## OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM

ACTUARIAL VALUATION REPORT

AS OF JULY 1, 2007

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This report has been prepared by Buck Consultants for the Oklahoma Police Pension and Retirement System to:

- Present the results of a valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2007;
- Review experience under the System for the year ended June 30, 2007; and
- Provide reporting and disclosure information for auditors' reports, governmental agencies and other interested parties.

#### The main financial highlights are:

 The funded status of the System increased since the prior valuation as indicated by the table below.

GASB No. 25 Funded Status (\$000,000)		July 1, 2007		July 1, 2006	
Accrued Liability	\$	2,035.7	\$	1,910.1	
Actuarial Value of Assets	\$	1,627.5	\$	1,490.2	
Unfunded Accrued Liability	\$	408.2	\$	419.9	
Funded Ratio		79.9%		78.0%	

- The funded ratio on a SFAS No. 35 basis, measuring the market value of System assets versus the present value of benefits accrued as of the valuation date, increased from 111.7% to 123.1%.
- The required state contribution for the System increased from \$67.7 million to \$71.2 million.

Contribution Summary (\$000,000)	Jul	July 1, 2007		July 1, 2006	
Total Required Contribution	\$	118.2	\$	111.4	
Expected Employee Contributions		17.7		16.3	
Expected Municipality Contributions		29.4		27.4	
Required State Contribution	\$	71.2	\$	67.7	
As a Percentage of Payroll		32.2%		33.1%	

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or system provisions between the two valuations are described in the section titled "Effects of Changes."

		Actuarial Va	luation a	s of
	J	uly 1, 2007	J	uly 1, 2006
Summary of Costs		5		
Required State Contribution for Current Year	\$	71,172,166	\$	67,668,746
Actual State Contribution Received in Prior Year (1)	\$	28,122,000	\$	23,584,000

GASB No. 25 Funded Status							
Actuarial Accrued Liability	\$	2,035,653,471	\$	1,910,059,072			
Actuarial Value of Assets	\$	1,627,476,000	\$	1,490,208,000			
Unfunded Actuarial Accrued Liability	\$	408,177,471	\$	419,851,072			

Market Value of Assets and Additional Liabilities						
Market Value of Assets	\$ 1,797,555,000	\$ 1,549,723,000				
Actuarial Present Value of Accumulated System Benefits (SFAS No. 35)	\$ 1,460,514,958	\$ 1,387,148,910				
Present Value of Projected System Benefits	\$ 2,547,974,273	\$ 2,394,004,171				

Summary of Data							
Number of Members in Valuation							
Active Paid Members	4,247	4,141					
Members with Deferred Benefits	84	80					
Retired Members	2,035	1,951					
Beneficiaries	471	453					
Disabled Members	144	144					
Deferred Option Plan Members	121	187					
Total	7,102	6,956					

Active Member Statistics							
Total Annual Compensation (2)	\$	220,884,875	\$	204,189,807			
Average Compensation (2)	\$	52,010	\$	49,309			
Average Age		38.2		37.9			
Average Service		10.4	(= r/=	10.2			

In addition to 26% of the special allocation, the system will receive 17% of the State's revenue from insurance premium taxes for the fiscal years beginning July 1, 2004 and ending with June 30, 2009. For the fiscal year beginning July 1, 2009 and each fiscal year thereafter, the system will receive 14% of such tax revenue.

<sup>(2)</sup> Compensation is projected one year based on the salary increase assumptions.

#### Changes in Plan Provisions

There were no changes in plan provisions with an actuarial impact as of July 1, 2007.

#### Changes in System Benefits

The following Legislation affecting the Oklahoma Police Pension and Retirement System became effective July 1, 2007.

HB 2070	Subjects the System to the Oklahoma Pension Legislation Actuarial Analysis Act.
SB 1112	Subjects the System to the Oklahoma Pension Legislation Actuarial Analysis Act.
SB 695	Brings the System into compliance with IRS requirements as it relates to the direct payment of qualified health insurance premiums and the rollover of distributions of a non-spouse beneficiary.

#### Actuarial Experience During the Plan Year

The System experienced the following gains/(losses) during the year ending June 30, 2007. These amounts are developed in Section 1.4 of this report:

Liability Gain/(Loss)	Millions		
	\$	(14.7)	
Asset Gain/(Loss)	\$	43.9	
Total Gain/(Loss)	\$	29.2	

The Oklahoma Police Deferred Option Plan (DOP) allows employees eligible for a normal retirement benefit to defer the receipt of retirement benefits while continuing employment. Participation in the Deferred Option Plan is limited to five years. During this time, the members' contributions stop, but the employer contributes half of the regular contribution on base salary to the Police Pension and Retirement System and the other half to the members' account in the Deferred Option Plan. In addition, the monthly retirement benefits are paid into the members' account in the Deferred Option Plan. The DOP also allows members to retroactively elect to enter DOP as of a back-drop-date upon termination. The monthly retirement benefits and member contributions that would have been payable had the member elected to enter DOP are credited to the member's account in the DOP.

The Deferred Option Plan accounts are credited with interest at a rate of 2% less than the total fund net earnings, with a guaranteed minimum interest rate equal to the valuation interest rate of 7.5%. The accrual rate credited for the fiscal year ended June 30, 2007, was 10.7%.

Effective July 1, 2006, a retired member who has completed participation in the DOP is allowed to transfer their account balance into a Deferred Option Payout Account and no further contributions will be accepted. The accounts are credited with interest at a rate of 2% less than the total fund net earnings if the fund returns more than 2%. If the fund realizes negative returns, the accounts are reduced at a rate equal to the fund net earnings. Alternatively, if the fund realizes a positive return of less than 2%, the accounts are credited with a rate of zero. The accrual rate for the payout accounts for the fiscal year ended June 30, 2007, was 10.5%.

The assets and liabilities reflected in these results as of July 1, 2007, include the account balances for the Deferred Option Plan, as in prior valuations. Statistics regarding the number of Deferred Option Plan members and total account balances are shown in the table below:

DOP Statistics		July 1, 2007		July 1, 2006	
Number of Active DOP Members		121		187	
DOP Account Balances of Active Members	\$	19.3M	\$	24.7M	
Annual Retirement Benefits of Active DOP Members	\$	4.3M	\$	6.2M	
Deferred Option Payout Account Balances	\$	1.9M		N/A	

We have prepared an actuarial valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2007, for the plan year ending June 30, 2007. The results of the valuation are set forth in this report, which reflects the provisions of the System as amended and effective on July 1, 2007.

The valuation is based on employee and financial data which were provided by the Oklahoma Police Pension and Retirement System and the independent auditor, respectively, and which are summarized in this report.

All costs, liabilities and other factors under the System were determined in accordance with generally accepted actuarial principles and procedures, in accordance with the provisions of current State Statutes and regulations issued thereunder, using an actuarial cost method which we believe is appropriate. In our opinion, the actuarial assumptions are reasonable and represent our best estimate of the anticipated experience under the System. This report fully and fairly discloses the actuarial position of the System on an ongoing basis.

There have been no changes in actuarial methods or assumptions. The changes in benefit provisions since the last valuation of the System as of July 1, 2006 are summarized on page 3 and the financial impact, if any, are incorporated in this report.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Richard A. Mackesey, F.S.A.

September 17, 2007

R. Ryan Falls, F.S.A.

September 17, 2007

Section	1.1	Summary	of	Contribution	Rec	uirement

- Section 1.2 Liability Detail
- Section 1.3 Unfunded Actuarial Accrued Liability
- Section 1.4 Actuarial Gain/(Loss)
- Section 1.5 Contributions
- Section 1.6 Ten-Year Projected Cash Flow

#### SUMMARY OF CONTRIBUTION REQUIREMENT

		Actuarial Valuation as of				
		July 1,	2007	July 1, 2	2006	
		Amount	% of Active Covered Comp.	Amount	% of Active Covered Comp.	
1.	Annual Covered Compensation for Members Included in Valuation					
	a. Active Members	\$220,884,875	N/A	\$204,189,807	N/A	
	b. Deferred Option Plan Members	10,372,405	N/A	13,368,248	N/A	
	c. Total	\$231,257,280	N/A	\$217,558,055	N/A	
2.	Total Normal Cost Mid-year	\$ 60,312,518	27.3%	\$ 56,022,376	27.4%	
3.	Unfunded Actuarial Accrued Liability	\$408,177,471	N/A	\$419,851,072	N/A	
4.	Amortization of Unfunded Actuarial Accrued Liability over 30 years From July 1, 1988 at mid-year	\$ 53,850,428	24.4%	\$ 52,384,037	25.7%	
5.	Budgeted Expenses	\$ 4,069,250	1.8%	\$ 3,011,129	1.5%	
6.	Total Required Contribution $(2 + 4 + 5)$	\$118,232,196	53.5%	\$111,417,542	54.6%	
7.	Estimated Employee Contribution (8% x 1a)	\$ 17,670,790	8.0%	\$ 16,335,185	8.0%	
8.	Estimated Municipality Contributions				100 100 100	
	a. Active Members	\$ 28,715,034	13.0%	\$ 26,544,675	13.0%	
	b. Deferred Option Plan Members	674,206	6.5%(1)	868,936	6.5%(1)	
	c. Total	\$ 29,389,240	12.7% <sup>(2)</sup>	\$ 27,413,611	12.6%(2)	
9.	Required State Contribution to amortize Unfunded Actuarial Accrued Liability over 30 years from July 1, 1988 at mid-year. (6 - 7 - 8c)	\$ 71,172,166	32.2%	\$ 67,668,746	33.1%	
10.	Previous year's actual State Contribution <sup>(4)</sup>	\$ 28,122,000	13.8%(3)	\$ 23,584,000	12.5%(3)	
11.	Approximate period over which previous year's State Contribution will amortize Current Unfunded Actuarial Accrued Liability (UAAL) from July 1, 1988.	Not sufficient to amortize UAAL (4)	N/A	Not sufficient to amortize UAAL (4)	N/A	

<sup>(1)</sup> Percentage of Deferred Option Plan Members' compensation.

<sup>(2)</sup> Percent of total compensation.

<sup>(3)</sup> Percent of previous years' annual compensation for active members.

<sup>&</sup>lt;sup>(4)</sup> In addition to 26% of the special allocation, the system will receive 17% of the State's revenue from insurance premium taxes for the fiscal years beginning July 1, 2004 and ending with June 30, 2009. For the fiscal year beginning July 1, 2009 and each fiscal year thereafter, the system will receive 14% of such tax revenue.

#### LIABILITY DETAIL

Total	Without 2% COLA	With 2% Auto COLA
Present Value of Benefits	\$ 2,062,438,153	\$ 2,547,974,273
<b>Present Value of Future Normal Costs</b>	\$ 403,516,499	\$ 512,320,802
Accrued Liability	\$ 1,658,921,654	\$ 2,035,653,471
Normal Cost Mid-Year	\$ 47,386,762	\$ 60,312,518

Active			
a. Retirement	\$ 750,169,429	\$	952,575,473
b. Disability	579,265		681,850
c. Withdrawal	10,857,366		13,604,806
d. Death	3,200,634		4,070,943
e. Refunds	(7,265,616)		(7,265,616)
f. Total	\$ 757,541,078	\$	963,667,456
Inactive			
1. Members Eligible for Automatic COLA			
a. Retired Members	\$ 113,404,203	\$	113,404,203
b. Disabled Members	18,366,727		18,366,727
c. Terminated Vested Members	0	,	0
d. Deferred Option Plan Members	0		0
e. Beneficiaries	68,293,005		68,293,005
f. Total	\$ 200,063,935	\$	200,063,935
2. Members Not Eligible for Automatic COLA			
a. Retired Members	\$ 561,804,122	\$	687,453,339
b. Disabled Members	11,436,821		14,174,162
c. Terminated Vested Members	9,647,354		12,097,796
d. Deferred Option Plan Members - Annuities	53,687,779		67,269,832
e. Deferred Option Plan Members - Account Balances	21,166,000		21,166,000
f. Beneficiaries	43,574,565		52,416,182
g. Reserve for COLA's in Future (1)	N/A		17,344,769
h. Total	\$ 701,316,641	\$	871,922,080
3. Total Inactive $(1f + 2h)$	\$ 901,380,576	\$	1,071,986,015
Accrued Liability (Active + Inactive)	\$ 1,658,921,654	\$	2,035,653,471

<sup>(1)</sup> Ad Hoc cost of living adjustments (COLAs) are prefunded to the 2% per year level in this valuation. These COLAs are granted periodically, but generally not each year. Therefore, in years in which a COLA is not granted, this reserve is increased to fund future COLA's.

#### UNFUNDED ACTUARIAL ACCRUED LIABILITY

The actuarial accrued liability is the present value of projected system benefits allocated to past service by the actuarial funding method being used.

	Total System		
	July 1, 2007	July 1, 2006	
1. Actuarial Present Value of Benefits			
a. Active Members	\$ 1,475,988,258	\$ 1,350,192,067	
b. Members with Deferred Benefits	12,097,796	11,764,488	
<ul> <li>Members Receiving Benefits who are not eligible for Automatic COLA</li> </ul>	754,043,683	708,911,121	
<ul> <li>d. Members Receiving Benefits who are eligible for Automatic COLA</li> </ul>	200,063,935	200,634,150	
e. Deferred Option Plan Members	88,435,832	122,502,345	
f. COLA Reserve	17,344,769	0	
g. Total	2,547,974,273	2,394,004,171	
2. Actuarial Present Value of Future Normal Costs	512,320,802	483,945,099	
3. Total Actuarial Accrued Liability (1g - 2)	2,035,653,471	1,910,059,072	
4. Actuarial Value of Assets	1,627,476,000	1,490,208,000	
5. Unfunded Actuarial Accrued Liability (3 - 4, not less than \$0)	408,177,471	419,851,072	

## ACTUARIAL GAIN/(LOSS)

The actuarial gain/(loss) is comprised of both the liability gain/(loss) and the actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of July 1, 2007.

	Regular	Deferred Option	Total
1. Expected Actuarial Accrued Liability			
<ul> <li>Actuarial Accrued Liability at July 1, 2006</li> </ul>	\$1,885,379,072	\$ 24,680,000	\$1,910,059,072
<ul> <li>Normal Cost at July 1, 2006 or DOP Contributions</li> </ul>	54,032,778	1,162,000	55,194,778
<ul> <li>Benefit Payments for Plan Year Ending June 30, 2007</li> </ul>	82,038,000	7,938,000	89,976,000
<ul> <li>d. Interest on a + b - c to End of Year (or actual interest)</li> </ul>	142,379,464	3,262,000	145,641,464
e. Expected Increase in COLA Reserve after Interest Increase	0	0	0
f. Expected Actuarial Accrued Liability Before Changes $(a + b - c + d)$	\$1,999,753,314	\$ 21,166,000	\$2,020,919,314
<ul> <li>g. Changes in Actuarial Accrued Liability at July 1, 2007 due to changes in Actuarial Assumptions</li> </ul>	0	0	0
<ul> <li>h. Change in Actuarial Accrued Liability at July 1, 2007 due to changes in System Provisions</li> </ul>	0	0	0
j. Expected Actuarial Accrued Liability at July 1, 2007 $(e + f + g)$	\$1,999,753,314	\$ 21,166,000	\$2,020,919,314
2. Actuarial Accrued Liability at July 1, 2007	\$2,014,487,471	\$ 21,166,000	\$2,035,653,471
3. Actuarial Liability Gain/(Loss) (1h - 2)	\$ (14,734,157)	\$ 0	\$ (14,734,157)
4. Expected Actuarial Value of Assets			
a. Actuarial Value of Assets at July 1, 2006	\$1,465,528,000	\$ 24,680,000	\$1,490,208,000
<ul> <li>b. Contributions Made for Plan Year Ending June 30, 2007</li> </ul>	71,936,000	1,162,000	73,098,000
<ul> <li>Benefit Payments and Expenses for Plan Year Ending June 30, 2007</li> </ul>	84,488,000	7,938,000	92,426,000
<ul> <li>d. Interest on a + b - c to End of Year (or actual interest)</li> </ul>	109,443,900	3,262,000	112,705,900
e. Expected Actuarial Value of Assets at July 1, 2007 $(a + b - c + d)$	\$1,562,419,900	\$ 21,166,000	\$1,583,585,900
5. Actuarial Value of Assets as of July 1, 2007	\$1,606,310,000	\$ 21,166,000	\$1,627,476,000
6. Actuarial Asset Gain/(Loss) (5 - 4e)	\$ 43,890,100	\$ 0	\$ 43,890,100
7. Actuarial Gain/(Loss) (3 + 6)	\$ 29,155,943	\$ 0	\$ 29,155,943

## ACTUARIAL GAIN/(LOSS) (CONTINUED)

COLA Reserve				
1. Reserve as of July 1, 2006	\$ 0			
<ol> <li>Liability for Inactive Members Not Eligible for COLA (See Section 1.2, Item 2 in prior report)</li> </ol>	806,733,466			
3. Reserve Increment (2% x 2.)	16,134,669			
4. Interest at 7.5% on 1. and 3.	1,210,100			
5. Expected Reserve as of July 1, 2007 (1. + 3. + 4.)	17,344,769			
6. Ad Hoc Cost of Living Increase	C			
7. Actual Reserve (5. Less 6., not less than \$0) as of July 1, 2007	\$ 17,344,769			

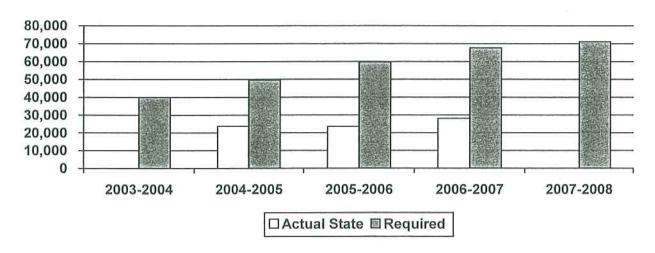
#### **CONTRIBUTIONS**

Contributions to the Retirement System are made by the Members, municipalities, and the State of Oklahoma. Member contributions equal 8% of base salary. Municipalities contribute 13% of base salary per year for plan years after June 30, 1996.

The active Deferred Option Plan Members do not make employee contributions to the plan. However, municipalities continue contributing for them, with 50% of the contribution going into the Retirement System fund and 50% going into the Deferred Option account. Contributions for members who retroactively elect to enter the Deferred Option Plan as of a back-drop-date are also deposited into the Deferred Option Account.

Prior to fiscal year beginning July 1, 2003, the fund received 14% of the insurance premium tax as illustrated in the chart below. However, SB 206 in 2003 reapportioned the insurance premium taxes. For the fiscal year ending June 30, 2004, the fund did not receive any taxes. Beginning in fiscal years July 1, 2004 and ending June 30, 2009, the fund shall receive 17% of the insurance premium tax. For years after that, the fund will receive 14% of the taxes. Beginning in fiscal year July 1, 2006, the system shall receive 26% of a special allocation established to refund the System for reduced allocations of insurance premium taxes resulting from increases in insurance premium tax credits.

#### State Contributions Received versus Contributions Required by Funding Policy (000's)



As of July 1, 2003, the amortization period was changed to 30 years from 1988. Prior years used an amortization period of 20 years from 1988.

# TEN-YEAR PROJECTED CASH FLOW (RETIREMENT BENEFIT PAYMENTS)

Plan Year Ending	Actives	Retirees (1)		Total	
6/30/2008	\$ 8,643,868	\$	76,817,542	\$	85,461,410
6/30/2009	\$ 18,604,885	\$	77,927,913	\$	96,532,798
6/30/2010	\$ 25,448,647	\$	78,953,772	\$	104,402,419
6/30/2011	\$ 32,544,183	\$	79,930,295	\$	112,474,478
6/30/2012	\$ 39,818,696	\$	80,864,485	\$	120,683,181
6/30/2013	\$ 47,002,400	\$	81,716,567	\$	128,718,967
6/30/2014	\$ 53,921,152	\$	82,609,606	\$	136,530,758
6/30/2015	\$ 60,666,695	\$	83,380,454	\$	144,047,149
6/30/2016	\$ 68,360,478	\$	84,004,370	\$	152,364,848
6/30/2017	\$ 76,724,141	\$	84,563,342	\$	161,287,483

<sup>(1)</sup> Includes Deferred Option Plan Members, Disabled Members, Beneficiaries and Terminated Vested Members.

Section 2.1 SFAS No. 35 Information

Section 2.2 GASB No. 25 Information

#### SFAS No. 35 INFORMATION

#### A. Actuarial Present Value of Accumulated System Benefits

The actuarial present value of vested and nonvested accumulated system benefits was computed on an ongoing system basis in order to provide required information under Financial Accounting Standards Board Statement No. 35. In this calculation, a determination is made of all benefits earned by current Members as of the valuation date; the actuarial present value is then computed using demographic assumptions and an assumed interest rate. Assumptions regarding future salary and accrual of future benefit service are not necessary for this purpose.

Accumulated System Benefits		July 1, 2007	July 1, 2006
Vested Benefits			
a. Active Members	\$	478,812,179	\$ 419,590,622
b. Deferred Option Plan Members		74,853,779	102,645,679
c. Members with Deferred Benefits		9,647,354	9,378,090
d. Members Receiving Benefits	V	816,879,443	779,702,187
e. Total Vested Benefits	\$	1,380,192,755	\$ 1,311,316,578
Nonvested Benefits		80,322,203	75,832,332
Total Accumulated System Benefits (1)	\$	1,460,514,958	\$ 1,387,148,910
Assumed Rate of Interest		7.5%	7.5%
Market Value of Assets Available for Benefits	\$	1,797,555,000	\$ 1,549,723,000
Funded Ratio		123.1%	111.7%

Number of Members	July 1, 2007	July 1, 2006	
Vested Members			
a. Active Members	2,109	2,012	
b. Deferred Option Plan Members	121	187	
c. Members with Deferred Benefits	84	80	
d. Members Receiving Benefits	2,650	2,548	
e. Total Vested Members	4,964	4,827	
Nonvested Members	2,138	2,129	
<b>Total Members</b>	7,102	6,956	

<sup>(1)</sup> Assumption of 2% future ad hoc cost-of-living increases is not reflected in this liability. Only System liabilities accrued (and in statute) as of the valuation date are included.

## SFAS No. 35 Information (continued)

#### B. Statement of Changes in Accumulated System Benefits

A statement of changes in the actuarial present value of accumulated system benefits follows. This statement shows the effect of certain events on the actuarial present value shown on the previous page.

Actuarial Present Value of Accumulated System Benefits as of July 1, 2006	\$ 1,387,148,910
Increase/(Decrease) During Year Attributable to:	15
a. Normal Cost	\$ 51,393,165
b. Increase for Interest Due to Decrease in Discount Period	104,516,556
c. Benefits Paid, Including Refund of Contributions	(89,976,000)
d. System Amendment	0
e. Assumption Changes	0
f. (Gains)/Losses	7,432,327
Net Increase/(Decrease)	\$ 73,366,048
Actuarial Present Value of Accumulated System Benefits as of July 1, 2007	\$ 1,460,514,958

The benefits valued include all benefits – retirement, preretirement death and vested termination – payable from the System for employee service prior to the valuation date. Benefits are assumed to accrue/(accumulate) in accordance with the system provisions.

#### GASB No. 25 INFORMATION

#### **Supplementary Schedules**

The GASB has issued the statement titled Financial Reporting for Defined Benefit and Note Disclosures for Defined Contribution Plans (GASB Statement No. 25). This standard became effective for periods beginning after June 15, 1996, and requires funding status to be measured based upon the actuarial funding method adopted by the Board, i.e., for the Oklahoma Police Retirement System, the Entry Age Normal Cost Method. The target value of assets is equal to the Actuarial Accrued Liability (AAL). The actual value of assets is the Actuarial Value developed later in this report. This GASB standard supersedes GASB Statement No. 5 in its entirety.

#### A. Schedules of Funding Progress

The GASB Statement No. 25 liabilities and assets resulting from the last ten actuarial valuations are as follows:

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
07/01/1998	\$ 966,907,000	\$ 1,092,443,208	\$ 125,536,208	88.5%	\$ 128,521,087	97.7%
07/01/1999	\$ 1,094,400,000	\$ 1,160,023,416	\$ 65,623,416	94.3%	\$ 139,242,527	47.1%
07/01/2000	\$ 1,222,123,000	\$ 1,354,500,875	\$ 132,377,875	90.2%	\$ 148,543,158	89.1%
07/01/2001	\$ 1,319,041,000	\$ 1,443,404,052	\$ 124,363,052	91.4%	\$ 153,350,395	81.1%
07/01/2002	\$ 1,370,024,000	\$ 1,554,288,324	\$ 184,264,324	88.1%	\$ 160,419,776	114.9%
07/01/2003	\$ 1,392,043,000	\$ 1,646,979,675	\$ 254,936,675	84.5%	\$ 170,507,025	149.5%
07/01/2004	\$ 1,399,975,000	\$ 1,727,162,602	\$ 327,187,602	81.0%	\$ 175,559,285	186.4%
07/01/2005	\$ 1,423,834,000	\$ 1,811,572,114	\$ 387,738,114	78.6%	\$ 188,848,451	205.3%
07/01/2006	\$ 1,490,208,000	\$ 1,910,059,072	\$ 419,851,072	78.0%	\$ 204,189,807	205.6%
07/01/2007	\$ 1,627,476,000	\$ 2,035,653,471	\$ 408,177,471	79.9%	\$ 220,884,875	184.8%

#### **GASB No. 25 INFORMATION**

## B. Schedule of Employer Contributions

The GASB Statement No. 25 required and actual contributions for the last ten fiscal years are as follows:

Year Ended June 30	Annual Required Contribution		Percentage Contributed	
1998	\$	22,425,929	158.0%	
1999	\$	39,826,511	90.9%	
2000	\$	34,682,993	108.7%	
2001	\$	53,043,666	75.5%	
2002	\$	54,918,091	76.9%	
2003	\$	71,704,935	61.6%	
2004	\$	63,511,155	37.7%	
2005	\$	73,756,197	66.1%	
2006	\$	85,391,444	58.6%	
2007	\$	95,082,357	59.3%	

This section presents information regarding System assets as reported by the auditor. The System assets represent the portion of total System liabilities, which has been funded as of the valuation date.

- Section 3.1 Summary of Assets
- Section 3.2 Reconciliation of Assets
- Section 3.3 Actuarial Value of Assets
- Section 3.4 Average Annual Rates of Investment Return

#### SUMMARY OF ASSETS

Asset Category	arket Value as of June 30, 2007	1000000	arket Value as of June 30, 2006
1. Cash and Short-term Investments			U176 (1) (1)
a. Cash	\$ (11,000)	\$	2,054,000
b. Short-term Investments	84,553,000		33,332,000
c. Total	\$ 84,542,000	\$	35,386,000
2. Receivables			
a. Interest and Dividends	\$ 3,597,000	\$	3,823,000
b. Member Contributions	787,000		666,000
c. Employer Contributions	1,320,000		1,151,000
d. Insurance Premium Tax	6,413,000		5,298,000
e. Investments Sold	0		0
f. Other Receivables	25,333,000		0
g. Total	\$ 37,450,000	\$	10,938,000
3. Investments at fair value			
a. Government Bonds	\$ 14,034,000	\$	7,748,000
b. International Government Bonds	30,327,000		34,756,000
c. Corporate Bonds (1)	221,776,000		222,332,000
d. Domestic Stock	781,532,000		730,096,000
e. International Stock	227,035,000		75,784,000
f. Other	401,656,000		437,817,000
g. Securities Lending Short-term Pool	112,923,000		53,657,000
h. Total	\$ 1,789,283,000	\$	1,562,190,000
4. Assets used in system operations			
a. Furniture, Fixtures and Equipment	\$ 0	\$	0
5. Total Assets	\$ 1,911,275,000	\$	1,608,514,000
6. Liabilities		0.	
a. Payable for Investments Purchased	\$ 0	\$	4,223,000
b. Accounts Payable and Accrued Expenses	797,000		911,000
c. Securities Lending Collateral Payable	112,923,000		53,657,000
d. Total Liabilities	\$ 113,720,000	\$	58,791,000
7. Net Assets for Pension Benefits	\$ 1,797,555,000	\$	1,549,723,000

<sup>(1)</sup> Includes Domestic and International Bonds

#### RECONCILIATION OF ASSETS

Transactions	June 30, 2007	June 30, 2006
Additions		The state of the s
1. Contributions		
a. Contributions from Employers	\$ 28,258,000	\$ 26,490,000
b. Contributions from System Members	16,718,000	15,326,000
c. Insurance Premium Tax	28,122,000	23,584,000
d. Total	\$ 73,098,000	\$ 65,400,000
2. Net Investment Income		
a. Interest	\$ 11,436,000	\$ 10,862,000
b. Dividends	10,589,000	9,942,000
c. Realized Gain and Unrealized Appreciation	256,261,000	76,049,000
d. Income from Securities Lending	308,000	269,000
e. Other	247,000	66,197,000
f. Total	\$ 278,841,000	\$ 163,319,000
g. Investment Expense	(11,681,000)	(8,728,000)
h. Net Investment Income	\$ 267,160,000	\$ 154,591,000
3. Total Additions	\$ 340,258,000	\$ 219,991,000
Deductions		
4. Retirement Benefits	\$ (88,602,000)	\$ (81,555,000)
5. Deferred Option Benefits	\$ 0	\$ 0
6. Refund of Contributions	\$ (1,374,000)	\$ (1,423,000)
7. Administrative Expenses	\$ (2,450,000)	\$ (2,235,000)
8. Total Deductions	\$ (92,426,000)	\$ (85,213,000)
9. Net Increase	\$ 247,832,000	\$ 134,778,000
10. Net Assets Held in Trust for Pension Benefits		
a. Beginning of Year	\$1,549,723,000	\$1,414,945,000
b. End of Year	\$1,797,555,000	\$1,549,723,000
Reconciliation of Actuarial Asset Value and Market	Value	
Actuarial Asset Value	\$ 1,627,476,000	\$ 1,490,208,000
Deferred Gain/(Loss)	\$ 170,079,000	\$ 59,515,000
Market Value	\$ 1,797,555,000	\$ 1,549,723,000

## RECONCILIATION OF ASSETS (1) (CONTINUED)

Transactions	Regular Assets	DROP Assets	Total		
Additions	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	12			
1. Contributions					
a. Contributions from Employers	\$ 27,365,000	\$ 893,000	\$ 28,258,000		
b. Contributions from Plan Members	16,449,000	269,000	16,718,000		
c. Insurance Premium Tax	28,122,000	0	28,122,000		
d. Total	\$ 71,936,000	\$ 1,162,000	\$ 73,098,000		
2. Net Investment Income					
a. Interest	\$ 8,174,000	\$ 3,262,000	\$ 11,436,000		
b. Dividends	10,589,000	0	10,589,000		
c. Realized and Unrealized Gains	256,261,000	0	256,261,000		
d. Income and Security Lending	308,000	0	308,000		
e. Other	247,000	0	247,000		
f. Total	\$ 275,579,000	\$ 3,262,000	\$ 278,841,000		
g. Investment Expense	(11,681,000)	0	(11,681,000)		
h Net Investment Income	\$ 263,898,000	\$ 3,262,000	\$ 267,160,000		
3. Total Additions	\$ 335,834,000	\$ 4,424,000	\$ 340,258,000		
Deductions	-				
4. Benefits and Expenses					
a. Retirement Benefits	\$ (71,479,000)	\$ (17,123,000)	\$ (88,602,000)		
b. Deferred Option Benefits	(9,185,000)	9,185,000	0		
c. Refund of Contributions	(1,374,000)	0	(1,374,000)		
d. Administrative Expenses	(2,450,000)	0	(2,450,000)		
5. Total Deductions	\$ (84,488,000)	\$ (7,938,000)	\$ (92,426,000)		
6. Net Increase	\$ 251,346,000	\$ (3,514,000)	\$ 247,832,000		
7. Net Assets Held in Trust for Pension Benefits					
a. Beginning of Year	\$ 1,525,043,000	\$ 24,680,000	\$ 1,549,723,000		
b. End of Year	\$ 1,776,389,000	\$ 21,166,000	\$ 1,797,555,000		

This allocation of assets is maintained for accounting purposes only. It is our understanding that all assets of the System are available to pay all benefits provided under the System.

#### ACTUARIAL VALUE OF ASSETS

Year	Original Amount	Recognized in Prior Years	Recognized This Year	Recognized in Future Years
2002/2003	(62,256,106)	(49,804,884)	(12,451,222)	0
2003/2004	69,870,858	41,922,516	13,974,172	13,974,170
2004/2005	9,438,398	3,775,360	1,887,680	3,775,358
2005/2006	47,943,780	9,588,756	9,588,756	28,766,268
2006/2007	154,453,918	0	30,890,784	123,563,134
Total ·	\$ 219,450,848	\$ 5,481,748	\$ 43,890,170	\$ 170,078,930

Dev	velopment of Actuarial Value of Assets		
1.	Actuarial Value as of July 1, 2006 (Excluding drop)	\$	1,465,528,000
2.	Contributions		
	a. Member	\$	16,449,000
	b. Employer (Excluding DOP)		27,365,000
	c. Insurance tax		28,122,000
	d. Total	\$	71,936,000
3.	Decreases During the Year		
	Benefit Payments (Excluding payments from DOP, including payments to DOP)	\$	80,664,000
	b. Return of Member Contributions		1,374,000
	c. Noninvestment Expenses		2,450,000
	d. Total (a + b - c)	\$	84,488,000
4.	Expected Return at 7.5% on:		
	a. Item 1	\$	109,914,600
	b. Item 2 (one-half year)	T	2,697,600
	c. Item 3 (one-half year)		3,168,300
	d. Total (a + b - c)	\$	109,443,900
5.	Expected Actuarial Value of Assets (Excluding DOP) June 30, 2007 (1 + 2 - 3 + 4)	\$	1,562,419,900
6.	Unrecognized Asset Gain/(Loss) as of June 30, 2006	\$	59,515,182
7.	DOP Assets	\$	21,166,000
8.	Expected Actuarial Value June 30, 2007 plus previous year's Unrecognized Asset Gain $(5 + 6 + 7)$	\$	1,643,101,082
9.	Market Value as of June 30, 2007	\$	1,797,555,000
10.	2006/2007 Asset Gain/(Loss) (9 - 8)	\$	154,453,918
11.	Asset Gain/(Loss) to be Recognized as of June 30, 2007	\$	43,890,170
12.	Initial Actuarial Value July 1, 2007 (5 + 7 + 11) (Rounded to $1,000$ 's)	\$	1,627,476,000
13.	Constraining Values:		
	a. 80% of Market Value (9 x 0.8)	-	1,438,044,000
	b. 120% of Market Value (9 x 1.2)	\$	2,157,066,000
14.	Actuarial Value July 1, 2007 (12), but no less than (13a), nor greater than (13b)	\$	1,627,476,000

#### AVERAGE ANNUAL RATES OF INVESTMENT RETURN

Year Ending	Actuar	ial Value	Mark	et Value	
June 30	Annual	Cumulative	Annual	Cumulative	
1990	8.6%	8.6%	9.2%	9.2%	
1991	7.9%	8.2%	8.1%	8.6%	
1992	8.7%	8.4%	13.8%	10.3%	
1993	10.3%	8.9%	15.1%	11.5%	
1994	9.3%	9.0%	0.0%	9.1%	
1995	11.0%	9.3%	17.7%	10.5%	
1996	11.9%	9.7%	13.5%	10.9%	
1997	12.8%	10.1%	17.3%	11.7%	
1998	13.5%	10.4%	16.9%	12.3%	
1999	14.3%	10.8%	9.7%	12.0%	
2000	12.8%	11.0%	8.7%	11.7%	
2001	8.8%	10.8%	(5.3%)	10.2%	
2002	4.9%	10.3%	(5.6%)	8.9%	
2003	2.7%	9.8%	3.5%	8.5%	
2004	3.3%	9.3%	15.0%	8.9%	
2005	3.0%	8.9%	8.7%	8.9%	
2006	6.1%	8.8%	11.0%	9.0%	
2007	10.6%	8.9%	17.3%	9.5%	

Annual Returns before 1998 exclude DOP assets.

This section presents and describes the basis of the valuation. The census of Members, actuarial basis and benefit provisions of the System are the foundation of the valuation, since these are the present facts on which the projection of benefit payments will depend. The valuation is based on the premise that the System will continue in existence.

Section 4.1 System Members

Section 4.2 Actuarial Basis

Section 4.3 Summary of System Provisions

## SYSTEM MEMBERS

## A. Member Data Reconciliation

	Active N	<b>Iembers</b>		Inactive Members				
	Regular	Deferred Option Plan	Deferred Vested Members	Retired Members	Disabled Members	Bene- ficiaries	Total	
As of July 1, 2006	4,141	187	80	1,951	144	453	6,956	
Deferred Option Plan Retirees	(12)	15	0	(3)	0	0	0	
Age Retirements	(36)	(80)	(10)	126	0	0	0	
Disability Retirements	(3)	0	0	0	3	0	0	
Deaths Without Beneficiaries	0	(1)	(1)	(5)	(1)	(18)	(26)	
Deaths With Beneficiaries	(1)	0	0	(34)	(3)	38	0	
Nonvested Terminations	(175)	. 0	0	0	0	0	(175)	
Vested Terminations	(13)	0	13	0	0	0	0	
Rehires	21	0	0	0	0	0	21	
Expiration of Benefits	0	0	0	0	0	(2)	(2)	
Vested Terminations Electing a Cash-Out	0	0	0	0	0	0	0	
Data Corrections	1	0	2	0	1	0	4	
Transfers Out	0	0	0	0	0	0	0	
Transfers In	0	0	0	0	0	0	0	
Net Change	(218)	(66)	4	84	0	18	(178)	
New Entrants During the Year	324	0	0	0	0	0	324	
As of July 1, 2007	4,247	121	84	2,035	144	471	7,102	

#### **B.** Count of Active Members

	Years of Service											
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total		
Under 20										0		
20-24	189									189		
25-29	466	148				lanta e e e e e e e e e e e e e e e e e e e				614		
30-34	248	448	102							798		
35-39	168	240	330	149						887		
40-44	65	100	155	384	136					840		
45-49	20	34	66	152	170	103				545		
50-54		11	30	44	64	95	31			275		
55-59		1	9	18	22	16	18	5		89		
60-64				5	1	2	1		1	10		
65-69										0		
70-74										0		
75+										0		
Total	1,156	982	692	752	393	216	50	5	1	4,247		

## C. Average Compensation

	Years of Service												
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total			
Under 20										0			
20-24	33,787									33,787			
25-29	37,949	45,526								39,775			
30-34	37,179	49,598	54,356							46,347			
35-39	34,464	47,949	56,322	65,368						51,436			
40-44	35,171	43,816	54,919	64,599	69,381					58,836			
45-49	33,527	45,752	52,212	60,583	68,822	74,052				62,767			
50-54		38,178	48,651	53,739	62,038	71,082	81,189			63,578			
55-59		55,137	46,706	52,534	60,521	68,254	85,729	71,774		64,569			
60-64				50,020	52,120	79,581	74,668		71,946	60,800			
65-69										0			
70-74										0			
75+							F.7.			0			
Total	36,364	47,737	54,868	62,918	67,403	72,367	82,693	71,774	71,946	52,010			

## D. Members in Pay Status - Annual Benefits

Attained	Retir	ed Members	Be	neficiaries		Disabled Aembers	Cur	rent Payment Total
Age	No.	Benefit	No.	Benefit	No.	Benefit	No.	Benefit
Under 51	170	\$ 4,479,618	33	\$ 643,551	37	\$ 379,536	240	\$ 5,502,705
51	65	1,618,082	8	225,655	2	29,161	75	1,872,898
52	45	1,227,266	3	91,668	3	38,544	51	1,357,478
53	65	1,701,208	11	261,631	4	59,781	80	2,022,620
54	83	2,021,008	7	208,676	6	43,940	96	2,273,624
55	88	2,360,954	6	145,570	5	47,090	99	2,553,614
56	78	2,086,623	. 10	233,137	2	34,569	90	2,354,329
57	77	2,222,118	7	176,011	7	85,975	91	2,484,104
58	105	2,955,928	9	242,973	4	78,555	118	3,277,456
59	135	4,133,366	12	229,563	8	122,603	155	4,485,532
60	105	3,054,659	9	260,810	3	70,586	117	3,386,055
61	109	3,288,413	11	275,606	1	8,769	121	3,572,788
62	83	2,456,573	9	243,167	4	58,908	96	2,758,648
63	86	2,426,332	16	421,349	3	72,214	105	2,919,895
64	77	2,115,601	10	275,225	2	22,023	89	2,412,849
65	69	2,030,124	17	430,318	3	35,844	89	2,496,286
- 66	63	1,778,019	5	162,043	4	87,230	72	2,027,292
67	61	1,751,635	12	331,298	4	98,526	77	2,181,459
68	56	1,648,274	12	278,421	3	70,026	71	1,996,721
69	49	1,384,877	16	488,593	4	79,114	69	1,952,584
70	39	1,189,453	11	300,587	3	77,088	53	1,567,128
71	42	1,183,279	20	587,722	3	82,358	65	1,853,359
72	41	1,194,391	7	255,143	3	62,848	51	1,512,382
73	36	1,076,185	14	413,064	2	71,922	52	1,561,171
74	19	535,102	9	268,907	1	21,550	29	825,559
75	28	863,112	13	369,246	2	51,955	43	1,284,313
76	24	789,715	15	484,660	2	40,955	41	1,315,330
77	15	480,484	23	614,579	4	105,339	42	1,200,402
78	16	437,177	16	442,477	2	73,989	34	953,643
79	22	739,647	8	184,118	1	32,996	31	956,761
80	19	574,681	10	291,094	2	53,341	31	919,116
81	10	335,971	19	594,612	3	92,453	32	1,023,036
82	11	335,295	10	260,436	1	36,757	22	632,488
83	11	336,421	11	258,219	0	0	22	594,640
84	10	286,039	12	299,962	0	0	22	586,001
85	7	180,785	6	146,243	2	44,811	15	371,839
86	5	131,543	9	261,821	0	0	14	393,364
87	3	91,845	2	49,538	1	20,641	6	162,024
88	2	28,129	10	207,873	0	0	12	236,002
89	2	59,578	4	67,902	0	0	6	127,480
90	2	61,576	1	21,529	0	0	3	83,105
Over 90	2	46,300	18	431,699	3	58,154	23	536,153
Total	2,035	\$ 57,697,386	471	\$ 12,436,696	144	\$ 2,450,151	2,650	\$ 72,584,233

## E. Terminated Vested and Deferred Option Plan Members - Annual Benefits

Attained Age	Termina	ted Vest	ed Members	Deferred Option Plan Members			
Attained Age	No. Benefit		No.	Benefit			
Under 40	7	\$	79,352	0	\$ 0		
40	1		8,833	0	C		
41	7		100,756	0	C		
42	2	7	22,939	0	(		
43	6		104,609	1	33,954		
44	6		109,983	5	159,607		
45	7		77,012	6	167,744		
46	5		55,808	3	97,506		
47	9		101,838	11	333,181		
48	5		64,792	7	244,197		
49	6		75,536	5	127,716		
50	4		62,740	4	130,086		
51	4		41,538	9	316,965		
52	4		35,419	13	409,965		
53	2		22,421	7	239,930		
54	3		52,918	10	400,068		
55	0		0	9	402,794		
56	1		18,855	8	323,288		
57	4		59,323	10	460,047		
58	1		9,425	2	48,745		
59	0		0	3	99,125		
60	0		0	3	105,575		
61	0		- 0	2	74,369		
62	0		0	1	29,088		
63	0		0	1	32,339		
64	0		0	1	36,068		
65 and over	0		0	0			
Total	84	\$	1,104,097	121	\$ 4,272,357		

## System Members (Continued)

#### F. Member Statistics

Inactive Members as of July 1, 2007	Number	Amount of Annual Benefit						
Members Receiving Benefits								
a. Retired	2,035	\$	57,697,386					
b. Beneficiaries	471		12,436,696					
c. Disabled	144		2,450,151					
Total	2,650	\$	72,584,233					
Members with Deferred Benefits								
a. Terminated Vested	84	\$	1,104,097					
b. Beneficiaries	N/A		N/A					
c. Disabled	N/A		N/A					
Total	84	\$	1,104,097					
Deferred Option Plan Members	121	\$	4,272,357					

Statistics for Active	NI	Average			
Members	Number —	Age	Service	Earnings	
As of July 1, 2006					
a. Continuing	3,745	38.7	11.2	\$	51,066
b. New	396	30.1	0.6		32,697
Total	4,141	37.9	10.2	\$	49,309
As of July 1, 2007					
a. Continuing	3,901	39.0	11.3		53,692
b. New	346	29.3	0.6		33,043
Total	4,247	38.2	10.4		52,010

## G. Data Tape Reconciliation

	July 1, 2007	July 1, 2006	
Tape Records Submitted			
Records submitted	7,791	7,639	
Not Eligible to Participate	0	0	
Terminations/ No Benefits Payable	(689)	(683)	
Denied Benefit	0	0	
Data Corrections	0	0	
Number Added	0	0	
Total Valued	7,102	6,956	

#### ACTUARIAL BASIS

#### A. Entry Age Actuarial Cost Method

The actuarial cost method is selected by the Board with the recommendation of the actuary. Liabilities and contributions shown in this report are computed using the Individual Entry Age method of funding. The System has used this cost method since at least 1990.

Sometimes called "funding method", this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the system is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the Normal Cost is computed as the level percentage of pay which, if paid from the earliest time each Member would have been eligible to join the system if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the system.

The Actuarial Accrued Liability under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date.) The Unfunded Actuarial Accrued Liability is the excess of the actuarial accrued liability over the actuarial value of system assets actually on hand on the valuation date.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

#### **B.** Asset Valuation Method

The asset valuation method is selected by the Board with the recommendation of the actuary. The actuarial value of assets is based on a five-year moving average of expected and market values determined as follows:

• at the beginning of each plan year, a preliminary expected actuarial asset value is calculated as the sum of the previous year's actuarial value increased with a year's interest at the System valuation rate plus net cash flow adjusted for interest (at the same rate) to the end of the previous plan year;

#### ACTUARIAL BASIS (CONTINUED)

#### B. Asset Valuation Method (continued)

 the expected actuarial asset value is set equal to the preliminary expected actuarial value plus the unrecognized investment gains and losses as of the beginning of the previous plan year;

- the difference between the expected actuarial asset value and the market value is the investment gain or loss for the previous plan year;
- the (final) actuarial asset value is the preliminary value plus 20% of the investment gains and losses for each of the five previous plan years, but in no case more than 120% of the market value or less than 80% of the market value.
- Deferred Option Plan assets are included in the actuarial value. However, they are included at market value and are not subject to the smoothing described above.

The System has used this method since at least 1998.

#### C. Valuation Procedures

No actuarial accrued liability is held for nonvested, inactive Members who have a break in service, or for nonvested Members who have quit or been terminated, even if a break in service had not occurred as of the valuation date.

The wages used in the projection of benefits and liabilities are July 1, 2007 rates of pay based upon the prior year's earnings increased by the salary scale.

In computing accrued benefits, average earnings were determined using actual pay history.

No benefits are projected to be greater than the compensation limitation and dollar limitation required by the Internal Revenue Code Section 401 and 415 for governmental plans.

No additional liability is being carried for the guaranteed minimum interest rate for the Deferred Option Plan account balances. Stochastic studies of similar Systems have been used to quantify the cost of this benefit. Further review and analysis of this liability is recommended. Please note that this is a volatile benefit and the impact in any one-year may be large.

#### ACTUARIAL BASIS (CONTINUED)

#### C. Valuation Procedures (continued)

The calculations for the required state contribution are determined as of mid-year. This is a reasonable assumption since the employer contributions, employee contributions and State insurance premium tax allocations are made on a monthly basis throughout the year, and mid-year represents an average weighting of the contributions.

The contribution requirements are based on total annual compensation rather than total covered compensation of employees under assumed retirement age. This is a better reflection of the overall expectations for the System.

The Entry Age Normal Funding Method has been adjusted for those members granted prior service. The prior service is treated as occurring immediately before the membership date. Level pay is assumed during this period before actual membership. Entry Age costs are determined as if the member entered the System on the date the prior service is assumed to have begun. This treatment reflects the extra cost of prior service immediately in the accrued liability and preserves the relationship of normal cost to a year of service accrual.

# D. Actuarial Assumptions

The actuarial assumptions are selected by the Board with the recommendation of the actuary.

# **Economic Assumptions**

1. Investment Return

7.5%, net of investment expenses, per annum, compound annually. The System has used this assumption since at least 1984.

2. Earnings Progression

Sample rates below:

	Current Assumption		
Years of Service	Inflation %	Merit %	Increase %
1	3.0	16.00	19.00
2	3.0	12.00	15.00
3	3.0	6.75	9.75
4	3.0	6.25	9.25
5	3.0	5.75	8.75
6	3.0	5.50	8.50
7	3.0	5.00	8.00
8	3.0	4.25	7.25
9	3.0	4.10	7.10
10	3.0	3.90	6.90
15	3.0	2.90	5.90
20	3.0	2.00	5.00

## D. Actuarial Assumptions (continued)

# **Demographic Assumptions**

1. Retirement Rates

Sample rates below:

Attained Service	Annual Rates of Retirement Per 100 Eligible Members
20	39
21	21
22	17
23	17
24	19
25	22
26	80
27	80
28	80
29	80
30	100

# 2. Mortality Rates

(a) Active employees (pre-retirement)

RP-2000 No Collar Healthy Employees (Generational)

(b) Active employees (post-retirement and nondisabled pensioners) RP-2000 Blue Collar Healthy Annuitant (Generational)

(c) Disabled pensioners

RP-2000 Blue Collar Healthy Annuitant (Set forward 7 years)

#### D. Actuarial Assumptions (continued)

# **Demographic Assumptions (continued)**

3. Disability Rates

Graduated rates. See table below:

Age Range	Annual Rate
20-24	.0002
25-29	.0004
30-34	.0006
35-39	.0011
40-44	.0020
45-49	.0020
50-54	.0020
55-59	.0010

4. Withdrawal Rates

Graduated rates by years of service.

Service Range	Annual Rate
0-1	.100
2	.085
3	.070
4	.060
5-10	.040
11-15	.020
16-20	.005
Over 20	.000

#### 5. Marital Status

(a) Percentage married:

85% of participants are assumed to be married.

(b) Age difference:

Males are assumed to be three (3) years older than females.

#### D. Actuarial Assumptions (continued)

#### Other Assumptions

Assumed Age of Commencement

for Deferred Benefits:

Age 50, or the date at which the participant would have

achieved twenty years of service, if later.

2. Provision for Expenses:

Administrative Expenses, as budgeted by the Oklahoma

Police Pension and Retirement System.

3. Percentage of Disability:

Based upon information provided by the Executive

Director, we assume that employees becoming disabled

have a 25%-49% impairment.

4. Duty-Related Death:

Assuming all active pre-retirement deaths are duty-

related.

5. Cost-of-Living Allowance:

Police officers eligible to receive increased benefits according to repealed Section 50-120 of Title 11 of the Oklahoma Statutes pursuant to a court order receive an adjustment of 1/3 to 1/2 of the increase or decrease of any adjustment to the base salary of a regular police officer, based on an increase in base salary of 3.6%, with a 2%

minimum benefit increase assumed.

Members, not eligible for this increase are assumed to receive a 2% annual ad hoc increase in benefits during each year of retirement. This assumption was adopted in

2000.

6. Deferred Option Plan:

Deferred Option Plan members are assumed to remain in the Deferred Option Plan for the maximum of five years

prior to electing a lump sum.

#### SUMMARY OF SYSTEM PROVISIONS

Effective Date and Plan Year:

The System became effective January 1, 1981 and has been amended each year since then. The plan year is July 1 to June 30.

Administration:

The system is administered by the Oklahoma Police Pension and Retirement Board consisting of thirteen Members. The Board shall be responsible for the policies and rules for the general administration of the System.

Type of Plan:

A defined benefit plan.

**Employers Included:** 

An eligible employer may join the System on the first day of any month. An application of affiliation must be filed in the form of a resolution before the eligible municipality can become a participating municipality.

Eligibility:

All persons employed full-time as officers working more than 25 hours per week or any person undergoing police training to become a permanent police officer with a police department of a participating municipality, with ages not less than twenty-one (21) nor more than forty-five (45) when accepted for membership.

Service Considered:

Credited service consists of the period during which the Member participated in the System or predecessor municipal plan as an active employee, plus any service prior to the establishment of the municipal plan which was credited under the predecessor municipal systems or credited service granted by the State Board.

Salary Considered:

Base salary used in the determination of benefits does not include payment for accumulated sick and annual leave upon termination of employment or any uniform allowances.

Final average salary means the average paid base salary for normally scheduled hours of an officer over the highest 30 consecutive months of the last 60 months of credited service.

**State Contributions:** 

Insurance premium tax allocation. Historically, the fund has received 14% of these collected taxes. For the fiscal years beginning July 1, 2004 and ending June 30, 2009, the fund shall receive 17% of these collected taxes. For the fiscal year beginning July 1, 2009 and each fiscal year thereafter, the fund will receive 14% of these collected taxes. Beginning in fiscal year July 1, 2006, the system shall receive 26% of a special allocation established to refund the System for reduced allocations of insurance premium taxes resulting from increases in insurance

premium tax credits.

**Municipality Contributions:** 

Contribution is thirteen (13%) percent as of July 1, 1996.

**Member Contributions:** 

Eight (8%) percent of base salary. These contributions shall be "picked up" after December 31, 1988 pursuant to Section 414(h)(2) of the Internal Revenue Code.

**Normal Retirement Benefit:** 

Eligibility:

20 years of credited service.

Benefit:

2 1/2% of the final average salary multiplied by the years of credited service, with a maximum of 30 years of credited service considered.

Form of Benefit:

Lifetime benefit.

Cost-of-Living Adjustments:

Police officers eligible to receive increased benefits according to repealed Section 50-120 of Title 11 of the Oklahoma Statutes pursuant to a court order shall receive an adjustment of 1/3 to 1/2 of the increase or decrease of any adjustment to the base salary of a regular police officer.

Termination:

Less Than 10 Years of Service:

A refund of contributions without interest.

More than 10 Years of Service:

If greater than 10 years of service, but not eligible for the normal retirement benefit, the benefit is payable at the later of the date the Member would have had 20 years of service or attained age 50 in an amount equal to 2 1/2% of the final average salary multiplied by the years of credited service. The Member may elect a refund of contributions instead of the retirement benefit.

#### Disability Benefit (Duty):

#### Total Disability

Upon determination of total disability incurred as a result of the performance of duty, the normal disability benefit is 50% of final average salary.

#### Partial Disability

Upon determination of partial disability incurred as a result of the performance of duty, the normal disability is reduced according to the percentage of impairment, as outlined in the "American Medical Association's Guide to the Evaluation of Permanent Impairment." The following shows the percent of normal disability benefit payable as related to the percent of impairment.

% Impairment	% of Benefit
1% to 49%	50%
50% to 74%	75%
75% to 100%	100%

#### Disability Benefit (Non-Duty):

Upon determination of disability after 10 years of service due to causes other than duty, the benefit equals the accrued benefit of 2 1/2% of final average salary times years of credited service (maximum of 30 years) times:

• 100%, if permanent and total, or

• the following percentages, if partial disability.

1% to 24%

25%

25% to 49%

50%

50% to 74%

75%

75% to 99%

90%

# Death Benefits Payable to Beneficiaries:

Prior to Retirement (Duty):

The greater of:

- 1) 2 1/2% of final average salary times years of credited service (maximum of 30 years), or
- 2) 50% of final average salary.

Prior to Retirement (Non-Duty):

After 10 years of service, a benefit equal to 2 1/2% of final average salary times years of credited service (maximum of 30 years).

After Retirement:

100% of the Member's retirement or deferred vested benefit, payable when the Member would have been eligible to receive it, payable to the beneficiary.

Death Benefit:

The beneficiary shall receive a death benefit amount of \$5,000.

If an active Member dies prior to retirement without leaving a beneficiary, a refund of the accumulated contributions made by the Member will be paid to the estate.

Beneficiary:

Surviving spouses must be married to the member for 30 continuous months prior to the date of death (waived in the case of duty related death).

If the beneficiary is a child, the benefits are payable to age 18, or 22 if a full-time student.

**Deferred Option Plan:** 

A Member who has 20 or more years of service and continues employment may elect to participate in the Deferred Option Plan (DOP). Participation in the DOP shall not exceed five years. The employees' contributions cease upon entering the Plan, but the employer contributions are divided equally between the Retirement System and DOP. The monthly retirement benefits that the employee is eligible to receive are paid into the DOP account.

A member is also allowed to retroactively elect to join the DOP as of a back-drop-date which is no earlier than the member's normal retirement date or five years before his termination date. The monthly retirement benefits and employee contributions that would have been payable had the member elected to join the DOP are credited to the member's DOP account with interest.

The retirement benefits are not recalculated for service and salary past the election date to join the DOP. However, the benefits may be increased by any applicable cost-of-living increases.

When the Member actually terminates employment, the DOP account balance may be paid in a lump sum, to an annuity provider, or transferred to a Deferred Option Payout Account. Monthly retirement benefits are then paid directly to the retired Member.

The original Plan became effective during July 1, 1990 to June 30, 1991 Plan Year with the backdrop and Payout Account provisions added subsequently. The DOP account of an active member is guaranteed a minimum of the valuation interest rate for investment return, or 2% less than the fund rate of return, if greater. If the balance is transferred to a Payout Account upon retirement, the account is credited with interest at a rate of 2% below the total fund net earnings if the fund returns more than 2%. If the fund realizes negative returns, the account is reduced at a rate equal to the fund net earnings. Alternatively, if the fund realizes a positive return of less than 2%, the account is credited with a rate of zero.

## ADDENDUM TO JULY 1, 2007 ACTUARIAL VALUATION

#### CERTIFICATION

We have prepared an actuarial valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2007, for the plan year ending June 30, 2007. The results of the valuation are set forth in this report, which reflects the provisions of the System as amended and effective on July 1, 2007.

The valuation is based on employee and financial data which were provided by the Oklahoma Police Pension and Retirement System and the independent auditor, respectively, and which are summarized in this report.

The results in this Addendum have been prepared for the sole purpose of meeting the Retirement Board's requirement to submit this information to the Oklahoma State Pension Oversight Commission, based on the following prescribed assumptions (11 O.S. 2001, Section 50-105.4, Section G):

Interest rate: 7.5%

COLA assumption: 2.0%

Mortality: RP 2000 Generational Mortality Table Amortization period: 30 years, open period

Sources of all contributions and revenues, including dedicated

tax fee revenue and federal monies

All other assumptions, methodologies, and plan provisions used are consistent with those used in the July 1, 2007 valuation.

The results shown in this Addendum are not consistent with those in the July 1, 2007 valuation. The July 1, 2007 valuation results were determined in accordance with generally accepted actuarial principles and procedures, and are in compliance with the Actuarial Standards Board Actuarial Standard of Practice No. 27-Selection of Economic Assumptions for Measuring Pension Obligations. The results shown in this Addendum are not based on the assumptions and methodologies adopted by the Retirement Board. For those results, see the July 1, 2007 actuarial valuation.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Richard A. Mackesey F.S.A.

September 17, 2007

R. Ryan Falls, F.S.

September 17, 2007

This supplemental report has been prepared by Buck Consultants for the Oklahoma Police Pension Retirement Board to present the results of a valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2007, based on the prescribed assumptions under 11 O.S. 2001, Section 50-105.4, Section H of current State Statutes and regulations issued thereunder.

A summary of principal valuation results from the current valuation follows.

	54,54,54	arial Valuation of July 1, 2007
Summary of Costs		
Required State Contribution for Current Year under Prescribed Assumptions	\$	51,515,949
Actual State Contribution Received in Prior Year		28,122,000
Funded Status		
Actuarial Accrued Liability	\$	2,042,322,151
Actuarial Value of Assets	\$	1,627,476,000
Unfunded Actuarial Accrued Liability		414,846,151
Market Value of Assets and Additional Liabilities		
Market Value of Assets	\$	1,797,555,000
Present Value of Projected System Benefits	S	2,557,207,494

		Actuarial Valuation as of July 1, 2007		
	Summary of Contribution Requirements			
	THE CONTROL OF THE C	Amount	% of Active Covered Comp.	
1.	Annual Covered Compensation for Members Included in Valuation	4		
	a. Active Members	\$ 220,884,875		
	b. Deferred Option Plan Members	10,372,405		
	c. Total	\$ 231,257,280		
2.	Total Normal Cost Mid-year	\$ 60,606,502	27.4%	
3.	Unfunded Actuarial Accrued Liability	\$ 414,846,151		
4.	Amortization of Unfunded Actuarial Accrued Liability over 30 years From July 1, 2007 at mid-year	\$ 33,900,227	15.4%	
5.	Budgeted Expenses	\$ 4,069,250	1.8%	
6.	Total Required Contribution under Prescribed Assumptions $(2 + 4 + 5)$	\$ 98,575,979	44.6%	
7.	Estimated Employee Contribution (8% x 1a)	\$ 17,670,790	8.0%	
8.	Estimated Municipality Contributions			
	a. Active Members	\$ 28,715,034	13.0%	
	b. Deferred Option Plan Members	674,206	6.5% (1)	
	c. Total	\$ 29,389,240	12.7% (2)	
9.	Required State Contribution to amortize Unfunded Actuarial Accrued Liability over 30 years from July 1, 2007 at mid-year (6 - 7 - 8c)	\$ 51,515,949	23.3%	

<sup>(1)</sup> Percentage of Deferred Option Plan Members' compensation.
(2) Percent of total compensation.

#### UNFUNDED ACTUARIAL ACCRUED LIABILITY

The actuarial accrued liability is the present value of projected system benefits allocated to past service by the actuarial funding method being used.

	<b>Total System</b>	
	July 1, 2007	
Actuarial Present Value of Benefits		
a. Active Members	\$ 1,485,240,777	
b. Members with Deferred Benefits	12,188,880	
c. Members Receiving Benefits who are not eligible for Automatic COLA	762,314,541	
d. Members Receiving Benefits who are eligible for Automatic COLA	191,132,477	
e. Deferred Option Plan Members (1)	88,986,050	
f. COLA Reserve	17,344,769	
g. Total	\$ 2,557,207,494	
2. Actuarial Present Value of Future Normal Costs	\$ 514,885,343	
3. Total Actuarial Accrued Liability (1g - 2)	\$ 2,042,322,151	
4. Actuarial Value of Assets	\$ 1,627,476,000	
5. Unfunded Actuarial Accrued Liability (3 - 4, not less than \$0)	\$ 414,846,151	

# LIABILITY DETAIL

Total	July 1, 2007
Present Value of Benefits	\$ 2,557,207,494
Accrued Liability	\$ 2,042,322,151
Normal Cost Mid-Year	\$ 60,606,502

Active	
a. Retirement	\$ 959,188,132
b. Disability	684,948
c. Withdrawal	13,699,652
d. Death	4,048,318
e. Refunds	(7,265,616)
f. Total	\$ 970,355,434
Inactive	
1. Members Eligible for Automatic COLA	
a. Retired Members	\$ 105,366,676
b. Disabled Members	16,068,430
c. Terminated Vested Members	0
d. Deferred Option Plan Members	0
e. Beneficiaries	69,697,371
f. Total	\$ 191,132,477
2. Members Not Eligible for Automatic COLA	
a. Retired Members	\$ 695,279,831
b. Disabled Members	14,034,362
c. Terminated Vested Members	12,188,880
d. Deferred Option Plan Members - Annuities	67,820,050
e. Deferred Option Plan Members - Account Balances	21,166,000
f. Beneficiaries	53,000,348
g. Reserve for COLA's in Future (1)	17,344,769
h. Total	\$ 880,834,240
3. Total Inactive (1f + 2h)	\$ 1,071,966,717
Accrued Liability (Active + Inactive)	\$ 2,042,322,151

<sup>(1)</sup> Ad Hoc cost of living adjustments (COLAs) are prefunded to the 2% per year level in this valuation. These COLAs are granted periodically, but generally not each year. Therefore, in years in which a COLA is not granted, this reserve is increased to fund future COLA's.

This section presents and describes the actuarial assumptions used for this supplemental valuation. The census of Members, market and actuarial value of assets, actuarial basis and provisions of the Plan are the same as described in Sections 3 and 4 of the valuation report. The valuation is based on the premise that the Plan will continue in existence.

#### **Economic Assumptions**

1. Investment Return (Prescribed)

7.5%, net of investment expenses, per annum, compound annually. The System has used this assumption since at least 1984.

2. Earnings Progression

Sample rates below:

	Current Assumption		
Years of Service	Inflation %	Merit %	Increase
1	3.0	16.00	19.00
2	3.0	12.00	15.00
3	3.0	6.75	9.75
4	3.0	6.25	9.25
5	3.0	5.75	8.75
6	3.0	5.50	8.50
7	3.0	5.00	8.00
8	3.0	4.25	7.25
9	3.0	4.10	7.10
10	3.0	3.90	6.90
15	3.0	2.90	5.90
20	3.0	2.00	5.00

#### **Demographic Assumptions**

#### 1. Retirement Rates

Sample rates below:

Attained Service	Annual Rates of Retirement Per 100 Eligible Members
20	39
21	21
22	17
23	17
24	19
25	22
26	80
27	80
28	80
29	80
30	100

#### 2. Mortality Rates

(a) Active employees (pre-retirement) (Prescribed) RP-2000 Generational Mortality Tables with generational projections - Employees

(b) Active employees (post-retirement and nondisabled pensioners) (Prescribed) RP-2000 Generational Mortality Tables with generational projections – Healthy Annuitants (except before age 50 uses Employees mortality)

(c) Disabled pensioners (Prescribed)

RP-2000 Generational Mortality Tables with generational projections – Disabled Retirees

# **Demographic Assumptions (continued)**

3. Disability Rates

Graduated rates. See table below:

Age Range	Annual Rate
20-24	.0002
25-29	.0004
30-34	.0006
35-39	.0011
40-44	.0020
45-49	.0020
50-54	.0020
55-59	.0010

4. Withdrawal Rates

Graduated rates by years of service.

Service Range	Annual Rate
0-1	.100
2	.085
3	.070
4	.060
5-10	.040
11-15	.020
16-20	.005
Over 20	.000

5. Marital Status

(a) Percentage married:

85% of participants are assumed to be married.

(b) Age difference:

Males are assumed to be three (3) years older than females.

#### Other Assumptions

 Assumed Age of Commencement for Deferred Benefits:

Age 50, or the date at which the participant would have

achieved twenty years of service, if later.

2. Provision for Expenses:

Administrative Expenses, as budgeted by the Oklahoma

Police Pension and Retirement System.

3. Percentage of Disability:

Based upon information provided by the Executive

Director, we assume that employees becoming disabled

have a 25%-49% impairment.

4. Duty-Related Death:

Assuming all active pre-retirement deaths are duty-related.

5. Cost-of-Living Allowance: (Prescribed)

2% annually.

6. Deferred Option Plan:

Deferred Option Plan members are assumed to remain in

the Deferred Option Plan for the maximum of five years

prior to electing a lump sum.