# OKLAHOMA FIREFIGHTERS 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 Firefighters Retirement Board to:

- Present the results of a valuation of the Oklahoma Firefighters Pension and Retirement System as of July 1, 2007;
- Review experience under the Plan 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 Plan, on a GASB No. 25 basis, has increased since the prior valuation as indicated by the table below:

GASB No. 25 Funded Status (\$000,000)		uly 1, 2007	July 1, 2006	
Accrued Liability	\$	2,785.2	\$	2,666.3
Actuarial Value of Assets	\$	1,717.1	\$	1,546.5
Unfunded Accrued Liability	\$	1,068.1	\$	1,119.8
Funded Ratio		61.6%		58.0%

- The funded ratio on a SFAS No. 35 basis, measuring the market value of Plan assets versus the present value of benefits accrued as of the valuation date, increased from 74.7% to 84.4%.
- The total required contribution for the System increased by 0.9% and the required State contribution decreased by 0.8%.

Contribution Summary (\$000,000)		1, 2007	July 1, 2006		
Total Required Contribution	\$	164.6	\$	163.1	
Expected Employee Contributions		(17.3)		(16.3)	
Expected Municipality Contributions		(29.1)		(27.7)	
Required State Contribution	\$	118.2	\$	119.1	
As a Percentage of Active Payroll		54.5%		58.3%	

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

	Actuarial Valuation as of	
	July 1, 2007 July 1, 200	
Summary of Costs		-
Total Contribution Requirement (1)	\$ 164,610,121	\$ 163,165,329
Total Contributions Received in Prior Year <sup>(2)</sup>	\$ 135,902,051	\$ 99,175,326

GASB No. 25 Funded Status	•	
Actuarial Accrued Liability	\$ 2,785,218,488	\$ 2,666,305,915
Actuarial Value of Assets	\$ 1,717,070,814	\$ 1,546,486,429
Unfunded Actuarial Accrued Liability	\$ 1,068,147,674	\$ 1,119,819,486

Market Value of Assets and Additional Liabilities		
Market Value of Assets	\$ 1,848,149,410	\$ 1,585,843,863
Actuarial Present Value of Accumulated Plan Benefits		
(SFAS No. 35)	\$ 2,189,677,202	\$ 2,123,622,289
Present Value of Projected Plan Benefits	\$ 3,351,369,415	\$ 3,204,307,345

Summary of Data		
Number of Members in Valuation		
Active Paid Members	3,898	3,815
Active Volunteer Members	7,747	7,594
Members with Deferred Benefits	913	1,180
Retired Members	5,672	5,223
Beneficiaries	1,764	1,712
Disabled Members	1,585	1,574
Deferred Option Plan Members	164	212
Total	21,743	21,310

Active Member Statistics		- "	
Total Annual Compensation (Paid Members) <sup>(3)</sup>	\$ 216,710,606	\$	204,206,759
Average Compensation (Paid Members) <sup>(3)</sup>	\$ 55,595	\$	53,527
Average Age	38.0		38.0
Average Service	9.2		9.1

<sup>(1)</sup> Excluding Deferred Option Plan Contributions.

<sup>(2)</sup> For the fiscal year beginning July 1, 2006 and each fiscal year thereafter, the System is scheduled to receive 34% of collected state-wide insurance premium taxes. In addition, for the fiscal year beginning July 1, 2006, the System received a one-time allocation of \$35 million.

<sup>(3)</sup> Compensation is projected one year based on the salary increase assumptions

## **Changes in Actuarial Assumptions and Methods**

There were no changes in actuarial assumptions or methods since the prior valuation.

## **Changes in Actuarial Funding Methods**

There were no changes in actuarial funding methods.

#### **Changes in System Benefits**

The following legislation affecting the Oklahoma Firefighters Pension and Retirement System became effective July 1, 2007:

Senate Bill 674 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.

Modifies the definition of "volunteer firefighter". Specifies distribution Senate Bill 859

of pension benefits for members who lose their life under certain circumstances. Allows the pension to continue for disabled children of members who lose their life and specifies how the benefits will be held

and distributed.

House Bill 2070 Subjects the System to the Oklahoma Pension Legislation Actuarial

Analysis Act.

#### **Actuarial Experience During the Plan Year**

The actuarial gain/(loss) is shown in the table below:

	<b>Total (000s)</b>		
Liability Gain	\$	44,343	
Asset Gain	\$	45,272	
Net Actuarial Gain/(Loss)	\$	89,615	

The Oklahoma Firefighters Deferred Option Plan (DROP) allows members 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 Firefighters Pension and Retirement System and the other half to the members' accounts in the Deferred Option Plan equal to the retirement benefit accrued under the Plan. After the period of active participation, members must separate from active service as a firefighter and retire. After retirement, however, members may remain as inactive members in this plan and defer receipt of the account balance until payments are required under the minimum distribution rules. The DROP was modified effective July 1, 2003 to allow eligible members to retroactively elect to enter DROP 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 DROP are credited to the employee's account in the DROP.

The Deferred Option Plan accounts are credited with interest at a rate of 2.0% less than the total fund growth, with a guaranteed minimum interest rate equal to the valuation interest rate of 7.5%. The actual rate credited for the fiscal year ended June 30, 2007 was 14.0%.

Statistics regarding the number of Deferred Option Plan members and total account balances are shown in the table below:

DROP Statistics	July 1, 2007	July 1, 2006
Number of Members		
Active	164	212
Inactive	1,240	1,455
Total	1,404	1,667
Account Balances	\$ 254,237,382	\$ 226,423,394
Retirement Annual Benefits of Active Members	\$ 3,917,820	\$ 5,435,691

We have prepared an actuarial valuation of the Oklahoma Firefighters 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 Firefighters Pension and Retirement System and the independent auditor, respectively, and which are summarized in this report.

All costs, liabilities and other factors under the Plan 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 Plan. This report fully and fairly discloses the actuarial position of the Plan on an ongoing basis.

The changes in assumptions and benefit provisions since the last valuation of the System as of July 1, 2006 are summarized on pages 3 and 4. There have been no changes in actuarial methods since the last 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.

(Signed) RICHARD A. MACKESEY	
	October 15, 2007
Richard A. Mackesey, F.S.A.	<del></del>
(Signed) DAVID KENT	
David Kent F S A	October 15, 2007

- Section 1.1 Calculation of Contribution Requirement
- 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

## CALCULATION OF CONTRIBUTION REQUIREMENT

		Actuarial Valuation as of						
C	Summany of Containution		July 1, 20	007		July 1, 2006		
C.	. Summary of Contribution Requirements		Amount	% of Covered Comp.		Amount	% of Covered Comp.	
1.	Annual Compensation							
	a. Members included in							
	Valuation (Covered							
	Compensation)	\$	216,710,606		\$	204,206,759		
	b. Deferred Option Plan							
	Members		7,703,734			10,777,711		
	c. Total Compensation		224,414,340			214,984,470		
2.	Total Normal Cost Mid-year	\$	72,094,063	33.3%	\$	67,424,177	33.0%	
3.	Unfunded Actuarial Accrued							
	Liability	\$1	,068,147,674		\$1	,119,819,486		
4.	Amortization of Unfunded							
	Actuarial Accrued Liability over							
	30 years from July 1, 2003 Mid-							
	year (1)	\$	91,173,460	42.1%	\$	94,398,554	46.2%	
5.	Budgeted Expenses	\$	1,342,598	0.6%	\$	1,342,598	0.7%	
6.	Total Required Contribution							
	(2+4+5)	\$	164,610,121	76.0%	\$	163,165,329	79.9%	
7.	Estimated Member Contribution	\$	17,336,848	8.0%	\$	16,336,541	8.0%	
8.	Estimated Employer Contribution							
	a. Active Members – Paid	\$	28,172,379	13.0%	\$	26,546,879	13.0%	
	b. Deferred Option Plan			(2)			(2)	
	Members – Paid	\$	500,743	$6.5\%^{(2)}$		700,551	$6.5\%^{(2)}$	
	c. Active Members - Volunteer		464,820			455,640		
	d. Deferred Option Plan							
	Members – Volunteer		1,590	12 0 0 (3)		1,560	12 2 2 (3)	
	e. Total	\$	29,139,532	13.0%(3)	\$	27,704,630	12.9%(3)	
9.	Required State Contribution to							
	amortize Unfunded Actuarial							
	Accrued Liability over 30 years							
	from July 1, 2003 at Mid-year.	d.	110 122 741	E 1 E 01	φ	110 124 150	50.20	
10	(6 - 7 - 8e)	\$	118,133,741	54.5%	Þ	119,124,158	58.3%	
10.	Previous year's actual State Contribution (4)	ď	01 406 701	42 201	¢	57 940 010	20 207	
11	Approximate period over which	\$	91,406,791	42.2%	\$	57,849,910	28.3%	
11.								
	previous year's State Contribution will amortize							
	Unfunded Actuarial Accrued							
	Liability (UAAL) from	N	ot sufficient to		Νı	ot sufficient to		
	July 1, 2003		nortize UAAL			nortize UAAL		
<u> </u>	July 1, 2003	an	IOITIZE UAAL	<u> </u>	an	IOITIZE UAAL	<u> </u>	

<sup>(1)</sup> Funding Policy adopted by Board.

<sup>(2)</sup> Percentage of Deferred Option Plan Compensation.

<sup>(3)</sup> Percent of Total Compensation.

<sup>(4)</sup> For the fiscal year beginning July 1, 2006 and each fiscal year thereafter, the System is scheduled to receive 34% of collected state-wide insurance premium taxes. In addition, for the fiscal year beginning July 1, 2006, the System received a one-time allocation of \$35 million.

## CALCULATION OF CONTRIBUTION REQUIREMENT (CONTINUED)

D. Allocation of Contribution Requirements	July 1, 2007			
D. Anocation of Contribution Requirements	Paid	Volunteer	Total	
1. Total Normal Cost Mid-year	\$ 69,239,255	\$ 2,854,808	\$ 72,094,063	
2. Unfunded Actuarial Accrued Liability (1)	997,479,666	70,668,008	1,068,147,674	
3. Amortization of Unfunded Actuarial Accrued Liability over 30 years from July 1, 2003 Mid-year (2)	85,141,479	6,031,981	91,173,460	
4. Budgeted Expenses <sup>(3)</sup>	1,253,773	88,825	1,342,598	
5. Total Required Contribution (1 + 3 + 4)	155,634,507	8,975,614	164,610,121	
6. Estimated Member Contribution	17,336,848	0	17,336,848	
7. Estimated Employer Contribution				
a. Active Members	28,172,379	464,820	28,637,199	
b. Deferred Option Plan Members	500,743	1,590	502,333	
c. Total	28,673,122	466,410	29,139,532	
8. Required State Contribution to amortize Unfunded Actuarial Accrued Liability over 30 years from July 1, 2003 at Mid-year				
(5 - 6 - 7c)	109,624,537	8,509,204	118,133,741	

<sup>(1)</sup> See Section 1.3 for allocation.

<sup>(2)</sup> Funding Policy Adopted by Board.

<sup>(3)</sup> Allocation based on total Actuarial Accrued Liability.

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## LIABILITY DETAIL

Total	
Present Value of Benefits	\$ 3,351,369,415
Present Value of Future Normal Cost	\$ 566,150,927
Accrued Liability	\$ 2,785,218,488
Normal Cost Mid-year	\$ 72,094,063

Active	-	
a. Retirement	\$	951,161,268
b. Withdrawal		7,710,596
c. Disability		9,242,316
d. Death		14,498,370
e. Total	\$	982,612,550
Inactive		
1. Members Eligible for Automatic COLA		
a. Disabled Members	\$	78,463,884
b. Beneficiaries		110,284,886
c. Retired Members		153,105,798
d. Total	\$	341,854,568
2. Members Not Eligible for Automatic COLA		
a. Terminated Vested Members		17,137,374
b. Disabled Members		389,750,258
c. Beneficiaries		87,364,099
d. Retired Members		626,403,890
e. Deferred Option Plan Members - Annuity		62,537,257
f. Deferred Option Plan Members - Account Balances		254,237,382
g. Total	\$	1,437,430,260
3. Total Inactive $(1d + 2g)$	\$	1,779,284,828
4. COLA Reserve	\$	23,321,110
Accrued Liability (Active + Inactive + COLA Reserve)	\$	2,785,218,488

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#### UNFUNDED ACTUARIAL ACCRUED LIABILITY

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

	Total Plan		
	July 1, 2007	July 1, 2006	
1. Actuarial Present Value of Benefits			
a. Active Members	\$ 1,548,763,477	\$ 1,449,817,346	
b. Members with Deferred Benefits	17,137,374	19,606,202	
c. Members Receiving Benefits who are eligible for Automatic COLA	341,854,568	356,221,263	
d. Members Receiving Benefits who are not eligible for Automatic COLA	1,103,518,247	1,064,281,520	
e. Deferred Option Plan Members (1)	316,774,639	314,381,014	
f. COLA Reserve	23,321,110	0	
g. Total	3,351,369,415	3,204,307,345	
2. Actuarial Present Value of Future Normal Costs	\$ 566,150,927	\$ 538,001,430	
3. Total Actuarial Accrued Liability (1g - 2)	\$ 2,785,218,488	\$ 2,666,305,915	
4. Actuarial Value of Assets	\$ 1,717,070,814	\$ 1,546,486,429	
5. Unfunded Actuarial Accrued Liability (3 - 4, not less than \$0)	\$ 1,068,147,674	\$ 1,119,819,486	

#### Allocation of Current Year Between Paid and Volunteer:

		Total Plan	
	Paid	Volunteer	Total
1. Actuarial Present Value of Benefits			
a. Active Members	\$1,479,251,820	\$ 69,511,657	\$1,548,763,477
b. Members with Deferred Benefits	3,422,951	13,714,423	17,137,374
c. Members Receiving Benefits who are			
eligible for Automatic COLA	341,854,568	0	341,854,568
d. Members Receiving Benefits who are			
not eligible for Automatic COLA	990,671,253	112,846,994	1,103,518,247
e. Deferred Option Plan Members (1)	315,197,790	1,576,849	316,774,639
f. COLA Reserve	21,032,633	2,288,477	23,321,110
g. Total	3,151,431,015	199,938,402	3,351,369,415
2. Actuarial Present Value of Future Normal			
Costs	550,480,909	15,670,018	566,150,927
3. Total Actuarial Accrued Liability (1g - 2)	2,600,950,106	184,268,382	2,785,218,488
4. Actuarial Value of Assets (2)	1,603,470,440	113,600,374	1,717,070,814
5. Unfunded Actuarial Accrued Liability			
(3 - 4, not less than \$0)	997,479,666	70,668,008	1,068,147,674

Effective July 1, 1997, Deferred Option Account balances are included as liability and assets. The total Account Balance on July 1, 2007, is \$254,237,382 and the balance on July 1, 2006, is \$226,423,394.

<sup>(2)</sup> Allocated based on total actuarial accrued liability (item 3).

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## 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	<b>Deferred Option</b>	Total
1. Expected Actuarial Accrued Liability			
a. Actuarial Accrued Liability at July 1, 2006	\$ 2,439,882,521	\$ 226,423,394	\$ 2,666,305,915
b. Normal Cost at July 1, 2006	57,866,718		57,866,718
c. Reserve for DROP Interest Rate Guarantee and DROP Contribution at Mid-Year d. Benefit Payments for Plan Year Ending	5,264,421	2,162,266	7,426,687
June 30, 2007	118,619,241	7,146,905	125,766,146
e. Interest on a + b + c - d to End of Year	183,157,234	16,798,210	199,955,444
f. Cost of Amendment	\$ 451,919	\$ 0	\$ 451,919
g. COLA Reserve	\$ 23,321,110	\$ 0	\$ 23,321,110
h. Expected Actuarial Accrued Liability at July 1, 2007 $(a + b + c - d + e + f + g)$	\$ 2,591,324,682	\$ 238,236,965	\$ 2,829,561,647
2. Actuarial Accrued Liability at July 1, 2007	\$ 2,530,981,106	\$ 254,237,382	\$ 2,785,218,488
3. Actuarial Liability Gain/(Loss) (1h – 2)	\$ 60,343,576	\$ (16,000,417)	\$ 44,343,159
4. Expected Actuarial Value of Assets			
a. Actuarial Value of Assets at July 1, 2006	\$ 1,320,063,035	\$ 226,423,394	\$ 1,546,486,429
b. Contributions Made for Plan Year Ending June 30, 2007	133,739,785	2,162,266	135,902,051
c. Benefit Payments and Expenses for Plan Year Ending June 30, 2007	119,760,052	7,146,905	126,906,957
d. Interest on a + b - c to End of Year	99,519,490	16,798,210	116,317,700
e. Expected Actuarial Value of Assets at July 1, 2007 $(a + b - c + d)$	\$ 1,433,562,258	\$ 238,236,965	\$ 1,671,799,223
5. Actuarial Value of Assets as of July 1, 2006			
a. Actuarial Value of Assets as of July 1, 2007 prior to DROP transfer	\$ 1,472,301,796	\$ 244,769,018	\$ 1,717,070,814
b. DROP transfer	(9,468,364)	9,468,364	0
c. Actuarial Value of Assets as of July 1, 2007 after DROP transfer	\$ 1,462,833,432	\$ 254,237,382	\$ 1,717,070,814
6. a. Actuarial Asset Gain/(Loss) Before DROP Transfer (5a-4e)	\$ 38,739,538	\$ 6,532,053	\$ 45,271,591
b. Actuarial Asset Gain/(Loss) After DROP Transfer (5c-4e)	\$ 29,271,174	\$ 16,000,417	\$ 45,271,591
7. Summary			
a. Actuarial Asset Gain/(Loss) (6a)	\$ 38,739,538	\$ 6,532,053	\$ 45,271,591
b. DROP Guarantee Gain/(Loss) (5b)	(9,468,364)	9,468,364	0
c. Actuarial Liability Gain/(Loss) (3)	60,343,576	(16,000,417)	44,343,159
d. Total Actuarial Gain/(Loss) $(a + b + c)$	\$ 89,614,750	\$ 0	\$ 89,614,750

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#### **CONTRIBUTIONS**

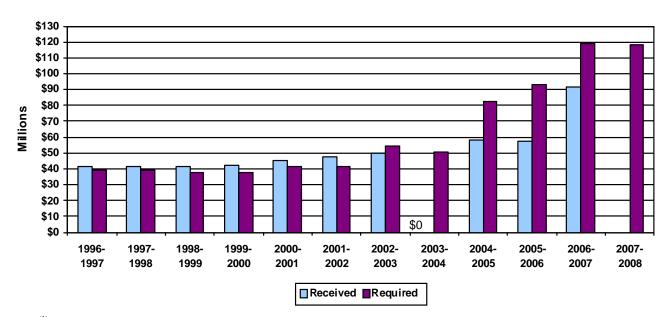
Contributions to the Retirement System are made by the Members, municipalities, fire districts, and the State of Oklahoma.

Paid firefighters contribute 8% of gross salary. Municipalities and fire districts contribute 13.0% of gross salary. For the fiscal year ending June 30, 2007 the fund received a contribution of \$91,406,791 from the State including a one-time allocation of \$35 million. For the fiscal year beginning July 1, 2006 and each fiscal year thereafter, the System is scheduled to receive 34% of collected statewide insurance premium taxes.

Volunteer firefighters do not contribute to the fund. Municipalities and fire districts that are not exempt contribute \$60 per year per active volunteer.

The 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.

#### State Contributions Received versus Contributions Required by 30-Year Funding Policy<sup>(1)</sup>



<sup>30-</sup>year amortization period was reset for plan year ending June 30, 2004 (SB 286) to start at July 1, 2003 Prior to that time, the amortization period was 30 years from July 1, 1988.

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TEN-YEAR PROJECTED CASH FLOW (1) (RETIREMENT BENEFIT PAYMENTS)

Plan Year Ending	Actives	Retirees (2)	Total
6/30/2008	\$ 4,622,529	\$ 114,488,468	\$ 119,110,997
6/30/2009	12,557,998	116,093,969	128,651,967
6/30/2010	20,628,104	117,641,240	138,269,344
6/30/2011	28,962,212	119,146,267	148,108,479
6/30/2012	37,511,455	120,521,819	158,033,274
6/30/2013	46,143,650	121,793,079	167,936,729
6/30/2014	54,810,783	122,863,446	177,674,229
6/30/2015	63,731,797	123,819,260	187,551,057
6/30/2016	73,111,520	124,560,151	197,671,671
6/30/2017	82,912,048	125,118,616	208,030,664

<sup>&</sup>lt;sup>(1)</sup> Includes payment to DROP as retirement benefits.

<sup>(2)</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 Plan Benefits

The actuarial present value of vested and nonvested accumulated Plan Benefits was computed on an ongoing plan 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 calculation 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 Plan Benefits	July 1, 2007	July 1, 2006
Vested Benefits		
a. Active Members	\$ 538,955,952	\$ 507,934,494
b. Deferred Option Plan Members	303,945,643	295,836,908
c. Members with Deferred Benefits	13,797,809	15,755,176
d. Members Receiving Benefits	1,245,449,397	1,217,950,901
e. Total Vested Benefits	2,102,148,801	2,037,477,479
Nonvested Benefits	87,528,401	86,144,810
<b>Total Accumulated Plan Benefits</b>	\$ 2,189,677,202	\$ 2,123,622,289
Assumed Rate of Interest	7.5%	7.5%
Market Value of Assets Available for		
Benefits	\$ 1,848,149,410	\$ 1,585,843,863
Funded Ratio	84.40%	74.68%

	July 1, 2007	July 1, 2006
Vested Members		
a. Active Members	4,712	4,503
b. Deferred Option Plan Members	164	212
c. Members with Deferred Benefits	913	1,180
d. Members Receiving Benefits	9,021	8,509
e. Total Vested Members	14,810	14,404
Nonvested Members	6,933	6,906
<b>Total Members</b>	21,743	21,310

#### SFAS No. 35 Information (CONTINUED)

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

A statement of changes in the actuarial present value of accumulated Plan 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 Plan Benefits as of	
July 1, 2006	\$ 2,123,622,289
Increase/(Decrease) During Year Attributable to:	
a. Normal Cost <sup>(1)</sup>	\$ 58,808,584
b. Increase for Interest Due to Decrease in Discount Period	159,051,346
c. Benefits Paid	(125,766,146)
d. Plan Amendment	729,906
e. Funding Method Changes	0
f. Assumption Changes	0
g. (Gains)/Losses	(26,768,777)
Net Increase/(Decrease)	\$ 66,054,913
Actuarial Present Value of Accumulated Plan Benefits as of	
July 1, 2007	\$ 2,189,677,202

<sup>&</sup>lt;sup>(1)</sup> Includes 3.28% of July 1, 2006, DROP account balance (\$226,423,394) as a reserve for the expected cost of the interest rate guarantee on the DROP.

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

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

#### **Supplementary Schedules**

The GASB has issued a statement; 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 Firefighters Pension and 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.

#### A. Schedule of Funding Progress

The GASB Statement No. 25 liabilities and assets resulting from the last six 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)
07/01/2002	\$1,457,170,001	\$ 1,858,079,585	\$ 400,909,584	78.4%	\$ 153,775,079	260.7%
07/01/2003	\$1,496,885,848	\$ 1,946,753,099	\$ 449,867,251	76.9%	\$ 163,684,035	274.8%
07/01/2004	\$1,473,396,552	\$ 2,233,519,875	\$ 760,123,323	66.0%	\$ 173,178,595	438.9%
07/01/2005	\$1,485,516,048	\$ 2,332,601,300	\$ 847,085,252	63.7%	\$ 188,968,929	448.3%
07/01/2006	\$1,546,486,429	\$ 2,666,305,915	\$ 1,119,819,486	58.0%	\$ 204,206,759	548.4%
07/01/2007	\$1,717,070,814	\$ 2,785,218,488	\$ 1,068,147,674	61.6%	\$ 216,710,606	492.9%

## GASB No. 25 Information (Continued)

**Supplementary Schedules (continued)** 

# **B.** Schedule of Employer Contributions

The GASB Statement No. 25 required contribution and actual percentage for the last six fiscal years are as follows:

Year Ended June 30	Annual Required Contribution	Percentage Contributed
2002	\$ 63,101,261	109.0%
2003	76,522,653	94.8%
2004	73,681,227	31.0%
2005	106,735,523	77.0%
2006	118,296,060	69.6%
2007	146,828,788	80.0%

This section presents information regarding plan assets as reported by the system administrator or trustee. The plan assets represent the portion of total plan 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 (1)

Asset Category	Market Value June 30, 20			Market Value as of June 30, 2006		
	Amount	%	Amount	%		
1. Cash and Short-term Investments	\$ 53,261,555	3%	\$ 34,066,539	2%		
2. Receivables	\$ 23,815,373	1%	\$ 22,628,459	2%		
3. Investments at fair value						
a. Government Bonds	\$ 254,375,228	14%	\$ 143,432,633	9%		
b. Foreign Government Bonds	0	0%	0	0%		
c. Corporate Bonds	130,375,456	7%	210,020,434	13 %		
d. Common Stock	788,396,981	43%	781,802,090	49%		
e. Foreign Stock	248,894,330	13%	181,858,794	12%		
f. Limited Partnerships	358,436,041	19%	225,536,874	14%		
g. Securities Lending	147,928,681	8%	126,305,081	8%		
h. Total	\$1,927,776,717	104%	\$1,668,955,906	105%		
4. Assets used in plan operations	\$ 43,449	0%	\$ 51,848	0%		
5. Total Assets	\$2,004,897,094	108%	\$1,725,702,752	109%		
6. Liabilities	\$ (156,747,684)	(8%)	\$ (139,858,889)	(9%)		
7. Net Assets for Pension Benefits	\$1,848,779,410	100%	\$1,585,843,863	100%		

Deferred option plan assets are included in the valuation assets. The value of these assets on July 1, 2006, is \$226,423,394 and the value on July 1, 2007, is \$254,237,382.

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## **RECONCILIATION OF ASSETS**

Transactions		June 30, 2007		June 30, 2006
Additions	-		-	
1. Contributions				
a. Contributions from Employers	\$	28,170,588	\$	26,271,256
b. Contributions from Plan Members		16,324,672		15,054,160
c. Insurance Premium Tax		56,406,791		57,849,910
d. Legislative Appropriation		35,000,000		0
e. Total	\$	135,902,051	\$	99,175,326
2. Net Investment Income	\$	253,310,453	\$	148,048,671
3. Total Additions	\$	389,212,504	\$	247,223,997
Deductions	-			
4. Benefit Payments	\$	(125,766,146)	\$	(116,696,082)
5. Transfer to Deferred Option Plan		0		0
6. Administrative Expenses		(1,140,811)		(1,087,873)
7. Adjustment		0		0
8. Total Deductions	\$	(126,906,957)	\$	(117,783,955)
9. Net Increase	\$	262,305,547	\$	129,440,042
10. Net Assets Held in Trust for Pension Benefits (1)				
a. Beginning of Year	\$	1,585,843,863	\$	1,456,403,821
b. End of Year	\$	1,848,149,410	\$	1,585,843,863
11. DROP Assets (included above)				
a. Beginning of Year	\$	226,423,934	\$	210,364,590
b. End of Year	\$	254,237,382	\$	226,423,394

 $<sup>^{(1)}</sup>$  Includes Deferred Option Plan Assets.

SECTION 3.3 Page 23

## **ACTUARIAL VALUE OF ASSETS**

	Schedule of Assets Gains/(Losses)									
Year	Original Amount	Recognized in Prior Years	Recognized This Year	Recognized in Future Years						
2002/2003	\$ (66,005,114)	\$ (52,804,092)	\$ (13,201,022)	\$ 0						
2003/2004	44,342,202	26,605,320	8,868,440	8,868,442						
2004/2005	13,846,248	5,538,500	2,769,250	5,538,498						
2005/2006	33,142,282	6,628,456	6,628,456	19,885,370						
2006/2007	120,982,858	0	24,196,572	96,786,286						
Total	146,308,476	(14,031,816)	29,261,696	131,078,596						

Dev	elopment of Actuarial Value of Assets	
1.	Actuarial Value as of July 1, 2006 (Excluding DROP) (pre-corridor)	\$ 1,320,063,035
2.	Contributions	
	a. Employer (Excluding DROP)	26,008,322
	b. Member	16,324,672
	c. Insurance Tax	56,406,791
	d. Legislative Appropriation	35,000,000
	e. Total	133,739,785
3.	Decreases During the Year	
	a. Benefit Payments (Excluding benefit payments from DROP, including transfer payments to DROP)	\$ 118,619,241
	b. Noninvestment Expenses	1,140,811
	c. Total	\$ 119,760,052
4.	Expected Return at 7.50% on:	
	a. Item 1	\$ 99,004,728
	b. Item 2	5,015,242
	c. Item 3	4,491,002
	d. Total $(a + b - c)$	\$ 99,528,968
5.	Expected Actuarial Value of Assets (Excluding DROP) June 30, 2007 (1 +2 - 3 +4)	\$ 1,433,571,736
6.	Unrecognized Asset Gain/(Loss) as of June 30, 2006	\$ 39,357,434
7.	DROP Assets	\$ 254,237,382
8.	Expected Actuarial Value June 30, 2007 plus previous year's	
	Unrecognized Asset Gain/(Loss) $(5 + 6 + 7)$	\$ 1,727,166,552
9.	Market Value June 30, 2007	\$ 1,848,149,410
10.	2006/2007 Asset Gain/(Loss) (9 - 8)	\$ 120,982,858
11.	Asset Gain/(Loss) to be Recognized as of June 30, 2007	\$ 29,261,696
12.		\$ 1,717,070,814
13.	<u> </u>	
	a. 80% of Market Value (9 x 0.8)	\$ 1,478,519,528
	b. 120% of Market Value (9 x 1.2)	\$ 2,217,779,292
14.	Actuarial Value July 1, 2007 (Including DROP)	
	(12), but no less than (13a), nor greater than (13b)	\$ 1,717,070,814

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## AVERAGE ANNUAL RATES OF INVESTMENT RETURN

Year Ending June	Actuar	ial Value	Marke	et Value
30	Annual	Cumulative	Annual	Cumulative
1991	7.46%	7.46%	7.77%	7.77%
1992	8.35%	7.90%	13.74%	10.71%
1993	9.42%	8.41%	13.70%	11.70%
1994	8.34%	8.39%	1.75%	9.13%
1995	9.56%	8.62%	15.06%	10.29%
1996	11.30%	9.06%	15.22%	11.09%
1997	25.01%	11.21%	18.24%	12.09%
1998	11.34%	11.23%	18.77%	12.90%
1999	10.32%	11.13%	6.59%	12.18%
2000	10.98%	11.11%	11.08%	12.07%
2001	7.14%	10.74%	(7.88%)	10.09%
2002	1.94%	9.98%	(7.20%)	8.54%
2003	3.56%	9.47%	3.73%	8.16%
2004	2.75%	8.98%	13.32%	8.52%
2005	1.75%	8.48%	9.29%	8.57%
2006	5.39%	8.29%	10.23%	8.67%
2007	10.42%	8.41%	15.93%	9.09%

Annual Returns include Deferred Option Plan Assets.

This section presents and describes the basis of the valuation. The census of Members, actuarial basis and provisions of the Plan 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 Plan will continue in existence.

**Section 4.1** Plan Members

**Section 4.2** Actuarial Basis

**Section 4.3** Summary of Plan Provisions

## PLAN MEMBERS

#### A. Active Member Statistics

Statistics for Active	N. I		Average		
Members	Number	Age	Service		Earnings
As of July 1, 2006				-	
Paid					
a. Continuing	3,555	39.6	13.3	\$	55,140
b. New	260	28.5	0.7		31,475
c. Total	3,815	38.9	12.4	\$	53,527
Volunteer					
a. Continuing	6,268	39.0	8.8		N/A
b. New	1,326	30.3	0.7		N/A
c. Total	7,594	37.5	7.4		N/A
Total	11,409	38.0	9.1		N/A
As of July 1, 2007					
Paid					
a. Continuing	3,654	39.7	13.2	\$	57,519
b. New	244	28.5	0.8		26,782
c. Total	3,898	39.0	12.5	\$	55,595
Volunteer					
a. Continuing	6,718	38.7	8.5		N/A
b. New	1,029	30.2	0.9		N/A
c. Total	7,747	37.6	7.5		N/A
Total	11,645	38.0	9.2		N/A

# PLAN MEMBERS (CONTINUED)

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

					Years of	f Service				
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
Under 20	2	0	0	0	0	0	0	0	0	2
20-24	183	6	0	0	0	0	0	0	0	189
25-29	292	174	13	0	0	0	0	0	0	479
30-34	206	312	177	10	0	0	0	0	0	705
35-39	109	154	299	145	4	0	0	0	0	711
40-44	28	87	168	255	171	7	0	0	0	716
45-49	11	29	93	190	232	140	1	0	0	696
50-54	1	5	20	56	96	118	35	0	0	331
55-59	0	0	2	7	18	16	14	5	0	62
60-64	0	0	2	1	1	1	1	1	0	7
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75+	0	0	0	0	0	0	0	0	0	0
Total	832	767	774	664	522	282	51	6	0	3,898

## C. Average Compensation of Paid Active Members

					Years o	f Service				
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
Under 20	23,672	-	-	=	ı	-	-	-	-	23,672
20-24	32,938	39,486	1	1	1	1	1	-	-	33,146
25-29	38,588	43,522	49,907	1	ı	ı	ı	-	-	40,688
30-34	39,064	49,975	57,025	56,981	-	-	-	-	-	48,656
35-39	40,856	50,151	59,614	66,695	53,245	-	-	-	-	56,097
40-44	35,475	52,895	59,558	66,293	70,641	72,956	-	-	-	62,983
45-49	55,526	46,744	56,282	64,835	70,545	68,876	98,524	-	-	65,556
50-54	32,414	54,149	47,633	58,301	62,130	69,907	75,284	-	-	64,559
55-59	-	-	47,718	56,189	64,291	70,194	78,055	74,107	-	68,265
60-64	-	-	47,380	23,402	49,394	93,473	72,871	63,670	-	56,796
65-69	-	-	-	-	-	-	-	-	-	
70-74	_	-	-	-	-	-	-	-	-	
75+	-	-	-	-	1	-	-	-	-	
Total	37,836	48,701	58,074	64,978	68,640	69,571	76,453			55,595

# PLAN MEMBERS (CONTINUED)

## **D.** Count of Volunteer Active Members

					Years of	f Service				
Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
Under 20	142	0	0	0	0	0	0	0	0	142
20-24	772	90	0	0	2	0	0	0	0	864
25-29	733	319	28	0	0	0	0	0	0	1080
30-34	633	333	214	12	0	0	0	0	0	1192
35-39	507	353	261	130	9	0	0	0	0	1260
40-44	387	322	279	199	48	4	0	0	0	1239
45-49	172	242	292	237	75	20	3	0	0	1041
50-54	19	108	186	189	73	16	5	1	0	597
55-59	5	5	60	88	39	12	6	2	1	218
60-64	2	2	16	34	20	1	2	1	0	78
65-69	0	1	5	11	6	3	0	1	0	27
70-74	0	0	4	3	0	0	0	0	0	7
75+	0	0	2	0	0	0	0	0	0	2
Total	3372	1775	1347	903	272	56	16	5	1	7,747

# PLAN MEMBERS (CONTINUED)

## **E.** Inactive Member Statistics

Paid	Paid									
Inactive Members as of July 1, 2007	Number	Amount of Annual Benefit								
Members Receiving Benefits										
a. Retired	1,933	\$ 50,534,160								
b. Beneficiaries	691	17,210,652								
c. Disabled	1,243	33,261,120								
d. Deferred Option	111	3,820,764								
Total	3,978	\$ 104,826,696								
Members with Deferred Benefits	-									
a. Terminated Vested	28	\$ 334,152								
Total	28	\$ 334,152								

Volunteer								
Inactive Members as of July 1, 2007	Number	A	Amount of nnual Benefit					
Members Receiving Benefits								
a. Retired	3,739	\$	6,239,580					
b. Beneficiaries	1,073		1,777,920					
c. Disabled	342		468,336					
d. Deferred Option	53		97,056					
Total	5,207	\$	8,582,892					
Members with Deferred Benefits	Members with Deferred Benefits							
a. Terminated Vested	885	\$	1,117,068					
Total	885	\$	1,117,068					

## PLAN MEMBERS (CONTINUED)

F. Members in Pay Status - Annual Benefits

				Paid				
Attained Age	Retir	ed Members	Bei	neficiaries		Disabled Iembers	Cur	rent Payment Total
Age	No.	Benefit	No.	Benefit	No.	Benefit	No.	Benefit
Under 50	146	\$ 3,179,112	43	\$1,028,712	148	\$ 3,004,356	337	\$ 7,212,180
50	46	1,086,516	3	68,160	24	588,804	73	1,743,480
51	49	1,381,464	6	140,928	32	833,844	87	2,356,236
52	48	1,195,932	9	243,000	40	1,018,740	97	2,457,672
53	63	1,714,200	10	236,940	31	751,956	104	2,703,096
54	60	1,584,144	9	187,764	42	1,229,340	111	3,001,248
55	78	2,107,236	8	212,172	54	1,378,788	140	3,698,196
56	87	2,407,884	6	130,452	46	1,266,156	139	3,804,492
57	72	2,039,880	12	299,868	54	1,546,404	138	3,886,152
58	55	1,388,424	9	211,524	71	1,890,372	135	3,490,320
59	65	1,721,304	13	275,880	38	1,072,704	116	3,069,888
60	78	2,088,564	17	401,712	67	1,887,132	162	4,377,408
61	55	1,262,868	13	301,272	60	1,616,952	128	3,181,092
62	58	1,523,772	21	482,364	45	1,089,348	124	3,095,484
63	64	1,651,260	16	344,484	45	1,302,888	125	3,298,632
64	83	2,084,028	23	480,924	58	1,567,596	164	4,132,548
65	64	1,712,352	21	479,472	56	1,556,472	141	3,748,296
66	68	1,771,848	19	461,748	37	1,090,224	124	3,323,820
67	65	1,586,976	12	282,336	45	1,216,152	122	3,085,464
68	64	1,689,456	16	403,980	38	1,046,532	118	3,139,968
69	51	1,309,116	23	575,196	31	800,412	105	2,684,724
70	44	1,108,980	13	340,248	25	713,676	82	2,162,904
71	44	1,147,524	24	562,044	20	510,984	88	2,220,552
72	49	1,373,616	19	566,016	18	470,544	86	2,410,176
73	37	994,392	14	329,388	16	461,100	67	1,784,880
74	33	878,340	15	378,804	10	316,668	58	1,573,812
75	30	802,836	25	609,552	11	335,304	66	1,747,692
76	32	845,436	20	538,752	11	409,896	63	1,794,084
77	38	1,164,576	20	558,468	13	441,585	71	2,164,629
78	32	921,696	30	830,340	13	431,580	75	2,183,616
79	33	870,516	20	532,476	9	295,044	62	1,698,036
80	28	807,480	20	452,652	6	155,904	54	1,416,036
81	31	867,324	14	357,228	5	188,496	50	1,413,048
82	20	522,624	13	362,676	4	132,216	37	1,017,516
83	16	533,592	23	697,992	4	108,432	43	1,340,016
84	14	345,240	14	431,820	6	221,496	34	998,556
85	9	199,512	24	682,212	1	32,004	34	913,728
86	5	188,388	16	379,572	7	225,600	28	793,560
87	5	122,844	18	444,276	1	17,796	24	584,916
88	4	109,212	5	108,276		, -	9	217,488
89	1	31,968	5	122,904			6	154,872
90	3	73,920	4	87,888	1	30,828	8	192,630
Over 90	6	137,808	26	588,180	1	33,300	33	759,288
Total	1,933	\$50,534,160	691	\$17,210,652	1,243	\$33,261,120	3,867	\$ 101,005,932

## PLAN MEMBERS (CONTINUED)

## F. Members in Pay Status - Annual Benefits (continued)

Volunteer									
Attained	Retired Members		Beneficiaries		Disabled Members		Current Payment Total		
Age	No.	Benefit	No.	Benefit	No.	Benefit	No.	Benefit	
Under 50	478	\$ 686,256	58	\$ 67,260	50	\$ 60,168	586	\$ 813,684	
50	103	156,708	11	13,908	6	7,776	120	178,392	
51	92	145,140	8	11,592	7	7,860	107	164,592	
52	98	152,736	4	6,132	8	10,284	110	169,152	
53	105	170,580	16	22,812	6	7,296	127	200,688	
54	103	168,600	4	5,880	16	20,640	123	195,120	
55	101	157,584	14	19,884	13	19,284	128	196,752	
56	125	201,324	7	12,972	10	10,020	142	224,316	
57	101	163,704	15	23,676	11	13,128	127	200,508	
58	122	198,828	15	25,128	5	8,472	142	232,428	
59	124	222,828	19	30,348	17	23,520	160	276,696	
60	146	254,352	18	30,012	13	19,968	177	304,332	
61	114	197,292	10	16,848	16	17,016	140	231,156	
62	130	224,172	23	34,716	21	31,572	174	290,460	
63	129	213,840	11	17,820	15	21,924	155	253,584	
64	120	208,524	20	31,128	12	16,332	152	255,984	
65	114	197,244	16	27,756	5	7,260	135	232,260	
66	110	192,864	16	26,964	7	8,640	133	228,468	
67	92	154,176	16	27,684	14	19,116	122	200,976	
68	104	176,700	28	46,788	9	14,448	141	237,936	
69	98	166,188	22	36,480	6	7,872	126	210,540	
70	86	150,756	31	55,116	7	11,592	124	217,464	
71	76	130,776	30	52,056	11	15,720	117	198,552	
72	89	154,920	21	35,376	7	9,588	117	199,884	
73	78	139,368	24	40,656	10	15,912	112	195,936	
74	61	110,184	30	54,588	10	15,204	101	179,976	
75	88	159,444	27	45,828	1	1,296	116	206,568	
76	65	119,064	24	42,972			89	162,036	
77	62	111,624	39	64,824	5	8,040	106	184,488	
78	60	105,768	35	60,588	3	5,280	98	171,636	
79	52	93,108	47	79,944	1	1,380	100	174,432	
80	61	107,100	38	62,400	1	1,728	100	171,228	
81	47	83,544	43	74,364	1	1,728	91	159,636	
82	27	48,240	38	67,248	2	2,856	67	118,344	
83	27	48,264	36	63,804	3	4,836	66	116,904	
84	13	23,532	25	44,436	5	7,524	43	75,492	
85	31	56,400	31	50,976	3	4,932	65	112,308	
86	26	45,816	32	56,352	1	1,728	59	103,896	
87	17	29,952	31	54,012	1	1,560	49	85,524	
88	16	27,648	30	51,408	1	1,728	47	80,784	
89	11	19,008	21	35,160	1	1,728	33	55,896	
90	9	15,900	16	26,796	1	1,380	26	44,076	
Over 90	28	49,524	73	123,228		7	101	172,752	
Total	3,739	\$ 6,239,580	1,073	\$1,777,920	342	\$ 468,336	5,154	\$ 8,485,836	

# PLAN MEMBERS (CONTINUED)

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

Paid							
Attained Ass	Termina	ted Vested Members	Deferred Option Plan Members				
Attained Age	No.			Benefit			
Under 40	7	\$ 77,172		\$			
40	1	17,292					
41	1	19,092	1	36,396			
42	1	23,256	1	39,252			
43	1	648	2	70,452			
44	4	63,948	2	69,132			
45			3	86,988			
46	3	26,772	6	225,000			
47	5	67,200	7	254,544			
48	1	1,092	9	299,844			
49			7	196,056			
50	1	8,448	10	313,320			
51	1	21,228	10	310,776			
52	2	8,004	8	300,048			
53			9	312,192			
54			12	453,396			
55			10	409,980			
56			6	196,404			
57			1	23,484			
58			1	44,796			
59			2	71,244			
60			2	84,168			
61							
62							
63			1	21,564			
64							
65							
66			1	1,728			
67							
68							
69							
70							
71 and over							
Total	28	\$ 334,152	111	\$ 3,820,764			

## PLAN MEMBERS (CONTINUED)

# **G.** Terminated Vested and Deferred Option Plan Members - Annual Benefits (continued)

Volunteer							
Attained Age	Terminat	ed Vested Members	Deferred Option Plan Members				
Attained Age	No.	Benefit	No.	Benefit			
Under 40	105	\$ 111,264		\$			
40	23	25,788	2	3,456			
41	17	19,716					
42	34	43,428					
43	30	38,364	5	9,084			
44	31	37,644	1	1,728			
45	25	30,660	1	1,728			
46	32	40,320	2	3,456			
47	32	40,716	1	1,992			
48	26	32,376	3	5,184			
49	36	43,176	1	1,728			
50	54	71,052	4	6,912			
51	33	42,708	1	1,728			
52	25	29,868	7	13,356			
53	35	43,644	3	5,280			
54	34	46,020	6	11,424			
55	21	27,996	1	1,728			
56	24	31,056	5	9,216			
57	29	38,388	5	9,516			
58	19	25,536	1	1,908			
59	18	23,868					
60	16	20,820	1	1,824			
61	12	14,988					
62	14	18,924	1	1,908			
63	17	23,496	1	1,728			
64	13	16,800	1	2,172			
65	11	15,180					
66	14	19,452					
67	13	16,440					
68	9	13,056					
69	11	14,856					
70 and over	72	99,468					
Total	885	\$ 1,117,068	53	\$ 97,056			

## PLAN MEMBERS

#### H. Member Data Reconciliation

	Paid Members							
	Active M	Iembers						
	Regular	Deferred Option Plan	Deferred Vested Members	Retired Members	Disabled Members	Bene- ficiaries	Total	
As of July 1, 2006	3,815	160	42	1,864	1,239	640	7,760	
Deferred Option Plan Retirees	(40)	40	-	-	-	-	-	
Service Retirements	(39)	(88)	(17)	144	-	-	-	
Disability Retirements	(25)	-	-	-	25	-	-	
Deaths Without Beneficiaries	-	-	-	(1)	-	(28)	(29)	
Deaths With Beneficiaries	(5)	(1)	-	(25)	(12)	43	-	
Nonvested Terminations	(39)	-	-	-	-	-	(39)	
Vested Terminations	(7)	-	7	-	-	-	-	
Rehires	1	-	(1)	-	-	-	-	
Cashouts of Member Contributions	-	-	ı	ı	1	-	-	
Expiration of Benefits	-	-	1	-	-	-	-	
Data Corrections	-	-	(2)	(49)	(9)	36	(24)	
Transfers to Volunteer	(6)	-	(1)	ı	-	-	(7)	
Transfers from Volunteer	53	-	ı	ı	-	-	53	
Net Change	(107)	(49)	(14)	69	4	51	(46)	
New Entrants During the Year	190	-	-	-	-	-	190	
Net Change	83	(49)	(14)	69	4	51	144	
As of July 1, 2007	3,898	111	28	1,933	1,243	691	7,904	

# PLAN MEMBERS (CONTINUED)

# H. Member Data Reconciliation (continued)

	Volunteer Members						
	Active Members		Inactive Members				
	Regular	Deferred Option Plan	Deferred Vested Members	Retired Members	Disabled Members	Bene- ficiaries	Total
As of July 1, 2006	7,594	52	1,138	3,359	335	1,072	13,550
Deferred Option Plan Retirees	(9)	9	1	1	1	-	1
Service Retirements	(156)	(8)	(41)	205	-	-	-
Disability Retirements	(15)	1	ı	1	15	-	-
Deaths Without Beneficiaries	-	1	ı	(1)	(1)	(62)	(64)
Deaths With Beneficiaries	-	1	(1)	(45)	(8)	54	-
Nonvested Terminations	(582)		1	1	1	-	(582)
Vested Terminations	(60)	-	60	-	-	-	-
Rehires	12	-	(12)	1	-	-	-
Cashouts of Member Contributions	-	-	-	-	-	-	-
Expiration of Benefits	-	-	-	-	-	-	-
Data Corrections	(1)	-	(259)	221	1	9	(29)
Transfers to Paid	(53)	-	-	-	-	-	(53)
Transfers from Paid	6	-	-	-	-	-	6
Net Change	(857)	1	(253)	380	7	1	(721)
New Entrants During the Year	1,010	-	-	-	-	-	1,010
Net Change	153	1	(253)	380	7	1	289
As of July 1, 2007	7,747	53	885	3,739	342	1,073	13,839

#### **ACTUARIAL BASIS**

#### A. Entry Age Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the Individual Entry Age method of funding.

Sometimes called "funding method," this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of Plan Benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the plan 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 plan 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 plan.

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 plan 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.

#### **Actuarial Present Value**

The current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The actuarial present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

#### Present Value of Accrued Plan Benefit (SFAS No. 35)

The present value of accrued Plan Benefits represents the actuarial present value of benefits which are accrued based on service and salary information as of the valuation date.

### **ACTUARIAL BASIS (CONTINUED)**

#### B. Asset Valuation Method

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 Plan valuation rate plus net cash flow adjusted for interest (at the same rate) to the end of the previous plan year;
- 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 were included in the actuarial value of assets. Deferred Option Plan assets are not subject to this smoothing methodology; they are included at market value.

#### 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 were considered earnings for the year ending June 30, 2007, increased by the salary scale to develop expected earnings for the current valuation year. Earnings were annualized for Members with less than twelve months of reported earnings.

In computing accrued benefits, average earnings were determined using actual pay history provided for valuation purposes.

### **ACTUARIAL BASIS (CONTINUED)**

#### C. Valuation Procedures (continued)

The impact from the dollar limitation required by the Internal Revenue Code Section 415 for governmental plans was not considered in this valuation and was determined not to be significant on a projected basis.

The compensation limitation under IRC Section 401(a)(17) was not considered in this valuation. On a projected basis, the impact of this limitation is insignificant.

The census data provided by the Retirement System was screened for completeness and validity, and discrepancies were resolved. No significant assumptions for incomplete data were necessary.

The estimated employee, employer and state contributions have been determined based on total compensation.

When the data is edited, members reported as non-vested terminations are verified to have less than ten years of service at date of termination. Members with more than ten years of service are included in the valuation with estimated benefits. Members who terminated prior to the current year with over 10 years of service were added to the valuation with estimated benefits.

The Deferred Option Plan members are valued in a manner similar to retired Members. The main difference is the continuation of 50% of the employer contributions to the Firefighters Pension and Retirement System based on the compensation rate of the Deferred Option Plan members. Beginning with the July 1, 2006, valuation, 32% of active and future Deferred Option Plan members are assumed to become disabled at benefit commencement.

The normal cost is adjusted to reflect the expected cost of the guaranteed minimum interest rate on the Deferred Option Plan account balances. The adjustment is 3.28% of the DROP account balances as of the valuation date. This load was determined through a simplified stochastic modeling process in a study conducted for the Plan during 2000. This amount will be carried forward as a reserve, if applicable. This reserve will effect the actuarial accrued liability for the first time on July 1, 2001.

The contribution requirements are based on total annual compensation rather than total covered compensation. This is a better reflection of the overall expectations for the Plan.

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.

## **ACTUARIAL BASIS (CONTINUED)**

## **D.** Actuarial Assumptions

### **Paid Firefighters**

## **Economic Assumptions**

1. Investment Return 7.50%, net of investment expenses, per annum,

compound annually.

2. Earnings Progression Sample rates below:

Years of	Inflation	Merit	Increase
Service	<b>%</b>	<b>%</b>	%
0	3.00	7.00	10.00
1	3.00	6.00	9.00
2	3.00	5.40	8.40
3	3.00	5.20	8.20
4	3.00	5.00	8.00
5	3.00	4.80	7.80
10	3.00	3.55	6.55
15	3.00	1.65	4.65
20	3.00	1.20	4.20
25+	3.00	1.00	4.00

3. Reserve for Guaranteed Interest Rate for DROP Account Balances

3.28% of DROP account balances as of the valuation date is loaded to normal cost.

## **ACTUARIAL BASIS (CONTINUED)**

### **D.** Actuarial Assumptions (continued)

### **Paid Firefighters (continued)**

### **Demographic Assumptions**

#### 1. Retirement Rates

#### Sample rates below:

Attained Service	Annual Rates of Retirement Per 100 Eligible Members
20	20
21	18
22	15
23	14
24	14
25	17
26-34	25
35+	100

#### 2. Mortality Rates

(a) Active employees (pre-retirement)

1994 Group Annuity Mortality Table.

(b) Active employees (post-retirement) and nondisabled pensioners

Males - 1994 Group Annuity Mortality Table for males set forward one year.

Females - 1994 Group Annuity Mortality Table for females set back two years.

(c) Disabled pensioners

Males - 1994 Group Annuity Mortality Table for males set forward five years.

Females - 1994 Group Annuity Mortality Table for females set forward two years.

# **ACTUARIAL BASIS (CONTINUED)**

## **D.** Actuarial Assumptions (continued)

**Paid Firefighters (continued)** 

## **Demographic Assumptions (continued)**

3. Disability Rates -

Graduated rates. See table below:

Age Range	Rate
20-24	.0005
25-29	.0010
30-34	.0030
35-39	.0040
40-44	.0045
45-49	.0105
50-54	.0280
55-59	.0490
60-64	.0900

33% of disabilities are assumed to be Non-Duty related and 67% are assumed to be Duty related.

## **ACTUARIAL BASIS (CONTINUED)**

## **D.** Actuarial Assumptions (continued)

## **Paid Firefighters (continued)**

### **Demographic Assumptions (continued)**

4. Disability from DROP 32% of DROP Members are assumed to become disabled

during active DROP membership.

5. Withdrawal Rates Graduated rates. See table below:

Attained Service	Rate
0	.0350
1	.0350
2	.0300
3	.0250
4	.0200
5-9	.0100
10-14	.0080
15+	.0040

## 6. Marital Status

(a) Percentage married Males: 85%; Females: 85%

(b) Age difference Males are assumed to be three years older than females.

### **ACTUARIAL BASIS (CONTINUED)**

#### D. Actuarial Assumptions (continued)

#### **Paid Firefighters (continued)**

#### **Other Assumptions**

 Assumed Age of Commencement for Deferred Benefits
 Later of Age 50 and 20 Years of Service.

2. Actuarial Value of Assets

An expected actuarial value is determined equal to the prior year's Actuarial Value of Assets plus cash flow (excluding realized and unrealized gains and losses) for the year ended on the valuation date and assuming 7.50% interest return. Twenty percent (20%) of any (gain)/loss as measured by the difference between the expected actuarial value and the market value at the valuation date is added to the expected actuarial value. The (gain)/loss is amortized over five years. The result is constrained to a value of 80% to 120% of the market value at the valuation date. Deferred Option Plan assets are included in the actuarial value of assets. Deferred Option Plan assets are included at market value and are not subject to smoothing.

3. Provision for Expenses

Administrative Expenses, as budgeted by the Oklahoma Firefighters Pension and Retirement System.

4. Cost-of-Living Allowance Assumption for Retirees with 20 years of service as of May 26, 1983 Half of the dollar amount of a 3% assumed increase in base pay.

5. Cost-of-Living Increase Assumption

Members are assumed to receive a 2% annual increase in benefits during each year of retirement, except for those in Item 4 above.

## **ACTUARIAL BASIS (CONTINUED)**

entry into the DROP. A 2.50% load is added to the liability of anticipated member joining DROP

retroactively.

### D. Actuarial Assumptions (continued)

## **Volunteer Firefighters**

# **Economic Assumptions**

1. Investment Return 7.50%, net of investment expenses, per annum,

compound annually.

2. Benefit level increases No increases.

### **Demographic Assumptions**

1. Retirement Rates Sample rates below:

Attained Service	Annual Rates of Retirement Per 100 Eligible Members
20	43
21	24
22	18
23	14
24	16
25	18
26-34	20
35+	100

## **ACTUARIAL BASIS (CONTINUED)**

### 2. Mortality Rates

(a) Active employees (pre-retirement)

1994 Group Annuity Mortality Table.

(b) Active employees (post-retirement) and nondisabled pensioners

Males - 1994 Group Annuity Mortality Table for males

set forward one year.

Females - 1994 Group Annuity Mortality Table for

females set back two years.

(c) Disabled pensioners Males - 1994 Group Annuity Mortality Table for males

set forward five years.

Females - 1994 Group Annuity Mortality Table for

females set forward two years.

# **ACTUARIAL BASIS (CONTINUED)**

## **D.** Actuarial Assumptions (continued)

**Volunteer Firefighters (continued)** 

## **Demographic Assumptions (continued)**

3. Disability Rates -

Graduated rates. See table below:

Age Range	Rate
20-24	.0005
25-29	.0005
30-34	.0010
35-39	.0010
40-44	.0020
45-49	.0020
50-54	.0080
55-59	.0140
60-64	.0165

67% of disabilities are assumed to be Non-Duty related and 33% are assumed to be Duty related.

## ACTUARIAL BASIS (CONTINUED)

## **D.** Actuarial Assumptions (continued)

**Volunteer Firefighters (continued)** 

## **Demographic Assumptions (continued)**

4. Withdrawal Rates Graduated rates. See table below:

Attained Service	Rate
0	.1800
1	.1600
2	.1400
3	.1300
4	.1100
5-9	.0075
10-14	.0500
15+	.0300

#### 5. Marital Status

(a) Percentage married Males: 85%; Females: 85%

(b) Age difference Males are assumed to be three years older than females.

### **ACTUARIAL BASIS (CONTINUED)**

#### **D.** Actuarial Assumptions (continued)

#### **Volunteer Firefighters (continued)**

#### **Other Assumptions**

 Assumed Age of Commencement for Deferred Benefits
 Later of Age 50 and 20 Years of Service.

2. Actuarial Value of Assets

An expected actuarial value is determined equal to the prior year's Actuarial Value of Assets plus cash flow (excluding realized and unrealized gains and losses) for the year ended on the valuation date and assuming 7.50% interest return. Twenty percent (20%) of any (gain)/loss as measured by the difference between the expected actuarial value and the market value at the valuation date is added to the expected actuarial value plus unrecognized (gain)/loss. The (gain)/loss is amortized over five years. The result is constrained to a value of 80% to 120% of the market value at the valuation date. Deferred Option Plan assets are included in the actuarial value of assets. Deferred Option Plan assets are included at market value and are not subject to smoothing.

3. Provision for Expenses

Administrative Expenses, as budgeted by the Oklahoma Firefighters Pension and Retirement System.

4. Cost-of-Living Increase Assumption

Members are assumed to receive a 2% annual increase in benefits during each year of retirement.

5. Deferred Option Plan

The retirement rates reflect both regular retirement and entry into the DROP.

#### SUMMARY OF PLAN PROVISIONS

**Effective Date and Plan Year:** The plan became effective May 14, 1908 and is regularly

amended during legislative session. The plan year is July

1 to June 30.

Administration: The plan is administered the Oklahoma Firefighters

Pension and Retirement System Board consisting of 13 members. The Board acts as the fiduciary for investment

and administration of the Plan.

Members Included: All paid and volunteer firefighters of participating

municipalities and fire protection districts.

Member Contributions: Paid firefighters contribute 8% of gross salary. No

employee contributions are required of volunteer

firefighters.

**Employer Contributions:** Participating municipalities and fire protection districts

contribute 13% of gross salary for each paid firefighter and \$60.00 per year for each volunteer firefighter. Municipalities with revenues under \$25,000 make no

contribution for volunteers.

State Contributions: Insurance Premium Tax allocation. For the fiscal year

beginning July 1, 2006 and each fiscal year thereafter, the fund is scheduled to receive 34% of these collected taxes.

Service Considered: The period of membership in the Pension System or a

predecessor municipal system. Service for members of a fire protection district does not accrue before

July 1, 1982.

Military service is credited for one term (unless the member is required by law to re-enlist) if the city continues to make contributions on the member's behalf as though he were in actual service, provided that he returns to actual service within the fire department within ninety (90) days of honorable discharge. War veterans shall receive up to five years of credit for active military

service.

### SUMMARY OF PLAN PROVISIONS (CONTINUED)

A member who has withdrawn his contributions and later returns to membership may repay the amount withdrawn plus interest as determined by the Board to reinstate participating service which was canceled by his withdrawal.

A member may receive credit for up to five years of credited service accumulated by the member while a member of the Oklahoma Police Pension and Retirement System, the Oklahoma Law Enforcement Retirement System, the Teachers' Retirement System of Oklahoma, or the Oklahoma Public Employees Retirement System, if the member is not receiving or eligible to receive retirement credit or benefits from said service in any other public retirement system. The cost of buy-back service is determined as the actuarial present value of the benefits attributable to this service, effective January 1, 1991.

**Considered Compensation:** 

The member's gross salary excluding overtime, payment for accumulated sick or annual leave upon termination, any uniform allowances or reimbursement of out-orpocket expenses, but excluding any salary reductions pursuant to Section 457 or Section 414(b) of the Internal Revenue Code. Only salary on which the required contributions have been made may be considered.

**Final Average Compensation:** 

The monthly average of the highest thirty (30) consecutive months of the last sixty (60) months of participating service.

**Normal Retirement Date:** 

The first day following the day the member completes twenty (20) years of service, regardless of age.

**Normal Retirement Benefit:** 

Paid firefighters

A monthly benefit equal to 50% of final average compensation.

Volunteer firefighters

\$144.80 per month, effective July 1, 2006.

### SUMMARY OF PLAN PROVISIONS (CONTINUED)

**Late Retirement Benefit:** Benefits continue to accrue for service up to thirty (30)

years at the following rates:

Paid firefighters 2.5% of final average compensation per year of service.

Volunteer firefighters \$7.24 per month per year of service, effective July 1,

2006.

**Early Retirement Benefit:** None.

**Disability or Death Benefit:** All firefighters are eligible for immediate disability or

death benefits. Disabilities due to heart disease, injury to the respiratory system, or cancer are considered in the line of duty. If there is no eligible surviving spouse, the death benefit is divided between the children under age 18 or age 22 if children are enrolled as full-time students.

Paid firefighters 2.5% of final average monthly compensation per year of

service, with a minimum service credit of 20 years and maximum of 30 years. For disabilities not in the line of duty, final average monthly compensation is based on 60

months instead of 30 months.

Volunteer firefighters \$7.24 per month per year of service, with a maximum of

30 years. For disabilities or deaths in the line of duty,

there is a minimum service credit of 20 years.

### SUMMARY OF PLAN PROVISIONS (CONTINUED)

**Vested Severance Benefit:** 

A member who terminates after ten years of credited service is eligible for a vested severance benefit determined by the normal retirement formula, based on service and salary history to date of termination.

The benefit is payable at age 50 or when the member would have completed twenty years of service, whichever is later, provided the member's contribution accumulation is not withdrawn.

Members terminating with less than ten years of credited service receive a refund of their contribution accumulation without interest.

**Lump Sum Death Benefit:** 

Upon the death of an active or retired member on or after July 1, 1999, a \$5,000 lump sum death benefit will be paid to the member's beneficiary, or estate if no beneficiary. The \$5,000 death benefit does not apply to members electing the vested benefit.

Form of Payments:

The normal form of benefit is a Joint and 100% Survivor Annuity if the firefighter was married 30 months prior to death.

**Post-Retirement Adjustments:** 

Firefighters with 20 years of service as of May 26, 1983, are entitled to post-retirement adjustments equal to one-half the increase or decrease for top step firefighters. Pensions will not be adjusted below the level at which the firefighter retired.

**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 (DROP). Participation in the DROP 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 DROP. The monthly retirement benefits that the employee is eligible to receive are paid into the DROP account.

## **SUMMARY OF PLAN PROVISIONS (CONTINUED)**

A member is also allowed to retroactively elect to join the DROP 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 DROP are credited to the member's DROP account with interest.

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

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

The DROP account is guaranteed a minimum of the valuation interest rate for investment return, or 2% less than the fund rate of return, if greater.

### ADDENDUM TO JULY 1, 2007 ACTUARIAL VALUATION

#### **CERTIFICATION**

We have prepared a supplemental actuarial valuation of the Oklahoma Firefighters Pension and Retirement System as of July 1, 2007, for the plan year ending June 30, 2007 as required by State statutes. 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 Firefighters 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 Commission, based on the following prescribed assumptions (11 O.S. 2001, Section 49-100.9, Section H):

Interest rate: 7.50%

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 of 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.

(Signed) RICHARD A. MACKESEY	
	October 15, 2007
Richard A. Mackesey, F.S.A.	
(Signed) DAVID KENT	
David Kent F.S.A	October 15, 2007

David Kent, F.S.A.

This supplemental report has been prepared by Buck Consultants, LLC for the Oklahoma Firefighters Retirement Board to present the results of a valuation of the Oklahoma Firefighters Pension and Retirement System as of July 1, 2007, based on the prescribed assumptions under 11 O.S. 2001, Section 49-100.9, Section H of current State Statutes and regulations issued thereunder.

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

	rial Valuation f July 1, 2007
Summary of Costs	
Required State Contribution for Current Year under Prescribed	
Assumptions (1)	\$ 109,436,758
Actual State Contribution Received in Prior Year	\$ 91,406,791

Funded Status		
Actuarial Accrued Liability	\$ 2,721,904,248	
Actuarial Value of Assets	\$ 1,717,070,814	
Unfunded Actuarial Accrued Liability	\$ 1,004,833,434	

Market Value of Assets and Additional Liabilities		
Market Value of Assets	\$ 1,848,149,410	
Present Value of Projected System Benefits	\$ 3,292,508,841	

<sup>(1)</sup> For the fiscal year beginning July 1, 2006 and each fiscal year thereafter, the System is scheduled to receive 34% of collected state-wide insurance premium taxes. In addition, for the fiscal year beginning July 1, 2006, the System is expected to receive a one-time allocation of \$35 million.

	Summary of Contribution Requirements		Actuarial Valuation as of		
			July 1, 2007		
			Amount	% of Covered Comp.	
1.	Annual Compensation				
	a. Members included in Valuation				
	(Covered Compensation)	\$	216,710,606	N/A	
	b. Deferred Option Plan Members		7,703,734	N/A	
	c. Total Compensation	\$	224,414,340	N/A	
2.	Total Normal Cost Mid-year	\$	72,538,630	33.5%	
3.	Unfunded Actuarial Accrued Liability	\$ 1	,004,833,434	N/A	
4.	Amortization of Unfunded Actuarial Accrued Liability over 30 years from				
	July 1, 2007 at mid-year	\$	82,058,910	37.9%	
5.	Budgeted Expenses	\$	1,342,598	0.6%	
	Total Required Contribution under		,- ,		
	Prescribed Assumptions				
	(2+4+5)	\$	155,940,138	72.0%	
7.	Estimated Member Contribution	\$	17,336,848	8.0%	
8.	Estimated Employer Contribution				
	a. Active Members - Paid	\$	28,172,379	13.0%	
	b. Deferred Option Plan Members –				
	Paid	\$	500,743	$6.5\%^{(1)}$	
	c. Active Members - Volunteer	\$	464,820	N/A	
	d. Deferred Option Plan Members -				
	Volunteer	\$	1,590	N/A	
	e. Total	\$	29,139,532	13.0%(2)	
9.	Required State Contribution to amortize Unfunded Actuarial Accrued Liability over 30 years from July 1, 2007.				
	(6 - 7 - 8e)	\$	109,463,758	50.5%	

<sup>(1)</sup> Percentage of Deferred Option Plan Compensation. (2) Percentage of Total Compensation.

## UNFUNDED ACTUARIAL ACCRUED LIABILITY

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

	Total Plan
	July 1, 2007
1. Actuarial Present Value of Benefits	
a. Active Members	\$ 1,551,210,367
b. Members with Deferred Benefits	17,192,253
c. Members Receiving Benefits who are eligible for Automatic	
COLA	300,517,402
d. Members Receiving Benefits who are not eligible for Automatic	
COLA	1,083,571,067
e. Deferred Option Plan Members (1)	317,089,292
f. COLA Reserve	22,928,460
g. Total	\$ 3,292,508,841
2. Actuarial Present Value of Future Normal Costs	\$ 570,604,593
3. Total Actuarial Accrued Liability (1g – 2)	\$ 2,721,904,248
4. Actuarial Value of Assets	\$ 1,717,070,814
5. Unfunded Actuarial Accrued Liability	
(3 - 4, not less than \$0)	\$ 1,004,833,434

Effective July 1, 1997, Deferred Option Account balances are included as liability and assets. The total Account Balance on July 1, 2007, is \$254,237,382 and the balance on July 1, 2006, is \$226,423,394.

# LIABILITY DETAIL

Total	
Present Value of Benefits	\$ 3,292,508,841
Present Value of Future Normal Cost	\$ 570,604,593
Accrued Liability	\$ 2,721,904,248
Normal Cost Mid-year	\$ 72,538,630

Active		
a. Retirement	\$	949,442,816
b. Withdrawal		7,762,695
c. Disability		8,481,823
d. Death		14,918,440
e. Total	\$	980,605,774
Inactive		
1. Members Eligible for Automatic COLA		
a. Disabled Members	\$	69,392,079
b. Beneficiaries		93,795,216
c. Retired Members		137,330,107
d. Total	\$	300,517,402
2. Members Not Eligible for Automatic COLA		
a. Terminated Vested Members	\$	17,192,253
b. Disabled Members		375,417,233
c. Beneficiaries		82,708,027
d. Retired Members		625,445,807
e. Deferred Option Plan Members - Annuity		62,851,910
f. Deferred Option Plan Members - Account Balances		254,237,382
g. Total		1,417,852,612
3. Total Inactive $(1d + 2g)$	\$	1,718,370,014
4. COLA Reserve	\$	22,928,460
Accrued Liability (Active + Inactive + COLA Reserve)	\$	2,721,904,248

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 Section 4.1 of the valuation report. The valuation is based on the premise that the Plan will continue in existence.

#### **Paid Firefighters**

### **Economic Assumptions**

1. Investment Return (Prescribed)

7.50%, net of investment expenses, per annum, compound annually

2. Earnings Progression

Sample rates below:

Years of	Inflation	Merit	Increase
Service	%	<b>%</b>	<b>%</b>
0	3.00	7.00	10.00
1	3.00	6.00	9.00
2	3.00	5.40	8.40
3	3.00	5.20	8.20
4	3.00	5.00	8.00
5	3.00	4.80	7.80
10	3.00	3.55	6.55
15	3.00	1.65	4.65
20	3.00	1.20	4.20
25+	3.00	1.00	4.00

- 3. Reserve for Guaranteed Interest Rate for DROP Account Balances
- 3.28% of DROP account balances as of the valuation date is loaded to normal cost.

## **Paid Firefighters (continued)**

### **Demographic Assumptions**

1. Retirement Rates

Sample rates below:

Attained Service	Annual Rates of Retirement Per 100 Eligible Members
20	20
21	18
22	15
23	14
24	14
25	17
26-34	25
35+	100

### 2. Mortality Rates

(a) Active employees (pre-retirement) (Prescribed)

RP-2000 Generational Mortality Table - Employees

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

(c) Disabled pensioners (Prescribed)

RP-2000 Generational Disabled Mortality Table

## **Paid Firefighters (continued)**

## **Demographic Assumptions (continued)**

3. Disability Rates -

Graduated rates. See table below:

Age Range	Rate
20-24	.0005
25-29	.0010
30-34	.0030
35-39	.0040
40-44	.0045
45-49	.0105
50-54	.0280
55-59	.0490
60-64	.0900

33% of disabilities are assumed to be Non-Duty related and 67% are assumed to be Duty related.

## **Paid Firefighters (continued)**

## **Demographic Assumptions (continued)**

4. Disability from DROP 32% of DROP Members are assumed to become disabled

during active DROP membership.

5. Withdrawal Rates Graduated rates. See table below:

Attained Service	Rate
0	.0350
1	.0350
2	.0300
3	.0250
4	.0200
5-9	.0100
10-14	.0080
15+	.0040

#### 6. Marital Status

(a) Percentage married Males: 85%; Females: 85%

(b) Age difference Males are assumed to be three years older than females.

#### **Paid Firefighters (continued)**

### **Other Assumptions**

 Assumed Age of Commencement for Deferred Benefits

Later of Age 50 and 20 Years of Service.

2. Actuarial Value of Assets

An expected actuarial value is determined equal to the prior year's Actuarial Value of Assets plus cash flow (excluding realized and unrealized gains and losses) for the year ended on the valuation date and assuming 7.50% interest return. Twenty percent (20%) of any (gain)/loss as measured by the difference between the expected actuarial value and the market value at the valuation date is added to the expected actuarial value. The (gain)/loss is amortized over five years. The result is constrained to a value of 80% to 120% of the market value at the valuation date. Deferred Option Plan assets are included in the actuarial value of assets. Deferred Option Plan assets are included at market value and are not subject to smoothing.

3. Provision for Expenses

Administrative Expenses, as budgeted by the Oklahoma Firefighters Pension and Retirement System.

4. Cost-of-Living Assumption (Prescribed)

2% annually.

5. Deferred Option Plan

The retirement rates reflect both regular retirement and entry into the DROP. A 2.50% load is added to the liability of anticipated member joining DROP retroactively.

## **Volunteer Firefighters**

## **Economic Assumptions**

1. Investment Return (Prescribed)

7.50%, net of investment expenses, per annum, compound annually.

2. Benefit level increases

No increases.

# **Demographic Assumptions**

1. Retirement Rates

Sample rates below:

Attained Service	Annual Rates of Retirement Per 100 Eligible Members
20	43
21	24
22	18
23	14
24	16
25	18
26-34	20
35+	100

### **Volunteer Firefighters (continued)**

### **Demographic Assumptions (continued)**

### 2. Mortality Rates

(a) Active employees (pre-retirement) (Prescribed) RP-2000 Generational Mortality Table - Employees

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

(c) Disabled pensioners (Prescribed)

RP-2000 Generational Disabled Mortality Table

### 3. Disability Rates -

Graduated rates. See table below:

Age Range	Rate
20-24	.0005
25-29	.0005
30-34	.0010
35-39	.0010
40-44	.0020
45-49	.0020
50-54	.0080
55-59	.0140
60-64	.0165

67% of disabilities are assumed to be Non-Duty related and 33% are assumed to be Duty related.

Page 13 **ACTUARIAL ASSUMPTIONS** 

## **Volunteer Firefighters (continued)**

## **Demographic Assumptions (continued)**

4. Withdrawal Rates

Graduated rates. See table below:

Attained Service	Rate
0	.1800
1	.1600
2	.1400
3	.1300
4	.1100
5-9	.0075
10-14	.0500
15+	.0300

### 5. Marital Status

(a) Percentage married

Males: 85%; Females: 85%

(b) Age difference

Males are assumed to be three years older than

females.

#### **Volunteer Firefighters (continued)**

#### **Other Assumptions**

 Assumed Age of Commencement for Deferred Benefits

Later of Age 50 and 20 Years of Service.

2. Actuarial Value of Assets

An expected actuarial value is determined equal to the prior year's Actuarial Value of Assets plus cash flow (excluding realized and unrealized gains and losses) for the year ended on the valuation date and assuming 7.50% interest return. Twenty percent (20%) of any (gain)/loss as measured by the difference between the expected actuarial value and the market value at the valuation date is added to the expected actuarial value. The (gain)/loss is amortized over five years. The result is constrained to a value of 80% to 120% of the market value at the valuation date. Deferred Option Plan assets are included in the actuarial value of assets. Deferred Option Plan assets are included at market value and are not subject to smoothing.

3. Provision for Expenses

Administrative Expenses, as budgeted by the Oklahoma Firefighters Pension and Retirement System.

4. Deferred Option Plan

The retirement rates reflect both regular retirement and entry into the DROP.