,380
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	1.87%	$16,027,043
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	8.85%	$125,507,160	7.63%	$100,461,997	7.63%	$92,173,681	7.63%	$86,620,338	7.63%	$79,956,906	7.63%	$68,873,512	9.33%	$79,963,802
Total Requirements	8.14%	$115,438,224	7.61%	$100,198,663	7.30%	$88,187,139	6.96%	$79,014,096	7.18%	$75,241,230	7.95%	$71,762,047	9.17%	$78,592,505
Total Contributions	8.85%	$125,507,160	7.63%	$100,461,997	7.63%	$92,173,681	7.63%	$86,620,338	7.63%	$79,956,906	7.63%	$68,873,512	9.33%	$79,963,802
Deficiency (Surplus)	(0.71%)	($10,068,936)	(0.02%)	($263,334)	(0.33%)	($3,986,542)	(0.67%)	($7,606,242)	(0.45%)	($4,715,676)	0.32%	$2,888,535	(0.16%)	($1,371,298)
Amortization Target Date	2020		2011		2011		2010		2010		2010		2010	
Actuary	Wyatt		Wyatt		Wyatt		Wyatt		Wyatt		Touche Ross		Touche Ross	

Funded Status of PERA-General 1983-2009

Actuarial Valuation Data **Public Employees Retirement Fund** **(PERA)**

	2009		2008		2007*		2007**		2006		2005		2004	
Membership														
Active Members		142,097		145,238		146,226		146,226		144,244		142,303		138,164
Service Retirees		56,948		54,855		52,554		52,554		50,320		48,147		46,470
Disabilitants		2,075		2,046		1,988		1,988		1,940		1,853		1,760
Survivors		7,036		6,979		6,894		6,894		6,818		6,650		6,550
Deferred Retirees		43,645		42,308		39,722		39,722		37,476		35,768		33,915
Nonvested Former Members		122,434		116,805		109,599		109,599		105,590		100,369		102,265
Total Membership		374,235		368,231		356,983		356,983		346,388		335,090		329,124
Funded Status														
Accrued Liability		$18,799,416,000		$17,729,847,000		$17,705,626,649		$17,705,626,649		$16,737,756,758		$15,892,554,615		$14,959,464,879
Current Assets		$13,158,490,000		$13,048,970,000		$12,985,324,048		$13,500,024,678		$12,495,207,148		$11,843,935,692		$11,477,960,861
Unfunded Accrued Liability		$5,640,926,000		$4,680,877,000		$4,720,302,601		$4,205,601,971		$4,242,549,610		$4,048,618,923		$3,481,504,018
Funding Ratio	69.99%		73.60%		73.34%		76.25%		74.65%		74.53%		76.73%	
Financing Requirements														
Covered Payroll		$5,130,307,000		$4,952,751,000		$4,957,789,826		$4,957,789,826		$4,703,895,104		$4,530,882,628		$4,220,502,712
Benefits Payable		$863,910,000		$824,372,000		$784,013,433		$784,013,433		$748,390,506		$715,043,179		$687,124,293
Normal Cost	7.82%	$400,956,000	7.74%	$383,111,000	7.77%	$385,359,657	7.78%	$385,359,657	7.78%	$366,059,040	7.79%	$352,964,350	7.78%	$328,196,111
Administrative Expenses	0.20%	$10,261,000	0.19%	$9,410,000	0.19%	$9,419,801	0.19%	$9,419,801	0.20%	$9,407,790	0.22%	$9,967,942	0.21%	$8,863,056
Normal Cost & Expense	8.02%	$411,217,000	7.93%	$392,521,000	7.96%	$394,779,458	7.97%	$394,779,458	7.98%	$375,466,830	8.01%	$362,932,292	7.99%	$337,059,167
Normal Cost & Expense	8.02%	$411,217,000	7.93%	$392,521,000	7.96%	$394,779,458	7.97%	$394,779,458	7.98%	$375,466,830	8.01%	$362,932,292	7.99%	$337,059,167
Amortization	7.53%	$386,312,000	6.29%	$311,528,000	5.35%	$265,241,756	4.77%	$236,486,575	4.92%	$231,431,639	4.73%	$214,310,748	4.25%	$179,371,365
Total Requirements	15.55%	$797,529,000	14.22%	$704,049,000	13.31%	$660,021,214	12.74%	$631,266,033	12.90%	$606,898,469	12.74%	$577,243,040	12.24%	$516,430,532
Employee Contributions	6.00%	$307,819,000	6.00%	$297,220,000	5.88%	$291,588,497	5.88%	$291,588,497	5.63%	$264,931,649	5.30%	$240,262,784	5.10%	$215,425,739
Employer Contributions	6.88%	$352,965,000	6.63%	$328,211,000	6.38%	$316,425,146	6.38%	$316,425,146	6.13%	$288,515,428	5.77%	$261,631,214	5.54%	$233,675,208
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	12.88%	$660,784,000	12.63%	$625,431,000	12.26%	$608,013,643	12.26%	$608,013,643	11.76%	$553,447,077	11.07%	$501,893,998	10.64%	$449,100,947
Total Requirements	15.55%	$797,529,000	14.22%	$704,049,000	13.31%	$660,021,214	12.74%	$631,266,033	12.90%	$606,898,469	12.74%	$577,243,040	12.24%	$516,430,532
Total Contributions	12.88%	$660,784,000	12.63%	$625,431,000	12.26%	$608,013,643	12.26%	$608,013,643	11.76%	$553,447,077	11.07%	$501,893,998	10.64%	$449,100,947
Deficiency (Surplus)	2.67%	$136,745,000	1.59%	$78,618,000	1.05%	$52,007,571	0.48%	$23,252,390	1.14%	$53,451,392	1.67%	$75,349,042	1.60%	$67,329,585
Amortization Target Date	2031		2031		2031		2031		2031		2031		2031	
Actuary	Mercer		Mercer		Segal		Segal		Segal		Segal		Segal	

** Reflects 2007 Asset Valuati * Reflects 2007 Asset Valuation Method change ** Current Assets and Amortization results do not reflect the 2007 Asset Valuation Method change*

Actuarial Valuation Data

Public Employees Retirement Fund

(PERA)

	2003		2002		2001		2000		1999		1998		1997	
Membership														
Active Members		140,066		137,817		138,759		135,560		137,528		136,166		130,865
Service Retirees		44,532		43,037		41,797		39,940		38,077		36,187		34,168
Disabilitants		1,640		1,565		1,468		1,397		1,301		1,223		1,115
Survivors		6,391		6,276		6,149		6,010		5,881		5,732		5,531
Deferred Retirees		32,128		29,353		25,917		21,495		16,340		10,817		10,817
Nonvested Former Members		94,340		87,114		83,027		79,362		18,491		15,162		15,162
Total Membership		319,097		305,162		297,117		283,764		217,618		205,287		197,658
Funded Status														
Accrued Liability		$13,776,198,000		$12,958,105,000		$12,105,337,000		$11,133,682,000		$9,443,678,000		$8,769,303,000		$8,049,666,000
Current Assets		$11,195,902,000		$11,017,414,000		$10,527,270,000		$9,609,367,000		$8,489,177,000		$7,636,668,000		$6,658,410,000
Unfunded Accrued Liability		$2,580,296,000		$1,940,691,000		$1,578,067,000		$1,524,315,000		$954,501,000		$1,132,635,000		$1,391,256,000
Funding Ratio	81.27%		85.02%		86.96%		86.31%		89.89%		87.08%		82.72%	
Financing Requirements														
Covered Payroll		$4,233,217,000		$3,967,335,000		$3,835,448,000		$3,602,750,000		$3,544,488,000		$3,385,720,000		$3,214,578,000
Benefits Payable		$664,459,000		$642,088,000		$592,209,000		$527,119,000		$467,602,000		$412,746,000		$342,154,000
Normal Cost	8.61%	$364,657,000	8.60%	$341,299,000	9.40%	$360,850,000	9.33%	$336,088,000	7.49%	$265,778,000	7.61%	$257,628,000	7.11%	$228,459,000
Administrative Expenses	0.22%	$9,313,000	0.23%	$9,125,000	0.23%	$8,822,000	0.23%	$8,286,000	0.28%	$9,925,000	0.22%	$7,449,000	0.18%	$5,786,000
Normal Cost & Expense	8.83%	$373,970,000	8.83%	$350,424,000	9.63%	$369,672,000	9.56%	$344,374,000	7.77%	$275,703,000	7.83%	$265,077,000	7.29%	$234,245,000
Normal Cost & Expense	8.83%	$373,970,000	8.83%	$350,424,000	9.63%	$369,672,000	9.56%	$344,374,000	7.77%	$275,703,000	7.83%	$265,077,000	7.29%	$234,245,000
Amortization	3.06%	$129,536,000	2.40%	$95,216,000	1.97%	$75,558,000	2.38%	$85,745,000	1.67%	$59,193,000	2.01%	$68,053,000	2.51%	$80,686,000
Total Requirements	11.89%	$503,506,000	11.23%	$445,640,000	11.60%	$445,230,000	11.94%	$430,119,000	9.44%	$334,896,000	9.84%	$333,130,000	9.80%	$314,931,000
Employee Contributions	5.11%	$216,169,000	5.11%	$202,715,000	4.94%	$189,604,000	4.77%	$171,898,000	4.78%	$169,398,000	4.79%	$162,179,000	4.55%	$146,127,000
Employer Contributions	5.54%	$234,526,000	5.55%	$219,990,000	5.38%	$206,389,000	5.21%	$187,823,000	5.23%	$185,221,000	5.24%	$177,504,000	4.92%	$158,067,000
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	10.65%	$450,695,000	10.66%	$422,705,000	10.32%	$395,993,000	9.98%	$359,721,000	10.01%	$354,619,000	10.03%	$339,683,000	9.47%	$304,194,000
Total Requirements	11.89%	$503,506,000	11.23%	$445,640,000	11.60%	$445,230,000	11.94%	$430,119,000	9.44%	$334,896,000	9.84%	$333,130,000	9.80%	$314,931,000
Total Contributions	10.65%	$450,695,000	10.66%	$422,705,000	10.32%	$395,993,000	9.98%	$359,721,000	10.01%	$354,619,000	10.03%	$339,683,000	9.47%	$304,194,000
Deficiency (Surplus)	1.24%	$52,811,000	0.57%	$22,935,000	1.28%	$49,237,000	1.96%	$70,398,000	(0.57%)	($19,723,000)	(0.19%)	($6,553,000)	0.33%	$10,737,000
Amortization Target Date	2031		2031		2031		2024		2020		2020		2020	
Actuary	Milliman USA		Milliman USA		Milliman USA		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson	

Actuarial Valuation Data

Public Employees Retirement Fund

(PERA)

	1996		1995		1994		1993		1992		1991		1990	
Membership														
Active Members		129,431		126,612		120,199		114,932		110,100		107,025		102,664
Service Retirees		32,906		31,487		30,414		28,279		27,057		25,634		24,314
Disabilitants		1,051		959		871		794		781		739		708
Survivors		5,423		5,260		5,091		4,895		4,721		4,553		4,414
Deferred Retirees		8,605		7,156		6,277		5,402		4,502		3,655		2,699
Nonvested Former Members		11,448		9,683		9,180		9,307		8,711		7,995		7,695
Total Membership		188,864		181,157		172,032		163,609		155,872		149,601		142,494
Funded Status														
Accrued Liability		$7,270,073,000		$6,622,069,000		$6,223,622,000		$5,784,318,000		$5,439,953,000		$4,988,671,000		$4,560,469,000
Current Assets		$5,786,398,000		$5,138,461,000		$4,747,128,000		$4,374,459,000		$3,978,110,000		$3,570,304,000		$3,297,216,000
Unfunded Accrued Liability		$1,483,675,000		$1,483,608,000		$1,476,494,000		$1,409,859,000		$1,461,843,000		$1,418,367,000		$1,263,253,000
Funding Ratio	79.59%		77.60%		76.28%		75.63%		73.13%		71.57%		72.30%	
Financing Requirements														
Covered Payroll		$3,073,106,000		$2,930,993,000		$2,749,217,000		$2,578,604,000		$2,455,401,000		$2,286,179,000		$2,074,092,000
Benefits Payable		$312,511,000		$290,483,000		$264,233,000		$236,420,000		$216,952,000		$198,324,000		$182,363,000
Normal Cost	6.85%	$210,507,761	6.68%	$195,790,332	6.75%	$185,572,148	6.82%	$175,860,793	6.91%	$169,668,209	6.38%	$145,858,220	6.98%	$144,771,622
Administrative Expenses	0.19%	$5,838,901	0.17%	$4,982,688	0.17%	$4,673,669	0.16%	$4,125,766	0.29%	$7,120,663	0.27%	$6,172,683	0.32%	$6,637,094
Normal Cost & Expense	7.04%	$216,346,662	6.85%	$200,773,021	6.92%	$190,245,816	6.98%	$179,986,559	7.20%	$176,788,872	6.65%	$152,030,904	7.30%	$151,408,716
Normal Cost & Expense	7.04%	$216,346,662	6.85%	$200,773,021	6.92%	$190,245,816	6.98%	$179,986,559	7.20%	$176,788,872	6.65%	$152,030,904	7.30%	$151,408,716
Amortization	2.71%	$83,281,173	2.76%	$80,895,407	2.84%	$78,077,763	2.60%	$67,043,704	2.75%	$67,523,528	2.79%	$63,784,394	2.74%	$56,830,121
Total Requirements	9.75%	$299,627,835	9.61%	$281,668,427	9.76%	$268,323,579	9.58%	$247,030,263	9.95%	$244,312,400	9.44%	$215,815,298	10.04%	$208,238,837
Employee Contributions	4.29%	$131,836,247	4.31%	$126,325,798	4.30%	$118,216,331	4.36%	$112,427,134	4.38%	$107,546,564	4.41%	$100,820,494	4.44%	$92,089,685
Employer Contributions	4.58%	$140,748,255	4.60%	$134,825,678	4.60%	$126,463,982	4.68%	$120,678,667	4.72%	$115,894,927	4.76%	$108,822,120	4.81%	$99,763,825
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	8.88%	$272,584,502	8.91%	$261,151,476	8.90%	$244,680,313	9.04%	$233,105,802	9.10%	$223,441,491	9.17%	$209,642,614	9.25%	$191,853,510
Total Requirements	9.75%	$299,627,835	9.61%	$281,668,427	9.76%	$268,323,579	9.58%	$247,030,263	9.95%	$244,312,400	9.44%	$215,815,298	10.04%	$208,238,837
Total Contributions	8.88%	$272,584,502	8.91%	$261,151,476	8.90%	$244,680,313	9.04%	$233,105,802	9.10%	$223,441,491	9.17%	$209,642,614	9.25%	$191,853,510
Deficiency (Surplus)	0.87%	$27,043,333	0.70%	$20,516,951	0.86%	$23,643,266	0.54%	$13,924,462	0.85%	$20,870,909	0.27%	$6,172,683	0.79%	$16,385,327
Amortization Target Date	2020		2020		2020		2020		2020		2020		2020	
Actuary	Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Wyatt	

Actuarial Valuation Data

Public Employees Retirement Fund

(PERA)

	1989		1988		1987		1986		1985		1984		1983	
Membership														
Active Members		99,515		95,224		92,497		89,336		86,312		83,702		83,378
Service Retirees		22,932		21,882		20,341		18,719		17,277		15,765		14,577
Disabilitants		689		650		645		633		654		638		658
Survivors		4,251		4,168		4,029		3,970		3,854		3,665		3,581
Deferred Retirees		2,349		2,094		2,152		1,746		1,863		1,843		1,831
Nonvested Former Members		6,805		6,621		40,185		40,023		38,986		0		0
Total Membership		136,541		130,639		159,849		154,427		148,946		105,613		104,025
Funded Status														
Accrued Liability		$4,175,240,000		$3,755,608,000		$3,188,962,000		$2,925,006,000		$2,614,116,000		$2,228,361,179		$1,875,559,860
Current Assets		$2,992,285,000		$2,657,038,000		$2,457,899,000		$2,148,114,000		$1,842,957,000		$1,599,673,540		$1,474,041,241
Unfunded Accrued Liability		$1,182,955,000		$1,098,570,000		$731,063,000		$776,892,000		$771,159,000		$628,687,639		$401,518,619
Funding Ratio	71.67%		70.75%		77.08%		73.44%		70.50%		71.79%		78.59%	
Financing Requirements														
Covered Payroll		$1,932,674,000		$1,767,041,000		$1,645,876,000		$1,551,555,000		$1,423,911,000		$1,225,625,000		$1,135,785,000
Benefits Payable		$162,130,000		$148,587,000		$128,009,000		$109,613,000		$92,891,000		$76,064,731		$64,156,295
Normal Cost	5.85%	$113,061,429	5.72%	$101,074,745	5.45%	$89,700,242	5.59%	$86,731,925	5.68%	$80,878,145	5.64%	$69,125,250	7.44%	$84,502,404
Administrative Expenses	0.29%	$5,604,755	0.30%	$5,301,123	0.33%	$5,431,391	0.32%	$4,964,976	0.35%	$4,983,689	0.25%	$3,064,063	0.15%	$1,703,678
Normal Cost & Expense	6.14%	$118,666,184	6.02%	$106,375,868	5.78%	$95,131,633	5.91%	$91,696,901	6.03%	$85,861,833	5.89%	$72,189,313	7.59%	$86,206,082
Normal Cost & Expense	6.14%	$118,666,184	6.02%	$106,375,868	5.78%	$95,131,633	5.91%	$91,696,901	6.03%	$85,861,833	5.89%	$72,189,313	7.59%	$86,206,082
Amortization	2.69%	$51,988,931	3.40%	$60,079,394	2.43%	$39,994,787	2.64%	$40,961,052	2.75%	$39,157,553	2.43%	$29,782,688	2.46%	$27,940,311
Total Requirements	8.83%	$170,655,114	9.42%	$166,455,262	8.21%	$135,126,420	8.55%	$132,657,953	8.78%	$125,019,386	8.32%	$101,972,000	10.05%	$114,146,393
Employee Contributions	4.47%	$86,390,528	4.27%	$75,452,651	4.31%	$70,937,256	4.37%	$67,802,954	4.43%	$63,079,257	4.53%	$55,520,813	4.59%	$52,132,532
Employer Contributions	4.86%	$93,927,956	4.67%	$82,520,815	4.74%	$78,014,522	4.37%	$67,802,954	4.43%	$63,079,257	4.53%	$55,520,813	4.59%	$52,132,532
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.46%	$7,137,153	0.50%	$7,119,555	0.55%	$6,740,938	1.65%	$18,740,453
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	9.33%	$180,318,484	8.94%	$157,973,465	9.05%	$148,951,778	9.20%	$142,743,060	9.36%	$133,278,070	9.61%	$117,782,563	10.83%	$123,005,516
Total Requirements	8.83%	$170,655,114	9.42%	$166,455,262	8.21%	$135,126,420	8.55%	$132,657,953	8.78%	$125,019,386	8.32%	$101,972,000	10.05%	$114,146,393
Total Contributions	9.33%	$180,318,484	8.94%	$157,973,465	9.05%	$148,951,778	9.20%	$142,743,060	9.36%	$133,278,070	9.61%	$117,782,563	10.83%	$123,005,516
Deficiency (Surplus)	(0.50%)	($9,663,370)	0.48%	$8,481,797	(0.84%)	($13,825,358)	(0.65%)	($10,085,108)	(0.58%)	($8,258,684)	(1.29%)	($15,810,563)	(0.78%)	($8,859,123)
Amortization Target Date	2020		2010		2009		2009		2009		2009		2009	
Actuary	Wyatt		Wyatt		Wyatt		Wyatt		Wyatt		Comp. & Capital		Comp. & Capital	

Attachment K

Funded Status of TRA 1983-2009

Actuarial Valuation Data

Teachers Retirement Association

(TRA)

	2009		2008		2007*		2007**		2006*		2005		2004	
Membership														
Active Members		77,786		76,515		77,694		77,694		79,164		74,552		72,008
Service Retirees		46,108		43,041		42,679		42,679		41,009		35,779		34,581
Disabilitants		624		641		636		636		630		581		589
Survivors		3,476		3,299		3,223		3,223		3,044		2,597		2,479
Deferred Retirees		12,490		12,168		12,636		12,636		11,773		9,880		10,767
Nonvested Former Members		23,073		22,115		22,914		22,914		21,956		19,151		18,223
Total Membership		163,557		157,779		159,782		159,782		157,576		142,540		138,647
Funded Status														
Accrued Liability		$23,114,802,000		$22,230,841,000		$21,470,314,497		$21,470,314,497		$20,679,110,879		$18,021,410,061		$17,518,783,700
Current Assets		$17,882,408,000		$18,226,985,000		$18,794,389,076		$20,111,778,892		$19,035,611,839		$17,752,917,313		$17,519,909,350
Unfunded Accrued Liability		$5,232,394,000		$4,003,856,000		$2,675,925,421		$1,358,535,605		$1,643,499,040		$268,492,748		($1,125,650)
Funding Ratio	77.36%		81.99%		87.54%		93.67%		92.05%		98.51%		100.01%	
Financing Requirements														
Covered Payroll		$4,049,217,000		$3,846,190,000		$3,814,373,772		$3,814,373,772		$3,707,900,584		$3,389,066,754		$3,206,759,440
Benefits Payable		$1,381,366,000		$1,330,837,000		$1,273,093,384		$1,273,093,384		$1,224,212,024		$1,048,440,524		$1,008,410,471
Normal Cost	8.88%	$359,579,000	8.77%	$337,281,000	9.37%	$357,343,265	9.37%	$357,343,265	9.43%	$349,678,399	8.02%	$271,801,325	8.07%	$258,898,450
Administrative Expenses	0.28%	$11,338,000	0.27%	$10,385,000	0.29%	$11,061,684	0.29%	$11,061,684	0.33%	$12,236,072	0.34%	$11,522,827	0.39%	$12,506,362
Normal Cost & Expense	9.16%	$370,917,000	9.04%	$347,666,000	9.66%	$368,404,949	9.66%	$368,404,949	9.76%	$361,914,471	8.36%	$283,324,152	8.46%	$271,404,812
Normal Cost & Expense	9.16%	$370,917,000	9.04%	$347,666,000	9.66%	$368,404,949	9.66%	$368,404,949	9.76%	$361,914,471	8.36%	$283,324,152	8.46%	$271,404,812
Amortization	7.66%	$310,170,000	6.04%	$232,310,000	3.78%	$144,183,329	1.92%	$73,235,976	2.34%	$86,764,874	0.69%	$23,384,561	0.00%	$0
Total Requirements	16.82%	$681,087,000	15.08%	$579,976,000	13.44%	$512,588,278	11.58%	$441,640,925	12.11%	$448,679,345	9.05%	$306,708,713	8.46%	$271,404,812
Employee Contributions	5.50%	$222,860,000	5.50%	$211,704,000	5.51%	$210,143,378	5.51%	$210,143,378	5.51%	$204,456,479	5.00%	$169,453,338	5.00%	$160,337,972
Employer Contributions	5.69%	$230,325,000	5.69%	$218,752,000	5.72%	$218,013,895	5.72%	$218,013,895	5.23%	$193,832,020	5.00%	$169,453,338	5.00%	$160,337,972
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.44%	$17,948,000	0.50%	$19,170,000	0.49%	$18,819,110	0.49%	$18,819,110	0.51%	$18,819,110	0.00%	$0	0.00%	$0
Other Govt. Funding	0.06%	$2,500,000	0.06%	$2,500,000	0.07%	$2,500,000	0.07%	$2,500,000	0.07%	$2,500,000	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	11.70%	$473,633,000	11.75%	$452,126,000	11.78%	$449,476,383	11.78%	$449,476,383	11.31%	$419,607,609	10.00%	$338,906,676	10.00%	$320,675,944
Total Requirements	16.82%	$681,087,000	15.08%	$579,976,000	13.44%	$512,588,278	11.58%	$441,640,925	12.11%	$448,679,345	9.05%	$306,708,713	8.46%	$271,404,812
Total Contributions	11.70%	$473,633,000	11.75%	$452,126,000	11.78%	$449,476,383	11.78%	$449,476,383	11.31%	$419,607,609	10.00%	$338,906,676	10.00%	$320,675,944
Deficiency (Surplus)	5.12%	$207,454,000	3.33%	$127,850,000	1.65%	$63,111,895	(0.21%)	($7,835,458)	0.80%	$29,071,736	(0.95%)	($32,197,963)	(1.54%)	($49,271,132)
									*Reflects MTRFA/TRA Merger					
Amortization Target Date	2037		2037		2037		2037		2037		2020		2034	
Actuary	Mercer		Mercer		Segal		Segal		Segal		Segal		Segal	

* Reflects 2007 Asset Valuation Method change   ** Current Assets and Amortization results do not reflect the 2007 Asset Valuation Method change

Actuarial Valuation Data

Teachers Retirement Association

(TRA)

	2003		2002		2001		2000		1999		1998		1997	
Membership														
Active Members		71,916		71,690		71,097		70,508		68,613		68,247		68,554
Service Retirees		33,290		32,231		31,169		29,525		27,457		25,088		23,678
Disabilitants		558		551		518		509		476		454		425
Survivors		2,351		2,192		2,070		1,912		1,816		1,686		1,578
Deferred Retirees		9,304		8,680		7,959		7,375		7,020		6,356		6,356
Nonvested Former Members		19,256		19,022		19,344		17,833		18,317		16,653		16,653
Total Membership		136,675		134,366		132,157		127,662		123,699		118,484		117,244
Funded Status														
Accrued Liability		$16,856,379,000		$16,503,099,000		$15,903,984,000		$14,802,441,000		$13,259,569,000		$12,046,312,000		$10,963,637,000
Current Assets		$17,384,179,000		$17,378,994,000		$16,834,024,000		$15,573,151,000		$14,011,247,000		$12,727,546,000		$11,103,759,000
Unfunded Accrued Liability		($527,800,000)		($875,895,000)		($930,040,000)		($770,710,000)		($751,678,000)		($681,234,000)		($140,122,000)
Funding Ratio	103.13%		105.31%		105.85%		105.21%		105.67%		105.66%		101.28%	
Financing Requirements														
Covered Payroll		$3,163,057,000		$3,040,422,000		$2,937,962,000		$2,813,696,000		$2,692,960,000		$2,569,368,000		$2,475,599,000
Benefits Payable		$978,466,000		$946,344,000		$861,788,000		$755,036,000		$620,938,000		$533,851,000		$427,587,000
Normal Cost	8.84%	$279,583,000	8.68%	$264,209,000	9.09%	$267,166,000	9.09%	$255,746,000	9.55%	$257,386,000	9.60%	$246,514,000	9.66%	$238,907,000
Administrative Expenses	0.43%	$13,601,000	0.44%	$13,378,000	0.46%	$13,515,000	0.30%	$8,441,000	0.31%	$8,348,000	0.22%	$5,653,000	0.19%	$4,704,000
Normal Cost & Expense	9.27%	$293,184,000	9.12%	$277,587,000	9.55%	$280,681,000	9.39%	$264,187,000	9.86%	$265,734,000	9.82%	$252,167,000	9.85%	$243,611,000
Normal Cost & Expense	9.27%	$293,184,000	9.12%	$277,587,000	9.55%	$280,681,000	9.39%	$264,187,000	9.86%	$265,734,000	9.82%	$252,167,000	9.85%	$243,611,000
Amortization	(0.90%)	($28,468,000)	(1.55%)	($47,127,000)	(1.70%)	($49,945,000)	(1.47%)	($41,361,000)	0.00%	$0	0.00%	$0	0.00%	$0
Total Requirements	8.37%	$264,716,000	7.57%	$230,460,000	7.85%	$230,736,000	7.92%	$222,826,000	9.86%	$265,734,000	9.82%	$252,167,000	9.85%	$243,611,000
Employee Contributions	5.00%	$158,163,000	5.00%	$152,031,000	5.00%	$146,914,000	5.00%	$140,710,000	5.00%	$134,698,000	5.00%	$128,538,000	5.00%	$123,892,000
Employer Contributions	5.00%	$158,163,000	5.00%	$152,031,000	5.00%	$146,914,000	5.00%	$140,710,000	5.00%	$134,698,000	5.00%	$128,538,000	6.64%	$164,492,000
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	10.00%	$316,326,000	10.00%	$304,062,000	10.00%	$293,828,000	10.00%	$281,420,000	10.00%	$269,396,000	10.00%	$257,076,000	11.64%	$288,384,000
Total Requirements	8.37%	$264,716,000	7.57%	$230,460,000	7.85%	$230,736,000	7.92%	$222,826,000	9.86%	$265,734,000	9.82%	$252,167,000	9.85%	$243,611,000
Total Contributions	10.00%	$316,326,000	10.00%	$304,062,000	10.00%	$293,828,000	10.00%	$281,420,000	10.00%	$269,396,000	10.00%	$257,076,000	11.64%	$288,384,000
Deficiency (Surplus)	(1.63%)	($51,610,000)	(2.43%)	($73,602,000)	(2.15%)	($63,092,000)	(2.08%)	($58,594,000)	(0.14%)	($3,662,000)	(0.18%)	($4,909,000)	(1.79%)	($44,773,000)
Amortization Target Date	2033		2032		2031		2030		2020		2020		2020	
Actuary	Milliman USA		Milliman USA		Milliman USA		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson	

Actuarial Valuation Data

Teachers Retirement Association

(TRA)

	1996		1995		1994		1993		1992		1991		1990	
<u>Membership</u>														
Active Members		68,490		67,558		66,514		65,268		65,557		65,093		64,324
Service Retirees		22,434		21,458		20,563		19,343		17,863		16,851		16,133
Disabilitants		409		379		345		354		297		280		257
Survivors		1,464		1,331		1,229		1,113		1,049		955		929
Deferred Retirees		5,767		5,103		4,499		4,030		3,548		3,134		1,955
Nonvested Former Members		<u>16,444</u>		<u>16,411</u>		<u>16,147</u>		<u>15,994</u>		<u>15,447</u>		<u>15,151</u>		<u>15,356</u>
Total Membership		115,008		112,240		109,297		106,102		103,761		101,464		98,954
<u>Funded Status</u>														
Accrued Liability		$10,366,168,000		$9,717,623,000		$9,115,266,000		$8,266,059		$7,662,522,000		$7,213,720,000		$6,611,074,000
Current Assets		<u>$9,541,221,000</u>		<u>$8,348,124,000</u>		<u>$7,611,935,000</u>		<u>$7,045,937</u>		<u>$6,324,733,000</u>		<u>$5,614,924,000</u>		<u>$5,131,999,000</u>
Unfunded Accrued Liability		$824,947,000		$1,369,499,000		$1,503,331,000		$1,220,122		$1,337,789,000		$1,598,796,000		$1,479,075,000
Funding Ratio	92.04%		85.91%		83.51%		85.24%		82.54%		77.84%		77.63%	
<u>Financing Requirements</u>														
Covered Payroll		$2,391,385,000		$2,325,059,000		$2,235,636,000		$2,156,000,000		$2,112,401,000		$2,044,754,000		$1,931,669,000
Benefits Payable		$378,073,000		$338,857,000		$309,036,000		$256,630,000		$227,067,000		$200,415,000		$179,792,000
Normal Cost	10.49%	$250,856,287	10.59%	$246,223,748	10.63%	$237,648,107	9.84%	$212,150,400	9.73%	$205,536,617	9.06%	$185,254,712	9.24%	$178,486,216
Administrative Expenses	<u>0.16%</u>	<u>$3,826,216</u>	<u>0.16%</u>	<u>$3,720,094</u>	<u>0.15%</u>	<u>$3,353,454</u>	<u>0.15%</u>	<u>$3,234,000</u>	<u>0.40%</u>	<u>$8,449,604</u>	<u>0.37%</u>	<u>$7,565,590</u>	<u>0.42%</u>	<u>$8,113,010</u>
Normal Cost & Expense	10.65%	$254,682,503	10.75%	$249,943,843	10.78%	$241,001,561	9.99%	$215,384,400	10.13%	$213,986,221	9.43%	$192,820,302	9.66%	$186,599,225
Normal Cost & Expense	10.65%	$254,682,503	10.75%	$249,943,843	10.78%	$241,001,561	9.99%	$215,384,400	10.13%	$213,986,221	9.43%	$192,820,302	9.66%	$186,599,225
Amortization	<u>2.13%</u>	<u>$50,936,501</u>	<u>3.55%</u>	<u>$82,539,595</u>	<u>3.95%</u>	<u>$88,307,622</u>	<u>2.76%</u>	<u>$59,505,600</u>	<u>3.00%</u>	<u>$63,372,030</u>	<u>3.61%</u>	<u>$73,815,619</u>	<u>3.45%</u>	<u>$66,642,581</u>
Total Requirements	12.78%	$305,619,003	14.30%	$332,483,437	14.73%	$329,309,183	12.75%	$274,890,000	13.13%	$277,358,251	13.04%	$266,635,922	13.11%	$253,241,806
Employee Contributions	6.15%	$147,070,178	6.51%	$151,361,341	6.51%	$145,539,904	4.52%	$97,451,200	4.54%	$95,903,005	4.56%	$93,240,782	4.58%	$88,470,440
Employer Contributions	8.15%	$194,897,878	8.15%	$189,492,309	8.15%	$182,204,334	8.16%	$175,929,600	8.18%	$172,794,402	8.20%	$167,669,828	8.22%	$158,783,192
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	<u>0.00%</u>	<u>$0</u>	<u>0.00%</u>	<u>$0</u>	<u>0.00%</u>	<u>$0</u>	<u>0.00%</u>	<u>$0</u>	<u>0.00%</u>	<u>$0</u>	<u>0.00%</u>	<u>$0</u>	<u>0.00%</u>	<u>$0</u>
Total Contributions	14.66%	$341,968,055	14.66%	$340,853,649	14.66%	$327,744,238	12.68%	$273,380,800	12.72%	$268,697,407	12.76%	$260,910,610	12.80%	$247,253,632
Total Requirements	12.78%	$305,619,003	14.30%	$332,483,437	14.73%	$329,309,183	12.75%	$274,890,000	13.13%	$275,003,000	13.04%	$266,635,922	13.11%	$253,241,806
Total Contributions	<u>14.66%</u>	<u>$341,968,055</u>	<u>14.66%</u>	<u>$340,853,649</u>	<u>14.66%</u>	<u>$327,744,238</u>	<u>12.68%</u>	<u>$273,380,800</u>	<u>12.72%</u>	<u>$273,637,000</u>	<u>12.76%</u>	<u>$260,910,610</u>	<u>12.80%</u>	<u>$247,253,632</u>
Deficiency (Surplus)	(1.88%)	($36,349,052)	(0.36%)	($8,370,212)	0.07%	$1,564,945	0.07%	$1,509,200	0.41%	$1,366,000	0.28%	$5,725,311	0.31%	$5,988,174
Amortization Target Date	2020		2020		2020		2020		2020		2020		2020	
Actuary	Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Wyatt	

Actuarial Valuation Data

Teachers Retirement Association

(TRA)

	1989		1988		1987		1986		1985		1984		1983	
Membership														
Active Members		64,796		63,326		61,283		60,174		58,533		58,190		57,831
Service Retirees		15,406		14,974		14,582		13,695		12,798		11,885		12,427
Disabilitants		241		221		217		222		223		222		0
Survivors		903		869		830		808		781		737		0
Deferred Retirees		1,887		1,878		1,926		2,088		2,191		0		0
Nonvested Former Members		14,205		13,310		13,106		12,957		13,628		0		16,842
Total Membership		97,438		94,578		91,944		89,944		88,154		71,034		87,100
Funded Status														
Accrued Liability		$6,249,413,000		$5,413,782,000		$5,000,785,000		$4,539,359,000		$4,166,116,000		$3,716,432,337		$3,472,264,036
Current Assets		$4,567,997,000		$3,806,239,000		$3,467,205,000		$2,962,050,000		$2,585,778,000		$2,216,249,806		$1,983,579,211
Unfunded Accrued Liability		$1,681,416,000		$1,607,543,000		$1,533,580,000		$1,577,309,000		$1,580,338,000		$1,500,182,531		$1,488,684,825
Funding Ratio	73.09%		70.31%		69.33%		65.25%		62.07%		59.63%		57.13%	
Financing Requirements														
Covered Payroll		$1,887,073,000		$1,752,322,000		$1,601,809,000		$1,498,590,000		$1,393,716,000		$1,232,356,505		$1,146,613,563
Benefits Payable		$160,850,000		$148,243,000		$125,152,000		$110,908,000		$91,606,536		$75,269,396		$62,177,636
Normal Cost	8.30%	$156,627,059	7.77%	$136,155,419	7.82%	$125,261,464	7.96%	$119,287,764	7.94%	$110,661,050	8.66%	$106,722,073	9.47%	$108,584,304
Administrative Expenses	0.30%	$5,661,219	0.30%	$5,256,966	0.31%	$4,965,608	0.32%	$4,795,488	0.33%	$4,599,263	0.16%	$1,971,770	0.13%	$1,490,598
Normal Cost & Expense	8.60%	$162,288,278	8.07%	$141,412,385	8.13%	$130,227,072	8.28%	$124,083,252	8.27%	$115,260,313	8.82%	$108,693,844	9.60%	$110,074,902
Normal Cost & Expense	8.60%	$162,288,278	8.07%	$141,412,385	8.13%	$130,227,072	8.28%	$124,083,252	8.27%	$115,260,313	8.82%	$108,693,844	9.60%	$110,074,902
Amortization	3.92%	$73,973,262	5.22%	$91,471,208	5.23%	$83,774,611	5.54%	$83,021,886	5.76%	$80,278,042	5.73%	$70,614,028	9.03%	$103,539,205
Total Requirements	12.52%	$236,261,540	13.29%	$232,883,594	13.36%	$214,001,682	13.82%	$207,105,138	14.03%	$195,538,355	14.55%	$179,307,871	18.63%	$213,614,107
Employee Contributions	4.59%	$86,616,651	4.60%	$80,606,812	4.62%	$74,003,576	4.64%	$69,534,576	4.68%	$65,225,909	4.71%	$58,043,991	4.73%	$54,234,822
Employer Contributions	9.07%	$171,157,521	9.09%	$159,286,070	9.09%	$145,604,438	9.13%	$136,821,267	9.15%	$127,525,014	4.71%	$58,043,991	4.73%	$54,234,822
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	4.48%	$55,209,571	3.05%	$34,971,714
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	13.66%	$257,774,172	13.69%	$239,892,882	13.71%	$219,608,014	13.77%	$206,355,843	13.83%	$192,750,923	13.90%	$171,297,554	12.51%	$143,441,357
Total Requirements	12.52%	$236,261,540	13.29%	$232,883,594	13.36%	$214,001,682	13.82%	$207,105,138	14.03%	$195,538,355	14.55%	$179,307,871	18.63%	$213,614,107
Total Contributions	13.66%	$257,774,172	13.69%	$239,892,882	13.71%	$219,608,014	13.77%	$206,355,843	13.83%	$192,750,923	13.90%	$171,297,554	12.51%	$143,441,357
Deficiency (Surplus)	(1.14%)	($21,512,632)	(0.40%)	($7,009,288)	(0.35%)	($5,606,331)	0.05%	$749,295	0.20%	$2,787,432	0.65%	$8,010,317	6.12%	$70,172,750
Amortization Target Date	2020		2009		2009		2009		2009		2009		2009	
Actuary	Wyatt		Wyatt		Wyatt		Wyatt		Wyatt		Flott		Flott	

Funded Status of the State Patrol Retirement Plan 1983-2009

Actuarial Valuation Data

State Patrol Retirement Fund

(STPATROL)

	2009		2008		2007*		2007**		2006		2005		2004	
Membership														
Active Members		876		840		844		844		851		831		834
Service Retirees		673		660		645		645		626		612		607
Disabilitants		44		42		41		41		41		35		34
Survivors		191		194		190		190		179		178		163
Deferred Retirees		41		35		32		32		33		34		27
Nonvested Former Members		11		7		8		8		9		14		12
Total Membership		1,836		1,778		1,760		1,760		1,739		1,704		1,677
Funded Status														
Accrued Liability		$725,334,000		$693,686,000		$673,443,671		$673,443,671		$641,479,078		$566,763,689		$545,243,508
Current Assets		$584,501,000		$595,082,000		$617,900,887		$650,135,655		$618,990,349		$601,220,181		$594,785,274
Unfunded Accrued Liability		$140,833,000		$98,604,000		$55,542,784		$23,308,016		$22,488,729		($34,456,492)		($49,541,766)
Funding Ratio	80.58%		85.79%		91.75%		96.54%		96.49%		106.08%		109.09%	
Financing Requirements														
Covered Payroll		$67,421,000		$63,771,000		$61,497,551		$61,497,551		$57,765,450		$55,142,064		$53,119,128
Benefits Payable		$44,480,000		$42,804,000		$40,581,617		$40,581,617		$38,767,492		$36,956,287		$35,501,294
Normal Cost	25.37%	$17,103,000	25.15%	$16,041,000	24.75%	$15,219,351	24.75%	$15,219,351	24.41%	$14,098,467	23.03%	$12,698,808	23.00%	$12,212,574
Administrative Expenses	0.16%	$108,000	0.18%	$115,000	0.19%	$116,845	0.19%	$116,845	0.18%	$103,978	0.17%	$93,742	0.17%	$90,303
Normal Cost & Expense	25.53%	$17,211,000	25.33%	$16,156,000	24.94%	$15,336,196	24.94%	$15,336,196	24.59%	$14,202,445	23.20%	$12,792,550	23.17%	$12,302,877
Normal Cost & Expense	25.53%	$17,211,000	25.33%	$16,156,000	24.94%	$15,336,196	24.94%	$15,336,196	24.59%	$14,202,445	23.20%	$12,792,550	23.17%	$12,302,877
Amortization	12.63%	$8,515,000	9.15%	$5,838,000	4.96%	$3,050,279	2.08%	$1,279,149	2.10%	$1,213,075	(3.36%)	($1,852,773)	(5.02%)	($2,666,580)
Total Requirements	38.16%	$25,726,000	34.49%	$21,994,000	29.90%	$18,386,475	27.02%	$16,615,345	26.69%	$15,415,520	19.84%	$10,939,777	18.15%	$9,636,297
Employee Contributions	10.40%	$7,012,000	9.80%	$6,250,000	9.10%	$5,596,277	9.10%	$5,596,277	8.40%	$4,852,298	8.40%	$4,631,933	8.40%	$4,462,007
Employer Contributions	15.60%	$10,518,000	14.60%	$9,310,000	13.60%	$8,363,667	13.60%	$8,363,667	12.60%	$7,278,447	12.60%	$6,947,900	12.60%	$6,693,010
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	26.00%	$17,530,000	24.40%	$15,560,000	22.70%	$13,959,944	22.70%	$13,959,944	21.00%	$12,130,745	21.00%	$11,579,833	21.00%	$11,155,017
Total Requirements	38.16%	$25,726,000	34.49%	$21,994,000	29.90%	$18,386,475	27.02%	$16,615,345	26.69%	$15,415,520	19.84%	$10,939,777	18.15%	$9,636,297
Total Contributions	26.00%	$17,530,000	24.40%	$15,560,000	22.70%	$13,959,944	22.70%	$13,959,944	21.00%	$12,130,745	21.00%	$11,579,833	21.00%	$11,155,017
Deficiency (Surplus)	12.16%	$8,196,000	10.09%	$6,434,000	7.20%	$4,426,531	4.32%	$2,655,401	5.69%	$3,284,775	(1.16%)	($640,056)	(2.85%)	($1,518,720)
Amortization Target Date	2036		2036		2036		2036		2036		2035		2034	
Actuary	Mercer		Mercer		Segal		Segal		Segal		Segal		Segal	

* Reflects 2007 Asset Valuation Method change

** Current Assets and Amortization results do not reflect the 2007 Asset Valuation Method change

(2/23/2010)

Actuarial Valuation Data

State Patrol Retirement Fund

(STPATROL)

	2003		2002		2001		2000		1999		1998		1997	
Membership														
Active Members		805		810		823		830		825		806		795
Service Retirees		592		577		556		531		503		462		422
Disabilitants		31		29		25		22		23		21		20
Survivors		162		156		164		457		146		137		128
Deferred Retirees		20		27		25		24		23		21		21
Nonvested Former Members		13		11		10		10		10		7		7
Total Membership		1,623		1,610		1,603		1,874		1,530		1,454		1,393
Funded Status														
Accrued Liability		$538,980,000		$510,344,000		$489,483,000		$458,384,000		$406,215,000		$371,369,000		$332,427,000
Current Assets		$591,521,000		$591,383,000		$572,815,000		$528,573,000		$472,687,000		$430,011,000		$375,650,000
Unfunded Accrued Liability		($52,541,000)		($81,039,000)		($83,332,000)		($70,189,000)		($66,472,000)		($58,642,000)		($43,223,000)
Funding Ratio	109.75%		115.88%		117.02%		115.31%		116.36%		115.79%		113.00%	
Financing Requirements														
Covered Payroll		$56,569,000		$51,473,000		$51,574,000		$51,980,000		$47,034,000		$45,217,000		$43,084,000
Benefits Payable		$34,316,000		$33,031,000		$29,935,000		$25,789,000		$22,226,000		$18,353,000		$14,642,000
Normal Cost	22.62%	$12,797,000	22.62%	$11,649,000	22.53%	$11,620,000	22.55%	$11,725,000	22.62%	$10,636,000	22.50%	$10,170,000	21.91%	$9,443,000
Administrative Expenses	0.18%	$102,000	0.20%	$103,000	0.17%	$88,000	0.20%	$104,000	0.16%	$75,000	0.15%	$68,000	0.15%	$65,000
Normal Cost & Expense	22.80%	$12,899,000	22.82%	$11,752,000	22.70%	$11,708,000	22.75%	$11,829,000	22.78%	$10,711,000	22.65%	$10,238,000	22.06%	$9,508,000
Normal Cost & Expense	22.80%	$12,899,000	22.82%	$11,752,000	22.70%	$11,708,000	22.75%	$11,829,000	22.78%	$10,711,000	22.65%	$10,238,000	22.06%	$9,508,000
Amortization	(5.00%)	($2,828,000)	(8.48%)	($4,365,000)	(8.70%)	($4,487,000)	(7.27%)	($3,779,000)	(9.57%)	($4,501,000)	(8.51%)	($3,848,000)	(6.39%)	($2,753,000)
Total Requirements	17.81%	$10,071,000	14.34%	$7,387,000	14.00%	$7,221,000	15.48%	$8,050,000	13.21%	$6,210,000	14.14%	$6,390,000	15.67%	$6,755,000
Employee Contributions	8.40%	$4,752,000	8.40%	$4,324,000	8.40%	$4,332,000	8.40%	$4,366,000	8.40%	$3,951,000	8.40%	$3,798,000	8.40%	$3,619,000
Employer Contributions	12.60%	$7,128,000	12.60%	$6,486,000	12.60%	$6,498,000	12.60%	$6,550,000	12.60%	$5,926,000	12.60%	$5,697,000	12.60%	$5,429,000
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	21.00%	$11,880,000	21.00%	$10,810,000	21.00%	$10,830,000	21.00%	$10,916,000	21.00%	$9,877,000	21.00%	$9,495,000	21.00%	$9,048,000
Total Requirements	17.81%	$10,071,000	14.34%	$7,387,000	14.00%	$7,221,000	15.48%	$8,050,000	13.21%	$6,210,000	14.14%	$6,390,000	15.67%	$6,755,000
Total Contributions	21.00%	$11,880,000	21.00%	$10,810,000	21.00%	$10,830,000	21.00%	$10,916,000	21.00%	$9,877,000	21.00%	$9,495,000	21.00%	$9,048,000
Deficiency (Surplus)	(3.19%)	($1,809,000)	(6.66%)	($3,423,000)	(7.00%)	($3,609,000)	(5.52%)	($2,866,000)	(7.79%)	($3,667,000)	(6.86%)	($3,105,000)	(5.33%)	($2,293,000)
Amortization Target Date	2033		2032		2031		2030		2020		2020		2020	
Actuary	Milliman USA		Milliman USA		Milliman USA		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson	

Actuarial Valuation Data

State Patrol Retirement Fund

(STPATROL)

	1996		1995		1994		1993		1992		1991		1990	
Membership														
Active Members		777		803		788		781		795		809		788
Service Retirees		416		401		391		377		373		363		346
Disabilitants		18		18		18		15		15		15		14
Survivors		126		121		120		119		109		109		105
Deferred Retirees		22		19		21		18		19		15		23
Nonvested Former Members		6		5		3		3		3		0		4
Total Membership		1,365		1,367		1,341		1,313		1,314		1,311		1,280
Funded Status														
Accrued Liability		$303,941,000		$283,078,000		$275,377,000		$258,202,000		$233,656,000		$224,033,000		$207,343,000
Current Assets		$323,868,000		$284,918,000		$262,570,000		$244,352,000		$222,314,000		$200,068,000		$185,699,000
Unfunded Accrued Liability		($19,927,000)		($1,840,000)		$12,807,000		$13,850,000		$11,342,000		$23,965,000		$21,644,000
Funding Ratio	106.56%		100.65%		95.35%		94.60%		95.15%		89.30%		89.56%	
Financing Requirements														
Covered Payroll		$40,399,000		$39,838,000		$41,462,000		$40,654,000		$37,113,000		$37,777,000		$34,423,000
Benefits Payable		$13,279,000		$12,092,000		$11,272,000		$10,253,000		$9,603,000		$8,720,000		$7,846,000
Normal Cost	21.19%	$8,560,548	21.21%	$8,449,640	20.08%	$8,325,570	20.12%	$8,179,585	20.19%	$7,493,115	19.02%	$7,185,185	18.53%	$6,378,582
Administrative Expenses	0.14%	$56,559	0.13%	$51,789	0.16%	$66,339	0.16%	$65,046	0.63%	$233,812	0.63%	$237,995	0.79%	$271,942
Normal Cost & Expense	21.33%	$8,617,107	21.34%	$8,501,429	20.24%	$8,391,909	20.28%	$8,244,631	20.82%	$7,726,927	19.65%	$7,423,181	19.32%	$6,650,524
Normal Cost & Expense	21.33%	$8,617,107	21.34%	$8,501,429	20.24%	$8,391,909	20.28%	$8,244,631	20.82%	$7,726,927	19.65%	$7,423,181	19.32%	$6,650,524
Amortization	0.00%	$0	0.00%	$0	1.55%	$642,661	1.66%	$674,856	1.45%	$538,139	2.93%	$1,106,866	2.83%	$974,171
Total Requirements	21.33%	$8,617,107	21.34%	$8,501,429	21.79%	$9,034,570	21.94%	$8,919,488	22.27%	$8,265,065	22.58%	$8,530,047	22.15%	$7,624,695
Employee Contributions	8.92%	$3,603,591	8.92%	$3,553,550	8.50%	$3,524,270	8.50%	$3,455,590	8.50%	$3,154,605	8.50%	$3,211,045	8.50%	$2,925,955
Employer Contributions	14.88%	$6,011,371	14.88%	$5,927,894	14.88%	$6,169,546	14.88%	$6,049,315	14.88%	$5,522,414	14.88%	$5,621,218	14.88%	$5,122,142
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	23.80%	$9,614,962	23.80%	$9,481,444	23.38%	$9,693,816	23.38%	$9,504,905	23.38%	$8,677,019	23.38%	$8,832,263	23.38%	$8,048,097
Total Requirements	21.33%	$8,617,107	21.34%	$8,501,429	21.79%	$9,034,570	21.94%	$8,919,488	22.27%	$8,265,065	22.58%	$8,530,047	22.15%	$7,624,695
Total Contributions	23.80%	$9,614,962	23.80%	$9,481,444	23.38%	$9,693,816	23.38%	$9,504,905	23.38%	$8,677,019	23.38%	$8,832,263	23.38%	$8,048,097
Deficiency (Surplus)	(2.47%)	($997,855)	(2.46%)	($980,015)	(1.59%)	($659,246)	(1.44%)	($585,418)	(1.11%)	($411,954)	(0.80%)	($302,216)	(1.23%)	($423,403)
Amortization Target Date	2020		2020		2020		2020		2020		2020		2020	
Actuary	Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Wyatt	

Actuarial Valuation Data

State Patrol Retirement Fund

(STPATROL)

	1989		1988		1987		1986		1985		1984		1983	
Membership														
Active Members		765		740		771		769		764		741		774
Service Retirees		340		339		318		306		285		397		359
Disabilitants		14		13		13		13		13		0		0
Survivors		101		103		99		106		109		0		0
Deferred Retirees		19		16		16		18		21		21		22
Nonvested Former Members		7		8		8		9		9		10		10
Total Membership		1,246		1,219		1,225		1,221		1,201		1,169		1,165
Funded Status														
Accrued Liability		$194,434,000		$175,062,000		$160,628,000		$149,064,000		$134,508,000		$119,682,218		$132,174,955
Current Assets		$167,271,000		$148,355,000		$136,397,000		$118,174,000		$100,486,000		$86,784,592		$78,774,772
Unfunded Accrued Liability		$27,163,000		$26,707,000		$24,231,000		$30,890,000		$34,022,000		$32,897,626		$53,400,183
Funding Ratio	86.03%		84.74%		84.91%		79.28%		74.71%		72.51%		59.60%	
Financing Requirements														
Covered Payroll		$32,591,000		$29,267,000		$28,583,000		$27,474,000		$25,846,000		$23,016,272		$21,562,464
Benefits Payable		$7,187,000		$6,263,000		$5,431,000		$4,753,000		$3,967,000		$3,536,079		$2,777,224
Normal Cost	17.61%	$5,739,275	18.08%	$5,291,474	18.10%	$5,173,523	18.47%	$5,074,448	18.66%	$4,822,864	18.68%	$4,299,440	17.65%	$3,805,775
Administrative Expenses	0.57%	$185,769	0.60%	$175,602	0.66%	$188,648	0.61%	$167,591	0.58%	$149,907	0.27%	$62,144	0.18%	$38,812
Normal Cost & Expense	18.18%	$5,925,044	18.68%	$5,467,076	18.76%	$5,362,171	19.08%	$5,242,039	19.24%	$4,972,770	18.95%	$4,361,584	17.83%	$3,844,587
Normal Cost & Expense	18.18%	$5,925,044	18.68%	$5,467,076	18.76%	$5,362,171	19.08%	$5,242,039	19.24%	$4,972,770	18.95%	$4,361,584	17.83%	$3,844,587
Amortization	3.66%	$1,192,831	5.19%	$1,518,957	4.63%	$1,323,393	5.92%	$1,626,461	6.68%	$1,726,513	7.00%	$1,611,139	16.81%	$3,624,650
Total Requirements	21.84%	$7,117,874	23.87%	$6,986,033	23.39%	$6,685,564	25.00%	$6,868,500	25.92%	$6,699,283	25.95%	$5,972,723	34.64%	$7,469,238
Employee Contributions	8.50%	$2,770,235	8.50%	$2,487,695	8.50%	$2,429,555	8.50%	$2,335,290	8.50%	$2,196,910	8.50%	$1,956,383	8.50%	$1,832,809
Employer Contributions	18.90%	$6,159,699	18.90%	$5,531,463	18.90%	$5,402,187	18.90%	$5,192,586	18.90%	$4,884,894	18.90%	$4,350,075	12.00%	$2,587,496
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	9.00%	$1,940,622
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	27.40%	$8,929,934	27.40%	$8,019,158	27.40%	$7,831,742	27.40%	$7,527,876	27.40%	$7,081,804	27.40%	$6,306,459	29.50%	$6,360,927
Total Requirements	21.84%	$7,117,874	23.87%	$6,986,033	23.39%	$6,685,564	25.00%	$6,868,500	25.92%	$6,699,283	25.95%	$5,972,723	34.64%	$7,469,238
Total Contributions	27.40%	$8,929,934	27.40%	$8,019,158	27.40%	$7,831,742	27.40%	$7,527,876	27.40%	$7,081,804	27.40%	$6,306,459	29.50%	$6,360,927
Deficiency (Surplus)	(5.56%)	($1,812,060)	(3.53%)	($1,033,125)	(4.01%)	($1,146,178)	(2.40%)	($659,376)	(1.48%)	($382,521)	(1.45%)	($333,736)	5.14%	$1,108,311
Amortization Target Date	2020		2009		2009		2009		2009		2009		2009	
Actuary	Wyatt		Wyatt		Wyatt		Wyatt		Wyatt		Touche Ross		Touche Ross	

Funded Status of PERA-P&F 1983-2009

Actuarial Valuation Data

Public Employees Police and Fire Fund

(PERA-P&F)

	2009		2008		2007*		2007**		2006		2005		2004	
Membership														
Active Members		11,035		10,961		10,720		10,720		10,591		10,235		10,055
Service Retirees		5,213		5,079		4,938		4,938		4,756		4,668		4,547
Disabilitants		838		824		803		803		765		686		700
Survivors		1,380		1,291		1,291		1,291		1,280		1,261		1,385
Deferred Retirees		1,280		1,242		1,200		1,200		999		927		878
Nonvested Former Members		911		879		814		814		757		729		750
Total Membership		20,657		20,276		19,766		19,766		19,148		18,506		18,315
Funded Status														
Accrued Liability		$6,296,274,000		$5,918,061,000		$5,669,346,646		$5,669,346,646		$5,260,564,020		$4,956,339,899		$4,692,190,387
Current Assets		$5,239,855,000		$5,233,015,000		$5,198,921,940		$5,382,707,345		$5,017,950,719		$4,814,961,076		$4,746,834,494
Unfunded Accrued Liability		$1,056,419,000		$685,046,000		$470,424,706		$286,639,301		$242,613,301		$141,378,823		($54,644,107)
Funding Ratio	83.22%		88.42%		91.70%		94.94%		95.39%		97.15%		101.16%	
Financing Requirements														
Covered Payroll		$786,887,000		$746,743,000		$699,841,244		$699,841,244		$668,088,065		$625,806,943		$593,944,656
Benefits Payable		$310,099,000		$295,994,000		$280,266,868		$280,266,868		$264,601,229		$251,428,946		$237,442,200
Normal Cost	22.07%	$173,703,000	23.07%	$172,273,000	22.19%	$155,328,501	22.19%	$155,328,501	22.32%	$149,097,708	22.28%	$139,384,787	22.37%	$132,886,767
Administrative Expenses	0.13%	$1,023,000	0.11%	$821,000	0.10%	$699,841	0.10%	$699,841	0.11%	$734,897	0.12%	$750,968	0.12%	$712,734
Normal Cost & Expense	22.20%	$174,726,000	23.18%	$173,094,000	22.29%	$156,028,342	22.29%	$156,028,342	22.43%	$149,832,605	22.40%	$140,135,755	22.49%	$133,599,501
Normal Cost & Expense	22.20%	$174,726,000	23.18%	$173,094,000	22.29%	$156,028,342	22.29%	$156,028,342	22.43%	$149,832,605	22.40%	$140,135,755	22.49%	$133,599,501
Amortization	7.79%	$61,298,000	5.23%	$39,055,000	6.19%	$43,320,173	3.77%	$26,384,015	3.14%	$20,977,965	1.84%	$11,514,848	(0.44%)	($2,613,356)
Total Requirements	29.99%	$236,024,000	28.41%	$212,149,000	28.48%	$199,348,515	26.06%	$182,412,357	25.57%	$170,810,570	24.24%	$151,650,603	22.05%	$130,986,145
Employee Contributions	9.40%	$73,967,000	9.00%	$67,207,000	8.20%	$57,386,982	8.20%	$57,386,982	7.40%	$49,438,517	6.60%	$41,303,258	6.20%	$36,824,569
Employer Contributions	14.10%	$110,951,000	13.50%	$100,810,000	12.30%	$86,080,473	12.30%	$86,080,473	11.10%	$74,157,775	9.90%	$61,954,887	9.30%	$55,236,853
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	23.50%	$184,918,000	22.50%	$168,017,000	20.50%	$143,467,455	20.50%	$143,467,455	18.50%	$123,596,292	16.50%	$103,258,145	15.50%	$92,061,422
Total Requirements	29.99%	$236,024,000	28.41%	$212,149,000	28.48%	$199,348,515	26.06%	$182,412,357	25.57%	$170,810,570	24.24%	$151,650,603	22.05%	$130,986,145
Total Contributions	23.50%	$184,918,000	22.50%	$168,017,000	20.50%	$143,467,455	20.50%	$143,467,455	18.50%	$123,596,292	16.50%	$103,258,145	15.50%	$92,061,422
Deficiency (Surplus)	6.49%	$51,106,000	5.91%	$44,132,000	7.98%	$55,881,060	5.56%	$38,944,902	7.07%	$47,214,278	7.74%	$48,392,458	6.55%	$38,924,723
Amortization Target Date	2038		2038		2020		2020		2020		2020		2034	
Actuary	Mercer		Mercer		Segal		Segal		Segal		Segal		Segal	

** *Current Assets and Amortization results do not reflect the 2007 Asset Valuation Method change*

* *Reflects 2007 Asset Valuation Method change*

(2/23/2010)

Actuarial Valuation Data

Public Employees Police and Fire Fund

(PERA-P&F)

	2003		2002		2001		2000		1999		1998		1997	
Membership														
Active Members		9,948		9,940		9,858		9,627		9,477		8,499		8,079
Service Retirees		4,381		4,191		4,188		3,991		3,674		1,781		1,608
Disabilitants		614		574		543		482		412		251		215
Survivors		1,213		1,206		1,267		1,205		1,173		492		471
Deferred Retirees		758		637		554		470		368		292		292
Nonvested Former Members		740		663		610		626		195		201		201
Total Membership		17,654		17,211		17,020		16,401		15,299		11,516		10,866
Funded Status														
Accrued Liability		$4,390,953,000		$3,886,311,000		$3,712,360,000		$3,383,187,000		$3,004,637,000		$1,741,344,000		$1,556,483,000
Current Assets		$4,713,606,000		$4,707,255,000		$4,510,134,000		$4,145,351,000		$3,679,551,000		$2,337,313,000		$1,974,635,000
Unfunded Accrued Liability		($322,653,000)		($820,944,000)		($797,774,000)		($762,164,000)		($674,914,000)		($595,969,000)		($418,152,000)
Funding Ratio	107.35%		121.12%		121.49%		122.53%		122.46%		134.22%		126.87%	
Financing Requirements														
Covered Payroll		$582,688,000		$541,250,000		$528,942,000		$494,134,000		$474,245,000		$399,499,000		$369,503,000
Benefits Payable		$225,434,000		$212,405,000		$192,245,000		$165,719,000		$68,672,000		$56,034,000		$43,045,000
Normal Cost	22.05%	$128,469,000	20.22%	$109,474,000	20.21%	$106,905,000	19.93%	$98,462,000	20.30%	$96,225,000	20.21%	$80,719,000	21.65%	$80,020,000
Administrative Expenses	0.12%	$699,000	0.12%	$650,000	0.13%	$688,000	0.14%	$692,000	0.23%	$1,091,000	0.14%	$559,000	0.13%	$480,000
Normal Cost & Expense	22.17%	$129,168,000	20.34%	$110,124,000	20.34%	$107,593,000	20.07%	$99,154,000	20.53%	$97,316,000	20.35%	$81,278,000	21.78%	$80,500,000
Normal Cost & Expense	22.17%	$129,168,000	20.34%	$110,124,000	20.34%	$107,593,000	20.07%	$99,154,000	20.53%	$97,316,000	20.35%	$81,278,000	21.78%	$80,500,000
Amortization	(2.65%)	($15,441,000)	(7.26%)	($39,295,000)	(7.22%)	($38,190,000)	(7.38%)	($36,467,000)	(8.85%)	($41,971,000)	(8.95%)	($35,755,000)	(6.57%)	($24,276,000)
Total Requirements	19.52%	$113,727,000	13.08%	$70,829,000	13.12%	$69,403,000	12.68%	$62,687,000	11.68%	$55,345,000	11.40%	$45,523,000	15.21%	$56,224,000
Employee Contributions	6.20%	$36,127,000	6.20%	$33,558,000	6.20%	$32,793,000	6.20%	$30,636,000	6.20%	$29,403,000	7.60%	$30,362,000	7.60%	$28,082,000
Employer Contributions	9.30%	$54,190,000	9.30%	$50,336,000	9.30%	$49,189,000	9.30%	$45,954,000	9.30%	$44,105,000	11.40%	$45,543,000	11.40%	$42,123,000
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	15.50%	$90,317,000	15.50%	$83,894,000	15.50%	$81,982,000	15.50%	$76,590,000	15.50%	$73,508,000	19.00%	$75,905,000	19.00%	$70,205,000
Total Requirements	19.52%	$113,727,000	13.08%	$70,829,000	13.12%	$69,403,000	12.68%	$62,687,000	11.68%	$55,345,000	11.40%	$45,523,000	15.21%	$56,224,000
Total Contributions	15.50%	$90,317,000	15.50%	$83,894,000	15.50%	$81,982,000	15.50%	$76,590,000	15.50%	$73,508,000	19.00%	$75,905,000	19.00%	$70,205,000
Deficiency (Surplus)	4.02%	$23,410,000	(2.42%)	($13,065,000)	(2.38%)	($12,579,000)	(2.82%)	($13,903,000)	(3.82%)	($18,163,000)	(7.60%)	($30,382,000)	(3.79%)	($13,981,000)
Amortization Target Date	2033		2032		2031		2030		2020		2020		2020	
Actuary	Milliman USA		Milliman USA		Milliman USA		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson	

Actuarial Valuation Data

Public Employees Police and Fire Fund

(PERA-P&F)

	1996		1995		1994		1993		1992		1991		1990	
Membership														
Active Members		7,680		7,380		7,043		6,785		6,521		6,309		6,136
Service Retirees		1,524		1,435		1,347		1,250		1,191		1,130		1,057
Disabilitants		184		146		116		94		93		93		89
Survivors		447		426		411		394		379		359		347
Deferred Retirees		267		250		234		215		187		165		128
Nonvested Former Members		162		141		140		121		120		112		121
Total Membership		10,264		9,778		9,291		8,859		8,491		8,168		7,878
Funded Status														
Accrued Liability		$1,334,202,000		$1,196,795,000		$1,099,221,000		$1,009,226,000		$888,826,000		$794,295,000		$715,963,000
Current Assets		$1,633,010,000		$1,385,901,000		$1,234,959,000		$1,118,342,000		$979,981,000		$839,560,000		$755,204,000
Unfunded Accrued Liability		($298,808,000)		($189,106,000)		($135,738,000)		($109,116,000)		($91,155,000)		($45,265,000)		($39,241,000)
Funding Ratio	122.40%		115.80%		112.35%		110.81%		110.26%		105.70%		105.48%	
Financing Requirements														
Covered Payroll		$336,779,000		$313,885,000		$294,339,000		$270,813,000		$255,270,000		$234,208,000		$216,022,000
Benefits Payable		$37,132,000		$32,152,000		$28,127,000		$24,619,000		$22,165,000		$19,672,000		$17,631,000
Normal Cost	19.73%	$66,446,497	19.49%	$61,176,187	19.47%	$57,307,803	19.26%	$52,158,584	18.05%	$46,076,235	17.08%	$40,002,726	16.98%	$36,680,536
Administrative Expenses	0.13%	$437,813	0.12%	$376,662	0.12%	$353,207	0.11%	$297,894	0.55%	$1,403,985	0.46%	$1,077,357	0.58%	$1,252,928
Normal Cost & Expense	19.86%	$66,884,309	19.61%	$61,552,849	19.59%	$57,661,010	19.37%	$52,456,478	18.60%	$47,480,220	17.54%	$41,080,083	17.56%	$37,933,463
Normal Cost & Expense	19.86%	$66,884,309	19.61%	$61,552,849	19.59%	$57,661,010	19.37%	$52,456,478	18.60%	$47,480,220	17.54%	$41,080,083	17.56%	$37,933,463
Amortization	(4.75%)	($15,997,003)	(3.12%)	($9,793,212)	(2.31%)	($6,799,231)	(1.92%)	($5,199,610)	0.00%	$0	0.00%	$0	0.00%	$0
Total Requirements	15.11%	$50,887,307	16.49%	$51,759,637	17.28%	$50,861,779	17.45%	$47,256,869	18.60%	$47,480,220	17.54%	$41,080,083	17.56%	$37,933,463
Employee Contributions	7.60%	$25,595,204	7.60%	$23,855,260	7.60%	$22,369,764	7.80%	$21,123,414	8.00%	$20,421,600	8.00%	$18,736,640	8.00%	$17,281,760
Employer Contributions	11.40%	$38,392,806	11.40%	$35,782,890	11.40%	$33,554,646	11.70%	$31,685,121	12.00%	$30,632,400	12.00%	$28,104,960	12.00%	$25,922,640
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	19.00%	$63,988,010	19.00%	$59,638,150	19.00%	$55,924,410	19.50%	$52,808,535	20.00%	$51,054,000	20.00%	$46,841,600	20.00%	$43,204,400
Total Requirements	15.11%	$50,887,307	16.49%	$51,759,637	17.28%	$50,861,779	17.45%	$47,256,869	18.60%	$47,480,220	17.54%	$41,080,083	17.56%	$37,933,463
Total Contributions	19.00%	$63,988,010	19.00%	$59,638,150	19.00%	$55,924,410	19.50%	$52,808,535	20.00%	$51,054,000	20.00%	$46,841,600	20.00%	$43,204,400
Deficiency (Surplus)	(3.89%)	($13,100,703)	(2.51%)	($7,878,514)	(1.72%)	($5,062,631)	(2.05%)	($5,551,667)	(1.40%)	($3,573,780)	(2.46%)	($5,761,517)	(2.44%)	($5,270,937)
Amortization Target Date	2020		2020		2020		2020		2020		2020		2020	
Actuary	Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Wyatt	

Actuarial Valuation Data

Public Employees Police and Fire Fund

(PERA-P&F)

	1989		1988		1987		1986		1985		1984		1983	
Membership														
Active Members		5,891		5,611		5,385		5,127		4,928		4,744		4,598
Service Retirees		995		965		895		838		765		715		674
Disabilitants		84		73		66		58		54		44		52
Survivors		333		325		310		302		279		242		224
Deferred Retirees		110		105		97		555		163		175		179
Nonvested Former Members		100		107		462		461		350		0		0
Total Membership		7,513		7,186		7,215		7,341		6,539		5,920		5,727
Funded Status														
Accrued Liability		$651,776,000		$574,133,000		$486,674,000		$447,742,000		$382,998,000		$306,817,265		$250,280,229
Current Assets		$656,654,000		$557,669,000		$506,153,000		$424,936,000		$338,400,000		$279,757,310		$249,539,820
Unfunded Accrued Liability		($4,878,000)		$16,464,000		($19,479,000)		$22,806,000		$44,598,000		$27,059,955		$740,409
Funding Ratio	100.75%		97.13%		104.00%		94.91%		88.36%		91.18%		99.70%	
Financing Requirements														
Covered Payroll		$197,982,000		$178,768,000		$164,975,000		$153,714,000		$139,222,000		$117,880,783		$105,153,394
Benefits Payable		$15,446,000		$13,821,000		$11,314,000		$9,555,000		$7,899,000		$6,592,773		$5,576,067
Normal Cost	15.79%	$31,261,358	15.84%	$28,316,851	15.47%	$25,521,633	15.84%	$24,348,298	16.22%	$22,581,808	15.66%	$18,460,131	15.48%	$16,277,745
Administrative Expenses	0.42%	$831,524	0.46%	$822,333	0.50%	$824,875	0.48%	$737,827	0.47%	$654,343	0.18%	$212,185	0.09%	$94,638
Normal Cost & Expense	16.21%	$32,092,882	16.30%	$29,139,184	15.97%	$26,346,508	16.32%	$25,086,125	16.69%	$23,236,152	15.84%	$18,672,316	15.57%	$16,372,383
Normal Cost & Expense	16.21%	$32,092,882	16.30%	$29,139,184	15.97%	$26,346,508	16.32%	$25,086,125	16.69%	$23,236,152	15.84%	$18,672,316	15.57%	$16,372,383
Amortization	0.00%	$0	0.39%	$697,195	0.00%	$0	0.78%	$1,198,969	1.63%	$2,269,319	1.09%	$1,284,901	0.05%	$52,577
Total Requirements	16.21%	$32,092,882	16.69%	$29,836,379	15.97%	$26,346,508	17.10%	$26,285,094	18.32%	$25,505,470	16.93%	$19,957,217	15.62%	$16,424,960
Employee Contributions	8.00%	$15,838,560	8.00%	$14,301,440	8.00%	$13,198,000	8.00%	$12,297,120	8.00%	$11,137,760	8.00%	$9,430,463	8.00%	$8,412,272
Employer Contributions	12.00%	$23,757,840	12.00%	$21,452,160	12.00%	$19,797,000	12.00%	$18,445,680	12.00%	$16,706,640	12.00%	$14,145,694	12.00%	$12,618,407
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	20.00%	$39,596,400	20.00%	$35,753,600	20.00%	$32,995,000	20.00%	$30,742,800	20.00%	$27,844,400	20.00%	$23,576,157	20.00%	$21,030,679
Total Requirements	16.21%	$32,092,882	16.69%	$29,836,379	15.97%	$26,346,508	17.10%	$26,285,094	18.32%	$25,505,470	16.93%	$19,957,217	15.62%	$16,424,960
Total Contributions	20.00%	$39,596,400	20.00%	$35,753,600	20.00%	$32,995,000	20.00%	$30,742,800	20.00%	$27,844,400	20.00%	$23,576,157	20.00%	$21,030,679
Deficiency (Surplus)	(3.79%)	($7,503,518)	(3.31%)	($5,917,221)	(4.03%)	($6,648,493)	(2.90%)	($4,457,706)	(1.68%)	($2,338,930)	(3.07%)	($3,618,940)	(4.38%)	($4,605,719)
Amortization Target Date	2020		2018		2009		2009		2009		2009		2009	
Actuary	Wyatt		Wyatt		Wyatt		Wyatt		Wyatt		Comp. & Capital		Comp. & Capital	

Funded Status of MSRS-Correctional 1983-2009

Actuarial Valuation Data

Correctional State Employees Retirement Fund

(MSRS-C)

	2009		2008		2007*		2007**		2006		2005		2004	
Membership														
Active Members		4,403		4,520		4,332		4,332		3,910		3,607		3,326
Service Retirees		1,381		1,293		1,210		1,210		1,101		1,025		943
Disabilitants		194		184		174		174		168		150		154
Survivors		134		123		118		118		106		104		91
Deferred Retirees		949		888		851		851		817		738		678
Nonvested Former Members		626		548		494		494		388		351		339
Total Membership		7,687		7,556		7,179		7,179		6,490		5,975		5,531
Funded Status														
Accrued Liability		$821,250,000		$760,363,000		$708,291,710		$708,291,710		$647,480,269		$546,117,680		$524,215,028
Current Assets		$590,339,000		$572,719,000		$559,851,700		$583,318,116		$535,356,819		$503,573,272		$486,617,032
Unfunded Accrued Liability		$230,911,000		$187,644,000		$148,440,010		$124,973,594		$112,123,450		$42,544,408		$37,597,996
Funding Ratio	71.88%		75.32%		79.04%		82.36%		82.68%		92.21%		92.83%	
Financing Requirements														
Covered Payroll		$208,388,000		$205,537,000		$187,309,014		$187,309,014		$162,744,640		$147,385,402		$134,117,624
Benefits Payable		$33,239,000		$30,932,000		$28,564,915		$28,564,915		$26,506,726		$19,025,766		$17,265,693
Normal Cost	18.22%	$37,970,000	18.24%	$37,500,000	17.68%	$33,124,289	17.68%	$33,124,289	17.69%	$28,786,714	15.01%	$22,111,459	14.96%	$20,066,740
Administrative Expenses	0.20%	$417,000	0.22%	$452,000	0.22%	$412,080	0.22%	$412,080	0.21%	$341,764	0.20%	$294,771	0.20%	$268,235
Normal Cost & Expense	18.42%	$38,387,000	18.46%	$37,952,000	17.90%	$33,536,369	17.90%	$33,536,369	17.90%	$29,128,478	15.21%	$22,406,230	15.16%	$20,334,975
Normal Cost & Expense	18.42%	$38,387,000	18.46%	$37,952,000	17.90%	$33,536,369	17.90%	$33,536,369	17.90%	$29,128,478	15.21%	$22,406,230	15.16%	$20,334,975
Amortization	6.43%	$13,399,000	5.20%	$10,688,000	6.54%	$12,250,010	5.51%	$10,320,727	5.44%	$8,853,309	2.50%	$3,684,635	2.31%	$3,098,117
Total Requirements	24.85%	$51,786,000	23.66%	$48,640,000	24.44%	$45,786,379	23.41%	$43,857,096	23.34%	$37,981,787	17.71%	$26,090,865	17.48%	$23,433,092
Employee Contributions	7.70%	$16,046,000	7.00%	$14,388,000	6.40%	$11,987,777	6.40%	$11,987,777	5.69%	$9,260,170	5.69%	$8,386,229	5.69%	$7,631,293
Employer Contributions	11.10%	$23,131,000	10.10%	$20,759,000	9.10%	$17,045,120	9.10%	$17,045,120	7.98%	$12,987,022	7.98%	$11,761,355	7.98%	$10,702,586
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	18.80%	$39,177,000	17.10%	$35,147,000	15.50%	$29,032,897	15.50%	$29,032,897	13.67%	$22,247,192	13.67%	$20,147,584	13.67%	$18,333,879
Total Requirements	24.85%	$51,786,000	23.66%	$48,640,000	24.44%	$45,786,379	23.41%	$43,857,096	23.34%	$37,981,787	17.71%	$26,090,865	17.48%	$23,433,092
Total Contributions	18.80%	$39,177,000	17.10%	$35,147,000	15.50%	$29,032,897	15.50%	$29,032,897	13.67%	$22,247,192	13.67%	$20,147,584	13.67%	$18,333,879
Deficiency (Surplus)	6.05%	$12,609,000	6.56%	$13,493,000	8.94%	$16,753,482	7.91%	$14,824,199	9.67%	$15,734,595	4.04%	$5,943,281	3.81%	$5,099,213
Amortization Target Date	2038		2038		2023		2023		2023		2020		2020	
Actuary	Mercer		Mercer		Segal		Segal		Segal		Segal		Segal	

** Reflects 2007 Asset Valuation Method change*

*** Current Assets and Amortization results do not reflect the 2007 Asset Valuation Method change*

Actuarial Valuation Data

Correctional State Employees Retirement Fund

(MSRS-C)

	2003		2002		2001		2000		1999		1998		1997	
Membership														
Active Members		3,262		3,249		3,182		3,098		2,882		2,817		2,600
Service Retirees		843		754		655		616		542		503		444
Disabilitants		135		115		92		75		60		49		39
Survivors		82		69		61		56		50		39		36
Deferred Retirees		601		550		483		419		337		291		282
Nonvested Former Members		340		268		220		163		135		114		90
Total Membership		5,263		5,005		4,693		4,427		4,006		3,813		3,491
Funded Status														
Accrued Liability		$484,974,000		$446,426,000		$398,633,000		$359,885,000		$307,408,000		$261,869,000		$212,638,000
Current Assets		$470,716,000		$457,416,000		$431,134,000		$386,964,000		$335,408,000		$295,291,000		$241,916,000
Unfunded Accrued Liability		$14,258,000		($10,990,000)		($32,501,000)		($27,079,000)		($28,000,000)		($33,422,000)		($29,278,000)
Funding Ratio	97.06%		102.46%		108.15%		107.52%		109.11%		112.76%		113.77%	
Financing Requirements														
Covered Payroll		$138,518,000		$131,232,000		$127,835,000		$127,557,000		$112,202,000		$106,178,000		$91,847,000
Benefits Payable		$17,276,000		$17,105,000		$14,911,000		$12,414,000		$10,190,000		$8,226,000		$6,267,000
Normal Cost	15.04%	$20,857,000	14.97%	$19,646,000	14.99%	$19,161,000	14.64%	$18,670,000	14.85%	$16,664,000	14.88%	$15,789,000	14.34%	$13,162,000
Administrative Expenses	0.22%	$305,000	0.21%	$276,000	0.19%	$243,000	0.22%	$281,000	0.15%	$168,000	0.17%	$181,000	0.18%	$165,000
Normal Cost & Expense	15.26%	$21,162,000	15.18%	$19,922,000	15.18%	$19,404,000	14.86%	$18,951,000	15.00%	$16,832,000	15.05%	$15,970,000	14.52%	$13,327,000
Normal Cost & Expense	15.26%	$21,162,000	15.18%	$19,922,000	15.18%	$19,404,000	14.86%	$18,951,000	15.00%	$16,832,000	15.05%	$15,970,000	14.52%	$13,327,000
Amortization	0.57%	$790,000	(0.45%)	($591,000)	(1.37%)	($1,751,000)	(1.14%)	($1,454,000)	(1.69%)	($1,896,000)	(2.06%)	($2,187,000)	(2.03%)	($1,864,000)
Total Requirements	15.83%	$21,952,000	14.73%	$19,331,000	13.81%	$17,653,000	13.72%	$17,497,000	13.31%	$14,936,000	12.99%	$13,783,000	12.49%	$11,463,000
Employee Contributions	5.69%	$7,882,000	5.69%	$7,467,000	5.69%	$7,274,000	5.69%	$7,258,000	5.69%	$6,384,000	5.50%	$5,840,000	5.50%	$5,052,000
Employer Contributions	7.98%	$11,054,000	7.98%	$10,472,000	7.98%	$10,201,000	7.98%	$10,179,000	7.98%	$8,954,000	7.70%	$8,176,000	7.70%	$7,072,000
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	13.67%	$18,936,000	13.67%	$17,939,000	13.67%	$17,475,000	13.67%	$17,437,000	13.67%	$15,338,000	13.20%	$14,016,000	13.20%	$12,124,000
Total Requirements	15.83%	$21,952,000	14.73%	$19,331,000	13.81%	$17,653,000	13.72%	$17,497,000	13.31%	$14,936,000	12.99%	$13,783,000	12.49%	$11,463,000
Total Contributions	13.67%	$18,936,000	13.67%	$17,939,000	13.67%	$17,475,000	13.67%	$17,437,000	13.67%	$15,338,000	13.20%	$14,016,000	13.20%	$12,124,000
Deficiency (Surplus)	2.16%	$3,016,000	1.06%	$1,392,000	0.14%	$178,000	0.05%	$60,000	(0.36%)	($402,000)	(0.21%)	($233,000)	(0.71%)	($661,000)
Amortization Target Date	2032		2032		2031		2030		2020		2020		2020	
Actuary	Milliman USA		Milliman USA		Milliman USA		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson	

Actuarial Valuation Data

Correctional State Employees Retirement Fund

(MSRS-C)

	1996		1995		1994		1993		1992		1991		1990	
Membership														
Active Members		2,264		2,117		1,761		1,618		1,573		1,467		1,416
Service Retirees		413		399		393		374		363		358		340
Disabilitants		33		25		21		20		17		12		9
Survivors		27		25		17		15		14		13		15
Deferred Retirees		324		296		248		225		181		157		113
Nonvested Former Members		84		74		44		51		44		48		45
Total Membership		3,145		2,936		2,484		2,303		2,192		2,055		1,938
Funded Status														
Accrued Liability		$170,959,000		$153,491,000		$152,702,000		$134,939,000		$123,515,000		$112,171,000		$102,217,000
Current Assets		$193,833,000		$165,427,000		$148,163,000		$135,939,000		$121,051,000		$105,926,000		$96,945,000
Unfunded Accrued Liability		($22,874,000)		($11,936,000)		$4,539,000		($1,000,000)		$2,464,000		$6,245,000		$5,272,000
Funding Ratio	113.38%		107.78%		97.02%		101.24%		98.01%		94.43%		94.84%	
Financing Requirements														
Covered Payroll		$78,030,000		$71,022,000		$70,562,000		$60,330,000		$56,044,000		$50,821,000		$47,075,000
Benefits Payable		$5,460,000		$4,971,000		$4,557,000		$4,150,000		$3,773,000		$3,493,000		$3,188,000
Normal Cost	11.05%	$8,622,315	10.96%	$7,784,011	10.81%	$7,627,752	10.82%	$6,527,706	10.74%	$6,019,126	9.81%	$4,985,540	9.67%	$4,552,153
Administrative Expenses	0.16%	$124,848	0.15%	$106,533	0.17%	$119,955	0.15%	$90,495	0.46%	$257,802	0.44%	$223,612	0.56%	$263,620
Normal Cost & Expense	11.21%	$8,747,163	11.11%	$7,890,544	10.98%	$7,747,708	10.97%	$6,618,201	11.20%	$6,276,928	10.25%	$5,209,153	10.23%	$4,815,773
Normal Cost & Expense	11.21%	$8,747,163	11.11%	$7,890,544	10.98%	$7,747,708	10.97%	$6,618,201	11.20%	$6,276,928	10.25%	$5,209,153	10.23%	$4,815,773
Amortization	0.00%	$0	0.00%	$0	0.32%	$225,798	0.00%	$0	0.21%	$117,692	0.57%	$289,680	0.50%	$235,375
Total Requirements	11.21%	$8,747,163	11.11%	$7,890,544	11.30%	$7,973,506	10.97%	$6,618,201	11.41%	$6,394,620	10.82%	$5,498,832	10.73%	$5,051,148
Employee Contributions	4.90%	$3,823,470	4.90%	$3,480,078	4.90%	$3,457,538	4.90%	$2,956,170	4.90%	$2,746,156	4.90%	$2,490,229	4.90%	$2,306,675
Employer Contributions	6.27%	$4,892,481	6.27%	$4,453,079	6.27%	$4,424,237	6.27%	$3,782,691	6.27%	$3,513,959	6.27%	$3,186,477	6.27%	$2,951,603
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	11.17%	$8,715,951	11.17%	$7,933,157	11.17%	$7,881,775	11.17%	$6,738,861	11.17%	$6,260,115	11.17%	$5,676,706	11.17%	$5,258,278
Total Requirements	11.21%	$8,747,163	11.11%	$7,890,544	11.30%	$7,973,506	10.97%	$6,618,201	11.41%	$6,394,620	10.82%	$5,498,832	10.73%	$5,051,148
Total Contributions	11.17%	$8,715,951	11.17%	$7,933,157	11.17%	$7,881,775	11.17%	$6,738,861	11.17%	$6,260,115	11.17%	$5,676,706	11.17%	$5,258,278
Deficiency (Surplus)	0.04%	$31,212	(0.06%)	($42,613)	0.13%	$91,731	(0.20%)	($120,660)	0.24%	$134,506	(0.35%)	($177,873)	(0.44%)	($207,130)
Amortization Target Date	2020		2020		2020		2020		2020		2020		2020	
Actuary	Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Wyatt	

Actuarial Valuation Data

Correctional State Employees Retirement Fund

(MSRS-C)

	1989		1988		1987		1986		1985		1984		1983	
Membership														
Active Members		1,317		1,267		1,232		1,220		1,191		1,174		1,124
Service Retirees		337		328		313		309		309		326		295
Disabilitants		8		6		11		11		12		0		0
Survivors		12		12		9		8		8		0		0
Deferred Retirees		58		47		43		35		30		25		12
Nonvested Former Members		57		80		84		83		79		95		27
Total Membership		1,789		1,740		1,692		1,666		1,629		1,620		1,458
Funded Status														
Accrued Liability		$92,684,000		$81,454,000		$72,081,000		$59,042,000		$53,345,000		$43,887,970		$39,550,404
Current Assets		$85,441,000		$74,065,000		$67,488,000		$56,894,000		$48,568,000		$40,152,963		$36,067,783
Unfunded Accrued Liability		$7,243,000		$7,389,000		$4,593,000		$2,148,000		$4,777,000		$3,735,007		$3,482,621
Funding Ratio	92.19%		90.93%		93.63%		96.36%		91.04%		91.49%		91.19%	
Financing Requirements														
Covered Payroll		$41,976,000		$38,807,000		$35,155,000		$33,561,000		$31,055,000		$26,993,968		$24,511,088
Benefits Payable		$2,964,000		$2,678,000		$1,951,829		$1,681,000		$1,647,000		$1,942,689		$1,596,030
Normal Cost	9.70%	$4,071,672	9.24%	$3,585,767	9.26%	$3,255,353	7.98%	$2,678,168	7.92%	$2,459,556	9.49%	$2,561,728	10.62%	$2,603,078
Administrative Expenses	0.41%	$172,102	0.30%	$116,421	0.27%	$94,919	0.27%	$90,615	0.28%	$86,954	0.18%	$48,589	0.18%	$44,120
Normal Cost & Expense	10.11%	$4,243,774	9.54%	$3,702,188	9.53%	$3,350,272	8.25%	$2,768,783	8.20%	$2,546,510	9.67%	$2,610,317	10.80%	$2,647,198
Normal Cost & Expense	10.11%	$4,243,774	9.54%	$3,702,188	9.53%	$3,350,272	8.25%	$2,768,783	8.20%	$2,546,510	9.67%	$2,610,317	10.80%	$2,647,198
Amortization	0.76%	$319,018	0.83%	$322,098	0.55%	$193,353	0.32%	$107,395	0.75%	$232,913	0.66%	$178,160	0.95%	$232,855
Total Requirements	10.87%	$4,562,791	10.37%	$4,024,286	10.08%	$3,543,624	8.57%	$2,876,178	8.95%	$2,779,423	10.33%	$2,788,477	11.75%	$2,880,053
Employee Contributions	4.90%	$2,056,824	4.90%	$1,901,543	4.90%	$1,722,595	4.90%	$1,644,489	4.90%	$1,521,695	4.90%	$1,322,704	4.89%	$1,198,592
Employer Contributions	8.70%	$3,651,912	8.70%	$3,376,209	8.70%	$3,058,485	8.70%	$2,919,807	8.70%	$2,701,785	8.70%	$2,348,475	7.34%	$1,799,114
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	4.08%	$1,000,052
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	13.60%	$5,708,736	13.60%	$5,277,752	13.60%	$4,781,080	13.60%	$4,564,296	13.60%	$4,223,480	13.60%	$3,671,180	16.31%	$3,997,758
Total Requirements	10.87%	$4,562,791	10.37%	$4,024,286	10.08%	$3,543,624	8.57%	$2,876,178	8.95%	$2,779,423	10.33%	$2,788,477	11.75%	$2,880,053
Total Contributions	13.60%	$5,708,736	13.60%	$5,277,752	13.60%	$4,781,080	13.60%	$4,564,296	13.60%	$4,223,480	13.60%	$3,671,180	16.31%	$3,997,758
Deficiency (Surplus)	(2.73%)	($1,145,945)	(3.23%)	($1,253,466)	(3.52%)	($1,237,456)	(5.03%)	($1,688,118)	(4.65%)	($1,444,058)	(3.27%)	($882,703)	(4.56%)	($1,117,706)
Amortization Target Date	2020		2017		2017		2010		2010		2010		2010	
Actuary	Wyatt		Wyatt		Wyatt		Wyatt		Wyatt		Touche Ross		Touche Ross	

Funded Status of PERA-Correctional 1999-2009

Actuarial Valuation Data **Local Government Correctional Service Retirement Fund** **(PERA-C)**

	2009		2008		2007*		2007**		2006		2005		2004	
Membership														
Active Members		3,715		3,710		3,566		3,566		3,531		3,352		3,251
Service Retirees		267		211		175		175		144		113		81
Disabilitants		101		92		87		87		70		59		50
Survivors		18		15		13		13		9		8		8
Deferred Retirees		1,683		1,520		1,337		1,337		1,100		915		758
Nonvested Former Members		1,525		1,473		1,291		1,291		1,086		906		911
Total Membership		7,309		7,021		6,469		6,469		5,940		5,353		5,059
Funded Status														
Accrued Liability		$229,383,000		$192,572,000		$162,169,250		$162,169,250		$133,305,790		$108,926,147		$85,693,412
Current Assets		$217,577,000		$192,937,000		$159,547,801		$160,267,042		$125,775,917		$98,155,975		$75,918,151
Unfunded Accrued Liability		$11,806,000		($365,000)		$2,621,449		$1,902,208		$7,529,873		$10,770,172		$9,775,261
Funding Ratio	94.85%		100.19%		98.38%		98.83%		94.35%		90.11%		88.59%	
Financing Requirements														
Covered Payroll		$172,770,000		$163,937,000		$148,793,559		$148,793,559		$141,083,054		$129,231,426		$120,511,319
Benefits Payable		$2,836,000		$2,268,000		$1,835,548		$1,835,548		$1,341,435		$1,040,881		$804,803
Normal Cost	13.26%	$22,904,000	13.37%	$21,918,000	12.09%	$17,985,024	12.09%	$17,985,024	12.14%	$17,134,103	12.31%	$15,908,607	12.31%	$14,834,390
Administrative Expenses	0.13%	$227,000	0.14%	$229,000	0.13%	$193,432	0.13%	$193,432	0.14%	$197,516	0.15%	$193,847	0.14%	$168,716
Normal Cost & Expense	13.39%	$23,131,000	13.51%	$22,147,000	12.22%	$18,178,456	12.22%	$18,178,456	12.28%	$17,331,619	12.46%	$16,102,454	12.45%	$15,003,106
Normal Cost & Expense	13.39%	$23,131,000	13.51%	$22,147,000	12.22%	$18,178,456	12.22%	$18,178,456	12.28%	$17,331,619	12.46%	$16,102,454	12.45%	$15,003,106
Amortization	0.64%	$1,109,000	(0.01%)	($16,000)	0.14%	$208,311	0.10%	$148,794	0.39%	$550,224	0.59%	$762,465	0.55%	$662,812
Total Requirements	14.03%	$24,240,000	13.50%	$22,131,000	12.36%	$18,386,767	12.32%	$18,327,250	12.68%	$17,881,843	13.05%	$16,864,919	13.00%	$15,665,918
Employee Contributions	5.83%	$10,073,000	5.83%	$9,558,000	5.83%	$8,674,664	5.83%	$8,674,664	5.83%	$8,225,142	5.83%	$7,534,192	5.83%	$7,025,810
Employer Contributions	8.75%	$15,117,000	8.75%	$14,344,000	0.89%	$1,319,436	0.89%	$1,319,436	8.75%	$12,344,767	8.75%	$11,307,750	8.75%	$10,544,740
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	14.58%	$25,190,000	14.58%	$23,902,000	6.72%	$9,994,100	6.72%	$9,994,100	14.58%	$20,569,909	14.58%	$18,841,942	14.58%	$17,570,550
Total Requirements	14.03%	$24,240,000	13.50%	$22,131,000	12.36%	$18,386,767	12.32%	$18,327,250	12.68%	$17,881,843	13.05%	$16,864,919	13.00%	$15,665,918
Total Contributions	14.58%	$25,190,000	14.58%	$23,902,000	6.72%	$9,994,100	6.72%	$9,994,100	14.58%	$20,569,909	14.58%	$18,841,942	14.58%	$17,570,550
Deficiency (Surplus)	(0.55%)	($950,000)	(1.08%)	($1,771,000)	5.64%	$8,392,667	5.60%	$8,333,150	(1.90%)	($2,688,066)	(1.53%)	($1,977,023)	(1.58%)	($1,904,632)
Amortization Target Date	2023		2023		2023		2023		2023		2023		2023	
Actuary	Mercer		Mercer		Segal		Segal		Segal		Segal		Segal	

** Reflects 2007 Asset Valuai * Reflects 2007 Asset Valuation Method chan. ** Current Assets and Amortization results do not reflect the 2007 Asset Valuation Method change*

Actuarial Valuation Data

Local Government Correctional Service Retirement Fund

(PERA-C)

	2003		2002		2001		2000		1999	
Membership										
Active Members		3,155		3,270		3,238		2,781		2,280
Service Retirees		57		35		20		9		0
Disabilitants		37		26		17		3		0
Survivors		6		2		0		0		0
Deferred Retirees		590		282		97		0		0
Nonvested Former Members		702		488		267		0		0
Total Membership		4,547		4,103		3,639		2,793		2,280
Funded Status										
Accrued Liability		$62,542,000		$42,144,000		$25,453,000		$10,195,000		$0
Current Assets		$56,487,000		$40,105,000		$25,014,000		$11,116,000		$0
Unfunded Accrued Liability		$6,055,000		$2,039,000		$439,000		($921,000)		$0
Funding Ratio	90.32%		95.16%		98.28%		109.03%		0.00%	
Financing Requirements										
Covered Payroll		$116,276,000		$106,400,000		$100,460,000		$80,818,000		$68,915,000
Benefits Payable		$559,000		$338,000		$173,000		$20,000		$0
Normal Cost	13.65%	$15,866,000	13.83%	$14,717,000	14.02%	$14,093,000	14.26%	$11,520,000	14.75%	$10,164,000
Administrative Expenses	0.14%	$163,000	0.14%	$149,000	0.16%	$161,000	0.16%	$129,000	0.28%	$193,000
Normal Cost & Expense	13.79%	$16,029,000	13.97%	$14,866,000	14.18%	$14,254,000	14.42%	$11,649,000	15.03%	$10,357,000
Normal Cost & Expense	13.79%	$16,029,000	13.97%	$14,866,000	14.18%	$14,254,000	14.42%	$11,649,000	15.03%	$10,357,000
Amortization	0.34%	$395,000	0.12%	$128,000	0.03%	$30,000	(0.05%)	($40,000)	0.00%	$0
Total Requirements	14.13%	$16,424,000	14.09%	$14,994,000	14.21%	$14,284,000	14.37%	$11,609,000	15.03%	$10,357,000
Employee Contributions	5.83%	$6,779,000	5.83%	$6,203,000	5.83%	$5,858,000	5.83%	$4,712,000	5.83%	$4,018,000
Employer Contributions	8.75%	$10,174,000	8.75%	$9,310,000	8.75%	$8,792,000	8.75%	$7,072,000	8.75%	$6,030,000
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	14.58%	$16,953,000	14.58%	$15,513,000	14.58%	$14,650,000	14.58%	$11,784,000	14.58%	$10,048,000
Total Requirements	14.13%	$16,424,000	14.09%	$14,994,000	14.21%	$14,284,000	14.37%	$11,609,000	15.03%	$10,357,000
Total Contributions	14.58%	$16,953,000	14.58%	$15,513,000	14.58%	$14,650,000	14.58%	$11,784,000	14.58%	$10,048,000
Deficiency (Surplus)	(0.45%)	($529,000)	(0.49%)	($519,000)	(0.37%)	($366,000)	(0.21%)	($175,000)	0.45%	$309,000
Amortization Target Date	2023		2023		2020		2030		2020	
Actuary	Milliman USA		Milliman USA		Milliman USA		Milliman & Robertson		Milliman & Robertson	

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Funded Status of the Judges Retirement Plan 1983-2009

Actuarial Valuation Data

Judges Retirement Fund

(JUDGES)

	2009		2008		2007*		2007**		2006		2005		2004	
Membership														
Active Members		287		287		308		308		303		295		294
Service Retirees		162		181		171		171		169		163		162
Disabilitants		27		9		9		9		9		7		6
Survivors		96		89		83		83		83		85		86
Deferred Retirees		45		40		18		18		16		21		18
Nonvested Former Members		0		0		0		0		0		0		0
Total Membership		617		606		589		589		580		571		566
Funded Status														
Accrued Liability		$241,815,000		$231,623,000		$214,296,973		$214,296,973		$202,301,170		$191,413,999		$190,338,344
Current Assets		$147,120,000		$147,542,000		$153,561,828		$161,749,693		$151,850,386		$144,465,380		$138,948,244
Unfunded Accrued Liability		$94,695,000		$84,081,000		$60,735,145		$52,547,280		$50,450,784		$46,948,619		$51,390,100
Funding Ratio	60.84%		63.70%		71.66%		75.48%		75.06%		75.47%		73.00%	
Financing Requirements														
Covered Payroll		$41,644,000		$42,911,000		$37,974,474		$37,974,474		$36,529,039		$35,940,583		$35,697,480
Benefits Payable		$16,261,000		$15,117,000		$14,516,203		$14,516,203		$14,260,083		$13,750,170		$13,520,057
Normal Cost	17.52%	$7,295,000	16.21%	$6,957,000	18.03%	$6,848,676	18.03%	$6,848,676	17.91%	$6,538,362	17.71%	$6,365,882	17.44%	$6,224,006
Administrative Expenses	0.08%	$33,000	0.14%	$60,000	0.14%	$53,164	0.14%	$53,164	0.17%	$62,099	0.10%	$35,940	0.09%	$32,128
Normal Cost & Expense	17.60%	$7,328,000	16.35%	$7,017,000	18.17%	$6,901,840	18.17%	$6,901,840	18.08%	$6,600,461	17.81%	$6,401,822	17.53%	$6,256,134
Normal Cost & Expense	17.60%	$7,328,000	16.35%	$7,017,000	18.17%	$6,901,840	18.17%	$6,901,840	18.08%	$6,600,461	17.81%	$6,401,822	17.53%	$6,256,134
Amortization	13.93%	$5,801,000	11.80%	$5,063,000	15.53%	$5,897,448	13.44%	$5,103,780	12.65%	$4,620,928	11.33%	$4,072,052	11.89%	$4,244,430
Total Requirements	31.53%	$13,129,000	28.15%	$12,080,000	33.70%	$12,799,288	31.61%	$12,005,620	30.73%	$11,221,389	29.14%	$10,473,874	29.42%	$10,500,564
Employee Contributions	7.30%	$3,039,000	7.42%	$3,186,000	8.00%	$2,874,882	8.00%	$2,874,882*	7.59%	$2,772,195	8.00%	$2,756,292	7.54%	$2,689,962
Employer Contributions	20.50%	$8,537,000	20.50%	$8,797,000	20.50%	$7,784,783	20.50%	$7,784,783	20.50%	$7,488,460	20.50%	$7,367,790	20.50%	$7,317,983
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	27.80%	$11,576,000	27.93%	$11,983,000	28.07%	$10,659,665	28.07%	$10,659,665	28.09%	$10,260,655	28.17%	$10,124,082	28.04%	$10,007,945
Total Requirements	31.53%	$13,129,000	28.15%	$12,080,000	33.70%	$12,799,288	31.61%	$12,005,620	30.73%	$11,221,389	29.14%	$10,473,874	29.42%	$10,500,564
Total Contributions	27.80%	$11,576,000	27.93%	$11,983,000	28.07%	$10,659,665	28.07%	$10,659,665	28.09%	$10,260,655	28.17%	$10,124,082	28.04%	$10,007,945
Deficiency (Surplus)	3.73%	$1,553,000	0.22%	$97,000	5.63%	$2,139,623	3.54%	$1,345,955	2.64%	$960,734	0.97%	$349,792	1.38%	$492,619
Amortization Target Date	2038		2038		2020		2020		2020		2020		2020	
Actuary	Mercer		Mercer		Segal		Segal		Segal		Segal		Segal	

*The dollar amount is 8% of the contributing members projected annual payroll

* Reflects 2007 Asset Valuation Method change

** Current Assets and Amortization results do not reflect the 2007 Asset Valuation Method change

Actuarial Valuation Data

Judges Retirement Fund

(JUDGES)

	2003		2002		2001		2000		1999		1998		1997	
Membership														
Active Members		288		283		292		282		282		278		279
Service Retirees		160		164		155		153		149		148		142
Disabilitants		6		5		4		4		6		6		6
Survivors		87		87		88		82		83		83		79
Deferred Retirees		26		24		14		9		11		7		7
Nonvested Former Members		1		1		1		2		1		1		1
Total Membership		568		564		554		532		532		523		514
Funded Status														
Accrued Liability		$176,291,000		$171,921,000		$165,244,000		$153,660,000		$139,649,000		$130,727,000		$117,714,000
Current Assets		$134,142,000		$131,379,000		$123,589,000		$111,113,000		$97,692,000		$86,578,000		$74,680,000
Unfunded Accrued Liability		$42,149,000		$40,542,000		$41,655,000		$42,547,000		$41,957,000		$44,149,000		$43,034,000
Funding Ratio	76.09%		76.42%		74.79%		72.31%		69.96%		66.23%		63.44%	
Financing Requirements														
Covered Payroll		$34,270,000		$31,057,000		$29,874,000		$28,186,000		$27,080,888		$25,890,000		$24,420,000
Benefits Payable		$13,558,000		$13,202,000		$12,228,000		$11,082,000		$9,996,000		$9,082,000		$7,560,000
Normal Cost	16.91%	$5,797,000	16.76%	$5,204,000	16.44%	$4,913,000	16.30%	$4,593,000	16.08%	$4,363,000	16.00%	$4,141,000	16.24%	$3,965,000
Administrative Expenses	0.12%	$41,000	0.19%	$59,000	0.14%	$42,000	0.15%	$42,000	0.15%	$41,000	0.14%	$36,000	0.14%	$34,000
Normal Cost & Expense	17.03%	$5,838,000	16.95%	$5,263,000	16.58%	$4,955,000	16.44%	$4,635,000	16.23%	$4,404,000	16.14%	$4,177,000	16.38%	$3,999,000
Normal Cost & Expense	17.03%	$5,838,000	16.95%	$5,263,000	16.58%	$4,955,000	16.44%	$4,635,000	16.23%	$4,404,000	16.14%	$4,177,000	16.38%	$3,999,000
Amortization	9.70%	$3,324,000	9.87%	$3,065,000	10.14%	$3,029,000	10.58%	$2,982,000	10.48%	$2,841,000	11.18%	$2,895,000	11.22%	$2,740,000
Total Requirements	26.73%	$9,162,000	26.82%	$8,328,000	26.72%	$7,984,000	27.03%	$7,617,000	26.71%	$7,245,000	27.32%	$7,072,000	27.60%	$6,739,000
Employee Contributions	7.92%	$2,713,000	8.00%	$2,485,000	7.45%	$2,226,000	8.00%	$2,255,000	6.28%	$2,167,000	6.28%	$1,626,000	6.29%	$1,536,000
Employer Contributions	20.50%	$7,025,000	20.50%	$6,367,000	20.50%	$6,124,000	20.50%	$5,778,000	22.00%	$5,551,000	22.00%	$5,696,000	22.00%	$5,372,000
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	28.42%	$9,738,000	28.50%	$8,852,000	27.95%	$8,350,000	28.50%	$8,033,000	28.28%	$7,718,000	28.28%	$7,322,000	28.29%	$6,908,000
Total Requirements	26.73%	$9,162,000	26.82%	$8,328,000	26.72%	$7,984,000	27.03%	$7,617,000	26.71%	$7,245,000	27.32%	$7,072,000	27.60%	$6,739,000
Total Contributions	28.42%	$9,738,000	28.50%	$8,852,000	27.95%	$8,350,000	28.50%	$8,033,000	28.28%	$7,718,000	28.28%	$7,322,000	28.29%	$6,908,000
Deficiency (Surplus)	(1.69%)	($576,000)	(1.68%)	($524,000)	(1.23%)	($366,000)	(1.47%)	($416,000)	(1.57%)	($473,000)	(0.96%)	($250,000)	(0.69%)	($169,000)
Amortization Target Date	2020		2020		2020		2020		2020		2020		2020	
Actuary	Milliman USA		Milliman USA		Milliman USA		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson	

Actuarial Valuation Data

Judges Retirement Fund

(JUDGES)

	1996		1995		1994		1993		1992		1991		1990	
Membership														
Active Members		279		271		265		267		271		271		262
Service Retirees		133		131		127		123		111		109		105
Disabilitants		7		7		8		8		9		9		9
Survivors		76		77		72		69		66		64		64
Deferred Retirees		6		7		6		6		4		3		2
Nonvested Former Members		1		1		0		0		0		0		1
Total Membership		502		494		478		473		461		456		443
Funded Status														
Accrued Liability		$108,150,000		$102,238,000		$98,313,000		$90,509,000		$83,969,000		$78,428,000		$69,396,000
Current Assets		$64,851,000		$56,813,000		$50,428,000		$44,156,000		$37,768,000		$33,559,000		$28,116,000
Unfunded Accrued Liability		$43,299,000		$45,425,000		$47,885,000		$46,353,000		$46,201,000		$44,869,000		$41,280,000
Funding Ratio	59.96%		55.57%		51.29%		48.79%		44.98%		42.79%		40.52%	
Financing Requirements														
Covered Payroll		$24,206,000		$23,429,000		$22,302,000		$22,469,000		$22,181,000		$21,570,000		$20,662,000
Benefits Payable		$6,761,000		$6,233,000		$5,773,000		$5,144,000		$4,592,000		$4,183,000		$3,846,000
Normal Cost	17.30%	$4,187,638	17.15%	$4,018,074	17.68%	$3,942,994	16.67%	$3,745,582	16.72%	$3,708,663	15.74%	$3,395,118	14.24%	$2,942,269
Administrative Expenses	0.14%	$33,888	0.13%	$30,458	0.12%	$26,762	0.17%	$38,197	0.31%	$68,761	0.34%	$73,338	0.35%	$72,317
Normal Cost & Expense	17.44%	$4,221,526	17.28%	$4,048,531	17.80%	$3,969,756	16.84%	$3,783,780	17.03%	$3,777,424	16.08%	$3,468,456	14.59%	$3,014,586
Normal Cost & Expense	17.44%	$4,221,526	17.28%	$4,048,531	17.80%	$3,969,756	16.84%	$3,783,780	17.03%	$3,777,424	16.08%	$3,468,456	14.59%	$3,014,586
Amortization	9.57%	$2,316,514	10.04%	$2,352,272	10.47%	$2,335,019	9.45%	$2,123,321	9.56%	$2,120,504	9.02%	$1,945,614	9.00%	$1,859,580
Total Requirements	27.01%	$6,538,041	27.32%	$6,400,803	28.27%	$6,304,775	26.29%	$5,907,100	26.59%	$5,897,928	25.10%	$5,414,070	23.59%	$4,874,166
Employee Contributions	6.36%	$1,539,502	6.36%	$1,490,084	6.36%	$1,418,407	6.36%	$1,429,028	6.38%	$1,415,148	4.34%	$936,138	4.31%	$890,532
Employer Contributions	22.00%	$5,325,320	22.00%	$5,154,380	22.00%	$4,906,440	22.00%	$4,943,180	22.00%	$4,879,820	22.00%	$4,745,400	18.25%	$3,770,815
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	28.36%	$6,864,822	28.36%	$6,644,464	28.36%	$6,324,847	28.36%	$6,372,208	28.38%	$6,294,968	26.34%	$5,681,538	22.56%	$4,661,347
Total Requirements	27.01%	$6,538,041	27.32%	$6,400,803	28.27%	$6,304,775	26.29%	$5,907,100	26.59%	$5,897,928	25.10%	$5,414,070	23.59%	$4,874,166
Total Contributions	28.36%	$6,864,822	28.36%	$6,644,464	28.36%	$6,324,847	28.36%	$6,372,208	28.38%	$6,294,968	26.34%	$5,681,538	22.56%	$4,661,347
Deficiency (Surplus)	(1.35%)	($326,781)	(1.04%)	($243,662)	(0.09%)	($20,072)	(2.07%)	($465,108)	(1.79%)	($397,040)	(1.24%)	($267,468)	1.03%	$212,819
Amortization Target Date	2020		2020		2020		2020		2020		2020		2020	
Actuary	Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Milliman & Robertson		Wyatt	

Actuarial Valuation Data

Judges Retirement Fund

(JUDGES)

	1989		1988		1987		1986		1985		1984		1983	
Membership														
Active Members		257		246		238		243		240		244		229
Service Retirees		95		93		87		83		83		136		135
Disabilitants		8		5		5		5		4		0		0
Survivors		63		63		60		50		52		0		0
Deferred Retirees		4		5		7		7		7		4		5
Nonvested Former Members		0		0		1		0		0		2		0
Total Membership		427		412		398		388		386		386		369
Funded Status														
Accrued Liability		$64,854,000		$59,708,000		$54,034,000		$51,360,000		$46,662,000		$42,377,889		$40,556,310
Current Assets		$23,352,000		$20,760,000		$18,781,000		$15,982,000		$13,785,000		$11,791,860		$11,049,076
Unfunded Accrued Liability		$41,502,000		$38,948,000		$35,253,000		$35,378,000		$32,877,000		$30,586,029		$29,507,234
Funding Ratio	36.01%		34.77%		34.76%		31.12%		29.54%		27.83%		27.24%	
Financing Requirements														
Covered Payroll		$18,759,000		$17,109,000		$15,999,000		$16,718,000		$15,521,000		$14,083,111		$11,970,000
Benefits Payable		$3,451,000		$3,110,000		$2,725,000		$2,428,000		$2,243,000		$2,022,777		$1,877,375
Normal Cost	14.26%	$2,675,033	15.00%	$2,566,350	13.63%	$2,180,664	13.90%	$2,323,802	13.87%	$2,152,763	13.84%	$1,949,103	15.09%	$1,806,273
Administrative Expenses	0.31%	$58,153	0.29%	$49,616	0.29%	$46,397	0.28%	$46,810	0.24%	$37,250	0.26%	$36,616	0.16%	$19,152
Normal Cost & Expense	14.57%	$2,733,186	15.29%	$2,615,966	13.92%	$2,227,061	14.18%	$2,370,612	14.11%	$2,190,013	14.10%	$1,985,719	15.25%	$1,825,425
Normal Cost & Expense	14.57%	$2,733,186	15.29%	$2,615,966	13.92%	$2,227,061	14.18%	$2,370,612	14.11%	$2,190,013	14.10%	$1,985,719	15.25%	$1,825,425
Amortization	9.73%	$1,825,251	12.95%	$2,215,616	12.04%	$1,926,280	11.14%	$1,862,385	10.75%	$1,668,508	10.63%	$1,497,035	16.74%	$2,003,778
Total Requirements	24.30%	$4,558,437	28.24%	$4,831,582	25.96%	$4,153,340	25.32%	$4,232,998	24.86%	$3,858,521	24.73%	$3,482,753	31.99%	$3,829,203
Employee Contributions	4.30%	$806,637	4.44%	$759,640	3.76%	$601,562	4.11%	$687,110	4.13%	$641,017	4.18%	$588,674	4.54%	$543,438
Employer Contributions	21.19%	$3,975,032	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Employer Add'l Cont.	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Direct State Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Other Govt. Funding	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Administrative Assessment	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0	0.00%	$0
Total Contributions	25.49%	$4,781,669	4.44%	$759,640	3.76%	$601,562	4.11%	$687,110	4.13%	$641,017	4.18%	$588,674	4.54%	$543,438
Total Requirements	24.30%	$4,558,437	28.24%	$4,831,582	25.96%	$4,153,340	25.32%	$4,232,998	24.86%	$3,858,521	24.73%	$3,482,753	31.99%	$3,829,203
Total Contributions	25.49%	$4,781,669	4.44%	$759,640	3.76%	$601,562	4.11%	$687,110	4.13%	$641,017	4.18%	$588,674	4.54%	$543,438
Deficiency (Surplus)	(1.19%)	($223,232)	23.80%	$4,071,942	22.20%	$3,551,778	21.21%	$3,545,888	20.73%	$3,217,503	20.55%	$2,894,079	27.45%	$3,285,765
Amortization Target Date	2020		2009		2009		2009		2009		2009		2009	
Actuary	Wyatt		Wyatt		Wyatt		Wyatt		Wyatt		Touche Ross		Touche Ross	

TRA Board of Trustees Position on Financial Sustainability

The TRA Board supports a financial sustainability package that calls for a shared sacrifice approach to stabilize the fund in the short term and put TRA on a path toward attaining a funding ratio goal of 80% to 90%. The financial sustainability package would include the following combination of measures:

- ***Phased approach to contribution rate increases -- employer and employee rates rise 2% each, beginning July 1, 2011, phased in over 4 years, in 0.5% annual increments and implementation of a contribution stabilizer.***
- ***Temporary two-year suspension of annual increases, followed by a reduction in annual increases to 2%, with a bounce back to a full 2.5% annual increase once funding stability is restored.***
- ***Reduction in interest rates paid for refunds to 4%, for ELSAs to 0% and deferred augmentation to 2%.***
- ***Review of all elements of the financial sustainability package (contribution rates, annual increases, interest rates) in five years (2015) for adjustments and fine-tuning if necessary.***

The TRA Board does not support any reduction in core benefits, such as reducing the benefit formula multiplier which would exacerbate existing inequities for post-1989 hires, or switching to a defined contribution / hybrid plan which would worsen TRA's short-term financial status. The Board continues to favor addressing benefit inequities for post-1989 hires and improving disability coverage, but must put the highest priority on stabilizing the fund first so that it is sustainable in the long term. Potential benefit changes to address inequities and disability provisions should be reviewed and evaluated in five years along with the elements of the financial sustainability package.

MSRS Board to Introduce Benefit Adjustments to Restore Stability to the Retirement Funds

Board proposes shared responsibility to get back on course

The MSRS Board of Directors is proposing legislation during the 2010 Legislative Session to adjust benefits to ensure the retirement system has sufficient funds to pay benefits for retirees, active employees and future hires.

The proposed legislation follows almost two years of steep market declines. Although it appears that the economic recovery is underway, most experts predict a slow recovery.

"We were in a strong funding position going into the severe market drop and we've weathered the storm. Now is the time to get the ship back on course toward full funding," explains MSRS Executive Director Dave Bergstrom.

Funding Levels

As of June 30, 2007, the General Plan administered by MSRS was about 95 percent funded. A 5 percent market decline in fiscal year 2008, followed by a 19 percent loss in fiscal year 2009, decreased the Plan's funding ratio to a level below 70 percent. Since June 30, 2009, the Plan has experienced significant recovery with strong investment gains of 15 percent. The investment gains have helped stabilize the funding and the Plan is now over 70 percent funded, but there is still progress to be made to return to full funding.

Goal to achieve full funding

To achieve our goal to reach full funding, the MSRS Board of Directors began making strides through 2006 legislation to gradually increase contribution rates for both employees and employers over three to four years. See the chart below which shows how the increases in rates were phased in to ease the burden for employees of the General, Correctional, and State Patrol Plans and their employers. To continue its efforts to reach full funding, the MSRS Board will recommend other types of benefit adjustments in the 2010 Session which will lower current and future liabilities. All of these various changes made over a period of time will help improve the overall funding of the retirement plans.

HISTORY OF PHASED-IN CONTRIBUTION RATE INCREASES
(approved in 2006 legislation)

	GENERAL PLAN		*CORRECTIONAL PLAN*		*STATE PATROL PLAN*	
Increase Year	*Employee Contribution Rate*	*Employer Contribution Rate*	*Employee Contribution Rate*	*Employer Contribution Rate*	*Employee Contribution Rate*	*Employer Contribution Rate*
Prior to 2007	4%	4%	5.69%	7.98%	8.40%	12.60%
July 1, 2007	4.25%	4.25%	6.40%	9.10%	9.10%	13.60%
July 1, 2008	4.50%	4.50%	7.00%	10.10%	9.80%	14.60%
July 1, 2009	4.75%	4.75%	7.70%	11.10%	10.40%	15.60%
July 1, 2010	5%	5%	8.60%	12.10%	N/A	N/A

No additional employee or employer contribution rate increases for General or Correctional Plans

The MSRS Board decided that no additional employee and employer contribution rate increases will be proposed for the General and Correctional Plans beyond the final increase set for July 1, 2010. "The Board does not believe that employees should bear any additional contribution rate increases to resolve the funding issue. Employees have already experienced gradual contribution rate increases, and they have not received significant raises in the past several years. The Board understands that most employees will go without raises for the next two years," explains Bergstrom. The Board is also aware that the State's budget shortfall will not allow for any additional employer contributions for several years.

Protecting the solvency of the retirement fund

The MSRS Board decided that retirees, employees, and deferred members (employees who have terminated but not yet started to collect monthly benefits) will share the responsibility of keeping MSRS sustainable. "We need to modify benefits now to make sure MSRS can pay benefits in the future. The Board's most important responsibility is to protect the long-term solvency of the fund," explains Bergstrom.

The MSRS Board of Directors is proposing the following nine solutions to maintain the solvency of the retirement fund and to get the plans on track to reach full funding.

1. **Lower future Post-Retirement Adjustments**

   Under current law, benefit recipients receive a 2.5 percent increase each January 1. The Board is proposing to lower future Post-Retirement Adjustments beginning January 1, 2011, to 2 percent. Benefit recipients will continue to see their benefits increase on an annual basis, just not as quickly. Under the proposal, the Post-Retirement Adjustments will return to 2.5 percent per year when the retirement plan reaches 90 percent funded.

2. **Reinstate waiting period for initial Post-Retirement Adjustments**

   The Board proposal would push the waiting period for the initial Post-Retirement Adjustments back six months. Currently, a person who retires any time during the year is eligible for a prorated increase the next January 1. Under the proposal, only employees who retire before July 1 will be eligible for a prorated increase the following January. Increases are prorated depending on which month the person retires. For example, a person who ends their service in January under the proposal would receive 6/12 (one-half) of next January's increase. If the increase is 2 percent, a January retiree's first increase would be 1 percent.

   The chart below shows what an employee retiring in the year 2010 can expect under the proposed law compared to current law:

A RETIREE'S FIRST POST-RETIREMENT ADJUSTMENT
(Prorated Percent and Year Granted)

Retirement Month in 2010	Current Law (percent of full increase)	Proposed Law (percent of full increase)
January	11/12 to receive in January 2011	5/12 to receive in January 2011
February	10/12 to receive in January 2011	4/12 to receive in January 2011
March	9/12 to receive in January 2011	3/12 to receive in January 2011
April	8/12 to receive in January 2011	2/12 to receive in January 2011
May	7/12 to receive in January 2011	1/12 to receive in January 2011
June	6/12 to receive in January 2011	12/12 to receive in January 2012
July	5/12 to receive in January 2011	11/12 to receive in January 2012
August	4/12 to receive in January 2011	10/12 to receive in January 2012
September	3/12 to receive in January 2011	9/12 to receive in January 2012
October	2/12 to receive in January 2011	8/12 to receive in January 2012
November	1/12 to receive in January 2011	7/12 to receive in January 2012
December	12/12 (full) to receive in January 2012	6/12 to receive in January 2012

3. **Lower interest on refunds**

   The Board proposal includes reducing interest paid on refunds from 6 percent to 4 percent.

4. **Reduce the benefit increases for members who terminate service and plan on collecting monthly benefits in future years (deferred members)**

   Employees who are vested can keep their contributions in the MSRS retirement plans and collect benefits when they reach retirement age. Under the current method of determining a deferred member's benefit amount, their base amount is increased by 3 percent per year until January 1 following the member's 55th birthday, and 5 percent per year thereafter. The Board is proposing lowering both of the increases to 2 percent in future years. Current terminated employees would retain the higher accrued rate for the past years, but for all future years the benefits would be increased by 2 percent instead of 3 or 5 percent.

   While cutting this benefit saves money, it also makes sense from a retirement plan policy perspective. At the current rate, some employees who leave state service and wait to collect monthly benefits, results in getting higher benefits than if they continued to work and contributed to MSRS. The 5 percent rate increase after age 55 is extremely costly and has led to fairly generous benefit increases. Terminated employees over age 55 are eligible to collect monthly benefits, if they prefer, rather than waiting to collect and letting their monthly benefits increase. It still will be attractive for deferred members to wait to collect, because the penalty for early retirement also lessens every year.

5. **Eliminate interest on suspended benefits for re-employed retirees**

   Retirees who return to state employment, or to any employment normally covered by MSRS, have their retirement benefits suspended when they earn more than the earnings limit ($14,160 in 2010). Any suspended amounts are paid back to retirees one year after they terminate from their re-employed positions. Currently, 6 percent interest is added to the suspended amount - the proposal would eliminate interest for future years.

6. **Increase vesting for future hires**

   Currently, most employees become vested (eligible for monthly benefits) after three years of service. The Board is proposing to raise vesting to five years for future employees covered by the General and State Patrol Plans and to ten years for future employees covered by the Correctional Plan.

7. **Increase in early retirement penalty for future Correctional and State Patrol Plan employees**

   Members of the State Patrol and Correctional Plans can retire with full benefits at age 55. They can retire as early as age 50 with subsidized early retirement benefits. The Board is proposing to increase the early retirement penalty in the State Patrol Plan for future hires from 1.2 percent for each year a person retires under age 55 to 2.4 percent. The Correctional Plan early retirement penalty for new hires is being proposed to increase from 2.4 percent to 5 percent for each year a person retires under age 55.

8. **Lower retirement formula for future Correctional Plan employees**

   Under the current formula of determining a Correctional Plan employee's benefit amount, 2.4 percent is added to their base amount for each year of service. Under the proposal, employees hired after July 1, 2010, would receive 2.2 percent for each year of service.

9. **State Patrol Plan contribution rate increases**

   The Board is proposing to increase employee contributions for the State Patrol Plan from 10.4 percent to 11.2 percent. The Board selected the 11.2 percent employee contribution because it is equal to the contributions paid for by employees covered by the General Plan - MSRS contribution of 5 percent, plus Social Security deduction of 6.2 percent. Employer contributions would also increase from 15.6 percent to 16.8 percent. In addition, the Board is proposing additional employer contributions to help reduce the State Patrol Plan's unfunded liability.

Purpose of MSRS Board proposal

The MSRS Board of Director's initiative lowers current and future liabilities by about $75 million per year. If the markets continue to rebound, the Funds will move back toward full funding. If the market recovery stalls or takes several years, the Board may have to consider additional modifications. Bergstrom stated, "The Board is committed to bringing MSRS back to its strong funding position it has enjoyed for many years. We need to make sure retirees, active members, and future employees have a retirement plan that is sustainable and can depend on."

Legislation introduced to address PERA Funding

Many recommendations by PERA's Board of Trustees to address the Association's future funding needs have been incorporated into legislation introduced in the House and Senate Tuesday, February 16.

House File 2999 and Senate File 2631 are companion bills resulting from discussions in the Legislative Commission on Pensions and Retirement. They include the following provisions:

- Increasing contributions to the Coordinated Plan by 0.25 percent of pay each for employees and employers; and to the Police and Fire Plan by 0.2 percent for employees and 0.3 percent for employers, effective January 1, 2011
- Lowering the annual increase paid to all benefit recipients to 1 percent each year, beginning January 1, 2011. Annual increases would return to 2.5 percent when the plans are again 90 percent funded. *(The reduced rate would return any time the plans again fall below 90 percent.)*
- Decreasing the interest the Association pays on refunds from the current 6 percent per year to 4 percent
- Increasing the vesting requirements for newly enrolled members:
  - 5 years of credited service for Coordinated Plan members
  - 50 percent vesting after 5 years for Police and Fire and Local Government Correctional Plan members—increasing 10 percent each additional year of service until fully vested after 10 years
- Reducing the growth rate of future deferred benefits (including current deferred members) to 1 percent beginning January 1, 2011. *(As a further measure to ensure the future stability of the plan, PERA's Board voted February 11 to eliminate all deferred augmentation as of January 1, 2011. That recommendation is expected to be introduced as an amendment to the current bills.)*
- Eliminating the 6 percent interest earned on the escrow accounts of retirees who exceed PERA's earning limits beginning January 1, 2011

The Board's recommendations, now represented by the two bills, followed months of study and discussion of ways to shore up the future funding of the retirement system. Two years of investment losses and ongoing benefit obligations during the recent recession reduced the Association's assets by $4 billion at the end of the last fiscal year. With assets of over $14 billion, current benefits are not in jeopardy—the problems that must be addressed lie in the future. Investment returns alone cannot erase all those losses.

"The Board believes strongly that these sacrifices are necessary to place PERA back on a sound economic track for the future," said Mary Most Vanek, PERA's executive director. "The more we sacrifice today, the sooner we can be assured that the fund will move upward in its funding and be there for the many public employees providing their talents and services to the local communities in which they are employed."

Vanek said the Association's primary concern is the sustainability of the pension system. PERA has never received any direct state assistance, and with the state facing a multi-year, multi-billion dollar deficit, any financial relief for the participating employers from the Legislature is a remote possibility. "It is up to all of us, active members, retirees, and deferred members alike, to ensure our funds remain strong and vital in the future," said Vanek.

As these two bills work their way through the Legislature, they are likely to see some changes as amendment are introduced. Other Legislation addressing these issues is also very possible. We will attempt to keep you informed as these occur.

Component-by-Component Comparison of Contribution Stabilizer Provisions

	MSRS	PERA-General	TRA Proposal
	352.045 PROCEDURE FOR REVISING EMPLOYEE AND EMPLOYER CONTRIBUTIONS IN CERTAIN INSTANCES.	**353.27 PUBLIC EMPLOYEES RETIREMENT FUND.**	**354.42 CONTRIBUTIONS BY EMPLOYER AND EMPLOYEE.**
Covered Plans	Subdivision 1. **Application**. This section applies to the general state employees retirement plan and to the correctional state employees retirement plan under this chapter, and to the state patrol retirement plan under chapter 352B.	*(no provision)*	*(no provision)*
Sufficiency/ Deficiency Determination	Subd. 2. **Determination**. For purposes of this section, a contribution sufficiency exists if, for purposes of the applicable plan, the total of the employee contributions, the employer contributions, and any additional employer contributions, if applicable, exceeds the total of the normal cost, the administrative expenses, and the amortization contribution of the retirement plan as reported in the most recent actuarial valuation of the retirement plan prepared by the actuary retained under section 356.214 and prepared under section 356.215 and the standards for actuarial work of the Legislative Commission on Pensions and Retirement. For purposes of this section, a contribution deficiency exists if, for the applicable plan, the total employee contributions, employer contributions, and any additional employer contributions are less than the total of the normal cost, the administrative expenses, and the amortization contribution of the retirement plan as reported in the most recent actuarial valuation of the retirement plan prepared by the actuary retained under section 356.214 and prepared under section 356.215 and the standards for actuarial work of the Legislative Commission on Pensions and Retirement.	Subd. 3b. **Change in employee and employer contributions in certain instances.** (a) For purposes of this section~~,~~: (1) a contribution sufficiency exists if the total of the employee contribution under subdivision 2, the employer contribution under subdivision 3, the additional employer contribution under subdivision 3a, and any additional contribution previously imposed under this subdivision exceeds the total of the normal cost, the administrative expenses, and the amortization contribution of the retirement plan as reported in the most recent actuarial valuation of the retirement plan prepared by the actuary retained under section 356.214 and prepared under section 356.215 and the standards for actuarial work of the Legislative Commission on Pensions and Retirement~~. For purposes of this section,~~; and (2) a contribution deficiency exists if the total of the employee contributions under subdivision 2, the employer contributions under subdivision 3, the additional employer contribution under subdivision 3a, and any additional contribution previously imposed under this subdivision is less than the total of the normal cost, the administrative expenses, and the amortization contribution of the retirement plan as reported in the most recent actuarial valuation of the retirement plan prepared by the actuary retained under section 356.214 and prepared under section 356.215 and the standards for actuarial work of the Legislative Commission on Pensions and Retirement.	Subd. 4a. **Determination.** (a) For purposes of this section, a contribution sufficiency exists if the total of the employee contributions, the employer contributions, and any additional employer contributions, if applicable, exceeds the total of the normal cost, the administrative expenses, and the amortization contribution of the retirement plan as reported in the most recent actuarial valuation of the retirement plan prepared by the approved actuary retained under section 356.214 and prepared under section 356.215 and the standards for actuarial work of the Legislative Commission on Pensions and Retirement. (b) For purposes of this section, a contribution deficiency exists if the total of the employee contributions, the employer contributions, and any additional employer contributions are less than the total of the normal cost, the administrative expenses, and the amortization contribution of the retirement plan as reported in the most recent actuarial valuation of the retirement plan prepared by the approved actuary retained under section 356.214 and prepared under section 356.215 and the standards for actuarial work of the Legislative Commission on Pensions and Retirement.
Contribution Adjustment	Subd. 3. **Contribution rate revision**. Notwithstanding the contribution rate provisions stated in plan law, the employee and employer contribution rates must be adjusted: (1) if, after July 1, 2011, the regular actuarial valuations of the applicable plan under section 356.215 indicate that there is a contribution sufficiency under subdivision 2 equal to or greater than 0.5 percent of covered payroll for two consecutive years, the employee and employer contribution rates for the applicable plan must be decreased as determined under subdivision 4 to a level such that the sufficiency equals no more than 0.25 percent of covered payroll based on the most recent actuarial valuation; or (2) if, after July 1, 2011, the regular actuarial valuations of the applicable plan under section 356.215 indicate that there is a deficiency equal to or greater than 0.5 percent of covered payroll for two consecutive years, the employee and employer contribution rates for the applicable plan must be increased as determined under	(b) Employee and employer contributions under subdivisions 2 and 3 must be adjusted: (1) if, on or after July 1, 2010, the regular actuarial ~~valuations~~ valuation of the general employees retirement plan of the Public Employees Retirement Association under section 356.215 ~~indicate~~ indicates that there is a contribution sufficiency under paragraph (a) ~~equal to or~~ greater than ~~0.5~~ one percent of covered payroll and that the sufficiency has existed for at least two consecutive years, the coordinated program employee and employer contribution rates must be decreased as determined under paragraph (c) to a level such that the sufficiency ~~equals~~ is no ~~more~~ greater than ~~0.25~~ one percent of covered payroll based on the most recent actuarial valuation; or (2) if, on or after July 1, 2010, the regular actuarial ~~valuations~~ valuation of the general employees retirement plan of the Public Employees Retirement Association under section 356.215 ~~indicate~~ indicates that there is a contribution deficiency equal to or greater than 0.5 percent of covered payroll and that the deficiency has existed for at least two consecutive years, the coordinated program employee and employer contribution rates must be increased as determined under paragraph ~~(c)~~ (d) to a level such that no deficiency exists based on the most recent actuarial valuation.	Subd. 4b. **Contribution rate revision.** Notwithstanding the contribution rate provisions under subdivisions 2 and 3, the employee and employer contribution rates may be adjusted: (1) if after June 30, 2015, the regular actuarial valuation of the plan under section 356.215 indicate that there is a contribution sufficiency under subdivision 4a equal to or greater than one percent of covered payroll and the sufficiency has existed for at least two consecutive years, the employee and employer contribution rates for the plan each may be decreased to a level such that the sufficiency equals no more than one percent of covered payroll based on the most recent actuarial valuation; or (2) if after June 30, 2015, the regular valuation of the plan under section 356.215 indicate that there is a deficiency equal to or greater than 0.25 percent of covered payroll and the deficiency has existed for at least two consecutive years, the employee and employer contribution rates for the applicable plan each may be increased by 0.25 percent if the deficiency is less than 2.00 percent of covered payroll, by 0.5 percent if the deficiency is equal to or

Component-by-Component Comparison of Contribution Stabilizer Provisions

	MSRS	PERA-General	TRA Proposal
	subdivision 4 to a level such that no deficiency exists based on the most recent actuarial valuation.	(c) ~~The contribution rate increase or decrease must be determined by the executive director of the Public Employees Retirement Association, must be reported to the chair and the executive director of the Legislative Commission on Pensions and Retirement on or before the next February 1, and, if the Legislative Commission on Pensions and Retirement does not recommend against the rate change or does not recommend a modification in the rate change, is effective on the next July 1 following the determination by the executive director that a contribution deficiency or sufficiency has existed for two consecutive fiscal years based on the most recent actuarial valuations under section 356.215.~~ If the actuarially required contribution ~~exceeds or~~ is less than the total support provided by the combined employee and employer contribution rates under subdivisions 2, 3, and 3a, by more than ~~0.5~~ one percent of covered payroll, the coordinated program employee and employer contribution rates under subdivisions 2 and 3 must be ~~adjusted~~ decreased incrementally over one or more years by no more than 0.25 percent of pay each for employee and employer matching contribution rates to a level such that there remains a contribution sufficiency of ~~no more than 0.25~~ at least one percent of covered payroll. No contribution rate decrease may be made until at least two years have elapsed since any adjustment under this subdivision has been fully implemented. (d) ~~No~~ If the actuarially required contribution exceeds the total support provided by the combined employee and employer contribution rates under subdivisions 2, 3, and 3a, the employee and matching employer contribution rates must be increased equally to eliminate that contribution deficiency. If the contribution deficiency is: (1) less than two percent, the incremental ~~adjustment~~ increase may ~~exceed~~ be up to 0.25 percent for ~~either~~ the ~~coordinated program~~ employee and matching employer contribution rates ~~per year in which any adjustment is implemented. A contribution rate adjustment under this subdivision must not be made until at least two years have passed since fully implementing a previous adjustment under this subdivision.~~; (2) is greater than 1.99 percent and less than 4.01 percent, the incremental increase may be up to 0.5 percent for the employee and matching employer contribution rates; or(3) greater than four percent, the incremental increase may be up to 0.75 percent for the employee and matching employer contribution.	greater than 2.00 percent of covered payroll and less than or equal to four percent, and by 0.75 percent if the deficiency is greater than four percent.
Contribution Sufficiency Measures	*(no provision)*	(f) A contribution sufficiency of up to one percent of covered payroll must be held in reserve to be used to offset any future actuarially required contributions that are more than the total combined employee and employer contributions under subdivisions 2, 3, and 3a.	Subd. 4c. **Contribution sufficiency measures.** (a) A contribution sufficiency of up to one percent of covered payroll must be held in reserve to be used to offset any future actuarially required contributions that are more than the total combined employee and employer contributions being collected. (b) Before any reduction in contributions to eliminate a sufficiency in excess of one percent of covered pay may be recommended, the executive director must review any need for a change in actuarial assumptions, as recommended by the actuary retained under section 356.214 in the most recent experience study of the retirement plan, that may result in an increase in the actuarially required contribution and must report to the Legislative Commission on Pensions and Retirement any recommendation by the board to use the sufficiency exceeding one percent of covered payroll to offset the impact of an actuarial assumption change recommended by the actuary retained under section 356.214, subdivision 1, and reviewed by the actuary retained by the Commission under section 356.214, subdivision 4.

Component-by-Component Comparison of Contribution Stabilizer Provisions

	MSRS	PERA-General	TRA Proposal
			(c) No contribution sufficiency in excess of one percent of covered pay may be used to increase benefits, and no benefit increase may be proposed that would initiate an automatic adjustment under this section to increase contributions. Any proposed benefit improvement must include a recommendation, prepared by the actuary retained under section 356.214, subdivision 1, and reviewed by the actuary retained by the Legislative Commission on Pensions and Retirement as provided under section 356.214, subdivision 4, on the manner in which the benefit modification is to be funded.
Reporting/ Commission Review	Subd. 4. **Reporting, commission review.** (a) The contribution rate increase or decrease must be determined by the executive director of the Minnesota State Retirement System, must be reported to the chair and the executive director of the Legislative Commission on Pensions and Retirement on or before the next February 1, and, if the Legislative Commission on Pensions and Retirement does not recommend against the rate change or does not recommend a modification in the rate change, is effective on the next July 1 following the determination by the executive director that a contribution deficiency or sufficiency has existed for two consecutive fiscal years based on the most recent actuarial valuations under section 356.215. If the actuarially required contribution exceeds or is less than the total support provided by the combined employee and employer contribution rates for the applicable plan by more than 0.5 percent of covered payroll, the applicable plan employee and employer contribution rates must be adjusted incrementally over one or more years to a level such that there remains a contribution sufficiency of no more than 0.25 percent of covered payroll.	(e) Any recommended adjustment to the contribution rates must be reported to the chair and the executive director of the Legislative Commission on Pensions and Retirement by January 15 following receipt of the most recent annual actuarial valuation prepared under section 356.215. If the Legislative Commission on Pensions and Retirement does not recommend against the rate change or does not recommend a modification in the rate change, the recommended adjustment becomes effective on the first day of the first full payroll period in the fiscal year following receipt of the most recent actuarial valuation that gave rise to the adjustment. (g) Before any reduction in contributions to eliminate a sufficiency in excess of one percent of covered pay may be recommended, the executive director must review any need for a change in actuarial assumptions, as recommended by the actuary retained under section 356.214 in the most recent experience study of the general employees retirement plan prepared under section 356.215 and the standards for actuarial work promulgated by the Legislative Commission on Pensions and Retirement that may result in an increase in the actuarially required contribution and must report to the Legislative Commission on Pensions and Retirement any recommendation by the board to use the sufficiency exceeding one percent of covered payroll to offset the impact of an actuarial assumption change recommended by the actuary retained under section 356.214, subdivision 1, and reviewed by the actuary retained by the commission under section 356.214, subdivision 4.	Subd. 4d. **Reporting, commission review.** (a) The contribution rate increase or decrease under subdivision 4b as determined by the executive director of the Teachers Retirement Association, must be reported to the chair and the executive director of the Legislative Commission on Pensions and Retirement on or before the next February 1 and, if the Legislative Commission on Pensions and Retirement does not recommend against the rate change or does not recommend a modification in the rate change, is effective on the next July 1 following the determination by the executive director that a contribution deficiency or sufficiency exists based on the most recent actuarial valuation under section 356.215.
Contribution Adjustment Limit	(b) No incremental adjustment may exceed 0.25 percent of payroll for either the employee or employer contribution rates per year in which any adjustment is implemented. For an applicable plan, a contribution rate adjustment under this section must not be made until at least two years have passed since fully implementing a previous adjustment under this section.	(h) No contribution sufficiency in excess of one percent of covered pay may be proposed to be used to increase benefits, and no benefit increase may be proposed that would initiate an automatic adjustment to increase contributions under this subdivision. Any proposed benefit improvement must include a recommendation, prepared by the actuary retained under section 356.214, subdivision 1, and reviewed by the actuary retained by the Legislative Commission on Pensions and Retirement as provided under section 356.214, subdivision 4, on how the benefit modification will be funded.	*(no provision)*

.... moves to amend S.F. No. ....; H.F. No. ...., as follows:

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2008, section 352.01, subdivision 11, is amended to read:

Subd. 11. **Allowable service.** (a) "Allowable service" means:

(1) service by an employee for which on or before July 1, 1961, the employee chose to obtain credit for service by making payments to the fund under Minnesota Statutes 1961, section 352.24;

(2) service by an employee after July 1, 1957, for any calendar month in which the employee is paid salary from which deductions are made, deposited, and credited in the fund, including deductions made, deposited, and credited as provided in section 352.041 <u>before July 1, 2010, and in proportion to 1/12th of the employee's annual salary for the preceding fiscal year after June 30, 2010</u>;

(3) service by an employee for any calendar month for which payments in lieu of salary deductions are made, deposited, and credited in the fund, as provided in section 352.27;

(4) the period of absence from their duties by employees who are temporarily disabled because of injuries incurred in the performance of duties and for which disability the state is liable under the workers' compensation law until the date authorized by the director for the commencement of payments of a total and permanent disability benefit from the retirement fund;

(5) service covered by a refund repaid as provided in section 352.23 or 352D.05, subdivision 4, except service rendered as an employee of the adjutant general for which the person has credit with the federal civil service retirement system;

(6) service before July 1, 1978, by an employee of the Transit Operating Division of the Metropolitan Transit Commission or by an employee on an authorized leave of absence from the Transit Operating Division of the Metropolitan Transit Commission who is employed by the labor organization which is the exclusive bargaining agent representing employees of the Transit Operating Division, which was credited by the Metropolitan Transit Commission-Transit Operating Division employees retirement fund or any of its predecessor plans or funds as past, intermediate, future, continuous, or allowable service as defined in the Metropolitan Transit Commission-Transit Operating Division employees retirement fund plan document in effect on December 31, 1977;

(7) service after July 1, 1983, by an employee who is employed on a part-time basis for less than 50 percent of full time, for which the employee is paid salary from which deductions are made, deposited, and credited in the fund, including deductions made, deposited, and credited as provided in section 352.041 or for which payments in lieu of

salary deductions are made, deposited, and credited in the fund as provided in section 352.27 shall be credited on a fractional basis either by pay period, monthly, or annually based on the relationship that the percentage of salary earned bears to a full-time salary, with any salary paid for the fractional service credited on the basis of the rate of salary applicable for a full-time pay period, month, or a full-time year. For periods of part-time service that is duplicated service credit, section 356.30, subdivision 1, clauses (i) and (j), govern; and

(8) any period of authorized leave of absence without pay that does not exceed one year and for which the employee obtained credit by payment to the fund under section 352.017.

(9) [Renumbered clause (8)]

(10) MS 2002 [Expired]

(11) [Expired, 2002 c 392 art 2 s 4]

(b) For purposes of paragraph (a), clauses (2) and (3), any salary that is paid for a fractional part of any calendar month, including the month of separation from state service, is deemed to be the compensation for the entire calendar month.

(c) Allowable service determined and credited on a fractional basis must be used in calculating the amount of benefits payable, but service as determined on a fractional basis must not be used in determining the length of service required for eligibility for benefits.

EFFECTIVE DATE. This section is effective the day following final enactment."

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2009 Supplement, section 352B.011, subdivision 3, is amended to read:

Subd. 3. **Allowable service.** (a) "Allowable service" means:

(1) service in a month during which a member is paid a salary from which a member contribution is deducted, deposited, and credited in the State Patrol retirement fund before July 1, 2010, and in proportion to 1/12th of the employee's annual salary for the preceding fiscal year after June 30, 2010;

(2) for members defined in subdivision 10, clause (1), service in any month for which payments have been made to the State Patrol retirement fund under law; and

(3) for members defined in subdivision 10, clauses (2) and (3), service for which payments have been made to the State Patrol retirement fund under law, service for which payments were made to the State Police officers retirement fund under law after June 30, 1961, and all prior service which was credited to a member for service on or before June 30, 1961.

(b) Allowable service also includes any period of absence from duty by a member who, by reason of injury incurred in the performance of duty, is temporarily disabled and for which disability the state is liable under the workers' compensation law, until the date authorized by the executive director for commencement of payment of a disability benefit or until the date of a return to employment.

EFFECTIVE DATE. This section is effective the day following final enactment."

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2009 Supplement, section 353.01, subdivision 16, is amended to read:

Subd. 16. **Allowable service; limits and computation.** (a) "Allowable service" means:

(1) service during years of actual membership in the course of which employee deductions were withheld from salary and contributions were made at the applicable rates under section 353.27, 353.65, or 353E.03;

(2) periods of service covered by payments in lieu of salary deductions under sections 353.27, subdivision 12, and 353.35 before July 1, 2010, and in proportion to 1/12th of the member's annual salary for the preceding fiscal year after June 30, 2010;

(3) service in years during which the public employee was not a member but for which the member later elected, while a member, to obtain credit by making payments to the fund as permitted by any law then in effect;

(4) a period of authorized leave of absence with pay from which deductions for employee contributions are made, deposited, and credited to the fund;

(5) a period of authorized personal, parental, or medical leave of absence without pay, including a leave of absence covered under the federal Family Medical Leave Act, that does not exceed one year, and for which a member obtained service credit for each month in the leave period by payment under section 353.0161 to the fund made in place of salary deductions. An employee must return to public service and render a minimum of three months of allowable service in order to be eligible to make payment under section 353.0161 for a subsequent authorized leave of absence without pay. Upon payment, the employee must be granted allowable service credit for the purchased period;

(6) a periodic, repetitive leave that is offered to all employees of a governmental subdivision. The leave program may not exceed 208 hours per annual normal work cycle as certified to the association by the employer. A participating member obtains service credit by making employee contributions in an amount or amounts based on the member's average salary that would have been paid if the leave had not been taken. The

employer shall pay the employer and additional employer contributions on behalf of the participating member. The employee and the employer are responsible to pay interest on their respective shares at the rate of 8.5 percent a year, compounded annually, from the end of the normal cycle until full payment is made. An employer shall also make the employer and additional employer contributions, plus 8.5 percent interest, compounded annually, on behalf of an employee who makes employee contributions but terminates public service. The employee contributions must be made within one year after the end of the annual normal working cycle or within 30 days after termination of public service, whichever is sooner. The executive director shall prescribe the manner and forms to be used by a governmental subdivision in administering a periodic, repetitive leave. Upon payment, the member must be granted allowable service credit for the purchased period;

(7) an authorized temporary or seasonal layoff under subdivision 12, limited to three months allowable service per authorized temporary or seasonal layoff in one calendar year <u>with the payment for the period under section 353.0161</u>. An employee who has received the maximum service credit allowed for an authorized temporary or seasonal layoff must return to public service and must obtain a minimum of three months of allowable service subsequent to the layoff in order to receive allowable service for a subsequent authorized temporary or seasonal layoff;

(8) a period during which a member is absent from employment by a governmental subdivision by reason of service in the uniformed services, as defined in United States Code, title 38, section 4303(13), if the member returns to public service with the same governmental subdivision upon discharge from service in the uniformed service within the time frames required under United States Code, title 38, section 4312(e), provided that the member did not separate from uniformed service with a dishonorable or bad conduct discharge or under other than honorable conditions. The service is credited if the member pays into the fund equivalent employee contributions based upon the contribution rate or rates in effect at the time that the uniformed service was performed multiplied by the full and fractional years being purchased and applied to the annual salary rate. The annual salary rate is the average annual salary during the purchase period that the member would have received if the member had continued to be employed in covered employment rather than to provide uniformed service, or, if the determination of that rate is not reasonably certain, the annual salary rate is the member's average salary rate during the 12-month period of covered employment rendered immediately preceding the period of the uniformed service. Payment of the member equivalent contributions must be made during a period that begins with the date on which the individual returns to public employment and that is three times the length of the military leave period, or

within five years of the date of discharge from the military service, whichever is less. If the determined payment period is less than one year, the contributions required under this clause to receive service credit may be made within one year of the discharge date. Payment may not be accepted following 30 days after termination of public service under subdivision 11a. If the member equivalent contributions provided for in this clause are not paid in full, the member's allowable service credit must be prorated by multiplying the full and fractional number of years of uniformed service eligible for purchase by the ratio obtained by dividing the total member contributions received by the total member contributions otherwise required under this clause. The equivalent employer contribution, and, if applicable, the equivalent additional employer contribution must be paid by the governmental subdivision employing the member if the member makes the equivalent employee contributions. The employer payments must be made from funds available to the employing unit, using the employer and additional employer contribution rate or rates in effect at the time that the uniformed service was performed, applied to the same annual salary rate or rates used to compute the equivalent member contribution. The governmental subdivision involved may appropriate money for those payments. The amount of service credit obtainable under this section may not exceed five years unless a longer purchase period is required under United States Code, title 38, section 4312. The employing unit shall pay interest on all equivalent member and employer contribution amounts payable under this clause. Interest must be computed at a rate of 8.5 percent compounded annually from the end of each fiscal year of the leave or the break in service to the end of the month in which the payment is received. Upon payment, the employee must be granted allowable service credit for the purchased period; or

(9) a period specified under subdivision 40.

(b) For calculating benefits under sections 353.30, 353.31, 353.32, and 353.33 for state officers and employees displaced by the Community Corrections Act, chapter 401, and transferred into county service under section 401.04, "allowable service" means the combined years of allowable service as defined in paragraph (a), clauses (1) to (6), and section 352.01, subdivision 11.

(c) For a public employee who has prior service covered by a local police or firefighters relief association that has consolidated with the Public Employees Retirement Association or to which section 353.665 applies, and who has elected the type of benefit coverage provided by the public employees police and fire fund either under section 353A.08 following the consolidation or under section 353.665, subdivision 4, "applicable service" is a period of service credited by the local police or firefighters relief association as of the effective date of the consolidation based on law and on bylaw provisions governing the relief association on the date of the initiation of the consolidation procedure.

(d) No member may receive more than 12 months of allowable service credit in a year either for vesting purposes or for benefit calculation purposes.

(e) MS 2002 [Expired]

EFFECTIVE DATE. This section is effective the day following final enactment."

Page ..., line ..., insert:

"Sec. .... Minnesota Statutes 2008, section 352.116, subdivision 1a, is amended to read:

Subd. 1a. **Actuarial reduction for early retirement.** This subdivision applies to a person who has become at least 55 years old and first became a covered employee after June 30, 1989, and to any other covered employee who has become at least 55 years old and whose annuity is higher when calculated under section 352.115, subdivision 3, paragraph (b), in conjunction with this subdivision than when calculated under section 352.115, subdivision 3, paragraph (a), in conjunction with subdivision 1. A covered employee who retires before the normal retirement age shall be paid the normal retirement annuity provided in section 352.115, subdivisions 2 and 3, paragraph (b), reduced so that the reduced annuity is the actuarial equivalent of the annuity that would be payable to the employee if the employee deferred receipt of the annuity and the annuity amount were augmented at an annual rate of three percent compounded annually from the day the annuity begins to accrue until the normal retirement age if the employee became an employee before July 1, 2006, and at an annual rate of 2.5 percent compounded annually from the day the annuity begins to accrue until the normal retirement age if the employee initially becomes an employee after June 30, 2006, and without augmentation if the person began receipt of the early retirement annuity after June 30, 2010.

EFFECTIVE DATE. This section is effective the day following final enactment."

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2008, section 352.116, subdivision 3a, is amended to read:

Subd. 3a. **Bounce-back annuity.** (a) If a retired employee or disabilitant selects a joint and survivor annuity option under subdivision 3 after June 30, 1989, the retired employee or disabilitant must receive a normal single-life annuity if the designated optional annuity beneficiary dies before the retired employee or disabilitant. Under this option, no reduction may be made in the annuity to provide for restoration of the normal single-life annuity in the event of the death of the designated optional annuity beneficiary for an optional annuity that commences before July 1, 2010, and with reduction for the future for an optional annuity that commences after June 30, 2010..

(b) The annuity adjustment specified in paragraph (a) also applies to joint and survivor annuity options under subdivision 3 elected before July 1, 1989. The annuity adjustment under this paragraph occurs on July 1, 1989, or on the first day of the first month following the death of the designated optional annuity beneficiary, whichever is later. This paragraph may not be interpreted as authorizing retroactive payments.

EFFECTIVE DATE. This section is effective the day following final enactment."

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2008, section 352.116, subdivision 3b, is amended to read:

Subd. 3b. **Bounce-back annuity; correctional employees and State Patrol.** (a) The board of directors must provide a joint and survivor annuity option to members of the correctional employees and State Patrol retirement funds. Under this option, if a former member or disabilitant selects a joint and survivor annuity option after June 30, 1989, the former member or disabilitant must receive a normal single life annuity if the designated optional annuity beneficiary dies before the former member or disabilitant. Under this option, no reduction may be made in the person's annuity to provide for restoration of the normal single life annuity in the event of the death of the designated optional annuity beneficiary for an optional annuity that commences before July 1, 2010, and with reduction for the future for an optional annuity that commences after June 30, 2010..

(b) The annuity adjustment specified in paragraph (a) also applies to joint and survivor annuity options elected before July 1, 1989. The annuity adjustment under this paragraph occurs on July 1, 1989, or on the first day of the first month following the death of the designated optional annuity beneficiary, whichever is later. This paragraph may not be interpreted as authorizing retroactive payments.

EFFECTIVE DATE. This section is effective the day following final enactment."

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2008, section 353.30, subdivision 3a, is amended to read:

Subd. 3a. **Bounce-back annuity.** (a) If a former member or disabilitant selects a joint and survivor annuity option under subdivision 3 after June 30, 1989, the former member or disabilitant must receive a normal single life annuity if the designated optional annuity beneficiary dies before the former member or disabilitant. Under this option, no reduction may be made in the person's annuity to provide for restoration of the normal single life annuity in the event of the death of the designated optional annuity beneficiary for an optional annuity that commences before July 1, 2010, and with reduction for the future for an optional annuity that commences after June 30, 2010..

(b) The annuity adjustment specified in paragraph (a) also applies to joint and survivor annuity options under subdivision 3 elected before July 1, 1989. The annuity adjustment under this paragraph occurs on July 1, 1989, or on the first day of the first month following the death of the designated optional annuity beneficiary, whichever is later. This paragraph may not be interpreted as authorizing retroactive payments."

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2008, section 353.30, subdivision 3b, is amended to read:

Subd. 3b. **Bounce-back annuity; police and fire fund option.** (a) The board of trustees must provide a joint and survivor annuity option to members of the police and fire fund. If a joint and survivor annuity is elected on or after July 1, 1989, the former member or disabilitant must receive a normal single life annuity if the designated optional annuity beneficiary dies before the former member or disabilitant. Under this option, no reduction may be made in the person's annuity to provide for restoration of the normal single life annuity in the event of the death of the designated optional annuity beneficiary for an optional annuity that commences before July 1, 2010, and with reduction for the future for an optional annuity that commences after June 30, 2010..

(b) The annuity adjustment specified in paragraph (a) also applies to joint and survivor annuity options under subdivision 3 elected before July 1, 1989. The annuity adjustment under this paragraph occurs on July 1, 1989, or on the first day of the first month following the death of the designated optional annuity beneficiary, whichever is later. This paragraph may not be interpreted as authorizing retroactive payments.

EFFECTIVE DATE. This section is effective the day following final enactment."

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2008, section 353.30, subdivision 5, is amended to read:

Subd. 5. **Actuarial reduction for early retirement.** This subdivision applies to a member who has become at least 55 years old and first became a public employee after June 30, 1989, and to any other member who has become at least 55 years old and whose annuity is higher when calculated under section 353.29, subdivision 3, paragraph (b), in conjunction with this subdivision than when calculated under section 353.29, subdivision 3, paragraph (a), in conjunction with subdivision 1, 1a, 1b, or 1c. An employee who retires before normal retirement age shall be paid the retirement annuity provided in section 353.29, subdivision 3, paragraph (b), reduced so that the reduced annuity is the actuarial equivalent of the annuity that would be payable to the employee if the employee deferred receipt of the annuity and the annuity amount were augmented at an annual rate of three percent compounded annually from the day the annuity begins to accrue until the normal retirement age if the employee became an employee before July 1, 2006, ~~and~~ at 2.5 percent compounded annually from the day the annuity begins to accrue until the normal retirement age if the employee initially becomes an employee after June 30, 2006, and without augmentation if the person began receipt of the early retirement annuity after June 30, 2010.

EFFECTIVE DATE. This section is effective the day following final enactment."

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2008, section 354.44, subdivision 6, is amended to read:

Subd. 6. **Computation of formula program retirement annuity.** (a) The formula retirement annuity must be computed in accordance with the applicable provisions of the formulas stated in paragraph (b) or (d) on the basis of each member's average salary under section 354.05, subdivision 13a, for the period of the member's formula service credit.

(b) This paragraph, in conjunction with paragraph (c), applies to a person who first became a member of the association or a member of a pension fund listed in section 356.30, subdivision 3, before July 1, 1989, unless paragraph (d), in conjunction with paragraph (e), produces a higher annuity amount, in which case paragraph (d) applies. The average salary as defined in section 354.05, subdivision 13a, multiplied by the following percentages per year of formula service credit shall determine the amount of the annuity to which the member qualifying therefor is entitled for service rendered before July 1, 2006:

	Coordinated Member	Basic Member
Each year of service during first ten	the percent specified in section 356.315, subdivision 1, per year	the percent specified in section 356.315, subdivision 3, per year
Each year of service thereafter	the percent specified in section 356.315, subdivision 2, per year	the percent specified in section 356.315, subdivision 4, per year

For service rendered on or after July 1, 2006, the average salary as defined in section 354.05, subdivision 13a, multiplied by the following percentages per year of service credit, determines the amount the annuity to which the member qualifying therefor is entitled:

	Coordinated Member	Basic Member
Each year of service during first ten	the percent specified in section 356.315, subdivision 1a, per year	the percent specified in section 356.315, subdivision 3, per year
Each year of service after ten years of service	the percent specified in section 356.315, subdivision 2b, per year	the percent specified in section 356.315, subdivision 4, per year

(c)(i) This paragraph applies only to a person who first became a member of the association or a member of a pension fund listed in section 356.30, subdivision 3, before

July 1, 1989, and whose annuity is higher when calculated under paragraph (b), in conjunction with this paragraph than when calculated under paragraph (d), in conjunction with paragraph (e).

(ii) Where any member retires prior to normal retirement age under a formula annuity, the member shall be paid a retirement annuity in an amount equal to the normal annuity provided in paragraph (b) reduced by one-quarter of one percent for each month that the member is under normal retirement age at the time of retirement except that for any member who has 30 or more years of allowable service credit, the reduction shall be applied only for each month that the member is under age 62.

(iii) Any member whose attained age plus credited allowable service totals 90 years is entitled, upon application, to a retirement annuity in an amount equal to the normal annuity provided in paragraph (b), without any reduction by reason of early retirement.

(d) This paragraph applies to a member who has become at least 55 years old and first became a member of the association after June 30, 1989, and to any other member who has become at least 55 years old and whose annuity amount when calculated under this paragraph and in conjunction with paragraph (e), is higher than it is when calculated under paragraph (b), in conjunction with paragraph (c). For a basic member, the average salary, as defined in section 354.05, subdivision 13a, multiplied by the percent specified by section 356.315, subdivision 4, for each year of service for a basic member shall determine the amount of the retirement annuity to which the basic member is entitled. The annuity of a basic member who was a member of the former Minneapolis Teachers Retirement Fund Association as of June 30, 2006, must be determined according to the annuity formula under the articles of incorporation of the former Minneapolis Teachers Retirement Fund Association in effect as of that date. For a coordinated member, the average salary, as defined in section 354.05, subdivision 13a, multiplied by the percent specified in section 356.315, subdivision 2, for each year of service rendered before July 1, 2006, and by the percent specified in section 356.315, subdivision 2b, for each year of service rendered on or after July 1, 2006, determines the amount of the retirement annuity to which the coordinated member is entitled.

(e) This paragraph applies to a person who has become at least 55 years old and first becomes a member of the association after June 30, 1989, and to any other member who has become at least 55 years old and whose annuity is higher when calculated under paragraph (d) in conjunction with this paragraph than when calculated under paragraph (b), in conjunction with paragraph (c). An employee who retires under the formula annuity before the normal retirement age shall be paid the normal annuity provided in paragraph (d) reduced so that the reduced annuity is the actuarial equivalent of the annuity that would be payable to the employee if the employee deferred receipt of the annuity and the annuity amount were augmented at an annual rate of three percent compounded annually from the day the annuity begins to accrue until the normal retirement age if the employee became an employee before July 1, 2006, and at 2.5 percent compounded annually if the employee becomes an employee after June 30, 2006, and without augmentation if the person began receipt of the early retirement annuity after June 30, 2010.

(f) No retirement annuity is payable to a former employee with a salary that exceeds 95 percent of the governor's salary unless and until the salary figures used in computing the highest five successive years average salary under paragraph (a) have been audited by the Teachers Retirement Association and determined by the executive director to comply with the requirements and limitations of section 354.05, subdivisions 35 and 35a."

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2008, section 354.45, subdivision 1a, is amended to read:

Subd. 1a. **Bounce-back annuity.** (a) If a former member or disabilitant selects a joint and survivor annuity option under subdivision 1, the former member or disabilitant must receive a normal single life annuity if the designated optional annuity beneficiary dies before the former member or disabilitant. Under this option, no reduction may be made in the person's annuity to provide for restoration of the normal single life annuity in the event of the death of the designated optional annuity beneficiary for an optional annuity that commences before July 1, 2010, and with reduction for the future for an optional annuity that commences after June 30, 2010..

(b) The restoration of the normal single life annuity under this subdivision will take effect on July 1, 1989, or the first of the month following the date of death of the designated optional annuity beneficiary, or on the first of the month following one year before the date on which a certified copy of the death record of the designated optional annuity beneficiary is received in the office of the Teachers Retirement Association, whichever date is later.

(c) Except as stated in paragraph (b), this subdivision may not be interpreted as authorizing retroactive benefit payments.

EFFECTIVE DATE. This section is effective the day following final enactment."

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2008, section 356.30, subdivision 1, is amended to read:

Subdivision 1. **Eligibility; computation of annuity.** (a) Notwithstanding any provisions of the laws governing the retirement plans enumerated in subdivision 3, a person who has met the qualifications of paragraph (b) may elect to receive a retirement annuity from each enumerated retirement plan in which the person has at least one-half year of allowable service, based on the allowable service in each plan, subject to the provisions of paragraph (c).

(b) A person may receive, upon retirement, a retirement annuity from each enumerated retirement plan in which the person has at least one-half year of allowable service, and, if the person retired before July 1, 2010, augmentation of a deferred annuity calculated at the appropriate rate under the laws governing each public pension plan or fund named in subdivision 3, based on the date of the person's initial entry into public employment from the date the person terminated all public service if:

(1) the person has allowable service totaling an amount that allows the person to receive an annuity in any two or more of the enumerated plans; and

(2) the person has not begun to receive an annuity from any enumerated plan or the person has made application for benefits from each applicable plan and the effective dates of the retirement annuity with each plan under which the person chooses to receive an annuity are within a one-year period.

(c) The retirement annuity from each plan must be based upon the allowable service, accrual rates, and average salary in the applicable plan except as further specified or modified in the following clauses:

(1) the laws governing annuities must be the law in effect on the date of termination from the last period of public service under a covered retirement plan with which the person earned a minimum of one-half year of allowable service credit during that employment;

(2) the "average salary" on which the annuity from each covered plan in which the employee has credit in a formula plan must be based on the employee's highest five successive years of covered salary during the entire service in covered plans;

(3) the accrual rates to be used by each plan must be those percentages prescribed by each plan's formula as continued for the respective years of allowable service from one plan to the next, recognizing all previous allowable service with the other covered plans;

(4) the allowable service in all the plans must be combined in determining eligibility for and the application of each plan's provisions in respect to reduction in the annuity amount for retirement prior to normal retirement age; and

(5) the annuity amount payable for any allowable service under a nonformula plan of a covered plan must not be affected, but such service and covered salary must be used in the above calculation.

(d) This section does not apply to any person whose final termination from the last public service under a covered plan was before May 1, 1975.

(e) For the purpose of computing annuities under this section, the accrual rates used by any covered plan, except the public employees police and fire plan, the judges retirement fund, and the State Patrol retirement plan, must not exceed the percent specified in section 356.315, subdivision 4, per year of service for any year of service or fraction thereof. The formula percentage used by the judges retirement fund must not exceed the percentage rate specified in section 356.315, subdivision 8, per year of service for any year of service or fraction thereof. The accrual rate used by the public employees police and fire plan and the State Patrol retirement plan must not exceed the percentage rate specified in section 356.315, subdivision 6, per year of service for any year of service or fraction thereof. The accrual rate or rates used by the legislators retirement plan must not exceed 2.5 percent, but this limit does not apply to the adjustment provided under section 3A.02, subdivision 1, paragraph (c).

(f) Any period of time for which a person has credit in more than one of the covered plans must be used only once for the purpose of determining total allowable service.

(g) If the period of duplicated service credit is more than one-half year, or the person has credit for more than one-half year, with each of the plans, each plan must apply its formula to a prorated service credit for the period of duplicated service based on a fraction of the salary on which deductions were paid to that fund for the period divided by the total salary on which deductions were paid to all plans for the period.

(h) If the period of duplicated service credit is less than one-half year, or when added to other service credit with that plan is less than one-half year, the service credit must be ignored and a refund of contributions made to the person in accord with that plan's refund provisions.

EFFECTIVE DATE. This section is effective the day following final enactment."

Renumber the sections in sequence and correct the internal references

Amend the title accordingly

.... moves to amend S.F. No. ....; H.F. No. ...., as follows:

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2009 Supplement, section 356.215, subdivision 1, is amended to read:

Subdivision 1. **Definitions.** (a) For the purposes of sections 3.85 and 356.20 to 356.23, each of the terms in the following paragraphs has the meaning given.

(b) "Actuarial valuation" means a set of calculations prepared by an actuary retained under section 356.214 if so required under section 3.85, or otherwise, by an approved actuary, to determine the normal cost and the accrued actuarial liabilities of a benefit plan, according to the entry age actuarial cost method and based upon stated assumptions including, but not limited to rates of interest, mortality, salary increase, disability, withdrawal, and retirement and to determine the payment necessary to amortize over a stated period any unfunded accrued actuarial liability disclosed as a result of the actuarial valuation of the benefit plan.

(c) "Approved actuary" means a person who is regularly engaged in the business of providing actuarial services and who is a fellow in the Society of Actuaries.

(d) "Entry age actuarial cost method" means an actuarial cost method under which the actuarial present value of the projected benefits of each individual currently covered by the benefit plan and included in the actuarial valuation is allocated on a level basis over the service of the individual, if the benefit plan is governed by section 69.773, or over the earnings of the individual, if the benefit plan is governed by any other law, between the entry age and the assumed exit age, with the portion of the actuarial present value which is allocated to the valuation year to be the normal cost and the portion of the actuarial present value not provided for at the valuation date by the actuarial present value of future normal costs to be the actuarial accrued liability, with aggregation in the calculation process to be the sum of the calculated result for each covered individual and with recognition given to any different benefit formulas which may apply to various periods of service.

(e) "Experience study" means a report providing experience data and an actuarial analysis of the adequacy of the actuarial assumptions on which actuarial valuations are based.

(f) "~~Actuarial~~ value of assets" means~~:~~

~~(1) For the July 1, 2009, actuarial valuation,~~ the market value of all assets as of June 30, 2009~~, reduced by:~~.

~~(i) 20 percent of the difference between the actual net change in the market value of assets other than the Minnesota postretirement investment fund between June 30, 2006, and June 30, 2005, and the computed increase in the market value of assets other than the~~

~~Minnesota postretirement investment fund over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2005;~~

~~(ii) 40 percent of the difference between the actual net change in the market value of assets other than the Minnesota postretirement investment fund between June 30, 2007, and June 30, 2006, and the computed increase in the market value of assets other than the Minnesota postretirement investment fund over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2006;~~

~~(iii) 60 percent of the difference between the actual net change in the market value of assets other than the Minnesota postretirement investment fund between June 30, 2008, and June 30, 2007, and the computed increase in the market value of assets other than the Minnesota postretirement investment fund over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2007;~~

~~(iv) 80 percent of the difference between the actual net change in the market value of assets other than the Minnesota postretirement investment fund between June 30, 2009, and June 30, 2008, and the computed increase in the market value of assets other than the Minnesota postretirement investment fund over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2008; and~~

~~(v) if applicable, 80 percent of the difference between the actual net change in the market value of the Minnesota postretirement investment fund between June 30, 2009, and June 30, 2008, and the computed increase in the market value of assets over that fiscal year period if the assets had increased at 8.5 percent annually.~~

~~(2) For the July 1, 2010, actuarial valuation, the market value of all assets as of June 30, 2010, reduced by:~~

~~(i) 20 percent of the difference between the actual net change in the market value of assets other than the Minnesota postretirement investment fund between June 30, 2007, and June 30, 2006, and the computed increase in the market value of assets other than the Minnesota postretirement investment fund over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2006;~~

~~(ii) 40 percent of the difference between the actual net change in the market value of assets other than the Minnesota postretirement investment fund between June 30, 2008, and June 30, 2007, and the computed increase in the market value of assets other than the~~

~~Minnesota postretirement investment fund over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2007;~~

~~(iii) 60 percent of the difference between the actual net change in the market value of assets other than the Minnesota postretirement investment fund between June 30, 2009, and June 30, 2008, and the computed increase in the market value of assets other than the Minnesota postretirement investment fund over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2008;~~

~~(iv) 80 percent of the difference between the actual net change in the market value of total assets between June 30, 2010, and June 30, 2009, and the computed increase in the market value of total assets over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2009; and~~

~~(v) if applicable, 60 percent of the difference between the actual net change in the market value of the Minnesota postretirement investment fund between June 30, 2009, and June 30, 2008, and the computed increase in the market value of assets over that fiscal year period if the assets had increased at 8.5 percent annually.~~

~~(3) For the July 1, 2011, actuarial valuation, the market value of all assets as of June 30, 2011, reduced by:~~

~~(i) 20 percent of the difference between the actual net change in the market value of assets other than the Minnesota postretirement investment fund between June 30, 2008, and June 30, 2007, and the computed increase in the market value of assets other than the Minnesota postretirement investment fund over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2007;~~

~~(ii) 40 percent of the difference between the actual net change in the market value of assets other than the Minnesota postretirement investment fund between June 30, 2009, and June 30, 2008, and the computed increase in the market value of assets other than the Minnesota postretirement investment fund over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2008;~~

~~(iii) 60 percent of the difference between the actual net change in the market value of the total assets between June 30, 2010, and June 30, 2009, and the computed increase in the market value of the total assets over that fiscal year period if the assets had earned~~

~~a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2009;~~

~~(iv) 80 percent of the difference between the actual net change in the market value of total assets between June 30, 2011, and June 30, 2010, and the computed increase in the market value of total assets over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2010; and~~

~~(v) if applicable, 40 percent of the difference between the actual net change in the market value of the Minnesota postretirement investment fund between June 30, 2009, and June 30, 2008, and the computed increase in the market value of assets over that fiscal year period if the assets had increased at 8.5 percent annually.~~

~~(4) For the July 1, 2012, actuarial valuation, the market value of all assets as of June 30, 2012, reduced by:~~

~~(i) 20 percent of the difference between the actual net change in the market value of assets other than the Minnesota postretirement investment fund between June 30, 2009, and June 30, 2008, and the computed increase in the market value of assets other than the Minnesota postretirement investment fund over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2008;~~

~~(ii) 40 percent of the difference between the actual net change in the market value of total assets between June 30, 2010, and June 30, 2009, and the computed increase in the market value of total assets over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2009;~~

~~(iii) 60 percent of the difference between the actual net change in the market value of total assets between June 30, 2011, and June 30, 2010, and the computed increase in the market value of total assets over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2010;~~

~~(iv) 80 percent of the difference between the actual net change in the market value of total assets between June 30, 2012, and June 30, 2011, and the computed increase in the market value of total assets over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for July 1, 2011; and~~

~~(v) if applicable, 20 percent of the difference between the actual net change in the market value of the Minnesota postretirement investment fund between June 30, 2009,~~

~~and June 30, 2008, and the computed increase in the market value of assets over that fiscal year period if the assets had increased at 8.5 percent annually.~~

~~(5) For the July 1, 2013, and following actuarial valuations, the market value of all assets as of the preceding June 30, reduced by:~~

~~(i) 20 percent of the difference between the actual net change in the market value of total assets between the June 30 that occurred three years earlier and the June 30 that occurred four years earlier and the computed increase in the market value of total assets over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for the July 1 that occurred four years earlier;~~

~~(ii) 40 percent of the difference between the actual net change in the market value of total assets between the June 30 that occurred two years earlier and the June 30 that occurred three years earlier and the computed increase in the market value of total assets over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for the July 1 that occurred three years earlier;~~

~~(iii) 60 percent of the difference between the actual net change in the market value of total assets between the June 30 that occurred one year earlier and the June 30 that occurred two years earlier and the computed increase in the market value of total assets over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for the July 1 that occurred two years earlier; and~~

~~(iv) 80 percent of the difference between the actual net change in the market value of total assets between the most recent June 30 and the June 30 that occurred one year earlier and the computed increase in the market value of total assets over that fiscal year period if the assets had earned a rate of return on assets equal to the annual percentage preretirement interest rate assumption used in the actuarial valuation for the July 1 that occurred one year earlier.~~

(g) "Unfunded actuarial accrued liability" means the total current and expected future benefit obligations, reduced by the sum of the actuarial value of assets and the present value of future normal costs.

(h) "Pension benefit obligation" means the actuarial present value of credited projected benefits, determined as the actuarial present value of benefits estimated to be payable in the future as a result of employee service attributing an equal benefit amount, including the effect of projected salary increases and any step rate benefit accrual rate differences, to each year of credited and expected future employee service.

EFFECTIVE DATE. This section is effective the day following final enactment."

Renumber the sections in sequence and correct the internal references

Amend the title accordingly

.... moves to amend S.F. No. ....; H.F. No. ...., as follows:

Page ..., after line ..., insert:

"Sec. .... Minnesota Statutes 2008, section 356.215, subdivision 8, is amended to read:

Subd. 8. **Interest and salary assumptions.** (a) The actuarial valuation must use the applicable following preretirement interest assumption and the applicable following postretirement interest assumption:

plan	preretirement interest rate assumption	postretirement interest rate assumption
general state employees retirement plan	~~8.5%~~ 8.0%	~~6.0%~~ 8.0%
correctional state employees retirement plan	~~8.5~~ 8.0	~~6.0~~ 8.0
State Patrol retirement plan	~~8.5~~ 8.0	~~6.0~~ 8.0
legislators retirement plan	~~8.5~~ 8.0	~~6.0~~ 8.0
elective state officers retirement plan	~~8.5~~ 8.0	~~6.0~~ 8.0
judges retirement plan	~~8.5~~ 8.0	~~6.0~~ 8.0
general public employees retirement plan	~~8.5~~ 8.0	~~6.0~~ 8.0
public employees police and fire retirement plan	~~8.5~~ 8.0	~~6.0~~ 8.0
local government correctional service retirement plan	~~8.5~~ 8.0	~~6.0~~ 8.0
teachers retirement plan	~~8.5~~ 8.0	~~6.0~~ 8.0
Minneapolis employees retirement plan	6.0	5.0
Duluth teachers retirement plan	~~8.5~~ 8.0	~~8.5~~ 8.0
St. Paul teachers retirement plan	~~8.5~~ 8.0	~~8.5~~ 8.0
Minneapolis Police Relief Association	6.0	6.0
Fairmont Police Relief Association	5.0	5.0
Minneapolis Fire Department Relief Association	6.0	6.0
Virginia Fire Department Relief Association	5.0	5.0
Bloomington Fire Department Relief Association	6.0	6.0
local monthly benefit volunteer firefighters relief associations	5.0	5.0

(b) Before July 1, 2010, the actuarial valuation must use the applicable following single rate future salary increase assumption, the applicable following modified single rate future salary increase assumption, or the applicable following graded rate future salary increase assumption:

(1) single rate future salary increase assumption

plan	future salary increase assumption
legislators retirement plan	5.0%
judges retirement plan	4.0
Minneapolis Police Relief Association	4.0
Fairmont Police Relief Association	3.5

Minneapolis Fire Department Relief Association	4.0
Virginia Fire Department Relief Association	3.5
Bloomington Fire Department Relief Association	4.0

(2) modified single rate future salary increase assumption

plan	future salary increase assumption
Minneapolis employees retirement plan	the prior calendar year amount increased first by 1.0198 percent to prior fiscal year date and then increased by 4.0 percent annually for each future year

(3) age-related select and ultimate future salary increase assumption or graded rate future salary increase assumption

plan	future age-related salary increase assumption
~~general state employees retirement plan~~	~~select calculation and assumption A~~
correctional state employees retirement plan	assumption ~~H~~ E
State Patrol retirement plan	assumption ~~G~~ D
~~general public employees retirement plan~~	~~select calculation and assumption B~~
public employees police and fire fund retirement plan	assumption ~~C~~ A
local government correctional service retirement plan	assumption ~~G~~ D
~~teachers retirement plan~~	~~assumption D~~
Duluth teachers retirement plan	assumption ~~E~~ B
St. Paul teachers retirement plan	assumption ~~F~~ C

The select calculation is: during the designated select period, a designated percentage rate is multiplied by the result of the designated integer minus T, where T is the number of completed years of service, and is added to the applicable future salary increase assumption. ~~The designated select period is five years and the designated integer is five for the general state employees retirement plan and the general public employees retirement plan.~~ The designated select period is ten years and the designated integer is ten for all other retirement plans covered by this clause. The designated percentage rate is: (1) 0.2 percent for the correctional state employees retirement plan, the State Patrol retirement plan, the public employees police and fire plan, and the local government correctional service plan; ~~(2) 0.6 percent for the general state employees retirement plan and the general public employees retirement plan;~~ and ~~(3)~~ (2) 0.3 percent for the teachers retirement plan, the Duluth Teachers Retirement Fund Association, and the St. Paul Teachers Retirement Fund Association. The select calculation for the Duluth Teachers Retirement Fund Association is 8.00 percent per year for service years one through seven, 7.25 percent per year for service years seven and eight, and 6.50 percent per year for service years eight and nine.

The ultimate age-related future salary increase assumption is:

age	~~A~~	~~B~~	~~C~~ A	~~D~~	~~E~~ B	~~F~~ C	~~G~~ D	~~H~~ E
16	~~5.95%~~	~~5.95%~~	11.00%	~~7.70%~~	8.00%	6.90%	7.7500%	7.2500%
17	~~5.90~~	~~5.90~~	11.00	~~7.65~~	8.00	6.90	7.7500	7.2500
18	~~5.85~~	~~5.85~~	11.00	~~7.60~~	8.00	6.90	7.7500	7.2500
19	~~5.80~~	~~5.80~~	11.00	~~7.55~~	8.00	6.90	7.7500	7.2500
20	~~5.75~~	~~5.40~~	11.00	~~5.50~~	6.90	6.90	7.7500	7.2500
21	~~5.75~~	~~5.40~~	11.00	~~5.50~~	6.90	6.90	7.1454	6.6454
22	~~5.75~~	~~5.40~~	10.50	~~5.50~~	6.90	6.90	7.0725	6.5725
23	~~5.75~~	~~5.40~~	10.00	~~5.50~~	6.85	6.85	7.0544	6.5544
24	~~5.75~~	~~5.40~~	9.50	~~5.50~~	6.80	6.80	7.0363	6.5363
25	~~5.75~~	~~5.40~~	9.00	~~5.50~~	6.75	6.75	7.0000	6.5000
26	~~5.75~~	~~5.36~~	8.70	~~5.50~~	6.70	6.70	7.0000	6.5000
27	~~5.75~~	~~5.32~~	8.40	~~5.50~~	6.65	6.65	7.0000	6.5000
28	~~5.75~~	~~5.28~~	8.10	~~5.50~~	6.60	6.60	7.0000	6.5000
29	~~5.75~~	~~5.24~~	7.80	~~5.50~~	6.55	6.55	7.0000	6.5000
30	~~5.75~~	~~5.20~~	7.50	~~5.50~~	6.50	6.50	7.0000	6.5000
31	~~5.75~~	~~5.16~~	7.30	~~5.50~~	6.45	6.45	7.0000	6.5000
32	~~5.75~~	~~5.12~~	7.10	~~5.50~~	6.40	6.40	7.0000	6.5000
33	~~5.75~~	~~5.08~~	6.90	~~5.50~~	6.35	6.35	7.0000	6.5000

34	~~5.75~~	~~5.04~~	6.70	~~5.50~~	6.30	6.30	7.0000	6.5000
35	~~5.75~~	~~5.00~~	6.50	~~5.50~~	6.25	6.25	7.0000	6.5000
36	~~5.75~~	~~4.96~~	6.30	~~5.50~~	6.20	6.20	6.9019	6.4019
37	~~5.75~~	~~4.92~~	6.10	~~5.50~~	6.15	6.15	6.8074	6.3074
38	~~5.75~~	~~4.88~~	5.90	~~5.40~~	6.10	6.10	6.7125	6.2125
39	~~5.75~~	~~4.84~~	5.70	~~5.30~~	6.05	6.05	6.6054	6.1054
40	~~5.75~~	~~4.80~~	5.50	~~5.20~~	6.00	6.00	6.5000	6.0000
41	~~5.75~~	~~4.76~~	5.40	~~5.10~~	5.90	5.95	6.3540	5.8540
42	~~5.75~~	~~4.72~~	5.30	~~5.00~~	5.80	5.90	6.2087	5.7087
43	~~5.65~~	~~4.68~~	5.20	~~4.90~~	5.70	5.85	6.0622	5.5622
44	~~5.55~~	~~4.64~~	5.10	~~4.80~~	5.60	5.80	5.9048	5.4078
45	~~5.45~~	~~4.60~~	5.00	~~4.70~~	5.50	5.75	5.7500	5.2500
46	~~5.35~~	~~4.56~~	4.95	~~4.60~~	5.40	5.70	5.6940	5.1940
47	~~5.25~~	~~4.52~~	4.90	~~4.50~~	5.30	5.65	5.6375	5.1375
48	~~5.15~~	~~4.48~~	4.85	~~4.50~~	5.20	5.60	5.5822	5.0822
49	~~5.05~~	~~4.44~~	4.80	~~4.50~~	5.10	5.55	5.5404	5.0404
50	~~4.95~~	~~4.40~~	4.75	~~4.50~~	5.00	5.50	5.5000	5.0000
51	~~4.85~~	~~4.36~~	4.75	~~4.50~~	4.90	5.45	5.4384	4.9384
52	~~4.75~~	~~4.32~~	4.75	~~4.50~~	4.80	5.40	5.3776	4.8776
53	~~4.65~~	~~4.28~~	4.75	~~4.50~~	4.70	5.35	5.3167	4.8167
54	~~4.55~~	~~4.24~~	4.75	~~4.50~~	4.60	5.30	5.2826	4.7826
55	~~4.45~~	~~4.20~~	4.75	~~4.50~~	4.50	5.25	5.2500	4.7500
56	~~4.35~~	~~4.16~~	4.75	~~4.50~~	4.40	5.20	5.2500	4.7500
57	~~4.25~~	~~4.12~~	4.75	~~4.50~~	4.30	5.15	5.2500	4.7500
58	~~4.25~~	~~4.08~~	4.75	~~4.60~~	4.20	5.10	5.2500	4.7500
59	~~4.25~~	~~4.04~~	4.75	~~4.70~~	4.10	5.05	5.2500	4.7500
60	~~4.25~~	~~4.00~~	4.75	~~4.80~~	4.00	5.00	5.2500	4.7500
61	~~4.25~~	~~4.00~~	4.75	~~4.90~~	3.90	5.00	5.2500	4.7500
62	~~4.25~~	~~4.00~~	4.75	~~5.00~~	3.80	5.00	5.2500	4.7500
63	~~4.25~~	~~4.00~~	4.75	~~5.10~~	3.70	5.00	5.2500	4.7500
64	~~4.25~~	~~4.00~~	4.75	~~5.20~~	3.60	5.00	5.2500	4.7500
65	~~4.25~~	~~4.00~~	4.75	~~5.20~~	3.50	5.00	5.2500	4.7500
66	~~4.25~~	~~4.00~~	4.75	~~5.20~~	3.50	5.00	5.2500	4.7500
67	~~4.25~~	~~4.00~~	4.75	~~5.20~~	3.50	5.00	5.2500	4.7500
68	~~4.25~~	~~4.00~~	4.75	~~5.20~~	3.50	5.00	5.2500	4.7500
69	~~4.25~~	~~4.00~~	4.75	~~5.20~~	3.50	5.00	5.2500	4.7500
70	~~4.25~~	~~4.00~~	4.75	~~5.20~~	3.50	5.00	5.2500	4.7500
71	~~4.25~~	~~4.00~~		~~5.20~~				

(4) service-related ultimate future salary increase assumption

service length	general state employees retirement plan	general employees retirement plan of the Public Employees Retirement Association	Teachers Retirement Association
1	10.52%	12.03%	12.00%
2	8.06	8.90	9.00
3	6.90	7.46	8.00
4	6.18	6.58	7.50
5	5.68	5.97	7.25
6	5.29	5.52	7.00
7	4.99	5.16	6.85
8	4.74	4.87	6.70
9	4.53	4.63	6.55
10	4.35	4.42	6.40
11	4.20	4.24	6.25
12	4.06	4.08	6.00
13	3.94	3.94	5.75
14	3.83	3.82	5.50
15	3.73	3.70	5.25
16	3.63	3.60	5.00
17	3.55	3.51	4.75
18	3.50	3.50	4.50
19	3.50	3.50	4.25
20	3.50	3.50	4.00
21	3.50	3.50	3.90
22	3.50	3.50	3.80
23	3.50	3.50	3.70
24	3.50	3.50	3.60
25	3.50	3.50	3.50
26	3.50	3.50	3.50
27	3.50	3.50	3.50
28	3.50	3.50	3.50
29	3.50	3.50	3.50
30 more more	3.50	3.50	3.50

(c) Before July 2, 2010, the actuarial valuation must use the applicable following payroll growth assumption for calculating the amortization requirement for the unfunded actuarial accrued liability where the amortization retirement is calculated as a level percentage of an increasing payroll:

plan	payroll growth assumption
general state employees retirement plan	~~4.50%~~ 4.0%
correctional state employees retirement plan	~~4.50~~ 4.0
State Patrol retirement plan	~~4.50~~ 4.0

legislators retirement plan	~~4.50~~ 4.0
judges retirement plan	4.00
general public employees retirement plan	~~4.50~~ 4.0
public employees police and fire retirement plan	~~4.50~~ 4.0
local government correctional service retirement plan	~~4.50~~ 4.0
teachers retirement plan	~~4.50~~ 4.0
Duluth teachers retirement plan	4.50
St. Paul teachers retirement plan	5.00

(d) After July 1, 2010, the assumptions set forth in paragraphs (b) and (c) continue to apply~~,~~ unless a different salary assumption or a different payroll increase assumption:

(1) has been proposed by the governing board of the applicable retirement plan;

(2) is accompanied by the concurring recommendation of the actuary retained under section 356.214, subdivision 1, if applicable, or by the approved actuary preparing the most recent actuarial valuation report if section 356.214 does not apply; and

(3) has been approved or deemed approved under subdivision 18.

EFFECTIVE DATE. This section is effective July 1, 2010, and applies to actuarial valuations prepared as of or after that date."

Renumber the sections in sequence and correct the internal references

Amend the title accordingly