

ACTUARIAL SECTION

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January 22, 2014

The Retirement Board
Public School Employees'
Retirement System of Pennsylvania
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Re: Actuary's Certification Letter

Members of the Board:

An actuarial valuation of the Public School Employees' Retirement System of Pennsylvania (Retirement System or PSERS) is performed annually to measure the ongoing costs of the Retirement System and the progress towards the funding goals of the Retirement System over time. The financing objective of the Retirement System is to:

- Fully fund all current costs based on the normal contribution rate determined under the funding method; and
- Liquidate the unfunded accrued liability based on level percentage of pay amortization schedules required by the Public School Employees' Retirement Code, 24 Pa. C.S. §8101 et. seq. (Retirement Code) as amended by Act 2010-120, which requires amortization over 24 years of the unfunded accrued liability as of June 30, 2010, and of each change in the unfunded accrued liability due to actuarial experience after the June 30, 2010 valuation. Any increases in the unfunded liability arising from legislation enacted after June 30, 2010, are to be amortized over 10 years.
- As directed by Act 2010-120, use pension rate collars to moderate the rise of annual employer pension contribution rates to reach the full actuarially determined contribution funding level in a budgetarily sound manner and within a financially responsible period of time.

Based on the June 30, 2013, actuarial valuation, a total contribution rate of 26.87% of payroll payable by employers for FY2014/2015, when taken together with the contributions payable by the members, current assets, and expected future asset returns, is sufficient to achieve the financing objective. However, Act 2010-120 limits the contribution for FY 2014/2015 to 21.40% of payroll. This has the effect of deferring part of the contribution that would otherwise have been payable in FY 2014/2015 to future years.

The valuation takes into account all of the promised benefits to which members are entitled as of June 30, 2013, including pension and survivor benefits, and as required by the Retirement Code is the basis for the contribution rate for fiscal year 2014/2015. There were no legislative or administrative changes made to the benefits payable by PSERS since the prior valuation.

As required under Section 8502(j) of the Retirement Code, experience studies are performed for PSERS every five years, the most recent having been made as of June 30, 2010. This valuation was prepared on the basis of the demographic and economic assumptions that were recommended on the basis of the July 1, 2005 – June 30, 2010 Experience Review and approved by the Board of Trustees at its March 11, 2011, meeting.

The actuarial assumptions and methods used by PSERS for financial reporting meet the requirements set forth in Governmental Accounting Standards Board (GASB) Statements No. 25, 43, and 50, and are unchanged from the prior valuation. The actuarial assumptions and methods for the GASB 25 disclosure are the same as those used for pension funding, except that the GASB 25 amortization payment will be determined on the basis of 30-year level-dollar funding. The Health Insurance funding provisions of the Retirement Code differ from the GASB 43 disclosure requirements. For funding purposes, the actuarial liability equals the assets in the health insurance account, and a contribution is determined to provide

for solvency of the account through the third fiscal year following the valuation date. For GASB 43 purposes the Health Insurance actuarial liability and normal cost requirements are determined under the entry age actuarial cost method, with 30-year level-dollar funding. (The entry age actuarial cost method meets the GASB 43 requirements for determining actuarial liability and normal cost and is the cost method specified by the Retirement Code for the PSERS pension plan.)

The Retirement System reported the individual data for members of the Retirement System as of the valuation date to the actuaries. While we did not verify the data at their source, we did perform tests for internal consistency and reasonableness. The amount of assets in the trust fund taken into account in the valuation was based on statements prepared for us by the Retirement System. The accuracy of the results presented in this report is dependent on the accuracy of the data.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. An analysis of the potential range of future results is beyond the scope of this valuation.

In our opinion, the attached schedules of valuation results fairly represent the status of the Public School Employees' Retirement System and present an accurate view of historical data. The underlying assumptions and methods used for both funding and GASB disclosure purposes are consistent with the statutory specifications and represent a best estimate of the aggregate future experience of the Retirement System.

The following supporting schedules in the Actuarial Section were prepared by Buck Consultants:

- Summary of Results of Actuarial Valuation as of June 30, 2013
- History and Projection of Contribution Rates and Funded Ratios
- Description of Actuarial Assumptions and Methods
- Schedule of Active Member Valuation Data
- Schedule of Retired Members and Beneficiaries Added To and Removed From Rolls
- Solvency Test
- Analysis of Past Financial Experience - Reconciliation of Employer Contribution Rates

In addition, Buck Consultants prepared the "Schedule of Changes in the Employer Net Pension Liability," "Schedule of Employer Net Pension Liability," "Schedule of Employer Contributions," and "Schedule of Funding Progress" in the Financial Section.

This report was prepared solely for the Public School Employees' Retirement System of Pennsylvania for the purposes herein stated and may not be appropriate to use for other purposes. Buck does not intend to benefit and assumes no duty or liability to other parties who receive this work. Use of this report for any other purposes or by anyone other than PSERS and its auditors may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. The attached pages should not be provided without a copy of this cover letter. No one may make any representations or warranties based on any statements or conclusions contained in this report without Buck Consultants' written consent.

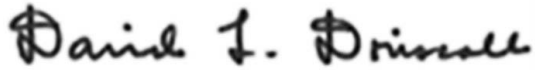
David L. Driscoll is a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. Edward Quinn and Salvador Nakar are Members of the American Academy of Actuaries. We meet the Qualification Standards of



Actuarial Section

the American Academy of Actuaries to render the actuarial opinions contained herein. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions concerning it.

Respectfully submitted,
Buck Consultants



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Director, Retirement Actuary



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SUMMARY OF RESULTS OF ACTUARIAL VALUATION
AS OF JUNE 30, 2013
(\$ Amounts in Thousands)

Item	June 30, 2013	June 30, 2012
Member Data		
1. Number of Members		
a) Active Members	267,428	273,504
b) Inactive Members and Vestees	18,911	17,121
c) Annuitants, Beneficiaries and Survivor Annuitants	209,204	202,015
d) Total	495,543*	492,640*
2. Annualized Salaries (\$ Amounts in Thousands)	\$ 12,577,105	\$ 12,714,371
3. Annual Annuities (\$ Amounts in Thousands)	\$ 5,147,060	\$ 4,872,918
Valuation Results		
4. Present Value of Future Pension Benefits		
a) Active Members	\$ 59,347,835	\$ 59,970,002
b) Inactive Members and Vestees	1,379,601	1,232,277
c) Annuitants, Beneficiaries and Survivor Annuitants	49,979,444	47,511,912
d) Total	\$ 110,706,880	\$ 108,714,191
5. Present Value of Future Pension Normal Cost		
a) Active Members	\$ 9,826,502	\$ 9,836,166
b) Employer	10,928,562	11,117,365
c) Total	\$ 20,755,064	\$ 20,953,531
6. Pension Accrued Liability		
a) Active Members (4a) – (5c)	\$ 38,592,771	\$ 39,016,471
b) Inactive Members and Vestees	1,379,601	1,232,277
c) Annuitants, Beneficiaries and Survivor Annuitants	49,979,444	47,511,912
d) Total	\$ 89,951,816	\$ 87,760,660
7. Health Insurance Assets for Premium Assistance	\$ 100,349	\$ 93,753
8. Total Accrued Liability for Funding (6) + (7)	\$ 90,052,165	\$ 87,854,413
9. Actuarial Value of Assets	\$ 57,453,611	\$ 58,321,375
10. Funded Status (9) / (8)	63.8%	66.4%
11. Unfunded Accrued Liability (8) – (9)	\$ 32,598,554	\$ 29,533,038
12. Total Normal Cost Rate	15.92%	16.00%
13. Member Contribution Rate	7.46%	7.43%
14. Employer Normal Cost Rate (12) – (13)	8.46%	8.57%
Employer Annual Funding Requirement		
15. Employer Contribution Rate Calculated by Actuary	Fiscal 2014/2015	Fiscal 2013/2014
a) Normal	8.46%	8.57%
b) Unfunded Accrued Liability	17.51%	15.25%
c) Preliminary Pension Rate	25.97%	23.82%
d) Act 120 Employer Pension Rate Collar	20.50%	16.00%
e) Health Insurance	0.90%	0.93%
f) Total Rate	21.40%	16.93%

* In addition, there are 109,739 and 105,165 inactive members as of June 30, 2013 and June 30, 2012, respectively, who are no longer participating and are valued for their accumulated deductions only.

HISTORY AND PROJECTION OF CONTRIBUTION RATES AND FUNDED RATIOS¹

Fiscal Year Ending June 30	Appropriation Payroll ⁹ (thousands)	Contribution Rates ²							
		Employee	Employer Normal Cost	Employer Unfunded Liability	Preliminary Employer Pension	Final Employer Pension ⁷	Employer Health Insurance	Total Employer	Funded Ratio
2004	\$ 10,030,705	7.08%	7.25%	(4.27%)	2.98%	2.98%	0.79%	3.77%	91.2%
2005 ³	11,062,589	7.12	7.48	(7.10)	0.38	4.00	0.23	4.23	83.7
2006	11,505,093	7.16	7.61	(4.28)	3.33	4.00	0.69	4.69	81.2
2007 ⁴	11,821,951	7.21	6.62	(0.95)	5.67	5.72	0.74	6.46	85.8
2008	12,881,244	7.25	6.68	(0.24)	6.44	6.44	0.69	7.13	86.0
2009	12,500,000	7.29	6.68	(3.37)	3.31	4.00	0.76	4.76	79.2
2010 ⁵	12,899,000	7.32	7.35	(3.72)	3.63	4.00	0.78	4.78	75.1
2011 ^{5,6}	13,510,000	7.34	8.08	(0.50)	7.58	5.00	0.64	5.64	69.1
2012	14,112,000	7.37	8.12	10.15	18.27	8.00	0.65	8.65	66.4
2013 ⁸	14,297,000	7.40	8.66	12.99	21.65	11.50	0.86	12.36	63.8
2014	13,720,000	7.43	8.57	15.25	23.82	16.00	0.93	16.93	61.6
2015	13,482,000	7.46	8.46	17.51	25.97	20.50	0.90	21.40	59.8
2016	13,841,530	7.47	8.23	19.05	27.28	25.00	0.84	25.84	58.5
2017	14,214,689	7.48	8.03	20.41	28.44	28.44	0.83	29.27	57.3
2018	14,613,842	7.48	7.84	21.59	29.43	29.43	0.82	30.25	56.6
2019	15,028,322	7.49	7.66	22.83	30.49	30.49	0.79	31.28	57.9
2020	15,465,597	7.49	7.49	23.81	31.30	31.30	0.78	32.08	59.2
2021	15,914,196	7.49	7.32	23.93	31.25	31.25	0.77	32.02	60.2
2022	16,378,425	7.50	7.15	24.12	31.27	31.27	0.74	32.01	61.6
2023	16,858,286	7.50	6.99	24.50	31.49	31.49	0.73	32.22	63.1
2024	17,349,187	7.50	6.83	24.75	31.58	31.58	0.72	32.30	64.8
2025	17,847,579	7.50	6.67	25.00	31.67	31.67	0.69	32.36	66.5

- The projection of contribution rates is based on the assumption that there are no changes in demographic assumptions, no changes in benefit provisions and no actuarial gains or losses other than gains or losses on the actuarial value of assets that result from recognizing currently deferred gains or losses on the market value of assets.
- In general, the Preliminary Employer Pension Rate equals the sum of the rates for the Employer Normal Cost and the Unfunded Liability; and the Final Employer Pension Rate is the greater of the Preliminary Pension Rate and any Pension Rate Floor or Collar stated in the Retirement Code. The Total Employer Rate is the sum of the Final Employer Pension Rate and the Employer Health Insurance Rate.
- Act 2003-40 amended the Retirement Code to increase the Employer Pension Rate Floor from 1% to 4%.
- Revised actuarial assumptions based on a five-year experience review ending June 30, 2005 were used to determine the contributions for the fiscal year ending June 30, 2007. Since the benefit changes under Act 2001-9 had not been in effect throughout the entire period covered by the study the Board decided, at its December 2005 meeting, to delay making any changes to the retirement rate assumptions until further data became available. The 5.72% Final Employer Pension Rate equals the 6.46% Total Employer Rate certified by the Board at that meeting, minus the 0.74% Employer Health Insurance Rate. The 5.67% Preliminary Employer Pension Rate equals the sum of the Employer Normal Cost and Unfunded Liability rates. The Normal Cost and Unfunded Liability rates were calculated by the actuary in January 2006, based on the package of assumptions adopted at the December 2005 meeting.
- At its January 2009 meeting, the Board voted to reduce the interest rate from 8.50% to 8.25% for the June 30, 2008 valuation and to 8.00% thereafter.
- Act 2010-46 recertified the fiscal year ending June 30, 2011 pension rate from 7.58% to 5.00%.
- The Final Employer Pension rate is limited by the Act 2010-120 pension rate collars for fiscal years 2012 through 2016.
- Revised actuarial assumptions based on a five-year experience review ending June 30, 2010 were used to determine the contributions for the fiscal year ending June 30, 2013 and thereafter, which includes an interest rate of 7.50%.
- Beginning fiscal year ending June 30, 2005, the appropriation payroll shown is estimated payroll used for valuation purposes, not actual appropriation payroll. Prior to fiscal year ending June 30, 2005, the appropriation payroll shown is the annualized salary.

DESCRIPTION OF ACTUARIAL ASSUMPTIONS AND METHODS

ASSUMPTIONS

Investment Rate of Return: 7.50% per annum, compounded annually (adopted as of June 30, 2011). The components are 3.00% for inflation and 4.50% for the real rate of return. Actuarial equivalent benefits are determined based on 4% (since 1960).

Separation from Service: Illustrative rates of assumed separation from service are shown in the following table (adopted as of June 30, 2011).

Age	Annual Rate of:						
	Non-Vested Withdrawal	Vested Withdrawal*		Death	Disability	Early Retirement**	Superannuation Retirement
		Less Than 10 Years of Service	10 or More Years of Service				
MALES							
25	12.50%	5.50%	2.00%	0.037%	0.024%		
30	10.50	3.20	2.00	0.038	0.024		
35	11.00	3.00	1.50	0.056	0.100		
40	13.00	3.50	1.25	0.090	0.180		
45	13.00	3.50	1.25	0.121	0.180		25.00%
50	13.00	3.50	1.70	0.173	0.280		25.00
55	11.00	3.50	3.00	0.245	0.430	15.00%	30.00
60	10.50	3.50	4.50	0.363	0.580	12.00	28.00
65				0.592	0.100		20.00
69				0.810	0.100		18.00
FEMALES							
25	13.00%	8.50%	5.00%	0.018%	0.030%		
30	13.00	6.50	4.00	0.019	0.040		
35	13.00	5.50	3.00	0.022	0.060		
40	10.90	4.50	1.50	0.035	0.100		
45	10.90	4.00	1.50	0.055	0.150		30.00%
50	10.90	3.75	1.75	0.085	0.200		30.00
55	10.90	3.75	3.00	0.133	0.380	15.00%	30.00
60	10.90	4.50	5.50	0.197	0.380	15.00	30.00
65				0.301	0.130		25.00
69				0.428	0.130		20.00

* Vested Withdrawal – At least 5 years of service for Class T-C and Class T-D members and 10 years of service for Class T-E and Class T-F members but not eligible for Early or Superannuation retirement.

** Early Retirement – Age 55 with 25 years of service, but not eligible for Superannuation retirement.

**DESCRIPTION OF ACTUARIAL ASSUMPTIONS AND METHODS
(Continued)**

Death after Retirement: The RP-2000 Combined Healthy Annuitant Tables (Male and Female) with age set back 3 years for both genders for healthy annuitants and for dependent beneficiaries. The RP-2000 Combined Disabled Tables (Male and Female) with age set back 7 years for males and set back 3 years for females for disabled annuitants. (A unisex table based on the RP-2000 Combined Healthy Annuitant Tables (Male and Female) with age set back 3 years for both genders assuming the population consists of 25% males and 75% females is used to determine actuarial equivalent benefits.) No provision has been made for future improvements in mortality.

Salary Increase: Effective average of 5.50% per annum, compounded annually (adopted as of June 30, 2011). The components are 3.00% for inflation, 1% for real wage growth and 1.5% for merit or seniority increases. Representative values are as follows:

Age	Annual Rate of Salary Increase
20	10.75%
30	8.25
40	6.25
50	4.25
55	3.75
60	3.75
65	3.75
70	3.75

Payroll Growth: 3.50% per annum.

MISCELLANEOUS

Option 4 Elections: 100% of Class T-C and Class T-D members are assumed to elect a refund of contributions and a reduced annuity.

Withdrawal Annuity: 90% of members are assumed to commence payment immediately and 10% are assumed to defer payment to superannuation age.

Health Insurance

Elections: 66% of eligible retirees are assumed to elect premium assistance.

Administrative Expenses: Assumed equal to 2% of contributions made during the year.

METHODS

Calculations: The actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the Retirement System, and on actuarial assumptions that are internally consistent and reasonable based on the actual experience of the System.

Asset Valuation Method: A ten-year smoothed market average (five-year smoothed market average prior to June 30, 2010) value of assets that recognizes the 7.50% (8.00% prior to June 30, 2011, 8.25% prior to June 30, 2009, and 8.50% prior to June 30, 2008) actuarial expected investment return immediately and spreads the difference between the actual return on the market value of assets and the expected return on the actuarial value of assets over a period of ten years. The averaging period is being phased-in from fiscal year 2006.

**DESCRIPTION OF ACTUARIAL ASSUMPTIONS AND METHODS
(Continued)**

Actuarial Cost Method for Pension Funding: Entry Age Normal Cost Method (modified slightly as of June 30, 2005 to use a pay-weighted average normal contribution rate). The results of each June 30 valuation normally determine the employer contribution rate for the second succeeding fiscal year. Act 120 revised the funding method effective with the June 30, 2010 valuation. Act 120 mandated that the outstanding balance of the unfunded accrued liability as of June 30, 2010, including changes in the unfunded accrued liability due to the funding reforms of Act 120, be amortized over a 24-year period, as a level percent of pay, beginning July 1, 2011. Future valuation gains and losses, and changes in the unfunded accrued liability resulting from changes in actuarial assumptions and methods, are amortized over a 24-year period, as a level percent of pay. Future increases in the unfunded accrued liability due to legislation will be amortized over a 10-year period, as a level percent of pay. Act 120 also modified the employer pension contribution requirements by imposing collars on the rate at which employer contributions may rise from year to year. For the fiscal years ending June 30, 2012, June 30, 2013, and on or after June 30, 2014 the pension contribution rate can be no more than 3%, 3.5% and 4.5%, respectively, of total compensation of all active members, greater than the prior year's final contribution rate. Beginning with the fiscal year in which the actuarially required contribution rate is less than the collared rate, the final contribution rate is the actuarially determined contribution rate, provided that the final contribution rate is not less than the employer normal contribution rate.

Actuarial Cost Method for GASB 25 Accounting for Pensions: Same as for pension funding, except that the GASB 25 amortization payment will be set equal to the level dollar amount that will amortize the unfunded accrued liability over a period of 30 years.

Actuarial Cost Method for Health Insurance Funding: The actuarial liability equals the assets in the health insurance account, and the results of the June 30 valuation determine the contribution rate for the second succeeding fiscal year. The rate so determined is the rate necessary to establish reserves sufficient to cover administrative

expenses and provide premium assistance payments for all participating eligible annuitants during the third fiscal year that follows the valuation date.

Actuarial Cost Method for GASB 43 Accounting for Health Insurance: The actuarial liability is determined under the entry age actuarial cost method, and the Annual Required Contribution (ARC) for the second fiscal year that follows the valuation date is equal to the entry age normal cost for health insurance plus an amount that will amortize the entry age unfunded actuarial liability for health insurance over a period of 30 years.

DATA

Census and Assets: The valuation was based on members of the Retirement System as of June 30, 2013 and does not take into account future members. All census data was supplied by the Retirement System and was subject to reasonable consistency checks. The actuary adjusts the data to account for service and pay earned by members on or before the valuation that is not reported by the Retirement System until after the actuarial valuation is performed. Asset data was supplied by the Retirement System.

SCHEDULE OF ACTIVE MEMBERS

VALUATION DATA

Valuation as of June 30	Number of Participating Employers	Number of Active Members	Annual Compensation (Thousands)	Average Compensation	% Increase in Average
2013	782	267,428	\$12,577,105	\$47,030	1.17%
2012	773	273,504	12,714,371	46,487	0.52
2011	747	279,152	12,910,043	46,247	1.99
2010	747	282,041	12,788,847	45,344	1.26
2009	742	279,701	12,524,593	44,779	2.43
2008	739	272,690	11,921,469	43,718	1.16
2007	739	264,023	11,410,257	43,217	(0.33)
2006	733	263,350	11,419,049	43,361	5.22
2005	734	255,465	10,527,668	41,209	1.84
2004	733	247,901	10,030,705	40,463	3.40

SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES

ADDED TO AND REMOVED FROM ROLLS

Valuation Date as of June 30	Added to Rolls		Removed from Rolls		Rolls at End of Year		% Increase in Annual Allowance	Average Annual Allowance
	Number	Annual Allowance (Millions)	Number	Annual Allowance (Millions)	Number*	Annual Allowance** (Millions)		
2013	16,404	\$377.6	9,215	\$83.7	209,204	\$5,147.1	5.63%	\$24,603
2012	14,579	332.7	7,186	66.6	202,015	4,872.9	4.78	24,122
2011	16,228	453.7	6,540	76.4	194,622	4,650.8	7.17	23,897
2010	12,649	372.8	5,678	77.6	184,934	4,339.6	8.59	23,466
2009	9,651	314.9	5,228	74.4	177,963	3,996.3	4.85	22,456
2008	10,911	345.3	5,397	73.9	173,540	3,811.5	8.18	21,963
2007	10,612	307.5	4,399	56.0	168,026	3,523.4	7.60	20,970

* Excludes inactive members and vestees.

** Reflects changes in annuities for continuing payees due to finalization of benefit calculations and due to the commencement of supplemental annuity payments.

POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS

SCHEDULE OF RETIRED MEMBERS ADDED TO AND REMOVED FROM ROLLS*

Valuation Date as of June 30	Added to Rolls		Removed from Rolls		Rolls at End of Year		% Increase in Annual Premium Assistance	Average Annual Premium Assistance
	Number*	Annual Premium Assistance (Millions)	Number*	Annual Premium Assistance (Millions)	Number*	Annual Premium Assistance (Millions)		
2013	6,759	\$5.4	2,364	\$1.9	137,693	\$109.1	3.31%	\$1,200
2012	5,751	4.6	1,372	1.1	133,298	105.6	3.43	1,200
2011	8,185	6.5	2,074	1.6	128,919	102.1	4.93	1,200
2010	6,709	5.3	2,323	1.8	122,808	97.3	3.73	1,200
2009	6,285	5.0	3,079	2.4	118,422	93.8	2.74	1,200
2008	8,792	7.0	6,050	4.8	115,216	91.3	2.47	1,200
2007	7,072	5.6	2,637	2.1	112,474	89.1	4.09	1,200

* Number of retired members eligible to participate in the Health Insurance Premium Assistance; 66% of eligible retirees are assumed to elect premium assistance.

SOLVENCY TEST
COMPARATIVE SUMMARY OF ACCRUED LIABILITY AND
ACTUARIAL VALUE OF ASSETS
(\$ Amounts in Thousands)

PENSIONS

Valuation as of June 30	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Member Employer Financed	Actuarial Value of Assets	Portion of Accrued Liability Covered by Valuation Assets		
					(1)	(2)	(3)
2013	\$13,089,342	\$49,979,444	\$26,883,030	\$57,353,262	100%	89%	0%
2012	12,535,442	47,511,912	27,713,306	58,227,622	100	96	0
2011	12,242,308	45,648,780	27,749,295	59,141,131	100	100	5
2010	11,850,031	40,284,383	26,871,014	59,306,848	100	100	27
2009	11,087,345	37,112,318	27,321,073	59,781,575	100	100	42
2008	10,532,683	34,617,953	25,695,001	60,922,157	100	100	61
2007	10,183,433	31,603,788	24,708,649	57,057,838	100	100	62
2006	9,571,668	29,117,164	25,938,529	52,464,726	100	100	53
2005	9,116,347	27,051,245	25,058,989	51,219,293	100	100	60
2004	8,755,109	24,482,234	23,885,657	52,094,479	100	100	79

POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS

Valuation as of June 30	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Member Employer Financed	Actuarial Value of Assets	Portion of Accrued Liability Covered by Valuation Assets		
					(1)	(2)	(3)
2013	\$0	\$961,701	\$423,332	\$100,349	N/A	10%	0%
2012	0	934,506	430,161	93,753	N/A	10	0
2011	0	909,076	430,368	111,258	N/A	12	0
2010	0	767,587	394,632	116,831	N/A	15	0
2009	0	759,891	399,164	105,114	N/A	14	0
2008	0	749,070	383,941	95,785	N/A	13	0
2007	0	684,677	373,415	97,292	N/A	14	0
2006	0	684,435	371,719	92,777	N/A	14	0

The solvency test compares the actuarial accrued liabilities by various categories with the System's actuarial value of assets.

**ANALYSIS OF PAST FINANCIAL EXPERIENCE
RECONCILIATION OF EMPLOYER CONTRIBUTION RATES**

Fiscal Year Ending June 30	2015	2014	2013	2012	2011	2010	2009	2008
Effective Prior Year Contribution Rate	16.93%	12.36%	8.65%	5.64%	4.78%	4.76%	7.13%	6.46%
Prior Year Adjustment for Legislation	7.82	10.15	10.27	2.58	(0.37)	(0.69)	N/A	(0.05)
Net Change Due to:								
Change in Normal Rate	(0.11)	(0.09)	(0.22)	0.04	0.00	(0.02)	0.00	0.06
Payroll Growth and Liability Experience	0.68	0.72	(0.21)	0.40	(0.03)	0.33	(0.88)	0.47
Investment Loss/(Gain)	0.81	0.78	0.59	1.94	2.04	(1.71)	(2.25)	0.24
Health Insurance Contribution Change	(0.03)	0.07	0.21	0.01	(0.14)	0.02	0.07	(0.05)
Assumption/Method Change	N/A	N/A	3.04	N/A	1.94	1.72	N/A	N/A
Act 40 4.00% Floor*	N/A	N/A	N/A	N/A	N/A	0.37	0.69	N/A
Act 120 Funding Reforms	N/A	N/A	N/A	8.31	N/A	N/A	N/A	N/A
Amortization of Prior Legislation Deferrals	0.77	0.76	0.18	N/A	N/A	N/A	N/A	N/A
Legislation Deferrals:								
Act 46 Rate Cap**	N/A	N/A	N/A	N/A	(2.58)	N/A	N/A	N/A
Act 120 Collar***	(5.47)	(7.82)	(10.15)	(10.27)	N/A	N/A	N/A	N/A
Actual Contribution Rate:	21.40%	16.93%	12.36%	8.65%	5.64%	4.78%	4.76%	7.13%

* Act 2003-40 amended the Retirement Code to increase the Employer Pension Rate Floor from 1% to 4%.

** Act 2010-46 recertified the fiscal year ending June 30, 2011 pension rate from 7.58% to 5.00%.

*** The Final Employer Pension rate is limited by the Act 2010-120 pension rate collar. For the fiscal years ending June 30, 2012, June 30, 2013, and on or after June 30, 2014 the pension contribution rate can be no more than 3%, 3.5% and 4.5%, respectively, of total compensation of all active members, greater than the prior year's final contribution rate. Beginning with the fiscal year in which the actuarially required contribution rate is less than the collared rate, the final contribution rate is the actuarially determined contribution rate, provided that the final contribution rate is not less than the employer normal contribution rate.

Schedule of Funding Progress for Pensions*
GASB Statement No. 25 Disclosure
(\$ Amounts in Thousands)

Valuation as of June 30	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Accrued Liability as a Percentage of Covered Payroll
2013	\$57,353,262	\$89,951,816	\$32,598,554	63.8%	\$12,577,105	259.2%
2012	58,227,622	87,760,660	29,533,038	66.3	12,714,371	232.3
2011	59,141,131	85,640,383	26,499,252	69.1	12,910,043	205.3
2010	59,306,848	79,005,428	19,698,580	75.1	12,788,847	154.0
2009	59,781,575	75,520,736	15,739,161	79.2	12,524,593	125.7
2008	60,922,157	70,845,637	9,923,480	86.0	11,921,469	83.2
2007	57,057,838	66,495,870	9,438,032	85.8	11,410,257	82.7
2006	52,464,726	64,627,361	12,162,635	81.2	11,419,049	106.5
2005	51,122,156	61,129,444	10,007,288	83.6	10,527,668	95.1
2004	51,949,622	56,978,143	5,028,521	91.2	10,030,705	50.1

* The amounts reported above include assets and liabilities for Pensions.

Schedule of Funding Progress for
Postemployment Benefits Other Than Pensions*
GASB Statement No. 43 Disclosure
(\$ Amounts in Thousands)

Valuation as of June 30	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Accrued Liability as a Percentage of Covered Payroll
2013	\$100,349	\$1,385,033	\$1,284,684	7.2%	\$12,577,105	10.2%
2012	93,753	1,364,667	1,270,914	6.9	12,714,371	10.0
2011	111,258	1,339,444	1,228,186	8.3	12,910,043	9.5
2010	116,831	1,162,219	1,045,388	10.1	12,788,847	8.2
2009	105,114	1,159,055	1,053,941	9.1	12,524,593	8.4
2008	95,785	1,133,011	1,037,226	8.5	11,921,469	8.7
2007	97,292	1,058,092	960,800	9.2	11,410,257	8.4
2006	92,777	1,056,154	963,377	8.8	11,419,049	8.4

* The amounts reported above include assets and liabilities for Health Insurance Premium Assistance. The health insurance liabilities for GASB 43 disclosure have been calculated under the entry age normal cost method, which provides liabilities that differ from those determined under the funding requirements of the Retirement Code.

SCHEDULE OF EMPLOYER CONTRIBUTIONS FOR PENSIONS
GASB STATEMENT NO. 25 DISCLOSURE
(\$ Amounts in Thousands)

Fiscal Year Ended June 30	Annual Required Contribution	Actual Employer Contribution	Percentage Contributed
2013	\$3,110,429	\$1,434,815	46%
2012	2,629,244	1,001,140	38
2011	2,436,602	647,000	27
2010	1,928,278	527,212	27
2009	1,761,295	503,227	29
2008	1,852,238	753,532	41
2007	1,708,821	659,545	39
2006	1,328,373	456,878	34
2005	945,107	431,556	46
2004	321,091	321,091	100

The Annual Required Contribution (ARC) presented above was determined as part of the actuarial valuation as of two years prior to the dates indicated (i.e., the ARC for the fiscal year ended June 30, 2013 was determined by the valuation completed as of June 30, 2011, which was based on a 7.50% interest rate).

Additional information as of the latest actuarial valuation follows:

Valuation Date:	6/30/2013
Actuarial Cost Method:	Entry Age
Amortization Method:	Level Dollar, Open
Remaining Amortization Period:	30 Years
Asset Valuation Method:	10 Year Smoothed Market
Actuarial Assumptions:	
-Investment Rate of Return*	7.50%
-Projected Salaried Increases*	5.50%
*Includes Inflation at:	3.00%

**SCHEDULE OF EMPLOYER CONTRIBUTIONS FOR
POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS
GASB STATEMENT NO. 43 DISCLOSURE
(\$ Amounts in Thousands)**

Fiscal Year Ended June 30	Annual Required Contribution	Actual Employer Contribution	Percentage Contributed
2013	\$113,016	\$107,993	96%
2012	102,104	80,936	79
2011	119,320	88,796	74
2010	117,187	102,703	88
2009	109,531	92,493	84
2008	101,352	81,317	80
2007	94,970	86,763	91

The Annual Required Contribution (ARC) beginning with the fiscal year ended June 30, 2009 was determined as part of the actuarial valuation as of two years prior to the date indicated (i.e., the ARC for the fiscal year ended June 30, 2013 was determined by the valuation completed as of June 30, 2011, which was based on a 7.50% interest rate). Prior to the fiscal year which ended June 30, 2009, the ARC was determined as part of the actuarial valuation as of one year prior to the dates indicated.

Additional information as of the latest actuarial valuation follows:

Valuation Date:	6/30/2013
Actuarial Cost Method:	Entry Age
Amortization Method:	Level Dollar, Open
Remaining Amortization Period:	30 Years
Asset Valuation Method:	Market
Actuarial Assumptions:	
-Investment Rate of Return*	7.50%
-Projected Salaried Increases*	5.50%
*Includes Inflation at:	3.00%



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