

ARIZONA ELECTED OFFICIALS' RETIREMENT PLAN CONSOLIDATED REPORT

JUNE 30, 2015



October 16, 2015

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

#### Re: Arizona Elected Officials' Retirement Plan Actuarial Valuation as of June 30, 2015

Ladies and Gentlemen:

The results of the June 30, 2015 annual actuarial valuation of members covered by the Arizona Elected Officials' Retirement Plan (EORP) are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement Plan and those designated or approved by the Board. This report may be provided to parties other than the Retirement Plan only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purpose of the valuation was to measure the Retirement Plan's funding progress and to determine the employer contribution for the 2016-2017 fiscal year. The funding objective is stated in Article 4, Chapter 5, Title 38, Sections 810C-D of the Arizona Revised Statutes. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The findings in this report are based on data and other information through June 30, 2015. 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. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

The valuation was based upon information furnished by the Retirement Plan, concerning Retirement Plan benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the Retirement Plan.

In addition, this report was prepared using certain assumptions approved by the Board as described in the section of this report entitled Methods and Assumptions.

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This report has been prepared by actuaries who have substantial experience valuing public employee retirement plans. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Arizona Elected Officials' Retirement Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Mark Buis, James D. Anderson and Francois Pieterse are Members of the American Academy of Actuaries (MAAA). These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

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MB/JDA/FP:dj

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#### 1. Required Employer Contributions to Support Retirement Benefits

The recommended employer contribution and funded status for the fiscal year beginning July 1, 2016 is shown below. Please note that the actual contribution is now made on a statutorily required contribution basis (as described on page A-3).

EORP	Pension	Health	Total
Employer Contribution Rate	95.56%	0.00 %	95.56%
Funded Status	38.8%	186.4%	41.0%

#### 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
6/30/2014	86.54%	0.00%	86.54%
6/30/2015	95.56%	0.00%	95.56%

Please note that the pension contribution rate increased significantly in the June 30, 2014 valuation. This arose primarily due to the repeal of certain aspects of SB1609 which resulted in much larger recognition of liabilities related to Permanent Benefit Increases (PBI). The contribution rate also increased due to the continued recognition of 2008-2009 asset losses, and due to statutorily required contribution amounts that are much less than the actuarially determined contribution.

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#### 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	86.54 %	0.00 %	86.54 %
Asset Losses	1.95 %	0.13 %	2.09 %
Tier 2	(0.13)%	(0.03)%	(0.16)%
Payroll	6.32 %	0.00 %	6.32 %
PBI	(1.00)%	0.00 %	(1.00)%
Other	1.88 %	(0.10)%	1.78 %
Contribution Rate This Valuation	95.56 %	0.00 %	95.56 %

Funded Status	Pension	Health	Total
Funded Status Last Valuation	39.4%	190.8%	41.6%
Asset Losses	(1.6)%	(7.0)%	(1.6)%
Tier 2	0.0%	0.0%	0.0%
Payroll	0.8%	0.0%	0.8%
PBI	0.8%	0.0%	0.8 %
Other	(0.6)%	2.6%	(0.5)%
Funded Status This Valuation	38.8%	186.4%	41.0%

Asset Losses – Asset losses are based on 7-year smoothing of assets and therefore primarily attributable to the market downturn in 2008-2009. Note that this is the last year recognition of the large asset loss that occurred in 2008-2009.

GRS -2-

Tier 2 – The decrease in the contribution rate is due to the fact that as current members retire, they are replaced by new members who have a less costly Tier of Benefits (for members hired on or after January 1, 2012). This will typically result in a declining normal cost rate that will occur gradually over time as the population mix (Tier 1 / Tier 2) changes.

Payroll Base – The contribution rate is shown as a percentage of payroll. Since this pension plan is closed to new hires, it is important to consider the overall dollar level of the contribution along with the contribution rate. To the extent that overall payroll is lower/greater than last year's payroll projected at 4% payroll growth, the contribution rate will increase/decrease as a result. The dollar contributions are also shown on Page A-2. The change in the funded status is primarily due to gains or losses on the overall salary assumption, which includes both the wage base assumption (4.0%) and the merit and longevity components of the salary assumption.

PBI Gain/(Loss) – Under the current structure, retired members will receive a PBI under certain conditions based on the current year excess asset return. The valuation assumes a resulting average PBI of approximately 3.00% per year. Since there was only a partial PBI for EORP members this year, this resulted in a gain for the Plan with a corresponding reduction in the contribution rate and increase in the funded status.

Other – This is the combination of all factors other than those listed above and primarily reflect demographic gains and losses (i.e., retirement, turnover, disability, etc. experience that differs from the actuarial assumptions). While this number is small on a combined plan basis, it will vary considerably from employer to employer, especially for employers with a smaller number of members.

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#### 4. Plan Experience

Experience during the year ended June 30, 2015 was overall unfavorable. On a market value basis, the Plan's return for the year ended June 30, 2015 was 3.7%. 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 3.8%. The effects of the asset losses were partially offset by gains attributable to demographic experience. Detailed information related to Plan experience is shown on page B-2.

#### 5. Looking Ahead

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

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.

The Board has adopted an investment return assumption of 7.5% for the June 30, 2016 actuarial valuation. If all other assumptions are realized, this change will result in upward pressure on the contribution rate.

#### 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.

GRS -4-

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.

GRS -5-

# **SECTION A**INTRODUCTION

#### **FUNDING OBJECTIVE**

The purpose of the annual actuarial valuation of the Arizona Elected Officials' Retirement Plan as of June 30, 2015 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, 2016. This information is contained in Section A.

This objective is stated in Article 4, Chapter 5, Title 38, Sections 810C-D 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, 2016 are shown on page A-2.

#### **CONTRIBUTION REQUIREMENTS**

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

	June	e <b>30</b> ,
	2014	2015
Contribution for Fiscal Year Ending	2016	2017
Pension		
Normal cost requirement		
Service pensions	23.10%	22.99%
Disability pensions	0.08	0.08
Survivors of active members	0.68	0.67
Refunds of members' accumulated contributions	0.84	0.83
Total normal cost requirement	24.70%	24.57%
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	17.70%	17.57%
Amortization of unfunded liabilities	68.84%	77.99%
Total recommended pension contribution rate	86.54%	95.56%
Health		
Normal cost requirement	0.59%	0.56%
Amortization of unfunded liabilities	(0.59)%	(0.56)%
Total health contribution requirement	0.00%	0.00%
Total contribution rate	86.54%	95.56%
<b>Estimated Dollar Pension Contribution</b>	\$ 59,142,210	\$ 59,183,541
<b>Estimated Dollar Health Contribution</b>	\$ -	\$ -

Actuarial accrued liability, \$825,811,275, exceeded the funding value of assets, which was \$338,430,894. The resulting unfunded actuarial accrued liabilities (after netting out the maintenance of effort reserve of \$14,944,183 from the actuarial value of assets) were amortized as a level dollar over a closed period of 21 years ending June 30, 2037 and added to the employer normal cost. The 21-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;
- 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, 2015 Defined Benefit payroll of \$61,933,383, Defined Contribution payroll of \$2,784,503, court fees received during 2014-2015 in the amount of \$8,285,993 and the \$5,000,000 appropriation, the estimated employer contribution for the fiscal year ending in June 30, 2017 will be **\$29,735,726**.

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
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
2015	2017	17.57	77.99	95.56

<sup>\*</sup> Beginning with the June 30, 2014 valuation, the rates are for pension only.

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%
2015	<b>2017</b>	0.56	(0.56)	0.0070

## **SECTION B**

FUNDING RESULTS

## PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY

	June	30,
	2014	2015
Pension		
A. Accrued Liability		
1. For retirees and beneficiaries	\$ 576,014,997	\$ 601,710,784
2. For vested terminated members	6,262,087	8,433,148
3. For present active members		
a. Value of expected future benefit payments	302,680,301	282,117,909
b. Value of future normal costs	88,711,847	78,811,481
c. Active member accrued liability: (a) - (b)	213,968,454	203,306,428
4. Total accrued liability	796,245,538	813,450,360
B. Present Assets (Funding Value)	313,381,951	315,387,358
C. Unfunded Accrued Liability: (A.4) - (B)	482,863,587	498,063,002
D. Funding Ratio: (B) / (A.4)	39.4%	38.8%
Health A. Accrued Liability		
<ol> <li>For retirees and beneficiaries</li> <li>For present active members</li> </ol>	\$ 7,683,506	\$ 8,237,142
a. Value of expected future benefit payments	6,406,196	5,768,345
b. Value of future normal costs	1,977,967	1,644,572
c. Active member accrued liability: (a) - (b)	4,428,229	4,123,773
3. Total accrued liability	12,111,735	12,360,915
B. Present Assets (Funding Value)	23,112,947	23,043,536
C. Unfunded Accrued Liability: (A.3) - (B)	(11,001,212)	(10,682,621)
D. Funding Ratio: (B) / (A.3)	190.8%	186.4%

### **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,
	2014**	2015
(1) UAAL* at start of year	\$292,448,392	\$482,863,587
(2) Normal cost from last valuation	16,649,370	15,595,081
(3) Actual Contributions	38,909,650	38,463,704
(4) Interest Accrual	22,083,483	37,007,199
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	292,271,595	497,002,163
(6) Changes from benefit increases, methods and assumptions	170,547,893	6,975,322
(7) Change in reserve for future pension increases	6,727,741	(7,255,869)
(8) Expected UAAL after changes: $(5) + (6) + (7)$	469,547,229	496,721,616
(9) Actual UAAL at end of year	482,863,587	498,063,002
(10) Experience Gain/(Loss): (8) - (9)	(13,316,358)	(1,341,386)

 $<sup>*\</sup> Unfunded\ Actuarial\ Accrued\ Liabilities.$ 

**FY2015** Gains and Losses by Source

	Gain/(Loss)	% of Liabilities
Investment Return	\$(12,744,622)	-1.6%
Salary Increases	6,494,136	0.8%
Retirement	(514,177)	-0.1%
Turnover	(915,499)	-0.1%
Disability	(323,819)	0.0%
Death-in-Service	89,470	0.0%
PBI	6,535,649	0.8%
Retiree Mortality	(1,471,635)	-0.2%
Other	1,509,111	0.2%
Total	(1,341,386)	-0.2%

<sup>\*\*</sup> Pension only beginning with the June 30, 2014 valuation.

## UNFUNDED ACTUARIAL ACCRUED LIABILITIES COMPARATIVE STATEMENT

(Dollar amounts in \$'000s)

#### **Pension**

	(1)			(4)			7 . 1 . 2 .	. D. d
	Actuarial Accrued	(2)	(3)	(4) Funded	(5)		(7)	ty Ratio (8)
Valuation	Liabilities	Valuation	Unfunded	Ratio	Financing	(6)	Unfunded	Total
Date	(AAL)	Assets	AAL	(2)/(1)	Period	Payroll	(3)/(6)	(1)/(6)
2006	\$391,403	\$351,701	\$ 39,702	89.9%	30 yrs.	\$ 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
2015	813,450	315,387	498,063	38.8	21	61,933	804.2	1313.4

<sup>\*</sup> Pension only beginning with the June 30, 2014 valuation.

#### Health

	(1) Actuarial			(4)			Liabili	ty Ratio
	Accrued	(2)	(3)	Funded	(5)		(7)	(8)
Valuation	Liabilities	Valuation	Unfunde d	Ratio	Financing	(6)	Unfunded	Total
Date	(AAL)	Assets	AAL	(2)/(1)	Period	Payroll	(3)/(6)	(1)/(6)
2014	\$12,112	\$23,113	\$(11,001)	190.8%	22	\$ 68,341	(16.1)%	17.7%
2015	12,361	23,044	(10,683)	186.4	21	61,933	(17.2)	20.0

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.

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; and
- 3) The liabilities for service already rendered by active and inactive members.

In a plan 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 plan.

#### **Short Condition Test**

(in \$'000s)

#### Pension

	Aggreg	ate Actuarial Lial	bilities for		Port	ion of Ac	tuarial
			(3)		Liabil	Liabilities Covered by	
			Non-Retired			Assets	
	(1)		Members				
Calendar	Non-Retired	(2)	(Employer	Actuarial			
Year	Contributions	Annuitants	Financed Portion)	Assets	(1)	(2)	(3)
2009	\$40.924	\$324.200	\$141,067	\$360.950	100%	99%	0.0%
	, -,-	, - ,	· · · · · · · · · · · · · · · · · · ·	1			
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
2015	56,387	601,711	155,353	315,387	100	43	0.0

<sup>\*</sup> Pension only beginning with the June 30, 2014 valuation.

## **SHORT CONDITION TEST**

#### Health

	Aggreg	ate Actuarial Lial	bilities for		Port	ion of Ac	tuarial
			(3)		Liabil	Liabilities Covered by	
			Non-Retired			Assets	
	(1)		Members				
Calendar	Non-Retired	(2)	(Employer	Actuarial			
Year	Contributions	Annuitants	Financed Portion)	Assets	(1)	(2)	(3)
2014	\$0	\$7,684	\$4,428	\$23,113	100%	100%	348.5%
2015	0	8,237	4,124	23,044	100	100	359.0

## **SECTION C**

FUND ASSETS

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

Year Ended June 30:	2015	2016	2017	2018	2019	2020	2021
A. Funding Value Beginning of Year (Including Future Benefit Increases)	\$ 320,109,692						
B. Market Value End of Year	308,668,424						
C. Market Value Beginning of Year	314,304,310						
D. Non-Investment Net Cash Flow	(16,460,258)						
E. Investment Income							
E1. Total: B-C-D	10,824,372						
E2. Amount for Immediate Recognition: (7.85%)	24,482,546						
E3. Amount for Phased-in Recognition: E1-E2	(13,658,174)						
F. Phased-in Recognition of Investment Income							
F1. Current Year: E3 / 7	(1,951,168)						
F2. First Prior Year	1,735,522 \$	(1,951,168)					
F3. Second Prior Year	452,369	1,735,522 \$	(1,951,168)				
F4. Third Prior Year	(3,609,304)	452,369	1,735,522 \$	(1,951,168)			
F5. Fourth Prior Year	2,386,184	(3,609,304)	452,369	1,735,522 \$	(1,951,168)		
F6. Fifth Prior Year	556,536	2,386,184	(3,609,304)	452,369	1,735,522 \$	(1,951,168)	
F7. Sixth Prior Year	(12,314,761)	556,534	2,386,186	(3,609,307)	452,366	1,735,522 \$	(1,951,166)
F8. Total Recognized Investment Gain	(12,744,622)	(429,863)	(986,395)	(3,372,584)	236,720	(215,646)	(1,951,166)
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7)	315,387,358						
G2. Upper Corridor: (120% x B)	370,402,109						
G3. Lower Corridor: (80% x B)	246,934,739						
G4. End of Year: (G1 subject to max of G2 and min of G3)	315,387,358						
G5. Future Benefit Increases	0						
G6. End of Year: (G4 - G5)	315,387,358						
H. Difference Between Market Value & Funding Value: (B-G4)	(6,718,934)	(6,289,071)	(5,302,676)	(1,930,092)	(2,166,812)	(1,951,166)	0
I. Market Rate of Return	3.5%						
J. Recognized Rate of Return	3.8%						
K. Ratio of Funding Value to Market Value	102.2%						

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.

**GRS** 

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

Year Ended June 30:	2015	2016	2017	2018	2019	2020	2021
A. Funding Value Beginning of Year	\$ 23,112,947						
B. Market Value End of Year	22,597,987						
C. Market Value Beginning of Year	22,772,767						
D. Non-Investment Net Cash Flow	(978, 362)						
E. Investment Income							
E1. Total: B-C-D	803,582						
E2. Amount for Immediate Recognition: (7.85%)	1,775,966						
E3. Amount for Phased-in Recognition: E1-E2	(972,384)						
F. Phased-in Recognition of Investment Income							
F1. Current Year: E3 / 7	(138,912)						
F2. First Prior Year	128,006 \$	(138,912)					
F3. Second Prior Year	30,910	128,006 \$	(138,912)				
F4. Third Prior Year	(246,625)	30,910	128,006 \$	(138,912)			
F5. Fourth Prior Year	163,049	(246,625)	30,910	128,006 \$	(138,912)		
F6. Fifth Prior Year	38,028	163,049	(246,625)	30,910	128,006 \$	(138,912)	
F7. Sixth Prior Year	(841,471)	38,028	163,049	(246,625)	30,912	128,006 \$	(138,912)
F8. Total Recognized Investment Gain	(867,015)	(25,544)	(63,572)	(226,621)	20,006	(10,906)	(138,912)
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7)	23,043,536						
G2. Upper Corridor: (120% x B)	27,117,584						
G3. Lower Corridor: (80% x B)	18,078,390						
G4. End of Year: (G1 subject to max of G2 and min of G3)	23,043,536						
G5. Future Benefit Increases	0						
G6. End of Year: (G4 - G5)	23,043,536						
H. Difference Between Market Value & Funding Value: (B-G4)	(445,549)	(420,005)	(356,433)	(129,812)	(149,818)	(138,912)	0
I. Market Rate of Return	3.6%						
J. Recognized Rate of Return	4.0%						
K. Ratio of Funding Value to Market Value	102.0%						

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.

**GRS** 

## REVENUES AND DISBURSEMENTS

Pension		
_	2014	2015
Market Value at the Beginning of Year:	\$ 292,528,317	\$ 314,304,310
Revenues:		
a. Member contributions	\$ 8,989,478	\$ 9,113,788
b. Employer contributions	29,845,174	29,324,054
c. Interest and dividends	3,384,893	2,237,967
d. Investment gain	40,687,738	13,529,827
e. Net transfers	74,998	25,862
f. Total	\$ 82,982,281	\$ 54,231,498
Disbursements:		
a. Refunds of member contributions	\$ 154,933	\$ 173,427
b. Pension benefits	53,984,038	54,453,000
c. Investment expenses	6,751,421	4,943,422
d. Administrative expenses	315,896	297,535
e. Total	\$ 61,206,288	\$ 59,867,384
December Income		
Reserve Increase:	ф 21.775.002	(\$ 5 (25 00C)
Total revenues minus total disbursements	\$ 21,775,993	(\$ 5,635,886)
Market Value at the End of Year:	\$ 314,304,310	\$ 308,668,424
Health	-0.4	
	2014	2015
Market Value at the Beginning of Year:	\$ 19,988,544	\$ 22,772,767
Revenues:		
a. Health Insurance contributions	\$ 1,072,197	\$ 0
b. Interest and dividends and investment gain	2,662,557	803,582
c. Total	\$ 3,734,754	\$ 803,582
Disbursements:	950,531	978,362
Reserve Increase:		
Total revenues minus total disbursements	\$ 2,784,223	(\$ 174,780)
Market Value at the End of Year:	\$ 22,772,767	\$ 22,597,987



## SECTION D

CENSUS DATA

## **JUNE 30, 2015 VALUATION DATA SUMMARY**

For purposes of the June 30, 2015 valuation, information on 2,025 covered persons was furnished. These people may be briefly described as follows:

		Averages						
				Annua	l Pay or			
			Years of	Retirement Allowance				
	No.	Age	Service	2015	2014			
Actives	738	56.2	9.3	\$83,921	\$81,069			
Retirees & Beneficiaries	1,116	72.6		50,846	50,338			
Inactive Vested	171	54.9						
	2,025							

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## **ACTIVE MEMBERS**

#### Members in Active Service as of June 30, 2015 by Years of Service

			Ye	ars of Servi	ice			Total	Total	Average
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Up	Count	Pay	Pay
Under 25								-	\$ -	\$ -
25 - 29	2							2	60,832	30,416
30 - 34	10	4						14	573,450	40,961
35 - 39	18	8	1	1				28	1,187,194	42,400
40 - 44	27	15	8					50	3,959,508	79,190
45 - 49	36	25	10	1				72	6,585,542	91,466
50 - 54	46	45	26	16	4			137	13,337,939	97,357
55 - 59	42	35	41	26	4		2	150	13,925,952	92,840
60 - 64	26	37	38	24	15	2		142	12,766,221	89,903
65 and Over	31	39	28	30	8	4	3	143	9,536,745	66,691
Total	238	208	152	98	31	6	5	738	\$ 61,933,383	\$83,921

## TERMINATED VESTED MEMBERS

		Y	Years of Servic	e		Total
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 & Up	Count
Under 30						
30 - 39	8	3		1		12
40 - 44	14	4	3			21
45 - 49	8	9	1			18
50 - 54	13	7	3	1		24
55 - 59	14	22	4	1	1	42
60 - 69	19	16	6	5	1	47
70 and Over	3	2		1	1	7
Total	79	63	17	9	3	171

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## RETIREES AND BENEFICIARIES

		Malan		D I	Total		
Attained		Males Annual Pension	]	Females Annual Pension		Annual Pension	
	No	Benefits	No	Benefits	No	Benefits	
Ages	No.	Denents	No.	Dellettis	No.	Denents	
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	2	21,876	0	0	2	21,876	
40-44	2	22,596	4	75,786	6	98,382	
45-49	10	133,800	2	81,163	12	214,963	
50-54	13	425,642	7	237,400	20	663,042	
55-59	26	1,389,651	26	1,158,072	52	2,547,723	
60-64	81	4,368,434	61	3,386,392	142	7,754,826	
65-69	144	8,914,101	97	5,224,190	241	14,138,291	
70-74	135	7,447,102	66	2,822,837	201	10,269,939	
75-79	104	5,960,121	69	2,494,417	173	8,454,538	
80-84	81	4,921,048	51	2,381,005	132	7,302,053	
85-89	49	2,226,105	37	1,230,211	86	3,456,316	
90-94	16	715,782	28	948,160	44	1,663,942	
95-99	1	36,272	3	108,413	4	144,685	
100 and Over	1	13,477	0	0	1	13,477	
Totals	665	\$36,596,007	451	\$20,148,046	1,116	\$56,744,053	

Pension Being Paid		Number	<b>Annual Pensions</b>	<b>Average Pensions</b>
Retired Members	Service Pensions	893	\$47,228,332	\$ 52,887
	Disability Pensions	17	1,809,596	106,447
Totals		910	49,037,928	53,888
Survivors of Members	Spouses	205	7,658,311	37,358
	Children with Guardians	1	47,814	47,814
Total		206	7,706,125	37,408
Total Pension being Pa	id	1,116	\$56,744,053	\$ 50,846
		Average Age	Average Service	Average Age at Retirement
Normal retired members		71.6	14.4	61.1
Disability retired member	S	68.6	12.3	58.7
Spouse beneficiaries		77.3	13.4	57.5

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## PENSIONS BEING PAID HISTORICAL SCHEDULE

Valuation Date		Annual	% Incr. in Annual	Average	Present Value of Pensions		
<b>June 30</b>	No.	Pensions	Pensions	Pension	Total	Average	
2006	797	\$28,044,340	7.4%	\$35,187	\$248,357,037	\$311,615	
2007	826	30,380,250	0.1	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	
2015	1,116	56,744,053	7.1	50,846	601,710,784	539,167	

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Results prior to 2009 were prepared by the prior actuary.

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# **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 a level dollar amount over a closed period of 21 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.

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 overfunded. 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 Plan benefits will be based.

	Salary Increase Assumptions for an Individual Member			
Sample	Merit &	Merit & Base Increase		
Ages	Seniority	(Economy)	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			

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% would be consistent with the other economic assumptions.

The healthy mortality table used to evaluate death after retirement in this valuation of the Plan 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 Plan and include margin for future improvements in mortality. Sample rates of mortality and years of life expectancy are shown below:

Sample	Probability of		Futur	e Life
Attained	Dying Next Year		Expectancy (Years)	
Ages	Males	Females	Males	Females
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	473 x 1.00		
	0 year set forward	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 Plan 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 Plan. Sample rates of mortality and years of life expectancy are shown below:

Sample Attained	Probability of Dying Next Year			e Life cy (Years)
Ages	Males	· ·		Females
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	473 x 1.00		
	10 year set forward	10 year set forward		

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	Probability of Dying Next Year	
Ages	Males Females	
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	473 x 0.75
	0 year set forward	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.

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	EODD
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	Service	% of Active Members
Ages	Index	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

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### **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 Plan.

Sample	% of Active Members Becoming Disabled Within Next Year
Ages	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
	25%

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## SUMMARY OF ASSUMPTIONS USED JUNE 30, 2015

#### 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.

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## **SECTION F**PLAN PROVISIONS

#### 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%.

#### 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

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 the 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; and
- 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.

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.

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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.

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### **APPENDIX I**

#### ACCOUNTING DISCLOSURES

This information is presented in draft form for review by the Plan's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Plan'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 plan'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 Plan'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, 2015.

A single discount rate of 4.86% 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 3.80%. 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 2028. As a result, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the year 2028, 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, 2015, the net pension liability is \$781,451,299. If a single discount rate that was 100 basis points lower was used, the net pension liability would have been \$909,707,897. Similarly, if a single discount rate that was 100 basis points higher was used, the net pension liability would have been \$673,594,229.

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,		2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
	_	2015	2017	2013	2012	2011	2010	2007	2000	2007	2000
Total Pension Liability											
Service Cost	\$	23,501,879 \$	23,501,879								
Interest on the Total Pension Liability		54,960,104	47,537,398								
Benefit and Assumption Changes		95,710,915	342,442,071								
Difference Between Expected and Actual Experience											
of the Total Pension Liability		(14,303,022)	4,643,397								
Benefit Payments and Refunds		(54,626,427)	(54,138,971)								
Net Change in Total Pension Liability		105,243,449	363,985,774								
Total Pension Liability - Beginning		984,876,274	620,890,500								
Total Pension Liability - Ending (a)	\$	1,090,119,723 \$	984,876,274								
Plan Fiduciary Net Position											
Employer Contributions	\$	29,324,054 \$	29,845,174								
Employee Contributions		9,113,788	8,989,478								
Pension Plan Net Investment Income		6,358,800	34,068,988								
Benefit Payments and Refunds		(54,626,427)	(54,138,971)								
Pension Plan Administrative Expense		(297,535)	(315,896)								
Other		4,491,434	3,327,220								
Net Change in Plan Fiduciary Net Position		(5,635,886)	21,775,993								
Plan Fiduciary Net Position - Beginning		314,304,310	292,528,317								
Plan Fiduciary Net Position - Ending (b)	\$	308,668,424 \$	314,304,310								
Net Pension Liability - Ending (a) - (b)		781,451,299	670,571,964								
Plan Fiduciary Net Position as a Percentage											
of Total Pension Liability		28.32 %	31.91 %								
Covered Employee Payroll	\$	61,933,383 \$	68,340,894								
Net Pension Liability as a Percentage											
of Covered Employee Payroll		1,261.76 %	981.22 %								
Notes to Schedule:											
N/A											

N/A

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

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

Total			Plan Net Position		Net Pension Liability
Pension	Plan Net	Net Pension	as a % of Total	Covered	as a % of
Liability	Position	Liability	Pension Liability	Payroll	Covered Payroll
		-			
		-			
		-			
		-			
		-			
		-			
		-			
		-			
\$ 984,876,274	\$ 314,304,310	\$ 670,571,964	31.91%	\$ 68,340,894	981.22%
1,090,119,723	308,668,424	781,451,299	28.32%	61,933,383	1261.76%
	Pension Liability  \$ 984,876,274	Pension Plan Net Position  Sequence of the Position Plan Net Posit	Pension Liability         Plan Net Position         Net Pension Liability           -         -           -	Pension Liability         Plan Net Position         Net Pension Liability         as a % of Total Pension Liability           -         -           -         -           -         -           -         -           -         -           -         -           -         -           -         -           -         -           -         -           -         -           \$ 984,876,274         \$ 314,304,310         \$ 670,571,964         31.91%	Pension Liability         Plan Net Position         Net Pension Liability         as a % of Total Pension Liability         Covered Payroll           -

### **Schedule of Contributions**

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

FY Ending June 30,	O .		Actual ontribution				Covered Payroll	Actual Contribution as a % of Covered Payroll	
2006									
2007									
2008									
2009									
2010									
2011									
2012									
2013									
2014	\$	28,235,016	\$	29,845,174	\$	(1,610,158)	\$	68,340,994	43.67%
2015		37,323,403		29,324,054		7,999,349		61,933,383	47.35%

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

		Current Single	
	1% Decrease	<b>Rate Assumption</b>	1% Increase
	3.86%	4.86%	5.86%
Total Pension Liability	\$ 1,218,376,321	\$ 1,090,119,723	\$ 982,262,653
Plan Fiduciary Net Position	308,668,424	308,668,424	 308,668,424
Net Pension Liability/(Asset)	\$ 909,707,897	\$ 781,451,299	\$ 673,594,229

## **Single Discount Rate Development Projection of Contributions**

		Payroll for	Contributions from	Normal Cost and Expense	UAL	Total
Yes	ar (	•	<b>Current Employees</b>	Contributions	Contributions	Contributions
<u> </u>						
(	0 :	\$ 61,933,383				
1	1	59,085,787	\$ 7,681,152	\$ 9,985,498	\$ 20,925,700	\$ 38,592,350
2	2	53,644,617	6,973,800	9,430,724	20,305,003	36,709,527
3	3	48,680,367	6,328,448	8,480,120	21,913,596	36,722,164
4	4	43,932,623	5,711,241	7,587,164	23,490,861	36,789,266
4	5	39,674,708	5,157,712	6,796,278	24,993,428	36,947,418
(	6	35,713,244	4,642,722	6,067,680	26,462,174	37,172,576
7	7	31,984,707	4,158,012	5,379,828	27,919,781	37,457,621
8	8	28,629,563	3,721,843	4,761,096	29,339,057	37,821,997
ģ	9	25,364,654	3,297,405	4,162,340	30,770,380	38,230,125
10	0	22,178,834	2,883,248	3,588,535	32,210,054	38,681,838
11	1	19,276,002	2,505,880	3,066,812	33,632,281	39,204,973
12	2	16,801,907	2,184,248	2,626,138	35,009,479	39,819,865
13	3	14,610,645	1,899,384	2,236,890	36,372,712	40,508,986
14	4	12,574,091	1,634,632	1,882,341	37,740,205	41,257,178
15	5	10,776,835	1,400,989	1,571,263	39,104,746	42,076,997
16	6	9,124,345	1,186,165	1,290,182	40,481,427	42,957,774
17	7	7,543,332	980,633	1,029,665	41,881,369	43,891,667
18	8	6,232,371	810,208	814,571	43,281,464	44,906,244
19	9	5,245,894	681,966	657,835	44,670,602	46,010,403
20	0	4,438,563	577,013	536,622	46,073,512	47,187,148
2	1	3,763,056	489,197	436,891	47,506,210	48,432,298
22	2	3,141,283	408,367	348,997	48,980,388	49,737,752
23	3	2,526,937	328,502	267,097	50,504,023	51,099,622
24	4	1,994,381	259,270	198,840	52,071,686	52,529,795
25	5	1,585,353	206,096	148,231	53,681,676	54,036,003
26	6	1,296,182	168,504	111,731	55,339,933	55,620,167
27	7	1,058,439	137,597	83,723	57,054,568	57,275,887
28	8	831,032	108,034	60,832	58,831,551	59,000,416
29	9	622,528	80,929	41,025	60,675,613	60,797,566
30	0	459,267	59,705	27,051	-	86,756
31	1	351,379	45,679	18,483	-	64,162
32	2	261,600	34,008	11,432	-	45,440
33	3	198,981	25,867	6,706	-	32,573
34	4	143,665	18,676	4,281	-	22,958
35	5	93,133	12,107	2,682	-	14,790
36	6	64,971	8,446	1,754	=	10,200
37	7	43,657	5,675	1,061	=	6,736
38		26,326	3,422	563	-	3,986
39		16,885	2,195	285	-	2,480
40	0	9,013	1,172	147	-	1,319
41	1	4,551	592	69	=	660
42	2	1,475	192	20	=	211
43		=	-	-	-	-
44		-	-	-	-	-
45		-	-	-	-	-
40		-	-	-	-	-
47		-	-	-	-	-
48		-	-	-	-	-
49	9	-	-	-	-	-
50	0	-	-	-	-	-

## **Single Discount Rate Development Projection of Contributions (Concluded)**

	J		Normal Cost and		,
	Payroll for	Contributions from	Expense	UAL	Total
Year		Current Employees	Contributions	Contributions	Contributions
51	-	-	-	-	-
52	-	-	-	-	-
53	-	-	-	-	-
54	-	-	-	-	-
55	-	-	-	-	-
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	Pı	ojected Benefit Payments	Projected Investment Earnings at 7.85%	Projected Ending Plan Net Position
	(a)	(b)		(c)	(d)	(e)=(a)+(b)-(c)+(d)
1	\$ 308,668,424	\$ 38,592,350	\$	58,503,669	\$ 23,463,715	\$ 312,220,821
2	312,220,821	36,709,527		61,901,205	23,539,240	310,568,382
3	310,568,382	36,722,164		64,856,992	23,296,187	305,729,740
4	305,729,740	36,789,266		67,828,916	22,804,493	297,494,582
5	297,494,582	36,947,418		70,606,225	22,057,173	285,892,948
6	285,892,948	37,172,576		73,178,851	21,056,047	270,942,721
7	270,942,721	37,457,621		75,687,366	19,796,832	252,509,808
8	252,509,808	37,821,997		77,795,043	18,282,716	230,819,478
9	230,819,478	38,230,125		79,724,947	16,521,424	205,846,080
10	205,846,080	38,681,838		81,522,305	14,509,193	177,514,805
11	177,514,805	39,204,973		82,913,740	12,251,751	146,057,790
12	146,057,790	39,819,865		83,879,787	9,768,853	111,766,721
13	111,766,721	40,508,986		84,457,395	7,081,298	74,899,610
14	74,899,610	41,257,178		84,726,791	4,205,668	35,635,665
15	35,635,665	42,076,997		84,635,118	1,158,548	-
16	-	42,957,774		84,226,156	-	<u>-</u>
17	_	43,891,667		83,532,610	_	<u>-</u>
18	_	44,906,244		82,402,875	_	-
19	-	46,010,403		80,830,388	_	<u>-</u>
20	-	47,187,148		78,941,982	_	<u>-</u>
21	_	48,432,298		76,735,755	_	_
22	_	49,737,752		74,285,388	_	_
23	_	51,099,622		71,632,353	_	_
24	_	52,529,795		68,773,676	_	_
25	_	54,036,003		65,663,990	_	_
26	_	55,620,167		62,356,213	_	_
27	_	57,275,887		58,966,097	_	_
28	_	59,000,416		55,522,948	_	_
29	_	60,797,566		52,064,030	_	_
30	_	86,756		48,638,958	_	_
31	_	64,162		45,193,683	_	_
32	_	45,440		41,824,265	_	_
33	_	32,573		38,544,317	_	_
34	_	22,958		35,392,515	_	_
35	_	14,790		32,373,275	_	_
36	_	10,200		29,484,362	_	_
37	_	6,736		26,751,326	_	_
38	_	3,986		24,177,326	_	_
39	_	2,480		21,763,257	_	_
40		1,319		19,514,443		
41	_	660		17,428,102	_	_
42		211		15,502,760		
43	_	211		13,733,555	_	_
44				12,114,918		
45	_	_		10,641,509	_	_
	-	-			-	-
46 47	-	-		9,306,523	-	-
48	-	-		8,102,968 7,023,697	-	-
48 49	-	-		7,023,697	-	-
50	-	-		6,060,961 5,206,297	-	-
30	-	-		3,200,297	-	-

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

,	Year	Projected Beginning Plan Net Position		cted Total ributions	Pr	ojected Benefit Payments	Project Investm Earnings at	ent		eted Ending Plan let Position
		(a)		(b)		(c)	(d)		(e)=	(a)+(b)-(c)+(d)
	51	\$	-	\$ -	\$	4,451,254		-	\$	=
	52		_	_		3,787,702		_		_
	53		_	_		3,207,947		_		_
	54		_	_		2,704,218		_		_
	55		_	_		2,268,538		_		_
	56		_	_		1,893,574		_		-
	57		_	_		1,572,495		_		_
	58		-	-		1,298,961		-		-
	59		-	-		1,067,134		_		-
	60		-	-		871,424		-		-
	61		-	-		706,889		_		-
	62		-	-		569,372		_		-
	63		-	-		455,327		-		-
	64		-	-		361,390		-		-
	65		-	-		284,463		-		_
	66		-	-		221,919		-		-
	67		-	-		171,597		-		-
	68		-	-		131,446		-		-
	69		-	-		99,706		-		-
	70		-	-		74,868		-		-
	71		-	-		55,655		-		-
	72		-	-		40,969		-		-
	73		-	-		29,867		-		-
	74		-	-		21,572		-		-
	75		-	-		15,444		-		-
	76		-	-		10,961		-		-
	77		-	-		7,700		-		-
	78		-	-		5,347		-		-
	79		-	-		3,672		-		-
	80		-	-		2,491		-		-
	81		-	-		1,668		-		-
	82		-	-		1,098		-		-
	83		-	-		710		-		-
	84		-	-		448		-		-
	85		-	-		280		-		-
	86		-	-		173		-		-
	87		-	-		105		-		-
	88		-	-		61		-		-
	89		-	-		35		-		-
	90		-	-		21		-		-
	91		-	-		12		-		-
	92		-	-		7		-		-
	93		-	-		3		-		-
	94		-	-		2		-		-
	95		-	-		0		-		-
	96		-	-		-		-		-
	97		-	-		-		-		-
	98		-	-		-		-		-
	99		-	-		-		-		=
	100		-	-		-		-		-

## 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)^(a5)
1	\$ 308,668,424	\$ 58,503,669	\$ 58,503,669	\$ -	\$ 56,334,316	\$ -	\$ 57,132,729
2	312,220,821	61,901,205	61,901,205	-	55,267,380	-	57,650,715
3	310,568,382	64,856,992	64,856,992	-	53,691,610	-	57,605,788
4	305,729,740	67,828,916	67,828,916	-	52,064,818	-	57,455,012
5	297,494,582	70,606,225	70,606,225	-	50,251,881	-	57,037,406
6	285,892,948	73,178,851	73,178,851	-	48,291,952	-	56,377,535
7	270,942,721	75,687,366	75,687,366	-	46,311,881	-	55,609,324
8	252,509,808	77,795,043	77,795,043	-	44,136,796	-	54,510,464
9	230,819,478	79,724,947	79,724,947	-	41,939,473	-	53,275,302
10	205,846,080	81,522,305	81,522,305	-	39,763,539	-	51,953,147
11	177,514,805	82,913,740	82,913,740	-	37,498,590	-	50,392,469
12	146,057,790	83,879,787	83,879,787	-	35,174,311	-	48,618,346
13	111,766,721	84,457,395	84,457,395	-	32,838,689	-	46,685,742
14	74,899,610	84,726,791	74,899,610	9,827,181	27,002,722	5,939,702	44,665,384
15	35,635,665	84,635,118	35,635,665	48,999,452	11,912,220	28,531,828	42,550,498
16	-	84,226,156	-	84,226,156	-	47,248,497	40,383,574
17	-	83,532,610	-	83,532,610	-	45,143,967	38,195,971
18	-	82,402,875	-	82,402,875	-	42,903,101	35,934,168
19	-	80,830,388	-	80,830,388	-	40,543,723	33,615,813
20	-	78,941,982	-	78,941,982	-	38,146,934	31,309,830
21	-	76,735,755	-	76,735,755	-	35,723,337	29,025,130
22	-	74,285,388	-	74,285,388	-	33,316,571	26,796,837
23	-	71,632,353	-	71,632,353	-	30,950,578	24,642,972
24	-	68,773,676	-	68,773,676	-	28,627,567	22,563,675
25	-	65,663,990	-	65,663,990	-	26,332,501	20,545,588
26	-	62,356,213	-	62,356,213	-	24,090,578	18,606,932
27	-	58,966,097	-	58,966,097	-	21,946,866	16,780,355
28	-	55,522,948	-	55,522,948	-	19,908,810	15,068,673
29	-	52,064,030	-	52,064,030	-	17,985,115	13,475,473
30	-	48,638,958	-	48,638,958	-	16,186,850	12,005,886
31	-	45,193,683	-	45,193,683	-	14,489,669	10,638,770
32	-	41,824,265	-	41,824,265	-	12,918,488	9,389,570
33	-	38,544,317	-	38,544,317	-	11,469,550	8,252,423
34	-	35,392,515	-	35,392,515	-	10,146,122	7,226,638
35	-	32,373,275	-	32,373,275	-	8,940,832	6,303,986
36	-	29,484,362	-	29,484,362	-	7,844,869	5,475,503
37	-	26,751,326	-	26,751,326	-	6,857,123	4,737,851
38	-	24,177,326	-	24,177,326	-	5,970,456	4,083,646
39	-	21,763,257	-	21,763,257	-	5,177,568	3,505,641
40	-	19,514,443	-	19,514,443	-	4,472,607	2,997,805
41	-	17,428,102	-	17,428,102	-	3,848,197	2,553,295
42	-	15,502,760	-	15,502,760	-	3,297,758	2,166,026
43	-	13,733,555	-	13,733,555	-	2,814,462	1,829,959
44	-	12,114,918	-	12,114,918	-	2,391,859	1,539,510
45	-	10,641,509	-	10,641,509	-	2,024,049	1,289,642
46	-	9,306,523	-	9,306,523	-	1,705,328	1,075,615
47	-	8,102,968	-	8,102,968	-	1,430,432	893,136
48	-	7,023,697	-	7,023,697	-	1,194,515	738,317
49	-	6,060,961	-	6,060,961	-	993,047	607,606
50	-	5,206,297	-	5,206,297	-	821,788	497,753

## 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)^(a5
51	\$ -	\$ 4,451,254		\$ 4,451,254	\$ -	\$ 676,887	\$ 405,855
52	-	3,787,702	-	3,787,702	-	554,897	329,358
53	-	3,207,947	-	3,207,947	-	452,758	266,025
54	-	2,704,218	-	2,704,218	-	367,691	213,866
55	_	2,268,538	-	2,268,538	-	297,160	171,100
56	-	1,893,574	-	1,893,574	-	238,962	136,204
57	-	1,572,495	-	1,572,495	-	191,178	107,870
58	_	1,298,961	-	1,298,961	-	152,142	84,979
59	_	1,067,134	-	1,067,134	-	120,413	66,579
60	_	871,424	-	871,424	_	94,730	51,850
61	_	706,889	-	706,889	_	74,031	40,112
62	_	569,372	-	569,372	_	57,446	30,812
63	_	455,327	-	455,327	_	44,258	23,499
64	_	361,390	_	361,390	_	33,841	17,787
65	_	284,463	_	284,463	_	25,662	13,353
66	_	221,919	_	221,919	_	19,287	9,934
67	_	171,597	_	171,597	_	14,368	7,326
68	_	131,446	_	131,446	_	10,603	5,352
69	_	99,706	_	99,706	_	7,748	3,871
70	_	74,868	_	74,868	_	5,605	2,772
71	_	55,655	_	55,655	_	4,014	1,965
72	_	40,969	_	40,969	_	2,847	1,380
73	_	29,867	_	29,867	_	1,999	959
74	-	21,572	-	21,572	-	1,391	661
75	-	15,444	-	15,444	_	960	451
76	-	10,961	-	10,961	-	656	305
77	-	7,700	-	7,700	_	444	205
78	-	5,347	-	5,347	-	297	135
79	-		-	3,672	-	197	89
80	-	3,672	-		-		
81	-	2,491	-	2,491	-	128	57
	-	1,668	-	1,668	-	83	37
82	-	1,098	-	1,098	-	53	23
83	-	710	-	710	-	33	14
84	-	448	-	448	-	20	9
85	-	280	-	280	-	12	5
86	-	173	-	173	-	/	3
87	-	105	-	105	-	4	2
88	-	61	-	61	-	2	1
89	-	35	-	35	-	1	1
90	-	21	-	21	-	1	0
91	-	12	-	12	-	0	0
92	-	7	-	7	-	0	0
93	-	3	-	3	-	0	0
94	-	2	-	2	-	0	0
95	-	0	-	0	-	0	C
96	-	-	-	-	-	-	-
97	-	-	-	-	-	-	-
98	-	-	-	-	-	-	-
99	-	-	-	-	-	-	-
100							

#### 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, 2015

Actuarial cost method Entry Age Normal

Amortization method Level dollar, Closed

Remaining amortization period 21 years

Asset valuation method 7-year smoothed market

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.

Members Retired on or after August 1, 2011: 0.5% of

benefit.

#### GASB STATEMENT NO. 43 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	Actua Valu Ass (a	e of ets	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	23,11	2,947	12,111,735	(11,001,212)	190.83	68,340,894	(16.10)%
2015	23,04	3,536	12,360,915	(\$10,682,621)	186.42	61,933,383	(17.25)%

### **ANNUAL REQUIRED CONTRIBUTION**

Valuation Date June 30	Fiscal Year Ended June 30	Normal Cost (a)	Actuarial Accrued Liability (b)	Total (a+b)	Dollar Amount	
2006	2008	1.05%	1.17%	2.22%	\$ 1,380,478	0
					. , ,	
2007	2009	0.91%	1.09%	2.00%	1,355,533	
2008	2010	0.85%	1.04%	1.89%	1,255,755	5
2009	2011	0.85%	0.92%	1.77%	1,322,61	1
2010	2012	0.83%	0.96%	1.79%	1,311,213	8
2011	2013	0.74%	1.06%	1.80%	1,309,84	7
2012	2014	0.58%	0.98%	1.56%	1,157,294	4
2013	2015	0.59%	1.61%	2.20%	1,485,103	5
2014	2016	0.59%	(1.77)%	0.00%	-	
2015	2017	0.56%	(1.71)%	0.00%	-	

Fiscal Years prior to 2011 provided by the prior actuary.

**Health Insurance Subsidy Payment Reported for FY 2015: \$956,773** 



October 16, 2015

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

Re: Report of the June 30, 2015 Actuarial Valuation of EORP

Dear Mr. Smout:

Enclosed please find five copies of this report.

Any questions or comments you may develop will be welcome.

Sincerely,

Mark Buis, FSA, EA, FCA, MAAA

MB:dj Enclosures