Gabriel Roeder Smith & Company
Consultants & Actuaries

STATE OF WYOMING RETIREMENT SYSTEM

ACTUARIAL VALUATION REPORT

FOR THE YEAR BEGINNING JANUARY 1, 2013

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
5605 N. MacArthur Blvd.
Suite 870
Irving, TX 75038-2631
469.524.0000 phone
469.524.0003 fax
www.gabrielroeder.com

May 3, 2013

Board of Trustees
State of Wyoming Retirement System
6101 Yellowstone Road
Suite 500
Cheyenne, WY 82002

Dear Board of Trustees:

Subject: Actuarial Valuation as of January 1, 2013

We are pleased to present the report of the actuarial valuation of the State of Wyoming Retirement System ("the Fund") for the plan year commencing January 1, 2013. This report describes the current actuarial condition of the Fund, determines the calculated employer contribution rate (the actuarially required rate), and analyzes changes in this contribution rate from the prior year. Valuations are prepared annually, as of January 1, the first day of the Fund's plan year.

Financing objectives and funding policy

The employer and employee contribution rates are specified in the statute. The purpose of this actuarial valuation is to determine whether or not this statutory contribution is sufficient to meet the obligations of the Fund.

Progress toward realization of financing objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. The funded ratio, based upon the assumption of no further cost-of-living adjustment increases as of January 1, 2013 is 78.56%. In the January 1, 2012 valuation, this funded ratio was 81.87%. On a market value of assets basis, the funded ratio increased from 75.57% as of January 1, 2012 to 80.67% as of January 1, 2013.

The market losses from 2008 have now been fully recognized and the current market value of assets is higher than the actuarial value of assets.

Benefit provisions

The benefit provisions reflected in this valuation are those which were in effect on January 1, 2013. However, new legislation was signed into law on March 23, 2012 that will affect benefits for new hires. Members who join the State of Wyoming Retirement System later than August 31, 2012 will be under a "New Tier" of benefits, as outlined among the benefit provisions. There were no other benefit changes since the prior valuation.

In addition, legislation was enacted that prohibits benefit changes, including cost-of-living increases, unless the funded ratio stays above 100%.

The benefit provisions are summarized in Appendix B of the report.

Assumptions and methods

Actuarial assumptions and methods are set by the Board, based upon recommendations made by the plan's actuary. The current assumptions used in the valuation were adopted by the Board based on the recommendations from an experience study performed by the prior actuary as of December 31, 2007. Effective February 22, 2013, the Board adopted new assumptions which will be used in the January 2014 valuation.

The results of the actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. The actuarial calculations presented in the report are intended to provide information for rational decision making.

The actuarial assumptions and methods used in this report comply with the parameters for disclosure that appear in Governmental Accounting Standards Board (GASB) Statement Number 25.

All assumptions and methods are described in Appendix A of our report.

Data

Member data for retired, active and inactive members was supplied as of January 1, 2013 by the Fund's staff. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data.

Asset and financial information as of January 1, 2013 was supplied to us by McGee, Hearne & Paiz, LLP.

Plan experience

As part of each valuation, we examine the Fund's experience relative to the assumptions. As experience in a given year deviates from the assumptions, a gain occurs if the liabilities grow slower than the assumption set anticipates and a loss occurs if the liabilities grow faster. This past fiscal year the Fund had a total experience loss of approximately $261 million, composed of a $328 million investment loss, a $21 million contribution loss, and an $88 million liability gain. The gain in liability was primarily due to salary increases less than assumed. The aggregate results of these analyses are disclosed in Tables 4 & 5 under Section III of the report.

Legislated Contribution Rate Increases

Per House Enrolled Act No. 103, effective September 1, 2013, the employee contribution rate will increase from 7.00% of pay to 7.50% and effective September 1, 2014 the employer rate will increase from 7.12% to 7.62% for a total phased-in contribution increase of 1.00% of pay.

Actuarial certification

All of the tables contained in this actuarial valuation report were prepared by Gabriel, Roeder, Smith & Company. Historical information for years prior to 2010 was prepared by the prior actuarial firm and was not subjected to our actuarial review.

We certify that the information presented herein is accurate and fairly portrays the actuarial position of the Fund as of January 1, 2013.

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries and consultants. Mark Randall and Leslie Thompson are Enrolled Actuaries and Members of the American Academy of Actuaries, and all meet the Qualification Standards of the American Academy of Actuaries. Finally, all of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,
Gabriel, Roeder, Smith & Company

Mark R. Randall

Mark R. Randall, FCA, EA, MAAA
Executive Vice President

Leslie L. Thompson

Leslie Thompson, FSA, FCA, EA, MAAA
Senior Consultant

Todd D. Kanaster, ASA, MAAA
Actuary

Page

SECTION I

EXECUTIVE SUMMARY

Executive Summary

Item	January 1, 2013 No COLA	January 1, 2012 No COLA
1. Contributions:		
a. Total normal cost	10.77%	10.86%
b. Employee contributions	(7.00%)	(7.00%)
c. Net employer normal cost	3.77%	3.86%
d. Amortization payment	4.72%	3.90%
e. Administrative expenses	0.37%	0.28%
f. Required contribution	8.86%	8.04%
g. Statutory contribution	(7.12%)	(7.12%)
h. Shortfall/(surplus)	1.74%	0.92%
2. Funding Elements:		
a. Market value of assets (MVA)	$5,904,283,843	$5,318,208,995
b. Actuarial value of assets (AVA)	$5,749,967,972	$5,761,221,926
c. Actuarial accrued liability (AAL)	$7,319,204,726	$7,037,186,665
d. Unfunded/(overfunded) actuarial accrued liability (UAAL)	$1,569,236,754	$1,275,964,739
3. GASB 25/27 Elements:		
a. Annual required contribution	$158,013,754	$141,299,725
b. Actual contributions	N/A	124,648,088
i. Employer	*N/A*	*121,026,954*
ii. Other	*N/A*	*3,621,134*
c. Percentage contributed	N/A	88.22%
d. Funded ratio on an actuarial basis (AVA/AAL)	78.56%	81.87%
e. Funded ratio on an market basis (MVA/AAL)	80.67%	75.57%
f. Projected payroll	$1,782,069,208	$1,756,856,648

Effective September 1, 2013, the employee contribution rate will increase from 7.00% to 7.50% and effective September 1, 2014 the employer (statutory) rate will increase from 7.12% to 7.62% of pay. Based on the timing of the employee contribution increase in 2013, the one-year shortfall would decrease from 1.74% to 1.57% of pay.

SECTION II

DISCUSSION

Contribution Requirements

- Exhibits throughout this report are based primarily, unless stated otherwise, on the assumption of no future cost-of-living adjustments (COLAs).
- As stated in Senate Enrolled Act No. 66, a recommendation for benefit change can only occur if the funded ratio remains above 100%. The actuarial value funded ratio is 78.56% and the market value funded ratio is 80.67%.
- Employee contribution rates will increase September 1, 2013 from 7.00% to 7.50% of pay. The contribution shortfall shown in the report is based on rates in effect January 1, 2013; however, the shortfall over the course of the year will diminish as the contribution rates increase. Employer contribution rates will increase September 1, 2014 from 7.12% to 7.62% of pay.
- As shown in the Executive Summary, the most significant factor in the increase in the "bottom line" contribution requirements this year was due to the increase in the Amortization Payment brought about by assets being lower than expected.
- Other than the creation of a new tier of benefits for new hires, there are no changes in the benefit provisions since the prior valuation.
  - Changes to benefit provisions for employees hired on or after September 1, 2012 are detailed in the Benefit Provision section
- There were no changes to the actuarial assumptions or methods.
- The amortization payment is based upon the following assumptions:
  - 30-year open funding period
  - Contribution amounts are calculated in such a way that they will increase as a level percentage of payroll
  - Total payroll increases are assumed at 4.50% per year, and
  - Future growth in the number of active members is not reflected in the annual valuation
- The Fund's funded ratio decreased from the prior year due to the loss on the actuarial value of assets (2.22% return versus the assumed rate of return of 8.00% per annum).
  - The analysis of the changes in the contribution rates is shown in Table 5 under Section III of the report
- The calculated funding period assuming the current statutory contribution of 7.12% of pay is 160.5 years.

Calculation of Contribution Rates

The funds available to pay benefits come from two sources, contributions and investment income on those contributions (the majority of the funds available to pay benefits typically come from investment income). The Fund receives contributions from two sources, employer contributions and member contributions, both of which are determined as a percentage of pay. As shown in Table 1 under Section III of the report, the employer contribution rate has three components:

- The normal cost percentage (NC%)
- The amortization percentage (UAAL%)
- The administrative expenses

The NC% is the theoretical amount which would be required to pay the members' benefits if this amount had been contributed from each member's entry date and if the fund's experience exactly followed the actuarial assumptions. The NC% is shown in Table 3 under Section III of the report.

Members are required to make employee contributions and only the excess of the NC% over the member contribution rate is included in the employer contribution rate.

The actuarial accrued liability (AAL) is the difference between (i) the actuarial present value of all future benefits for all current participants of the fund, including active, inactive and retired members, and (ii) the actuarial present value of future normal costs. Thus, the AAL represents the liability associated with past years. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and the actuarial value of assets (AVA). It is the shortfall/excess between the liability associated with prior years (the AAL) and the assets actually accumulated (the AVA). This shortfall/excess can arise from several sources, including actuarial gains and losses which are caused by differences between actual experience and the plan's assumptions, changes to the plan's actuarial assumptions, and amendments to the benefit provisions.

The UAAL% is the amount required to fund this difference. It is the amount, expressed as a level percentage of payroll, necessary to amortize the UAAL. This amortization is over a period of 30 years beginning January 1, 2013. The Executive Summary shows the UAAL%, called Amortization Payment, compared to that of last year.

Assumed administrative expenses are the average of the prior two years, with each year projected at 6.5% to the valuation date.

The calculated rate is used in determining the contributions necessary to meet the GASB Annual Required Contribution (ARC) for the twelve-month period beginning January 1, 2013. As of January 1, 2013, the employer contribution is within 2% of meeting the ARC.

Financial Data and Experience

As of January 1, 2013, the Fund has a total market value of $5,904 million. Financial information was received from McGee, Hearne & Paiz, LLP.

Table 7 under Section III of the report shows a reconciliation of the market values between the beginning and end of 2012.

During 2012, the total investment return on the market value of assets (MVA), as reported by NEPC, was 14.06%, as shown in Table 10 under Section III of the report.

In determining the contribution rates and funded status of the Fund, an actuarial value of assets (AVA) is used rather than the market value of assets. The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Market Value. For any year following a year in which the 20% of market value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

The development of the AVA is shown in Table 9 under Section III of the report. The AVA is $5.7 billion. The AVA is 97.39% of the MVA as of December 31, 2012, compared to 108.33% last year. The difference between the AVA and the MVA is the deferred gains and losses. As of January 1, 2012, the total deferred loss was $443 million. As of January 1, 2013, the total deferred gain was $154 million.

In addition to the market return, Table 10 also shows the return on the actuarial value of assets for the Fund. For 2012, this return was 2.22%. Since this return is less than the assumed 8.00% investment return, an actuarial loss occurred increasing the unfunded actuarial accrued liabilities of the Fund by $327.7 million.

Member Data

Member data as of January 1, 2013 was supplied electronically by the Fund's staff. While we did not audit this data, we did perform various tests to ensure that it was internally consistent, consistent with the prior year's data, and was reasonable overall.

Table 15 under Section III of the report shows the number of members by category (active, inactive, retired, etc.) along with member statistics. Tables 16 through 28 show summaries of certain historical data and include membership statistics.

Total active member payroll increased 1.44% last year, compared with a 1.64% increase the prior year.

Of the 36,444 active participants, 6,535 are eligible or will become eligible for normal retirement and 8,788 are eligible or will become eligible for early retirement in 2013.

Changes in payroll are significant because the methodology used in the valuation to amortize the unfunded actuarial accrued liability assumes a growing payroll into the future. If the payroll does not grow at the assumed 4.50% per year average, then the current amortization payments may be understated and the funding position of the Fund will not strengthen as assumed over time. Higher than expected payroll growth, however, has the opposite effect of this and the funded position of the Fund should trend to 100%. Table 5 under Section III of the report shows, for the past year, payroll for the plan increased less than expected so the effect is an increase in the calculated contribution rate of 0.14% of payroll.

One reason payroll increased less than expected is that the salary, for continuing active participants, increased less than expected. This represented a gain to the Plan, as shown in Table 4 under Section III of the report.

Benefit Provisions

Appendix B of the report includes a more detailed summary of the benefit provisions for the Fund. A brief summary is as follows:

A new tier of benefits was signed into law on March 23, 2012 and is effective for new members joining the System on or after September 1, 2012.

– *Tier*
    - Members who join the State of Wyoming Retirement System by August 31, 2012 are in Tier 1, while members who join later are in Tier 2
– *Normal Retirement Eligibility*
    - For Tier 1 member - Age 60 with at least four years of service
    - For Tier 2 member - Age 65 with at least four years of service
– *Normal Retirement Benefit*
    - For Tier 1 member - 2.125% of employee's Highest Average Salary for each year of credited service for the first 15 years of service credit plus 2.25% of Highest Average Salary for any years of service credit exceeding 15 years. This amount is reduced by 5.0% per year that the employee is under age 60.
    - For Tier 2 member - 2.00% of employee's Highest Average Salary for each year of credited service. This amount is reduced by 5.0% per year that the employee is under age 65.

      However, members retiring with a combined age and service of at least 85 receive an unreduced benefit. Employees hired prior to July 1, 1981 may be entitled to benefits earned under a different formula.
– *Normal Form of Payment*
    - Monthly benefit for life with a lump-sum death benefit equal to the excess (if any) of the employee contributions with interest over the total benefits received.
– *Employee Contributions* are required
    - 7.00% of pay.
– *Post-retirement cost-of-living adjustments (COLAs)* may be granted only if the funded ratio is shown to stay at least 100%.

Actuarial Methods and Assumptions

Appendix A of the report includes a summary of the actuarial assumptions and methods used in this valuation. A few highlights are listed as follows:

- Costs are determined using the Entry Age Normal actuarial cost method, calculated as a level percentage of payroll.
- The unfunded actuarial accrued liability is amortized over an open 30 year period as a level percent of payroll.
- The assumed annual investment return rate is 8.00%, with assumed inflation of 3.50%.
- Payroll is assumed to increase at 4.50% per year.
- Inactive vested participants are assumed to retire at age 60 or on the valuation date if over age 60.
- No benefit data is available for members entitled to deferred benefits. The present value of benefits expected to be paid to vested inactive non-retired members is approximated using the data provided.

Based on the current mortality tables, the average future lifetime for current pensioners is 15.6 years.

There have been no changes in actuarial assumptions or methods since the prior valuation.

GASB and Funding Progress

Governmental Accounting Standards Board Statement Number 25 (GASB 25) contains certain accounting requirements for the Fund. In particular, it requires the inclusion of two special schedules in the Fund's annual report:

1. Schedule of Funding Progress
2. Schedule of Employer Contributions

Information needed to prepare the Schedule of Funding Progress is included in Table 12 under Section III of the report.

Governmental Accounting Standards Board Statement Number 27 (GASB 27) also requires that plans calculate an Annual Required Contribution (ARC), and, if actual contributions received are less than the ARC, this must be disclosed.

Under GASB 27, the ARC must be calculated in accordance with certain parameters. In particular, it must include a payment to amortize the unfunded actuarial accrued liability (UAAL). This amortization payment must be computed using a funding period no greater than 30 years. Further, the amortization payment included in the ARC may be computed as a level dollar amount, or it may be computed as an amount which increases with payroll (level percentage of payroll). However, if payments are computed on a level percentage of payroll approach, the payroll growth assumption may not anticipate future membership growth.

Since the recommended employer contribution rate of 8.86% is computed as a level percentage of payroll using an amortization period of 30 years from the valuation date, the calculated rate meets the definition of an acceptable ARC.

SECTION III

SUPPORTING EXHIBITS

Calculation of Annual Required Contribution Rate

(Assumes No Future Cost-Of-Living Increases)

Item		January 1, 2013	January 1, 2012
1.	Projected valuation payroll	$1,782,069,208	$1,756,856,648
2.	Present value of future pay	$13,050,200,182	$12,856,582,790
3.	Employer normal cost rate	3.77%	3.86%
4.	Actuarial accrued liability for active members		
	a. Present value of future benefits for active members	$4,938,390,587	$4,919,034,775
	b. Less: present value of future employer normal costs	(430,619,907)	(437,628,197)
	c. Less: present value of future employee contributions	(913,514,005)	(899,960,796)
	d. Actuarial accrued liability	$3,594,256,675	$3,581,445,782
5.	Total actuarial accrued liability for:		
	a. Retirees and beneficiaries	$3,404,048,187	$3,135,375,356
	b. Disabled members	34,015,248	32,096,000
	c. Inactive members	286,884,616	288,269,527
	d. Active members (Item 4d)	3,594,256,675	3,581,445,782
	e. Total	$7,319,204,726	$7,037,186,665
6.	Actuarial value of assets (Table 9)	$5,749,967,972	$5,761,221,926
7.	Unfunded actuarial accrued liability (UAAL) (Item 5e - Item 6)	$1,569,236,754	$1,275,964,739
8.	Funding period	30 years	30 years
9.	Assumed payroll growth rate	4.50%	4.50%
10.	Employer contribution requirement		
	a. UAAL amortization payment as % of pay	4.72%	3.90%
	b. Employer normal cost	3.77%	3.86%
	c. Administrative expense	0.37%	0.28%
	d. Contribution requirement (a + b + c)	8.86%	8.04%

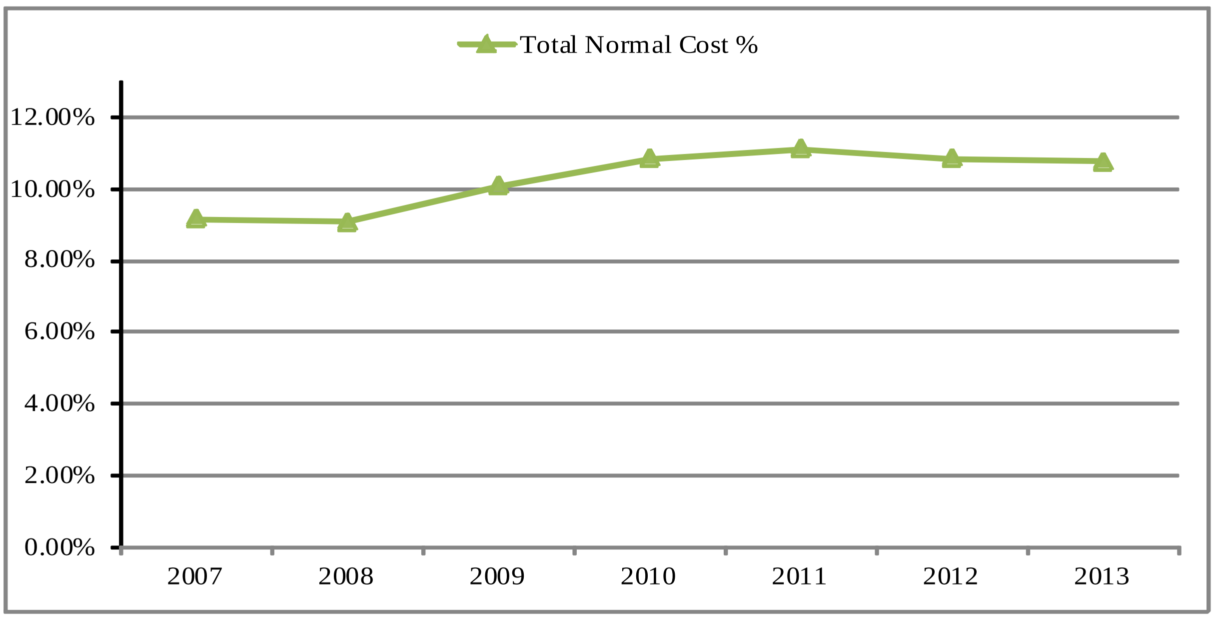
Cost Breakdown

(Assumes No Future Cost-Of-Living Increases)

Item	Present Value of Future Normal Costs (1)	Actuarial Accrued Liabilities (2)	Total Present Value of Benefits (3) = (1) + (2)
Age and service allowances based on total service and disability benefits likely to be rendered by present active members	$1,046,123,875	$3,553,301,118	$4,599,424,993
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)	35,720,581	93,446,605	129,167,186
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members	262,289,456	(52,491,048)	209,798,408
Benefits likely to be paid to vested inactive members	0	250,860,630	250,860,630
Benefits to be paid to members due refunds	0	36,023,986	36,023,986
Benefits to be paid to current retirees, disabled members, beneficiaries, and future beneficiaries of current retirees	0	3,438,063,435	3,438,063,435
Total	$1,344,133,912	$7,319,204,726	$8,663,338,638
Actuarial value of assets	0	5,749,967,972	5,749,967,972
Liabilities to be covered by future contributions	$1,344,133,912	$1,569,236,754	$2,913,370,666

History of Total Normal Cost
(Assumes No Future Cost-Of-Living Increases)

Fiscal Year Ending December 31	Normal Cost as Percent of Payroll
(1)	(2)
2007	9.17%
2008	9.08%
2009	10.10%
2010	10.86%
2011*	11.11%
2012	10.86%
2013	10.77%



* Beginning 9/1/2010, the employee contribution rate was increased by 1.43% of pay to 7.00%.

Calculation of Total Actuarial Gain/(Loss)
(Assumes No Future Cost-Of-Living Increases)

Item	January 1, 2013
1. Derivation of Experience Gain/(Loss)	
a. Unfunded actuarial accrued liability (UAAL) - previous valuation	$1,275,964,739
b. Normal cost (NC) for fiscal year ending 12/31/2012	190,853,698
c. Actual administrative expenses for fiscal year ending 12/31/2012	6,463,506
d. Actuarially determined contribution for fiscal year ending 12/31/2012	264,279,690
e. Interest accrual:	
(i) For whole year on (a)	102,077,179
(ii) For half year on (b) + (c) - (d)	(2,678,499)
(iii) Total interest: (e)(i) + (e)(ii)	99,398,680
f. Change in UAAL due to plan changes	-
g. Change in UAAL due to assumption change	-
h. Expected UAAL current year: (a) + (b) + (c) - (d) + (e)(iii) + (f) + (g)	1,308,400,933
i. Actual UAAL current year	1,569,236,754
j. Experience gain/(loss): (h) - (i)	($260,835,821)
k. Experience gain/(loss) as a % of actuarial accrued liability	-3.56%
2. Approximate portion of gain/(loss) due to investments (at actuarial value)	($327,733,841)
3. Approximate portion of gain/(loss) due to contributions Higher or lower than expected	($21,402,366)
4. Approximate amount of gain/(loss) due to liabilities: (1)(j) - (2) - (3)	$88,300,386
a. Age & service retirements	($2,486,009)
b. Disability retirements	(459,322)
c. Death-in-service retirements	(103,936)
d. Withdrawal from employment	(7,553,834)
e. Rehires	(716,187)
f. Pay increases	102,407,413
g. Death after retirement	8,285,283
h. Other	(11,073,021)
i. Other as a % of actuarial accrued liability	-0.15%

Change in Calculated Contribution Rate Since the Prior Valuation

(Assumes No Future Cost-Of-Living Increases)

Item	January 1, 2013
1. Calculated contribution rate as of January 1, 2012	8.04%
2. Change in contribution rate during year	
a. Change in total normal cost	-0.09%
b. Assumption changes	0.00%
c. Recognition of prior asset losses (gains)	1.15%
d. Actuarial (gain) loss from current year asset performance	-0.19%
e. Actuarial (gain) loss from liability sources & administrative expenses	-0.15%
f. Difference between contributions made and required contribution	0.07%
g. Effect of payroll growing (faster)/slower than assumption	0.14%
h. Open amortization period reset to 30 years	-0.10%
i. Other changes	-0.01%
j. Total change	0.82%
3. Calculated contribution rate as of January 1, 2013	8.86%

Statement of Plan Net Assets

Assets at Market Value		
Item	**FYE 2012**	**FYE 2011**
1. Cash and Cash Equivalents (Operating Cash)	$269,200,385	$310,936,186
2. Receivables		
a. Insurance premium tax	$0	$0
b. Buy backs	0	0
c. Employee contributions	8,354,892	8,363,618
d. Employer contributions	8,472,564	8,557,368
e. Securities sold	14,658,774	37,399,459
f. Accrued interest and dividends	14,756,018	14,218,920
g. Currency contract receivable	141,356,952	262,730,290
h. Other	57,705	154,200
i. Rebate and fee income receivable	0	0
j. Total receivables	$187,656,905	$331,423,855
3. Investments, at Fair Value	$6,210,977,505	$5,403,578,247
4. Liabilities		
a. Benefits and refunds payable	($483,484)	($609,404)
b. Securities purchased	(101,311,797)	(172,995,548)
c. Administrative and consulting fees payable	(6,411,854)	(7,356,021)
d. Currency contract payable	(141,025,011)	(264,630,028)
e. Securities lending collateral	(514,318,806)	(282,138,292)
f. Total liabilities	($763,550,952)	($727,729,293)
5. Total Market Value of Assets Available for Benefits	$5,904,283,843	$5,318,208,995

Reconciliation of Plan Net Assets

Assets at Market Value		
Item	**FYE 2012**	**FYE 2011**
A. Market Value of Assets at Beginning of Year		
1. Beginning of year	$5,318,208,995	$5,491,978,896
2. Adjustment*	-	34,368
3. Adjusted beginning of year	$5,318,208,995	$5,492,013,264
B. Contribution Income:		
1. Contributions		
a. Employee	$119,052,404	$116,691,540
b. Employer	121,026,954	118,652,496
c. Other	3,621,134	3,905,410
d. Total	$243,700,492	$239,249,446
2. Investment Income		
a. Interest, dividends, and other income	$149,314,224	$109,511,488
b. Net appreciation	595,202,806	(149,192,855)
c. Investment expenses	(24,955,969)	(25,736,868)
d. Net investment income	$719,561,061	$(65,418,235)
3. Securities Lending		
a. Gross income	$4,595,582	$2,229,467
b. Deductions	(689,067)	(344,251)
c. Net investment income	$3,906,515	$1,885,216
4. Benefits and Refunds		
a. Refunds	$(17,263,004)	$(15,241,933)
b. Regular monthly benefits	(357,366,710)	(328,737,275)
c. Total	$(374,629,714)	$(343,979,208)
5. Administrative and Miscellaneous Expenses	$(6,463,506)	$(5,541,488)
C. Market Value of Assets at End of Year	$5,904,283,843	$5,318,208,995

* The Adjustment reflects the difference between the approximate amount transferred from the State Plan to the Air Guard Plan in the FYE 2010 valuation and the actual amount transferred.

Progress of Fund Through December 31, 2012

Plan Year Ending December 31	Employer Contributions*	Employee Contributions	Administrative Expenses	Net Investment Income**	Benefit Payments	Transfers	Actuarial Value of Assets
Total	$ 1,773,024,011	$ 1,587,696,914	$ (46,339,902)	$ 6,094,361,746	$ (4,309,258,258)	$ (115,633,895)	
1986	$ 41,364,465	$ 36,365,804	$ (782,000)	$ 98,998,090	$ (42,082,765)	$ -	$ 900,097,591
1987	39,901,834	36,039,418	(808,023)	91,374,783	(50,604,364)	-	1,016,001,239
1988	38,414,939	33,222,264	(444,343)	103,025,282	(48,627,479)	-	1,141,591,902
1989	36,139,394	36,231,108	(424,136)	128,370,680	(55,459,353)	-	1,286,449,595
1990	38,668,634	38,960,372	(850,148)	114,218,588	(61,154,261)	-	1,416,292,780
1991	38,903,350	39,288,267	(863,301)	148,164,188	(69,348,501)	-	1,572,336,783
1992	42,354,843	42,883,874	(909,653)	175,246,400	(75,211,430)	-	1,756,700,817
1993	41,596,571	42,266,219	(801,026)	189,281,426	(82,480,713)	-	1,946,563,294
1994	42,791,243	43,415,880	(888,518)	136,210,578	(89,707,717)	-	2,078,384,760
1995	43,714,263	44,435,762	(937,480)	230,731,781	(99,689,985)	-	2,296,639,101
1996	43,495,146	44,761,611	(1,028,163)	233,212,720	(108,536,621)	-	2,508,543,794
1997	44,958,544	46,152,691	(1,147,818)	314,340,179	(117,126,096)	-	2,795,721,294
1998	46,183,091	47,366,181	(1,074,562)	436,098,461	(123,858,991)	-	3,200,435,474
1999	48,681,209	50,106,535	(1,182,899)	475,758,627	(132,428,572)	-	3,641,370,374
2000	50,539,675	51,868,059	(1,096,747)	592,379,739	(144,620,949)	-	4,190,440,151
2001	56,517,377	53,792,429	(1,387,930)	439,286,379	(156,189,100)	-	4,582,462,306
2002	57,377,428	58,234,324	(1,281,554)	(66,209,697)	(171,160,286)	(106,978,719)	4,352,423,802
2003	55,363,788	60,848,296	(1,435,922)	376,524,142	(185,826,481)	-	4,657,897,625
2004	60,573,670	61,412,824	(1,644,382)	127,831,761	(201,772,174)	-	4,704,299,324
2005	65,191,670	63,381,309	(1,930,627)	238,882,774	(217,308,520)	(8,655,176)	4,843,861,114
2006	72,664,403	69,020,297	(1,949,051)	409,948,934	(232,944,164)	-	5,160,601,533
2007	83,149,236	78,495,298	(2,005,783)	583,547,681	(249,765,088)	-	5,654,022,877
2008	88,451,655	84,814,014	(2,778,990)	(720,402,274)	(268,232,301)	-	4,835,874,981
2009***	244,063,923	89,298,711	(3,081,105)	868,641,735	(292,256,569)	-	5,742,541,676
2010****	104,757,666	99,291,423	(3,600,747)	170,797,772	(314,256,856)	-	5,799,530,934
2011	122,557,906	116,691,540	(5,541,488)	71,962,242	(343,979,208)	-	5,761,221,926
2012	124,648,088	119,052,404	(6,463,506)	126,138,774	(374,629,714)	-	5,749,967,972

* Includes other funding sources

** Net of investment expenses

*** December 31,2009 market values exclude Air Guard Firefighters

**** Beginning with the plan year ending 12/31/2010, employer contributions are 7.12% of pay and employee contributions are 7.00% of pay

Development of Actuarial Value of Assets

Item	FYE 2012	FYE 2011
1. Actuarial value of assets, beginning of year (without corridor)	$5,761,221,926	$5,799,530,934
2. Market value, end of year	$5,904,283,843	$5,318,208,995
3. Market value, beginning of year (adjusted)*	$5,318,208,995	$5,492,013,264
4. Non-investment/administrative net cash flow:		
a. Employee contributions	$119,052,404	$116,691,540
b. Employer contributions	121,026,954	118,652,496
c. Other contributions	3,621,134	3,905,410
d. Refund of employee accounts	(17,263,004)	(15,241,933)
e. Retirement benefits	(357,366,710)	(328,737,275)
f. Administrative Expenses	(6,463,506)	(5,541,488)
g. Total net cash flow: [sum of (4a) through (4f)]	($137,392,728)	($110,271,250)
5. Investments and securities lending:		
a. Interest and dividends on investments	$149,314,224	$109,511,488
b. Gross income from securities lending	4,595,582	2,229,467
c. Fees and expenses	(25,645,036)	(26,081,119)
d. Total net income: [sum of (5a) through (5c)]	$128,264,770	$85,659,836
6. Investment income:		
a. Actual market return: (2) - (3) - (4g) - (5d)	$595,202,806	($149,192,855)
b. Assumed rate of return	8.00%	8.00%
c. Assumed amount of return	291,801,966	349,375,231
d. Amount subject to phase-in: (6a) - (6c)	$303,400,840	($498,568,086)
7. Phase-in recognition of investment income:		
a. Current year: 0.20 * (6d)	$60,680,168	($99,713,617)
b. First prior year	(99,713,617)	48,937,178
c. Second prior year	48,937,178	115,865,314
d. Third prior year	115,865,314	(419,697,005)
e. Fourth prior year	(419,697,005)	(8,464,695)
f. Total recognition	($293,927,962)	($363,072,825)
8. Actuarial value of assets, end of year		
a. Preliminary actuarial value of assets, end of year:		
(1) + (4g) + (5d) + (6c) + (7f)	$5,749,967,972	$5,761,221,926
b. Upper corridor limit: 120% * (2)	7,085,140,612	6,381,850,794
c. Lower corridor limit: 80% * (2)	4,723,427,074	4,254,567,196
d. Actuarial value of assets, end of year	$5,749,967,972	$5,761,221,926
9. Difference between market and actuarial value of assets	$154,315,871	($443,012,932)
10. Actuarial rate of return	2.22%	1.25%
11. Market rate of return**	14.06%	-0.90%
12. Ratio of actuarial value to market value of assets	97.39%	108.33%

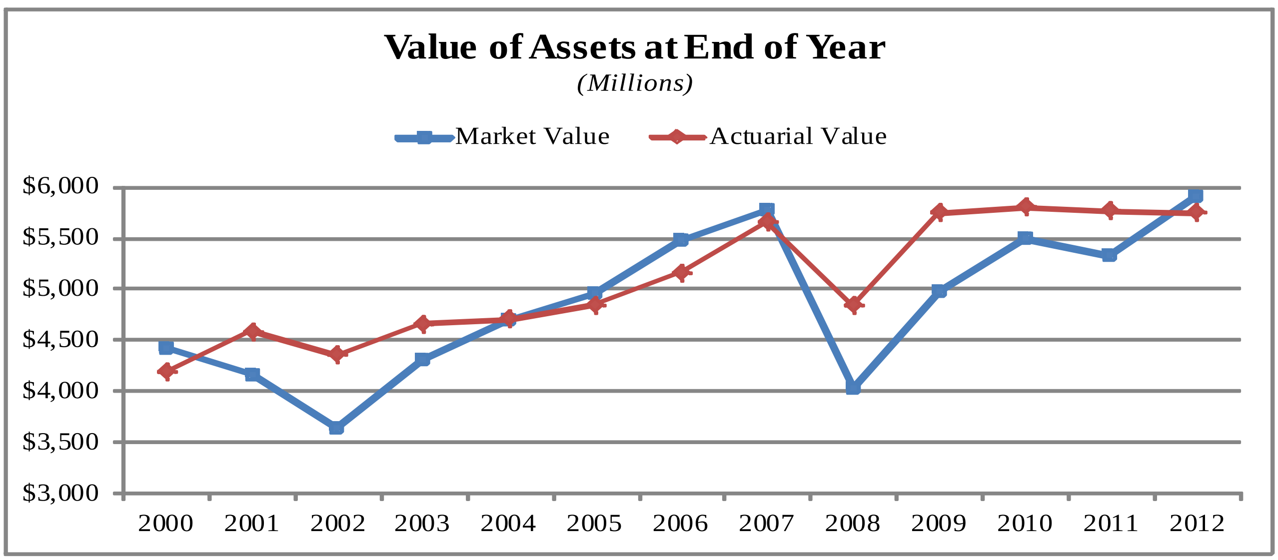
* The Beginning of year market value for FYE 2011 reflects the adjustment to the amount transferred from the State Plan to the Air Guard Firefighter Plan.

** Current year market rate of return is based on unaudited data and is supplied by NEPC, LLC.

History of Investment Returns

Plan Year (1)	Market Value (2)	Actuarial Value (3)
2000	-0.99%	16.37%
2001	-4.47%	10.54%
2002	-9.29%	-1.47%
2003	21.00%	8.72%
2004	11.54%	2.77%
2005	8.22%	5.13%
2006	12.63%	8.55%
2007	7.44%	11.41%
2008	-29.63%	-12.85%
2009	23.72%	17.89%
2010	13.79%	3.00%
2011	-0.90%	1.25%
2012	14.06%	2.22%
Average returns:		
Last five years:	2.29%	1.84%
Last ten years:	7.06%	4.52%

The market rates above were provided by NEPC, LLC, including changes to the rates for 2009-2011 since the prior valuation. The actuarial rates above are based on the financial information provided by McGee, Hearne & Paiz, LLP.



Solvency Test

Valuation Date January 1	Total Active Member Contributions (1)	Inactive and Pensioner Liability (2)	Employer Financed Active Accrued Liability (3)	Actuarial Value of Assets	Percentage of Liabilities Covered by Assets (1)	(2)	(3)
2005	$840,104,000	$2,592,159,000	$2,103,929,000	$4,704,299,324	100%	100%	60.5%
2006	888,544,000	2,354,500,000	1,848,710,000	4,843,861,114	100%	100%	86.6%
2007	941,572,000	2,488,504,000	2,038,153,000	5,160,601,533	100%	100%	84.9%
2008	991,444,000	2,699,505,000	2,325,036,000	5,654,022,877	100%	100%	84.4%
2009	1,036,443,231	2,796,308,000	2,319,370,769	4,835,874,981	100%	100%	43.2%
2010	1,109,001,753	2,933,630,669	2,519,698,185	5,742,541,676	100%	100%	67.3%
2011	1,161,508,226	3,178,244,317	2,515,890,340	5,799,530,934	100%	100%	58.0%
2012	1,226,273,201	3,455,740,883	2,355,172,581	5,761,221,926	100%	100%	45.8%
2013	1,286,009,555	3,724,948,051	2,308,247,120	5,749,967,972	100%	100%	32.0%

Excludes Air Guard beginning in 2010

Effective January 1, 2010, liabilities are calculated assuming no future cost-of-living increases.

Schedule of Funding Progress

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Valuation Date January 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL) [(3) - (2)]	Funded Ratio [(2)/(3)]	Covered Payroll	UAAL as a Percentage of Covered Payroll [(4)/(6)]
2001	$4,190,440,151	$3,683,174,000	($507,266,151)	113.77%	$897,641,000	(56.51%)
2002	4,582,462,306	4,442,033,000	(140,429,306)	103.16%	964,121,000	(14.57%)
2003	4,352,423,802	4,718,618,000	366,194,198	92.24%	988,135,000	37.06%
2004	4,657,897,625	5,077,443,000	419,545,375	91.74%	1,032,259,000	40.64%
2005	4,704,299,324	4,902,322,000	198,022,676	95.96%	1,086,736,000	18.22%
2006	4,843,861,114	5,091,763,000	247,901,886	95.13%	1,156,400,000	21.44%
2007	5,160,601,533	5,468,229,000	307,627,467	94.37%	1,285,096,000	23.94%
2008	5,654,022,877	6,015,985,000	361,962,123	93.98%	1,462,474,000	24.75%
2009	4,835,874,981	6,152,122,000	1,316,247,019	78.60%	1,585,728,000	83.01%
2010	5,742,541,676	6,562,330,607	819,788,931	87.51%	1,697,341,384	48.30%
2011	5,799,530,934	6,855,642,883	1,056,111,949	84.59%	1,728,433,786	61.10%
2012	5,761,221,926	7,037,186,665	1,275,964,739	81.87%	1,756,856,648	72.63%
2013	5,749,967,972	7,319,204,726	1,569,236,754	78.56%	1,782,069,208	88.06%

Excludes Air Guard beginning in 2010

Effective January 1, 2010, liabilities are calculated assuming no future cost-of-living increases.

Schedule of Contributions from the Employer(s) and Other Contributing Entities

(1)	(2)	(3)	(4)	(5)	(6)
Fiscal Year Ending December 31	GASB No. 25 Annual Required Contribution (ARC) % of Payroll	Amount	Employer Contributions* % of Payroll	Amount	Percentage of GASB ARC Contributed [(5)/(3)]
2004	8.76%	$90,477,000	5.87%	$60,573,670	66.95%
2005	10.00%	108,707,000	6.00%	65,191,670	59.97%
2006	5.68%	65,714,000	6.28%	72,664,403	110.58%
2007	5.68%	73,035,000	6.47%	83,149,236	113.85%
2008	5.68%	83,036,000	6.05%	88,451,655	106.52%
2009	9.15%	145,015,000	15.39%	244,063,923**	168.32%
2010	8.06%	136,689,664	6.17%	104,757,666	76.64%
2011	7.60%	131,260,466	7.09%	122,557,906	93.37%
2012	8.04%	141,299,725	7.09%	124,648,088	88.22%
2013	8.86%	158,013,754	-	-	-

Excludes Air Guard beginning December 31, 2009, including Employer Contributions of $149,244 as of December 31, 2009.

Effective January 1, 2010, liabilities are calculated assuming no future cost-of-living increases.

* Includes other funding sources

** There was a $150.6 million legislative appropriation to address the increase in school district employee pay.

Reconciliation of Participant Data

	Active Participants		Vested Former	Retired			Participants	
	Tier 1	Tier 2	Participants	Participants	Disableds	Beneficiaries	Due Refunds	Total
Number as of January 1, 2012	**36,070**	**-**	**5,390**	**18,424**	**249**	**2,015**	**18,707**	**80,855**
New participants	2,638	1,143	-	-	-	-	345	4,126
Vested terminations	(682)	-	682	-	-	-	-	-
Retirements	(1,045)	-	(279)	1,325	-	-	(1)	-
Disability	(12)	-	(2)	(1)	15	-	-	-
Deceased with beneficiary	(10)	-	(1)	(108)	(4)	123	-	-
Deceased without beneficiary	(22)	-	(11)	(361)	(8)	(96)	(5)	(503)
Due refunds	(1,138)	-	(1)	-	-	-	1,141	2
Lump sum payoffs	(947)	-	(248)	-	-	-	(1,112)	(2,307)
Rehires/return to active	340	104	(162)	(5)	-	-	(282)	(5)
Certain period expired	-	-	-	-	-	(2)	-	(2)
Reclassifications	-	-	-	-	-	-	-	-
Data corrections	5	-	-	16	-	18	-	39
Number as of January 1, 2013	**35,197**	**1,247**	**5,368**	**19,290**	**252**	**2,058**	**18,793**	**82,205**

Demographic Statistics

	January 1		
	2013	**2012**	**Change**
Active Participants			
Number	36,444	36,070	1.0%
Vested	*24,963*	*24,631*	
Not vested	*11,481*	*11,439*	
Average age (years)	46.65	46.77	-0.3%
Average service (years)	10.27	10.35	-0.8%
Average entry age (years)	36.38	36.42	-0.1%
Total payroll*	$1,782,069,208	$1,756,856,648	1.4%
Average payroll*	$48,899	$48,707	0.4%
Total employee contributions with interest	$1,286,009,555	$1,226,273,201	4.9%
Average employee contributions with interest	$35,287	$33,997	3.8%
Vested Former Participants			
Number	5,368	5,390	-0.4%
Average age (years)	52.42	52.26	0.3%
Total employee contributions with interest	$159,205,146	$155,633,071	2.3%
Average employee contributions with interest	$29,658	$28,874	2.7%
Service Retirees			
Number	19,290	18,424	4.7%
Average age (years)	71.32	71.23	0.1%
Total annual benefits	$337,454,368	$310,190,970	8.8%
Average annual benefit	$17,494	$16,836	3.9%
Disability Retirees			
Number	252	249	1.2%
Average age (years)	62.48	62.16	0.5%
Total annual benefits	$3,886,315	$3,683,646	5.5%
Average annual benefit	$15,422	$14,794	4.2%
Beneficiaries			
Number	2,058	2,015	2.1%
Average age (years)	75.30	75.05	0.3%
Total annual benefits	$26,295,618	$25,035,285	5.0%
Average annual benefit	$12,777	$12,424	2.8%
Participants Due Refunds	18,793	18,707	0.5%

* Projected payroll

Distribution of Male Active Members by Age and by Years of Service

Average Age = 47.2 Average Service = 10.6

Age Last Birthday		Whole Years of Service at Valuation Date							Totals
		0-4	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 Plus**	
Less than 20	Count	23	-	-	-	-	-	-	23
	Avg. Salary	$15,480	-	-	-	-	-	-	$15,480
20-24	Count	327	5	-	-	-	-	-	332
	Avg. Salary	29,626	$46,077	-	-	-	-	-	29,874
25-29	Count	794	133	4	-	-	-	-	931
	Avg. Salary	40,871	46,459	$38,008	-	-	-	-	41,657
30-34	Count	779	439	74	1	-	-	-	1,293
	Avg. Salary	45,180	54,367	56,528	*	-	-	-	48,949
35-39	Count	568	467	282	48	1	-	-	1,366
	Avg. Salary	48,112	56,088	61,275	$60,452	*	-	-	53,995
40-44	Count	535	339	326	243	57	1	-	1,501
	Avg. Salary	46,031	55,404	61,278	68,290	$62,201	*	-	55,680
45-49	Count	479	367	247	221	248	76	9	1,647
	Avg. Salary	45,856	54,383	57,937	66,456	70,865	$61,655	$58,525	56,896
50-54	Count	490	377	272	224	255	261	129	2,008
	Avg. Salary	43,202	52,123	54,394	61,902	64,415	71,647	67,271	56,416
55-59	Count	429	368	256	184	258	232	293	2,020
	Avg. Salary	44,848	51,716	53,674	58,594	66,658	69,855	72,556	58,147
60-64	Count	266	281	196	136	144	131	240	1,394
	Avg. Salary	43,010	50,502	53,868	57,626	62,904	67,252	74,485	57,225
65-69	Count	106	108	53	49	42	31	58	447
	Avg. Salary	30,659	45,510	47,121	58,746	68,859	66,002	75,261	51,106
70 & Over	Count	52	45	30	19	3	9	13	171
	Avg. Salary	27,833	34,236	35,950	36,805	*	49,417	75,721	37,410
Totals	Count	**4,848**	**2,929**	**1,740**	**1,125**	**1,008**	**741**	**742**	**13,133**
	Avg. Salary	**$42,936**	**$52,762**	**$56,650**	**$62,480**	**$66,419**	**$68,750**	**$72,358**	**$53,540**

Average salary represents annualized salary earned in 2012 and is not shown for cells with counts less than or equal to three participants

Distribution of Female Active Members by Age and by Years of Service

Average Age = 46.3 Average Service = 10.1

Age Last Birthday		0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals
		Whole Years of Service at Valuation Date							
Less than 20	Count	46	-	-	-	-	-	-	46
	Avg. Salary	$13,086	-	-	-	-	-	-	$13,086
20-24	Count	700	8	-	-	-	-	-	708
	Avg. Salary	26,428	$28,098	-	-	-	-	-	26,447
25-29	Count	1,677	292	2	-	-	-	-	1,971
	Avg. Salary	35,854	42,351	*	-	-	-	-	36,827
30-34	Count	1,365	784	134	-	-	-	-	2,283
	Avg. Salary	34,477	48,507	$48,493	-	-	-	-	40,118
35-39	Count	1,210	684	473	69	3	-	-	2,439
	Avg. Salary	32,416	45,654	54,740	$54,486	*	-	-	41,114
40-44	Count	1,090	763	511	335	66	3	-	2,768
	Avg. Salary	32,165	42,663	52,016	59,955	$61,154	*	-	42,802
45-49	Count	841	688	556	322	278	85	11	2,781
	Avg. Salary	31,208	40,132	44,218	53,407	62,605	$56,854	$54,861	42,603
50-54	Count	825	759	694	516	380	350	190	3,714
	Avg. Salary	32,104	38,745	41,507	47,428	57,383	62,702	61,207	44,306
55-59	Count	633	640	592	549	487	352	415	3,668
	Avg. Salary	31,546	38,688	41,657	45,417	52,077	57,787	65,446	45,580
60-64	Count	317	356	326	311	323	254	312	2,199
	Avg. Salary	30,935	38,891	39,278	43,705	48,756	51,973	62,322	44,767
65-69	Count	91	115	100	71	75	54	73	579
	Avg. Salary	22,010	32,809	40,751	35,662	50,993	44,082	55,745	39,132
70 & Over	Count	42	36	24	14	13	13	13	155
	Avg. Salary	14,961	23,102	28,519	31,091	42,654	39,308	36,327	26,565
Totals	Count	**8,837**	**5,125**	**3,412**	**2,187**	**1,625**	**1,111**	**1,014**	**23,311**
	Avg. Salary	**$32,331**	**$41,879**	**$45,334**	**$48,929**	**$54,713**	**$57,042**	**$62,504**	**$41,941**

Average salary represents annualized salary earned in 2012 and is not shown for cells with counts less than or equal to three participants

Distribution of Total Active Members by Age and by Years of Service

Average Age = 46.7 Average Service = 10.3

Age Last Birthday		Whole Years of Service at Valuation Date							Totals
		0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Less than 20	Count	69	-	-	-	-	-	-	69
	Avg. Salary	$13,884	-	-	-	-	-	-	$13,884
20-24	Count	1,027	13	-	-	-	-	-	1,040
	Avg. Salary	27,446	$35,013	-	-	-	-	-	27,541
25-29	Count	2,471	425	6	-	-	-	-	2,902
	Avg. Salary	37,466	43,637	$40,901	-	-	-	-	38,377
30-34	Count	2,144	1,223	208	1	-	-	-	3,576
	Avg. Salary	38,366	50,610	51,352	*	-	-	-	43,311
35-39	Count	1,778	1,151	755	117	4	-	-	3,805
	Avg. Salary	37,430	49,888	57,181	$56,934	$57,224	-	-	45,738
40-44	Count	1,625	1,102	837	578	123	4	-	4,269
	Avg. Salary	36,730	46,582	55,623	63,459	61,639	$53,404	-	47,330
45-49	Count	1,320	1,055	803	543	526	161	20	4,428
	Avg. Salary	36,523	45,089	48,438	58,718	66,499	59,120	$56,510	47,919
50-54	Count	1,315	1,136	966	740	635	611	319	5,722
	Avg. Salary	36,240	43,184	45,135	51,810	60,207	66,523	63,659	48,556
55-59	Count	1,062	1,008	848	733	745	584	708	5,688
	Avg. Salary	36,919	43,444	45,285	48,725	57,127	62,581	68,388	50,043
60-64	Count	583	637	522	447	467	385	552	3,593
	Avg. Salary	36,444	44,013	44,756	47,940	53,119	57,172	67,610	49,600
65-69	Count	197	223	153	120	117	85	131	1,026
	Avg. Salary	26,664	38,960	42,958	45,088	57,407	52,076	64,386	44,349
70 & Over	Count	94	81	54	33	16	22	26	326
	Avg. Salary	22,082	29,287	32,647	34,381	47,296	43,444	56,024	32,253
Totals	Count	**13,685**	**8,054**	**5,152**	**3,312**	**2,633**	**1,852**	**1,756**	**36,444**
	Avg. Salary	**$36,088**	**$45,836**	**$49,156**	**$53,532**	**$59,195**	**$61,727**	**$66,668**	**$46,121**

Average salary represents annualized salary earned in 2012 and is not shown for cells with counts less than or equal to three participants

Distribution of Male Deferred Members by Age and by Years of Service

Average Age = 52.3 Average Service = 9.6

Age Last Birthday	Whole Years of Service at Valuation Date 0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals
Less than 20	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-
25-29	6	11	-	-	-	-	-	17
30-34	27	40	-	-	-	-	-	67
35-39	25	72	12	-	-	-	-	109
40-44	44	98	20	4	-	-	-	166
45-49	34	128	37	22	6	1	1	229
50-54	57	151	77	43	27	8	1	364
55-59	51	153	105	72	29	12	1	423
60-64	39	90	36	22	12	3	-	202
65-69	9	28	13	8	3	3	1	65
70 & Over	10	17	6	1	-	-	-	34
Totals	**302**	**788**	**306**	**172**	**77**	**27**	**4**	**1,676**

Distribution of Female Deferred Members by Age and by Years of Service

Average Age = 52.5 Average Service = 9.0

Age	Whole Years of Service at Valuation Date							
Last Birthday	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals
Less than 20	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-
25-29	23	18	-	-	-	-	-	41
30-34	57	116	5	-	-	-	-	178
35-39	69	144	24	1	-	-	-	238
40-44	69	206	47	12	1	-	-	335
45-49	81	259	109	28	6	1	1	485
50-54	120	343	171	68	32	11	2	747
55-59	117	429	231	103	62	16	1	959
60-64	77	237	85	46	21	5	4	475
65-69	36	88	22	8	2	-	3	159
70 & Over	23	40	11	-	-	1	-	75
Totals	**672**	**1,880**	**705**	**266**	**124**	**34**	**11**	**3,692**

Distribution of Total Deferred Members by Age and by Years of Service

Average Age = 52.4 Average Service = 9.2

Age Last Birthday	Whole Years of Service at Valuation Date: 0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals
Less than 20	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-
25-29	29	29	-	-	-	-	-	58
30-34	84	156	5	-	-	-	-	245
35-39	94	216	36	1	-	-	-	347
40-44	113	304	67	16	1	-	-	501
45-49	115	387	146	50	12	2	2	714
50-54	177	494	248	111	59	19	3	1,111
55-59	168	582	336	175	91	28	2	1,382
60-64	116	327	121	68	33	8	4	677
65-69	45	116	35	16	5	3	4	224
70 & Over	33	57	17	1	-	1	-	109
Totals	**974**	**2,668**	**1,011**	**438**	**201**	**61**	**15**	**5,368**

Schedule of Pension Recipients Added to and Removed from Rolls

Fiscal Year Ending December 31	Added to Rolls*		Removed from Rolls		Total		Percent Increase in Annual Pension Benefits	Average Annual Pension Benefit
	Count	Annual Pension Benefits	Count	Annual Pension Benefits	Count	Annual Pension Benefits		
2008	1,290	$26,985,322	552	$3,650,746	18,333	$268,901,376	9.50%	$14,668
2009	1,160	24,062,484	577	6,292,131	18,916	286,671,729	6.61%	15,155
2010	1,388	31,055,004	562	6,314,155	19,742	311,412,579	8.63%	15,774
2011	1,538	34,517,321	592	7,019,999	20,688	338,909,901	8.83%	16,382
2012	1,497	35,646,627	585	6,920,227	21,600	367,636,301	8.48%	17,020

* Includes cost-of-living increases

Retired and Disabled Members by Option Code

	Count			Monthly Benefit		
Option Code*	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
1	1,752	5,297	7,049	$2,722,842	$6,199,061	$8,921,903
2	3,712	2,305	6,017	6,662,640	3,023,837	9,686,477
2P	1,066	1,317	2,383	1,786,223	2,038,166	3,824,389
3	478	424	902	1,025,480	628,026	1,653,506
3P	256	409	665	608,872	768,983	1,377,855
4	308	533	841	405,731	607,498	1,013,229
5	412	1,273	1,685	592,266	1,375,431	1,967,697
Total	**7,984**	**11,558**	**19,542**	**$13,804,054**	**$14,641,003**	**$28,445,057**
Beneficiaries	**392**	**1,666**	**2,058**	**$358,638**	**$1,832,663**	**$2,191,301**
Grand Total	**8,376**	**13,224**	**21,600**	**$14,162,692**	**$16,473,666**	**$30,636,358**

See optional forms of payment in Appendix B

Pensioners by Amount and Option Code

Males	Option Code							
Benefit Amount	1	2	2P	3	3P	4	5	Total
Under $200	107	150	61	3	3	33	98	455
$200-$399	197	321	111	16	18	34	131	828
$400-$599	194	324	116	28	12	38	110	822
$600-$799	154	276	83	29	15	31	82	670
$800-$999	138	234	73	20	10	20	63	558
$1,000-$1,499	238	488	127	81	27	52	100	1,113
$1,500-$1,999	192	457	98	57	23	32	49	908
$2,000-$2,499	152	429	130	69	35	19	61	895
$2,500 & over	380	1,033	267	175	113	49	110	2,127
Total	**1,752**	**3,712**	**1,066**	**478**	**256**	**308**	**804**	**8,376**
Females								
Benefit Amount	1	2	2P	3	3P	4	5	Total
Under $200	498	207	78	12	9	54	305	1,163
$200-$399	807	334	155	49	20	96	457	1,918
$400-$599	699	259	116	40	33	79	419	1,645
$600-$799	597	196	119	45	31	63	318	1,369
$800-$999	431	180	97	26	30	42	260	1,066
$1,000-$1,499	781	355	189	76	62	64	431	1,958
$1,500-$1,999	499	223	137	62	53	32	280	1,286
$2,000-$2,499	356	171	134	48	49	34	177	969
$2,500 & over	629	380	292	66	122	69	292	1,850
Total	**5,297**	**2,305**	**1,317**	**424**	**409**	**533**	**2,939**	**13,224**
Males & Females								
Benefit Amount	1	2	2P	3	3P	4	5	Total
Under $200	605	357	139	15	12	87	403	1,618
$200-$399	1,004	655	266	65	38	130	588	2,746
$400-$599	893	583	232	68	45	117	529	2,467
$600-$799	751	472	202	74	46	94	400	2,039
$800-$999	569	414	170	46	40	62	323	1,624
$1,000-$1,499	1,019	843	316	157	89	116	531	3,071
$1,500-$1,999	691	680	235	119	76	64	329	2,194
$2,000-$2,499	508	600	264	117	84	53	238	1,864
$2,500 & over	1,009	1,413	559	241	235	118	402	3,977
Total	**7,049**	**6,017**	**2,383**	**902**	**665**	**841**	**3,743**	**21,600**

Pensioners by Age and Option Code

Average Age Male = 71.4 Average Age Female = 71.7 Average Age Total = 71.6

Males	Option Code							
Age Last Birthday	**1**	**2**	**2P**	**3**	**3P**	**4**	**5**	**Total**
Under 50	1	2	-	-	-	-	16	19
50-54	17	32	14	1	-	5	11	80
55-59	100	201	64	16	17	15	34	447
60-64	268	624	281	57	57	58	113	1,458
65-69	394	895	344	90	79	63	161	2,026
70-74	359	773	212	88	60	62	159	1,713
75-79	253	555	101	93	29	49	109	1,189
80-84	194	370	38	65	12	31	107	817
85 & over	166	260	12	68	2	25	94	627
Total	**1,752**	**3,712**	**1,066**	**478**	**256**	**308**	**804**	**8,376**
Females								
Age Last Birthday	**1**	**2**	**2P**	**3**	**3P**	**4**	**5**	**Total**
Under 50	1	3	-	-	-	-	25	29
50-54	42	26	15	3	2	5	33	126
55-59	234	187	144	29	30	28	121	773
60-64	835	560	452	78	118	101	334	2,478
65-69	1,133	604	432	109	135	138	487	3,038
70-74	993	393	186	83	81	108	514	2,358
75-79	796	249	67	40	36	64	502	1,754
80-84	607	159	20	48	6	55	426	1,321
85 & over	656	124	1	34	1	34	497	1,347
Total	**5,297**	**2,305**	**1,317**	**424**	**409**	**533**	**2,939**	**13,224**
Males & Females								
Age Last Birthday	**1**	**2**	**2P**	**3**	**3P**	**4**	**5**	**Total**
Under 50	2	5	-	-	-	-	41	48
50-54	59	58	29	4	2	10	44	206
55-59	334	388	208	45	47	43	155	1,220
60-64	1,103	1,184	733	135	175	159	447	3,936
65-69	1,527	1,499	776	199	214	201	648	5,064
70-74	1,352	1,166	398	171	141	170	673	4,071
75-79	1,049	804	168	133	65	113	611	2,943
80-84	801	529	58	113	18	86	533	2,138
85 & over	822	384	13	102	3	59	591	1,974
Total	**7,049**	**6,017**	**2,383**	**902**	**665**	**841**	**3,743**	**21,600**

Pensions Awarded in 2012 by Option Code

Average Age = 63.1

Males & Females	Option Code							
Benefit Amount	**1**	**2**	**2P**	**3**	**3P**	**4**	**5**	**Total**
Under $200	17	15	9	1	1	2	27	72
$200-$399	48	37	30	4	4	2	30	155
$400-$599	34	26	17	2	3	4	32	118
$600-$799	29	17	16	1	1	3	16	83
$800-$999	31	20	14	1	2	3	23	94
$1,000-$1,499	51	40	25	5	3	9	42	175
$1,500-$1,999	47	42	17	5	11	5	25	152
$2,000-$2,499	31	50	26	4	5	1	21	138
$2,500 & over	128	167	99	17	32	17	50	510
Total	**416**	**414**	**253**	**40**	**62**	**46**	**266**	**1,497**

Males & Females								
Age Last Birthday	**1**	**2**	**2P**	**3**	**3P**	**4**	**5**	**Total**
Under 50	0	1	0	0	0	0	4	5
50-54	29	22	22	2	1	1	13	90
55-59	64	90	63	12	16	9	31	285
60-64	195	191	112	18	28	17	84	645
65-69	110	89	47	5	15	12	50	328
70-74	10	19	8	3	2	7	29	78
75-79	4	2	1	0	0	0	26	33
80-84	2	0	0	0	0	0	20	22
85 & over	2	0	0	0	0	0	9	11
Total	**416**	**414**	**253**	**40**	**62**	**46**	**266**	**1,497**

Retirees and Disabled Members by Service at Retirement and Years Since Retirement

(Average Monthly Benefit)

Average Service at Retirement = 19.4 Average Years Since Retirement = 11.5

Service at Retirement		Years Elapsed Since Retirement							
		0-4	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 Plus**	**Totals**
Less than 5	Count	228	207	135	112	136	90	56	964
	Avg. Benefit	$261	$317	$1,037	$484	$151	$134	$143	$191
5-9	Count	827	658	462	397	390	254	185	3,173
	Avg. Benefit	$457	$389	$359	$320	$327	$310	$266	$373
10-14	Count	726	599	521	489	429	207	148	3,119
	Avg. Benefit	$825	$686	$625	$620	$574	$536	$422	$660
15-19	Count	728	632	575	538	304	207	94	3,078
	Avg. Benefit	$1,311	$1,062	$967	$930	$919	$826	$650	$1,038
20-24	Count	818	640	488	432	229	136	65	2,808
	Avg. Benefit	$1,897	$1,514	$1,377	$1,323	$1,260	$1,207	$845	$1,521
25-29	Count	1,114	762	516	346	167	135	34	3,074
	Avg. Benefit	$2,696	$2,218	$2,038	$1,932	$1,794	$1,609	$1,046	$2,266
30-34	Count	982	589	378	334	156	102	7	2,548
	Avg. Benefit	$3,474	$2,937	$2,638	$2,700	$2,571	$2,155	$1,192	$3,010
35 & Over	Count	360	165	74	95	66	16	2	778
	Avg. Benefit	$4,240	$3,617	$3,221	$3,310	$3,056	$2,448	$1,264	$3,752
Totals	Count	**5,783**	**4,252**	**3,149**	**2,743**	**1,877**	**1,147**	**591**	**19,542**
	Avg. Benefit	**$1,985**	**$1,497**	**$1,281**	**$1,241**	**$993**	**$883**	**$477**	**$1,456**

Retirees and Disabled Members by Year of Retirement

January 1, 2013 Total = 19,542

Year of Retirement	Count	Year of Retirement	Count
Under 1960	-	1986	242
1960	-	1987	411
1961	-	1988	351
1962	-	1989	318
1963	-	1990	352
1964	-	1991	361
1965	-	1992	483
1966	-	1993	442
1967	1	1994	474
1968	-	1995	797
1969	-	1996	509
1970	-	1997	526
1971	16	1998	533
1972	9	1999	569
1973	13	2000	622
1974	22	2001	694
1975	22	2002	691
1976	33	2003	777
1977	49	2004	874
1978	55	2005	817
1979	82	2006	841
1980	75	2007	943
1981	103	2008	1,094
1982	96	2009	963
1983	120	2010	1,169
1984	162	2011	1,358
1985	213	2012 & Over	1,260

APPENDIX A

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Assumptions and Methods

The following methods and assumptions were used in preparing the January 1, 2013 actuarial valuation report.

1. Valuation Date

   The valuation date for any given year is January 1st, the first day of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

2. Actuarial Cost Method

   The actuarial valuation uses the Entry Age Normal (EAN) actuarial cost method, amortized as a level percentage of payroll. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) the rate that will amortize the unfunded actuarial accrued liability (UAAL).

   a. The valuation is prepared on the projected benefit basis, under which the present value, at the investment return rate assumed to be earned in the future (currently 8.00%), of each participant's expected benefit payable at retirement or death is determined, based on his/her age, service, sex and compensation. The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability, or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable for the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Fund on account of the present group of participants and beneficiaries.

   b. The employer contributions required to support the benefits of the Fund are determined using a level funding approach, and consist of a normal cost contribution and an accrued liability contribution.

   c. The normal cost contribution is determined using the "entry age normal" actuarial cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of his/her anticipated covered service, would be required to meet the cost of all benefits payable on his/her behalf based on the benefits provisions applicable for the individual member.

d. The unfunded actuarial accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 30 years from the valuation date.

3. Actuarial Value of Assets

The actuarial value of assets is based on the market value of assets with a five-year phase-in of actual investment return in excess of (less than) expected investment income, with interest, dividends, and other income recognized immediately. Expected investment income is determined using the assumed investment return rate and the market value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses. An adjustment is made if the actuarial value is not within 20% of the Market Value. For any year following a year in which the 20% of market value adjustment was applied, the actuarial value is determined as if the adjustment was not applied in the previous year.

4. Economic Assumptions

a. Investment return

8.00% per year, compounded annually, composed of an assumed 3.50% inflation rate and a 4.50% net real rate of return. This rate represents the assumed return, net of investment expenses.

b. Salary increase rate

Age	Rate
20	9.50%
25	8.30%
30	6.90%
35	6.05%
40	5.60%
45	5.35%
50	5.00%
55	5.00%
60	5.00%

c. Payroll growth rate: In the amortization of the unfunded actuarial accrued liability, payroll is assumed to increase 4.50% per year. This increase rate is solely due to the effect of inflation on salaries, with no allowance for future membership growth.

5. Demographic Assumptions

a. Rates Before Retirement

Healthy Mortality: 1994 Group Annuity Mortality with margins projected (scale AA) to 2008
Disabled Mortality: 1979 PBGC Disabled Lives Receiving Social Security

Age	Death Male	Death Female	Disability	Withdrawal Ultimate Male	Withdrawal Ultimate Female
20	0.04%	0.02%	0.01%	10.00%	11.00%
25	0.06%	0.02%	0.01%	10.00%	11.00%
30	0.07%	0.03%	0.01%	10.00%	11.00%
35	0.08%	0.04%	0.01%	4.83%	5.83%
40	0.10%	0.06%	0.01%	4.44%	5.44%
45	0.13%	0.08%	0.03%	4.22%	5.22%
50	0.20%	0.11%	0.08%	4.10%	5.10%
55	0.34%	0.21%	0.20%	4.03%	5.03%
60	0.64%	0.41%	0.20%	4.00%	5.00%

Service	Withdrawal First five years Male	Withdrawal First five years Female
1	25%	28%
2	18%	22%
3	12%	15%
4	10%	13%
5	10%	12%

Retirement Rates

Age	Service <=25	26	27	28	29	30	31	32	33	34	>=35
<=50	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	10%
51	3%	3%	3%	3%	3%	3%	3%	3%	3%	10%	10%
52	3%	3%	3%	3%	3%	3%	3%	3%	10%	10%	10%
53	3%	3%	3%	3%	3%	3%	3%	10%	10%	10%	10%
54	4%	4%	4%	4%	4%	4%	10%	10%	10%	10%	10%
55	6%	6%	6%	6%	6%	10%	10%	10%	10%	10%	10%
56	6%	6%	6%	6%	10%	10%	10%	10%	10%	10%	10%
57	7%	7%	7%	10%	10%	10%	10%	10%	10%	10%	10%
58	7%	7%	10%	10%	10%	10%	10%	10%	10%	10%	10%
59	10%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
60	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
61	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%
62	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
63	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%	17%
64	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
65	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
66	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
67	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
68	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
69	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
70	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

6. <u>Other Assumptions</u>

a. Percent married: 85.00% of employees are assumed to be married. (No beneficiaries other than the spouse assumed.)

b. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.

c. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an annuity.

d. Percent electing deferred termination benefit: Vested terminating members are assumed to elect a refund or a deferred benefit. It is assumed that 25% of active members who terminate with a deferred vested benefit will elect to have their contributions refunded.

e. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt at the first age at which unreduced benefits are available, which for this plan is age 60.

f. No benefit data is available for members entitled to deferred benefits. The present value of benefits expected to be paid to vested inactive non-retired members is approximated using the data provided.

g. There will be no recoveries once disabled. We assume all members are totally disabled.

h. No surviving spouse will remarry.

i. Administrative expenses: Assumed to be the average of the prior two years, with each year projected at 6.5% to the valuation date.

j. Pay increase timing**:** Beginning of (fiscal) year. This is equivalent to assuming that reported pay represents amount paid to members during the year ended on the valuation date.

k. Decrement timing: Decrements of all types are assumed to occur mid-year.

l. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

m. Decrement relativity: Decrement rates are converted to probabilities in order to account for multiple decrements.

n. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report, and the actual payroll payable at the time contributions are made.

o. Benefit Service: All members are assumed to accrue one year of service each year. Exact fractional service is used to determine the amount of benefit payable.

APPENDIX B

SUMMARY OF PLAN PROVISIONS

Summary of Plan Provisions

Covered Members	Any full-time or regular part-time employee of an employer as defined under W.S. 9-3-402(a)(vii)
Tier	Members who join the State of Wyoming Retirement System by August 31, 2012 are in Tier 1, while members who join on or after September 1, 2012 are in Tier 2.
Final Average Salary	For Tier 1 member: employee's average annual salary for the highest paid three continuous years of service. For Tier 2 member: employee's average annual salary for the highest paid five continuous years of service.
Service Retirement	
Eligibility	Tier 1 members may retire upon normal retirement on the date he/she attains age 60 with four or more years of service while Tier 2 members may retire upon normal retirement on the date he/she attains age 65 with four or more years of service. All employees may also retire upon normal retirement on the date that the sum of the member's age and service is at least 85. Tier 1 members are eligible for a reduced benefit at age 50 with four or more years of service and Tier 2 members are eligible for a reduced benefit at age 55 with four or more years of service. All members are eligible for a reduced benefit at any age with 25 or more years of service.
Monthly Benefit	For Tier 1 member: 2.125% of employee's Final Average Salary for each year of credited service for the first 15 years of service credit plus 2.25% of Final Average Salary for any years of service credit exceeding 15 years. For Tier 2 member: 2.000% of employee's Final (5-year) Average Salary for each year of credited service. This amount is reduced by 5.0% per year that the employee is under age 60 for Tier 1 and under age 65 for Tier 2. However, members retiring with a combined age and service of at least 85 receive an unreduced benefit. Employees hired prior to July 1, 1981 may be entitled to benefits earned under a different formula.
Vesting	Any employee who has left employment with four or more years of service, and who has not withdrawn accumulated contributions, is eligible to receive the above benefit or can elect to receive a lump-sum refund of employee contributions with interest. An employee who terminates with less than four years of service is only eligible for the lump-sum benefit.
Disability Benefit	
Eligibility	Ten or more years of service.
Benefit	Service retirement benefit earned as of the date of disability, payable immediately.

Pre-retirement Death Benefit

Eligibility	No age or service requirements.
Benefit	A lump sum equal to two times the employee contributions with interest. If the employee is vested, the beneficiary can elect, in lieu of this lump sum, to receive a monthly annuity equal to the actuarial equivalent of the retirement benefit that would be due the employee.

Contributions

Employee	7.00% of salary before September 1, 2013 and 7.50% after
Employer	7.12% of salary before September 1, 2014 and 7.62% after
Interest	5.50% annually.

Cost-of-Living Improvements A one-time ad hoc cost-of-living improvement may be granted only if the funded ratio is shown to stay at least 100%.

Optional Forms of Payment

Option 1 (normal form)	Monthly benefit for life with a lump-sum death benefit equal to the excess (if any) of the employee contributions with interest over the total benefits received.
Option 2	Monthly benefit for life. Upon death, 100% of the benefit continues to be paid to the beneficiary.
Option 2P	Monthly benefit for life. Upon death, 100% of the benefit continues to be paid to the beneficiary. Benefit reverts to Option 1 amount but without the cash refund feature upon beneficiary death.
Option 3	Monthly benefit for life. Upon death, 50% of the benefit continues to be paid to the beneficiary.
Option 3P	Monthly benefit for life. Upon death, 50% of the benefit continues to be paid to the beneficiary. Benefit reverts to Option 1 amount but without the cash refund feature upon beneficiary death.
Option 4	Monthly benefit for life with a guarantee of 120 monthly payments
Option 5	The largest possible monthly benefit payable for life with no lump-sum death benefit.