# Fifty-Seventh <br> Annual Actuarial Report 

# OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM 

as of September 1, 2008

Prepared by:
Milliman, Inc.
1120 South $101^{\text {st }}$ Street, Suite 400
Omaha, NE 68124

January 5, 2009
Board of Trustees
Omaha School Employees' Retirement System
3215 Cuming
Omaha, Nebraska 68131

## Re: Fifty-Seventh Annual Actuarial Report

Members of the Board:
Pursuant to our contract with the Omaha School District, we are pleased to submit the Fifty-Seventh Annual Actuarial Report of the Omaha School Employees' Retirement System (OSERS). This valuation has been performed as of September 1, 2008 for the plan year ending August 31, 2009. The major findings of the valuation are contained in this report. This report reflects the benefit provisions and contribution rates in effect as of September 1, 2008.

In preparing this 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, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

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 which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

We further certify that all costs, liabilities, rates of interest, and other factors for the 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 our best estimate of anticipated experience affecting the System. We further certify that, in our opinion, the actuarial assumptions in the aggregate are reasonable and are related to the experience of the Plan and to reasonable expectations and represent our best estimate of anticipated experience under the Plan. 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 Board of Trustees has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Actuarial computations under GASB Statements No. 25 and 27 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 out understanding of the System's funding requirements and goals, and of GASB Statements No. 25 and 27. 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.

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.

Milliman's work product was prepared exclusively for the Omaha School Employees' Retirement System for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the System's operations, and uses the System data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

I, Patrice A. Beckham F.S.A., am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We respectfully submit the following report and look forward to discussing it with you.
MILLIMAN, Inc.
Sincerely,

## Patruce Beckham

Patrice A. Beckham, F.S.A.
Consulting Actuary

## OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM

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## EXECUTIVE SUMMARY

This report presents the results of the September 1, 2008 actuarial valuation of the Omaha School Employees' Retirement System (OSERS). The primary purposes of performing the valuation are as follows:

- to certify that School District contributions equal to $101 \%$ of member's contributions, in addition to contributions paid by the members and the State, for the Plan Year beginning September 1, 2008 will be sufficient to fund the benefits expected to be paid to members, or to determine the actuarial contribution rate necessary to maintain the solvency of the System, as defined in this report,
- to disclose various asset and liability measures as of September 1, 2008, and
- to analyze and report on trends in System contributions, assets, and liabilities over the past several years.

There was no change in the actuarial methods used in the valuation other than adding a corridor ( $80 \%$ to $120 \%$ of market value) to the actuarial value of assets. The corridor had no impact on this year's valuation results.

There was a change in the set of actuarial assumptions used in the September 1, 2008 actuarial valuation. The Board of Trustees adopted a new set of assumptions in November 2008, following completion of an Experience Study. The changes included:

- Mortality: move to the RP-2000 Table with age adjustments (+1 male, -1 female) and generational projection of mortality improvements.
- Retirement rates: adjust rates to better fit the observed experience.
- Disability assumption: eliminate the use of a separate disability assumption.
- Termination rates: modify to better fit the observed experience.
- Election of refund: small adjustments based on actual experience.

The assumption changes increased the actuarial liability by $\$ 16$ million and the normal cost by $0.14 \%$ of pay. A minor refinement in the valuation methodology for estimating early retirement benefits increased the actuarial liability by $\$ 4$ million and the normal cost by $0.08 \%$ of pay.

The actuarial valuation results provide a "snapshot" view of the System's financial condition on September 1, 2008 based on the System's membership, benefit structure, and assets on that date. The valuation results reflect net unfavorable experience for the past plan year as demonstrated by an unfunded actuarial liability that was higher than expected based on the actuarial assumptions. The unfavorable experience was due to an actuarial loss on both the assets and the actuarial liabilities.

## Assets

As of September 1, 2008, the System had total funds of $\$ 1,050$ million measured on a market value basis. This was a decrease of $\$ 68$ million from the prior year and represents a rate of return of approximately $3.9 \%$. The components of this change are shown below:

|  | Market Value (\$M) |  |
| :--- | :---: | :---: |
| Net Assets, September 1, 2007 | $\$$ | 1,118 |
| - District, State and Member Contributions | + | 49 |
| - Benefit Payments and Refunds | - | 73 |
| - Administrative Expenses | - | 1 |
| - Investment Returm | - | 43 |
| Net Assets, September 1, 2008 | $\$$ | 1,050 |

The change in the actuarial value of assets from September 1, 2007 to September 1, 2008 is shown below:

|  | Actuarial Value (\$M) |  |
| :--- | :---: | :---: |
| Actuarial Assets, September 1, 2007 | $\$$ | 1,118 |
| - $\quad$ District, State and Member Contributions | + | 49 |
| - Benefit Payments and Refunds | - | 73 |
| - $\quad$ Expected Investment Income (based on 8.0\% assumption) | + | 88 |
| - Actuarial Investment G ain/ (Loss) | - | 33 |
| Actuarial Assets, September 1, 2008 | $\$$ | 1,149 |

The dollar-weighted rate of return, net of investment and administrative expenses, measured on the actuarial value of assets was approximately $+5.0 \%$. A comparison of asset values on both the market and actuarial basis is shown below:

|  | September 1 |  |  |  |  |
| :--- | ---: | ---: | :---: | ---: | ---: |
|  | $\mathbf{2 0 0 4}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ | $\mathbf{2 0 0 7}$ | $\mathbf{2 0 0 8}$ |
| Market Value of Assets | $\$ 775$ | $\$ 883$ | $\$ 978$ | $\$ 1,118$ | $\$ 1,050$ |
| Actuarial Value of Assets | 843 | 887 | 949 | 1,118 | 1,149 |
| Actuarial Value/ Market Value | $109 \%$ | $100 \%$ | $97 \%$ | $100 \%$ | $109 \%$ |



The estimated rate of return on the actuarial and mark et value of assets for the last ten years is shown in this graph. The asset smoothing method is mitigating the volatility of mark et value returns as shown in the rates of return on the actuarial versus market value

## Liabilities

The actuarial liability is that portion of the present value of future benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and asset values at the same date is referred to as the unfunded actuarial liability (UAL). The unfunded actuarial liability will be reduced if the employer's contributions exceed the employer's normal cost for the year, after allowing for interest eamed on the previous balance of the unfunded actuarial liability. Benefit improvements, experience gains and losses, and changes in actuarial assumptions and methods will also impact the total actuarial liability (AL) and the unfunded portion thereof.

The unfunded actuarial liability as of September 1, 2008 is shown below:
Actuarial Liability
Actuarial Value of Assets
Unfunded Actuarial Liability
\$1,346,999,000
1,149,289,000
\$ 197,710,000
Numerous factors contributed to the change in the Systems' UAL between September 1, 2007 and September 1, 2008. The components are examined in the following discussion.

Actuarial gains (or losses) result from actual experience that is more (or less) favorable than anticipated based on the actuarial assumptions. These "experience" (or actuarial) gains or losses are reflected in the UAL and are measured as the difference between the expected unfunded actuarial liability and the actual unfunded actuarial liability, taking into account any changes due to assumption, method or benefit provision changes. Overall, the System experienced a net actuarial loss of $\$ 47$ million, due to a loss on both the actuarial value of assets and liabilities.

The change in the unfunded actuarial liability between September 1, 2007 and 2008 is shown below (in millions):

| Unfunded Actuarial Liability, September 1, 2007 | $\$$ | 138 |
| :--- | ---: | ---: |
| - Expected change in UAL |  |  |
| $\quad$ - Contributions in excess of fixed payroll rate | - | 3 |
| $\quad$ - Amortization method | - | 1 |
| - Investment experience | + | 33 |
| - Liability experience |  |  |
| $\quad$ - Salary increases | + | 1 |
| - New entrants/ Rehires | + | 2 |
| - Mortality | + | 1 |
| - Retirement | + | 3 |
| - Termination | + | 7 |
| - Other demographic experience | + | 0 |
| - Other experience | - | 3 |
| - Change in actuarial assumptions/ methods | + | 20 |
| Unfunded Actuarial Liability, September 1, 2008 | $\$$ | 198 |

## Contribution Rate

The actuarial contribution rate for the System consists of:

- 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 liability contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

The Nebraska statutes provide that the School District shall contribute the greater of (a) one hundred and one percent of the contributions made by the employees or (b) such amount as may be necessary to maintain the solvency of the system, as determined annually by the board upon recommendation of the actuary and the trustees. The Trustees have adopted the criteria established in Governmental Accounting Standard Number 25 as the basis for determining the contribution amount necessary to maintain the solvency of the System. On this basis, the Annual Required Contribution (ARC) for the year under GASB 25 is $15.39 \%$ of payroll plus $\$ 973,301$. The contributions made by members, the State and the School District total $15.37 \%$ of payroll plus $\$ 973,301$. Although there is a difference between the actuarial and statutory contribution rates, the amount is very small and, therefore, is not of immediate concern.

## Comments

The 2008 valuation reflects a change in the actuarial assumptions used to estimate the present value of future benefit payments. The net result of the new set of assumptions was an increase in the unfunded actuarial liability (UAL) and an increase in the normal cost rate. The expectation is that the higher ongoing cost will reduce the magnitude of the losses that are occurring in each plan year. However, experience unfolds each year and the assumptions are long-term estimates so we expect some deviation of actual experience from that expected.

In the last valuation, the actuarial value of assets was reset to the market value. Consequently, the unfavorable investment experience in FY 2008 resulted in the actuarial value of assets exceeding the market value of assets by $\$ 99$ million. As of the valuation date, September 1, 2008, the System is $86 \%$ funded based on the actuarial value of assets. Furthermore, the fixed contribution rates in place are nearly equal to the actuarial required contribution (ARC). Therefore, assuming all assumptions are met in future years, the System is in actuarial balance over the long term.

Since the valuation date, there has been a significant decline in the stock market. There is considerable uncertainty as to where the market might be on September 1, 2009. However, if the current market levels remain in place until the end of the fiscal year, the UAL is expected to increase dramatically in the 2009 valuation. For example, if the investment return for the year ending August 31, 2009 is -20\%, the 2009 UAL would increase to about $\$ 435$ million and the corresponding ARC would be approximately $20 \%$ of payroll. Based on actual market value, the UAL at September 1, 2009 would be $\$ 600$ million and the ARC would be around $23 \%$ of payroll. The increase in the UAL anticipated from the market return for FY2009 is expected to create a shortfall between the ARC and the current contribution structure, which will cause the System to no longer be in actuarial balance over the long term, i.e. current assets plus future contributions will not be equal to the current value of future benefit payments.

The actual investment return is always a critical factor in determining the actuarial contribution rate. However, given the deferred investment losses at September 1, 2008 coupled with a significant decline in asset values since that date, the investment experience in the remainder of the current fiscal year will be a critical determinant of the results of the 2009 valuation. If there is not a significant bounceback in the stock market before August 31, 2009, the Trustees should be prepared for the 2009 valuation to indicate a significant funding shortfall.

## EXHIBIT 1

## SUMMARY OF FUND ACTIVITY <br> (Market Value Basis)

For the Y ear Ended August 31, 2008
NET ASSETS ON 9/1/07REVENUE
Salary deductions ..... 19,909,000
School D istrict contributions ..... 23,279,000
Repayment of withdrawals ..... 847,000
State service annuity receipts ..... 2,181,000
Sec. 79-988.01 deposit ..... 973,000Sec. 79-916 depositsIncome from investments, including realized and unrealized gains1,910,000
Total Revenue$(42,561,000)$
Total of Revenue and Balance ..... \$ 1,124,166,000
EXPENDITURES
Retirement Annuities ..... \$ 70,368,000
Refunds to Employees ..... 2,544,000
Professional Fees ..... 530,000
Other ..... 75,000
Personnel Costs ..... $\begin{array}{r}368,000 \\ \hline 885,000\end{array}$Total Expenditures
NET ASSETS ON 9/ 1/ 08 ..... \$ 1,050,281,000

## EXHIBIT 2

## ACTUARIAL VALUE OF NET ASSETS

As of September 1, 2008

1. Actuarial value of assets as of September 1,2007 \$ 1,117,628,000
2. Actual Contribution/ Disbursements
a. Contributions
49,099,000
b. Benefit Payments
72,912,000
c. Net Change
$(23,813,000)$
3. Expected Value of Assets as of September 1, 2008
$[(1) \times 1.08]+\left[(2 c) \times(1.08)^{1 / 2}\right]$
1,182,291,000
4. Market Value of A ssets as of September 1, 2008

1,050,281,000
5. Difference Between Market and Expected Values (4) - (3)
6. Actuarial Value of Assets as of September 1, 2008*

$$
\text { (3) }+[(5) \times 25 \%]
$$

1,149,289,000

* Estimated Rate of Return $\quad+5.0 \%$

Actuarial Value of Assets divided by Market Value of Assets as of September 1, 2008
(6) / (4)
109.4\%

Market Value of A ssets less Actuarial Value of
Assets as of September 1, 2008
$\$(99,008,000)$

## EXHIBIT 3

## ACTUARIAL BALANCE SHEET

As of September 1, 2008

## ASSETS

Actuarial value of assets $\$ 1,149,289,000$
Present value of future Section 79-988.01
state contributions
Present value of contributions for unfunded actuarial liability

Present value of future normal costs
186,323,000
263,040,000
Total Assets

## LIABILITIES

## Present Value of Future Benefits

Retired members and beneficiaries
Inactive vested members
Refunds due and unpaid to nonvested members
For service purchases initiated but not completed before the valuation date

Active Members
Retirement benefits
\$ 764,701,000
Termination benefits
D eath benefits
36,434,000
8,491,000

Total Liabilities
\$ 783,518,000
$15,296,000$
752,000

847,000

809,626,000
\$ 1,610,039,000

## EXHIBIT 4

## UNFUNDED ACTUARIAL LIABILITY

As of September 1, 2008

1. Present Value of Future Benefits ..... \$ 1,610,039,000
2. Present Value of Future Normal Costs ..... 263,040,000
3. Actuarial Liability(1) - (2)
1,346,999,000
4. Actuarial Value of Assets ..... 1,149,289,000
5. Unfunded Actuarial Liability(3) - (4)197,710,000
6. Present Value of Future
State Contributions under Section 79-988.01* ..... 11,387,000
7. Adjusted Unfunded Actuarial Liability
(Payable from Payroll Related Contributions) ..... 186,323,000
*The State contributes $0.70 \%$ of pay plus a level payment of $\$ 973,301$. Because this latter payment is not related to payroll, the present value of these contributions is used to finance the UAL.

## EXHIBIT 5

## ANALYSIS OF CONTRIBUTION RATE

The actuarial cost method used to determine the required level of annual contributions to support the expected benefits is the Entry Age Normal Cost Method. Under this method, the total cost is comprised of the normal cost rate and the unfunded actuarial liability payment. Commencing with the September 1, 2007 valuation the System set the funding policy as the normal cost plus a contribution to amortize the UAL over a closed 30 year period. The System is financed by contributions from the members, the School District and the State. The members contribute $7.3 \%$ of pay. The District is obligated to pay the greater of (a) one hundred and one percent of the member contributions or (b) such amount as may be necessary to maintain the solvency of the System. The Board has set a benchmark of compliance with the Governmental Accounting Standard Board (GASB) Statement Number 25 for the definition of "maintaining the solvency of the System". The Annual Required Contribution (ARC) under GASB 25 is based on the System's funding policy, i.e. the normal cost rate plus the contribution necessary to amortize the UAL over a 30 -year open period commencing September 1, 2007. The State contributes $0.70 \%$ of pay plus a level payment of $\$ 973,301$. Because this latter payment is not related to payroll, the present value of these contributions is used to finance the UAL.

1. Normal Cost Adjusted to Mid-Year
2. Expected Payroll for FYE August 31, 2009
3. Normal Cost Rate
(1)/ (2)
4. Unfunded Actuarial Liability at Valuation D ate
186,323,000
(Payable from Payroll Related Contributions)
5. 30 Year Amortization Factor - Level Percent of Pay
6. UAL Contribution at Mid-Year
$[(4) /(5)] *(1.08)^{1 / 2}$
7. UAL Contribution Rate
3.84\%
(6)/ (2)
8. Actuarial Contribution Rate
(3) $+(7)$
9. Statutory Contribution Rate:

| (a) Member | $7.30 \%$ |
| :--- | ---: |
| (b) District | $7.37 \%$ |
| (c) State | $\underline{0.70 \%}$ |
| (d) Total | $15.37 \%$ |

(a) Member
15.39\%
(b) District
7.37\%
(d) Total
15.37\%

Based on the results of the current valuation and assuming contribution rates remain unchanged in the future, the UAL will be amortized in just over 30 years if all actuarial assumptions are met in each future year.

## EXHIBIT 6

## CALCULATION OF ACTUARIAL GAIN / (LOSS)

The overall actuarial gain/ (loss) is comprised of both a liability gain/ (loss) and an actuarial asset gain/ (loss). Each of these represents the difference between the expected and actual values as of September 1, 2008.

1. Expected Actuarial Liability
a. Actuarial Liability as of September 1,2007 \$ 1,255,527,000
b. Normal Cost as of September 1, 2007
c. Benefit payments for Plan Year Ending August 31, 2008

72,912,000
d. Additional Liability for State Service Annuities and Service Purchases

3,028,000
e. Interest on a., b., c., and d. to End of Year 99,952,000
f. Change in assumptions/ methods 19,143,000
g. Expected Actuarial Liability
(a) + (b) - (c) + (d) + (e) + (f)
1,332,880,000
2. Actuarial Liability as of September 1,2008
\$ 1,346,999,000
3. Liability Gain/ (Loss)
(1.g.) - (2)
4. Liability Gain/ (Loss) as a Percent of Actuarial Liability
5. Expected Actuarial Value of Assets
a. Actuarial Value of A ssets as of September 1, 2007
\$ 1,117,628,000
b. Contributions for Plan Year Ending August 31, 2008
(including State Service Annuities and Service Purchases)
c. Benefit Payments for Plan Year Ending August 31, 2008
d. Interest on $\mathrm{a}, \mathrm{b}$. and c . to End of Year
\$ $(14,119,000)$
e. Expected Actuarial Value of Assets as of September 1, 2008
(a) + (b) - (c) + (d)
\$ 1,182,291,000
6. Actuarial Value of Assets as of September 1,2008
\$ 1,149,289,000
7. Asset $G$ ain / (Loss)

> (6) - (5.e.)
8. Asset G ain/ (Loss) as a Percent of Actuarial Value of Assets
\$ $(33,002,000)$
9. Overall Actuarial G ain/ (Loss)
(3) + (7)

## Gain/ (Loss) By Source

The Plan experienced net actuarial loss on liabilities of about $\$ 14.1$ million during the plan year ended August 31, 2008. The major components of this overall loss are shown below:

| Liability Sources | \$Millions |  |
| :--- | :---: | ---: |
| Salary Increases | $\$$ | $(0.7)$ |
| Mortality |  | $(1.3)$ |
| Terminations |  | $(6.9)$ |
| Retirements |  | $(3.4)$ |
| Disability |  | 0.0 |
| New Entrants |  | $(1.4)$ |
| Rehires |  | $(0.4)$ |
| Miscellaneous | $\mathbf{\$}$ | $(14.0$ |
| Total Liability Gain/ (Loss) | $\$$ | $(33.0)$ |
| Asset Gain/ (Loss) | $\$$ | $(47.1)$ |

## Comments

The purpose of conducting an actuarial valuation of a retirement system is to determine the costs and liabilities for the benefits under the system, to determine the annual level of contribution required to support these benefits and, finally, to analyze the system's overall experience as it compares with the actuarial assumptions used in the valuation. The costs and liabilities of a retirement system reported in the valuation depend not only upon the level of benefits provided but also upon factors such as investment return on invested funds, mortality rates for active and retired members, withdrawal rates among active members, rates at which salaries increase, and rates of retirement for ages at which members retire. The actuarial assumptions employed as to these and other contingencies in the current valuation are set forth in Appendix $C$ of this report.

Net demographic actuarial experience for the year was a loss of $\$ 14.1$ million. The loss was the net result of actual experience in a number of areas, as shown above. The change in the set of actuarial assumptions used in the valuation process is expected to reduce the liability losses in future years. However, experience is expected to continue to vary from year to year as the assumption are longterm estimates.

## EXHIBIT 7

## SCHEDULE OF CONTRIBUTIONS FROM THE EMPLOYER AND OTHER CONTRIBUTING ENTITIES

In Accordance with Statement No. 25 of the Govemmental Accounting Standards Board

| Fiscal Year <br> Ending | Annual <br> Required Contribution <br> (a) | Total <br> Employer Contribution <br> (b) | Percentage of ARC Contribution (b/a) |
| :---: | :---: | :---: | :---: |
| 8/31/03 | 17,927,131* | 18,328,875 | 102.2\% |
| 8/31/04 | 20,046,306* | 19,630,300 | 97.9\% |
| 8/31/05 | 22,459,221 | 20,210,403 | 90.0\% |
| 8/31/06 | 24,311,628 | 26,766,000 | 110.1\% |
| 8/31/07 | 28,143,388 | 24,981,000 | 88.8\% |
| 8/31/08 | 19,491,557 | 26,162,000 | 134.2\% |

*Numbers shown in prior valuation reports were Annual Pension Cost (APC) instead of Annual Required Contribution (ARC).

Notes to the Required Schedules:

1. The cost method used to determine the ARC is the Entry Age Normal Cost Method.
2. The assets are shown at actuarial value which is a market-related smoothed value.
3. Economic assumptions are:

Inflation: 3.5\%
Investment Return: 8.0\%
Salary increases: 4\% plus merit of 0\% to $2.6 \%$
Post-retirement benefit increases: 1.5\%
4. The amortization method is 30 -year open period, level percentage of payroll.

## EXHIBIT 8

## SCHEDULE OF FUNDING PROGRESS

In Accordance with Statement Nos. 25 and 27 of the Govemmental Accounting Standards Board

| Actuarial <br> Valuation <br> Date |  | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) |  | $\begin{aligned} & \text { funded AAL } \\ & \text { (UAAL) } \\ & (b-a) \end{aligned}$ | Funded Ratio (a/b) |  | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll [(b-a)/ c] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9/1/03 | \$ | 817,966,471 | \$ 1,009,062,603 | \$ | 191,096,132 | 81.1\% | \$ | 211,692,872 | 90.27\% |
| 9/1/04 |  | 843,486,000 | 1,066,324,000 |  | 222,838,000 | 79.1\% |  | 222,667,000 | 100.08\% |
| 9/1/05 |  | 887,165,000 | 1,126,967,000 |  | 239,802,000 | 78.7\% |  | 231,708,783 | 103.49\% |
| 9/1/06 |  | 948,938,000 | 1,195,354,000 |  | 246,416,000 | 79.4\% |  | 248,759,070 | 99.06\% |
| 9/1/07 |  | 1,117,628,000 * | 1,255,527,000 |  | 137,899,000 | 89.0\% |  | 272,844,149 | 50.54\% |
| 9/1/08 |  | 1,149,289,000 | 1,346,999,000 |  | 197,710,000 | 85.3\% |  | 272,720,007 | 72.50\% |

*T he actuarial value of assets was reset to market value as of $9 / 1 / 07$.

## EXHIBIT 9

## THREE-YEAR TREND INFORMATION

## In Accordance with Statement No. 27 of the Govemmental Accounting Standards Board

| Fiscal Year Ended | Annual <br> Pension <br> Cost (APC) | Percentage of APC <br> Contributed | Net Pension Obligation/ (Asset) |
| :---: | :---: | :---: | :---: |
| 8/31/06 | \$24,384,829 | 109.76\% | \$ 8,853 |
| 8/31/07 | 28,143,613 | 88.76\% | 3,171,466 |
| 8/31/08 | 19,565,145 | 133.53\% | $(3,425,389)$ |

Notes to the Schedule:

1. The cost method used to determine the ARC is the Entry Age Normal Cost Method.
2. The assets are shown at actuarial value which is a market-related smoothed value. For the 9/1/07 valuation, the actuarial value of assets was reset to market value.
3. Economic assumptions are:

Inflation: 3.5\%
General Wage Growth: 4.0\%
Investment Return: 8.0\%
Salary increases: 4\% plus merit of 0\% to 2.6\%
Post-retirement increases: 1.5\%
4. The amortization method is a 30 -year open period, level percentage of payroll.

## EXHIBIT 10

## DEVELOPMENT OF THE NET PENSION OBLIGATION

In Accordance with Statement No. 27 of the Governmental Accounting Standards Board

| Fiscal Year Ending August 31, |  | 2003 |  | 2004 |  | 2005 |  | 2006 |  | 2007 |  | 2008 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assumptions and Method: |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest Rate |  | 8.00\% |  | 8.00\% |  | 8.00\% |  | 8.00\% |  | 8.00\% |  | 8.00\% |
| Amortization Period |  | 40.00 years |  | 40.00 years |  | 40.00 years |  | 40.00 years |  | 40.00 years |  | 30.00 years |
| Cost Method |  | Entry Age <br> Normal |  | Entry Age <br> Normal |  | Entry Age <br> Normal |  | Entry Age Normal |  | Entry Age Normal |  | Entry Age <br> Normal |
| Annual Pension Cost: |  |  |  |  |  |  |  |  |  |  |  |  |
| Annual Required Contribution (ARC) | \$ | 17,927,131 | \$ | 20,046,306 | \$ | 22,459,221 | \$ | 24,311,628 | \$ | 28,143,388 | \$ | 19,491,557 |
| Interest on NPO |  | 10,172 |  | $(21,656)$ |  | 10,961 |  | 191,202 |  | 708 |  | 253,717 |
| Adjustment to ARC |  | $(6,277)$ |  | 13,365 |  | $(6,765)$ |  | $(118,001)$ |  | (484) |  | $(180,129)$ |
| Annual Pension Cost |  | 17,931,026 |  | 20,038,015 |  | 22,463,417 |  | 24,384,829 |  | 28,143,613 |  | 19,565,145 |
| Contribution for the Year: |  | 18,328,875 |  | 19,630,300 |  | 20,210,403 |  | 26,766,000 |  | 24,981,000 |  | 26,162,000 |
| Net Pension Obligation (NPO): |  |  |  |  |  |  |  |  |  |  |  |  |
| NPO at beginning of year |  | 127,144 |  | $(270,705)$ |  | 137,010 |  | 2,390,024 |  | 8,853 |  | 3,171,466 |
| Annual Pension Cost for year |  | 17,931,026 |  | 20,038,015 |  | 22,463,417 |  | 24,384,829 |  | 28,143,613 |  | 19,565,145 |
| Contributions for year |  | $(18,328,875)$ |  | $(19,630,300)$ |  | $(20,210,403)$ |  | $(26,766,000)$ |  | $(24,981,000)$ |  | $(26,162,000)$ |
| NPO at end of year | \$ | $(270,705)$ | \$ | 137,010 |  | 2,390,024 | \$ | 8,853 |  | 3,171,466 |  | $(3,425,389)$ |

## EXHIBIT 11

## ESTIMATED BENEFIT PAYMENTS*

| Year End | Cument <br> Retirees | Actives and Inactive Vesteds | Total |
| :---: | :---: | :---: | :---: |
| 2009 | \$71,332,000 | \$ 2,990,000 | \$ 74,322,000 |
| 2010 | 71,491,000 | 7,863,000 | 79,354,000 |
| 2011 | 71,168,000 | 12,794,000 | 83,962,000 |
| 2012 | 70,716,000 | 17,959,000 | 88,675,000 |
| 2013 | 70,145,000 | 23,129,000 | 93,274,000 |
| 2014 | 69,471,000 | 28,012,000 | 97,483,000 |
| 2015 | 68,765,000 | 32,827,000 | 101,592,000 |
| 2016 | 67,938,000 | 37,797,000 | 105,735,000 |
| 2017 | 66,993,000 | 43,123,000 | 110,116,000 |
| 2018 | 65,963,000 | 48,397,000 | 114,360,000 |
| 2019 | 64,857,000 | 54,093,000 | 118,950,000 |
| 2020 | 63,688,000 | 59,754,000 | 123,442,000 |
| 2021 | 62,420,000 | 65,361,000 | 127,781,000 |
| 2022 | 61,051,000 | 70,985,000 | 132,036,000 |
| 2023 | 59,577,000 | 76,512,000 | 136,089,000 |

*Amounts shown are the cash flows for current members only, based on the current benefit structure and assuming that all actuarial assumptions are met in each future year. To the extent that actual experience deviates from that expected, results will vary. Amounts are shown in future nominal dollars and have not been discounted to the valuation date.

## Appendix A

## HISTORICAL BACKGROUND

Since 1909, the Omaha School District has maintained a retirement system for its teachers. Since then, systems covering other employees were added. In 1951, the Nebraska Legislature consolidated the existing systems into one new System. Amendments of significance in the Nebraska statutes and federal Social Security Act have occurred from time to time. These changes in order of their occumence are outlined briefly below:

## 1951- New System

Prior to 1951, three separate retirement systems existed. In 1951 the Nebraska Legislature repealed these three separate systems and created the present single System covering all employees. This act provided, however, that a member of a pre-existing system might elect to retain his benefit and contribution rights under one of the former systems in lieu of the new System benefits and contributions. The members who so elected then became known by the following titles for retirement purposes:
(1) Employees covered by the former Omaha Teachers Retirement System were known as "Teachers,"
(2) Employees covered by the former Non-Teaching Employee Retirement System were known as "Non-Teachers,"
(3) Employees covered by the former Cafeteria Employee Retirement System were known as "Cafeteria."

All other employees became members of the new System and received credit for membership service starting September 1, 1951. Benefits as well as contributions under the new System became directly related to a member's compensation by formula. The maximum covered annual compensation under the new System became $\$ 5,000$, but the maximum for Teachers, Non-Teachers and Cafeteria remained $\$ 3,000$.

## 1955 Amendments

On September 24, 1955, Omaha School employees voted to become participants in the federal Social Security program. All Social Security benefits are payable in addition to the System benefits. As a result of Social Security coverage, changes were made in the benefit and contribution formulas of the System effective August 31, 1955. In general, the changes reduced contributions and benefits to $60 \%$ of the rates formerly in effect. In addition, the maximum covered compensation was increased from $\$ 5,000$ to $\$ 6,000$ except for Teachers, Non-Teachers and Cafeteria which remained at $\$ 3,000$.

The amount contributed by the School District was also reduced to $60 \%$ of the rates in effect prior to the change and the School District's contributions, matching the refunds paid upon the withdrawal or death of employees, were retained in the retirement fund rather than being retumed to the School District.

## 1963 Amendments

Effective September 1, 1963, several changes were made in the new System. The limit on covered compensation for contributions and benefits of members was removed.

The service retirement annuity credit was increased in order to integrate with the modifications in federal Social Security between 1955 and 1963. The disability annuity for members was increased to $100 \%$ of the service retirement annuity accrued to date of disability and the restriction as to the number of years for which it was payable was removed. The offset in the benefit formula for the Nebraska State Service Annuity credit was placed on a year-to-year basis for all members, increasing the annuity credit for service after September 1, 1951 for active and retired alike.

The employees who were participating as Teachers, Non-Teachers and Cafeteria began to make contributions and receive benefit credits at the same rates as other members of the System. It should be noted that any employee who retained rights under a pre-existing system still receives credit in accordance with the provisions of the former system if this is more than the credit, after the State service annuity offset, would be under the 1963 amendments.

The contribution rate for employees was changed to integrate with the modifications in Social Security and was no longer subject to revision depending upon the degree of actuarial soundness of the System as had been provided in 1962. The School District became solely responsible for maintaining the solvency of the System on the basis of annual actuarial valuations. The School District again became entitled to refunds equal to the refunds paid upon withdrawal or death of employees.

The restriction prohibiting the crediting of interest on refunds to employees who withdraw from employment during the first ten years of service was removed. Thus, all employees who withdraw after one year or more of service receive interest on their contributions made since September 1, 1951.

## 1965 Amendments

Effective September 1, 1965, a preretirement survivor's annuity was added to the System for long-service employees. This change gave an employee with 25 or more years of service protection at death approximately equivalent in value to the vesting which already existed at termination of employment for an employee with the same period of service.

Effective January 1, 1966, the Social Security tax base was increased from $\$ 4,800$ to $\$ 6,600$ per year. This change became effective in the System's contribution and benefit formulas as of September 1, 1966.

## 1967 Amendments

The 77th Session of the Nebraska Legislature enacted LB 494 which amended the Nebraska School Retirement System, effective O ctober 23, 1967. A major change was the increase in the State service annuity credit from $\$ 1.50$ to $\$ 3.00$ per month for each year of credited service after July 1, 1968 and the removal of the 35 year limitation on credited State service. For the purpose of determining the new State service annuity offset in calculating the net O maha annuity, the additional $\$ 1.50$ per month for each year of service after July 1, 1968 is not applicable, but removal of the 35 year limitation does apply. This means that the State service annuity offset is still determined on the basis of $\$ 1.50$ per month for each year of service. The increase in the State service annuity offset by virtue of eliminating the 35 year limitation represents a lower cost to the Omaha System for those members having more than 35 years of State service by age 65 .

Another change with regard to the State service annuity was the manner in which the funds are transferred from the State to the Omaha System to pay these annuities. For retirements occurring after the effective date of the amendments (October 23, 1967), the State transfers the commuted value (equivalent single sum) of the individual State service annuity to the Omaha System and then the payment of the monthly annuity to the retired member is the School District's responsibility.

In 1967 the eligibility provisions for the pre-retirement survivors' annuity and the vested retirement rights were changed, reducing the service required from 25 years to 20 years and thereby granting these options to a larger number of employees.

Effective January 1, 1968, the federal Social Security taxable wage base was increased from $\$ 6,600$ to $\$ 7,800$ per year. This change became effective in the System's contribution and benefit formulas as of September 1, 1968.

## 1969 Amendments

The 80th Session of the Nebraska Legislature enacted LB 530 which amended the System effective August 11, 1969. The provisions of this bill improved the benefit structure of the System in two ways. The membership annuity credits (credits after $9 / 1 / 51$ ) were increased approximately $10 \%$ and the Social Security wage base was "frozen" at the $\$ 7,800$ level for purposes of calculating benefit credits and employee contributions.

By freezing the Social Secunity base, benefit credits and employee contributions for service after September 1, 1969 will not be reduced by virtue of future increases in the Social Security wage base. The System benefits will remain integrated with the Social Security program at the level provided by the $\$ 7,800$ base.

## 1972 Amendments

During 1972, the Nebraska Legislature enacted LB 1116 which amended the System. These amendments were to become effective for retirements occuming on or after September 1, 1972. The provisions of this bill improved the benefit structure of the System and liberalized the eligibility condition for qualification upon termination for the deferred vested retirement benefit.

The benefits of the System were improved by increasing the membership annuity credits (credits after 9/1/51) by approximately $20 \%$ over those in existence on September 1, 1971.

In order to be eligible upon resignation to elect a deferred vested service annuity, the years of creditable service was reduced from 20 years to 15 years.

## 1973 Amendments

The 1973 Session of the Nebraska Legislature enacted LB 445 which created increases in the State service annuity of the Nebraska School Retirement System. LB 445 provides for (a) a State service annuity credit of $\$ 3.00$ per month for each year of creditable service for all emeritus members and for all full time school employees who retire on or after July 1, 1973 and (b) for increases in the State service annuity for members who retired prior to July 1, 1973 based upon the difference between the Consumers Price Index on the date of retirement and July 1, 1973.

## 1976 Amendments

The 1976 Session of the Nebraska Legislature enacted LB 994 which increased the membership annuity credits (credits after $9 / 1 / 51$ ) by $20 \%$.

The members' contributions were increased to $2.90 \%$ of compensation up to $\$ 7,800$ per year plus $5.25 \%$ of salary in excess of that amount.

## 1979 Amendments

The 1979 Session of the Nebraska Legislature changed the mandatory retirement date from age 65 to age 70. Late retirement benefits are actuarially increased from what would have been payable at the normal retirement date.

## 1982 Amendments

The 1982 Session of the Nebraska Legislature enacted LB 131 which made considerable changes to the System. LB 131 was approved by the Governor on February 19, 1982.

The most major revision in the System was to change the previous primary benefit formula from the step rate formula based on each year of salary to a final average compensation formula. The primary benefit formula became $1.5 \%$ of final average compensation for each year of creditable service not in excess of 30 . Final average compensation was then defined to be $1 / 36$ of the total compensation received during the three fiscal years of highest compensation. Also, the creditable service not in excess of 30 years was allowed to continue to accrue after the fiscal year in which the employee attains age 65. In addition, the State service annuity offset of $\$ 1.50$ per year of creditable service was removed with respect to the final average compensation formula. The prior provisions of the System were retained as a minimum benefit, recognizing creditable service for those provisions through the earlier of the date of retirement or August 31, 1983.

Another major revision in the System was to change the step rate formula for employee contributions to a level $4.90 \%$ of compensation. In addition, the provision entitling the School District to receive refunds of its own contributions equal to the contributions refunded to employees was removed.

The early retirement date was liberalized. Previously an employee needed to have either 35 years of creditable service or to have attained age 60 with 25 years of creditable service. Now an employee can retire early if he has at least 10 years of creditable service and has attained age 55.

The actuarial equivalent of the annuity payable at the end of the fiscal year in which the employee attains age 65 was changed in the following two ways:

1. for employees retiring before age 62 , the monthly formula retirement annuity is a reduced amount based on the actuarial equivalent of the annuity deferred to the employee's 62nd birthday. If retirement is at age 62 or later, there is no actuarial reduction. Previously there was an actuarial reduction, based on the benefit deferred to age 65 , for any retirement before age 65 .
2. For employees retiring on or after age 65, the monthly formula retirement annuity is to be based on total years of creditable service (not in excess of 30) and the employee's entire compensation history at date of retirement. Consequently, for retirements after the fiscal year in which the employee attains age 65 there is no longer an actuarial increase from the benefit available at the nomal retirement date.

The eligibility provision to elect a deferred vested service annuity upon resignation was changed from 15 years of creditable service to 10 years.

## 1983 Amendments

The 1983 Session of the Nebraska Legislature enacted LB 488 which created benefit increases effective September 1, 1983 for members having retired before February 21, 1982. The amount of benefit increase was limited to the smaller of:

1. The percentage increase in the Consumer Price Index for all Urban consumers from the effective date of retirement to June 30, 1983 applied to benefits being paid and
2. The sum of $\$ 1.50$ per month for each year of creditable service and $\$ 1.00$ per month for each completed year of retirement from the effective date of retirement to June 30, 1983, actuarially adjusted for joint and survivor elections.

## 1985 Amendments

The 1985 Session of the Nebraska Legislature enacted LB 215 which removed the 30 year limit on years of service used in the benefit formula, provided for vesting after five years of service rather than ten years, and reduced the eligibility period for disability from ten years of service to five years of service.

LP215 also provided for the employer "pick up" of employee contribution under IRC 414(h), thereby allowing employee contributions to be made on a pre-tax basis.

Unisex factors are now being used for detemining early retirement reductions and actuarial equivalents for joint and survivor optional benefits.

## 1986 Amendments

The 1985 Session of the Nebraska Legislature enacted LB 1048 which granted increases in benefits for most retirees to reflect cost-of-living increases over the last several years. The increases ranged up to a maximum of $10.5 \%$.

## 1987 Amendments

A "window of opportunity" was created for the buy-in or buy-back of service credits for participants qualifying for that right.

## 1989 Amendments

LB 237 was enacted by the 1989 Session of the Nebraska Legislature and provided: annual benefit accruals of $1.65 \%$ of final average compensation (up from $1.50 \%$ ), unreduced benefits if a member retires with 35 or more years of service, a five year certain and life thereafter annuity as the normal form of benefit (instead of just a life annuity), employee contributions of $5.8 \%$ of pay (up from 4.9\%), and increased benefits to retirees (the increases ranged up to $9.0 \%$ ). There were some other changes as a result of this bill, but none that had a direct actuarial cost impact.

## 1992 Amendments

The 1992 Session of the Nebraska Legislature enacted LB 1001 which increased annual benefit accruals from $1.65 \%$ of final average compensation to $1.70 \%$, and increased benefits to retirees ( $3 \%$ increase per year of retirement, not exceeding $9 \%$ total increase), a change in the preretirement joint and survivor option to allow it to become effective automatically after 20 years of service, and allowed employees to "buy-in" their time with other public school systems by means of a tax-deferred rollover of their refund from that System.

## 1995 Amendments

The 1995 Session of the Nebraska Legislature enacted LB505 which increased annual benefit accruals from 1.70\% to $1.80 \%$ of final average compensation. It also provided for unreduced retirement benefits when the sum of age and service equals or exceeds 85 (still maintaining the age 55 minimum), and reduced early retirement reductions to . $25 \%$ per month prior to age 62 . Early retirement at 84,83 , or 82 points is also allowed with a maximum reduction of $3 \%, 6 \%$ and $9 \%$ respectively. Employee contributions were increased to $6.3 \%$ of pay. The bill also provided for a one time increase to current retirees of $3 \%$ per year since retirement (not to exceed 9\%), or if larger, $90 \%$ restoration of the purchasing power of their original pension. There are other changes resulting from this bill, which are not included since they did not have a direct actuarial impact. One change with no actuarial impact but worth noting is the provision for employer "pick up" of employee contributions to the System used to buy in outside service, pursuant to Section 414(h) of the Internal Revenue Code.

## 1998 Amendments

The 1998 Session of the Nebraska Legislature enacted LB497 which increased annual benefit accruals from 1.80\% to $1.85 \%$ of final average compensation. The bill also provided for a one time increase to current retirees of $3 \%$ per year since retirement (not to exceed 9\%) and provides an annual automatic cost of living adjustment, not greater than $1.5 \%$, beginning January $1,2000$.

## 2000 Amendments and Cost of Living Adjustment

The 2000 session of the Nebraska Legislature enacted LB155 which increased accruals from $1.85 \%$ to $2.00 \%$ of final average compensation.

Pursuant to LB497, the OSERS Board and the Omaha School District Board authorized a $1.5 \%$ discretionary COLA beginning January 1,2000 in addition to the automatic COLA.

## 2001Amendments and Cost of Living Adjustment

The 2001 session of the Nebraska Legislature enacted LB711 which provided that certain members who previously left employment due to pregnancy could purchase their "lost" service. It also provided a post-retirement supplemental benefit to assist with medical costs. The supplement commences 10 years after retirement, beginning at $\$ 10$ per month for each year retired and increasing by $\$ 10$ each year to a maximum of $\$ 250$ per month. For retirees with less than twenty years of service, the benefit is reduced proportionately.

Additionally, the OSERS Board and the Omaha School Board authorized a discretionary COLA to restore full purchasing power, beginning January 1, 2001, in addition to the automatic COLA.

## 2002 Cost of Living Adjustment

The automatic 1.5\% COLA was granted beginning January 1, 2002.

## 2003 Cost of Living Adjustment

The automatic 1.5\% COLA was granted beginning January 1, 2003.

## 2004 Cost of Living Adjustment

The automatic 1.5\% COLA was granted beginning January 1, 2004.

## 2005 Cost of Living Adjustment

The automatic 1.5\% COLA was granted beginning January 1, 2005.

## 2006 Cost of Living Adjustment

The automatic 1.5\% COLA was granted beginning January 1, 2006.

## 2007 Amendment and Cost of Living Adjustment

The 2007 session of the Nebraska Legislature enacted Section 79-9, 113 which changed the employee contribution rate from $6.30 \%$ of compensation to $7.30 \%$ and provided for an employer contribution equal to $101 \%$ of the employee contribution rate.

The automatic 1.5\% COLA was granted beginning January 1, 2007.

## 2008 Cost of Living Adjustment

The automatic 1.5\% COLA was granted beginning January 1, 2008.

## Appendix B

## SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS

(Based on Latest Amendments Outlined in Appendix A.)

## Contributions

Employee Contributions: Employees contribute 7.30\% of compensation. Such contributions are payable each year while employed. Contributions accumulated with interest are refundable at resignation unless the vested retirement benefit has been elected and at death unless the pre-retirement survivor's benefit has been elected.

State Contribution: The State contributes annually an amount equal to $0.7 \%$ of the members' compensation plus a level payment of \$973,301.

School District Contribution: The School District contributes the greater of (a) one hundred and one percent of the contributions by the employees or (b) such amount as may be necessary to maintain the solvency of the system, as determined annually by the board upon recommendation of the actuary and the trustees.

Interest Credited on Refunds: Contributions made prior to September 1, 1951 and refunded at withdrawal or death are not credited with interest. Contributions after September 1, 1951 are credited with interest at the rate declared annually by the Board of Education upon the recommendation of the Board of Trustees.

## Benefits

General: The System provides annuities upon retirement from service or disability and upon death to designated survivors.

The service annuity formula is the greater of:

1. $2.00 \%$ per year of creditable service times the final average compensation, or
2. the minimum formulas for service to August 31, 1983.

Final average compensation is defined as $1 / 36$ of the total compensation received during the three fiscal years of highest compensation.

Annuities are paid for life, with 5 years guaranteed. Optional forms of payment are available.
The disability annuity, the pre-retirement survivor annuity and the vested retirement right are summarized in the following sections.

Benefits in pay status are subject to an annual cost of living adjustment of the lesser of $1.5 \%$ or CPI plus an additional COLA if surplus assets exist beginning January 1, 2000. Effective $O$ ctober 3, 2001, a medical cost of living adjustment is payable to retired members. Such amount will commence 10 years after retirement and shall be an amount equal to $\$ 10$ per month for each year retired (subject to a maximum of $\$ 250$ per month), prorated for years of service less than 20.

Retirement Annuities: To begin receiving a retirement annuity the employee must have left the employment of the School district, selected a retirement date and
(a) remained employed until his or her 65th birthday and completed at least five years of creditable Omaha service,
or
(b) have 10 years of creditable service (with at least five of those years being creditable Omaha service) and attained age 55.

If an employee begins receiving an annuity after age 62 or when age and service equals or exceeds 85 , there is no adjustment for the retirement annuity. If, however, an employee begins receiving an annuity before age 62, such annuity shall be reduced by $.25 \%$ for each month prior to age 62 , provided that if 84 points have been achieved the reduction is limited to $3 \%$, if 83 points, $6 \%$, and 82 points, $9 \%$.

Disability Retirement Annuities: Each employee who becomes totally disabled and who has completed five or more years of creditable Omaha service is entitled to a disability retirement annuity equal to the amount of service annuity eamed to date of disability. Alternatively, the employee may defer the disability retirement and accrue service and compensation increases in the interim. The disability retirement annuity is payable each month until disability ceases, if before unreduced retirement, or death.

Pre-Retirement Survivor Annuities: Upon the death of a member who has completed 20 or more years of creditable service and who has not retired, a pre-retirement survivor annuity shall be paid to the member's primary beneficiary. The survivor must be a spouse or one other person whose attained age in the calendar year of the member's death is no more than 10 years less than the attained age of the member in such calendar year. The survivor annuity is the actuarial equivalent of the member's annuity accrued to the date of death, determined on the basis of the member's and beneficiary's attained ages on said date. The survivor annuity is payable in lieu of a refund of the member's accumulated contributions. However, a member may elect out of the survivor annuity and specify that such a refund be paid in lieu of the annuity. An election out of the pre-retirement survivor annuity is entirely independent of the election of a joint and survivor option at retirement. Within 60 days after the member's death, the beneficiary may request a refund of the member's accumulated contributions instead of the annuity; provided, however, that the member may direct the System to pay only an annuity.

If the member (not retired) has less than 20 years of creditable service, or the beneficiary does not meet the requirements stated above, a refund of the member's accumulated contributions shall be paid.

Vested Retirement Right: Each employee who has completed five or more years of creditable O maha service is eligible upon resignation to elect a deferred vested service annuity, first payable as an unreduced amount at age 65, in lieu of a refund of his accumulated contributions. With ten or more years of total creditable service (including at least five years of creditable Omaha service), the deferred vested service annuity could commence, unreduced, at age 62. If benefits start before age 62 (but not earlier than attained age 55), the benefit shall then be reduced as described above.

## Appendix C

## ACTUARIAL ASSUMPTIONS AND VALUATION METHODS

The valuation assumptions and methods used in conducting the current actuarial valuation are as follows:

## Actuarial Assumptions

Interest Rate:

Mortality Rates:

Disability:
Termination of Employment: (prior to retirement eligibility):
8.0\% per annum, compounded annually, net of expenses.

RP-2000 Mortality Table for males, set forward one year. RP-2000 Mortality Table for females, set back one year.

Rates are projected on a generational basis using Scale AA.
Disabled retirees use the same assumptions as healthy retirees with ages set forward ten years.

None assumed.
Illustrative rates of termination are as follows:

## Certificated:

Percent Terminating
(First 5 Y ears)

| Age |  |  |
| :---: | :---: | :---: |
| $\frac{\text { Male }}{20}$ | $\underline{\text { Female }}$ |  |
| 25 | $10.0 \%$ | $13.0 \%$ |
| 30 | 10.0 | 13.0 |
| 35 | 9.8 | 13.0 |
| 40 | 9.0 | 9.0 |
| 45 | 9.0 | 6.0 |
| 50 | 9.0 | 5.0 |

Percent Terminating
(Over 5 Y ears)
Age Male Female
25 8.0\% 9.0\%
$30 \quad 7.0 \quad 9.0$

| 35 | 3.5 | 6.0 |
| :--- | :--- | :--- |

$40 \quad 2.3 \quad 2.5$
$45 \quad 1.0 \quad 2.5$
$50 \quad 1.0 \quad 1.0$

## Classified:

Percent Terminating
(First 5 Y ears)

| $\frac{\text { Age }}{20}$ | $\underline{\text { Male }}$ | $\underline{\text { Female }}$ |
| :---: | :---: | :---: |
| 25 | $20.0 \%$ | $30.0 \%$ |
| 30 | 14.0 | 27.0 |
| 30 | 5.0 | 15.0 |
| 35 | 5.0 | 10.0 |
| 40 | 5.0 | 9.0 |
| 45 | 5.0 | 9.0 |
| 50 | 4.0 | 9.0 |

Percent Terminating (Over 5 Y ears)

| $\underline{\text { Age }}$ | $\underline{\text { Male }}$ | $\underline{\text { Female }}$ |
| :--- | :--- | :--- | :--- |
| 25 | $8.0 \%$ | $18.0 \%$ |
| 30 | 8.0 | 13.0 |
| 35 | 4.4 | 6.0 |
| 40 | 2.2 | 3.8 |
| 45 | 1.4 | 3.8 |
| 50 | 1.0 | 3.0 |

Retirement Rates:
Early retirement rates are assumed to occur according to the schedule illustrated below:

## Certificated:

| Age | $\frac{\text { Early }}{}$ | Points <br> Pon | $\frac{83}{\text { Points }}$ | $\frac{82}{\text { Points }}$ <br> 55 |
| :---: | :---: | :---: | :---: | :---: |
| $10 \%$ | $55 \%$ | $40 \%$ | $30 \%$ |  |
| 56 | 5 | 55 | 40 | 30 |
| 57 | 5 | 40 | 40 | 30 |
| 58 | 5 | 40 | 20 | 10 |
| 59 | 10 | 40 | 20 | 10 |
| 60 | 10 | 40 | 40 | 30 |
| 61 | 20 | 20 | 10 | 30 |

## Classified:

| Age  <br> 55  | Early <br> 56 | 3 |
| :---: | :---: | :---: |
| 56 | 3 |  |
| 57 | 3 |  |
| 58 | 3 |  |
| 59 | 3 |  |
| 60 | 3 |  |
| 61 |  | 20 |

Unreduced (age 62 or 85 points) retirement rates are assumed to occur according to the schedule illustrated below:

## Centificated:

| Age  $1^{\text {st }}$ Year Eligible | Ultimate <br> 55 | $50 \%$ |
| :---: | :---: | :---: |
| 56 | 50 | $30 \%$ |
| 57 | 50 | 30 |
| 58 | 45 | 30 |
| 59 | 45 | 30 |
| 60 | 45 | 30 |
| 61 | 45 | 20 |
| 62 | 30 | 30 |
| 63 | 60 | 30 |
| 64 | 35 | 30 |
| 65 | 35 | 35 |
| 66 | 35 | 35 |
| 67 | 35 | 25 |
| 68 | 35 | 20 |
| 69 | 100 | 20 |
| 70 | 100 | 40 |
|  |  | 100 |

## Classified:

| $\frac{\text { Age }}{55}$ |  | $1^{\text {st }}$ Year Eligible |  |
| :---: | :---: | :---: | :---: |
|  | $20 \%$ |  | Ultimate |
| 56 | 10 | $20 \%$ |  |
| 57 | 10 | 20 |  |
| 58 | 10 | 20 |  |
| 59 | 15 | 20 |  |
| 60 | 35 | 20 |  |
| 61 | 20 | 20 |  |
| 62 | 20 | 25 |  |
| 63 | 50 | 40 |  |
| 64 | 30 | 20 |  |
| 65 | 30 | 20 |  |
| 66 | 20 | 35 |  |
| 67 | 20 | 20 |  |
| 68 | 20 | 20 |  |
| 69 | 20 | 20 |  |
| 70 | 100 | 20 |  |
| 70 |  |  | 100 |

D eferred vested members are assumed to retire at first unreduced retirement age.

Salary Scale:
Salaries are assumed to increase according to the schedule illustrated below:

|  | Annual Salary Increase |  |
| ---: | :---: | :---: |
| Age | Certificated | Classified |
|  |  |  |
| 20 | $5.6 \%$ | $4.7 \%$ |
| 25 | 5.6 | 4.7 |
| 30 | 5.6 | 4.7 |
| 35 | 5.6 | 4.7 |
| 40 | 5.6 | 4.7 |
| 45 | 5.0 | 4.7 |
| 50 | 4.6 | 4.5 |
| 55 | 4.3 | 4.3 |
| 60 | 4.1 | 4.1 |
| 65 | 4.0 | 4.0 |
| 70 | 4.0 | 4.0 |

## Pre-Retirement <br> Survivor Annuity:

Refunds to Members:

Interest Rate Credited
on Employee Contributions:
Inflation (CPI):

Total Payroll G rowth:

It is assumed that females are three years younger than males, and that all members are married.

The probability of electing a deferred vested benefit assumed to follow the schedule below:

| $\frac{\text { Age }}{25}$ | Certificated |  | Classified |
| :---: | :---: | :---: | :---: |
|  | $80 \%$ |  | $50 \%$ |
| 30 | 80 | 50 |  |
| 35 | 75 | 50 |  |
| 40 | 75 | 50 |  |
| 45 | 75 | 50 |  |
| 50 | 75 | 50 |  |

7.00\% annually, compounded.
3.50\% annually, compounded
4.00\% annually, compounded

## Actuarial Cost Method

The actuarial cost method is a procedure for allocating the actuarial present value of pension plan benefits and expenses to time periods. The method used for the valuation is known as the individual entry-age actuarial cost method, and has the following characteristics.
(i) The annual normal costs for individual active member are sufficient to accumulate the value of the member's pension at time of retirement.
(ii) Each annual nomal cost is a constant percentage of the member's year-by-year projected pensionable compensation.

The entry-age actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's pensionable compensation between the entry-age of the member and the assumed exit-ages.

The portion of the actuarial present value allocated to the valuation year is called the nomal cost. The portion of the actuarial present value not provided for by the actuarial present value of future normal costs is called the actuarial accrued liability. Deducting accrued assets from the actuarial accrued liability determines the unfunded actuarial accrued liability.

## Asset Valuation Method

Assets are valued at expected value at the valuation date plus $25 \%$ of the difference between the market value and expected value. As a starting point for implementation of this asset valuation method, the actuarial value of assets as of September 1, 1996 was set equal to the market value. As of September 1, 2007, the actuarial value was reset to market value. The smoothing method was again implemented in the 2008 valuations. Effective September 1, 2008, the actuarial value must fall within a comidor of $80 \%$ to $120 \%$ of market value.

## Appendix D

## SUMMARY OF MEMBERSHIP DATA

|  | Active and <br> Leave of <br> Absence | Deferred <br> Vested | Retired <br> and <br> Beneficiaries |
| :--- | :---: | :---: | :---: |
| Members on $9 / 1 / 07$ | 7,041 | 483 | 3,245 |
| New Entrants | +842 | +104 | $+238^{*}$ |
| Terminations: | -415 | -31 | 0 |
| $\quad$ Withdrawals | -9 | 0 | $-80^{* *}$ |
| $\quad$Death <br> Retirement | -194 | -23 | 0 |
| Back to Active | +48 | -18 | -3 |
| Members on $9 / 1 / 08$ | 7,313 | 515 | 3,400 |

* In addition to the retirements from actives, leave of absence, or deferred vested, this new entrant number includes any beneficiaries of actives or retirees who died in the last fiscal year.
** This death number includes any period certain payments ending during the year.


## SUMMARY OF DATA FILE RECONCILIATION

The following table reconciles the data we received from O maha School District to the final membership counts used in the valuation.
Records on the in-pay data file ..... 3,648
Removed deaths/ completed payments prior to 9/1/ 08 ..... (248)
Records used in the valuation ..... 3,400
Records on the not-in-pay data file ..... 10,468
Records removed because the member has received all benefits ..... $(2,640)$
Records used in the valuation ..... 7,828

These records are allocated as follows:

| Active members | 7,313 |
| :--- | ---: |
| D eferred vested members | 515 |
| Retired members | 3,400 |
| Total | 11,228 |

## HISTORICAL SUMMARY OF MEMBERS

The following table displays selected historical data that was used in the actuarial valuation for the System.

| Valuation |  | Active Members |  |  |  |  |  | Number |  | Act/ Ret Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Number | Average |  |  |  |  |  |  |  |
| Date <br> September 1 | Total Count |  | Age | $\begin{gathered} \hline \text { Entry } \\ \text { Age } \end{gathered}$ | Service | $\begin{gathered} \hline \text { Annual } \\ \text { Pay (\$) } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Pay } \\ \text { Increase } \end{gathered}$ | Vested <br> Inactive | Retired |  |
| 1997 | 7,931 | 5,596 | 44.3 | 33.6 | 10.7 | 28,630 |  | 270 | 2,065 | 2.71 |
| 1998 | 8,204 | 5,680 | 44.2 | 33.7 | 10.5 | 28,912 | 0.98\% | 330 | 2,194 | 2.59 |
| 1999 | 8,564 | 5,864 | 43.9 | 34.0 | 9.9 | 29,493 | 2.01\% | 386 | 2,314 | 2.53 |
| 2000 | 8,885 | 6,057 | 43.8 | 34.1 | 9.7 | 30,544 | 3.56\% | 380 | 2,448 | 2.47 |
| 2001 | 9,156 | 6,259 | 44.0 | 34.4 | 9.6 | 32,091 | 5.06\% | 368 | 2,529 | 2.47 |
| 2002 | 9,409 | 6,383 | 43.9 | 34.5 | 9.4 | 33,406 | 4.10\% | 384 | 2,642 | 2.42 |
| 2003 | 9,425 | 6,279 | 44.0 | 34.5 | 9.5 | 33,877 | 1.41\% | 385 | 2,761 | 2.27 |
| 2004 | 9,711 | 6,399 | 44.2 | 34.6 | 9.6 | 34,698 | 2.42\% | 473 | 2,839 | 2.25 |
| 2005 | 10,124 | 6,623 | 44.1 | 34.8 | 9.3 | 35,234 | 1.54\% | 485 | 3,016 | 2.20 |
| 2006 | 10,522 | 6,972 | 44.1 | 34.9 | 9.2 | 35,732 | 1.41\% | 442 | 3,108 | 2.24 |
| 2007 | 10,769 | 7,041 | 44.2 | 35.1 | 9.1 | 36,720 | 2.77\% | 483 | 3,245 | 2.17 |
| 2008 | 11,228 | 7,313 | 44.2 | 35.2 | 9.0 | 37,725 | 2.74\% | 515 | 3,400 | 2.15 |

# OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM DISTRIBUTION OF ACTIVE MEMBERS 

## as of September 1, 2008

Males and Females

| Age | 0 to 4 | $\begin{gathered} 5 \text { to } \\ 9 \\ \hline \end{gathered}$ | 10 to 14 | 15 to 19 | $\begin{aligned} & \text { Service } \\ & 20 \text { to } 24 \end{aligned}$ | 25 to 29 | 30 to 34 | 35 \& Up | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Under 25 | 344 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 344 |
| 25 to 29 | 796 | 170 | 1 | 0 | 0 | 0 | 0 | 0 | 967 |
| 30 to 34 | 309 | 411 | 69 | 0 | 0 | 0 | 0 | 0 | 789 |
| 35 to 39 | 311 | 244 | 198 | 46 | 0 | 0 | 0 | 0 | 799 |
| 40 to 44 | 260 | 196 | 145 | 134 | 30 | 3 | 0 | 0 | 768 |
| 45 to 49 | 260 | 220 | 140 | 111 | 134 | 33 | 0 | 0 | 898 |
| 50 to 54 | 248 | 215 | 176 | 122 | 97 | 107 | 96 | 0 | 1,061 |
| 55 to 59 | 218 | 191 | 143 | 167 | 98 | 53 | 47 | 19 | 936 |
| 60 to 64 | 119 | 111 | 88 | 83 | 62 | 22 | 13 | 23 | 521 |
| 65 \& Up | 59 | 56 | 40 | 37 | 15 | 11 | 8 | 4 | 230 |
| Total | 2,924 | 1,814 | 1,000 | 700 | 436 | 229 | 164 | 46 | 7,313 |

Age Distribution


Service Distribution


# OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM SUMMARY OF DEFERRED VESTED MEMBERS 

as of September 1, 2008

| Age | Number |  |  | Monthly Benefit at Unreduced Retirement |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males | Females | Tota I |  | Males |  | Females |  | Total |
| Under 25 | 0 | 1 | 1 | \$ | - | \$ | 1,268 | \$ | 1,268 |
| 25 to 29 | 2 | 15 | 17 |  | 748 |  | 4,592 |  | 5,340 |
| 30 to 34 | 13 | 59 | 72 |  | 5,500 |  | 22,479 |  | 27,979 |
| 35 to 39 | 8 | 62 | 70 |  | 3,944 |  | 24,150 |  | 28,095 |
| 40 to 44 | 16 | 68 | 84 |  | 7,431 |  | 31,776 |  | 39,207 |
| 45 to 49 | 14 | 63 | 77 |  | 10,286 |  | 38,525 |  | 48,812 |
| 50 to 54 | 10 | 63 | 73 |  | 9,003 |  | 31,640 |  | 40,643 |
| 55 to 59 | 11 | 70 | 81 |  | 12,638 |  | 34,426 |  | 47,065 |
| 60 to 64 | 10 | 22 | 32 |  | 4,502 |  | 9,270 |  | 13,772 |
| 65 \& Up | 1 | 7 | 8 |  | 200 |  | 1,948 |  | 2,148 |
| Total | 85 | 430 | 515 | \$ | 54,253 | \$ | 200,075 | \$ | 254,328 |

Age Distribution


# OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM SUMMARY OF RETIRED MEMBERS AND BENEFICIARIES 

as of September 1, 2008

| Age | Number |  |  | Total Monthly Benefit |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males | Females | Total |  | Males |  | Females |  | Total |
| Under 50 | 13 | 15 | 28 | \$ | 10,042 | \$ | 8,684 | \$ | 18,727 |
| 50 to 54 | 4 | 7 | 11 |  | 7,708 |  | 3,966 |  | 11,674 |
| 55 to 59 | 105 | 251 | 356 |  | 292,506 |  | 643,777 |  | 936,283 |
| 60 to 64 | 226 | 425 | 651 |  | 577,847 |  | 904,291 |  | 1,482,138 |
| 65 to 69 | 231 | 470 | 701 |  | 487,177 |  | 728,394 |  | 1,215,570 |
| 70 to 74 | 179 | 400 | 579 |  | 327,225 |  | 538,961 |  | 866,186 |
| 75 to 79 | 126 | 305 | 431 |  | 190,609 |  | 340,033 |  | 530,642 |
| 80 to 84 | 102 | 236 | 338 |  | 153,275 |  | 247,067 |  | 400,342 |
| 85 to 89 | 46 | 138 | 184 |  | 54,357 |  | 133,191 |  | 187,548 |
| 90 to 94 | 15 | 60 | 75 |  | 11,601 |  | 48,177 |  | 59,778 |
| 95 \& Up | 4 | 42 | 46 |  | 2,601 |  | 27,935 |  | 30,536 |
| Total | 1,051 | 2,349 | 3,400 | \$ | 2,114,948 | \$ | 3,624,475 | \$ | 5,739,423 |

Age Distribution


Average Benefit


# OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM SUMMARY OF ACTIVE MEMBERS 

as of September 1, 2008

| Age | Number |  |  | Salaries |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males | Females | Total |  | Males |  | Females |  | Total |
| Under 25 | 60 | 284 | 344 | \$ | 1,430,809 | \$ | 6,131,093 | \$ | 7,561,902 |
| 25 to 29 | 215 | 752 | 967 |  | 7,375,566 |  | 24,385,135 |  | 31,760,701 |
| 30 to 34 | 207 | 582 | 789 |  | 8,068,329 |  | 22,409,079 |  | 30,477,408 |
| 35 to 39 | 210 | 589 | 799 |  | 9,062,243 |  | 21,935,553 |  | 30,997,796 |
| 40 to 44 | 181 | 587 | 768 |  | 8,237,219 |  | 21,675,468 |  | 29,912,687 |
| 45 to 49 | 217 | 681 | 898 |  | 9,854,281 |  | 24,894,932 |  | 34,749,213 |
| 50 to 54 | 257 | 804 | 1,061 |  | 10,484,198 |  | 30,479,374 |  | 40,963,572 |
| 55 to 59 | 229 | 707 | 936 |  | 11,607,265 |  | 28,700,058 |  | 40,307,323 |
| 60 to 64 | 144 | 377 | 521 |  | 6,387,691 |  | 15,610,675 |  | 21,998,366 |
| 65 \& Up | 92 | 138 | 230 |  | 2,835,924 |  | 4,320,032 |  | 7,155,956 |
| Total | 1,812 | 5,501 | 7,313 | \$ | 75,343,525 |  | 200,541,399 |  | 75,884,924 |

Average Salary by Age


