

**CITY OF OMAHA EMPLOYEES'  
RETIREMENT SYSTEM**

**Valuation Report  
as of January 1, 2009**

**CITY OF OMAHA EMPLOYEES' RETIREMENT SYSTEM  
ACTUARIAL VALUATION REPORT**

**Table of Contents**

|  | <b>PAGE</b> |
|--|-------------|
| <b>Letter of Transmittal</b>               |             |
| <b>Board Summary</b> .....                 | 1           |
| <b>Valuation Results</b>                   |             |
| Assets .....                               | 8           |
| Liabilities .....                          | 10          |
| Contributions.....                         | 12          |
| <b>Appendices</b>                          |             |
| A. Summary of Membership Data.....         | 13          |
| B. Summary of Plan Provisions .....        | 14          |
| C. Actuarial Methods and Assumptions ..... | 17          |



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October 21, 2009

The Board of Trustees  
City of Omaha Employees' Retirement System  
Omaha/Douglas Civic Center  
1819 Farnam Street  
Omaha, NE 68183

**Re: January 1, 2009 Actuarial Report**

Dear Members of the Board:

At your request, we have performed an annual actuarial valuation of the City of Omaha Employees' Retirement System as of January 1, 2009 for determining contributions for the year ended December 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 January 1, 2009.

In preparing this report, we relied, without audit, on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, plan provisions, member 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 principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board (ASB) and the applicable Guides to Professional Conduct, amplifying Opinions and Supporting Recommendations of 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 of future experience); and which, in combination, offer 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 B.

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 actuarial contribution rates for funding the System. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. Determinations for purposes other than these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work product was prepared exclusively for the City of Omaha Employees' Retirement System for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the Employees' Retirement System operations, and used data from the Employees' Retirement System, 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 professionals for advice appropriate to its own specific needs.

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

Respectfully Submitted,

MILLIMAN, Inc.

I, Gregg Rueschhoff, A.S.A. am a member of the American Academy of Actuaries and an Associate of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



Gregg Rueschhoff, A.S.A.  
Principal & Consulting Actuary

## Board Summary

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This report presents the results of the January 1, 2009 actuarial valuation of the City of Omaha Employees' Retirement System (the "System"). The primary purposes of performing the valuation are to:

- Determine the employer contribution rates required to fund the System on an actuarially sound basis,
- Disclose asset and liability measures as of January 1, 2009,
- Analyze and report on trends in System contributions, assets, and liabilities over the past year.

The valuation results provide a "snapshot" view of the System's financial condition on January 1, 2009. There was an increase in the Actuarial Contribution Rate from the last valuation. (Throughout this report we refer to the actuarially determined contribution rate as the Actuarial Contribution Rate). There was no change in the actuarial assumptions or actuarial methods from the prior year. One reason for the increase is due to the fact that actual contributions were less than the actuarially recommended rate since the last valuation. Other reasons include actuarial losses on plan experience that were somewhat offset by actuarial gains on net investment return. Each component of change in the Actuarial Contribution Rate is identified later in this Board Summary (see page 4).

## Board Summary

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### Assets

As of January 1, 2009, the System had total funds, when measured on an actuarial value basis, of \$245.3 million. This was a decrease of \$37.9 million from the January 1, 2008 figure of \$283.2 million. We expected an increase of \$8.2 million over that time period.

The components of the change in the actuarial value of assets (in millions) are set forth below:

|  | <i>Actuarial Value</i> | <i>Market Value</i> |
|--|------------------------|---------------------|
| Assets, January 1, 2008                | \$ 283.2               | \$ 294.7            |
| • employer and member contributions    | + 10.1                 | + 10.1              |
| • benefit payments                     | - 23.9                 | - 23.9              |
| • net investment income (expected)     | + 22.1                 | + 23.0              |
| • net investment actuarial gain/(loss) | <u>- 46.2</u>          | <u>- 99.4</u>       |
| Assets, December 31, 2008              | \$ 245.3               | \$ 204.5            |

The market value of assets is not used directly in the actuarial calculation of the Plan's funded status and the development of the Actuarial Contribution Rate. An asset valuation method is used to smooth the effects of market fluctuations. The actuarial value of assets is equal to the expected asset value (based on a rate of return equal to the actuarial assumed rate of 8.0%) plus 25% of the difference between the actual market value and the expected asset value. See page 9 for the detailed development of the actuarial value of assets as of January 1, 2009.

# Board Summary

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## Liabilities

The actuarial liability (also referred to as past service liability) is the portion of the present value of projected 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. 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 earned on the previous balance of the unfunded actuarial liability. Benefit improvements, actuarial gains and losses, and changes in actuarial assumptions and procedures will also impact the total actuarial liability and the unfunded portion thereof.

The calculation of the Unfunded Actuarial Liability as of January 1, 2009 is shown below:

|                                    |                        |
|------------------------------------|------------------------|
| Actuarial Liability                | \$ 389,986,183         |
| Actuarial Value of Assets          | <u>\$(245,343,007)</u> |
| Unfunded Actuarial Liability (UAL) | \$ 144,643,176         |

Between January 1, 2008 and January 1, 2009 the change in the unfunded actuarial liabilities for the System was as follows (in millions):

|  | <u>\$millions</u> |
|--|-------------------|
| Unfunded Actuarial Liability, January 1, 2008  | \$ 91.7           |
| • effect of contribution shortfall in 2008     | 3.8               |
| • expected increase due to amortization method | 1.2               |
| • (gain)/loss from investment return           | 46.2              |
| • demographic experience                       | 2.1               |
| • all other experience                         | (0.4)             |
| • change in actuarial assumptions              | 0.0               |
| • change in benefit provisions                 | 0.0               |
| Unfunded Actuarial Liability, January 1, 2009  | \$144.6           |

# Board Summary

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## Contributions

Under the Entry Age Normal Method, contributions to the System consist of:

- a “normal cost” for the portion of projected liabilities attributable to service of members during the year following the valuation date, and
- an “unfunded actuarial liability” contribution for the excess of the portion of projected liabilities allocated to service to date over assets on hand.

The System’s total actuarially determined contribution rate (payable as a % of member payroll) increased by **6.80%** of pay, to **31.46%** on January 1, 2009, from 24.66% on January 1, 2008. The primary components of this change are as follows:

|  | Rate        |
|--|-------------|
| Total Actuarial Contribution Rate, January 1, 2008 | 24.66%      |
| • Actuarial (Gain)/Loss – Investment Experience    | 6.10        |
| • Actuarial (Gain)/Loss – Demographic Experience   | 0.25        |
| • Benefit Improvements                             | 0.00        |
| • Assumption Changes                               | 0.00        |
| • Contributions of less than Actuarial Rate        | <u>0.45</u> |
| Total Actuarial Contribution Rate, January 1, 2009 | 31.46%      |

See page 12 for a detailed calculation of the Actuarial Contribution Rate as of January 1, 2009.

The Actuarial Contribution Rate increased from 24.66% of payroll on January 1, 2008 to 31.46% of payroll on January 1, 2009. This rate increased over the period by 6.80% of payroll due to investment losses during 2008, contributions less than the actuarial rate in 2008 and losses from demographic changes.



# Board Summary

## Observations

The actual contributions made to the System continue to be significantly less than the Actuarial Contribution Rate. The City's contribution rate is 9.525% of pensionable payroll. The member contribution rate is 8.325% of payroll. These result in a total contribution rate of 17.85%. The actual contribution to the System is 13.61% less than the Actuarial Contribution Rate developed in this valuation. In the last valuation report, we discussed the importance of closing this contribution shortfall. The situation still exists, and in fact continues to get worse. If all actuarial assumptions are met and current benefit structure and contributions remain unchanged, we expect, the System's funded status in future years will decline quickly and significantly and the Actuarial Contribution Rate will systematically increase.

The shortfall between the actual contribution rate (city and member) and the Actuarial Contribution Rate results in an increase in the Unfunded Actuarial Liability and a corresponding increase in the Actuarial Contribution Rate. Under the current schedule of contribution rates, the shortfall is expected to increase in future years. The table on page 4 provides a reconciliation of the change in the Actuarial Contribution Rate from the prior valuation. As that table illustrates, the Actuarial Contribution Rate in the current valuation is 0.45% higher due to actual contributions less than the Actuarial Contribution Rate (as measured from the January 1, 2008 report). If all actuarial assumptions are met in the future, the contribution shortfall will increase and its impact on the Actuarial Contribution Rate will also increase, possibly significantly. We strongly recommend that the contribution shortfall between the actual contribution rate and the Actuarial Contribution Rate be addressed and measures be taken to eliminate it. The longer action is delayed to address this funding shortfall, the higher the ultimate contribution rate will be.

As mentioned earlier, the System utilizes an asset smoothing method in the valuation process. While this is a common procedure for public retirement systems, it is important to identify the potential impact of the deferred (unrecognized) investment experience. The key valuation results from the January 1, 2009 actuarial valuation are shown below using both the actuarial value of assets and the pure market value.

|                              | <b>\$ Millions</b>                         |   |
|------------------------------|--|---|
|                              | <b>Using Actuarial<br/>Value of Assets</b> | <b>Using Market<br/>Value of Assets</b> |
| Actuarial Liability          | \$389.9                                    | \$389.9                                 |
| Asset Value                  | 245.3                                      | 204.5                                   |
| Unfunded Actuarial Liability | \$144.6                                    | \$185.4                                 |
| Funded Ratio                 | 62.9%                                      | 52.4%                                   |
| Normal Cost Rate             | 13.8%                                      | 13.8%                                   |
| UAL Contribution Rate        | 17.7%                                      | 22.7%                                   |
| Actuarial Contribution Rate  | 31.5%                                      | 36.5%                                   |

The asset smoothing method impacts only the timing of recognizing the actual market experience on the assets. Due to the significant negative return in 2008, the actuarial value of assets exceeds the pure market value by 20%. If there are not significantly higher returns consistently over the next few years, the \$41 million of deferred investment experience will be recognized and the ultimate impact on the employer contribution rate can be expected to be similar to the column shown above using market value of assets.

# Board Summary

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## Summary of Principal Results

|                                   | <i>January 1,<br/>2008<br/><u>Valuation</u></i> | <i>January 1,<br/>2009<br/><u>Valuation</u></i> |
|-----------------------------------|---|---|
| <b>1. Participant Data</b>        |   |   |
| Number of:                        |   |   |
| Active Members                    | 1,125   | 1,116   |
| Service Retirements               | 845   | 864   |
| Surviving Spouses and Children    | 253   | 257   |
| Disabled                          | 125   | 122   |
| Deferred Vested                   | <u>79</u>                                       | <u>81</u>                                       |
| Total                             | 2,427   | 2,440   |
| Annual Salaries of Active Members | \$52,278,938                                    | \$53,004,716                                    |
| Average Per Member                | 46,470  | 47,495  |
| <b>2. Assets and Liabilities</b>  |   |   |
| Total Actuarial Liability         | \$374,918,443                                   | \$389,986,183                                   |
| Market Value of Assets            | 294,658,022                                     | 204,452,506                                     |
| Actuarial Value of Assets         | 283,243,750                                     | 245,343,007                                     |
| Unfunded Actuarial Liability      | 91,674,693                                      | 144,643,176                                     |
| Funded Ratios:                    |   |   |
| On Market Value                   | 78.6%   | 52.4%   |
| On Actuarial Value                | 75.5%   | 62.9%   |

## Change in Net Plan Assets at Market Value Increases since January 1, 2008

|   |                       |
|---|-----------------------|
| <b>Assets at January 1, 2008</b>                  | \$294,658,022         |
| <b>Receipts:</b>                                  |                       |
| City Contributions                                | 5,374,082             |
| Employee Contributions                            | 4,695,162             |
| Investment Income                                 | (74,581,511)          |
| <b>Total Receipts</b>                             | <b>\$(64,512,267)</b> |
| <b>Disbursements:</b>                             |                       |
| Benefits Paid to Members                          | \$23,943,022          |
| Investment Fees                                   | 1,739,834             |
| Other   | 10,393                |
| <b>Total Disbursements</b>                        | <b>\$25,693,249</b>   |
| <b>Assets at December 31, 2008 (Market Value)</b> | <b>\$204,452,506</b>  |
| <b>Annualized Yield</b>                           |                       |
| - Gross   | -26.0%                |
| - Net of Expenses                                 | -26.5%                |

## Actuarial Value of Assets

Neither the market value of assets, representing a “cash-out” value of Plan 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 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. The specific technique follows:

- Step 1:** Determine the expected value of plan assets at the current valuation date using the actuarial assumption for investment return and the actual receipts and disbursements of the fund since the previous actuarial valuation.
- Step 2:** Subtract the expected value determined in Step 1 from the total market value of the Fund at the current valuation date.
- Step 3:** Multiply the difference between market and expected values determined in Step 2 by 25%.
- Step 4:** Add the expected value of Step 1 and the product of Step 3 to determine the actuarial value of assets.

|    |   |    |              |
|----|---|----|--------------|
| 1. | Actuarial Value of Assets as of January 1, 2008                               | \$ | 283,243,750  |
| 2. | Actual Receipts/Disbursements   |    |              |
|    | a. Total Contributions  |    | 10,069,244   |
|    | b. Benefit Payments   |    | (23,943,022) |
|    | c. Net Change   |    | (13,873,778) |
| 3. | Expected Investment Earnings  |    | 22,115,225   |
| 4. | Expected Actuarial Value of Assets as of January 1, 2009                      |    | 291,485,197  |
| 5. | Market Value as of January 1, 2009  |    | 204,452,506  |
| 6. | Difference Between Market and Expected Values (5 - 4)                         |    | (87,032,691) |
| 7. | Preliminary Actuarial Value of Assets as of January 1, 2009<br>(4 + 25% of 6) |    | 269,727,024  |
| 8. | Actuarial Value of Assets after 20% Corridor Applied                          | \$ | 245,343,007  |

## Liabilities

### Actuarial Valuation Detail Actuarial Balance Sheet

An actuarial statement of the status of the plan in balance sheet form as of January 1, 2008 and January 1, 2009 is as follows:

|                                      | <u>January 1, 2008</u> | <u>January 1, 2009</u> |
|--------------------------------------|------------------------|------------------------|
| <b>Assets</b>                        |                        |                        |
| Fund                                 | \$283,243,750          | \$245,343,007          |
| Present Value of Future Normal Costs | 48,810,602             | 49,792,281             |
| Unfunded Actuarial Liability         | 91,674,693             | 144,643,176            |
| <b>Total</b>                         | <b>\$423,729,045</b>   | <b>\$439,778,464</b>   |
| <b>Liabilities</b>                   |                        |                        |
| Inactive Members:                    |                        |                        |
| Service Retirements                  | \$191,689,283          | \$202,060,753          |
| Disability Retirements               | 22,477,102             | 22,359,554             |
| Surviving Spouses and Children       | 19,675,072             | 24,323,972             |
| Lump Sum Death Benefits              | 1,743,129              | 1,744,605              |
| Terminated Vested                    | 5,756,725              | 5,943,483              |
| <b>Total Inactives</b>               | <b>\$241,341,311</b>   | <b>\$256,432,367</b>   |
| Active Members:                      |                        |                        |
| Service Retirements                  | \$165,498,451          | \$166,440,406          |
| Disability Retirements               | 8,081,171              | 8,138,380              |
| Death Benefits                       | 2,190,581              | 2,175,644              |
| Withdrawal Benefits                  | 6,617,531              | 6,591,667              |
| <b>Total Active</b>                  | <b>\$182,387,734</b>   | <b>\$183,346,097</b>   |
| <b>Total</b>                         | <b>\$423,729,045</b>   | <b>\$439,778,464</b>   |

## Actuarial Valuation Detail

### UNFUNDED ACTUARIAL LIABILITY

The actuarial liability is the portion of the present value of future benefits which will not be paid by future normal costs. The actuarial value of assets is subtracted from the actuarial liability to determine the unfunded actuarial liability.

|  |                |
|--|----------------|
| 1. Present Value of Future Benefits          | \$ 439,778,464 |
| 2. Present Value of Future Normal Costs      | 49,792,281     |
| 3. Actuarial Liability<br>(1) – (2)          | 389,986,183    |
| 4. Actuarial Value of Assets                 | 245,343,007    |
| 5. Unfunded Actuarial Liability<br>(3) – (4) | \$ 144,643,176 |

# Contributions

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## Actuarial Valuation Detail

### DEVELOPMENT OF ACTUARIAL 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. The Plan is financed by contributions from the employees and the City.

|  |               |
|--|---------------|
| 1. (a) Normal Cost   | \$ 7,264,242  |
| (b) Covered Payroll for Members Under<br>Assumed Retirement Age  | \$ 52,715,835 |
| (c) Normal Cost Rate<br>(a) / (b)  | 13.78%        |
| 2. Unfunded Actuarial Liability/(Surplus)<br>at Valuation Date   | \$144,643,176 |
| 3. Amortization Factor to Pay UAL as a<br>Level Percent of Payroll over 23 Years                                 | 15.666        |
| 4. Unfunded Actuarial Liability/(Surplus) Payment<br>(Adjusted to Mid-Year)<br>[(2) / (3)] x 1.08 <sup>1/2</sup> | \$ 9,595,149  |
| 5. Total Projected Payroll for the Year  | \$ 54,267,686 |
| 6. Unfunded Actuarial Liability Payment<br>as a Percent of Payroll<br>[(4) / (5)]                                | 17.68%        |
| 7. Total Contribution as a Percent of Pay<br>[(1c) + (6)]  | 31.46%        |



## Appendix A

## Summary of Membership Data

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|                                    | <u>January 1, 2008</u> | <u>January 1, 2009</u> |
|------------------------------------|------------------------|------------------------|
| <b>ACTIVE MEMBERS</b>              |                        |                        |
| Total Reported Annual Compensation | \$52,278,938           | \$53,004,716           |
| Average Per Member                 | 46,470                 | 47,495                 |
| Average Attained Age               | 47.1                   | 47.3                   |
| Average Hire Age                   | 35.9                   | 36.4                   |
| Average Past Service               | 11.2                   | 10.9                   |
| <b>NON-ACTIVE MEMBERS</b>          |                        |                        |
| Service Retirements                | 845                    | 864                    |
| Surviving Spouses & Children       | 253                    | 257                    |
| Deferred Vested                    | 79                     | 81                     |
| Disabled                           | 125                    | 122                    |
| <b>Annual Pension Benefit</b>      |                        |                        |
| Service Retirements                | \$ 18,790,315          | \$ 19,942,654          |
| Surviving Spouses                  | 2,522,606              | 2,742,929              |
| Disabled                           | 2,169,412              | 2,191,473              |
| <b>Average Attained Age</b>        |                        |                        |
| Service Retirees                   | 67.3                   | 67.3                   |
| Disability Retirees                | 59.6                   | 59.7                   |
| Surviving Spouses                  | 79.0                   | 74.6                   |

## Appendix B

## Summary of Plan Provisions

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|  |  |
|--|--|
| <b>Effective Date:</b><br>Section 22-21                    | January 1, 1949.   |
| <b>Active Member:</b><br>Section 22-24 & 25                | All City employees except: policemen; firemen; persons paid on a contractual or fee basis; seasonal, temporary and part-time employees; and elective officials who do not make written application.  |
| <b>Average Final Monthly Compensation</b><br>Section 22-23 | The member's highest consecutive 26 pay periods of compensation during the final 130 pay periods of service as a member, divided by 12.  |
| <b>Member Contributions:</b><br>Section 22-26(a)           | Each member will contribute 8.325% of total compensation. Interest is currently credited at 3.0% on member contributions.  |
| <b>City of Omaha Contributions</b><br>Section 22-26(e)     | The City will contribute an amount equal to 9.525% of each member's total compensation.  |
| <b>Service Credits:</b><br>Section 22-28 and 29            | <p>The member shall receive membership service credit for each full pay period of employment. Intervening periods of military service in time of emergency shall be counted provided the member is honorably discharged and returns to work within 90 days after such discharge.</p> <p>Membership credits shall be earned by those receiving a disability pension. However, the total credited service will not exceed 30, unless more than 30 years were earned as an active member.</p> |
| <b>Service Retirement Eligibility:</b><br>Section 22-30    | A member is eligible to retire after age 50 if their age plus service is 80 or more. Otherwise, a member is eligible to retire after age 55 and 5 years of service. The pension is reduced 8% for years prior to age 60. No reduction applies if age plus service is 80 or more.   |

**Service Retirement Pension:**  
**Section 22-32**

A monthly pension equal to 2.25% of Average Final Monthly Compensation times years of credited service.

**Disability Benefits:**  
**Section 22-35**

If permanently disabled with five years of service, the member shall receive 60% of final monthly compensation offset by Social Security and workers' compensation benefits. Payment for all medical, surgical and hospital expenses incurred is made if disability is service related. Not payable while full salary continues.

**Spouse's Pension:**

**1. Death of Active Member:**  
**Section 22-36**

A monthly pension equal to 75% of the member's accrued pension is paid to the surviving spouse until death or remarriage. The member must have had five years of service or had a service-connected death and six months of service.

**2. Death of Member Eligible for Retirement or Death of Retired Member**  
**Section 22-36**

If legally married to the member for at least one year, surviving spouse shall be entitled to 75% of the pension the member was receiving or was eligible to receive at the time of death. Upon the spouse's remarriage, all benefits cease.

**Children's Pension:**  
**Section 22-36**

Upon the death of an active or retired member, the following benefit will be paid to the surviving children until age 18 or prior to death or marriage, except that if a child is totally disabled, the full pension continues until the cessation of total disability or dependency for support, whichever occurs first:

| <u>Number of<br/>Dependent Children</u> | <u>Percentage<br/>of Accrued Benefit</u> |
|---|--|
| 1                                       | 5%                                       |
| 2                                       | 10%                                      |
| 3                                       | 15%                                      |
| 4 or more                               | 20%                                      |

**Lump Sum Death Benefits:**

- |   |  |
|---|--|
| 1. Active Member without Eligible Dependents:<br>Section 22-37  | Accumulated member's contributions, plus \$5,000.                                    |
| 2. Retired Member Without Eligible Dependents:<br>Section 22-37 | Accumulated member's contribution less previous pension payments made, plus \$5,000. |
| 3. Active Member with Eligible Dependents:<br>Section 22-37     | \$5,000.   |
| 4. Retired Member with Eligible Dependents:<br>Section 22-37    | \$5,000.   |

**Vesting:**

Section 22-39

Upon severance of employment by a member with less than 5 years of service and prior to obtaining eligibility under Section 22-30, a refund of such member's accumulated contributions, including credited interest, will be paid.

Section 22-40

Upon severance of employment by a member with more than 5 years of service and prior to obtaining eligibility for retirement, the member may elect, in lieu of receiving a refund of contributions, to receive a monthly pension, reduced for early retirement if applicable, commencing at or above age 55. Such deferred pension shall be based on service credited to the date of severance.

**Supplemental Pension:**

Section 22-123

Retirees (including widows, widowers and children) receive a supplemental pension (Cost of Living Adjustment - COLA) after five years equal to the lesser of 3% or \$50 per month. The COLA is granted for the full remaining period that benefits are payable. No COLA's will be available for members who retire after January 28, 1998.

### ACTUARIAL METHOD

Valuation of the plan use the “*entry age-normal*” cost method. Under this actuarial method, the value of future costs attributable to future employment of participants is determined. This is called present value of future normal costs. The following steps indicate how this is determined for benefits expected to be paid upon normal retirement.

1. The expected pension benefit at normal retirement is determined for each participant.
2. A normal cost, as a level percent of pay, is determined for each participant assuming that such level percent is paid from the employee’s entry age into employment to his normal retirement. This normal cost is determined so that its accumulated value at normal retirement is sufficient to provide the expected pension benefits.
3. The sum of the normal costs for all participants for one year determines the total normal cost of the plan for one year.
4. The value of future payments of normal cost in future years is determined for each participant based on his years of service to normal retirement age.
5. The sum of the value of future payments of normal cost for all participants determines the present value of future costs.

The value of future costs attributable to past employment of participants, which is called the accrued liability, is equal to the present value of benefits less the present value of future normal costs. The unfunded accrued liability is equal to the excess of the accrued liability over assets. The unfunded accrued liability is amortized as a level percent of pay over the 30 year period beginning January 1, 2002 and ending January 1, 2032.

As experience develops with the plan, actuarial gains and actuarial losses result. These actuarial gains and losses indicate the extent to which actual experience is deviating from that expected on the basis of the actuarial assumptions. In each year, as they occur, actuarial gains and losses are recognized in the unfunded accrued liability as of the valuation date.

## ACTUARIAL ASSUMPTIONS

**Interest:** 8.0% per year, net of investment expenses.

**Inflation:** 3.5% per year, net of investment expenses.

**Salary Increases:**

| <u>Years of Service</u> | <u>Annual Rate of Increase For Sample Years</u> |                     |                              | <u>Total Increase</u> |
|-------------------------|---|---------------------|------------------------------|-----------------------|
|                         | <u>Inflation</u>                                | <u>Productivity</u> | <u>Merit &amp; Longevity</u> |                       |
| 1                       | 3.5%  | .5%                 | 6.0%                         | 10.0%                 |
| 5                       | 3.5%  | .5%                 | 2.5%                         | 6.5%                  |
| 10                      | 3.5%  | .5%                 | 1.0%                         | 5.0%                  |
| 15                      | 3.5%  | .5%                 | 0.5%                         | 4.5%                  |
| 20+                     | 3.5%  | .5%                 | 0.0%                         | 4.0%                  |

**Payroll Growth Assumption:** 4.0%

**Service Retirement Age:**

### Eligible for Unreduced Retirement

| <u>Age</u> | <u>1st Year Eligible</u> | <u>Subsequent Years</u> |
|------------|--------------------------|-------------------------|
| 50         | 25%                      | 20%                     |
| 52-53      | 25%                      | 20%                     |
| 54-55      | 35%                      | 25%                     |
| 56-57      | 45%                      | 30%                     |
| 58-59      | 50%                      | 25%                     |
| 60         | 25%                      | 25%                     |
| 61         |                          | 25%                     |
| 62         |                          | 35%                     |
| 63         |                          | 25%                     |
| 64         |                          | 25%                     |
| 65-69      |                          | 50%                     |
| 70         |                          | 100%                    |

Members eligible for Early, but not Unreduced Retirement are assumed to retire at a rate of 5% per year from age 55 to 59.

**Mortality:**

**Active Members**

RP-2000 Employee Table with generational improvements, set forward one year.

**Pensioners**

RP-2000 Healthy Annuitant Table with generational improvements, set forward one year.

**Disabled**

RP-2000 Disabled Table with generational improvements.

Disability:

| <u>Age</u> | <u>Annual Rate</u> |
|------------|--------------------|
| 20         | 0.11%              |
| 30         | 0.14%              |
| 40         | 0.19%              |
| 50         | 0.41%              |
| 60         | 1.48%              |

Percent Married at Death  
or Retirement:

75%

Number of Children  
per Married Member:

0

Turnover:

SAMPLE RATES

| <u>Years of Service</u> | <u>Annual Rate</u> |
|-------------------------|--------------------|
| 1                       | 15%                |
| 5                       | 7%                 |
| 10                      | 3%                 |
| 11+                     | 2.5%               |

Assets:

Actuarial value of assets equals  $\frac{3}{4}$  of Expected Value, plus  $\frac{1}{4}$  of Market Value.