Gabriel Roeder Smith & Company
Consultants & Actuaries

# ARIZONA ELECTED OFFICIALS' RETIREMENT PLAN CONSOLIDATED REPORT

## JUNE 30, 2014

GRS

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October 16, 2014

The Board of Trustees
Arizona Elected Officials' Retirement Plan
Phoenix, Arizona

**Re: Arizona Elected Officials' Retirement Plan Actuarial Valuation as of June 30, 2014**

Ladies and Gentlemen:

The results of the June 30, 2014 annual actuarial valuation of members covered by the Arizona Elected Officials' Retirement Plan (EORP) are presented in this report. The purpose of the valuation was to measure the System's funding progress, provide actuarial information in connection with applicable Governmental Accounting Standards Board Statements and to determine the employer contribution for the 2015-2016 fiscal year. The funding objective is stated in Article 4, Chapter 5, Title 38, Sections 843B and 848N of the Arizona Revised Statutes. This report should not be relied upon for any other purpose. This report may be distributed to parties other than the System only in its entirety and only with the permission of the Board.

The valuation was based upon information, furnished by the State Retirement System, concerning Retirement System benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. Data was checked for internal and year to year consistency, but was not otherwise audited by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the data provided.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the applicable state statutes. Mark Buis, James D. Anderson and Francois Pieterse are independent of the plan sponsor and are Members of the American Academy of Actuaries (MAAA) who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. It is our opinion that the actuarial assumptions used for the valuation produce results which are reasonable.

Respectfully submitted,

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James D. Anderson
FSA, EA, MAAA

Francois Pieterse
ASA, MAAA

MB/JDA:sc

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# EXECUTIVE SUMMARY/BOARD SUMMARY

## 1. Required Employer Contributions to Support Retirement Benefits

The computed employer contribution and funded status for the fiscal year beginning July 1, 2015 is shown below. Please note that the actual contribution will now be made on a statutorily required contribution basis (as described on page A-3).

| EORP | Pension | Health | Total |
|---|---|---|---|
| Employer Contribution Rate | 86.54% | 0.00 % | 86.54% |
| Funded Status | 39.4% | 190.8% | 41.6% |

## 2. Contribution Rate Comparison

The chart below compares the results of this valuation of the Retirement Plan with the results of the prior year's valuation:

| Valuation Date | Pension | Health | Total |
|---|---|---|---|
| 6/30/2013 | 55.29% | 2.20% | 57.49% |
| 6/30/2014 | 86.54% | 0.00 % | 86.54% |

Please note that the pension contribution rate increased significantly. This arose primarily due to the repeal of certain aspects of SB1609 which resulted in much larger recognition of liabilities related to projected Permanent Benefit Increases (PBI). The contribution rate also increased due to the continued recognition of 2008-2009 asset losses.

## EXECUTIVE SUMMARY/BOARD SUMMARY

### 3. Reasons for Change

Changes in the contribution rate and funded status are illustrated on the following charts.

| Contribution Rate | Pension | Health | Total |
|---|---|---|---|
| Contribution Rate Last Valuation | 55.29% | 2.20% | 57.49% |
| PBI Effect | 22.88% | N/A | 22.88% |
| Asset Losses | 2.62% | N/A | 2.62% |
| Transfer of Assets to Health | 3.15% | (3.15)% | 0.00% |
| Other | 2.60% | 0.95% | 3.55% |
| Contribution Rate This Valuation | 86.54% | 0.00% | 86.54% |

| Funded Status | Pension | Health | Total |
|---|---|---|---|
| Funded Status Last Valuation | 56.5% | 0.0% | 55.5% |
| PBI Effect | (10.2)% | N/A | (10.2)% |
| Asset Losses | (2.4)% | N/A | (2.4)% |
| Transfer of Assets to Health | (2.6)% | 190.8% | 0.0% |
| Other | (1.9)% | 0.0% | (1.3)% |
| Funded Status This Valuation | 39.4% | 190.8% | 41.6% |

The PBI effect is the result of increases in liability due to the reversal of SB1609. Asset losses are based on 7-year smoothing of assets and therefore primarily attributable to the market downturn in 2008-2009. A transfer of Assets to the Health Plan was also made this year. In accordance with IRS rules, assets dedicated to pay retiree health care benefits must be segregated from assets dedicated to pay pension benefits. The Board of Trustees provided this asset split for the year ending June 30, 2014. This resulted in an increase in the pension contribution with an equivalent decrease in the health contribution.

## EXECUTIVE SUMMARY/BOARD SUMMARY

**4. Plan Experience**

Experience during the year ended June 30, 2014 was overall unfavorable. On a market value basis, the System's return for the year ended June 30, 2014 was 13.1%. However, the market value smoothing techniques used in this valuation of the System recognize both past and present investment gains and losses. The resulting actuarial asset yield for the year was 2.3%. The effects of the asset losses were partially offset by gains attributable to demographic experience. Detailed information related to System experience is shown on page B-2.

**5. Looking Ahead**

The continuing effect of prior losses was dampened by the 7-year smoothing period, and further offset by the effect of lower than expected pay increases. There remains $6 million of unrecognized investment losses that will, in the absence of other gains, put upward pressure on the contribution rate next year. Next year is the last year of the recognition of the 2008/2009 asset loss.

In 2014 the Society of Actuaries published new mortality tables which include mortality improvement scales. While these tables were not developed specifically for the Public Sector, we recommend that the mortality assumption be reviewed in conjunction with the next regularly scheduled experience study.

**6. Conclusion**

The reversal of some of the provisions in SB1609 due to the Fields decision resulted in a significant increase in the contribution rate. If pending litigation in the Hall case is ruled in favor of the plaintiffs, contribution rates will increase again next year. The statutory contribution of 23.50% of aggregate payroll was instituted prior to the Fields decision. We recommend that this rate be reviewed to reflect the recent court rulings on benefit provisions.

The retired lives are less than fully funded on a funding value of assets basis, but are much less than fully funded based upon the market value of assets. It is most important that this plan receive contributions at least equal to the rates shown in this report.

# SECTION A

## INTRODUCTION

## FUNDING OBJECTIVE

The purpose of the annual actuarial valuation of the Arizona Elected Officials' Retirement Plan as of June 30, 2014 is to:

- Compute the liabilities associated with benefits likely to be paid on behalf of current retired and active members. This information is contained in Section B.
- Compare accrued assets with accrued liabilities to assess the funded condition. This information is contained in Section B.
- Compute the employers' recommended contribution rates for the Fiscal Year beginning July 1, 2015. This information is contained in Section A.

This objective is stated in Article 4, Chapter 5, Title 38, Sections 843B and 848N of the Arizona Revised Statutes.

## CONTRIBUTION RATES

The Retirement Plan is supported by member contributions, employer contributions and investment income from Retirement Plan assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

(1) Cover the actuarial present value of benefits allocated to the current year by the actuarial cost method described in Section E (the normal cost); and

(2) Finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (the unfunded actuarial accrued liability).

***Computed contribution rates*** for the fiscal year beginning July 1, 2015 are shown on page A-2.

# CONTRIBUTION REQUIREMENTS

### Development of Employer Contributions for the Indicated Valuation Date

| | June 30, 2013 | June 30, 2014 |
|---|---|---|
| Contribution for Fiscal Year Ending | 2015 | 2016 |
| **Pension** | | |
| Normal cost requirement | | |
| Service pensions | 22.32% | 23.10% |
| Disability pensions | 0.08 | 0.08 |
| Survivors of active members | 0.66 | 0.68 |
| Refunds of members' accumulated contributions | 0.84 | 0.84 |
| Total normal cost requirement | 23.90% | 24.70% |
| Employee Contributions | | |
| Total employee rate | 13.00% | 13.00% |
| Less portion used to pay down unfunded liability | 6.00 | 6.00 |
| Net employee rate | 7.00% | 7.00% |
| Employer normal cost requirement | 16.90% | 17.70% |
| Amortization of unfunded liabilities | 38.39% | 68.84% |
| **Total recommended pension contribution rate** | 55.29% | 86.54% |
| **Health** | | |
| Normal cost requirement | 0.59% | 0.59% |
| Amortization of unfunded liabilities | 1.61% | (0.59)% |
| **Total health contribution requirement** | 2.20% | 0.00% |
| **Total contribution rate** | **57.49%** | **86.54%** |
| **Estimated Dollar Pension Contribution** | **$ 37,323,403** | **$ 59,142,210** |
| **Estimated Dollar Health Contribution** | **$ 1,485,105** | **$ -** |

Actuarial accrued liability, $808,357,273, exceeded the funding value of assets, which was $336,494,898. The resulting unfunded actuarial accrued liabilities (after netting out the maintenance of effort reserve of $10,573,115 from the actuarial value of assets) were amortized as a level dollar over a closed period of 22 years ending June 30, 2037 and added to the employer normal cost. The 22 year period is a one year decrease from last year. This method is appropriate for plans that are closed to new hires. The actual funding contribution is now defined under statute (as described on the following page).

## CONTRIBUTION REQUIREMENTS

**Contribution Amounts per Section 38-810, Arizona Revised Statutes:** Beginning January 1, 2014 and continuing for 30 years, employer contributions equal 23.5% of aggregate payroll. Aggregate payroll is on behalf of active members in the Arizona Elected Official's Retirement Plan (EORP) and active members in the Elected Officials' Defined Contribution Retirement System (EODCRS), and active members in the Arizona State Retirement System (ASRS) who opt out of EODCRS because they had money on account with ASRS. The employer contributions are used to pay for:

1) EORP Defined Benefits = Employer Normal Cost plus an amount to amortize the unfunded accrued liability; and
2) EODCRS Defined Contribution = 6% of pay for those electing EODCRS, first effective January 1, 2014; and
3) ASRS Defined Benefits = Employer's contribution amount.

Additionally, in fiscal years 2013-2014 through 2042-2043, the sum of $5,000,000 is appropriated in each fiscal year from the state general fund to EORP to supplement the Normal Cost plus an amount to amortize the unfunded accrued liability.

Based on the June 30, 2014 payroll of $68,340,894 and on court fees received during 2013-2014 in the amount of $8,540,583 the estimated employer contribution for the fiscal year ending in June 30, 2016 will be **$30,911,198**.

**The aggregate contribution rate of 23.50% of payroll was instituted prior to the Fields decision. If contributions are not increased, assets are likely to be depleted in the next 20 years. We recommend the rate be reviewed to reflect recent court decisions.**

## HISTORICAL SUMMARY OF RECOMMENDED EMPLOYER PENSION RATES

| Valuation Date June 30 | Fiscal Year Ending June 30 | Normal Cost | Unfunded Actuarial Accrued Liability | Total |
|---|---|---|---|---|
| 2005 | 2007 | 22.57% | 1.70% | 24.27% |
| 2006 | 2008 | 16.59 | 3.62 | 20.21 |
| 2007 | 2009 | 18.46 | 9.54 | 28.00 |
| 2008 | 2010 | 17.34 | 8.91 | 26.25 |
| 2009 | 2011 | 18.51 | 11.28 | 29.79 |
| 2010 | 2012 | 18.52 | 14.47 | 32.99 |
| 2011 | 2013 | 17.33 | 19.11 | 36.44 |
| 2012 | 2014 | 18.31 | 21.31 | 39.62 |
| 2013 | 2015 | 17.49 | 40.00 | 57.49 |
| **2014*** | **2016** | **17.70** | **68.84** | **86.54** |

** Beginning with the June 30, 2014 valuation the rates are for pension only.*

2005 results were revised pursuant to changes enacted by the 2006 Legislature and the EORP Board of Trustees.

The statutory minimum employer contribution is 10% of payroll.

Results prior to 2009 were calculated by the prior actuary.

## HISTORICAL SUMMARY OF RECOMMENDED EMPLOYER HEALTH RATES

| Valuation Date June 30 | Fiscal Year Ending June 30 | Normal Cost | Unfunded Actuarial Accrued Liability | Total |
|---|---|---|---|---|
| **2014** | **2016** | **0.59%** | **(0.59)%** | **0.00 %** |

# SECTION B

## FUNDING RESULTS

## PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY

| | June 30, 2013 | June 30, 2014 |
|---|---|---|
| **Pension** | | |
| A. Accrued Liability | | |
| 1. For retirees and beneficiaries | $ 423,992,661 | $ 576,014,997 |
| 2. For vested terminated members | 6,299,387 | 6,262,087 |
| 3. For present active members | | |
| a. Value of expected future benefit payments | 278,124,096 | 302,680,301 |
| b. Value of future normal costs | 87,525,644 | 88,711,847 |
| c. Active member accrued liability: (a) - (b) | 190,598,452 | 213,968,454 |
| 4. Total accrued liability | 620,890,500 | 796,245,538 |
| B. Present Assets (Funding Value) | 350,884,652 | 313,381,951 |
| C. Unfunded Accrued Liability: (A.4) - (B) | 270,005,848 | 482,863,587 |
| D. Funding Ratio: (B) / (A.4) | 56.5% | 39.4% |
| **Health** | | |
| A. Accrued Liability | | |
| 1. For retirees and beneficiaries | $ 7,518,741 | $ 7,683,506 |
| 2. For present active members | | |
| a. Value of expected future benefit payments | 6,191,354 | 6,406,196 |
| b. Value of future normal costs | 2,063,663 | 1,977,967 |
| c. Active member accrued liability: (a) - (b) | 4,127,691 | 4,428,229 |
| 3. Total accrued liability | 11,646,432 | 12,111,735 |
| B. Present Assets (Funding Value) | - | 23,112,947 |
| C. Unfunded Accrued Liability: (A.3) - (B) | 11,646,432 | (11,001,212) |
| D. Funding Ratio: (B) / (A.3) | 0.0% | 190.8% |

# DERIVATION OF EXPERIENCE GAIN/(LOSS)

Actual experience will never (except by coincidence) exactly match assumed experience. Gains and losses often cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below, along with a year-by-year comparative schedule.

| | June 30, | |
|---|---|---|
| | 2013 | 2014** |
| (1) UAAL* at start of year | $253,882,794 | $292,448,392 |
| (2) Normal cost from last valuation | 17,385,156 | 16,649,370 |
| (3) Actual Contributions | 31,099,560 | 38,909,650 |
| (4) Interest Accrual | 19,762,049 | 22,083,483 |
| (5) Expected UAAL before changes: (1) + (2) - (3) + (4) | 259,930,439 | 292,271,595 |
| (6) Changes from benefit increases, methods and assumptions | 6,715,993 | 170,547,893 |
| (7) Change in reserve for future pension increases | - | 6,727,741 |
| (8) Expected UAAL after changes: (5) + (6) + (7) | 266,646,432 | 469,547,229 |
| (9) Actual UAAL at end of year | 281,652,280 | 482,863,587 |
| (10) Experience Gain/(Loss): (8) - (9) | (15,005,848) | (13,316,358) |

** Unfunded Actuarial Accrued Liabilities.*
*** Pension only beginning with the June 30, 2014 valuation.*

**FY2014 Gains and Losses by Source**

| | Gain/(Loss) | % of Liabilities |
|---|---|---|
| Investment Return | $(17,959,755) | -2.9% |
| Salary Increases | 5,057,083 | 0.8% |
| Retirement | 2,737,860 | 0.5% |
| Turnover | (1,609,462) | -0.3% |
| Disability | (151,454) | 0.0% |
| Death-in-Service | 99,079 | 0.0% |
| Retiree Mortality | (1,124,924) | -0.2% |
| Other | (364,785) | 0.0% |
| Total | (13,316,358) | -2.1% |

# UNFUNDED ACTUARIAL ACCRUED LIABILITIES COMPARATIVE STATEMENT

(Dollar amounts in $'000s)

## Pension

| Valuation Date | (1) Actuarial Accrued Liabilities (AAL) | (2) Valuation Assets | (3) Unfunded AAL | (5) Funded Ratio (2)/(1) | (6) Financing Period | (7) Payroll | Liability Ratio (8) Unfunded (3)/(7) | Liability Ratio (9) Total (1)/(7) |
|---|---|---|---|---|---|---|---|---|
| 2005 | $360,758 | $344,604 | $ 16,154 | 95.5% | 20 yrs. | $ 53,449 | 30.2% | 675.0% |
| 2006 | 391,403 | 351,701 | 39,702 | 89.9 | 30 | 54,696 | 72.6 | 715.6 |
| 2007 | 451,299 | 336,717 | 114,582 | 74.6 | 29 | 61,308 | 186.9 | 736.1 |
| 2008 | 454,340 | 348,013 | 106,327 | 76.6 | 28 | 62,184 | 171.0 | 730.6 |
| 2009 | 506,191 | 360,950 | 145,241 | 71.3 | 27 | 67,777 | 214.3 | 746.8 |
| 2010 | 535,771 | 357,342 | 178,429 | 66.7 | 26 | 66,442 | 268.5 | 806.4 |
| 2011 | 590,322 | 366,429 | 223,893 | 62.1 | 25 | 66,637 | 336.0 | 885.9 |
| 2012 | 610,229 | 356,346 | 253,883 | 58.4 | 24 | 67,934 | 373.7 | 898.3 |
| 2013 | 632,537 | 350,885 | 281,652 | 55.5 | 23 | 67,505 | 417.2 | 937.0 |
| **2014*** | **796,246** | **313,382** | **482,864** | **39.4** | **22** | **68,341** | **706.6** | **1165.1** |

** Pension only beginning with the June 30, 2014 valuation.*

## Health

| Valuation Date | (1) Actuarial Accrued Liabilities (AAL) | (2) Valuation Assets | (3) Unfunded AAL | (4) Funded Ratio (2)/(1) | (5) Financing Period | (6) Payroll | Liability Ratio (7) Unfunded (3)/(6) | Liability Ratio (8) Total (1)/(6) |
|---|---|---|---|---|---|---|---|---|
| **2014** | **$ 12,112** | **$ 23,113** | **$ (11,001)** | **190.8%** | **22** | **$ 68,341** | **(16.1)%** | **17.7%** |

The Unfunded Liability ratio gives a general measure of the ability to collect contributions to pay off the unfunded liabilities. The Total Liability ratio gives a longer term indication of the volatility of the contribution rate.

2005 results revised pursuant to changes in assumptions and methods enacted by the 2006 Legislature and the EORP Board of Trustees. Results prior to 2009 were calculated by the prior actuary.

## SHORT CONDITION TEST

If the contributions to EORP are soundly executed, the Plan will ***pay all promised benefits when due -- the ultimate test of financial soundness***.

***A short condition test*** is one means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with:

1) Member contributions on deposit;
2) The liabilities for future benefits to present retired lives;
3) The liabilities for service already rendered by active and inactive members.

In a system that has been following the discipline of pre-funding, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active and inactive members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the system.

### Short Condition Test

***(in $'000s)***

### Pension

| | Aggregate Actuarial Liabilities For | | | | Portion of Actuarial Liabilities Covered by Assets | | |
|---|---|---|---|---|---|---|---|
| Calendar Year | (1) Non-Retired Contributions | (2) Annuitants | (3) Non-Retired Members (Employer Financed Portion) | Actuarial Assets | (1) | (2) | (3) |
| 2009 | $40,924 | $324,200 | $141,067 | $360,950 | 100% | 99% | 0.0% |
| 2010 | 43,283 | 349,417 | 143,071 | 357,342 | 100 | 90 | 0.0 |
| 2011 | 42,171 | 393,830 | 154,321 | 366,429 | 100 | 82 | 0.0 |
| 2012 | 47,274 | 400,005 | 162,949 | 356,346 | 100 | 77 | 0.0 |
| 2013 | 47,351 | 431,511 | 153,675 | 350,885 | 100 | 70 | 0.0 |
| **2014*** | **54,318** | **576,015** | **165,913** | **313,382** | **100** | **45** | **0.0** |

** Pension only beginning with the June 30, 2014 valuation.*

### Health

| | Aggregate Actuarial Liabilities For | | | | Portion of Actuarial Liabilities covered by Assets | | |
|---|---|---|---|---|---|---|---|
| Calendar Year | (1) Non-Retired Contributions | (2) Annuitants | (3) Non-Retired Members (Employer Financed Portion) | Actuarial Assets | (1) | (2) | (3) |
| **2014** | **$ 0** | **$7,684** | **$4,428** | **$23,113** | **100%** | **100%** | **348.5%** |

# SECTION C

## FUND ASSETS

# DEVELOPMENT OF PENSION FUNDING VALUE OF ASSETS (7-YEAR SMOOTHING)

| Year Ended June 30: | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|
| A. Funding Value Beginning of Year | $ 328,442,108 | | | | | | |
| B. Market Value End of Year | 314,304,310 | | | | | | |
| C. Market Value Beginning of Year | 292,528,317 | | | | | | |
| D. Non Investment Net Cash Flow | (15,545,217) | | | | | | |
| E. Investment Income | | | | | | | |
| E1. Total: B-C-D | 37,321,210 | | | | | | |
| E2. Amount for Immediate Recognition: (7.85%) | 25,172,556 | | | | | | |
| E3. Amount for Phased-in Recognition: E1-E2 | 12,148,654 | | | | | | |
| F. Phased-in Recognition of Investment Income | | | | | | | |
| F1. Current Year: E3 / 7 | 1,735,522 | | | | | | |
| F2. First Prior Year | 452,369 | $ 1,735,522 | | | | | |
| F3. Second Prior Year | (3,609,304) | 452,369 | $ 1,735,522 | | | | |
| F4. Third Prior Year | 2,386,184 | (3,609,304) | 452,369 | $ 1,735,522 | | | |
| F5. Fourth Prior Year | 556,536 | 2,386,184 | (3,609,304) | 452,369 | $ 1,735,522 | | |
| F6. Fifth Prior Year | (12,314,765) | 556,536 | 2,386,184 | (3,609,304) | 452,369 | $ 1,735,522 | |
| F7. Sixth Prior Year | (7,166,297) | (12,314,761) | 556,534 | 2,386,186 | (3,609,307) | 452,366 | $ 1,735,522 |
| F8. Funding Value Corridor Adjustment | 0 | | | | | | |
| F9. Total Recognized Investment Gain | (17,959,755) | (10,793,454) | 1,521,305 | 964,773 | (1,421,416) | 2,187,888 | 1,735,522 |
| G. Funding Value End of Year | | | | | | | |
| G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7) | 320,109,692 | | | | | | |
| G2. Upper Corridor: (120% x B) | 377,165,172 | | | | | | |
| G3. Lower Corridor: (80% x B) | 251,443,448 | | | | | | |
| G4. End of Year: (G1 subject to max of G2 and min of G3) | 320,109,692 | | | | | | |
| G5. Future Benefit Increases | 6,727,741 | | | | | | |
| G6. End of Year: (G4 - G5) | 313,381,951 | | | | | | |
| H. Difference Between Market Value & Funding Value: (B-G4) | (5,805,382) | 4,988,072 | 3,466,767 | 2,501,994 | 3,923,410 | 1,735,522 | 0 |
| I. Market Rate of Return | 13.1% | | | | | | |
| J. Recognized Rate of Return | 2.2% | | | | | | |
| K. Ratio of Funding Value to Market Value | 101.8% | | | | | | |

The funding value of assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment return (line E3) are phased-in over a closed 7-year period. During periods when investment performance exceeds the assumed rate, funding value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than market value. The funding value of assets is **unbiased** with respect to market value. At any time it may be either greater or less than market value. If actual and assumed rates of investment return are exactly equal for 7 consecutive years, the funding value will become equal to market value.

# DEVELOPMENT OF HEALTH FUNDING VALUE OF ASSETS (7-YEAR SMOOTHING)

| Year Ended June 30: | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|
| A. Funding Value Beginning of Year | $ 22,442,544 | | | | | | |
| B. Market Value End of Year | 22,772,767 | | | | | | |
| C. Market Value Beginning of Year | 19,988,544 | | | | | | |
| D. Non Investment Net Cash Flow | 121,666 | | | | | | |
| E. Investment Income | | | | | | | |
| E1. Total: B-C-D | 2,662,557 | | | | | | |
| E2. Amount for Immediate Recognition: (7.85%) | 1,766,515 | | | | | | |
| E3. Amount for Phased-in Recognition: E1-E2 | 896,042 | | | | | | |
| F. Phased-in Recognition of Investment Income | | | | | | | |
| F1. Current Year: E3 / 7 | 128,006 | | | | | | |
| F2. First Prior Year | 30,910 | $ 128,006 | | | | | |
| F3. Second Prior Year | (246,625) | 30,910 | $ 128,006 | | | | |
| F4. Third Prior Year | 163,049 | (246,625) | 30,910 | $ 128,006 | | | |
| F5. Fourth Prior Year | 38,028 | 163,049 | (246,625) | 30,910 | $ 128,006 | | |
| F6. Fifth Prior Year | (841,471) | 38,028 | 163,049 | (246,625) | 30,910 | $ 128,006 | |
| F7. Sixth Prior Year | (489,675) | (841,471) | 38,028 | 163,049 | (246,625) | 30,912 | $ 128,006 |
| F8. Funding Value Corridor Adjustment | 0 | | | | | | |
| F9. Total Recognized Investment Gain | (1,217,778) | (728,103) | 113,368 | 75,340 | (87,709) | 158,918 | 128,006 |
| G. Funding Value End of Year | | | | | | | |
| G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7) | 23,112,947 | | | | | | |
| G2. Upper Corridor: (120% x B) | 27,327,320 | | | | | | |
| G3. Lower Corridor: (80% x B) | 18,218,214 | | | | | | |
| G4. End of Year: (G1 subject to max of G2 and min of G3) | 23,112,947 | | | | | | |
| G5. Future Benefit Increases | 0 | | | | | | |
| G6. End of Year: (G4 - G5) | 23,112,947 | | | | | | |
| H. Difference Between Market Value & Funding Value: (B-G4) | (340,180) | 387,923 | 274,555 | 199,215 | 286,924 | 128,006 | 0 |
| I. Market Rate of Return | 13.3% | | | | | | |
| J. Recognized Rate of Return | 2.4% | | | | | | |
| K. Ratio of Funding Value to Market Value | 101.5% | | | | | | |

The funding value of assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment return (line E3) are phased-in over a closed 7-year period. During periods when investment performance exceeds the assumed rate, funding value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than market value. The funding value of assets is **unbiased** with respect to market value. At any time it may be either greater or less than market value. If actual and assumed rates of investment return are exactly equal for 7 consecutive years, the funding value will become equal to market value.

# REVENUES AND DISBURSEMENTS

## Pension

| | 2013 | 2014 |
|---|---|---|
| **Market Value at the Beginning of Year:** | $ 279,180,971 | $ 292,528,317 |
| **Revenues:** | | |
| a. Member contributions | $ 7,928,879 | $ 8,989,478 |
| b. Employer contributions | 21,982,087 | 29,845,174 |
| c. Interest and dividends | 4,085,129 | 3,384,893 |
| d. Investment gain | 26,674,269 | 40,687,738 |
| e. Net transfers | (19,811) | 74,998 |
| f. Total | $ 60,650,553 | $ 82,982,281 |
| **Disbursements:** | | |
| a. Refunds of member contributions | $ 123,773 | $ 154,933 |
| b. Pension benefits | 45,475,456 | 53,984,038 |
| c. Investment expenses | 1,404,286 | 6,751,421 |
| d. Administrative expenses | 299,692 | 315,896 |
| e. Total | $ 47,303,207 | $ 61,206,288 |
| **Reserve Increase:** | | |
| Total revenues minus total disbursements | $ 13,347,346 | $ 21,775,993 |
| **Market Value at the End of Year:** | $ 292,528,317 | $ 314,304,310 |

## Health

| | 2013 | 2014 |
|---|---|---|
| **Market Value at the Beginning of Year:** | $ 17,774,010 | $ 19,988,544 |
| **Revenues:** | | |
| c. Health Insurance contributions | $ 1,208,405 | $ 1,072,197 |
| d. Interest and dividends | 1,907,489 | 2,662,557 |
| g. Total | $ 3,115,894 | $ 3,734,754 |
| **Disbursements:** | 901,360 | 950,531 |
| **Reserve Increase:** | | |
| Total revenues minus total disbursements | $ 2,214,534 | $ 2,784,223 |
| **Market Value at the End of Year:** | $ 19,988,544 | $ 22,772,767 |

# SECTION D

## CENSUS DATA

# JUNE 30, 2014 VALUATION DATA SUMMARY

For purposes of the June 30, 2014 valuation, information on 2,045 covered persons was furnished. These people may be briefly described as follows.

| | | Averages | | | |
|---|---|---|---|---|---|
| | | | | Annual Pay or Retirement Allowance | |
| | No. | Age | Years of Service | 2014 | 2013 |
| Actives | 843 | 55.6 | 8.6 | $81,069 | $80,459 |
| Retirees & Beneficiaries | 1,053 | 72.4 | | 50,338 | 44,658 |
| Inactive Vested | 149 | 55.2 | | | |
| | 2,045 | | | | |

## ACTIVE MEMBERS

### Members in Active Service as of June 30, 2014
### by Years of Service

| Age | Years of Service 0 - 4 | 5 - 9 | 10 - 14 | 15 - 19 | 20 - 24 | 25 - 29 | 30 & Up | Total Count | Total Pay | Average Pay |
|---|---|---|---|---|---|---|---|---|---|---|
| Under 25 | 1 | | | | | | | 1 | $ 76,600 | $ 76,600 |
| 25 - 29 | 5 | | | | | | | 5 | 170,782 | 34,156 |
| 30 - 34 | 11 | 4 | | | | | | 15 | 563,756 | 37,584 |
| 35 - 39 | 24 | 13 | 3 | | | | | 40 | 1,808,579 | 45,214 |
| 40 - 44 | 37 | 19 | 6 | | | | | 62 | 4,656,440 | 75,104 |
| 45 - 49 | 49 | 28 | 8 | 5 | | | | 90 | 7,647,245 | 84,969 |
| 50 - 54 | 50 | 51 | 22 | 15 | 2 | | | 140 | 13,226,570 | 94,476 |
| 55 - 59 | 51 | 48 | 31 | 35 | 4 | | 2 | 171 | 15,610,479 | 91,289 |
| 60 - 64 | 36 | 46 | 39 | 33 | 8 | 2 | 1 | 165 | 14,715,433 | 89,184 |
| 65 and Over | 30 | 50 | 32 | 25 | 8 | 6 | 3 | 154 | 9,865,010 | 64,059 |
| Total | 294 | 259 | 141 | 113 | 22 | 8 | 6 | 843 | $68,340,894 | $81,069 |

## TERMINATED VESTED MEMBERS

| Age | Years of Service | | | | | Total Count |
|---|---|---|---|---|---|---|
| | 0 - 4 | 5 - 9 | 10 - 14 | 15 - 19 | 20 & Up | |
| Under 30 | | | | | | |
| 30 - 39 | 5 | 2 | | 1 | | 8 |
| 40 - 44 | 10 | 4 | | | | 14 |
| 45 - 49 | 6 | 8 | 2 | | | 16 |
| 50 - 54 | 12 | 9 | 5 | 1 | | 27 |
| 55 - 59 | 14 | 17 | 4 | 1 | | 36 |
| 60 - 69 | 18 | 18 | 2 | 4 | 1 | 43 |
| 70 and Over | 2 | 1 | | 1 | 1 | 5 |
| Total | 67 | 59 | 13 | 8 | 2 | 149 |

## RETIREES AND BENEFICIARIES

| Attained Ages | Males No. | Males Annual Pension Benefits | Females No. | Females Annual Pension Benefits | Total No. | Total Annual Pension Benefits |
|---|---|---|---|---|---|---|
| Under 25 | 0 | $ 0 | 0 | $ 0 | 0 | $ 0 |
| 25-29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35-39 | 3 | 24,036 | 0 | 0 | 3 | 24,036 |
| 40-44 | 1 | 10,652 | 3 | 67,320 | 4 | 77,972 |
| 45-49 | 9 | 136,251 | 5 | 204,583 | 14 | 340,834 |
| 50-54 | 13 | 478,105 | 7 | 241,353 | 20 | 719,458 |
| 55-59 | 26 | 1,308,151 | 26 | 918,036 | 52 | 2,226,187 |
| 60-64 | 78 | 4,746,471 | 62 | 3,964,668 | 140 | 8,711,139 |
| 65-69 | 130 | 8,031,729 | 76 | 3,499,422 | 206 | 11,531,151 |
| 70-74 | 135 | 7,046,333 | 61 | 2,639,183 | 196 | 9,685,516 |
| 75-79 | 102 | 5,987,409 | 67 | 2,393,904 | 169 | 8,381,313 |
| 80-84 | 80 | 4,761,027 | 48 | 2,038,189 | 128 | 6,799,216 |
| 85-89 | 36 | 1,441,401 | 38 | 1,421,763 | 74 | 2,863,164 |
| 90-94 | 19 | 764,889 | 26 | 811,904 | 45 | 1,576,793 |
| 95-99 | 1 | 13,242 | 1 | 55,445 | 2 | 68,687 |
| 100 and Over | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | **633** | **$34,749,696** | **420** | **$18,255,770** | **1,053** | **$53,005,466** |

| Pension Being Paid | | Number | Annual Pensions | Average Pensions |
|---|---|---|---|---|
| Retired Members | Service Pensions | 837 | $44,033,291 | $ 52,608 |
| | Disability Pensions | 16 | 1,686,107 | 105,382 |
| Totals | | 853 | 45,719,398 | 53,598 |
| Survivors of Members | Spouses | 199 | 7,239,086 | 36,377 |
| | Children with Guardians | 1 | 46,982 | 46,982 |
| Total | | 200 | 7,286,068 | 36,430 |
| **Total Pension being Paid** | | **1,053** | **$53,005,466** | **$ 50,338** |

| | Average Age | Average Service | Average Age at Retirement |
|---|---|---|---|
| Normal retired members | 71.5 | 14.4 | 61.1 |
| Disability retired members | 67.7 | 12.2 | 58.2 |
| Spouse beneficiaries | 76.7 | 13.3 | 57.5 |

## PENSIONS BEING PAID
## HISTORICAL SCHEDULE

| Valuation Date June 30 | No. | Annual Pensions | % Incr. in Annual Pensions | Average Pension | Present Value of Pensions Total | Present Value of Pensions Average |
|---|---|---|---|---|---|---|
| 2005 | 769 | $26,112,301 | 9.5% | $33,956 | $228,886,601 | $297,642 |
| 2006 | 797 | 28,044,340 | 7.4 | 35,187 | 248,357,037 | 311,615 |
| 2007 | 826 | 30,380,250 | 8.3 | 36,780 | 277,278,034 | 335,688 |
| 2008 | 872 | 32,850,340 | 8.1 | 37,672 | 285,633,966 | 327,562 |
| 2009 | 905 | 36,262,571 | 10.4 | 40,069 | 317,313,745 | 350,623 |
| 2010 | 921 | 39,337,025 | 8.5 | 42,711 | 342,362,491 | 371,729 |
| 2011 | 990 | 43,461,664 | 10.5 | 43,901 | 386,446,172 | 390,350 |
| 2012 | 992 | 43,910,140 | 1.0 | 44,264 | 392,503,050 | 395,668 |
| 2013 | 1,057 | 47,203,698 | 7.5 | 44,658 | 423,992,661 | 401,128 |
| **2014** | **1,053** | **53,005,466** | **12.3** | **50,338** | **576,014,997** | **547,023** |

Results prior to 2009 were prepared by the prior actuary.

# SECTION E

## METHODS AND ASSUMPTIONS

# VALUATION METHODS

***Actuarial Cost Method -*** Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using the Entry Age Normal Cost Method having the following characteristics:

(i) The annual normal costs for each individual active member, payable from the date of employment to the date of retirement, are sufficient to accumulate to the value of the member's pension at time of retirement; and

(ii) Each annual normal cost is a constant percentage of the member's year by year projected 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 compensation between the entry age of the member and the assumed exit ages.

***Actuarial Accrued Liability -*** The actuarial accrued liability is the portion of actuarial present value allocated to service rendered prior to the valuation date, including experience gains and losses. The actuarial accrued liability was computed using the assumptions summarized in this report.

***Actuarial Value of System Assets -*** The actuarial value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased in over a closed seven year period subject to a 20% corridor. During periods when investment performance exceeds the assumed rate, actuarial value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, the actuarial value of assets will tend to be greater than market value.

***Financing of Unfunded Actuarial Accrued Liabilities -*** The actuarial value of assets were subtracted from the computed actuarial accrued liability. Any unfunded amount would be amortized as level percent of payroll over a closed period of 22 years. If the actuarial value of assets exceeded the actuarial accrued liability, the excess was amortized over an open period of 20 years and applied as a credit to reduce the normal cost which otherwise would be payable.

Active member payroll was assumed to increase 4.00% annually for the purpose of computing the amortization payment (credit) as a level percent of payroll.

## VALUATION ASSUMPTIONS

Beginning with the June 30, 2007 valuation and with each subsequent valuation, if the actuarial value of assets exceeds the actuarial accrued liabilities, one half of this excess in each year is allocated to a Stabilization Reserve. The Stabilization Reserve is excluded from the calculation of the employer contribution rates. The Stabilization Reserve continues to accumulate as long as the plan is over-funded. Once the plan becomes under-funded, the Stabilization Reserve will be used to dampen increases in the employer contribution rates.

***The rate of investment return*** was 7.85% a year, compounded annually net of investment and administrative expenses.

The assumed real return is the rate of return in excess of wage growth. Considering other assumptions used in the valuation, the 7.85% nominal rate translates to a net real return over wage growth of 3.85% a year.

***The rates of pay increase*** used for individual members are shown below. This assumption is used to project a member's current pay to the pay upon which System benefits will be based.

| | Salary Increase Assumptions For an Individual Member | | |
|---|---|---|---|
| Sample Ages | Merit & Seniority | Base (Economy) | Increase Next Year |
| 20 | 0.25% | 4.0% | 4.25% |
| 25 | 0.25% | 4.0% | 4.25% |
| 30 | 0.25% | 4.0% | 4.25% |
| 35 | 0.25% | 4.0% | 4.25% |
| 40 | 0.25% | 4.0% | 4.25% |
| 45 | 0.25% | 4.0% | 4.25% |
| 50 | 0.25% | 4.0% | 4.25% |
| 55 | 0.25% | 4.0% | 4.25% |
| 60 | 0.25% | 4.0% | 4.25% |
| Ref: | 1 | | |

Active Member Payroll is assumed to grow at 4.00% per year. Although no specific price inflation assumption is required to perform this valuation, since no benefits are linked to prices, a price inflation assumption on the order of 3.0% to 4.0% would be consistent with the other economic assumptions.

# VALUATION ASSUMPTIONS

***The healthy mortality table*** used to evaluate death after retirement in this valuation of the System was the RP 2000 Mortality table projected to 2025 using projection scale AA with no adjustment for males and females. This assumption was first used for the June 30, 2012 valuation of the System and include margin for future improvements in mortality. Sample rates of mortality and years of life expectancy are shown below:

| Sample Attained Ages | Probability of Dying Next Year | | Future Life Expectancy (years) | |
|---|---|---|---|---|
| | Men | Women | Men | Women |
| 50 | 0.14% | 0.11% | 33.27 | 34.93 |
| 55 | 0.22 | 0.22 | 28.52 | 30.16 |
| 60 | 0.45 | 0.45 | 23.92 | 25.58 |
| 65 | 0.90 | 0.86 | 19.58 | 21.28 |
| 70 | 1.52 | 1.48 | 15.58 | 17.31 |
| 75 | 2.66 | 2.30 | 11.87 | 13.69 |
| 80 | 5.01 | 3.85 | 8.63 | 10.41 |
| Ref: | 472 x 1.00<br>0 year set forward | 473 x 1.00<br>0 year set forward | | |

This assumption is used to measure the probabilities of each benefit payment being made after retirement. For disabled members, non-disability rates with a five year set forward were used.

***The disabled mortality table*** used to evaluate death after retirement in this valuation of the System was the RP 2000 Mortality table projected to 2025 using projection scale AA set forward 10 years for both males and females. This assumption was first used for the June 30, 2012 valuation of the System. Sample rates of mortality and years of life expectancy are shown below:

| Sample Attained Ages | Probability of Dying Next Year | | Future Life Expectancy (years) | |
|---|---|---|---|---|
| | Men | Women | Men | Women |
| 50 | 0.45% | 0.45% | 23.88 | 25.54 |
| 55 | 0.90 | 0.86 | 19.54 | 21.23 |
| 60 | 1.52 | 1.48 | 15.54 | 17.27 |
| 65 | 2.66 | 2.30 | 11.83 | 13.64 |
| 70 | 5.01 | 3.85 | 8.59 | 10.37 |
| 75 | 9.29 | 6.66 | 6.02 | 7.52 |
| 80 | 16.59 | 12.22 | 4.13 | 5.39 |
| Ref: | 472 x 1.00<br>10 year set forward | 473 x 1.00<br>10 year set forward | | |

## VALUATION ASSUMPTIONS

For actives, the sample rates of mortality for death-in-service are shown below, and were first used for the June 30, 2012 valuation of the Plan.

| Sample Attained Ages | Probability of Dying Next Year | |
|---|---|---|
| | Men | Women |
| 50 | 0.10% | 0.08% |
| 55 | 0.17 | 0.17 |
| 60 | 0.34 | 0.33 |
| 65 | 0.67 | 0.64 |
| Ref: | 472 x 0.75<br>0 year set forward | 473 x 0.75<br>0 year set forward |

***The rates of regular retirement*** used to measure the probability of eligible members retiring during the next year are shown below. This assumption was first used for the June 30, 2012 valuation of the Plan.

***Retirement Rates:*** Age-related rates for employees who were hired before January 1, 2012 are shown below:

| Age at Retirement | EORP |
|---|---|
| 62 | 20% |
| 63 | 20% |
| 64 | 20% |
| 65 | 20% |
| 66 | 20% |
| 67 | 20% |
| 68 | 20% |
| 69 | 20% |
| 70 | 20% |
| 71 | 20% |
| 72 | 20% |
| 73 | 20% |
| 74 | 20% |
| 75 | 100% |
| Ref. | 2155 |

These retirement rates are applicable to employees attaining age 62 before attaining 20 years of service.

## VALUATION ASSUMPTIONS

Service-related rates for employees who were hired before January 1, 2012 are shown below:

| Service at Retirement | EORP |
|---|---|
| 20 | 45% |
| 21 | 40% |
| 22 | 20% |
| 23 | 15% |
| 24 | 15% |
| 25 | 20% |
| 26 | 20% |
| 27 | 20% |
| 28 | 20% |
| 29 | 20% |
| 30 | 20% |
| 31 | 20% |
| 32 | 20% |
| 33 | 20% |
| 34 | 20% |
| 35 | 100% |
| Ref. | 2156 |

These retirement rates are applicable to employees attaining 20 years of service before attaining age 62.

Age-related rates for employees who were hired after January 1, 2012 are shown below:

| Age at Retirement | EORP |
|---|---|
| 62 | 40% |
| 63 | 30% |
| 64 | 20% |
| 65 | 15% |
| 66 | 15% |
| 67 | 45% |
| 68 | 45% |
| 69 | 15% |
| 70 | 100% |
| Ref. | 1745 |

## VALUATION ASSUMPTIONS

***Early Retirement Rates:*** Service-related rates for employees who were hired before January 1, 2012 are shown below:

| Service at Retirement | EORP |
|---|---|
| 5 | 4.5% |
| 6 | 4.5% |
| 7 | 4.5% |
| 8 | 4.5% |
| 9 | 4.5% |
| 10 | 4.5% |
| 11 | 4.5% |
| 12 | 4.5% |
| 13 | 4.5% |
| 14 | 4.5% |
| 15 | 4.5% |
| 16 | 4.5% |
| 17 | 4.5% |
| 18 | 4.5% |
| 19 | 4.5% |
| Ref. | 2157 |

***Rates of separation from active membership*** used in the valuation are shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

| Sample Ages | Service Index | % of Active Members Separating Within Next Year |
|---|---|---|
| All | 1 | 6.00% |
| | 2 | 6.00% |
| | 3 | 6.00% |
| | 4 | 6.00% |
| | 5 | 6.00% |
| | 6 | 6.00% |
| | 7 | 6.00% |
| | 8 | 6.00% |
| | 9 | 6.00% |
| | 10 & Over | 2.00% |
| Ref. | | 607 |

# VALUATION ASSUMPTIONS

***Rates of disability*** among active members used in the valuation are shown below, and were first used for the June 30, 2012 valuation of the System.

| Sample Ages | % of Active Members Becoming Disabled Within Next Year<br>EORP |
|---|---|
| 20 | 0.01% |
| 25 | 0.01% |
| 30 | 0.01% |
| 35 | 0.01% |
| 40 | 0.02% |
| 45 | 0.02% |
| 50 | 0.03% |
| 55 | 0.03% |
| Ref | 592<br>25% |

## SUMMARY OF ASSUMPTIONS USED
## JUNE 30, 2014
## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

| | |
|---|---|
| **Marriage Assumption:** | 85% of males and females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes. |
| **Pay Increase Timing:** | Six months after the valuation date. This means that the pays received are assumed to be annual rates of pay on the valuation date as opposed to W-2 type earnings for the prior 12 months. |
| **Decrement Timing:** | Decrements of all types are assumed to occur mid-year. |
| **Eligibility Testing:** | Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur. |
| **Decrement Relativity:** | Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects. |
| **Decrement Operation:** | Disability and turnover decrements do not operate during retirement eligibility. |
| **Service Credit Accruals:** | It is assumed that members accrue one year of service credit per year. |
| **Incidence of Contributions:** | Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. |
| **Normal Form of Benefit:** | A straight life payment is the assumed normal form of benefit for members who are not married, and the 75% Joint and Survivor form of payment with no reduction, for married members. 85% of members are assumed to be married at time of retirement. |
| **Benefit Service:** | Exact fractional service is used to determine the amount of benefit payable. |
| **Health Care Utilization:** | 70% of future retirees are expected to utilize health care. 85% of those are assumed to be married. |
| **Assumed Future Permanent Benefit Increases:** | Members Retired on or before July 1, 2011: 3% of benefit. Members Retired on or after August 1, 2011: 0.5% of benefit. |

# SECTION F

## PLAN PROVISIONS

# SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

***Average Yearly Salary:***
**For members hired before January 1, 2012:**
Effective July 17, 1994, average yearly salary is the elected official's highest average salary during a three-consecutive year period within the final 10 years of service. For elected officials whose membership commenced before July 17, 1994, average yearly salary will generally be final salary at termination of service.

**For members hired on or after January 1, 2012:**
Average yearly salary is the elected official's highest average salary during a five-consecutive year period within the last 10 years of service

***Normal Retirement (no reduction for age).***
**For members hired before January 1, 2012:**
An elected official may retire upon meeting one of the following age and service requirements:

- Age 60 years with 25 or more years of credited service;
- Age 62 years with 10 or more years of credited service; and
- Age 65 years with 5 or more years of credited service.

Effective August 6, 1999, a member may retire at any age with 20 or more years of credited service.

The amount of a normal retirement pension is four percent of average yearly salary multiplied by years of credited service. The maximum is 80 percent of average yearly salary.

**For members hired on or after January 1, 2012:**
An elected official may retire upon meeting one of the following age and service requirements:

- 65 years of age with 5 or more years of credited service; or
- 62 years of age with 10 or more years of service.

The amount of a normal retirement pension is three percent of average yearly salary multiplied by years of credited service. The maximum is 75 percent of average yearly salary.

***Early Retirement (reduction for age).***
**For members hired before January 1, 2012:**
An elected official who is at least 50 years and has 10 or more years of credited service may retire before meeting an age and service requirement for normal retirement. The amount of an early retirement pension is computed by determining the amount of accrued normal retirement pension and then reducing the amount determined by three-twelfths of one percent for each month early retirement precedes the member's normal retirement age.

Effective August 6, 1999, a member with at least five years of credited service may retire early at any age. For those members who retire under this August 6, 1999 provision, their benefits are calculated using a three-year average salary, and the reduction for early retirement is capped at 30%.

## SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

**For members hired on or after January 1, 2012:**
No early retirement benefit

***Vested Termination (deferred retirement).*** An elected official with five or more years of credited service retains entitlement to a deferred pension upon ceasing to be an elected official if the official's accumulated contributions are left on deposit in the Retirement Plan. The amount of pension is determined in the same manner as a normal or early pension, whichever is applicable.

***Disability Retirement.***
**For members hired before January 1, 2012:**
An elected official who becomes incapacitated for the duties of office may be retired by the Board of Trustees. The amount of pension is 80 percent of three-year average salary if the elected official has at least 10 years of credited service, 40 percent of three-year average salary if the elected official has five but less than 10 years of credited service, and 20 percent of three-year average salary if the elected official has less than five years of credited service.

**For members hired on or after January 1, 2012:**
An elected official who becomes incapacitated for the duties of office may be retired by the Board of Trustees. The amount of pension is 75 percent of five-year average salary if the elected official has at least 10 years of credited service, 37.5 percent of five-year average salary if the elected official has five but less than 10 years of credited service, and 10 percent of five-year average salary if the elected official has less than five years of credited service.

***Survivor Pensions.***
**For members hired before January 1, 2012:**
Payable to the eligible beneficiary of a retired elected official or an active and inactive elected official. An eligible beneficiary is a surviving spouse who was married to the retired active or inactive elected official for at least two years; or, if there is no eligible spouse, a minor child. A surviving spouse's pension terminates upon death. A surviving child's pension terminates upon attainment of age 18 years, marriage, adoption or death, unless the child is a full time student under the age of 23 or was disabled prior to age 18. The amount of a surviving spouse's pension is 75% of the pension being paid the deceased retired elected official or the disability pension accrued by the deceased active elected official. The amount of a surviving child's pension is an equal share of the amount of a surviving spouse's pension.

**For members hired on or after January 1, 2012:**
Payable to the eligible beneficiary of a retired elected official or an active and inactive elected official. An eligible beneficiary is a surviving spouse who was married to the retired active or inactive elected official for at least two years; or, if there is no eligible spouse, a minor child. A surviving spouse's pension terminates upon death. A surviving child's pension terminates upon attainment of age 18 years, marriage, adoption or death, unless the child is a full time student under the age of 23 or was disabled prior to age 18. The amount of a surviving spouse's pension is 50% of the pension being paid the deceased retired elected official or the disability pension accrued by the deceased active elected official. The amount of a surviving child's pension is an equal share of the

## SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

amount of a surviving spouse's pension. A higher survivor benefit may be elected, but actuarial reduction will be applied to the benefit elected.

***Other Terminations.*** The elected official is paid a refund of accumulated member contributions, plus an additional amount if the member has at least five years of service credit. The amount is a percent of the member contribution amount, ranging from 25% to 100% (with at least 10 years of service credit).

***Post-Retirement Adjustments.***
**For members retired on or before July 1, 2011:**
Contingent upon the excess investment earnings, effective July 1 of each year, eligible retired members or survivors may be entitled to a permanent benefit increase in their base benefit. To be eligible for the increase, the retired member or survivor must be either age 55 or older on July 1 of the current year and receiving benefits on or before July 31 of the previous year, or the retired member or survivor has been receiving benefits on or before July 31 of the previous two years. The maximum amount of the increase is 4% of the average normal benefit being received on the preceding June 30.

Prior to July 1, 2013 a PBI reserve is maintained and used to pay for the post-retirement adjustment. The investment return on the PBI reserve is the same as the return on the market value of assets (whether the return is positive or negative). Additional amounts are added to the PBI reserve in years when the investment return on the market value of assets exceeds 9.0%. Each year the present value of that year's post-retirement adjustment is subtracted from PBI reserve. A post-retirement adjustment is paid as long as there is a positive balance in the PBI reserve.

**For members retired on or after August 1, 2011:**
A PBI is only paid in a year when the annual return on the market value of assets of the prior fiscal year exceeds 10.5% and the plan is at least 60% funded. 100% of the excess earnings is used to determine whether a PBI can be paid and the size of the PBI for that year. No PBI reserves will accumulate and the present value of that year's PBI for eligible retirees cannot exceed 100% of the earnings in excess of 10.5%. If the excess earnings is high enough to exceed the present value of that year's PBI, the excess stays in the fund.

To be eligible for an increase the retiree or the survivor must be:

- In the case of a retired member who became a member of the plan before January 1, 2012, the retired member or survivor was receiving benefits on or before July 31 of the two previous years; or
- In the case of a retired member who became a member of the plan before January 1, 2012, the retired member or survivor was 55 or older on July 1 of the current year and was receiving benefits on or before July 31 of the previous year
- In the case of a retired member who became a member of the plan on or after January 1, 2012, the retired member or survivor was at least 55 or older on July 1 and receiving benefits

## SUMMARY OF PLAN PROVISIONS VALUED AND/OR CONSIDERED

The amount of the PBI to be paid is determined as follows:

- Funded ratio is 60-64%, PBI is 2%
- Funded ratio is 65-69%, PBI is 2.5%
- Funded ratio is 70-74%, PBI is 3%
- Funded ratio is 75-79%, PBI is 3.5%
- Funded ratio is 80% or more, PBI is 4%

***Post-Retirement Health Insurance Subsidy.*** Payable on behalf of retired members and survivors who elect coverage provided by the state or participating employer. The monthly amounts cannot exceed:

| Member Only | | With Dependents | | |
|---|---|---|---|---|
| Not Medicare Eligible | Medicare Eligible | All Not Medicare Eligible | All Medicare Eligible | One With Medicare |
| $150 | $100 | $260 | $170 | $215 |

Retired members or survivors who have between five and eight years of credited service are eligible for a proportionate share of the full subsidy.

***Employer Contributions.*** A designed portion of court docket fees. Municipal employers contribute the computed normal cost rate plus a payment to amortize their unfunded actuarial accrued liability (UAAL) over a period not to exceed 30 years (a lump sum payment for UAAL is required for municipal employers entering after September 15, 1989). Pursuant to 1989 legislation, state and county employers contribute the difference between the actuarially determined contribution requirement and designated docket fees.

***Members Contributions.*** Member contribution rates are shown in the schedule below. Additional member contributions DO NOT reduce the employer contribution; this means there is a "maintenance of effort" provision.

- FY 2010-2011 – 7.0%
- FY 2011-2012 – 10.0%
- FY 2012-2013 – 11.5%
- FY 2013-2014 and after: 13.0%

# SECTION G

## GLOSSARY

***Actuarial Accrued Liability*** The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

***Accrued Service*** The service credited under the plan which was rendered before the date of the actuarial valuation.

***Actuarial Assumptions*** Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

***Actuarial Cost Method*** A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

***Actuarial Equivalent*** A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

***Actuarial Present Value*** The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

***Amortization*** Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

***Experience Gain (Loss)*** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

***Normal Cost*** The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

| | |
|---|---|
| ***Reserve Account*** | An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses. |
| ***Unfunded Actuarial Accrued Liability*** | The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability." |
| ***Valuation Assets*** | The value of current plan assets recognized for valuation purposes. Generally based on market value plus a portion of unrealized appreciation or depreciation. |

# APPENDIX I

## ACCOUNTING DISCLOSURES

**This information is presented in draft form for review by the System's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the System's financial statements. Please note Plan reporting under GASB Statement No. 25 has been replaced by GASB Statement No. 67.**

# INFORMATION REQUIRED BY GASB STATEMENT NO. 67

The Governmental Accounting Standards Board Statement No. 67 (GASB No. 67) contains certain requirements regarding the accounting and disclosure of financial information. In addition to disclosing the system's fiduciary net position, retirement systems are also required to disclose information regarding the plan's total pension liability, net pension liability, and change in net pension liability from the prior year. In actuarial terms, these are the plan's actuarial accrued liability and unfunded actuarial accrued liability on a market value of asset basis. This section of the report contains information that is part of the Retirement System's disclosure requirements under this accounting standard.

**Determination of the Total Pension Liability**

The total pension liability shown in this subsection is also shown as of the last date of the pension plan's fiscal year, June 30, 2014.

A single discount rate of 5.67% was used to measure the total pension liability. This single discount rate was based on an expected rate of return on pension plan investments of 7.85% and a municipal bond rate of 4.29%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the benefit payments through the year 2030. As a result, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the year 2030, and the municipal bond rate was applied to all benefit payments after that date.

An exhibit providing the projections and calculations used to determine the single equivalent discount rate under GASB No. 67 can be provided upon request.

**Measurement of Net Pension Liability**

The net pension liability is to be measured as the total pension liability, less the amount of the pension plan's fiduciary net position. As of the plan year ending June 30, 2014, the net pension liability is $670,571,964. If a single discount rate that was 100 basis points lower was used, the net pension liability would have been $782,836,809. Similarly, if a single discount rate that was 100 basis points higher was used, the net pension liability would have been $575,782,118.

The following exhibit provides information regarding the total pension liability, net pension liability, and change in the net pension liability since the prior plan year (and related ratios).

# Schedules of Required Supplementary Information
# Schedule of Changes in the Employers' Net Pension Liability and Related Ratios

### Last 10 Fiscal Years (which may be built prospectively)

| Fiscal year ending June 30, | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Pension Liability** | | | | | | | | | | |
| Service Cost | $ 23,501,879 | | | | | | | | | |
| Interest on the Total Pension Liability | 47,537,398 | | | | | | | | | |
| Benefit and Assumption Changes | 342,442,071 | | | | | | | | | |
| Difference Between Expected and Actual Experience of the Total Pension Liability | 4,643,397 | | | | | | | | | |
| Benefit Payments and Refunds | (54,138,971) | | | | | | | | | |
| **Net Change in Total Pension Liability** | 363,985,774 | | | | | | | | | |
| **Total Pension Liability - Beginning** | 620,890,500 | | | | | | | | | |
| **Total Pension Liability - Ending (a)** | $ 984,876,274 | | | | | | | | | |
| **Plan Fiduciary Net Position** | | | | | | | | | | |
| Employer Contributions | $ 29,845,174 | | | | | | | | | |
| Employee Contributions | 8,989,478 | | | | | | | | | |
| Pension Plan Net Investment Income | 34,068,988 | | | | | | | | | |
| Benefit Payments and Refunds | (54,138,971) | | | | | | | | | |
| Pension Plan Administrative Expense | (315,896) | | | | | | | | | |
| Other | 3,327,220 | | | | | | | | | |
| **Net Change in Plan Fiduciary Net Position** | 21,775,993 | | | | | | | | | |
| **Plan Fiduciary Net Position - Beginning** | 292,528,317 | | | | | | | | | |
| **Plan Fiduciary Net Position - Ending (b)** | $ 314,304,310 | | | | | | | | | |
| **Net Pension Liability - Ending (a) - (b)** | 670,571,964 | | | | | | | | | |
| **Plan Fiduciary Net Position as a Percentage of Total Pension Liability** | 31.91 % | | | | | | | | | |
| **Covered Employee Payroll** | $ 68,340,894 | | | | | | | | | |
| **Net Pension Liability as a Percentage of Covered Employee Payroll** | 981.22 % | | | | | | | | | |

**Notes to Schedule:**

N/A

# Schedules of Required Supplementary Information
# Schedule of the Employers' Net Pension Liability

### Last 10 Fiscal Years (which may be built prospectively starting from 2014)

| FY Ending June 30, | Total Pension Liability | Plan Net Position | Net Pension Liability | Plan Net Position as a % of Total Pension Liability | Covered Payroll | Net Pension Liability as a % of Covered Payroll |
|---|---|---|---|---|---|---|
| 2005 | | | - | | | |
| 2006 | | | - | | | |
| 2007 | | | - | | | |
| 2008 | | | - | | | |
| 2009 | | | - | | | |
| 2010 | | | - | | | |
| 2011 | | | - | | | |
| 2012 | | | - | | | |
| 2013 | | | - | | | |
| 2014 | $984,876,274 | $314,304,310 | $670,571,964 | 31.91% | $68,340,894 | 981.22% |

# Schedule of Contributions

## Last 10 Fiscal Years (which may be built prospectively starting from 2014)

| FY Ending June 30, | Actuarially Determined Contribution | Actual Contribution | Contribution Deficiency (Excess) | Covered Payroll | Actual Contribution as a % of Covered Payroll |
|---|---|---|---|---|---|
| 2007 | | | | | |
| 2008 | | | | | |
| 2009 | | | | | |
| 2010 | | | | | |
| 2011 | | | | | |
| 2012 | | | | | |
| 2013 | | | | | |
| 2014 | $ 28,235,016 | $ 29,845,174 | $ (1,610,158) | $ 68,340,894 | 43.67% |
| 2015 | 37,323,403 | | | | |
| 2016 | 59,142,210 | | | | |

**Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption**

| | 1% Decrease 4.67% | Current Single Rate Assumption 5.67% | 1% Increase 6.67% |
|---|---|---|---|
| Total Pension Liability | $ 1,097,141,119 | $ 984,876,274 | $ 890,086,428 |
| Plan Fiduciary Net Position | 314,304,310 | 314,304,310 | 314,304,310 |
| Net Pension Liability/(Asset) | $ 782,836,809 | $ 670,571,964 | $ 575,782,118 |

# Single Discount Rate Development
# Projection of Contributions

| Year | Payroll for Current Employees | Contributions from Current Employees | Normal Cost and Expense Contributions | UAL Contributions | Total Contributions |
|---|---|---|---|---|---|
| 0 | $ 68,340,894 | | | | |
| 1 | 65,413,195 | $ 8,503,715 | $ 11,054,830 | $ 19,515,009 | $ 39,073,554 |
| 2 | 59,672,184 | 7,757,384 | 10,561,977 | 20,349,221 | 38,668,582 |
| 3 | 54,307,796 | 7,060,014 | 9,536,449 | 22,074,791 | 38,671,254 |
| 4 | 49,060,961 | 6,377,925 | 8,546,419 | 23,787,844 | 38,712,188 |
| 5 | 44,101,437 | 5,733,187 | 7,620,728 | 25,465,454 | 38,819,369 |
| 6 | 39,712,624 | 5,162,641 | 6,806,744 | 27,061,398 | 39,030,783 |
| 7 | 35,615,586 | 4,630,026 | 6,051,088 | 28,630,272 | 39,311,386 |
| 8 | 31,786,319 | 4,132,221 | 5,346,459 | 30,180,628 | 39,659,308 |
| 9 | 28,405,599 | 3,692,728 | 4,721,010 | 31,685,606 | 40,099,345 |
| 10 | 25,136,693 | 3,267,770 | 4,122,418 | 33,198,899 | 40,589,086 |
| 11 | 21,903,753 | 2,847,488 | 3,539,647 | 34,732,948 | 41,120,082 |
| 12 | 18,974,865 | 2,466,732 | 3,015,106 | 36,246,798 | 41,728,637 |
| 13 | 16,493,846 | 2,144,200 | 2,571,391 | 37,719,372 | 42,434,962 |
| 14 | 14,310,727 | 1,860,395 | 2,186,679 | 39,174,078 | 43,221,151 |
| 15 | 12,310,592 | 1,600,377 | 1,837,971 | 40,635,568 | 44,073,916 |
| 16 | 10,553,139 | 1,371,908 | 1,533,371 | 42,097,447 | 45,002,727 |
| 17 | 8,931,398 | 1,161,082 | 1,257,541 | 43,576,839 | 45,995,461 |
| 18 | 7,384,459 | 959,980 | 1,000,594 | 45,085,482 | 47,046,056 |
| 19 | 6,121,921 | 795,850 | 792,177 | 46,595,650 | 48,183,676 |
| 20 | 5,176,443 | 672,938 | 640,326 | 48,101,306 | 49,414,569 |
| 21 | 4,408,580 | 573,115 | 523,739 | 49,625,840 | 50,722,695 |
| 22 | 3,765,421 | 489,505 | 428,128 | 51,185,710 | 52,103,343 |
| 23 | 3,169,734 | 412,065 | 342,965 | 52,793,699 | 53,548,730 |
| 24 | 2,585,979 | 336,177 | 264,028 | 54,456,373 | 55,056,579 |
| 25 | 2,077,399 | 270,062 | 198,184 | 56,169,301 | 56,637,547 |
| 26 | 1,676,860 | 217,992 | 148,402 | 57,932,044 | 58,298,438 |
| 27 | 1,389,734 | 180,665 | 112,013 | 59,749,910 | 60,042,588 |
| 28 | 1,153,979 | 150,017 | 83,894 | 61,630,762 | 61,864,673 |
| 29 | 922,446 | 119,918 | 60,605 | 63,580,893 | 63,761,415 |
| 30 | 714,942 | 92,942 | 40,895 | 65,604,516 | 65,738,353 |
| 31 | 559,307 | 72,710 | 27,350 | - | 100,060 |
| 32 | 452,747 | 58,857 | 18,336 | - | 77,193 |
| 33 | 364,538 | 47,390 | 10,936 | - | 58,326 |
| 34 | 301,865 | 39,242 | 5,675 | - | 44,917 |
| 35 | 247,259 | 32,144 | 3,115 | - | 35,259 |
| 36 | 201,493 | 26,194 | 1,531 | - | 27,725 |
| 37 | 175,634 | 22,832 | 246 | - | 23,078 |
| 38 | 156,807 | 20,385 | (643) | - | 19,742 |
| 39 | 143,496 | 18,655 | (1,291) | - | 17,363 |
| 40 | 136,578 | 17,755 | (1,803) | - | 15,952 |
| 41 | 131,205 | 17,057 | (2,021) | - | 15,036 |
| 42 | 129,178 | 16,793 | (2,261) | - | 14,533 |
| 43 | 128,514 | 16,707 | (2,403) | - | 14,304 |
| 44 | 129,421 | 16,825 | (2,524) | - | 14,301 |
| 45 | 131,757 | 17,128 | (2,609) | - | 14,520 |
| 46 | 134,065 | 17,428 | (2,654) | - | 14,774 |
| 47 | 110,078 | 14,310 | (2,180) | - | 12,131 |
| 48 | 72,615 | 9,440 | (1,438) | - | 8,002 |
| 49 | 55,700 | 7,241 | (1,103) | - | 6,138 |
| 50 | 47,392 | 6,161 | (938) | - | 5,223 |

# Single Discount Rate Development
# Projection of Contributions (concluded)

| Year | Payroll for Current Employees | Contributions from Current Employees | Normal Cost and Expense Contributions | UAL Contributions | Total Contributions |
|---|---|---|---|---|---|
| 51 | $ 41,659 | $ 5,416 | $ (825) | - | $ 4,591 |
| 52 | 30,612 | 3,980 | (606) | - | 3,373 |
| 53 | 17,286 | 2,247 | (342) | - | 1,905 |
| 54 | 11,649 | 1,514 | (231) | - | 1,284 |
| 55 | 5,534 | 719 | (110) | - | 609 |
| 56 | - | - | - | - | - |
| 57 | - | - | - | - | - |
| 58 | - | - | - | - | - |
| 59 | - | - | - | - | - |
| 60 | - | - | - | - | - |
| 61 | - | - | - | - | - |
| 62 | - | - | - | - | - |
| 63 | - | - | - | - | - |
| 64 | - | - | - | - | - |
| 65 | - | - | - | - | - |
| 66 | - | - | - | - | - |
| 67 | - | - | - | - | - |
| 68 | - | - | - | - | - |
| 69 | - | - | - | - | - |
| 70 | - | - | - | - | - |
| 71 | - | - | - | - | - |
| 72 | - | - | - | - | - |
| 73 | - | - | - | - | - |
| 74 | - | - | - | - | - |
| 75 | - | - | - | - | - |
| 76 | - | - | - | - | - |
| 77 | - | - | - | - | - |
| 78 | - | - | - | - | - |
| 79 | - | - | - | - | - |
| 80 | - | - | - | - | - |
| 81 | - | - | - | - | - |
| 82 | - | - | - | - | - |
| 83 | - | - | - | - | - |
| 84 | - | - | - | - | - |
| 85 | - | - | - | - | - |
| 86 | - | - | - | - | - |
| 87 | - | - | - | - | - |
| 88 | - | - | - | - | - |
| 89 | - | - | - | - | - |
| 90 | - | - | - | - | - |
| 91 | - | - | - | - | - |
| 92 | - | - | - | - | - |
| 93 | - | - | - | - | - |
| 94 | - | - | - | - | - |
| 95 | - | - | - | - | - |
| 96 | - | - | - | - | - |
| 97 | - | - | - | - | - |
| 98 | - | - | - | - | - |
| 99 | - | - | - | - | - |
| 100 | - | - | - | - | - |

# Single Discount Rate Development
# Projection of Plan Fiduciary Net Position

| Year | Projected Beginning Plan Net Position | Projected Total Contributions | Projected Benefit Payments | Projected Investment Earnings at 7.85% | Projected Ending Plan Net Position |
|---|---|---|---|---|---|
| | (a) | (b) | (c) | (d) | (e)=(a)+(b)-(c)+(d) |
| 1 | $ 314,304,310 | $ 39,073,554 | $ 54,799,278 | $ 24,067,314 | $ 322,645,900 |
| 2 | 322,645,900 | 38,668,582 | 58,349,073 | 24,569,836 | 327,535,244 |
| 3 | 327,535,244 | 38,671,254 | 61,748,020 | 24,822,864 | 329,281,343 |
| 4 | 329,281,343 | 38,712,188 | 64,908,472 | 24,839,805 | 327,924,863 |
| 5 | 327,924,863 | 38,819,369 | 68,044,572 | 24,616,682 | 323,316,341 |
| 6 | 323,316,341 | 39,030,783 | 70,954,306 | 24,151,004 | 315,543,823 |
| 7 | 315,543,823 | 39,311,386 | 73,640,780 | 23,448,215 | 304,662,643 |
| 8 | 304,662,643 | 39,659,308 | 76,255,651 | 22,506,746 | 290,573,046 |
| 9 | 290,573,046 | 40,099,345 | 78,420,208 | 21,334,303 | 273,586,486 |
| 10 | 273,586,486 | 40,589,086 | 80,368,722 | 19,944,683 | 253,751,534 |
| 11 | 253,751,534 | 41,120,082 | 82,226,976 | 18,336,529 | 230,981,169 |
| 12 | 230,981,169 | 41,728,637 | 83,666,406 | 16,517,059 | 205,560,458 |
| 13 | 205,560,458 | 42,434,962 | 84,669,258 | 14,510,115 | 177,836,278 |
| 14 | 177,836,278 | 43,221,151 | 85,265,328 | 12,341,088 | 148,133,189 |
| 15 | 148,133,189 | 44,073,916 | 85,526,805 | 10,032,165 | 116,712,465 |
| 16 | 116,712,465 | 45,002,727 | 85,429,839 | 7,605,139 | 83,890,492 |
| 17 | 83,890,492 | 45,995,461 | 85,004,326 | 5,083,229 | 49,964,856 |
| 18 | 49,964,856 | 47,046,056 | 84,303,697 | 2,487,504 | 15,194,719 |
| 19 | 15,194,719 | 48,183,676 | 83,152,855 | - | - |
| 20 | - | 49,414,569 | 81,543,651 | - | - |
| 21 | - | 50,722,695 | 79,615,786 | - | - |
| 22 | - | 52,103,343 | 77,368,191 | - | - |
| 23 | - | 53,548,730 | 74,872,231 | - | - |
| 24 | - | 55,056,579 | 72,181,299 | - | - |
| 25 | - | 56,637,547 | 69,283,145 | - | - |
| 26 | - | 58,298,438 | 66,143,311 | - | - |
| 27 | - | 60,042,588 | 62,814,645 | - | - |
| 28 | - | 61,864,673 | 59,394,030 | 95,141 | 2,565,784 |
| 29 | - | 63,761,415 | 55,915,633 | 302,130 | 8,147,911 |
| 30 | - | 65,738,353 | 52,421,162 | 512,826 | 13,830,017 |
| 31 | - | 100,060 | 48,919,380 | - | - |
| 32 | - | 77,193 | 45,435,213 | - | - |
| 33 | - | 58,326 | 42,023,973 | - | - |
| 34 | - | 44,917 | 38,705,145 | - | - |
| 35 | - | 35,259 | 35,515,928 | - | - |
| 36 | - | 27,725 | 32,459,996 | - | - |
| 37 | - | 23,078 | 29,540,543 | - | - |
| 38 | - | 19,742 | 26,780,799 | - | - |
| 39 | - | 17,363 | 24,183,916 | - | - |
| 40 | - | 15,952 | 21,753,152 | - | - |
| 41 | - | 15,036 | 19,492,094 | - | - |
| 42 | - | 14,533 | 17,397,316 | - | - |
| 43 | - | 14,304 | 15,466,770 | - | - |
| 44 | - | 14,301 | 13,695,232 | - | - |
| 45 | - | 14,520 | 12,076,016 | - | - |
| 46 | - | 14,774 | 10,603,240 | - | - |
| 47 | - | 12,131 | 9,308,831 | - | - |
| 48 | - | 8,002 | 8,154,417 | - | - |
| 49 | - | 6,138 | 7,088,646 | - | - |
| 50 | - | 5,223 | 6,136,174 | - | - |

# Single Discount Rate Development
# Projection of Plan Fiduciary Net Position (concluded)

| Year | Projected Beginning Plan Net Position | Projected Total Contributions | Projected Benefit Payments | Projected Investment Earnings at 7.85% | Projected Ending Plan Net Position |
|---|---|---|---|---|---|
| | (a) | (b) | (c) | (d) | (e)=(a)+(b)-(c)+(d) |
| 51 | $ - | $ 4,591 | $ 5,289,583 | $ - | $ - |
| 52 | - | 3,373 | 4,543,453 | - | - |
| 53 | - | 1,905 | 3,890,185 | - | - |
| 54 | - | 1,284 | 3,315,011 | - | - |
| 55 | - | 609 | 2,815,942 | - | - |
| 56 | - | - | 2,384,510 | - | - |
| 57 | - | - | 2,010,160 | - | - |
| 58 | - | - | 1,689,552 | - | - |
| 59 | - | - | 1,416,540 | - | - |
| 60 | - | - | 1,185,059 | - | - |
| 61 | - | - | 989,793 | - | - |
| 62 | - | - | 825,392 | - | - |
| 63 | - | - | 687,839 | - | - |
| 64 | - | - | 573,110 | - | - |
| 65 | - | - | 477,976 | - | - |
| 66 | - | - | 399,463 | - | - |
| 67 | - | - | 334,794 | - | - |
| 68 | - | - | 281,620 | - | - |
| 69 | - | - | 237,875 | - | - |
| 70 | - | - | 201,740 | - | - |
| 71 | - | - | 171,557 | - | - |
| 72 | - | - | 146,116 | - | - |
| 73 | - | - | 124,488 | - | - |
| 74 | - | - | 105,865 | - | - |
| 75 | - | - | 89,658 | - | - |
| 76 | - | - | 75,486 | - | - |
| 77 | - | - | 63,098 | - | - |
| 78 | - | - | 52,233 | - | - |
| 79 | - | - | 42,736 | - | - |
| 80 | - | - | 34,562 | - | - |
| 81 | - | - | 27,652 | - | - |
| 82 | - | - | 21,874 | - | - |
| 83 | - | - | 17,089 | - | - |
| 84 | - | - | 13,200 | - | - |
| 85 | - | - | 10,114 | - | - |
| 86 | - | - | 7,698 | - | - |
| 87 | - | - | 5,796 | - | - |
| 88 | - | - | 4,308 | - | - |
| 89 | - | - | 3,160 | - | - |
| 90 | - | - | 2,283 | - | - |
| 91 | - | - | 1,620 | - | - |
| 92 | - | - | 1,128 | - | - |
| 93 | - | - | 769 | - | - |
| 94 | - | - | 513 | - | - |
| 95 | - | - | 335 | - | - |
| 96 | - | - | 214 | - | - |
| 97 | - | - | 135 | - | - |
| 98 | - | - | 84 | - | - |
| 99 | - | - | 51 | - | - |
| 100 | - | - | 68 | - | - |

# Single Discount Rate Development
# Present Values of Projected Benefit Payments

| Year | Projected Beginning Plan Net Position | Projected Benefit Payments | Funded Portion of Benefit Payments | Unfunded Portion of Benefit Payments | Present Value of Funded Benefit Payments using Expected Return Rate (v) | Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf) | Present Value of Benefit Payments using Single Discount Rate (sdr) |
|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f)=(d)*v^((a)-.5) | (g)=(e)*vf ^((a)-.5) | (h)=((c)/(1+sdr)^(a-.5) |
| 1 | $ 314,304,310 | $ 54,799,278 | $ 54,799,278 | $ - | $ 52,767,287 | $ - | $ 53,309,918 |
| 2 | 322,645,900 | 58,349,073 | 58,349,073 | - | 52,095,923 | - | 53,719,689 |
| 3 | 327,535,244 | 61,748,020 | 61,748,020 | - | 51,117,860 | - | 53,800,823 |
| 4 | 329,281,343 | 64,908,472 | 64,908,472 | - | 49,823,114 | - | 53,522,159 |
| 5 | 327,924,863 | 68,044,572 | 68,044,572 | - | 48,428,701 | - | 53,099,701 |
| 6 | 323,316,341 | 70,954,306 | 70,954,306 | - | 46,823,938 | - | 52,401,497 |
| 7 | 315,543,823 | 73,640,780 | 73,640,780 | - | 45,059,608 | - | 51,469,467 |
| 8 | 304,662,643 | 76,255,651 | 76,255,651 | - | 43,263,426 | - | 50,439,372 |
| 9 | 290,573,046 | 78,420,208 | 78,420,208 | - | 41,253,113 | - | 49,089,882 |
| 10 | 273,586,486 | 80,368,722 | 80,368,722 | - | 39,200,864 | - | 47,612,108 |
| 11 | 253,751,534 | 82,226,976 | 82,226,976 | - | 37,187,994 | - | 46,101,071 |
| 12 | 230,981,169 | 83,666,406 | 83,666,406 | - | 35,084,832 | - | 44,392,966 |
| 13 | 205,560,458 | 84,669,258 | 84,669,258 | - | 32,921,066 | - | 42,516,270 |
| 14 | 177,836,278 | 85,265,328 | 85,265,328 | - | 30,739,758 | - | 40,519,887 |
| 15 | 148,133,189 | 85,526,805 | 85,526,805 | - | 28,589,732 | - | 38,464,878 |
| 16 | 116,712,465 | 85,429,839 | 85,429,839 | - | 26,478,737 | - | 36,361,187 |
| 17 | 83,890,492 | 85,004,326 | 83,890,492 | 1,113,834 | 24,109,060 | 556,950 | 34,240,164 |
| 18 | 49,964,856 | 84,303,697 | 49,964,856 | 34,338,840 | 13,314,106 | 16,464,136 | 32,137,181 |
| 19 | 15,194,719 | 83,152,855 | 15,194,719 | 67,958,136 | 3,754,222 | 31,242,956 | 29,998,855 |
| 20 | - | 81,543,651 | - | 81,543,651 | - | 35,946,626 | 27,840,948 |
| 21 | - | 79,615,786 | - | 79,615,786 | - | 33,653,055 | 25,725,238 |
| 22 | - | 77,368,191 | - | 77,368,191 | - | 31,357,764 | 23,658,599 |
| 23 | - | 74,872,231 | - | 74,872,231 | - | 29,097,840 | 21,667,744 |
| 24 | - | 72,181,299 | - | 72,181,299 | - | 26,898,125 | 19,768,967 |
| 25 | - | 69,283,145 | - | 69,283,145 | - | 24,756,101 | 17,957,804 |
| 26 | - | 66,143,311 | - | 66,143,311 | - | 22,661,983 | 16,224,746 |
| 27 | - | 62,814,645 | - | 62,814,645 | - | 20,636,223 | 14,582,072 |
| 28 | - | 59,394,030 | - | 59,394,030 | - | 18,709,813 | 13,048,707 |
| 29 | - | 55,915,633 | - | 55,915,633 | - | 16,889,517 | 11,625,839 |
| 30 | - | 52,421,162 | - | 52,421,162 | - | 15,182,663 | 10,314,877 |
| 31 | - | 48,919,380 | - | 48,919,380 | - | 13,585,624 | 9,109,713 |
| 32 | - | 45,435,213 | - | 45,435,213 | - | 12,098,974 | 8,007,237 |
| 33 | - | 42,023,973 | - | 42,023,973 | - | 10,730,264 | 7,008,960 |
| 34 | - | 38,705,145 | - | 38,705,145 | - | 9,476,312 | 6,109,301 |
| 35 | - | 35,515,928 | - | 35,515,928 | - | 8,337,794 | 5,305,329 |
| 36 | - | 32,459,996 | - | 32,459,996 | - | 7,306,910 | 4,588,851 |
| 37 | - | 29,540,543 | - | 29,540,543 | - | 6,376,188 | 3,952,213 |
| 38 | - | 26,780,799 | - | 26,780,799 | - | 5,542,727 | 3,390,875 |
| 39 | - | 24,183,916 | - | 24,183,916 | - | 4,799,367 | 2,897,885 |
| 40 | - | 21,753,152 | - | 21,753,152 | - | 4,139,395 | 2,466,852 |
| 41 | - | 19,492,094 | - | 19,492,094 | - | 3,556,563 | 2,091,923 |
| 42 | - | 17,397,316 | - | 17,397,316 | - | 3,043,768 | 1,766,997 |
| 43 | - | 15,466,770 | - | 15,466,770 | - | 2,594,695 | 1,486,687 |
| 44 | - | 13,695,232 | - | 13,695,232 | - | 2,202,994 | 1,245,821 |
| 45 | - | 12,076,016 | - | 12,076,016 | - | 1,862,623 | 1,039,624 |
| 46 | - | 10,603,240 | - | 10,603,240 | - | 1,568,185 | 863,888 |
| 47 | - | 9,308,831 | - | 9,308,831 | - | 1,320,113 | 717,762 |
| 48 | - | 8,154,417 | - | 8,154,417 | - | 1,108,833 | 595,038 |
| 49 | - | 7,088,646 | - | 7,088,646 | - | 924,260 | 489,532 |
| 50 | - | 6,136,174 | - | 6,136,174 | - | 767,159 | 401,035 |

# Single Discount Rate Development
# Present Values of Projected Benefit Payments (concluded)

| Year | Projected Beginning Plan Net Position | Projected Benefit Payments | Funded Portion of Benefit Payments | Unfunded Portion of Benefit Payments | Present Value of Funded Benefit Payments using Expected Return Rate (v) | Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf) | Present Value of Benefit Payments using Single Discount Rate (sdr) |
|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f)=(d)*v^((a)-.5) | (g)=(e)*vf ^((a)-.5) | (h)=((c)/(1+sdr)^(a-.5) |
| 51 | $ - | $ 5,289,583 | $ - | $ 5,289,583 | $ - | $ 634,113 | $ 327,169 |
| 52 | - | 4,543,453 | - | 4,543,453 | - | 522,262 | 265,952 |
| 53 | - | 3,890,185 | - | 3,890,185 | - | 428,776 | 215,503 |
| 54 | - | 3,315,011 | - | 3,315,011 | - | 350,350 | 173,794 |
| 55 | - | 2,815,942 | - | 2,815,942 | - | 285,363 | 139,714 |
| 56 | - | 2,384,510 | - | 2,384,510 | - | 231,703 | 111,965 |
| 57 | - | 2,010,160 | - | 2,010,160 | - | 187,292 | 89,326 |
| 58 | - | 1,689,552 | - | 1,689,552 | - | 150,945 | 71,054 |
| 59 | - | 1,416,540 | - | 1,416,540 | - | 121,348 | 56,378 |
| 60 | - | 1,185,059 | - | 1,185,059 | - | 97,342 | 44,636 |
| 61 | - | 989,793 | - | 989,793 | - | 77,958 | 35,282 |
| 62 | - | 825,392 | - | 825,392 | - | 62,336 | 27,845 |
| 63 | - | 687,839 | - | 687,839 | - | 49,810 | 21,960 |
| 64 | - | 573,110 | - | 573,110 | - | 39,795 | 17,316 |
| 65 | - | 477,976 | - | 477,976 | - | 31,824 | 13,667 |
| 66 | - | 399,463 | - | 399,463 | - | 25,502 | 10,810 |
| 67 | - | 334,794 | - | 334,794 | - | 20,495 | 8,574 |
| 68 | - | 281,620 | - | 281,620 | - | 16,530 | 6,826 |
| 69 | - | 237,875 | - | 237,875 | - | 13,388 | 5,456 |
| 70 | - | 201,740 | - | 201,740 | - | 10,887 | 4,379 |
| 71 | - | 171,557 | - | 171,557 | - | 8,878 | 3,524 |
| 72 | - | 146,116 | - | 146,116 | - | 7,250 | 2,841 |
| 73 | - | 124,488 | - | 124,488 | - | 5,923 | 2,291 |
| 74 | - | 105,865 | - | 105,865 | - | 4,830 | 1,843 |
| 75 | - | 89,658 | - | 89,658 | - | 3,922 | 1,478 |
| 76 | - | 75,486 | - | 75,486 | - | 3,166 | 1,177 |
| 77 | - | 63,098 | - | 63,098 | - | 2,538 | 931 |
| 78 | - | 52,233 | - | 52,233 | - | 2,014 | 730 |
| 79 | - | 42,736 | - | 42,736 | - | 1,580 | 565 |
| 80 | - | 34,562 | - | 34,562 | - | 1,225 | 432 |
| 81 | - | 27,652 | - | 27,652 | - | 940 | 327 |
| 82 | - | 21,874 | - | 21,874 | - | 713 | 245 |
| 83 | - | 17,089 | - | 17,089 | - | 534 | 181 |
| 84 | - | 13,200 | - | 13,200 | - | 396 | 132 |
| 85 | - | 10,114 | - | 10,114 | - | 291 | 96 |
| 86 | - | 7,698 | - | 7,698 | - | 212 | 69 |
| 87 | - | 5,796 | - | 5,796 | - | 153 | 49 |
| 88 | - | 4,308 | - | 4,308 | - | 109 | 35 |
| 89 | - | 3,160 | - | 3,160 | - | 77 | 24 |
| 90 | - | 2,283 | - | 2,283 | - | 53 | 16 |
| 91 | - | 1,620 | - | 1,620 | - | 36 | 11 |
| 92 | - | 1,128 | - | 1,128 | - | 24 | 7 |
| 93 | - | 769 | - | 769 | - | 16 | 5 |
| 94 | - | 513 | - | 513 | - | 10 | 3 |
| 95 | - | 335 | - | 335 | - | 6 | 2 |
| 96 | - | 214 | - | 214 | - | 4 | 1 |
| 97 | - | 135 | - | 135 | - | 2 | 1 |
| 98 | - | 84 | - | 84 | - | 1 | 0 |
| 99 | - | 51 | - | 51 | - | 1 | 0 |
| 100 | - | 68 | - | 68 | - | 1 | 0 |
| | | | | **Totals** | $ 702,013,339 | $ 428,799,428 | $ 1,130,812,767 |

# GASB STATEMENT NO. 67 SUPPLEMENTARY INFORMATION

## SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS USED TO DETERMINE RECOMMENDED CONTRIBUTION AMOUNTS

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

| | |
|---|---|
| Valuation date | June 30, 2014 |
| Actuarial cost method | Entry Age Normal |
| Amortization method | Level dollar, Closed |
| Remaining amortization period | 22 years |
| Asset valuation method | 7-year smoothed market<br>80%/120% market corridor |
| Actual Contributions Amounts | Amounts are according to Section 38-810, Arizona Revised Statutes: 23.50% of aggregate payroll for 30 years. |
| Actuarial assumptions: | |
| Investment Rate of Return | 7.85% |
| Projected Salary Increases | 4.25% |
| Payroll Growth | 4.00% |
| Retirement Age | Experience-based table of rates that is specific to the type of eligibility condition. |
| Mortality | RP-2000 mortality table projected to 2025 using projection scale AA (unadjusted males and females). |
| Assumed Future Permanent Benefit Increases | Members Retired on or before July 1, 2011: 3% of benefit.<br>Members Retired on or after August 1, 2011: 0.5% of benefit. |

# GASB STATEMENT NO. 45 SUPPLEMENTARY INFORMATION

**The following information is presented concerning the post-retirement health insurance subsidy. The liabilities and computed contribution for the post-retirement health insurance subsidy were based on the same assumptions and actuarial cost methods as indicated for GASB Statement No. 25.**

## SCHEDULE OF FUNDING PROGRESS

| Valuation Date June 30 | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (UAAL) (b-a) | Funded Ratio (a/b) | Annual Covered Payroll (c) | UAAL as a % of Covered Payroll ((b-a)/c) |
|---|---|---|---|---|---|---|
| 2006 | $ 0 | $12,264,911 | $12,264,911 | 0.00% | $54,696,109 | 22.42% |
| 2007 | 0 | 13,070,334 | 13,070,334 | 0.00 | 61,307,852 | 21.32% |
| 2008 | 0 | 12,454,201 | 12,454,201 | 0.00 | 62,183,699 | 20.03% |
| 2009 | 0 | 11,754,076 | 11,754,076 | 0.00 | 67,776,690 | 17.34% |
| 2010 | 0 | 12,014,810 | 12,014,810 | 0.00 | 66,442,072 | 18.08% |
| 2011 | 0 | 12,494,791 | 12,494,791 | 0.00 | 66,637,032 | 18.75% |
| 2012 | 0 | 11,900,126 | 11,900,126 | 0.00 | 67,933,920 | 17.52% |
| 2013 | 0 | 11,646,432 | 11,646,432 | 0.00 | 67,504,798 | 17.25% |
| **2014** | **23,112,947** | **12,111,735** | **($11,001,212)** | **190.83** | **68,340,894** | **(16.10)%** |

## ANNUAL REQUIRED CONTRIBUTION

| Valuation Date June 30 | Fiscal Year Ended June 30 | Normal Cost (a) | Actuarial Accrued Liability (b) | Total (a+b) | Dollar Amount |
|---|---|---|---|---|---|
| 2005 | 2007 | 1.64% | 1.42% | 3.06% | $ 1,523,119 |
| 2006 | 2008 | 1.05% | 1.17% | 2.22% | 1,380,478 |
| 2007 | 2009 | 0.91% | 1.09% | 2.00% | 1,355,533 |
| 2008 | 2010 | 0.85% | 1.04% | 1.89% | 1,255,755 |
| 2009 | 2011 | 0.85% | 0.92% | 1.77% | 1,322,611 |
| 2010 | 2012 | 0.83% | 0.96% | 1.79% | 1,311,218 |
| 2011 | 2013 | 0.74% | 1.06% | 1.80% | 1,309,847 |
| 2012 | 2014 | 0.58% | 0.98% | 1.56% | 1,157,294 |
| 2013 | 2015 | 0.59% | 1.61% | 2.20% | 1,485,105 |
| **2014** | **2016** | **0.59%** | **(1.77)%** | **0.00%** | **-** |

Fiscal Years prior to 2011 provided by the prior actuary.

**Health Insurance Subsidy Payment Reported for FY 2014: $950,531**

October 16, 2014

Mr. Jared Smout
Deputy Administrator
Arizona Elected Officials' Retirement Plan
3010 E. Camelback Road, Suite 200
Phoenix, Arizona  85016

**Re: Report of the June 30, 2014 Actuarial Valuation of EORP**

Dear Mr. Smout:

Enclosed please find 5 copies of this report.

Any questions or comments you may develop will be welcome.

Sincerely,

Mark Buis

Mark Buis, FSA, EA, MAAA

MB:sc
Enclosures