

**ARIZONA ELECTED OFFICIALS' RETIREMENT SYSTEM  
CONSOLIDATED REPORT**

**JUNE 30, 2009**



October 30, 2009

Fund Manager  
Arizona Elected Officials' Retirement System  
Phoenix, Arizona

**Re: Arizona Elected Officials' Retirement System Actuarial Valuation as of June 30, 2009**

Ladies and Gentlemen:

The results of the **June 30, 2009 annual actuarial valuations of members** covered by the Arizona Elected Officials' Retirement System (EORP) are presented in this report. The purpose of the valuations is to measure EORP' funding progress and to establish contribution rates for the 2010-2011 fiscal year.

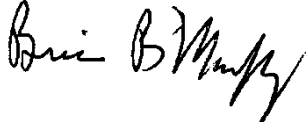
The valuations are based upon current plan provisions of the Arizona Elected Officials' Retirement System. All promised benefits are included in the actuarially calculated contribution rates. These provisions are summarized in Section F.

In preparing this report we relied, without audit, on information (some oral and some written) supplied by the State Retirement System. This information includes, but is not limited to, statutory provisions, employee and retiree census, and financial information. In our examination of this data, we have found it to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

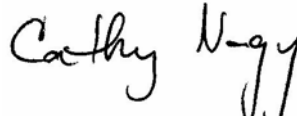
GRS's work product was prepared exclusively for the Arizona Elected Officials Retirement System for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the System's operations, and uses System data, which GRS has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of GRS's work product who desires professional guidance should not rely upon GRS's work product, but should engage qualified professionals for advice appropriate to its own specific needs. Any distribution of this report must be provided in its entirety including this cover letter, unless prior written consent is obtained from GRS.

The valuations were completed by qualified actuaries in accordance with accepted actuarial procedures prescribed by the Actuarial Standards Board. All of the actuaries submitting this report are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of our knowledge, this report is complete and accurate and the actuarial methods and assumptions produced results that are reasonable.

Respectfully submitted,



Brian B. Murphy, FSA, EA, MAAA



Cathy Nagy, FSA, EA, MAAA



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**EXECUTIVE SUMMARY/BOARD SUMMARY**

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

The computed employer contribution and funded status for the fiscal year beginning July 1, 2010 is shown below.

	<b>Contribution</b>	<b>Funded Status</b>
EORP	29.79%	71.3%

**2. Contribution Rate Comparison**

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

<b>Valuation Date</b>	<b>Contribution</b>	<b>Funded Status</b>
6/30/2008	26.25%	76.6%
6/30/2009	29.79%	71.3%

The 2008 results were calculated by prior actuary.

**3. Reasons for Change**

There are three general reasons why contribution rates change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions or methods used to predict future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions predicted.

There were no benefit changes reported to the actuary for the year ended June 30, 2009. In addition, there were no assumption changes. There was a change in actuary during the year which resulted in some technical adjustments to the actuarial methods that were applied.

## EXECUTIVE SUMMARY/BOARD SUMMARY

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### 4. Plan Experience

Experience during the year ended June 30, 2009 was unfavorable. During the year ended June 30, 2009, the return on fund assets was lower than expected. The market value smoothing techniques used in this valuation of the System recognize both past and present investment gains. While on a market value basis, the System's return was -18.9%, the resulting actuarial asset yield for the year ended June 30, 2009 was 2.90%. In addition, there were losses attributable to demographic experience. Detailed information related to System experience is shown on page B-2.

### 5. Looking Ahead

Recent market turmoil has resulted in significant declines since June 30, 2008. Due to the smoothing method, only a portion of the current year asset loss was recognized this year. If the Market Value of Assets were used as the basis of our calculations (instead of the smoothed value), the employer contribution would have been approximately 38% of payroll (instead of 29.79% of payroll) and the funded status would have been about 51% (instead of 71.3%). If equity markets do not improve significantly, the June 30, 2010 valuation will likely show an increase in the employer contribution amount (absent any liability gains).

### 6. Other Comments

The ratio of the Funding Value of Assets to Market Value of Assets as shown on Page C-1 is 141.1%. The Actuarial Standards of Practice require that the Funding Value fall within a reasonable range around the Market Value. Although some actuarial judgment is used to determine what is deemed 'reasonable', a ratio approaching 140% is on the high end. We recommend that consideration be given to establishing an asset corridor for the June 30, 2010 actuarial valuation. An asset corridor, sometimes called "Collar", is a limitation on the amount by which the Funding Value is permitted to differ from Market Value. 20% is a common standard, although many systems have relaxed their standards in response to the extraordinary events of late 2008 and early 2009.

**7. Conclusion**

The retired lives are almost 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.

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**SECTION A**  
INTRODUCTION

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## FUNDING OBJECTIVE

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The purpose of the annual actuarial valuation of the Arizona Elected Officials' Retirement System as of June 30, 2009 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, 2010. 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

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The Retirement System is supported by member contributions, employer contributions and investment income from Retirement System 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, 2010 are shown on page A-2.

**CONTRIBUTION REQUIREMENTS**

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

	<b>June 30,</b>	
	<b>2008</b>	<b>2009</b>
Contribution for Fiscal Year	2010	2011
<b>Pension</b>		
Normal cost requirement		
Service pensions	22.18%	23.80%
Disability pensions	0.00	0.00
Survivors of active members	1.12	0.65
Refunds of members' accumulated contributions	<u>0.19</u>	<u>0.21</u>
Total normal cost requirement	23.49%	24.66%
Less member contributions	<u>7.00</u>	<u>7.00</u>
Employer normal cost requirement	16.49%	17.66%
Amortization of unfunded liabilities	<u>7.87%</u>	<u>10.36%</u>
Total pension contribution requirement	24.36%	28.02%
<b>Health</b>		
Normal cost requirement	0.85%	0.85%
Amortization of unfunded liabilities	<u>1.04%</u>	<u>0.92%</u>
Total health contribution requirement	1.89%	1.77%
<b>Total contribution requirement</b>	<b>26.25%</b>	<b>29.79%</b>

Actuarial accrued liability, \$506,190,632, exceeded the funding value of accrued assets, \$360,950,484. The unfunded actuarial accrued liabilities were amortized as a level percent of payroll over a closed period of 27 years and added to the employer normal cost. The 27 year period is a one year decrease from last year.

2008 results were calculated by prior actuary. Split amounts between pension and health were estimated.

**HISTORICAL SUMMARY OF EMPLOYER RATES**

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<b>Valuation Date</b> <b>June 30</b>	<b>Fiscal</b> <b>Year</b>	<b>Normal Cost</b>	<b>Unfunded</b> <b>Actuarial</b> <b>Accrued Liability</b>	<b>Total</b>
2000	2002	16.69%	(9.72)%	6.97%
2001	2003	21.00	(13.45)	7.55
2002	2004	22.65	(9.16)	13.49
2003	2005	21.12	(6.58)	14.54
2004	2006	22.17	(1.63)	20.54
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
<b>2009</b>	<b>2011</b>	<b>18.51</b>	<b>11.28</b>	<b>29.79</b>

2005 results were revised pursuant to changes enacted by the 2006 Legislature and the EORP Fund Manager.

Results prior to 2009 were calculated by the prior actuary.

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**SECTION B**  
FUNDING RESULTS

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**PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY**

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	June 30,	
	2008	2009
A. Accrued Liability		
1. For retirees and beneficiaries	\$ 285,633,966	\$ 324,199,711
2. For vested terminated members	5,257,134	4,210,581
3. For present active members		
a. Value of expected future benefit payments	266,705,530	278,855,632
b. Value of future normal costs	103,255,979	101,075,292
c. Active member accrued liability: (a) - (b)	163,449,551	177,780,340
4. Total accrued liability	454,340,651	506,190,632
B. Present Assets (Funding Value)	348,013,490	360,950,484
C. Unfunded Accrued Liability: (A.4) - (B)	106,327,161	145,240,148
D. Funding Ratio: (B) / (A.4)	76.6%	71.3%

2008 results were calculated by the prior actuary.

Present Assets exclude \$3,637,670 in reserves held for future pension increases pursuant to state statute.

**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,	
	2008	2009
(1) UAAL* at start of year	\$114,582,583	\$106,327,161
(2) Normal cost from last valuation	11,317,429	16,496,846
(3) Actual Contributions	17,744,324	21,965,744
(4) Interest Accrual	9,466,397	8,805,381
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	117,622,085	109,663,644
(6) Changes from benefit increases	-	11,319,196
(7) Changes in actuarial methods & actuary	-	12,482,467
(8) Change in Reserve for future pension increases	-	(16,196,206)
(9) Expected UAAL after changes: (5) + (6) + (7) + (8)	117,622,085	117,269,101
(10) Actual UAAL at end of year	106,327,161	145,240,148
(11) Experience Gain/(Loss): (9) - (10)	11,294,924	(27,971,047)

2008 results were calculated by the prior actuary.

**FY2009 Gains and Losses by Source**

	Gain/(Loss)	% of Liabilities
Investment Return	\$(19,971,257)	-4.4%
Salary Increases	(4,341,610)	-1.0%
Retirement	665,376	0.1%
Turnover	(1,233,719)	-0.3%
Disability	-	0.0%
Death-in-service	(174,624)	0.0%
Retiree Mortality	(3,062,824)	-0.7%
Other	147,611	0.0%
<b>Total</b>	<b>(27,971,047)</b>	<b>-6.2%</b>

**UNFUNDED ACTUARIAL ACCRUED LIABILITIES  
COMPARATIVE STATEMENT**

(Dollar amounts in \$'000s)

Valuation Date	(1) Actuarial Accrued Liabilities (AAL)	(2) Valuation Assets	(3) Unfunded AAL	(5) Funded Ratio (2)/(1)	(6) Financing Period
2000	\$253,478	\$329,777	(76,299)	130.1%	20 yrs.
2001	250,987	355,768	(104,781)	141.7	20
2002	279,947	351,349	(71,402)	125.5	20
2003	297,892	353,463	(55,571)	118.7	20
2004	328,921	343,376	(14,455)	104.4	20
2005	360,758	344,604	16,154	95.5	20
2006	391,403	351,701	39,702	89.9	30
2007	451,299	336,717	114,582	74.6	29
2008	454,340	348,013	106,327	76.6	28
<b>2009</b>	<b>506,191</b>	<b>360,950</b>	<b>145,241</b>	<b>71.3</b>	<b>27</b>

2005 Results revised pursuant to changes in assumptions and methods enacted by the 2006 Legislature and the EORP Fund Manager. Results prior to 2009 were calculated by prior actuary.

**SHORT CONDITION TEST**

If the contributions to EORP are soundly executed, the System 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 (Including Health Insurance Subsidy)**

*(in \$'000s)*

Calendar Year	Aggregate Actuarial Liabilities For			Actuarial Assets	Portion of Actuarial Liabilities covered by Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
	Non-Retired Contributions	Annuitants	Non-Retired Members (Employer Financed Portion)				
2009	\$40,924	\$324,200	\$141,067	\$360,950	100%	99%	0.0%

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**SECTION C**  
FUND ASSETS

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

<b>Year Ended June 30:</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
A. Funding Value Beginning of Year (Including Future Benefit Increases)	\$ 366,197,908						
B. Market Value End of Year	258,333,105						
C. Market Value Beginning of Year	332,065,253						
D. Non Investment Net Cash Flow	(12,244,911)						
E. Investment Income							
E1. Total: B-C-D	(61,487,237)						
E2. Amount for Immediate Recognition (8.50%)	30,606,413						
E3. Amount for Phased in Recognition: E1-E2	(92,093,650)						
F. Phased in Recognition of Investment Income							
F1. Current Year: E3 / 7	\$ (13,156,236)						
F2. First Prior Year	(7,655,972)	\$ (13,156,236)					
F3. Second Prior Year	3,400,807	(7,655,972)	\$ (13,156,236)				
F4. Third Prior Year	(889,619)	3,400,807	(7,655,972)	\$ (13,156,236)			
F5. Fourth Prior Year	(446,909)	(889,619)	3,400,807	(7,655,972)	\$ (13,156,236)		
F6. Fifth Prior Year	921,669	(446,909)	(889,619)	3,400,807	(7,655,972)	\$ (13,156,236)	
F7. Sixth Prior Year	(2,144,997)	921,670	(446,911)	(889,617)	3,400,808	(7,655,972)	\$ (13,156,232)
F8. Total Recognized Investment Gain	\$ (19,971,257)	\$ (17,826,259)	\$ (18,747,931)	\$ (18,301,018)	\$ (17,411,400)	\$ (20,812,208)	\$ (13,156,232)
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D3+E2+F6)	364,588,154						
G2. Future Benefit Increases	3,637,670						
G3. End of Year: (G1-G2)	360,950,484						
H. Difference Between Market Value & Funding Value	(106,255,049)	(88,428,790)	(69,680,859)	(51,379,840)	(33,968,440)	(13,156,232)	0
I. Market Rate of Return	-18.9%						
J. Recognized Rate of Return	2.9%						
K. Ratio of Funding Value to Market Value	141.1%						

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.

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**SECTION D**  
CENSUS DATA

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**JUNE 30, 2009 VALUATION DATA SUMMARY**

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For purposes of the June 30, 2009 valuation, information on 1,881 covered persons was furnished. These people may be briefly described as follows.

	No.	Averages			
		Age	Service	Annual Pay or Retirement Allowance	
				2009	2008
Actives	857	54.6	8.1	\$79,086	\$75,474
Retirees & Beneficiaries	905	71.2		40,069	37,672
Inactive Vested	119	54.9			
	1,881				

**ACTIVE MEMBERS**

**Members in Active Service as of June 30, 2009  
by Years of Service**

Age	Years of Service							Total Count	Total Pay	Average Pay
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Up			
Under 25								-	\$ -	\$ -
25 - 29	6							6	276,900	46,150
30 - 34	17	2	1					20	760,087	38,004
35 - 39	29	10						39	1,924,890	49,356
40 - 44	39	16	7					62	4,563,294	73,602
45 - 49	60	24	18	5				107	9,737,923	91,009
50 - 54	62	40	38	13	1	2		156	13,756,396	88,182
55 - 59	54	51	46	25	8	2		186	16,786,700	90,251
60 - 64	49	41	39	29	8	1	2	169	13,469,429	79,701
65 and Over	29	32	29	11	8	3		112	6,501,071	58,045
<b>Total</b>	<b>345</b>	<b>216</b>	<b>178</b>	<b>83</b>	<b>25</b>	<b>8</b>	<b>2</b>	<b>857</b>	<b>\$67,776,690</b>	<b>\$79,086</b>

**TERMINATED VESTED MEMBERS**

Age	Years of Service					Total Count
	0 - 4	5 - 9	10 - 14	15 - 19	20 & Up	
Under 30						
30 - 39	4	3				7
40 - 44	4	2				6
45 - 49	9	8	2			19
50 - 54	10	10	6	1		27
55 - 59	10	15	2	2	1	30
60 - 69	7	11	4	4		26
70 and Over	2	1			1	4
Total	46	50	14	7	2	119

**RETIREES AND BENEFICIARIES**

Attained Ages	Males		Females		Total	
	No.	Annual Pension Benefits	No.	Annual Pension Benefits	No.	Annual Pension Benefits
Under 25	0	\$ 0	0	\$ 0	0	\$ 0
25-29	0	0	0	0	0	0
30-34	1	1,551	0	0	1	1,551
35-39	1	8,755	1	4,229	2	12,984
40-44	5	65,809	2	11,296	7	77,105
45-49	7	147,621	3	74,727	10	222,348
50-54	13	449,150	16	377,563	29	826,713
55-59	44	2,001,302	31	1,469,383	75	3,470,685
60-64	75	4,273,691	47	1,770,275	122	6,043,966
65-69	107	4,430,736	48	1,762,747	155	6,193,483
70-74	106	5,237,920	56	1,564,987	162	6,802,907
75-79	104	4,853,088	48	1,763,836	152	6,616,924
80-84	55	2,079,501	46	1,463,333	101	3,542,834
85-89	32	1,134,924	41	988,439	73	2,123,363
90-94	4	128,924	10	181,848	14	310,772
95-99	1	13,922	1	3,014	2	16,936
100 and Over	0	0	0	0	0	0
<b>Totals</b>	<b>555</b>	<b>\$24,826,894</b>	<b>350</b>	<b>\$11,435,677</b>	<b>905</b>	<b>\$36,262,571</b>

Pension Being Paid		Number	Annual Pensions	Average Pensions
Retired Members	Service Pensions	708	\$29,809,544	\$42,104
	Disability Pensions	15	1,097,425	73,162
Totals		723	30,906,969	42,748
Survivors of Members	Spouses	181	5,316,986	29,376
	Children with Guardians	1	38,616	38,616
Total		182	5,355,602	67,992
<b>Total Pension being Paid</b>		<b>905</b>	<b>\$36,262,571</b>	<b>\$40,069</b>
		<b>Average Age</b>	<b>Average Service</b>	<b>Average Age at Retirement</b>
Normal retired members		70.1	14.4	61.0
Disability retired members		69.2	11.7	57.6
Spouse beneficiaries		75.8	13.3	58.1

**PENSIONS BEING PAID  
HISTORICAL SCHEDULE**

<b>Valuation Date June 30</b>	<b>No.</b>	<b>Annual Pensions</b>	<b>% Incr. in Annual Pensions</b>	<b>Average Pension</b>	<b>Present Value of Pensions</b>	
					<b>Total</b>	<b>Average</b>
2000	589	\$15,096,774	15.0	\$25,631	\$124,211,110	\$210,885
2001	647	17,729,482	17.4	27,403	147,901,899	228,596
2002	659	19,606,416	10.6	29,752	164,670,150	249,879
2003	709	22,308,359	13.8	31,465	183,882,540	259,355
2004	730	23,854,186	6.9	32,677	204,302,428	279,866
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
<b>2009</b>	<b>905</b>	<b>36,262,571</b>	<b>10.4</b>	<b>40,069</b>	<b>317,313,745</b>	<b>350,623</b>

Results prior to 2009 were prepared by prior actuary.

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**SECTION E**  
METHODS AND ASSUMPTIONS

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## VALUATION METHODS

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

- (i) The annual normal costs for each individual active member, payable from date of hire to date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;
- (ii) Each annual normal cost is the portion of the actuarial present value allocated to the current year. The normal cost is expected to increase as accrued service increases.

This method tends to be less stable than the Entry Age Normal Method particularly if the group size changes.

**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. 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 27 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 5.0% annually for the purpose of computing the amortization payment (credit) as a level percent of payroll.

## VALUATION ASSUMPTIONS

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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 8.5% 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 8.5% nominal rate translates to a net real return over wage growth of 3.5% a year.

*The rates of pay increase* used for individual members are 5%. This assumption is used to project a member's current pay to the pay upon which System benefits will be based.

Active Member Payroll is assumed to grow at 5% per year. There is no specific price inflation assumption used for this valuation since no benefits are linked to prices.

*The healthy mortality table* used in this valuation of the System was the RP 2000 Healthy Annuity Mortality table for males with 2 year set back, and the female table with one year set back. This assumption was first used for the June 30, 2007 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	0.19%	0.16%	31.96	34.22
55	0.57	0.32	27.55	29.59
60	0.69	0.55	23.31	25.14
65	1.10	0.94	19.19	20.93
70	1.82	1.52	15.35	17.02
75	3.04	2.55	11.88	13.44
80	5.21	4.15	8.86	10.30
Ref:	702 x 1.00 2 year set back	703 x 1.00 1 year set back		

**VALUATION ASSUMPTIONS**

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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.

For actives, the sample rates of mortality and years of life expectancy are shown below, and were first used for the June 30, 2007 valuation of the System.

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.19%	0.16%	35.00	37.87
55	0.26	0.23	30.35	33.19
60	0.40	0.36	25.78	28.62
65	0.65	0.54	21.36	24.18
70	0.91	0.73	17.08	19.86
75	3.04	2.55	13.26	16.22
80	5.21	4.15	10.53	13.55
Ref:	663 x 1.00 2 year set back	664 x 1.00 1 year set back		

**VALUATION ASSUMPTIONS**

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*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, 2007 valuation of the System.

**Retirement Rates:** Service-related rates are based in the following schedule:

<b>Service at Retirement</b>	<b>Percent</b>
5	4%
6	4%
7	4%
8	8%
9	8%
10	8%
11	8%
12	15%
13	5%
14	5%
15	5%
16	15%
17	5%
18	6%
19	7%
20	40%
21	30%
22	20%
23	15%
24	15%
25	45%
26	45%
27	15%
28	15%
29	15%
30	100%
Ref.	1745

Active members are eligible to retire at any age with 20 years of service, at age 62 with 10 years of service, or age 65 with 5 years of service. Active members are also eligible to retire with reduced benefits at any age with 5 years of service.

**VALUATION ASSUMPTIONS**

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*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.

<b>Sample Ages</b>	<b>Years of Service</b>	<b>% of Active Members Separating Within Next Year</b>
All	0	6.00%
	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	2.00%
	10 & Over	2.00%
Ref.		607

*Rates of disability* There were no disability rates assumed.

**SUMMARY OF ASSUMPTIONS USED**  
**JUNE 30, 2009**

**MISCELLANEOUS AND TECHNICAL ASSUMPTIONS**

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<b>Marriage Assumption:</b>	90% 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.
<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year.
<b>Eligibility Testing:</b>	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.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Decrement Operation:</b>	Disability and turnover decrements do not operate during retirement eligibility.
<b>Service Credit Accruals:</b>	It is assumed that members accrue one year of service credit per year.
<b>Incidence of Contributions:</b>	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.
<b>Normal Form of Benefit:</b>	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. 90% of members are assumed to be married at time of retirement.
<b>Benefit Service:</b>	Exact fractional service is used to determine the amount of benefit payable.
<b>Normal Cost Percentage:</b>	For the purposes of calculating the Normal Cost as a percent of payroll under the Projected Unit Credit Cost Method, the Normal Cost was projected with interest to the applicable Fiscal Year and divided by the Payroll projected with wage base to the applicable Fiscal Year.
<b>Health Care Utilization:</b>	80% of future retirees are expected to utilize health care. 90% of those are assumed to be married.

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**SECTION F**  
PLAN PROVISIONS

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### Summary of Plan Provisions Valued and/or Considered

**Normal Retirement (no reduction for age).** 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;
- ❖ Age 65 years with 5 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. Maximum is 80 percent of average yearly salary. 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.

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

**Early Retirement (reduction for age).** 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%.

**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.** An elected official who becomes incapacitated for the duties of office may be retired by the Fund Manager. 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.

**Survivor Pensions.** 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.

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

<b>Member Only</b>		<b>With Dependents</b>		
<b>Not Medicare Eligible</b>	<b>Medicare Eligible</b>	<b>All Not Medicare Eligible</b>	<b>All Medicare Eligible</b>	<b>One With Medicare</b>
\$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.

**Elected Officials Contributions.** Seven percent of compensation.

**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.

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**SECTION G**  
GLOSSARY

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<b><i>Actuarial Accrued Liability</i></b>	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.”
<b><i>Accrued Service</i></b>	The service credited under the plan which was rendered before the date of the actuarial valuation.
<b><i>Actuarial Assumptions</i></b>	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.
<b><i>Actuarial Cost Method</i></b>	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.”
<b><i>Actuarial Equivalent</i></b>	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.
<b><i>Actuarial Present Value</i></b>	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.
<b><i>Amortization</i></b>	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.
<b><i>Experience Gain (Loss)</i></b>	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.
<b><i>Normal Cost</i></b>	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.

<b><i>Reserve Account</i></b>	An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses.
<b><i>Unfunded Actuarial Accrued Liability</i></b>	The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability.”
<b><i>Valuation Assets</i></b>	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**

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**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.**

**GASB STATEMENT 25 SUPPLEMENTARY INFORMATION**

**REQUIRED SUPPLEMENTARY INFORMATION  
(EXCLUDING HEALTH INSURANCE SUBSIDY BEGINNING JUNE 30, 2008)  
SCHEDULE OF FUNDING PROGRESS**

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<b>Year Ended June 30</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded AAL (UAAL) (b)-(a)</b>	<b>Funded Ratio (a)/(b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percent of Covered Payroll [(b)-(a)]/(c)</b>
2000	\$ 329,776,710	\$ 253,477,602	\$(76,299,108)	130.1 %	\$45,381,799	0.00 %
2001	355,767,752	250,987,205	(104,780,547)	141.7 %	48,669,464	0.00 %
2002	351,348,778	279,947,036	(71,401,742)	125.5 %	48,729,191	0.00 %
2003	353,463,170	297,891,264	(55,571,906)	118.7 %	49,350,925	0.00 %
2004	343,375,639	328,920,980	(14,454,659)	104.4 %	50,624,413	0.00 %
2005	344,604,118	360,757,867	16,153,749	95.5 %	53,448,803	30.2 %
2006	351,700,873	391,403,356	39,702,483	89.9 %	54,696,109	72.6 %
2007	336,716,618	451,299,201	114,582,583	74.6 %	61,307,852	186.9 %
2008	348,013,490	441,886,450	93,872,960	78.8 %	62,183,699	151.0 %
<b>2009</b>	<b>360,950,484</b>	<b>494,436,556</b>	<b>133,486,072</b>	<b>73.0 %</b>	<b>67,776,690</b>	<b>197.0 %</b>

Results for years prior to 2009 were calculated by prior actuary.

**GASB STATEMENT 25 SUPPLEMENTARY INFORMATION**

**SCHEDULE OF EMPLOYER CONTRIBUTIONS**

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<b>Fiscal Year Ended June 30</b>	<b>Annual Required Contribution</b>
2000	\$ 3,851,940
2001	3,163,111
2002	3,656,604
2003	3,755,629
2004	6,976,772
2005	6,809,136
2006	11,479,967
2007	10,057,915
2008	12,343,051
2009	13,171,203
2010	N/A
2011	20,937,609 (est.)

Fiscal Years prior to 2011 provided by the prior actuary.

Actual contribution dollar amount will based on the recommended contribution rate and the actual pension payroll for the period.

**GASB STATEMENT 25 SUPPLEMENTARY INFORMATION**

**SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS**

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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, 2009
Actuarial cost method	Projected Unit Credit
Amortization method	Level percent-of-pay closed
Remaining amortization period	27 years
Asset valuation method	7-year smoothed market
Actuarial assumptions:	
Investment rate of return	8.5%
Projected salary increases	5.0%
Payroll Growth	5.0%
Cost-of-living adjustments	None.

**GASB STATEMENT 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 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%
<b>2009</b>	<b>0</b>	<b>11,754,076</b>	<b>11,754,076</b>	<b>0.00</b>	<b>67,776,690</b>	<b>17.34%</b>

**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	N/A	N/A	N/A	N/A
2008	2010	N/A	N/A	N/A	N/A
<b>2009</b>	<b>2011</b>	<b>0.85%</b>	<b>0.92%</b>	<b>1.77%</b>	<b>1,322,611</b>

Fiscal Years prior to 2011 provided by the prior actuary.

**Health Insurance Subsidy Payment Reported for FY 2009: \$917,286**