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***NEBRASKA PUBLIC EMPLOYEES  
RETIREMENT SYSTEMS***

**SCHOOL RETIREMENT SYSTEM**

**ACTUARIAL VALUATION REPORT  
as of July 1, 2013**

**Sixty-first Actuarial Report for  
State Fiscal Year Ending June 30, 2015  
and  
System Plan Year Beginning July 1, 2013**







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# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

November 18, 2013

Public Employees Retirement Board  
Nebraska Public Employees Retirement System  
Post Office Box 94816  
Lincoln, NE 68509

Dear Members of the Board:

At your request, we performed an actuarial valuation of the School Retirement System as of July 1, 2013 for the purpose of determining the actuarial required contribution rate for the plan year ending June 30, 2014. It is our understanding that any required State contributions for this plan year will be made on July 1, 2014 (State fiscal year end 2015). The major findings of the valuation are contained in this report, which reflects the benefit provisions in place on July 1, 2013. Although, there was no change to the actuarial assumptions from the prior valuation, there were two changes to the actuarial methods. The amortization of the unfunded actuarial accrued liability was changed from a level dollar payment to a level percent of payroll payment in Legislative Bill 553 (LB 553). This change resulted in a lower actuarial contribution rate in the current valuation. LB 553 also changed the calculations under the Entry Age Normal cost method for the Omaha State Service Annuity benefit to a level percentage of payroll rather than a level dollar amount as was used in prior valuations. Other provisions in LB 553 that impacted the School Retirement System include the removal of the scheduled reduction of the member contribution rate in 2017, an increase in the State's payroll related contribution rate from 1% to 2%, effective July 1, 2014, and changes to the benefit structure for members hired on or after July 1, 2013.

This is the first actuarial valuation report prepared by Cavanaugh Macdonald Consulting, LLC (CMC). As part of our transition work, we replicated the July 1, 2012 actuarial valuation. Results were within acceptable limits, but as is typical in a takeover situation, there were differences in the key valuation results. Based on our experience, these differences are neither unusual nor significant. The details of the replication results are discussed in the Board Summary of this report.

In preparing our report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, member data and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

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We further certify that all costs, liabilities, rates of interest and other factors for the School Retirement System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer the best estimate of anticipated experience affecting the System. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Public Employees Retirement Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report are for purposes of determining the funding amounts for the System as set out in the Nebraska state statutes. The computations presented in this report under GASB Statement No. 25 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals and our understanding of GASB Statement No. 25. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. We are available to answer any questions on the material contained in the report or to provide explanations or further details as may be appropriate.

We respectfully submit the following report and look forward to discussing it with you.

Sincerely,

A handwritten signature in blue ink that reads 'Patrice Beckham'.

Patrice A. Beckham, FSA, EA, FCA, MAAA  
Principal and Consulting Actuary

A handwritten signature in blue ink that reads 'Brent A. Banister'.

Brent A. Banister Ph.D., FSA, EA, MAAA, FCA  
Chief Pension Actuary



## SECTION 1 – BOARD SUMMARY

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This report presents the results of the July 1, 2013 actuarial valuation of the School Retirement System. The primary purposes of performing actuarial valuations are to:

- Determine whether the School District, member and State contribution rates defined in the Nebraska State Statutes are sufficient to fund the total Formula Annuity for the Nebraska School System and the Omaha Service Annuity, and whether additional State contributions are required for the plan year ending June 30, 2014;
- Disclose asset and liability measurements as well as the current funded status of the System on the valuation date;
- Compare actual and expected experience under the System during the plan year ended June 30, 2013; and
- Analyze and report on trends in System contributions, assets and liabilities over the past several years.

The Nebraska statutes require the State to make an additional contribution if the regular, payroll-related contributions by members, employers, and the State are insufficient to meet the actuarial required contribution for the plan year. Based on the results of the July 1, 2013 actuarial valuation, no additional State contribution is necessary for this plan year.

The actuarial valuation results provide a “snapshot” view of the System’s financial condition on July 1, 2013. The System’s unfunded actuarial accrued liability (UAAL) increased from \$2.250 billion last year to \$2.282 billion this year and the funded ratio increased slightly from 76.6% to 77.1%. In addition, the actuarial required contribution rate decreased from 23.21% of pay last year to 19.94% of pay in this year’s valuation. Numerous factors impacted the July 1, 2013 actuarial valuation results, including:

- Differences in valuation procedures as identified in the letter to the Board about the replication of the July 1, 2012 actuarial valuation. These changes decreased the UAAL by \$34.5 million and increased the normal cost rate by 0.31% with a net increase in the actuarial required contribution rate of 0.13%.
- Legislative Bill 553 (LB 553) removed the scheduled reduction in the employee contribution rate in 2017 and created a new tier of benefits for members hired after July 1, 2013. Maintaining the current member contribution rate at 9.78% resulted in a small increase in the actuarial accrued liability of \$2.2 million and an increase of 0.04% in the normal cost rate. The new benefit tier had no impact on the results of the valuation this year as there were no members in this valuation covered by the new tier.
- LB 553 also required the use of the Entry Age Normal, level percent of payroll, method to determine the costs for the Omaha State Service Annuity. This change reduced the unfunded actuarial accrued liability by \$1.9 million.
- LB 553 also changed the amortization of the unfunded actuarial accrued liability to be based on payments determined as a level percent of payroll instead of a level dollar amount. This change reduced the actuarial required contribution rate in this valuation by 3.62% of pay.



## SECTION 1 – BOARD SUMMARY

- Actual experience on both System assets and liabilities. The net impact of all experience was an increase in the actuarial required contribution rate of 0.17%.

The valuation results reflect net unfavorable experience for the past plan year as demonstrated by an UAAL that was higher than expected. The UAAL on July 1, 2013 is \$2.28 billion as compared to an expected UAAL of \$2.24 billion. The unfavorable experience was largely due to the net impact of an experience loss of \$159 million on the actuarial value of assets and an experience gain of about \$115 million on System liabilities. While there was a loss on the actuarial value of assets, it is worth noting that the investment return on a market value basis of 13% was high enough to move the System from a deferred loss of \$113 million last year to a deferred gain of \$390 million this year. This is a significant improvement which will be fully recognized in the asset smoothing method over the next four years.

This is the first actuarial valuation report prepared by Cavanaugh Macdonald Consulting, LLC (CMC). As part of our transition work, we replicated the July 1, 2012 actuarial valuation. Results were within acceptable limits, but as is typical in a takeover situation, there were differences in the key valuation results. Based on our experience, these differences are neither unusual nor significant. During the replication we identified several changes that we believe will result in a better estimate of future liabilities and costs. As a result of implementing these changes, our final liability measurements and normal cost rate were slightly different than those in the 2012 valuation. For additional information on the replication of the 2012 valuation, please refer to our letter to the Board dated September 6, 2013. A summary of the key actuarial measurements in the replication, using CMC’s preferred methodology, is shown in the following table:

	July 1, 2012 Valuation Results (\$M)		
	CMC	Buck	CMC/Buck
Present Value of Future Benefits	\$11,293.2	\$11,321.3	99.8%
Actuarial Accrued Liability	\$ 9,574.7	\$ 9,609.2	99.6%
Normal Cost Rate	11.83%	11.52%	102.7%
UAAL Contribution Rate	<u>11.57%</u>	<u>11.75%</u>	98.5%
Actuarial Contribution Rate	23.40%	23.27%	100.6%

There was no change in the actuarial assumptions since the last valuation, but there were two changes to the actuarial methods. Legislative Bill 553 (LB 553) changed the amortization of the unfunded actuarial accrued liability from a level dollar payment to a level percent of payroll payment. Under the new methodology, the dollar amount of the UAAL payment increases with the assumed payroll growth each year in the future so payments are lower in the earlier years of the amortization period and higher in the later years. This change lowered the UAAL payment in the current valuation from 11.70% of payroll to 8.08%, which lowered the actuarial required contribution rate for by 3.62%, or about \$63 million.

The current member contribution rate of 9.78% was scheduled to drop to 7.28% on September 1, 2017. LB 553 extended the current contribution rate of 9.78% indefinitely and also increased the State’s payroll related contribution from 1% to 2% of pay, effective July 1, 2014. These changes served to strengthen the System’s long term funding by increasing the total statutory contribution rate. LB 553 also made some changes to the benefit structure for members hired on or after July 1, 2013 (Tier Two), including changing final average salary to the highest 60 months rather than the current highest 36 months of service and changing the maximum cost of living adjustment from 2.5% to 1%. The new Tier had no impact on this valuation because there were no Tier Two members in the July 1, 2013 member data.





## SECTION 1 – BOARD SUMMARY

LB 553 also changed the actuarial method used to determine the cost of the Omaha Service Annuity from the Entry Age Normal, level dollar method to the Entry Age Normal, level percent of pay method. This change had no net effect on the actuarial required contribution rate.

A summary of the key results from the July 1, 2013 actuarial valuation, excluding the Omaha State Service annuity, is shown in the following table. As the table indicates, the statutory contribution rates are sufficient to meet the actuarial required contribution rate and no additional State appropriation is required. Further detail on the valuation results can be found in the following sections of this Board Summary.

	July 1, 2013 Valuation Results	July 1, 2012 Valuation Results
Unfunded Actuarial Accrued Liability (\$M)	\$2,282	\$2,250
Funded Ratio (Actuarial Assets)	77.15%	76.58%
Normal Cost Rate	11.86%	11.49%
UAAL Amortization Rate	8.08%	11.72%
Total Actuarial Required Contribution	19.94%	23.21%
Member Contribution Rate	(9.78%)	(9.63%)
Employer Contribution Rate	(9.88%)	(9.73%)
State Contribution Rate	(2.00%)	(1.00%)
Total Contribution Rate	(21.66%)	(20.36%)
Shortfall/(Margin)	(1.72%)	2.85%
Additional State Contribution Amount	\$0	\$48,092,426

### ***EXPERIENCE FOR THE LAST PLAN YEAR***

Numerous factors contributed to the change in the System's assets, liabilities, and the actuarial contribution rate between July 1, 2012 and July 1, 2013. The components are examined in the following discussion.

### **ASSETS**

As of June 30, 2013, the System had net assets of \$8.09 billion, when measured on a market value basis. This was an increase of \$847 million from the prior year.

The market value of assets is not used directly in the calculation of the unfunded actuarial accrued liability and the actuarial required contribution rate. An asset valuation method, which smoothes the effect of market fluctuations, is used to determine the value of assets used in the valuation. The resulting amount is called the actuarial value of assets. In this year's valuation, the actuarial value of assets is \$7.70 billion, an increase of \$344 million from the prior year. The components of change in the asset values are shown in the following table:

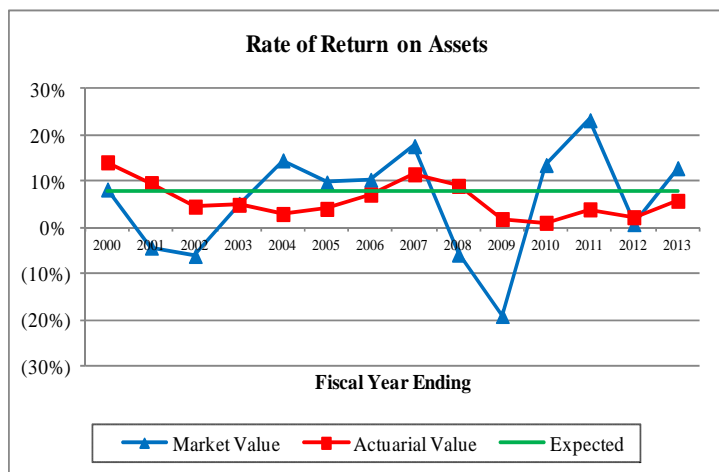


## SECTION 1 – BOARD SUMMARY

	Market Value (\$M)	Actuarial Value (\$M)
<b>Net Assets, June 30, 2012</b>	\$ 7,246.31	\$ 7,358.96
- Employer and Member Contributions	+ 343.84	+ 343.84
- Benefit Payments	- 427.89	- 427.89
- Net Investment Income	+ 930.69	+ 428.17
<b>Net Assets, June 30, 2013</b>	\$ 8,092.95	\$ 7,703.08
Estimated Rate of Return	12.9%	5.9%

The rate of return on the actuarial value of assets was 5.9%, less than the 8% assumption. As a result, there was an experience loss on assets of \$159 million.

Please see Section 3 of this report for more detailed information on the market and actuarial value of assets.



*The rate of return of the actuarial value of assets has been less volatile than the market value return, illustrating the benefit of using an asset smoothing method.*

## LIABILITIES

The actuarial accrued liability is that portion of the present value of future benefits that will not be paid by future normal costs. The difference between this liability and the actuarial value of assets as of the valuation date is called the unfunded actuarial accrued liability (UAAL). The dollar amount of unfunded actuarial accrued liability is reduced if the contributions to the System exceed the normal cost for the year plus interest on the prior year's UAAL.



## SECTION 1 – BOARD SUMMARY

The unfunded actuarial accrued liability is shown as of July 1, 2013 in the following table:

	Actuarial Value of Assets	Market Value of Assets
Actuarial Accrued Liability	\$9,984,898,998	\$9,984,898,998
Value of Assets	<u>7,703,084,507</u>	<u>8,092,953,030</u>
Unfunded Actuarial Accrued Liability	\$2,281,814,491	\$1,891,945,968
Funded Ratio	77.15%	81.05%

See Section 4 of the report for the detailed development of the unfunded actuarial accrued liability.

The net change in the UAAL from July 1, 2012 to July 1, 2013 was \$31.6 million. The components of this net change are shown in the following table (in millions):

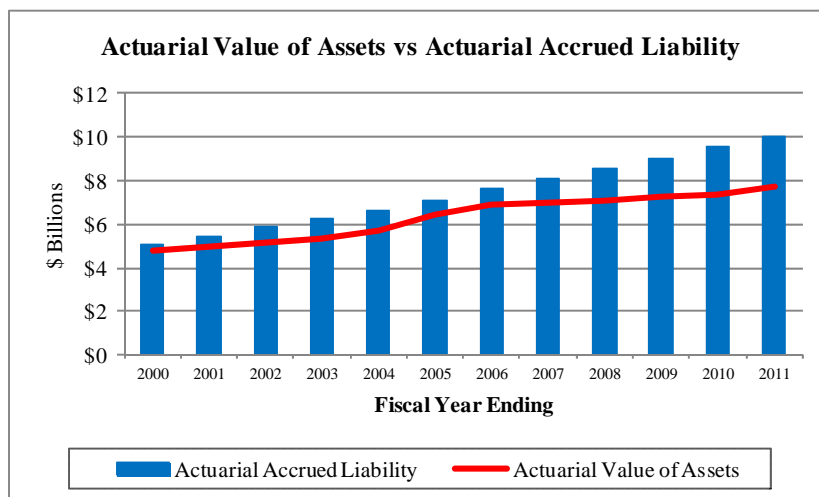
	(\$ Millions)
<b>Unfunded Actuarial Accrued Liability, July 1, 2012</b>	\$2,250.2
- Expected decrease from amortization method	(26.0)
- Actual versus expected contributions	48.9
- Investment experience	158.7
- Liability experience	(114.8)
- Other experience	(1.0)
- Extension of 9.78% employee contribution rate	2.2
- Change to level percent Entry Age method for Omaha Service Annuity	(1.9)
- Changes identified in replication process	(34.5)
<b>Unfunded Actuarial Accrued Liability, July 1, 2013</b>	\$2,281.8

As shown above, various components impacted the UAAL. Actuarial gains (losses), which result from actual experience that is more (less) favorable than anticipated based on the actuarial assumptions, are reflected in the UAAL and are measured as the difference between the expected UAAL and the actual UAAL, taking into account any changes due to actuarial assumptions and methods, or benefit provision changes. Overall, the System experienced a net actuarial loss of \$43.9 million. The net actuarial loss may largely be explained by considering the separate experience of assets and liabilities. There was a \$158.7 million loss on the actuarial value of assets, which was partially offset by a \$114.8 million experience gain on the System's liabilities. The liability gain was a result of various components of actuarial gains and losses, the largest of which were a gain from salary increases that were lower than the expected and cost of living adjustment that was lower than expected based on the actuarial assumptions.

As the following graph of historical actuarial assets and accrued liabilities shows, the School Retirement System liabilities have steadily increased while the assets, especially since the 2008 market downturn, have grown more slowly. Since the assets are growing more slowly than the liabilities, the funded ratio has declined.



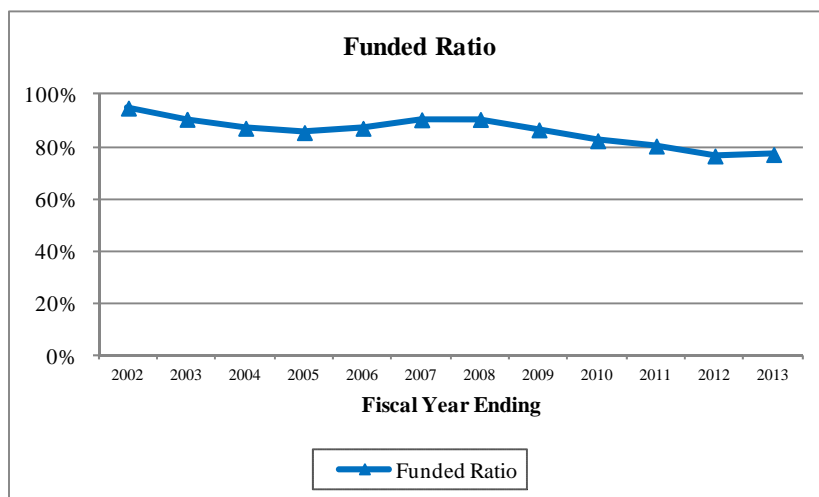
## SECTION 1 – BOARD SUMMARY



An evaluation of the UAAL on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both very large numbers) is reflected. Another way to evaluate the UAAL and the progress made in its funding is to track the funded ratio, the ratio of the actuarial value of assets to the actuarial accrued liability. The funded status information is shown below (in millions).

	7/1/2009	7/1/2010	7/1/2011	7/1/2012	7/1/2013
Funded Ratio (using Actuarial Assets)	86.6%	82.4%	80.4%	76.6%	77.1%
Unfunded Actuarial Accrued Liability (\$M)	\$1,084.8	\$1,501.2	\$1,772.2	\$2,250.2	\$2,281.8

The funded ratio over a longer period of years is shown in the following graph:





## SECTION 1 – BOARD SUMMARY

### ACTUARIAL REQUIRED CONTRIBUTION RATE

The System is funded by statutory contribution rates for members (9.78% of pay), employers (101% of the member rate) and the State (2% of pay effective July 1, 2014). State statutes require the State to make an additional contribution if the regular, payroll-related contributions by employees, employers and the State are insufficient to meet the actuarial required contribution for the plan year. The State contributions for the plan year are made on the July 1 following the plan year end. Based on the results of the July 1, 2013 actuarial valuation, no additional State contribution is necessary for the current plan year.

Under the Entry Age Normal cost method, the actuarial contribution rate consists of two components:

- A “normal cost” for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date.
- An “unfunded actuarial accrued liability contribution” for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

As a result of LB 553, the UAAL contribution rate is now determined by calculating the amortization payments as a level percentage of payroll rather than as a level dollar amount. This change results in payments that are lower in the initial years of the amortization period, but increase each year in the future with the assumed payroll growth assumption of 4%. The actuarial required contribution rate was reduced by 3.62% due to this change in amortization methodology. Because the UAAL contribution rate is determined as a level percent of payroll, the dollar amount of the UAAL contribution is scheduled to increase 4% each year in the future even if all actuarial assumptions are met.

See Section 5 of the report for the detailed development of these rates, which are summarized in the following table:

<b>Contribution Rates</b>	<b>July 1, 2013</b>	<b>July 1, 2012</b>
Normal Cost Rate	11.86%	11.49%
UAAL Amortization Rate	8.08%	11.72%
<b>Total Actuarial Required Contribution</b>	<b>19.94%</b>	<b>23.21%</b>
Member Contribution Rate	(9.78%)	(9.63%)
Employer Contribution Rate	(9.88%)	(9.73%)
State Contribution Rate	(2.00%)	(1.00%)
<b>Total Contribution Rate</b>	<b>(21.66%)</b>	<b>(20.36%)</b>
Shortfall/(Margin)	(1.72%)	2.85%

Note: Contribution rates exclude State funding of Omaha Service Annuity.

The actuarial required contribution rate for the current plan year is 19.94%. The member contribution rate of 9.78%, School District contributions of 9.88% (101% of 9.78%), and State contributions of 2.00% of pay result in total statutory contributions of 20.66% of pay. As a result, there is a contribution margin of 1.72%.



## SECTION 1 – BOARD SUMMARY

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A history of actuarial required contribution rates and any resulting additional required State contributions is shown below, whether or not actually contributed. For fiscal year 2003, the contribution rate shown is the rate required to cover the excess Formula Annuity only. For fiscal year 2004 and later, the contribution rate shown is the rate required to cover the entire Formula Annuity.

<b>History of Required Contribution Rates and Additional State Funding</b>		
<b>Fiscal Year</b>	<b>Total</b>	<b>Additional State Contributions*</b>
2014/2015	19.94%	\$ 0
2013/2014	23.27%	48,092,426
2012/2013	20.45%	23,465,817
2011/2012	19.21%	18,871,705
2010/2011	17.24%	0
2009/2010	15.46%	0
2008/2009	15.64%	0
2007/2008	16.58%	0
2006/2007	17.95%	12,847,537
2005/2006	16.97%	15,415,949
2004/2005	15.26%	0
2003/2004	13.45%	0
2002/2003	11.98%	0

\* Excludes funding of Omaha Service Annuity.

Note: Information before Fiscal Year 2014/2015 was produced by prior actuary.

The actuarial required contribution rate, which is determined based on the snapshot of the System taken on the valuation date of July 1, 2013, will change each year as the deferred investment experience is recognized and other experience (both investment and demographic) impacts the System. While there is a contribution margin for the current plan year, this should not be viewed as unnecessary or excess contribution. In order for the financing of the System on a fixed contribution rate basis to succeed, contributions above the actuarial required contribution rate must be made to offset years where the fixed contribution rate will be below the actuarial required contribution rate.



## SECTION 1 – BOARD SUMMARY

### SUMMARY OF PRINCIPAL RESULTS

	7/1/2013 Valuation	7/1/2012 Valuation	% Change
<b>1. PARTICIPANT DATA</b>			
Number of:			
Active Members	40,314	39,477	2.12%
Retired Members and Beneficiaries	19,461	18,775	3.65%
Disabled Members	329	322	2.17%
Inactive Members	21,116	20,971	0.69%
Total Members	81,220	79,545	2.11%
Projected Annual Salaries of Active Members	\$ 1,735,175,956	\$ 1,687,903,783	2.80%
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 425,631,676	\$ 397,615,234	7.05%
<b>2. ASSETS AND LIABILITIES</b>			
a. Market Value of Assets	\$ 8,092,953,030	\$ 7,246,311,781	11.68%
b. Actuarial Value of Assets	7,703,084,507	7,358,964,135	4.68%
c. Total Actuarial Accrued Liability	9,984,898,998	9,609,157,134	3.91%
d. Unfunded Actuarial Accrued Liability [c - b]	\$ 2,281,814,491	\$ 2,250,192,999	1.41%
e. Funded Ratio (Actuarial Value of Assets) [b / c]	77.15%	76.58%	0.74%
f. Funded Ratio (Market Value of Assets) [a / c]	81.05%	75.41%	7.48%
<b>3. CONTRIBUTION RATES AS A PERCENT OF PAYROLL (excluding Omaha Service Annuity)</b>			
Normal Cost	11.86%	11.49%	3.22%
Amortization of Unfunded Actuarial Accrued Liability	8.08%	11.72%	(31.06%)
Actuarial Required Contribution Rate	19.94%	23.21%	(14.09%)
Member Contribution Rate	(9.78%)	(9.63%)	1.56%
Employer Contribution Rate*	(9.88%)	(9.73%)	1.56%
State Contribution Rate	(2.00%)	(1.00%)	100.00%
Shortfall/(Margin)	(1.72%)	2.85%	(160.27%)
Additional State Contribution Amount	\$ 0	\$ 48,092,426	(100.00%)

\* 101% of employee contribution rate  
Note: results for 7/1/12 were prepared by the prior actuary.



## SECTION 2 – SCOPE OF THE REPORT

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This report presents the actuarial valuation results of the School Retirement System as of July 1, 2013. This valuation was prepared at the request of the Public Employees Retirement Board of the Nebraska Public Employees Retirement System.

Please pay particular attention to our actuarial certification letter, where the guidelines employed in the preparation of this report are outlined. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings which result from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of the System. Sections 4 and 5 describe how the obligations of the System are to be met under the actuarial cost method in use. Section 6 includes the information required for the financial reporting standards established by the Governmental Accounting Standards Board (GASB).

This report includes several appendices:

- Appendix A Schedules of valuation data classified by various categories of members.
- Appendix B A summary of the current benefit structure, as determined by the provisions of governing law on July 1, 2013.
- Appendix C A summary of the actuarial methods and assumptions used to estimate liabilities and determine contribution rates.
- Appendix D A glossary of actuarial terms.





## SECTION 3 – ASSETS

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In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is July 1, 2013. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the System, which are generally in excess of assets. The actuarial process then leads to a method of determining the contributions needed by members and the employer in the future to balance the System assets and liabilities.

### **Market Value of Assets**

The current market value represents the "snapshot" or "cash-out" value of System assets as of the valuation date. In addition, the market value of assets provides a basis for measuring investment performance from time to time. Table 1 is a comparison, at market values, of System assets as of July 1, 2013, and July 1, 2012, in total and by investment category. Table 2 summarizes the change in the market value of assets from July 1, 2012 to July 1, 2013.

### **Actuarial Value of Assets**

Neither the market value of assets, representing a "cash-out" value of System assets, nor the book values of assets, representing the cost of investments, may be the best measure of the System's ongoing ability to meet its obligations.

To arrive at a suitable value of assets for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens swings in the market value while still indirectly recognizing market values. Under the asset smoothing methodology, the difference between the actual and assumed investment return on the market value of assets is recognized evenly over a five year period.

Table 3 shows the development of the actuarial value of assets (AVA) as of the valuation date.



**SECTION 3 – ASSETS**

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**TABLE 1**  
**SCHOOL RETIREMENT SYSTEM**  
**MARKET VALUE OF ASSETS**  
**by Investment Category**

	<u>June 30, 2013</u>	<u>June 30, 2012</u>
1. Cash and Equivalents	\$ 6,594,098	\$ 1,763,724
2. Investments	8,193,626,827	7,308,681,411
3. Capital Assets	6,477	7,751
4. Receivables and Prepaids	607,661,994	518,661,208
5. Accounts Payable	<u>(714,936,366)</u>	<u>(582,802,313)</u>
6. Net Assets Available for Pension Benefits [1 + 2 + 3 + 4 + 5]	\$ 8,092,953,030	\$ 7,246,311,781



## SECTION 3 – ASSETS

**TABLE 2**  
**SCHOOL RETIREMENT SYSTEM**  
**CHANGE IN MARKET VALUE OF ASSETS**

	<b>Nebraska School System Formula <u>Annuity</u></b>	<b>Omaha Service <u>Annuity</u></b>	<b><u>Total</u></b>
1. Market Value of Assets as of July 1, 2012	\$ 7,236,497,571	\$ 9,814,210	\$ 7,246,311,781
2. Contributions			
(a) Member (includes purchased service)	\$ 164,077,967	\$ 0	\$ 164,077,967
(b) Employer	161,922,831	0	161,922,831
(c) State appropriations	16,874,535	969,396	17,843,931
(d) Total	<u>\$ 342,875,333</u>	<u>\$ 969,396</u>	<u>\$ 343,844,729</u>
3. Expenditures			
(a) Benefit payments	\$ 426,418,943	\$ 1,466,117	\$ 427,885,060
(b) Expenses and fees	3,021,657	0	3,021,657
(c) Total	<u>\$ 429,440,600</u>	<u>\$ 1,466,117</u>	<u>\$ 430,906,717</u>
4. Investment Return, Net of Expenses			
(a) Investment income	\$ 108,540,266	\$ 145,199	\$ 108,685,465
(b) Securities lending income	2,696,540	3,210	2,699,750
(c) Securities lending expense	(649,640)	(773)	(650,413)
(d) Net appreciation/(depreciation) in fair value of investments	821,854,588	1,084,397	822,938,985
(e) Other	29,450	0	29,450
(f) Investment return for 2012/2013 [(a) + (b) + (c) + (d) + (e)]	<u>\$ 932,471,204</u>	<u>\$ 1,232,033</u>	<u>\$ 933,703,237</u>
5. Market Value of Assets as of July 1, 2013 [1 + 2(d) - 3(c) + 4]	\$ 8,082,403,508	\$ 10,549,522	\$ 8,092,953,030
6. Rate of Return on Market Value of Assets			12.9%



**SECTION 3 – ASSETS**

**TABLE 3**  
**SCHOOL RETIREMENT SYSTEM**  
**DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS**

	Year End			
	6/30/2010	6/30/2011	6/30/2012	6/30/2013
1. Actuarial Value of Assets, Beginning of Year	\$ 7,007,581,825	\$ 7,040,908,599	\$ 7,267,497,259	\$ 7,358,964,135
2. Unrecognized Return Beginning of Year	\$ (1,741,932,118)	\$ (1,100,506,954)	\$ (3,542,427)	\$ (112,652,354)
3. Contributions During Year				
(a) Member	\$ 130,054,861	\$ 137,301,890	\$ 147,046,053	\$ 164,077,967
(b) Employer	128,845,427	135,328,339	145,582,040	161,922,831
(c) State appropriations	21,380,352	22,875,093	23,430,550	17,843,931
(d) Total	<u>\$ 280,280,640</u>	<u>\$ 295,505,322</u>	<u>\$ 316,058,643</u>	<u>\$ 343,844,729</u>
4. Benefit Payments During Year	\$ 320,509,700	\$ 351,083,806	\$ 391,133,707	\$ 427,885,060
5. Expected Investment Income on (1), (2), (3) and (4) at 8%	\$ 420,740,163	\$ 474,219,878	\$ 579,472,525	\$ 577,831,647
6. Actual Return on Market Value, Net of All Expenses	\$ 714,980,998	\$ 1,379,131,671	\$ 57,432,013	\$ 930,681,580
7. Return to be Spread, End of Year	\$ 294,240,835	\$ 904,911,793	\$ (522,040,512)	\$ 352,849,933

[6 - 5]

Note: Information before 2013 was produced by prior actuary.



**SECTION 3 – ASSETS**

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**TABLE 3  
(continued)**

**SCHOOL RETIREMENT SYSTEM**

8. Return to be Spread

<u>Plan Year</u> <u>Ending</u>	<u>Return to be</u> <u>Spread</u>	<u>Unrecognized</u> <u>Percent</u>	<u>Unrecognized</u> <u>Return</u>
2013	352,849,933	80%	\$282,279,946
2012	(522,040,512)	60%	(313,224,307)
2011	904,911,793	40%	361,964,717
2010	294,240,835	20%	58,848,167
			<hr/> \$389,868,523

9. Total Market Value of Assets as of July 1, 2013 \$8,092,953,030

10. Total Actuarial Value of Assets as of July 1, 2013 \$7,703,084,507  
[9 - 8]

11. Asset Ratios

(a) Actuarial Value to Market Value [10 / 9] 95.18%  
(b) Market Value to Actuarial Value [9 / 10] 105.06%



## SECTION 4 – SYSTEM LIABILITIES

---

In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of assets of the School Retirement System as of the valuation date, July 1, 2013. In this section, the discussion will focus on the commitments (future benefit payments) of the System, which are referred to as its liabilities.

Table 4 contains an analysis of the actuarial present value of all future benefits (PVFB) for contributing members, inactive members, retirees and their beneficiaries.

The liabilities summarized in Table 4 include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes the measurement of both benefits already earned and future benefits to be earned. For all members, active and retired, the value extends over benefits earnable and payable for the rest of their lives and for the lives of the surviving beneficiaries.

All liabilities reflect the benefit provisions in place as of July 1, 2013.

### **Actuarial Accrued Liability**

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates the present value of future benefits into annual costs. In order to do this allocation, it is necessary for the funding method to "breakdown" the present value of future benefits into two components:

- (1) that which is attributable to the past and
- (2) that which is attributable to the future.

Actuarial terminology calls the part attributable to the past the "past service liability" or the "actuarial accrued liability." The portion allocated to the future is known as the present value of future normal costs, with the specific piece of it allocated to the current year being called the "normal cost." Table 5 contains the calculation of actuarial accrued liability for the System. The Entry Age Normal actuarial cost method is used to develop the actuarial accrued liability.



**SECTION 4 – SYSTEM LIABILITIES**

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**TABLE 4**  
**SCHOOL RETIREMENT SYSTEM**  
**PRESENT VALUE OF FUTURE BENEFITS (PVFB)**  
**AS OF JULY 1, 2013**

	<b>Nebraska School System Formula <u>Annuity</u></b>	<b>Omaha Service <u>Annuity</u></b>	<b><u>Total</u></b>
1. Active Employees			
(a) Retirement	\$ 5,916,849,694	\$ 16,212,195	\$ 5,933,061,889
(b) Withdrawal	498,740,351	1,918,355	500,658,706
(c) Death	72,185,225	157,521	72,342,746
(d) Disability	40,275,123	186,291	40,461,414
(e) Total	<u>\$ 6,528,050,393</u>	<u>\$ 18,474,362</u>	<u>\$ 6,546,524,755</u>
2. Inactive Vested Members	302,942,006	883,726	303,825,732
3. Inactive Nonvested Members	35,695,217	0	35,695,217
4. Disabled Members	40,940,579	0	40,940,579
5. Retirees	4,667,328,564	0	4,667,328,564
6. Beneficiaries	<u>169,951,443</u>	<u>0</u>	<u>169,951,443</u>
7. Total Present Value of Future Benefits [1(e) + 2 + 3 + 4 + 5 + 6]	<u>\$ 11,744,908,202</u>	<u>\$ 19,358,088</u>	<u>\$ 11,764,266,290</u>



## SECTION 4 – SYSTEM LIABILITIES

**TABLE 5**  
**SCHOOL RETIREMENT SYSTEM**  
**ACTUARIAL ACCRUED LIABILITY**  
**AS OF JULY 1, 2013**

	<b>Nebraska School System Formula <u>Annuity</u></b>	<b>Omaha Service <u>Annuity</u></b>	<b><u>Total</u></b>
1. Present Value of Future Benefits for Active Members	\$ 6,528,050,393	\$ 18,474,362	\$ 6,546,524,755
2. Present Value of Future Normal Costs for Active Members			
(a) Retirement benefit	\$ 1,296,997,933	\$ 3,653,060	\$ 1,300,650,993
(b) Termination benefit	443,695,097	1,298,635	444,993,732
(c) Pre-Retirement death benefit	20,962,675	42,244	21,004,919
(d) Disability benefit	12,648,297	69,351	12,717,648
(e) Total	\$ <u>1,774,304,002</u>	\$ <u>5,063,290</u>	\$ <u>1,779,367,292</u>
3. Actuarial Accrued Liability for Active Members [1 - 2(e)]	\$ 4,753,746,391	\$ 13,411,072	\$ 4,767,157,463
4. Actuarial Accrued Liability for Inactive Members	5,216,857,809	883,726	5,217,741,535
5. Total Actuarial Accrued Liability [3 + 4]	9,970,604,200	14,294,798	9,984,898,998
6. Actuarial Value of Assets	7,693,043,196	10,041,311	7,703,084,507
7. Unfunded Actuarial Accrued Liability [5- 6]	\$ 2,277,561,004	\$ 4,253,487	\$ 2,281,814,491





**SECTION 4 – SYSTEM LIABILITIES**

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**TABLE 6**  
**SCHOOL RETIREMENT SYSTEM**  
**ACTUARIAL BALANCE SHEET**

<u>ASSETS</u>	
Actuarial Value of Assets	\$ 7,703,084,507
Unfunded Actuarial Accrued Liability	2,281,814,491
Present Value of Future Normal Costs	\$ <u>1,779,367,292</u>
Total Assets	\$ 11,764,266,290
<u>LIABILITIES</u>	
Present Value of Future Benefits	
Active members	
Retirement	\$ 5,916,849,694
Withdrawal	498,740,351
Death	72,185,225
Disability	<u>40,275,123</u>
Total	\$ 6,528,050,393
Inactive members	338,637,223
Retirees, disabilities and beneficiaries	<u>4,878,220,586</u>
Omaha Service Annuity	\$ 5,216,857,809
Active	18,474,362
Deferred vested	<u>883,726</u>
Total	\$ <u>19,358,088</u>
Total Liabilities	\$ 11,764,266,290



## SECTION 4 – SYSTEM LIABILITIES

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**TABLE 7**  
**SCHOOL RETIREMENT SYSTEM**  
**ACTUARIAL GAIN/(LOSS)**

**Liabilities**

1. Actuarial Accrued Liability as of July 1, 2012	\$ 9,609,157,134
2. Normal Cost for Plan Year Ending June 30, 2013	194,362,609
3. Benefit Payments During Plan Year Ending June 30, 2013	427,885,060
4. Changes Identified in Replication Process	(34,496,761)
5. Interest at 8.0%	758,235,279
6. Extending employee contribution rate of 9.78%	2,194,869
7. Change to Level Percent of Pay Cost Method for Omaha Service Annuity	<u>(1,909,557)</u>
8. Expected Actuarial Accrued Liability as of July 1, 2013 [1 + 2 - 3 + 4 + 5 + 6 + 7]	10,099,658,513
9. Actuarial Accrued Liability as of July 1, 2013	\$ 9,984,898,998

**Assets**

10. Actuarial Value of Assets as of July 1, 2012	\$ 7,358,964,135
11. Contributions During Plan Year Ending June 30, 2013	343,844,729
12. Benefit Payments During Plan Year Ending June 30, 2013	427,885,060
13. Interest at 8.0%	<u>586,843,836</u>
14. Expected Actuarial Value of Assets as of July 1, 2013 [10 + 11 - 12 + 13]	7,861,767,640
15. Actuarial Value of Assets as of July 1, 2013	\$ 7,703,084,507

**Gain / (Loss)**

16. Actuarial Gain / (Loss) on Liabilities [8 - 9]	\$ 114,759,515
17. Actuarial Gain / (Loss) on Assets [15 - 14]	\$ (158,683,133)
18. Total Actuarial Gain / (Loss) for Plan Year Ending June 30, 2013 [16 + 17]	\$ (43,923,618)



**TABLE 8**  
**SCHOOL RETIREMENT SYSTEM**  
**GAIN/(LOSS) ANALYSIS BY SOURCE**

<b>Liability Sources</b>	<b>Gain/(Loss)</b>
Retirement	\$ (7,409,616)
Termination	(3,495,541)
Disability	(2,137,579)
Mortality	(11,802,137)
Salary	119,827,834
New Entrants/Rehires	(27,588,141)
Miscellaneous/COLA	47,364,695
Total Liability Gain/(Loss)	\$ 114,759,515
Asset Gain/(Loss)	\$ (158,683,133)
Net Actuarial Gain/(Loss)	\$ (43,923,618)

**SECTION 4 – SYSTEM LIABILITIES**

**TABLE 9**  
**SCHOOL RETIREMENT SYSTEM**  
**PROJECTED BENEFIT PAYMENTS**  
**AS OF JULY 1, 2013**

<u>Plan Year</u> <u>Ending June 30</u>	<u>Active Employees</u>	<u>Retired and Disabled</u> <u>Members and</u> <u>Beneficiaries</u>	<u>Total</u>
2014	\$ 79,675,000	\$ 428,368,000	\$ 508,043,000
2015	115,918,000	432,568,000	548,486,000
2016	152,903,000	436,181,000	589,084,000
2017	190,800,000	439,247,000	630,047,000
2018	228,668,000	441,802,000	670,470,000
2019	267,562,000	443,655,000	711,217,000
2020	307,623,000	444,577,000	752,200,000
2021	349,093,000	444,592,000	793,685,000
2022	392,125,000	443,571,000	835,696,000
2023	436,663,000	441,710,000	878,373,000
2024	482,557,000	438,839,000	921,396,000
2025	530,157,000	434,541,000	964,698,000
2026	579,172,000	428,801,000	1,007,973,000
2027	629,170,000	421,648,000	1,050,818,000
2028	680,490,000	413,958,000	1,094,448,000
2029	733,104,000	405,452,000	1,138,556,000
2030	786,444,000	395,604,000	1,182,048,000
2031	840,772,000	384,404,000	1,225,176,000
2032	896,007,000	371,835,000	1,267,842,000
2033	950,430,000	357,898,000	1,308,328,000
2034	1,003,632,000	342,609,000	1,346,241,000
2035	1,056,457,000	326,046,000	1,382,503,000
2036	1,109,305,000	308,288,000	1,417,593,000
2037	1,161,657,000	289,450,000	1,451,107,000
2038	1,213,113,000	269,703,000	1,482,816,000
2039	1,262,860,000	249,242,000	1,512,102,000
2040	1,309,870,000	228,325,000	1,538,195,000
2041	1,353,415,000	207,195,000	1,560,610,000
2042	1,392,890,000	186,150,000	1,579,040,000
2043	1,427,189,000	165,468,000	1,592,657,000

Note: Cash flows are the expected future non-discounted payments to current members. These numbers exclude refund payouts to any current nonvested inactive members and assume future retirees elect the normal form of payment.



## SECTION 5 – EMPLOYER CONTRIBUTIONS

---

The previous two sections were devoted to a discussion of the assets and liabilities of the System. A comparison of Tables 3 and 4 indicates that current assets fall short of meeting the present value of future benefits (total liability). This is expected in all but a completely closed fund, where no further contributions are anticipated. In an active system, there will almost always be a difference between the actuarial value of assets and total liabilities. This deficiency has to be made up by future contributions and investment returns. An actuarial valuation sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion.

The method used to determine the incidence of the contributions in various years is called the actuarial cost method. Under an actuarial cost method, the contributions required to meet the difference between current assets and current liabilities are allocated each year between two elements: (1) the normal cost rate and (2) the unfunded actuarial accrued liability contribution rate.

The term "fully funded" is often applied to a system in which contributions at the normal cost rate are sufficient to pay for the benefits of existing employees as well as for those of new employees. More often than not, systems are not fully funded, either because of past benefit improvements that have not been completely funded or because of actuarial deficiencies that have occurred because experience has not been as favorable as anticipated by the actuarial assumptions. Under these circumstances, an unfunded actuarial accrued liability (UAAL) exists. Likewise, when the actuarial value of assets is greater than the actuarial accrued liability, a surplus exists.

### **Description of Contribution Rate Components**

The Entry Age Normal (EAN) actuarial cost method is used for the valuation. Under that method, the normal cost for each year from entry age to assumed exit age is a constant percentage of the member's year by year projected compensation. The portion of the present value of future benefits not provided by the present value of future normal costs is the actuarial accrued liability. The unfunded actuarial accrued liability/ (surplus) represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. The unfunded actuarial accrued liability is calculated each year and reflects experience gains and losses.

In general, contributions are computed in accordance with a level percent-of-payroll funding objective. The contribution rate based on the July 1, 2013 actuarial valuation will be used to determine the actuarial required employer contribution rate to the School Retirement System for the plan year ending June 30, 2014. Any State contributions are expected to be deposited on July 1, 2014 (State fiscal year 2015). In this context, the term "contribution rate" means the percentage, which is applied to a particular active member payroll to determine the actual employer contribution amount (i.e., in dollars) for the group.

### **Contribution Rate Summary**

In Table 10 the amortization payment related to the unfunded actuarial accrued liability/(surplus), as of July 1, 2013, is developed. Table 11 develops the actuarial required contribution rate for the System and the amount of required State contributions.

The contribution rates shown in this report are based on the actuarial assumptions and cost methods described in Appendix C.



**SECTION 5 – EMPLOYER CONTRIBUTIONS**

**TABLE 10**  
**SCHOOL RETIREMENT SYSTEM**  
**SCHEDULE OF AMORTIZATION BASES**

<b>Amortization Bases</b>	<b>Original Amount</b>	<b>July 1, 2013 Remaining Payments</b>	<b>Date of Last Payment</b>	<b>Outstanding Balance as of July 1, 2013</b>	<b>Annual Contribution*</b>
2006 Unfunded Actuarial Accrued Liability Base	\$ 845,226,412	23	7/1/2036	\$ 778,651,769	\$ 51,653,261
2007 Unfunded Actuarial Accrued Liability Base	(163,793,512)	24	7/1/2037	(153,186,666)	(9,896,724)
2008 Unfunded Actuarial Accrued Liability Base	54,258,200	25	7/1/2038	51,448,327	3,242,372
2009 Unfunded Actuarial Accrued Liability Base	370,759,908	26	7/1/2039	356,012,043	21,919,143
2010 Unfunded Actuarial Accrued Liability Base	427,955,512	27	7/1/2040	415,691,428	25,037,500
2011 Unfunded Actuarial Accrued Liability Base	287,237,896	28	7/1/2041	281,963,904	16,634,954
2012 Unfunded Actuarial Accrued Liability Base	497,977,442	29	7/1/2042	493,581,580	28,556,220
2013 Unfunded Actuarial Accrued Liability Base	57,652,106	30	7/1/2043	57,652,106	3,274,453
<b>Total</b>				<b>\$ 2,281,814,491</b>	<b>\$ 140,421,179</b>

\* Contribution amount reflects mid-year timing.

- 1. Total UAAL Amortization Payments \$ 140,421,179
- 2. Projected Payroll for FYE 2014 \$ 1,735,175,956
- 3. UAAL Amortization Payment Rate 8.09%

Note: Beginning with the July 1, 2013 valuation, the payments on each UAAL base are determined as a level percent of payroll using a 4% payroll growth assumption.



**SECTION 5 – EMPLOYER CONTRIBUTIONS**

**TABLE 11**  
**SCHOOL RETIREMENT SYSTEM**  
**ACTUARIAL REQUIRED CONTRIBUTION**  
**and**  
**DEVELOPMENT OF ADDITIONAL STATE CONTRIBUTION**

1. Normal Cost - Nebraska School System Formula Annuity		
(a) Amount	\$	194,447,317
(b) Expected pay for current actives		1,639,199,651
(c) Normal Cost Rate as % of pay		11.86%
2. Amortization Cost - Nebraska School System Formula Annuity		
(a) Amount		140,220,146
(b) Expected pay for all actives		1,735,175,956
(c) Amortization Rate as % of pay		8.08%
3. Total Actuarial Required Contribution Rate - Nebraska School System Formula Annuity		19.94%
[1(c) + 2(c)]		
4. Statutory Contribution Rates - Nebraska School System Formula Annuity		
(a) Member		9.78%
(b) Employer (101% of Member)		9.88%
(c) State		2.00%
(d) Total		<u>21.66%</u>
5. Shortfall/(Margin) - Nebraska School System Formula Annuity		(1.72%)
[3 - 4(d)]		
6. Expected pay for all actives for FYE 14		1,735,175,956
7. Additional Required State Contribution payable July 1, 2014		
[5 * 6 , but not less than 0%]	\$	0
8. State Contribution due July 1, 2014		
(a) State Statutory Amount due July 1, 2014	\$	34,703,519
[2% x Expected pay]		
(b) Omaha Service Annuity due July 1, 2014		
(i) Normal Cost amount	\$	700,718
(ii) Amortization amount		<u>208,920</u>
(iii) Total amount		909,638
(d) Additional Contribution		0
(e) Total	\$	<u>35,613,157</u>



## SECTION 6 – ACCOUNTING INFORMATION

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The actuarial accrued liability is a measure intended to help the reader assess (i) a retirement system's funded status on a going concern basis and (ii) progress being made toward accumulating the assets needed to pay benefits as due. Allocation of the actuarial present value of projected benefits between past and future service was based on service using the Entry Age Normal actuarial cost method. Assumptions, including projected pay increases, were the same as used to determine the System's level percent of payroll annual required contribution between entry age and assumed exit age. Entry age was established by subtracting credited service from current age on the valuation date. The Entry Age Normal actuarial accrued liability was determined as part of an actuarial valuation of the plan as of July 1, 2013. The actuarial assumptions used in determining the actuarial accrued liability can be found in Appendix C.

The preceding methods comply with the financial reporting standards established by the Governmental Accounting Standards Board.

GASB Statement No. 25 establishes financial reporting standards for defined benefit pension plans. In addition to two required statements regarding plan assets, the statement requires two schedules and accompanying notes disclosing information relative to the funded status of the plan and historical contribution patterns.

- The Schedule of Funding Progress provides information about whether the financial strength of the Plan is improving or deteriorating over time.
- The Schedule Contributions from Employers and Other Contributing Entities provides historical information about the annual required contribution (ARC) and the percentage of the ARC that was actually contributed.

In 2012, GASB issued the final version of GASB Statements Numbers 67 and 68 which will supersede the current GASB Standards, Numbers 25 and 27. GASB 67, which applies to the retirement system, will be effective for the plan year ending June 30, 2014. GASB 68, which applies to employer reporting, is first effective for fiscal years beginning after June 15, 2014.





**SECTION 6 – ACCOUNTING INFORMATION**

**TABLE 12**  
**SCHOOL RETIREMENT SYSTEM**  
**SCHEDULE OF FUNDING PROGRESS**  
**Under GASB No. 25**

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded Actuarial Accrued Liability (UAAL) (b - a)</b>	<b>Funded Ratio (a / b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a % of Covered Payroll [(b - a) / c]</b>
June 30, 2013	\$7,703,084,507	\$9,984,898,998	\$2,281,814,491	77.1%	\$1,735,175,956	131.5%
June 30, 2012	7,358,964,135	9,609,157,134	2,250,192,999	76.6%	1,593,184,929	141.2%
June 30, 2011	7,267,497,259	9,039,744,995	1,772,247,736	80.4%	1,590,225,983	111.4%
June 30, 2010	7,040,908,599	8,542,119,000	1,501,210,401	82.4%	1,543,930,532	97.2%
June 30, 2009	7,007,581,825	8,092,339,318	1,084,757,493	86.6%	1,481,568,432	73.2%
June 30, 2008	6,932,918,638	7,654,536,359	721,617,721	90.6%	1,389,124,819	51.9%

Note: Information before 2013 was produced by the prior actuary.



**SECTION 6 – ACCOUNTING INFORMATION**

**TABLE 13**

**SCHOOL RETIREMENT SYSTEM**

**SCHEDULE OF CONTRIBUTIONS FROM EMPLOYERS  
AND OTHER CONTRIBUTING ENTITIES  
Disclosure Requirement under GASB No. 25**

Plan Year Ending	Annual Required Contributions*			Percent Contributed
	School	State	Total	
June 30, 2013	\$161,922,831	\$66,073,226	\$227,996,057	79%
June 30, 2012	145,582,040	46,896,367	192,478,407	88%
June 30, 2011	135,328,339	41,746,797	177,075,136	89%
June 30, 2010	128,845,427	21,380,352	150,225,779	100%
June 30, 2009	110,028,942	20,620,548	130,649,490	100%
June 30, 2008	105,977,554	15,832,941	121,810,495	100%

\* Includes funding for Excess Formula Annuity, Service Annuity and supplemental funds. Excludes Omaha appropriations.

Note: Information prior to 2013 was produced by the prior actuary.

<u>Actuarial Assumptions and Methods</u>	
Valuation Date	June 30, 2013
Actuarial Cost Method	Entry Age
Amortization Method	Level dollar amount, closed for valuations before July 1, 2013. Level percent of payroll, closed effective July 1, 2013.
Equivalent Single Amortization Period	26 years
Asset Valuation Method	5 year smoothed market
Actuarial Assumptions	
Investment rate of return*	8.0%
Projected Salary increases*	4.0% - 9.0%
*Includes inflation at	3.25%
Cost-of-living adjustment	2.50% with a floor benefit equal to 75% purchasing power of original benefit.



**APPENDIX A – MEMBERSHIP DATA**

**MEMBER DATA RECONCILIATION**

	<b>Active Members</b>	<b>Inactive Vested</b>	<b>Inactive Non- vested</b>	<b>Retirees and Beneficiaries</b>	<b>Disabled Members</b>	<b>Total</b>
As of July 1, 2012	39,477	5,574	14,717	18,775	322	78,865
Changes in status						
a) Retirement	(837)	(245)		1,082	0	0
b) Death	(29)	(24)	(39)	(444)	(15)	(551)
c) Non-vested terminations	(1,165)	(1)	1,166	0	0	0
d) Vested terminations	(681)	681		0	0	0
e) Contribution refund	(611)	(193)	(936)	0	0	(1,740)
f) Beneficiaries in receipt	0	0		144	0	144
g) Disability retirements	(14)	(7)		(1)	22	0
h) Return to active service	548	(179)	(369)	0	0	0
i) Expired benefits	0	0		(95)	0	(95)
j) Data adjustments	0	4	(3)	0	0	1
Total changes in status	(2,789)	36	(181)	686	7	(2,241)
New entrants	3,626	0	242	0	0	3,868
Net Change	837	36	61	686	7	1,627
As of July 1, 2013	40,314	5,610	14,778	19,461	329	80,492



## APPENDIX A – MEMBERSHIP DATA

### SUMMARY OF MEMBERSHIP DATA

A. ACTIVE MEMBERS	<u>July 1, 2013</u>	<u>July 1, 2012</u>	% Change
1. Number of Active Members			
(a) Before assumed retirement age	40,273	39,445	2.1%
(b) Beyond assumed retirement age	41	32	28.1%
(c) Total	40,314	39,477	2.1%
2. Annual Considered Compensation			
(a) Before assumed retirement age	\$ 1,637,216,300	\$ 1,592,784,011	2.8%
(b) Beyond assumed retirement age	567,079	400,918	41.4%
(c) Total	\$ 1,637,783,379	\$ 1,593,184,929	2.8%
3. Accumulated Contributions	\$ 1,509,787,328	\$ 1,448,358,354	4.2%
4. Active Member Averages			
(a) Age	46.0	46.0	0.0%
(b) Service	11.6	11.6	0.0%
(c) Compensation	\$ 40,626	\$ 40,357	0.7%
B. INACTIVE MEMBERS			
1. Number of Inactive Members			
(a) System vested	5,610	5,574	0.6%
(b) System nonvested (refund only)	14,778	14,717	0.4%
(c) Omaha vested	728	680	7.1%
(d) Total	21,116	20,971	0.7%
2. Accumulated Member Contributions (excluding Omaha)	\$ 181,357,248	\$ 181,077,670	0.2%
3. Inactive Members Averages (excluding Omaha)			
(a) Age (vesteds only)	52.5	52.5	0.0%
(b) Accumulated member contributions	\$ 8,895	\$ 8,924	(0.3%)
C. RETIREES, DISABLEDS, AND BENEFICIARIES			
1. Number of Members (excluding Omaha)			
(a) Retired	18,285	17,606	3.9%
(b) Disabled	329	322	2.2%
(c) Beneficiaries	1,176	1,169	0.6%
(d) Total	19,790	19,097	3.6%
2. Annual Benefits			
(a) Retired	\$ 401,922,750	\$ 374,825,315	7.2%
(b) Disabled	4,356,520	4,122,655	5.7%
(c) Beneficiaries	19,352,406	18,667,264	3.7%
(d) Total	\$ 425,631,676	\$ 397,615,234	7.0%

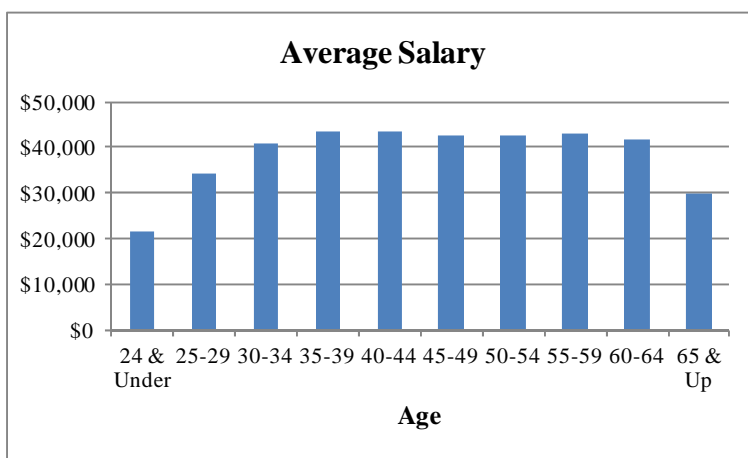
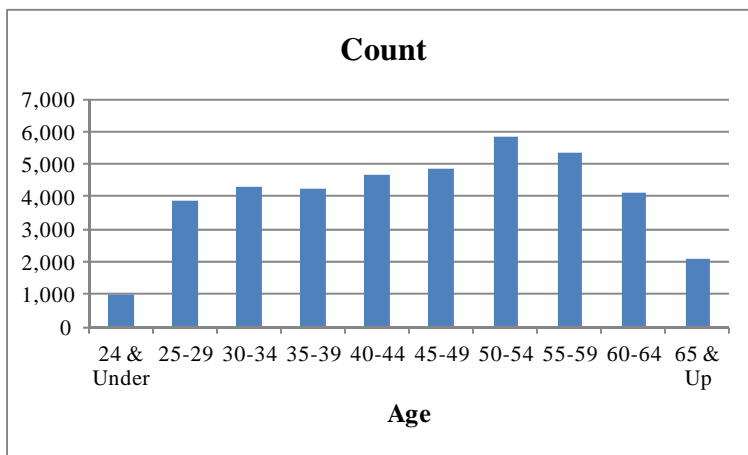
Note: Information prior to 2013 was produced by the prior actuary.



**APPENDIX A – MEMBERSHIP DATA**

**ACTIVE MEMBERS  
AS OF JULY 1, 2013**

<u>Age</u>	<u>Count of Members</u>			<u>Reported Salary</u>		
	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
24 & Under	252	750	1,002	\$ 5,632,037	\$ 16,025,097	\$ 21,657,134
25-29	935	2,915	3,850	33,588,923	97,784,952	131,373,875
30-34	1,121	3,173	4,294	51,518,389	124,639,053	176,157,442
35-39	1,043	3,221	4,264	56,406,771	128,134,621	184,541,392
40-44	1,078	3,591	4,669	62,217,127	141,298,886	203,516,013
45-49	1,057	3,777	4,834	61,327,878	145,295,910	206,623,788
50-54	1,342	4,493	5,835	74,167,733	173,838,929	248,006,662
55-59	1,270	4,070	5,340	66,570,430	163,963,337	230,533,767
60-64	1,094	3,054	4,148	52,413,945	120,838,048	173,251,993
65 & Up	<u>761</u>	<u>1,317</u>	<u>2,078</u>	<u>23,680,194</u>	<u>38,441,119</u>	<u>62,121,313</u>
<b>Total</b>	<b>9,953</b>	<b>30,361</b>	<b>40,314</b>	<b>\$ 487,523,427</b>	<b>\$ 1,150,259,952</b>	<b>\$ 1,637,783,379</b>





**APPENDIX A – MEMBERSHIP DATA**

**AGE AND SERVICE DISTRIBUTION  
AS OF JULY 1, 2013**

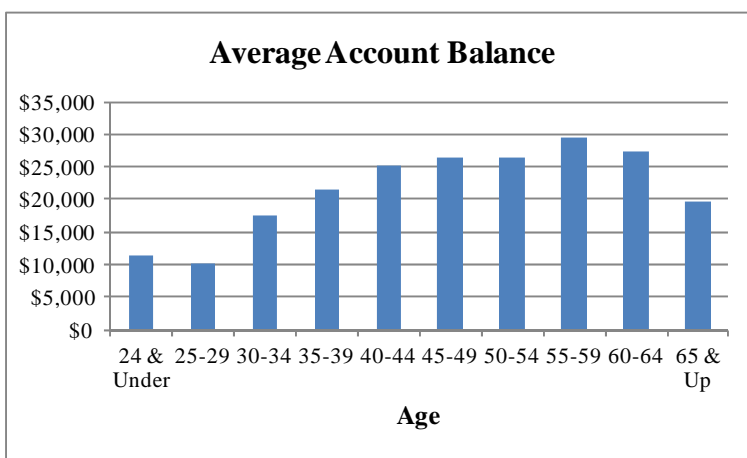
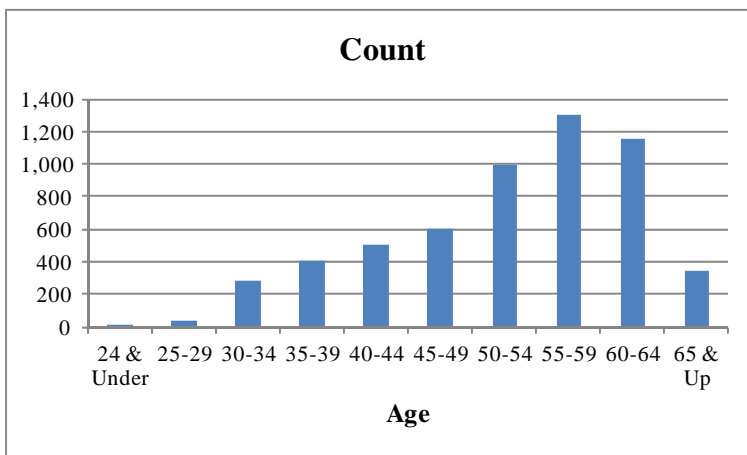
Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
<b>20-24</b>	Number	995	7	0	0	0	0	0	0	1,002
	Total Salary	\$ 21,453,468	\$ 203,666	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 21,657,134
	Average Sal.	\$ 21,561	\$ 29,095	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 21,614
<b>25-29</b>	Number	3,078	771	1	0	0	0	0	0	3,850
	Total Salary	\$ 99,123,241	\$ 32,224,444	\$ 26,190	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 131,373,875
	Average Sal.	\$ 32,204	\$ 41,796	\$ 26,190	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 34,123
<b>30-34</b>	Number	1,502	2,358	434	0	0	0	0	0	4,294
	Total Salary	\$ 44,336,355	\$ 108,701,627	\$ 23,119,460	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 176,157,442
	Average Sal.	\$ 29,518	\$ 46,099	\$ 53,271	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 41,024
<b>35-39</b>	Number	1,253	1,098	1,576	337	0	0	0	0	4,264
	Total Salary	\$ 30,520,913	\$ 46,142,367	\$ 87,729,115	\$ 20,148,997	\$ 0	\$ 0	\$ 0	\$ 0	\$ 184,541,392
	Average Sal.	\$ 24,358	\$ 42,024	\$ 55,666	\$ 59,789	\$ 0	\$ 0	\$ 0	\$ 0	\$ 43,279
<b>40-44</b>	Number	1,225	1,041	852	1,283	268	0	0	0	4,669
	Total Salary	\$ 28,112,384	\$ 37,711,146	\$ 42,422,890	\$ 77,963,007	\$ 17,306,586	\$ 0	\$ 0	\$ 0	\$ 203,516,013
	Average Sal.	\$ 22,949	\$ 36,226	\$ 49,792	\$ 60,766	\$ 64,577	\$ 0	\$ 0	\$ 0	\$ 43,589
<b>45-49</b>	Number	1,062	1,075	784	641	1,001	270	1	0	4,834
	Total Salary	\$ 23,273,238	\$ 33,972,105	\$ 33,237,614	\$ 35,351,271	\$ 63,417,482	\$ 17,324,121	\$ 47,957	\$ 0	\$ 206,623,788
	Average Sal.	\$ 21,915	\$ 31,602	\$ 42,395	\$ 55,150	\$ 63,354	\$ 64,163	\$ 47,957	\$ 0	\$ 42,744
<b>50-54</b>	Number	1,010	1,093	1,040	697	651	963	381	0	5,835
	Total Salary	\$ 21,387,678	\$ 32,902,448	\$ 38,769,520	\$ 31,602,579	\$ 36,983,841	\$ 61,603,102	\$ 24,757,494	\$ 0	\$ 248,006,662
	Average Sal.	\$ 21,176	\$ 30,103	\$ 37,278	\$ 45,341	\$ 56,811	\$ 63,970	\$ 64,980	\$ 0	\$ 42,503
<b>55-59</b>	Number	791	735	821	691	691	564	778	269	5,340
	Total Salary	\$ 17,671,507	\$ 20,655,753	\$ 29,654,681	\$ 27,924,274	\$ 33,866,627	\$ 32,264,074	\$ 50,917,877	\$ 17,578,974	\$ 230,533,767
	Average Sal.	\$ 22,341	\$ 28,103	\$ 36,120	\$ 40,411	\$ 49,011	\$ 57,206	\$ 65,447	\$ 65,349	\$ 43,171
<b>60-64</b>	Number	667	604	496	528	640	441	294	478	4,148
	Total Salary	\$ 15,688,312	\$ 17,842,993	\$ 17,068,580	\$ 21,307,223	\$ 29,254,516	\$ 22,854,871	\$ 17,162,541	\$ 32,072,957	\$ 173,251,993
	Average Sal.	\$ 23,521	\$ 29,541	\$ 34,412	\$ 40,355	\$ 45,710	\$ 51,825	\$ 58,376	\$ 67,098	\$ 41,768
<b>65 &amp; Up</b>	Number	580	434	281	190	198	146	114	135	2,078
	Total Salary	\$ 8,668,116	\$ 10,705,316	\$ 7,761,053	\$ 6,340,825	\$ 8,326,716	\$ 6,596,581	\$ 5,092,235	\$ 8,630,471	\$ 62,121,313
	Average Sal.	\$ 14,945	\$ 24,667	\$ 27,619	\$ 33,373	\$ 42,054	\$ 45,182	\$ 44,669	\$ 63,929	\$ 29,895
<b>Total</b>	Number	12,163	9,216	6,285	4,367	3,449	2,384	1,568	882	40,314
	Total Salary	\$ 310,235,212	\$ 341,061,865	\$ 279,789,103	\$ 220,638,176	\$ 189,155,768	\$ 140,642,749	\$ 97,978,104	\$ 58,282,402	\$ 1,637,783,379
	Average Sal.	\$ 25,506	\$ 37,008	\$ 44,517	\$ 50,524	\$ 54,844	\$ 58,994	\$ 62,486	\$ 66,080	\$ 40,626



**APPENDIX A – MEMBERSHIP DATA**

**INACTIVE VESTED MEMBERS  
AS OF JULY 1, 2013**

<u>Age</u>	<u>Count of Members</u>			<u>Account Balances</u>		
	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
24 & Under	1	0	1	\$ 11,401	\$ 0	\$ 11,401
25-29	10	25	35	104,145	255,904	360,049
30-34	45	234	279	881,016	4,014,467	4,895,483
35-39	79	323	402	2,066,610	6,616,846	8,683,456
40-44	108	393	501	3,358,367	9,217,414	12,575,781
45-49	118	483	601	4,635,528	11,277,807	15,913,335
50-54	171	827	998	7,162,444	19,309,541	26,471,985
55-59	208	1,092	1,300	9,618,790	28,804,154	38,422,944
60-64	163	990	1,153	7,131,387	24,488,383	31,619,770
65 & Up	<u>56</u>	<u>284</u>	<u>340</u>	<u>1,817,456</u>	<u>4,890,372</u>	<u>6,707,828</u>
<b>Total</b>	<b>959</b>	<b>4,651</b>	<b>5,610</b>	<b>\$ 36,787,144</b>	<b>\$ 108,874,888</b>	<b>\$ 145,662,032</b>

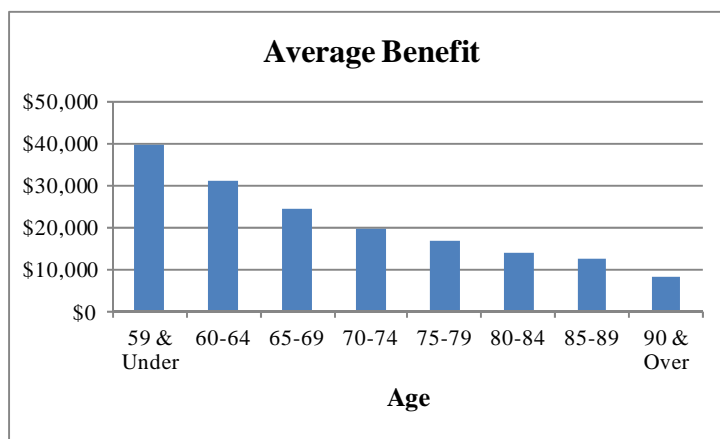
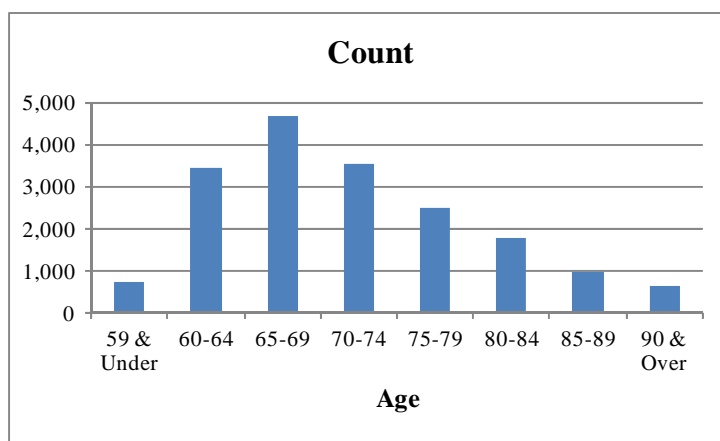




**APPENDIX A – MEMBERSHIP DATA**

**RETIRED MEMBERS  
AS OF JULY 1, 2013**

Age	Count of Members			Annual Benefits		
	Male	Female	Total	Male	Female	Total
59 & Under	251	476	727	\$ 10,461,462	\$ 18,252,388	\$ 28,713,850
60-64	1,000	2,457	3,457	37,498,306	68,972,408	106,470,714
65-69	1,643	3,050	4,693	49,476,855	64,640,793	114,117,648
70-74	1,193	2,331	3,524	31,543,975	36,804,528	68,348,503
75-79	800	1,707	2,507	18,152,075	23,709,513	41,861,588
80-84	526	1,269	1,795	9,849,255	15,275,088	25,124,343
85-89	255	708	963	4,484,322	7,647,906	12,132,228
90 & Over	<u>89</u>	<u>530</u>	<u>619</u>	<u>935,495</u>	<u>4,218,380</u>	<u>5,153,875</u>
Total	5,757	12,528	18,285	\$ 162,401,745	\$ 239,521,004	\$ 401,922,749



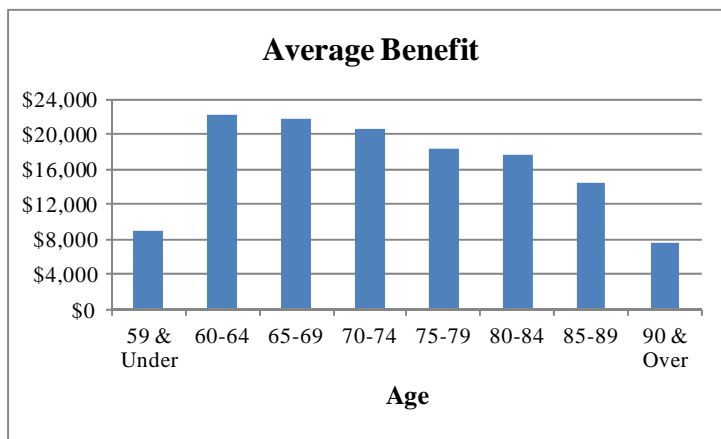
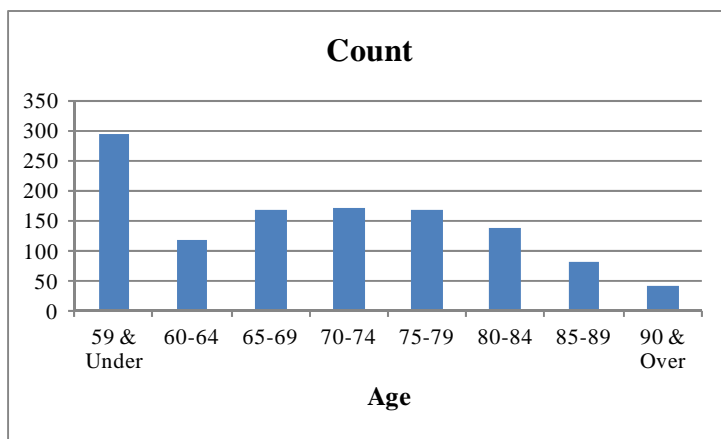




**APPENDIX A – MEMBERSHIP DATA**

**BENEFICIARIES RECEIVING BENEFITS  
AS OF JULY 1, 2013**

Age	Count of Members			Annual Benefits		
	Male	Female	Total	Male	Female	Total
59 & Under	149	144	293	\$ 1,233,847	\$ 1,382,084	\$ 2,615,931
60-64	45	72	117	916,158	1,675,924	2,592,082
65-69	68	99	167	1,292,302	2,322,121	3,614,423
70-74	53	118	171	909,845	2,627,630	3,537,475
75-79	53	115	168	777,430	2,313,945	3,091,375
80-84	38	100	138	470,227	1,947,230	2,417,457
85-89	17	64	81	236,234	933,218	1,169,452
90 & Over	<u>7</u>	<u>34</u>	<u>41</u>	<u>63,824</u>	<u>250,387</u>	<u>314,211</u>
Total	430	746	1,176	\$ 5,899,867	\$ 13,452,539	\$ 19,352,406

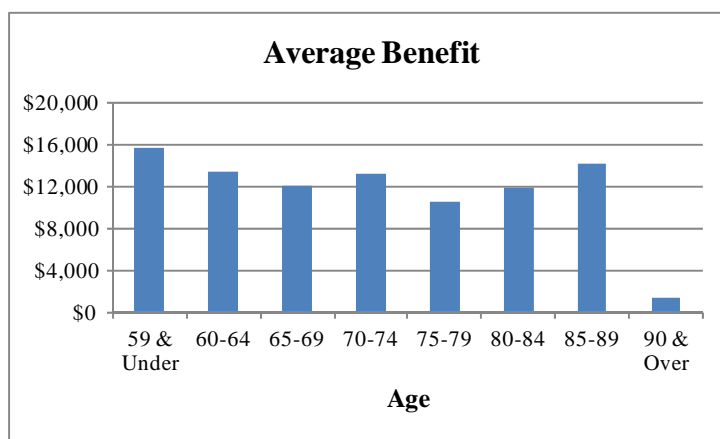
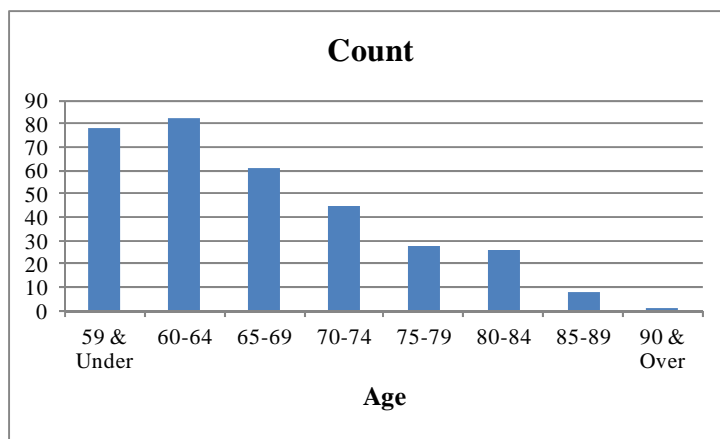




**APPENDIX A – MEMBERSHIP DATA**

**DISABLED MEMBERS  
AS OF JULY 1, 2013**

Age	Count of Members			Annual Benefits		
	Male	Female	Total	Male	Female	Total
59 & Under	19	59	78	\$ 280,111	\$ 942,483	\$ 1,222,594
60-64	24	58	82	278,478	818,067	1,096,545
65-69	24	37	61	274,098	457,797	731,895
70-74	19	26	45	263,687	329,339	593,026
75-79	9	19	28	91,966	200,505	292,471
80-84	8	18	26	118,581	187,461	306,042
85-89	2	6	8	47,070	65,481	112,551
90 & Over	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1,396</u>	<u>1,396</u>
Total	105	224	329	\$ 1,353,991	\$ 3,002,529	\$ 4,356,520





## APPENDIX B – SUMMARY OF PLAN PROVISIONS

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<b>Member</b>	Any person employed by a public school 15 or more hours per week shall be a member of the system. Employees at the date of establishment could have elected not to participate, and those covered under another system do not participate. The Tier Two benefit structure covers members joining the System on or after July 1, 2013.
<b>Participation Date</b>	Date of becoming a member.
<b>Definitions</b>	
Final average earnings	The average of the three highest twelve month periods of service during the period ending on the earlier of the participant's termination date or retirement date. For employees who become a member on or after July 1, 1996, earnings will be capped at the maximum earning defined in Code 401(a) (17). For Tier Two members, it is the average of the five highest twelve month periods of service.
Fiscal year	Twelve month period ending June 30.
Contributions	Members contribute 9.78% of pay. Such contributions are credited with interest based on the 1-year Treasury yield curve on July 1 of each year, as determined by State Statutes. The School Districts contribute at a rate equal to 101% of the members' rate. The State contributes 2% of pay, effective July 1, 2014 (previously 1%).
Monthly pension benefit	The greater of (1) or (2).  (1) Amount: A monthly benefit equal to the sum of:  (a) A savings annuity which is the actuarial equivalent of the member's accumulated contributions, and  (b) A service annuity equal to \$3.50 per year of service.  (2) Amount: Members employed by a class I, II, III, IV, or VI School District may receive a formula annuity. The formula annuity is a monthly amount equal to the product of 2.00% of final average earnings times total years of service for those members who are employed on or after July 1, 2001.  To receive this benefit, retirement must occur after meeting the Rule of 85 requirements (minimum age 55) or attaining age 65.



## APPENDIX B – SUMMARY OF PLAN PROVISIONS

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An automatic annual cost-of-living adjustment (COLA) equal to the change in the CPI-W index, with a maximum increase of 2.5% in any one year is provided for current and future retirees. Also provided is a minimum floor benefit equal to 75% of the purchasing power of the original benefit. For members hired on or after July 1, 2013, the maximum increase is 1.0% and there is no floor to the benefit's purchasing power. For Tier Two members, an automatic cost-of-living adjustment (COLA) equal to the change in the CPI-W index, not to exceed 1.0% in any one year. No purchasing power COLA applies.

Normal Retirement Date (NRD) First of month coinciding with or next following the attainment of age 65 and one-half year of service.

Service Length of service includes all service as a school employee for which contributions have been made. This service only includes years for which the member was employed on at least a half-time basis, and includes declared emergency service in the armed forces, provided certain conditions are met. Special provisions allow credit for service prior to 1945 and for up to ten years of service in another State upon payment of the actuarial cost of the additional benefit granted.

Pensionable pay Gross earnings subject to contributions.

### Eligibility for Benefits

Deferred vested Termination for reasons other than death or disability retirement after completing five years of service.

Disability retirement Retirement by reason of disability.

Early retirement Retirement before NRD and on or after both attaining age 60 and completing five years of service, or attaining 35 years of service regardless of age, or attaining age 55 and age plus service equals at least 85 (Rule of 85).

Normal retirement Retire on NRD.

Postponed retirement Retire after NRD.

Pre-retirement spouse benefit Death prior to retirement.

### Monthly Benefits Payable

Normal retirement Monthly pension benefit determined as of NRD.



## APPENDIX B – SUMMARY OF PLAN PROVISIONS

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Early retirement	Monthly pension benefit determined as of early retirement date, reduced by 3% for each year that commencement of payment precedes age 65 (members must be age 60 with five years of service). Unreduced benefits are available to members who have attained age 55 and whose age plus service is greater than or equal to 85. Benefits payable upon retirement prior to age 60 (based on the 35 year service rule) are actuarially reduced from age 65. The service annuity is a life annuity actuarially reduced before age 65 using 8% interest and the 1994 Group annuity Mortality Table, 25% male, 75% female.
Postponed retirement	Monthly pension benefit determined as of actual retirement date.
Termination with deferred vested benefit	Monthly pension benefit determined as of termination date, reduced by 3% for each year that commencement of payment precedes age 65 (Early Commencement requires attainment of age 60).
Disability retirement	Monthly pension benefit determined as of disability retirement date.
Death with pre-retirement benefits	<p>Survivor portion of 100% Joint and Survivor Annuity paid to spouse assuming retirement by member at death if the member is age 65 or has 20 years of service at death. If the member has met the 5-year vesting service requirement, has less than 20 years of service and is under age 65, the spouse may choose between the following two options:</p> <ol style="list-style-type: none"><li>(1) a lump sum equal to the member's contributions with interest plus 101% of the member's contributions with interest, and</li><li>(2) an annuity which equals the survivor portion of the 100% Joint and Survivor value of the member's accrued benefit, payable immediately, reduced for commencement before age 65 and the 100% joint and survivor form of payment.</li></ol>
Forms of payment	<p>Pre-retirement death benefits are payable only as described above.</p> <p>Monthly pension benefits are paid under the form of payment elected by the retiree at retirement. Payment forms include: life annuity, 5-year certain and life annuity, 100% joint and survivor annuity (spouse only), 10-year certain and life annuity, 15-year certain and life annuity, or a modified cash refund annuity. The normal form of payment for the formula annuity is a 5-year certain and life annuity.</p>

### **Funding Arrangement**

Pursuant to LB 407 enacted in 2002, the School Retirement Fund is created. Balances existing on June 30, 2002 in the School Employers Deposit Account, the School Employees Savings Account, the Service Annuity Account, the Annuity Reserve Account, and the School Employees Retirement System Reserve Fund (RSRF) shall be combined and transferred into the School Retirement Fund.



## **APPENDIX B – SUMMARY OF PLAN PROVISIONS**

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There are four funds established in the State Treasury, which receive monies and pay the expenses and benefits of the retirement system, as follows:

1. School Retirement Fund – receives required deposits of the employers, the State, and employees. Upon retirement, the fund pays all savings annuities, service annuities, and formula annuities.
2. Contingent Account – receives all interest, dividends, and miscellaneous income, pays all regular interest allocated to the other accounts or funds, and meets any deficiencies occurring in the other accounts or funds.
3. Expense Fund – pays all expenses connected with the operation and administration of the system, and receives annual contributions to cover anticipated expenses.
4. Omaha Service Annuity Fund – pays service annuity benefits to Omaha members.

### **State Appropriation**

LB 700, passed in 1996, established a separate fund to provide for cost-of-living benefit adjustments to members ceasing employment on or after April 10, 1996. The COLA increases are 0.3% per year, beginning six years after retirement. This benefit is funded by State contributions. Beginning with the 1996/1997 fiscal year, the funding shall be 81.7873% of \$6,895,000 or \$5,639,235 annually, for each year through the 2010/2011 fiscal year. LB 950, passed in 2010, extended this contribution through the 2012/2013 fiscal year. This appropriation is no longer applicable as of the July 1, 2013 valuation.

### **Benefits Reflected in Valuation**

All benefits were valued, including future cost-of-living increases as provided for by LB 674 and LB 711.

### **Plan Provisions Effective after July 1, 2013**

No future changes in plan provisions were recognized in determining the GASB 25 funded status or in determining the sufficiency of statutory contribution levels.

### **Changes in Plan Provisions Since the Prior Year**

Legislative Bill 553 (LB 553), passed in the 2013 session, created a new benefit tier for members hired on or after July 1, 2013. Because the valuation date is July 1, 2013, no members hired after June 30, 2013 are included in this valuation. Therefore, this legislation had no effect on liabilities or costs reflected in this valuation. Beginning with the 2014 valuation, the new benefit tier will begin to impact valuation results. These changes include increasing the period over which the final average salary is calculated from 36 months to 60 months and limiting the COLA to 1% without the 75% of purchasing power restoration.

LB 553 also changed the amortization of the unfunded actuarial accrued liability (UAAL) from a level dollar payment to a level percent of payroll payment, where the dollar amount of the payment increases with the assumed payroll growth each year in the future. This change lowered the dollar amount of the UAAL payment in the 2013 valuation, but creates a payment schedule where the dollar amount of UAAL contribution increases 4% each year in the future. If actual payroll increases at the assumed rate of 4%,



## **APPENDIX B – SUMMARY OF PLAN PROVISIONS**

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the UAAL contribution rate will remain level. If payroll increases are less than the 4% assumption, the UAAL contribution rate will increase.

Additionally, LB 553 extended the current member contribution rate of 9.78% indefinitely (scheduled reduction was to 7.28% after September 1, 2017) and increased the State's payroll related contribution from 1% to 2% of payroll, effective July 1, 2014 for the plan year end June 30, 2014.

Effective with the July 1, 2013 valuation, LB 553 requires that calculations for the Omaha State Service Annuity benefit be performed under the Entry Age Normal cost method, calculated as a level percentage of payroll.



## APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS

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### A. ACTUARIAL METHODS

1. **Calculation of Normal Cost and Actuarial Accrued Liability:** The method used to determine the normal cost and actuarial accrued liability was the Entry Age Actuarial Cost Method described below.

#### **Entry Age Actuarial Cost Method**

Projected pension and preretirement spouse's death benefits were determined for all active members under age 80. Cost factors designed to produce annual costs as a constant percentage of each member's expected compensation in each year from the assumed entry age to the assumed retirement age were applied to the projected benefits to determine the normal cost (the portion of the total cost of the plan allocated to the current year under the method). The normal cost is determined by summing intermediate results for active members under age 80 and determining an average normal cost rate which is then related to the total payroll of active members. The actuarial assumptions shown on the following page were used in determining the projected benefits and cost factors. The actuarial accrued liability for active members (the portion of the total cost of the plan allocated to prior years under the method) was determined as the excess of the actuarial present value of projected benefits over the actuarial present value of future normal costs.

The actuarial accrued liability for retired members and their beneficiaries currently receiving benefits, active members age 80 and over, terminated vested members and disabled members not yet receiving benefits was determined as the actuarial present value of the benefits expected to be paid. No future normal costs are payable for these members.

The actuarial accrued liability under this method at any point in time is the theoretical amount of the fund that would have been accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of plan assets measured on the valuation date. The initial unfunded actuarial accrued liability established July 1, 2004, is amortized with a level dollar payment amount over 25 years. At subsequent valuation dates, amortization bases equal to changes in the unfunded actuarial accrued liability are established and amortized with a level dollar payment over a 25-year period. Beginning July 1, 2006, the unfunded liability was reinitialized as of July 1, 2006 and amortized over a 30-year period. At subsequent valuation dates, amortization bases equal to changes in the unfunded actuarial accrued liability are established and amortized over a level dollar payment over a 30-year period. If the unfunded actuarial accrued liability is \$0 or less on the valuation date, all previous amortization bases are considered fully amortized. Effective with the July 1, 2013 valuation, amortization payments were recalculated to amortize the remaining bases as a level percentage of expected payroll, per LB 553.

Under this Entry Age method, experience gains or losses, i.e., decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.





## APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS

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- 2. Calculation of the Actuarial Value of Assets:** The actuarial value of assets is based on a five-year smoothing method and is determined by spreading the effect of each year's investment return in excess of or below the expected return. The Market Value of assets on the valuation date is reduced by the sum of the following:
- I. 80% of the return to be spread during the first year preceding the valuation date,
  - II. 60% of the return to be spread during the second year preceding the valuation date,
  - III. 40% of the return to be spread during the third year preceding the valuation date, and
  - IV. 20% of the return to be spread during the fourth year preceding the valuation date.

### **Changes in Methods and Procedures since the Prior Year**

Effective with the July 1, 2013 actuarial valuation, the amortization of the unfunded actuarial accrued liability was changed to a level percent of payroll method. The actuarial cost method used to develop the contributions for the Omaha State Service Annuity benefit was changed from the level dollar method to the level percent of payroll method.

There was a minor modification to the methodology of calculating of the contribution rates that was adopted during the transition from the prior actuary.



## APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS

### ACTUARIAL ASSUMPTIONS

#### Economic Assumptions

1. Investment Return 8.00% per annum, compounded annually, net of expenses.
2. Inflation 3.25% per annum, compounded annually
3. Salary Increases Rates vary by service. Sample rates are as follows:

Rates by Service	
Years	Rate
<1	9.00%
1	8.50
5	6.96
10	5.68
15	5.21
20	4.95
25	4.74
30	4.57
35	4.32
40+	4.00

4. Payroll Growth 4.0% per annum
5. Investment on Employee Contributions 4.25% per annum compounded annually.
6. Increase in Compensation And Benefit Limits 3.25% per annum on the 401(a)(17) compensation limit and 415 benefit limit

#### Demographic Assumptions

1. Mortality
 

The mortality assumption includes an appropriate level of conservatism that reflects expected future mortality improvement.

  - a. Healthy lives - Active members 1994 Group Annuity Mortality Table, projected to 2015 using scale AA, set-back 1 year (55% of male rates for males, 40% of female rates for females)
  - b. Healthy lives – Retired members and beneficiaries 1994 Group Annuity Mortality Table, projected to 2015 using scale AA, set-back 1 year (sex distinct)
  - c. Disabled lives 1983 Railroad Retirement Board Disabled Annuitants Mortality set-back 1 year (unisex)



## APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS

d. Healthy mortality rates and life expectancies are shown below at sample ages:

Sample Age	Pre-retirement Mortality			
	Mortality Rate		Life Expectancy (Years)	
	Males	Females	Males	Females
20	0.02%	0.01%	68.3	74.7
30	0.04	0.01	58.5	64.8
40	0.05	0.02	48.7	54.9
50	0.09	0.04	39.0	45.0
60	0.28	0.14	29.5	35.3
70	0.89	0.46	20.8	26.1

Sample Age	Post-retirement Mortality			
	Mortality Rate		Life Expectancy (Years)	
	Males	Females	Males	Females
50	0.16%	0.09%	33.4	36.4
60	0.51	0.35	24.1	26.9
70	1.62	1.14	16.0	18.4
80	4.43	3.05	9.2	11.0
90	12.55	9.82	4.5	5.4

e. Disabled mortality rates and life expectancies are shown below at sample ages:

Sample Age	Mortality Rate	Life Expectancy
30	1.02%	30.7
40	1.29	23.8
50	3.00	17.7
60	4.14	13.5
70	6.38	9.5
80	9.97	6.2



## APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS

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### 2. Retirement

Rates vary by age and eligibility for benefits.  
Rates are as follows:

<b>Retirement Rates When Eligible for Unreduced Benefits</b>	
<b>Age</b>	<b>Rate</b>
55	25%
56	20
57	20
58	20
59	20
60	25
61	25
62	30
63	25
64	25
65	30
66	25
67	20
68	20
69	20
70	20
71	20
72	20
73	20
74	25
75	25
76	25
77	25
78	35
79	35
80	100

<b>Retirement Rates When Eligible for Reduced Benefits</b>	
<b>Age</b>	<b>Rate</b>
60	10%
61	12
62	15
63	12
64	18



## APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS

### 3. Termination

Rates vary by service.  
Sample rates are as follows:

Years	Rates by Service	
	Male	Female
<1	27.5%	31.7%
1	17.0	20.3
5	6.7	8.4
10	4.3	4.7
15	2.5	3.1
20+	2.0	2.0

### 4. Disability

Rates vary by age.  
Sample rates are as follows:

Age	Rate
25	.00%
30	.00
35	.02
40	.02
45	.03
50	.04
55	.07
60	.09

### Other Assumptions

#### 1. Form of Payment

Service annuity – Life annuity  
Formula annuity – Five year certain and life annuity.

#### 2. Marital Status

- a. Percent married
- b. Spouse's age

85% married  
Females assumed to be two years younger than males.

#### 3. Administrative Expense

Investment return is assumed to be net of expenses.

#### 4. Commencement age for deferred vested benefit

Age 62

#### 5. Cost of Living Adjustment

Service annuity – none  
Formula annuity – For members hired before January 1, 2013, it is 2.5% per annum, compounded annually and 3.25% per annum, compounded annually, after reaching 75% purchasing power floor benefit. For members hired on or after January 1, 2013, it is 1.0% per annum, compounded annually, and there is no floor for the purchasing power of the benefit.



## APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS

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### 6. State Contribution

State contributions for the current plan year are assumed to be contributed in a lump sum on the July 1 following the plan year end. These amounts from the prior plan year are treated as a contribution receivable on the plan's financial statements.

### **Changes in Assumptions since the Prior Year**

There were no changes.

### **TECHNICAL VALUATION PROCEDURES**

#### **Data Procedures**

Salaries for first year members are annualized.

#### **Other Valuation Procedures**

Salary increases are assumed to apply to annual amounts.

Decrement rates are assumed to occur mid-year, except that immediate retirement is assumed for those who are at or above the age at which retirement rates are 100%. Standard adjustments are made for multiple decrements.

No actuarial liability is included for participants who terminated without being vested prior to the valuation date, except those due a refund of contributions.

Future monthly benefit amounts are not calculated or available for deferred vested members. The benefit liability for deferred vested members was calculated by loading the accumulated member contribution balances for deferred vested members by 100% to estimate the value of deferred benefit payments.



## APPENDIX D – GLOSSARY OF TERMS

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<b>Actuarial Accrued Liability</b>	The difference between the actuarial present value of system benefits and the actuarial value of future normal costs. Also referred to as “accrued liability” or “actuarial liability”.
<b>Actuarial Assumptions</b>	Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
<b>Accrued Service</b>	Service credited under the system which was rendered before the date of the actuarial valuation.
<b>Actuarial Equivalent</b>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate assumptions.
<b>Actuarial Cost Method</b>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement system benefit between future normal cost and actuarial accrued liability. Sometimes referred to as the “actuarial funding method”.
<b>Experience Gain (Loss)</b>	The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.
<b>Actuarial Present Value</b>	The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
<b>Amortization</b>	Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with lump sum payment.
<b>Normal Cost</b>	The actuarial present value of retirement system benefits allocated to the current year by the actuarial cost method.



## APPENDIX D – GLOSSARY OF TERMS

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**Unfunded Actuarial Accrued Liability** The difference between actuarial accrued liability and the valuation assets. Sometimes referred to as “unfunded actuarial liability” or “unfunded accrued liability”.

Most retirement systems have unfunded actuarial accrued liability. They arise each time new benefits are added and each time an actuarial loss is realized.

The existence of unfunded actuarial accrued liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liability and the trend in its amount (after due allowance for devaluation of the dollar).