

***State of Oklahoma  
Public Employees  
Retirement System***

***Actuarial Valuation Report  
as of July 1, 2006***

*Prepared: October 2006*



# Oklahoma Public Employees Retirement System Actuarial Valuation Report

## Table of Contents

Sections	Page
Actuarial Certification Letter	
Section 1 – Board Summary	1
Section 2 – Scope of the Report	9
Section 3 – Assets	11
Table 1 – Analysis of Net Assets at Market Value	12
Table 2 – Summary of Changes in Net Assets	13
Table 3 – Actuarial Value of Assets	14
Section 4 – System Liabilities	15
Table 4 – Present Value of Future Benefits	16
Table 5 – Actuarial Accrued Liability	17
Section 5 – Employer Contributions	19
Table 6 – Normal Cost Rate	20
Table 7 – Unfunded Actuarial Accrued Liability Contribution Rate	21
Table 8 – Actuarial Contribution Rate	22
Table 9 – Calculation of Actuarial Gain/(Loss)	23
Table 10 – Summary of Contribution Requirements	24
Section 6 – Accounting and Other Information	25
Table 11 – Schedule of Funding Progress (GASB 25)	26
Table 12 – Schedule of Employer Contributions (GASB 25)	27
Table 13 – FASB No. 35 Information	
Actuarial Present Value of Accumulated Benefits	28
Table 14 – Ten-Year Projected Benefit Payments	30
<b>Appendices</b>	
A. Summary of Membership Data	31
B. Summary of System Provisions	41
C. Actuarial Methods and Assumptions	51
D. Glossary of Terms	59
<b>Addendum</b>	
A. Certification	62
B. Summary of Valuation Results Under Prescribed Assumptions	63
C. Unfunded Actuarial Accrued Liability	65
D. Normal Cost	66



A MILLIMAN GLOBAL FIRM

1120 South 101st Street, Suite 400  
Omaha, NE 68124-1088  
Phone: (402) 393-9400  
Fax: (402) 393-1037  
[www.milliman.com](http://www.milliman.com)

October 9, 2006

Board of Trustees  
Oklahoma Public Employees Retirement System  
5801 N. Broadway Extension, Suite 400  
P.O. Box 53007  
Oklahoma City, OK 73152-3007

Dear Members of Board:

At your request, we have completed an actuarial valuation of the Oklahoma Public Employees Retirement System (OPERS) as of July 1, 2006 for the purpose of determining the actuarial contribution rate for the fiscal year ending June 30, 2007 and calculating and analyzing key financial measurements. The major findings of the valuation are contained in this report. There was no change in the actuarial assumptions or methods from the prior valuation. There were two items passed by the 2006 legislature which impacted the valuation results: (1) contribution rates for regular State employees are a flat 3.5% of compensation and (2) a 4% ad hoc COLA for retirees.

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

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board (ASB) and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting recommendations of the American Academy of Actuaries.

We hereby further certify that, in our opinion, each actuarial assumption used is reasonably related to the experience of the System and to reasonable expectations which, in combination, represent our best estimate of anticipated experience under the System. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Board of Trustees has the final decision regarding the appropriateness of the assumptions and has adopted them as indicated in Appendix C.



In the course of our valuation, we have examined the relative magnitude of medical benefits provided under Section 401(h) of the Internal Revenue Code. We have determined that these medical benefits are subordinate to the retirement benefits as required.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Actuarial computations under GASB Statement No. 25 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in this report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and of GASB Statement No. 25. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work product was prepared exclusively for OPERS for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning OPERS' operations, and uses OPERS' data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We would like to express our appreciation to the OPERS staff, who gave substantial assistance in supplying the data on which this report is based.

I, Patrice A. Beckham F.S.A., am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I, Brent A. Banister F.S.A., am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We respectfully submit the following report and look forward to discussing it with you.

MILLIMAN, Inc.

Sincerely,

A handwritten signature in black ink that reads "Patrice Beckham".

Patrice A. Beckham, F.S.A.  
Consulting Actuary

A handwritten signature in black ink that reads "Brent A. Banister".

Brent A. Banister, F.S.A.  
Actuary

## SECTION I BOARD SUMMARY

### OVERVIEW

The Oklahoma Public Employees Retirement System provides retirement benefits for most employees of the State of Oklahoma, for most County employees and for employees of Local Employers who have elected to participate in OPERS. This report presents the results of the July 1, 2006 actuarial valuation for the System.

The primary purposes of performing an actuarial valuation are to:

- determine the employer contribution rates required to fund each System on an actuarial basis,
- disclose asset and liability measures as of the valuation date,
- determine the experience of the System since the last valuation date, and
- analyze and report on trends in System contributions, assets, and liabilities over the past several years.

OPERS engaged Milliman, Inc. as the new retained actuary effective with the 2006 valuation. As part of the transition process, we reproduced the 2005 valuation results prepared by the prior actuary. In general, replication results are considered acceptable if they are within 2% on the total Present Value of Future Benefits and within 5% of the total Normal Cost and Actuarial Accrued Liability. The reason for the larger tolerance range for Normal Cost and Actuarial Accrued Liability is that various proprietary valuation software systems approach some of the technical aspects of the valuation calculations differently, yet within accepted practices and methods. The prior actuary developed costs as a dollar amount rather than as a percentage of payroll. On a consistent basis, Milliman's calculations of all key measurements for the July 1, 2005 actuarial valuation were within an acceptable range.

Given that the System's funding is based on member and employer contributions that are payroll related, Milliman's preferred approach is to develop an appropriate contribution rate, rather than a pure dollar amount of required contributions. The total contribution rate is the sum of the normal cost rate and the contribution rate for the payment on the Unfunded Actuarial Accrued Liability (UAAL). The normal cost rate is calculated by dividing the dollar amount of normal cost by the expected payroll of current active members for the plan year, reflecting expected exits from the System. The amortization payment of the UAAL is allocated over the total expected payroll for the year (reflecting new entrants replacing current active members who leave). The reader should recognize that this change in approach may impact certain comparisons to the prior valuation report.

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

The 2006 Legislature passed legislation containing the following provisions which impacted OPERS:

- 4% ad hoc COLA to retirees
- contribution rate for regular State employees was changed to a flat 3.5% of compensation.

The liabilities of the System are determined assuming a 2% annual COLA each year, even though the System does not have an automatic COLA provision. Historically the Legislature has granted ad hoc COLAs every other year. Because the System maintains a COLA reserve in the years in which a COLA is not actually granted by the Legislature, the 4% ad hoc COLA did not have an impact on the valuation results.

The employee contribution rate for regular State employees was changed to a flat 3.5% of compensation. Prior to July 1, 2006, the employee contribution rate was 3.0% of pay under \$25,000 and 3.5% of pay over \$25,000. The change to a flat 3.5% employee contribution rate produced a small decrease in the actuarial accrued liability.

The valuation results provide a “snapshot” view of the System’s financial condition on July 1, 2006. The unfunded actuarial accrued liability for the System increased by \$135 million due to various factors. A detailed analysis of the change in the unfunded actuarial accrued liability from July 1, 2005 to July 1, 2006 is shown on page 4.

The highlights of the valuation are:

Funded Status (\$M)	Actuarial Valuation Date	
	July 1, 2006	July 1, 2005
Actuarial Accrued Liability	\$7,915	\$7,575
Actuarial Value of Assets	\$5,654	\$5,451
Unfunded Actuarial Accrued Liability (UAAL)	\$2,260	\$2,125
Funded Ratio	71.4%	72.0%

There was a liability loss, which increased the actuarial accrued liability by \$62 million more than expected (0.80% of expected liability). The components of this liability loss are identified on page 5 of this report.

The net return on the market value of assets was approximately 7.9% for the year ended June 30, 2006. The actuarial value of assets is determined using a method to smooth gains and losses in order to develop more stable contribution rates. The return on the actuarial value of assets was approximately 6.0%, which resulted in an actuarial loss of \$78 million.

The actuarial contribution rate for the employer increased from 2005 to 2006:

Contribution Rate	Actuarial Valuation Date	
	July 1, 2006	July 1, 2005
Normal Cost	12.25%	11.18%
Amortization of UAAL	13.35%	13.28%
Budgeted Expenses	<u>0.41%</u>	<u>0.55%</u>
Actuarial Contribution Rate	26.01%	25.01%
Less Estimated Member Contribution Rate	<u>3.88%</u>	<u>3.70%</u>
Employer Actuarial Contribution Rate	22.13%	21.31%
Less Statutory Contribution Rate	12.50%	11.50%
Shortfall	9.63%	9.81%

Despite the 1% increase in the employer contribution rate, the shortfall between the employer actuarial contribution rate and the statutory contribution rate decreased by only 0.18% from the 2005 to the 2006 valuation. This shortfall contributes to an increase in the UAAL which increases the amortization payment on the UAAL.

## EXPERIENCE

### July 1, 2005 – June 30, 2006

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is July 1, 2006. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the System, which are generally in excess of assets. The actuarial process leads to a method of determining the contributions needed by members and employers in the future to balance the System assets and liabilities.



Changes in the System's assets and liabilities impacted the change in the actuarial contribution rates between the July 1, 2005 and July 1, 2006 actuarial valuations. Each component is examined and quantified in the following discussion.

## ASSETS

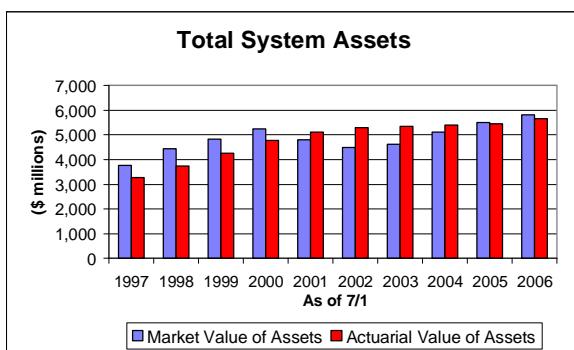
As of July 1, 2006, the System had total funds when measured on a market value basis, of \$5.8 billion. This was an increase of \$0.3 billion from the July 1, 2005 figure of \$5.5 billion. The components of the change in the market value of assets for the System (in millions) are set forth below.

	Market Value \$(millions)	Actuarial Value \$(millions)
Net Assets, July 1, 2005	\$5,504	\$5,451
• Employer and Member Contributions	227	227
• Benefit Payments and Expenses	(345)	(345)
• Investment Income	431	321
Net Assets, July 1, 2006	\$5,817	\$5,654

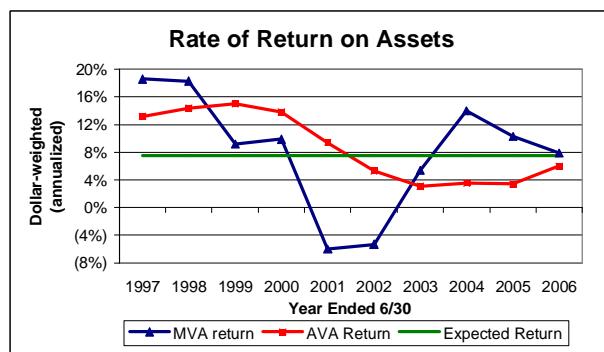
The market value of assets is not used directly in the calculation of contribution rates. An asset valuation method is used to smooth the effect of market fluctuations. See Table 3 on page 14 for the detailed development of the actuarial value of assets as of July 1, 2006.

The actuarial value of assets as of July 1, 2006, was \$5.654 billion. The annualized dollar-weighted rate of return for 2006 measured on the actuarial value of assets was approximately 6.0% and measured on the market value of assets, was approximately 7.9%, net of investment expenses.

Due to the use of an asset smoothing method, there is \$163 million of net deferred investment gain experience that has not yet been recognized. This deferred investment gain will gradually be reflected in the actuarial value of assets over the next four years.



*From 1997 through 2000, the market value of assets exceeded the actuarial value. Investment experience in 2001 - 03 reversed the situation. As the negative investment experience was recognized in the asset smoothing method and favorable experience occurred, the market value has again grown slightly larger than the actuarial value.*



*Rates of return on the market value of assets have been very volatile. The return on the actuarial value of assets illustrates the advantage of using an asset smoothing method.*

## SYSTEM LIABILITIES

The actuarial accrued liability is that portion of the present value of future benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and asset values at the same date is referred to as the unfunded actuarial accrued (UAAL). The unfunded actuarial accrued liability will be reduced if the employer's contributions exceed the employer's normal cost for the year, after allowing for interest earned on the previous balance of the unfunded actuarial accrued liability. Benefit improvements, experience gains and losses, and changes in actuarial assumptions and methods will also impact the total actuarial accrued liability (AAL) and the unfunded portion thereof.

The unfunded actuarial accrued liability is as follows:

Actuarial Accrued Liability	\$7,914,657,886
Actuarial Value of Assets	<u>5,654,276,043</u>
Unfunded Actuarial Accrued Liability	\$2,260,381,843

See Table 5 on page 17 for the detailed development of the Actuarial Accrued Liability and Table 7 on page 21 for the calculation of the Unfunded Actuarial Accrued Liability.

Other factors influencing the UAAL from year to year include actual experience versus that expected based on the actuarial assumptions (both asset and liability), changes in actuarial assumptions, procedures or methods and changes in benefit provisions. The actual experience measured in this valuation is that which occurred during the prior plan year (fiscal year 2006). There was an experience loss from both the experience on the actuarial value of assets and the actuarial accrued liability.

Between July 1, 2005 and July 1, 2006 the change in the unfunded actuarial accrued liability for the System was as follows (in millions):

	<u>\$millions</u>
Unfunded Actuarial Accrued Liability, July 1, 2005	\$ 2,125
• effect of contributions less than actuarial rate	137
• expected decrease due to amortization method	(41)
• investment experience	78
• liability experience <sup>1</sup>	62
• adjustment from replication of 2005 valuation <sup>2</sup>	(92)
• change in actuarial assumptions	0
• change in benefit provisions <sup>3</sup>	(9)
Unfunded Actuarial Accrued Liability, July 1, 2006	\$2,260

<sup>1</sup> Liability gain is about 0.80% of total actuarial accrued liability.

<sup>2</sup> Reflects differences in the actuarial accrued liability based on Milliman's replication of Mercer's July 1, 2005 valuation.

<sup>3</sup> Change in employee contribution rate for most State employees.

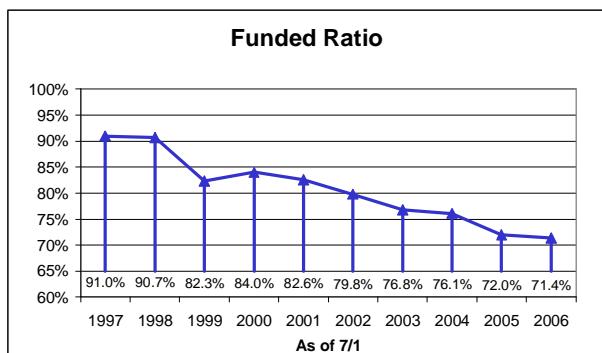
The liability loss for the System can be allocated to experience related to each actuarial assumption as follows:

Liability Source	Impact on AAL	% of Expected Liability
Salary increases	(56,832,000)	(0.72%)
Deaths	46,029,000	0.59%
Termination of employment	44,832,000	0.57%
Retirements	1,620,000	0.02%
Disability	(3,918,000)	(0.05%)
New entrants and rehires	17,908,000	0.22%
Miscellaneous/data change	12,416,000	0.16%
Total (gain)/loss	62,055,000	0.79%

A detailed summary of the change in the unfunded actuarial accrued liability is shown in Table 9 on page 22.

An evaluation of the unfunded actuarial accrued liability on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both very large numbers) is reflected. Another way to evaluate the unfunded actuarial liability and the progress made in its funding is to track the funded status, the ratio of the actuarial value of assets to the actuarial liability. The funded status information is shown below (in millions).

	7/1/03	7/1/04	7/1/05	7/1/06
Funded Ratio	76.8%	76.1%	72.0%	71.4%
Unfunded Actuarial Accrued Liability (UAAL)	\$1,620	\$1,703	\$2,125	\$2,260
Expected UAAL	\$1,419	\$1,725	\$1,852	\$2,120



The System's funded status has decreased significantly over the past 10 years. Numerous factors have contributed to the decline including changes in benefit provisions, contributions less than the actuarial rate, changes in actuarial assumptions, demographic experience and investment experience from 2001-03.

Given the current funded status of the System, the amortization method, the amortization period, and the scheduled increases in employer contribution rates, the unfunded actuarial accrued liability is expected to continue to grow and the funded ratio is expected to decline.

## CONTRIBUTION RATES

The funding objective of the System is to pay the normal cost rate plus an amount which will pay off the unfunded actuarial accrued liability over a 40 year period commencing July 1, 1987.

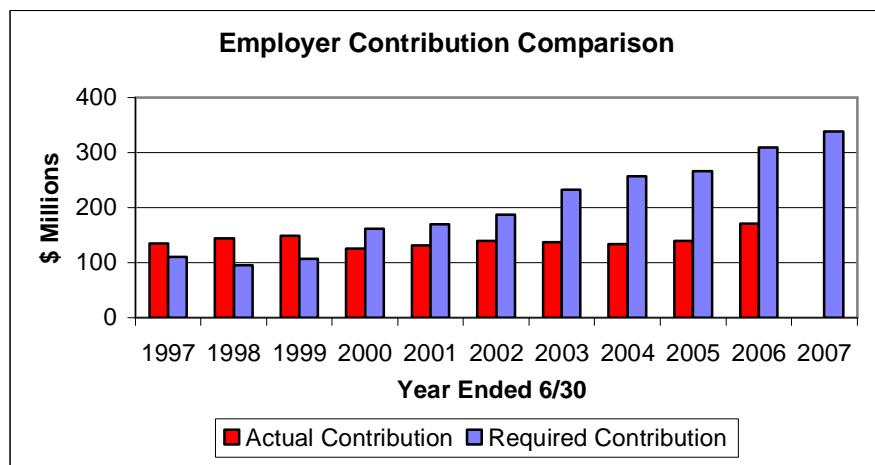
Under the Entry Age Normal cost method, the actuarial contribution rate consists of:

- a "normal cost" for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date,
- an "unfunded actuarial accrued liability contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets on hand.

Contributions to the Retirement System are made by the members and their employers. Effective July 1, 2006, most State employees pay 3.5% of compensation. Local government employees contribute from 3.5% to 8.5% of compensation, depending on the rate chosen by their employers. Elected officials and Hazardous Duty employees have different required contributions (see the Summary of System Provisions section of this report). Starting in 2004, participants were eligible to make an election to contribute an additional 2.91% of pay and to increase their benefit accrual multiplier for future years of service to 2.5%.

Effective July 1, 1999, the State's employer contribution was reduced from 12.5% to 10.0% of payroll and stayed at that level until 2005. As of July 1, 2005, the State's contribution rate increased to 11.5% of payroll and will increase an additional 1% each July 1 until it reaches 16.5% on July 1, 2010. It is scheduled to remain at 16.5% thereafter. For county and local employees, the total employer and employee contribution rate is 13.5% of payroll. This contribution rate increased to 15.0% on July 1, 2005 and will increase an additional 1% of payroll each year beginning July 1, 2006 until it reaches 20.0% on July 1, 2010. The ultimate contribution rates are still less than the employer actuarial required contribution rate for fiscal year 2007 of 22.13% developed in this valuation.

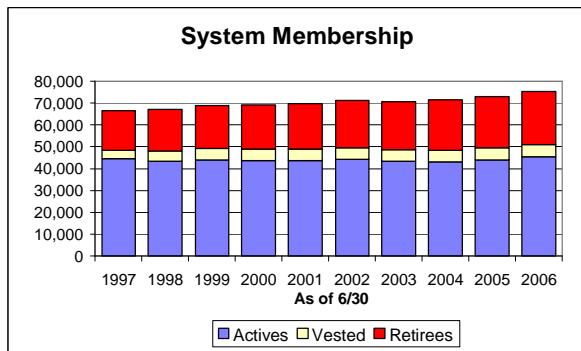
The graph below shows the total required employer contribution compared to the amount actually received in the year. The funding policy contribution equals the System's normal cost, budgeted expenses and an amortization of the unfunded actuarial accrued liability. For July 1, 1998 and prior years, the unfunded actuarial accrued liability was amortized over 25 years from July 1, 1987. For the July 1, 1999 valuation, the amortization period was changed to 40 years from July 1, 1987. At July 1, 2006, 21 years remain in the amortization period.



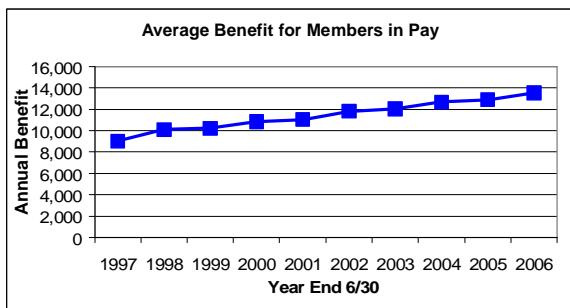
## MEMBER INFORMATION

The number of active members included in the valuation increased by about 3.5% from 2005 to 2006. Historically, the size of the active group has remained fairly stable.

Retired member counts and average retirement benefit amounts continue to increase steadily. There were 24,372 retirees and beneficiaries in the 2006 valuation, with an average benefit of \$1,127 per month. This represents a 4.9% increase in the average monthly benefit from the previous year.



*The size of the active group has been very stable over the last 10 years. The number of terminated vested members and retirees has increased, which is to be expected.*



*The average benefit for retirees has climbed steadily over the past 10 years as new retirees retire with higher salaries and therefore receive higher benefits than those already retired. In addition, most of the members who die are older with smaller benefits. Ad hoc COLAs granted by the Legislature have also increased the average benefit during this period.*

## SUMMARY VALUATION RESULTS

Based on the July 1, 2006 actuarial valuation results, the current schedule of increases in the statutory employer contribution rate do not appear sufficient to amortize the UAAL by 2027. In the next few months, Milliman will be preparing a projection model, based on the July 1, 2006 valuation, which will allow the System's long term funding to be more fully analyzed.

A summary of key data elements and valuation results as of July 1, 2006 and July 1, 2005 are presented on the following page. More detail on each of these elements can be found in the following Sections of this report.

**SUMMARY OF PRINCIPAL RESULTS**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**

	7/1/2006 Valuation	7/1/2005 Valuation	% Change
<b>1. PARTICIPANT DATA</b>			
Number of:			
Active Members*	45,472	43,918	3.5
Retired Members and Beneficiaries	24,372	23,679	2.9
Inactive Members	<u>5,568</u>	<u>5,521</u>	0.9
Total Members	<u><u>75,412</u></u>	<u><u>73,118</u></u>	3.1
Projected Annual Salaries of Active Members*	\$ 1,568,350,023	\$ 1,454,210,509	7.8
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 329,736,666	\$ 305,435,002	8.0
*Includes "No Application" members			
<b>2. ASSETS AND LIABILITIES</b>			
Total Actuarial Accrued Liability	\$ 7,914,657,886	\$ 7,575,419,808	4.5
Market Value of Assets	5,817,165,538	5,504,489,147	5.7
Actuarial Value of Assets	5,654,276,043	5,450,664,963	3.7
Unfunded Actuarial Accrued Liability	2,260,381,843	2,124,754,845	6.4
Funded Ratio	71.4%	72.0%	(0.8)
<b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>			
Normal Cost Rate	12.25%	11.18%	9.6
Amortization of Unfunded Actuarial Accrued Liability	13.35%	13.28%	0.5
Budgeted Expenses	<u>0.41%</u>	<u>0.55%</u>	(24.7)
Actuarial Required Contribution Rate	26.01%	25.01%	4.0
Less Estimated Member Contribution Rate	<u>3.88%</u>	<u>3.70%</u>	4.9
Employer Actuarial Required Contribution Rate	22.13%	21.31%	3.9
Less Statutory Employer Contribution Rate	<u>12.50%</u>	<u>11.50%</u>	8.7
Shortfall	9.63%	9.81%	(1.8)

## SECTION 2

### SCOPE OF THE REPORT

This report presents the actuarial valuation of the Oklahoma Public Employees Retirement System (OPERS) as of July 1, 2006. This valuation was prepared at the request of the System's Board of Trustees.

The reader is encouraged to review the actuarial certification letter, where the guidelines employed in the preparation of this report are outlined. Also included in this letter are comments on the sources and reliability of both the data and the actuarial assumptions upon which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings resulting from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of the System. Sections 4 and 5 describe how the obligations of the System are to be met under the actuarial cost method in use.

This report includes several appendices and an addendum:

- Appendix A      Schedules of valuation data classified by various categories of members.
- Appendix B      A summary of the current benefit structure, as determined by the provisions of governing law on July 1, 2006, as amended by changes enacted by the 2006 Legislature.
- Appendix C      A summary of the actuarial methods and assumptions used to estimate liabilities and determine contribution rates.
- Appendix D      A glossary of actuarial terms.
- Addendum        Provides actuarial results based on assumptions prescribed in 74 Okla. Stat, Section 909.1(H)



## **SECTION 3**

### **ASSETS**

#### **Market Value of Assets**

The current market value represents the "snapshot" or "cash-out" value of System assets as of the valuation date. In addition, market values of assets provide a basis for measuring investment performance from time to time. At July 1, 2006 the market value of assets for the Retirement System was \$5.8 billion. Table 1 on page 12 is a comparison, at market values, of System assets as of July 1, 2006, and July 1, 2005, in total and by investment category. Table 2 on page 13 summarizes the change in the market value of assets from July 1, 2005 to June 30, 2006.

#### **Actuarial Value of Assets**

Neither the market value of assets, representing a "cash-out" value of System assets, nor the book value of assets, representing the cost of investments, may be the best measure of the System's ongoing ability to meet its obligations.

To arrive at a suitable value for the actuarial valuation, a technique for determining the actuarial value of assets is used, which dampens swings in the market value while still indirectly recognizing market values.

The actuarial value of assets is based on a five-year moving average of expected and actual market values determined as follows:

- at the beginning of each fiscal 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 fiscal 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 fiscal year;
- the difference between the expected actuarial asset value and the market value is the investment gain or loss for the previous fiscal year;
- the (final) actuarial asset value is the preliminary value plus 20% of the investment gains and losses for each of the five previous fiscal years, but in no case more than 120% of the market value or less than 80% of the market value.

Table 3 on page 14 shows the development of the actuarial value of assets (AVA) as of the valuation date.

**TABLE 1**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ANALYSIS OF NET ASSETS AT MARKET VALUE**

	<u>June 30, 2006</u>			<u>June 30, 2005</u>		
	<u>Amount</u> (\$ Millions)	<u>% of Total</u>		<u>Amount</u> (\$ Millions)	<u>% of Total</u>	
Cash & Equivalents	\$ 42.1	0.7		\$ 33.3	0.6	
Short-term Investments	17.7	0.3		51.8	0.9	
Government Obligations	1,305.9	21.6		1,300.1	23.6	
Corporate Bonds	998.7	16.5		814.9	14.8	
Domestic Equity	2,526.8	41.7		2,430.6	44.1	
International Equity	<u>1,164.3</u>	<u>19.2</u>		<u>878.9</u>	<u>16.0</u>	
<b>Subtotal</b>	<b>\$ 6,055.5</b>	<b>100.0</b>		<b>\$ 5,509.6</b>	<b>100.0</b>	
Property (net)	0.6			0.4		
Other assets	0.1			0.2		
Net Receivables/(Payables)	<u>(239.0)</u>			<u>(5.7)</u>		
<b>Net Assets</b>	<b>\$ 5,817.2</b>			<b>\$ 5,504.5</b>		

**TABLE 2**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF CHANGES IN NET ASSETS**

(Market Value)

	Fiscal Year Ended June 30	
	2006	2005
1. Market Value of Net Assets at Beginning of Year	\$ 5,504,489,147	\$ 5,126,418,028
2. Contributions:		
a. Members	55,988,703	52,017,896
b. State and Local Agencies	<u>171,273,052</u>	<u>139,757,160</u>
c. Total Contributions (2a) + (2b)	<u>227,261,755</u>	<u>191,775,056</u>
3. Net Investment Income:		
a. Net appreciation in fair value of investments	312,735,516	407,023,558
b. Interest	96,454,218	90,694,789
c. Dividends	30,062,249	29,816,319
d. Security lending activities	1,657,368	1,519,139
e. Other	136,733	101,742
f. Total investment income (3a) + (3b) + (3c) + (3d) + (3e)	<u>441,046,084</u>	<u>529,155,547</u>
g. Investment expenses	<u>(6,092,429)</u>	<u>(6,821,748)</u>
h. Net investment income (3f) + (3g)	<u>434,953,655</u>	<u>522,333,799</u>
i. Total additions (2c) + (3h)	<u>662,215,410</u>	<u>714,108,855</u>
4. Deductions:		
a. Retirement, death, and survivor benefits	334,378,348	321,568,856
b. Refunds and withdrawals	11,120,588	10,861,971
c. Administration expenses	4,040,083	3,606,909
d. Total deductions (4a) + (4b) + (4c)	<u>349,539,019</u>	<u>336,037,736</u>
5. Net Change in Assets (3i) - (4d)	312,676,391	378,071,119
6. Market Value of Net Assets at End of Year (1) + (5)	\$ 5,817,165,538	\$ 5,504,489,147

**TABLE 3**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ACTUARIAL VALUE OF ASSETS**

**Schedule Of Asset Gains/(Losses)**

Year End	Original Amount	Recognized in Prior Years	Recognized in This Year	Recognized in Future Years
2002	\$ (631,139,394)	\$ (504,911,515)	\$ (126,227,879)	\$ -
2003	(153,115,261)	(91,869,156)	(30,623,052)	(30,623,053)
2004	239,722,094	95,888,838	47,944,419	95,888,837
2005	121,831,139	24,366,228	24,366,228	73,098,683
2006	30,656,285	0	6,131,257	24,525,028
Total	\$ (392,045,137)	\$ (476,525,605)	\$ (78,409,027)	\$ 162,889,495

**Development of Actuarial Value of Assets**

1. Actuarial value as of July 1, 2005	\$ 5,450,664,963
2. Contributions	
a. Member	\$ 55,988,703
b. Employer	171,273,052
c. Total (a) + (b)	<u>\$ 227,261,755</u>
3. Decreases during year	
a. Benefit payments	\$ (334,378,348)
b. Return of member contributions	(11,120,588)
c. Noninvestment expenses	(4,040,083)
d. Total (a) + (b) + (c)	<u>\$ (349,539,019)</u>
4. Expected return at 7.5% on:	
a. Item 1	\$ 408,799,872
b. Item 2 (one-half year)	8,368,248
c. Item 3 (one-half year)	(12,870,749)
d. Total (a) + (b) + (c)	<u>\$ 404,297,371</u>
5. Expected actuarial value as of June 30, 2006 (1) + (2) + (3) + (4)	\$ 5,732,685,070
6. Unrecognized asset gain/(loss) as of June 30, 2005	\$ 53,824,183
7. Expected actuarial value June 30, 2005, plus previous year's unrecognized asset gain/(loss) (5) + (6)	\$ 5,786,509,253
8. Market value June 30, 2006	\$ 5,817,165,538
9. Year end 2006 asset gain/(loss) (8) - (7)	\$ 30,656,285
10. Asset gain/(loss) to be recognized as of June 30, 2006	\$ (78,409,027)
11. Initial actuarial value July 1, 2006 (5) + (10)	\$ 5,654,276,043
12. Constraining values:	
a. 80% of market value (8) x 0.8	\$ 4,653,732,430
b. 120% of market value (8) x 1.2	\$ 6,980,598,646
13. Actuarial value as of July 1, 2006 (11), but no less than (12a), nor greater than (12b)	<u>\$ 5,654,276,043</u>

## SECTION 4

### SYSTEM LIABILITIES

In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of assets of the System as of the valuation date, July 1, 2006. In this section, the discussion will focus on the commitments of the System, which are referred to as its liabilities.

Table 4 on page 16 contains an analysis of the actuarial present value of all future benefits (PVFB) for contributing members, inactive members, retirees and their beneficiaries. The analysis is provided for each group.

The liabilities summarized in Table 4 include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes measures of both benefits already earned and future benefits to be earned. For all members, active and retired, the value extends over benefits earnable and payable for the rest of their lives and, if an optional benefit is chosen, for the lives of the surviving beneficiaries.

The actuarial assumptions used to determine liabilities are based on the results of an Experience Study based on the three year period ended June 30, 2004. This set of assumptions, as shown in Appendix C, was first used for the July 1, 2005 valuation.

The liabilities reflect the benefit structure in place as of July 1, 2006 including the provisions of legislation passed by the 2006 Legislature, which included changing the employee contribution for most State employees to 3.5% of compensation and a 4% ad hoc COLA for retirees.

#### **Actuarial Liabilities**

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates the present value of future benefits into annual costs. In order to do this allocation, it is necessary for the funding method to "breakdown" the present value of future benefits into two components:

- (1) that which is attributable to the past and
- (2) that which is attributable to the future.

Actuarial terminology calls the part attributable to the past the "past service liability" or the "actuarial accrued liability". The portion allocated to the future is known as the present value of future normal costs, with the specific piece of it allocated to the current year being called the "normal cost". Table 6 contains the calculation of actuarial liabilities for all groups.

The System uses an assumption of a 2% annual COLA each year in developing liabilities and contribution rates even though the System does not have an automatic COLA provision. Ad hoc COLAs have historically been granted by the Legislature every other year. In order to avoid actuarial gains in the year in which a COLA is not granted and an actuarial loss in the years in which a COLA is granted, the System's liabilities include a "COLA Reserve". The COLA Reserve is included in the actuarial accrued liability to account for expected cost of living adjustments to the benefits of retired participants that have not been granted by the valuation date. Any ad hoc increase granted will decrease the reserve amount by the cost of the increase. When the cost of an ad hoc increase is greater than the amount of the reserve, the reserve is set to zero and the period for calculating ungranted increases is set to the valuation date.

**TABLE 4**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**PRESENT VALUE OF FUTURE BENEFITS (PVFB)**  
**AS OF JULY 1, 2006**

	Regular	Elected Officials	Hazardous Duty	Total
1. Active employees				
a. Retirement Benefit	\$ 3,811,553,485	\$ 218,965,791	\$ 243,088,073	\$ 4,273,607,349
b. Withdrawal Benefit	316,797,090	18,077,587	15,681,869	350,556,546
c. Pre-Retirement Death Benefit	94,056,894	3,520,865	3,086,839	100,664,598
d. Disability Benefit	155,611,967	9,719,313	4,794,050	170,125,330
e. Return of Member Contributions	22,123,622	465,954	3,370,815	25,960,391
f. Supplementary Medical Benefit	180,424,686	4,911,237	10,644,690	195,980,613
g. Application Not Submitted	44,643,188			44,643,188
h. Total	<hr/> \$ 4,625,210,932	<hr/> \$ 255,660,747	<hr/> \$ 280,666,336	<hr/> \$ 5,161,538,015
2. Inactive Nonvested Members				17,397,925
3. Inactive Vested Members				334,842,169
4. Return of Excess Contributions				1,069,635
5. Disabled Members				109,367,301
6. Retirees				3,230,949,471
7. Beneficiaries				193,317,960
8. Supplementary Medical Benefit for Retirees and Inactive Vested Members				169,357,606
9. COLA Reserve				<hr/> 13,301,442
10. Total PVFB				<hr/> \$ 9,231,141,525

**TABLE 5**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ACTUARIAL ACCRUED LIABILITY**  
**AS OF JULY 1, 2006**

	Regular	Elected Officials	Hazardous Duty	Total
<b>1. Present Value of Future Benefits for Active Members</b>				
a. Retirement Benefit	\$ 3,811,553,485	\$ 218,965,791	\$ 243,088,073	\$ 4,273,607,349
b. Withdrawal Benefit	316,797,090	18,077,587	15,681,869	350,556,546
c. Pre-Retirement Death Benefit	94,056,894	3,520,865	3,086,839	100,664,598
d. Disability Benefit	155,611,967	9,719,313	4,794,050	170,125,330
e. Return of Member Contributions	22,123,622	465,954	3,370,815	25,960,391
f. Supplementary Medical Benefit	180,424,686	4,911,237	10,644,690	195,980,613
g. Application Not Submitted	44,643,188	0	0	44,643,188
h. Total	<hr/> \$ 4,625,210,932	<hr/> \$ 255,660,747	<hr/> \$ 280,666,336	<hr/> \$ 5,161,538,015
<b>2. Present Value of Future Normal Costs for Active Members</b>				
a. Retirement Benefit	\$ 775,515,525	\$ 33,929,629	\$ 59,341,292	\$ 868,786,446
b. Withdrawal Benefit	167,224,812	8,850,314	7,815,008	183,890,134
c. Pre-Retirement Death Benefit	23,317,356	708,049	1,197,274	25,222,679
d. Disability Benefit	47,282,911	2,408,460	1,755,369	51,446,740
e. Return of Member Contributions	74,421,798	3,148,161	8,402,556	85,972,515
f. Supplementary Medical Benefit	55,925,082	1,445,021	2,896,835	60,266,938
g. Application Not Submitted	40,898,187	0	0	40,898,187
h. Total	<hr/> \$ 1,184,585,671	<hr/> \$ 50,489,634	<hr/> \$ 81,408,334	<hr/> \$ 1,316,483,639
<b>2. Present Value of Future Benefits for Inactive Members</b>				<hr/> <u>4,069,603,510</u>
<b>3. Total Actuarial Accrued Liability</b>	<b>(1h) - (2h) + 3</b>			<b>\$ 7,914,657,886</b>



This work product was prepared solely for OPERS for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.



## **SECTION 5**

### **EMPLOYER CONTRIBUTIONS**

The previous two sections were devoted to a discussion of the assets and liabilities of the System. A comparison of Tables 3 and 4 indicates that current assets fall short of meeting the present value of future benefits (total liability). This is expected in all but a fully closed down fund, where no further contributions are anticipated.

In an active system, there will almost always be a difference between the actuarial value of assets and total liabilities. This deficiency has to be made up by future contributions and investment returns. An actuarial valuation sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion.

The method used to determine the incidence of the contributions in various years is called the actuarial cost method. Under an actuarial cost method, the contributions required to meet the difference between current assets and current liabilities are allocated each year between two elements: (1) the normal cost and (2) the payment on the unfunded actuarial liability.

The term "fully funded" is often applied to a system in which contributions at the normal cost rate are sufficient to pay for the benefits of existing employees as well as for those of new employees. More often than not, systems are not fully funded, either because of past benefit improvements that have not been completely funded and/or because of actuarial deficiencies that have occurred because experience has not been as favorable as anticipated. Under these circumstances, an unfunded actuarial accrued liability (UAAL) exists.

#### **Description of Rate Components**

The actuarial cost method used by the System is the traditional Entry Age Normal (EAN) – level percent of pay cost method. Under the EAN cost method, the actuarial present value of each member's projected benefit is allocated on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial liability. The unfunded actuarial liability represents the difference between the actuarial liability and the actuarial value of assets as of the valuation date. The unfunded actuarial liability is calculated each year and reflects experience gains/losses.

The Unfunded Actuarial Accrued Liability is amortized as a level dollar amount over a 40 year period from July 1, 1987. Given a stable active workforce, this amortization method is expected to produce a payment stream that decreases as a percent of covered payroll.

#### **Contribution Rate Summary**

The normal cost rate is developed in Table 6 on page 20. Table 7 on page 21 develops the contribution rate for amortization of the unfunded actuarial accrued liability. Table 8 on page 22 develops the total actuarial contribution rate.

**TABLE 6**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**NORMAL COST RATE**  
**AS OF JULY 1, 2006**

	<b>Regular</b>	<b>Elected Officials</b>	<b>Hazardous Duty</b>	<b>Total</b>	<b>% of Pay</b>
1. Normal Cost at Beginning of Year					
a. Retirement Benefit	\$ 107,451,336	\$ 5,745,729	\$ 8,623,575	\$ 121,820,640	8.31%
b. Withdrawal Benefit	20,288,772	1,199,729	1,099,693	22,588,195	1.54%
c. Pre-Retirement Death Benefit	3,118,014	112,782	173,497	3,404,293	0.23%
d. Disability Benefit	6,016,959	360,063	244,758	6,621,780	0.45%
e. Return of Member Contributions	9,323,667	454,969	1,216,849	10,995,485	0.75%
f. Supplementary Medical Benefit	8,142,338	257,652	416,457	8,816,447	0.60%
g. Application Not Submitted	5,375,002	0	0	5,375,002	0.37%
h. Total	\$ 159,716,088	\$ 8,130,924	\$ 11,774,829	\$ 179,621,841	12.25%
2. Estimated Payroll for Current Actives	\$ 1,364,566,306	\$ 30,910,642	\$ 70,699,732	\$ 1,466,176,680	
3. Normal Cost Rate [(1h) / (2)]	<u>11.70%</u>	<u>26.30%</u>	<u>16.65%</u>	<u>12.25%</u>	

**TABLE 7**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**UNFUNDED ACTUARIAL ACCRUED LIABILITY CONTRIBUTION RATE**  
**AS OF JULY 1, 2006**

1. Actuarial Present Value of Future Benefits	\$ 9,231,141,525
2. Actuarial Present Value of Future Normal Costs	<u>1,316,483,639</u>
3. Actuarial Accrued Liability (1) - (2)	\$ 7,914,657,886
4. Actuarial Value of Assets	<u>5,654,276,043</u>
5. Unfunded Actuarial Accrued Liability (UAAL) (3) - (4)	\$ 2,260,381,843
6. Amortization of UAAL over 40 years from July 1, 1987 (assumed mid-year)	\$ 209,354,199
7. Total Estimated Payroll for Year Ending June 30, 2007	\$ 1,568,350,023
8. Amortization as a Percent of Payroll	13.35%

**TABLE 8**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ACTUARIAL CONTRIBUTION RATE**  
**AS OF JULY 1, 2006**

1. Total Normal Cost Rate	12.25%
2. Amortization of UAAL	13.35%
3. Budgeted Expenses *	<u>0.41%</u>
4. Total Actuarial Contribution Rate (1) + (2) + (3)	26.01%
5. Estimated Member Contribution Rate	<u>3.88%</u>
6. Employer Actuarial Contribution Rate (4) - (5)	22.13%

\* Provided by the System

**TABLE 9**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**CALCULATION OF ACTUARIAL GAIN/(LOSS)**

The actuarial gain/(loss) is comprised of both the liability and the actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of July 1, 2006.

1. Expected actuarial accrued liability		
a. Actuarial accrued liability at July 1, 2005	\$	7,575,419,808
b. Normal cost at July 1, 2005		156,735,221
c. Benefit payments for fiscal year ending June 30, 2006		(345,498,936)
d. Interest on (a), (b), and (c)		567,189,642
e. Adjustment from Milliman 2005 replication		(92,443,207)
f. Change in state member contributions		(8,799,557)
g. Expected actuarial accrued liability at July 1, 2006	\$	7,852,602,971
(a) + (b) + (c) + (d) + (e) + (f)		
2. Actuarial accrued liability at July 1, 2006	\$	7,914,657,886
3. Actuarial liability gain/(loss) (1e) – (2)	\$	(62,054,915)
4. Expected actuarial value of assets		
a. Actuarial value of assets at July 1, 2005	\$	5,450,664,963
b. Contributions for fiscal year ending June 30, 2006		227,261,755
c. Benefit payments and administrative expenses for fiscal year ending June 30, 2006		(349,539,019)
d. Interest on (a), (b), and (c)		404,297,371
e. Expected actuarial value of assets at July 1, 2006	\$	5,732,685,070
(a) + (b) + (c) + (d)		
5. Actuarial value of assets at July 1, 2006	\$	5,654,276,043
6. Actuarial value of assets gain/(loss) (5) – (4e)	\$	(78,409,027)
7. Net actuarial gain/(loss) (3) + (6)	\$	(140,463,942)

#### **COLA Reserve**

1. Reserve as of July 1, 2005	\$	65,375,573
2. Interest at 7.5%		4,903,168
3. Reserve increment		67,290,083
4. Expected reserve as of July 1, 2006		137,568,824
5. Ad hoc cost of living increase during year ended June 30, 2006		(124,267,382)
6. Actual reserve on July 1, 2006	\$	13,301,442
(4) less (5), not less than \$0		

**TABLE 10**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF CONTRIBUTION REQUIREMENTS**

	Actuarial Valuation as of			Percent Change in Amount
			July 1,2006	
	Amount	Amount	Amount	
1. Expected annual payroll	\$ 1,568,350,023	\$ 1,454,210,509		7.8%
2. Total normal cost	\$ 179,621,841	\$ 162,612,792		10.5%
3. Unfunded actuarial accrued liability	\$ 2,260,381,843	\$ 2,124,754,845		6.4%
4. Amortization of unfunded actuarial accrued liability over 40 years from July 1, 1987	\$ 209,354,199	\$ 193,142,940		8.4%
5. Budgeted expenses (provided by the System)	\$ 6,496,405	\$ 8,053,062		(19.3%)
6. Total required contribution (2) + (4) + (5)	\$ 395,472,445	\$ 363,808,794		8.7%
7. Estimated member contribution	\$ 56,922,429	\$ 53,828,455		5.7%
8. Required employer contribution (6) - (7)	\$ 338,550,016	\$ 309,980,339		9.2%
9. Previous year's actual contribution				
a. Member	\$ 55,988,703	\$ 52,017,896		7.6%
b. Employer	\$ 171,273,052	\$ 139,757,160		22.6%
c. Total	\$ 227,261,755	\$ 191,775,056		18.5%

## SECTION 6

### ACCOUNTING AND OTHER INFORMATION

Governmental Accounting Standards Board (GASB) Statement No. 25, Financial Reporting for Defined Benefit Pension Plans (GASB 25), establishes financial reporting standards for defined benefit pension plans. In addition to two required statements regarding plan assets, the statement requires two schedules and accompanying notes disclosing information relative to the funded status of the plan and historical contribution patterns.

- The Schedule of Funding Progress provides information about whether the financial strength of the Plan is improving or deteriorating over time.
- The Schedule of Employer Contributions provides historical information about the annual required contribution (ARC) and the percentage of the ARC that was actually contributed.

In addition to information required by GASB, we also provide an exhibit showing the present value of accumulated benefits under FASB Statement No. 35 and an exhibit showing the expected benefit payments for the System.

**TABLE 11**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ACCOUNTING INFORMATION FOR GASB 25**

**Schedule of Funding Progress**

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll ((b-a)/c)
7/1/2001	\$5,110,226,650	\$6,190,228,108	\$1,080,001,458	82.6%	\$1,317,043,030	82.0%
7/1/2002	5,299,781,370	6,639,720,469	1,339,939,099	79.8%	1,450,317,127	92.4%
7/1/2003	5,354,795,771	6,974,586,356	1,619,790,585	76.8%	1,411,719,256	114.7%
7/1/2004	5,412,166,797	7,114,778,205	1,702,611,408	76.1%	1,383,965,233	123.0%
7/1/2005	5,450,664,963	7,575,419,808	2,124,754,845	72.0%	1,454,210,509	146.1%
7/1/2006	5,654,276,043	7,914,657,886	2,260,381,843	71.4%	1,568,350,023	144.1%

Valuation Date	7/1/06
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Dollar Closed
Remaining Amortization Period	21 years
Asset Valuation Method	5 Year Moving Average (see Appendix C)
Actuarial Assumptions:	
Investment Rate of Return	7.5%
Projected Salary Increases	5.1% - 9.0%
Cost of Living Adjustment	2%

**TABLE 12**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ACCOUNTING INFORMATION FOR GASB 25**

**Schedule of Employer Contributions**  
**For the Fiscal Year Ended June 30**

Year	Annual Required Contribution	Percentage Contributed
2001	\$169,642,126	77.3%
2002	187,991,746	74.3%
2003	232,891,719	59.1%
2004	257,038,902	51.9%
2005	266,044,444	52.5%
2006	309,980,339	55.3%

**TABLE 13**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**FASB NO. 35 INFORMATION**  
**ACTUARIAL PRESENT VALUE OF ACCUMULATED BENEFITS**

The actuarial present value of vested and nonvested accumulated System benefits is computed on an ongoing System basis in order to provide information on benefit liabilities calculated in accordance with Financial Accounting Standards Board Statement No. 35. In this calculation, a determination is made of all benefits earned by current participants 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. *An assumption of 2% annual 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.*

Vested benefits		
Active members	\$ 1,808,051,099	\$ 1,595,052,780
Terminated vested members	282,649,382	282,477,078
Unclaimed contributions	17,397,925	15,912,578
Limited benefit	1,069,635	1,121,549
Retirees and beneficiaries	3,034,316,856	2,841,842,164
Supplemental medical insurance premiums	293,996,456	289,949,485
Total vested benefits	\$ 5,437,481,353	\$ 5,026,355,634

Nonvested benefits		
Active members	\$ 200,216,350	\$ 332,839,164
Members who have not completed an application	833,243	754,964
Total nonvested benefits	\$ 201,049,593	\$ 333,594,128
<b>Total accumulated benefits</b>	<b>\$ 5,638,530,946</b>	<b>\$ 5,359,949,762</b>
Market value of assets available for benefits	\$ 5,817,165,538	\$ 5,504,489,147
Funded ratio	103.2%	102.7%

**Number of members**

Vested members		
Active members	22,314	21,512
Terminated vested members	5,568	5,521
Retirees and beneficiaries	24,372	23,679
Total vested members	52,254	50,712
Nonvested active members	23,158	22,406
<b>Total members</b>	<b>75,412</b>	<b>73,118</b>

**TABLE 13 (continued)**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**FASB NO. 35 INFORMATION**  
**ACTUARIAL PRESENT VALUE OF ACCUMULATED 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.

Present value of accrued benefits as of July 1, 2005	\$ 5,359,949,762
Increase/(decrease) during the year attributable to:	
Normal cost and (gains)/losses	110,772,716
Increase for interest due to discount period	389,040,022
Benefits paid	(345,498,936)
Plan provision change	124,267,382
Assumption change	0
Net increase/(decrease)	\$ 278,581,184
Present value of accrued benefits as of July 1, 2006	\$ 5,638,530,946

**TABLE 14**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**TEN-YEAR PROJECTED BENEFIT PAYMENTS**

The chart below shows estimated benefits expected to be paid over the next ten years, based on the assumptions used in this valuation. The "Actives" column shows benefits expected to be paid to members currently active on July 1, 2006. The "Retirees" column shows benefits expected to be paid to all other members. This includes those who, as of July 1, 2006, are receiving benefit payments or who terminated employment and are entitled to a deferred vested benefit.

**Retirement, Survivor, and Withdrawal Benefits**

<b>Year Ending</b> <b>June 30</b>	<b>Actives</b>	<b>Retirees</b>	<b>Total</b>
2007	\$16,519,225	\$331,043,684	\$347,562,909
2008	41,271,674	332,433,310	373,704,984
2009	68,186,566	333,110,419	401,296,985
2010	97,260,925	333,702,570	430,963,495
2011	128,153,912	333,505,829	461,659,741
2012	160,748,501	332,881,088	493,629,589
2013	194,895,612	331,891,678	526,787,290
2014	230,625,079	330,743,126	561,368,205
2015	267,783,806	329,322,057	597,105,863
2016	305,607,099	326,952,040	632,559,139

**Supplementary Medical Premium Benefits**

<b>Year Ending</b> <b>June 30</b>	<b>Actives</b>	<b>Retirees</b>	<b>Total</b>
2007	\$1,222,594	\$16,723,743	\$17,946,337
2008	2,826,190	16,371,566	19,197,756
2009	4,477,751	16,047,733	20,525,484

**APPENDIX A**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**COMPARATIVE SUMMARY OF MEMBER DATA**

		Actuarial Valuation as of 7/1/2006	7/1/2005	% Change
<b>Summary of Data</b>				
1. Active members				
a. Number				
i) Active members	43,488	43,259	43,259	0.5%
ii) Members without an application	1,984	659	659	201.1%
iii) Total	45,472	43,918	43,918	3.5%
b. Annual compensation	\$ 1,568,350,02	\$ 1,454,210,50	\$ 1,454,210,50	7.8%
	3	9	9	
c. Average annual compensation	34,490	33,112	33,112	4.2%
d. Average age	46.2	45.7	45.7	1.1%
e. Average service	10.7	10.5	10.5	2.2%
2. Accumulated member contributions				
a. Active members	\$ 383,989,541	\$ 360,106,166	\$ 360,106,166	6.6%
b. Unclaimed contribution amounts	17,397,925	15,912,578	15,912,578	9.3%
c. Members without applications	1,868,655	1,523,808	1,523,808	22.6%
d. Total	\$ 403,256,121	\$ 377,542,552	\$ 377,542,552	6.8%
3. Vested terminated members				
a. Number	4,150	4,162	4,162	(0.3%)
b. Annual deferred benefits	\$ 33,334,936	\$ 32,524,299	\$ 32,524,299	2.5%
c. Average annual deferred benefit	\$ 8,033	\$ 7,815	\$ 7,815	2.8%
d. Annual supplemental medical insurance premiums	\$ 5,229,000	\$ 5,244,120	\$ 5,244,120	(0.3%)
4. Assumed deferred vested - count		1,418	1,359	4.3%
5. Retired members				
a. Number	20,672	20,165	20,165	2.5%
b. Annual retirement benefits	\$ 297,237,745	\$ 275,940,893	\$ 275,940,893	7.7%
c. Average annual retirement benefit	\$ 14,379	\$ 13,684	\$ 13,684	5.1%
d. Annual supplemental medical insurance premiums	\$ 15,780,446	\$ 17,166,240	\$ 17,166,240	(8.1%)
6. Beneficiaries				
a. Number	2,381	2,250	2,250	5.8%
b. Annual retirement benefits	\$ 20,882,510	\$ 18,845,956	\$ 18,845,956	10.8%
c. Average annual deferred benefit	\$ 8,770	\$ 8,376	\$ 8,376	4.7%
7. Disabled members				
a. Number	1,319	1,264	1,264	4.4%
b. Annual retirement benefits	\$ 11,616,411	\$ 10,648,153	\$ 10,648,153	9.1%
c. Average annual retirement benefit	\$ 8,807	\$ 8,424	\$ 8,424	4.5%
d. Annual supplemental medical insurance premiums	\$ 949,673	\$ 991,620	\$ 991,620	(4.2%)
8. Total members included in valuation		75,412	73,118	3.1%

**APPENDIX A**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**MEMBER DATA RECONCILIATION**

	Receiving Benefits					Total Members
	Active Members	Vested Terminated	Retirees	Disability Retirees	Benefici- aries	
<b>As of July 1, 2005</b>	<b>43,258</b>	<b>5,520</b>	<b>20,165</b>	<b>1,264</b>	<b>2,250</b>	<b>72,457</b>
Age retirements	(995)	(241)	1,236	0	0	0
Disability retirements	(49)	(46)	0	95	0	0
Deaths without payments continuing	0	0	(593)	(34)	(92)	(719)
Deaths with payments continuing	(35)	(19)	(157)	(12)	223	0
Nonvested terminations/refund of contributions	(3,462)	(141)	0	0	0	(3,603)
Vested terminations	(579)	579	0	0	0	0
Transfers	0	0	0	0	0	0
Data adjustments	(15)	19	21	6	0	31
Rehires	103	(103)	0	0	0	0
New entrants during the year	5,262	0	0	0	0	5,262
No applications*	1,984	0	0	0	0	1,984
Net Change	2,214	48	507	55	131	2,955
<b>As of July 1, 2006</b>	<b>45,472</b>	<b>5,568</b>	<b>20,672</b>	<b>1,319</b>	<b>2,381</b>	<b>75,412</b>

\*Members contributing to the System but for whom no enrollment application has been received.

**APPENDIX A**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**DATA TAPE RECONCILIATION**

	Active	Retired	Vested Terminated	Total
Records submitted on data tape	43,633	40,313	4,176	88,122
Remove deceased retiree records	0	(15,941)	0	(15,941)
Remove unusable data	(16)	0	0	(16)
Remove those with another status	(129)	0	(26)	(155)
Add those with no application	1,984	0	0	1,984
Add assumed vesteds	<u>0</u>	<u>0</u>	<u>1,418</u>	<u>1,418</u>
<b>Total valued</b>	<b>45,472</b>	<b>24,372</b>	<b>5,568</b>	<b>75,412</b>

**APPENDIX A**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF MEMBERSHIP DATA**

**ACTIVE MEMBER DATA**

---

	<b>7/1/2006</b>	<b>7/1/2005</b>
<b>Regular</b>		
Number	40,353	NA
Average Current Age	46.4	NA
Average Service	10.8	NA
Average Pay	\$34,908	NA
<b>Elected Officials</b>		
Number	767	NA
Average Current Age	53.7	NA
Average Service	14.9	NA
Average Pay	\$44,774	NA
<b>Hazardous Duty</b>		
Number	2,368	NA
Average Current Age	40.0	NA
Average Service	8.3	NA
Average Pay	\$32,194	NA
<b>Total</b>		
Number	43,488 *	43,259
Average Current Age	46.2	45.7
Average Service	10.7	10.5
Average Pay	\$34,934	\$33,112

\*Count excludes those with no application

NA = Not available from prior actuary's report.

**APPENDIX A**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF MEMBERSHIP DATA**

**INACTIVE MEMBER DATA**

---

	<b>7/1/2006</b>	<b>7/1/2005</b>
<b>Retirees</b>		
Number	20,672	20,165
Average Annual Benefit	\$14,379	\$13,684
Average Age	70.9	NA
<b>Disability Retirees</b>		
Number	1,319	1,264
Average Annual Benefit	\$8,807	\$8,424
Average Age	60.2	NA
<b>Beneficiaries</b>		
Number	2,381	2,250
Average Annual Benefit	\$8,770	\$8,376
Average Age	71.6	NA
<b>Total</b>		
Number	24,372	23,679
Average Annual Benefit	\$13,529	\$12,899
Average Age	70.4	NA

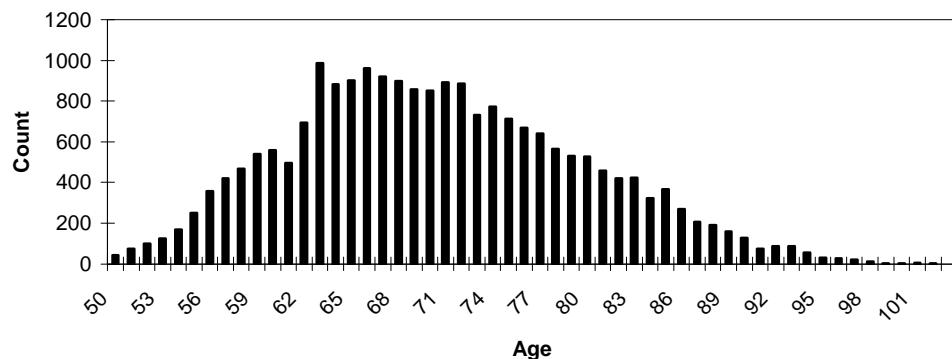
**Vested Members**

Number	5,568	5,521
Average Annual Benefit	\$9,754	\$10,192
Average Age	50.4	NA

NA = Not available from prior actuary's report.

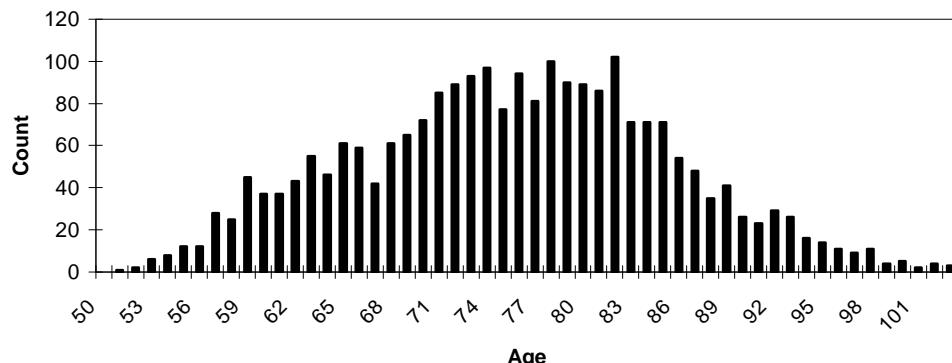
**APPENDIX A**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**DISTRIBUTION OF RETIREES AND BENEFICIARIES**  
as of July 1, 2006

**All Retirees (excluding Beneficiaries)**



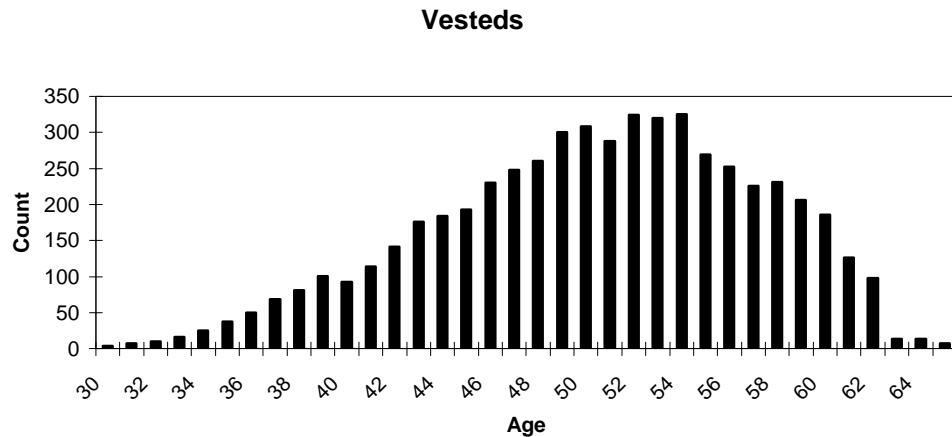
Count: 21,991 Average age: 70.26 Average benefit: \$ 14,045

**Beneficiaries**



Count: 2,381 Average age: 71.6 Average benefit: \$ 8,770

**APPENDIX A**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**DISTRIBUTION OF VESTED MEMBERS**  
as of July 1, 2006



Count: 5,568 Average age: 50.4 Average benefit: \$ 9,754

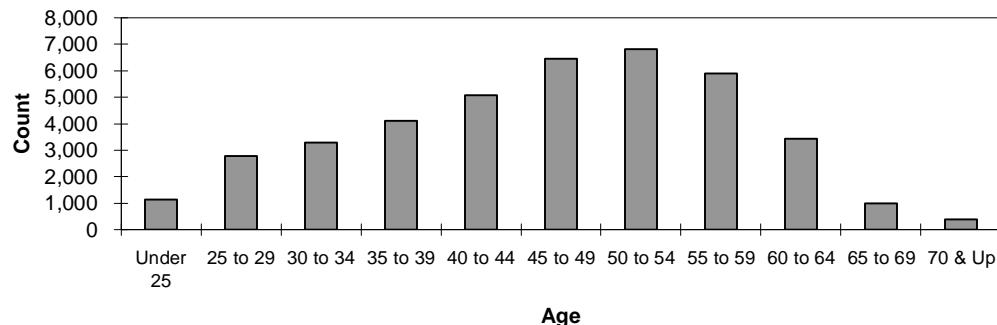
Includes assumed vested members

**APPENDIX A**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**DISTRIBUTION OF ACTIVE MEMBERS**  
as of July 1, 2006

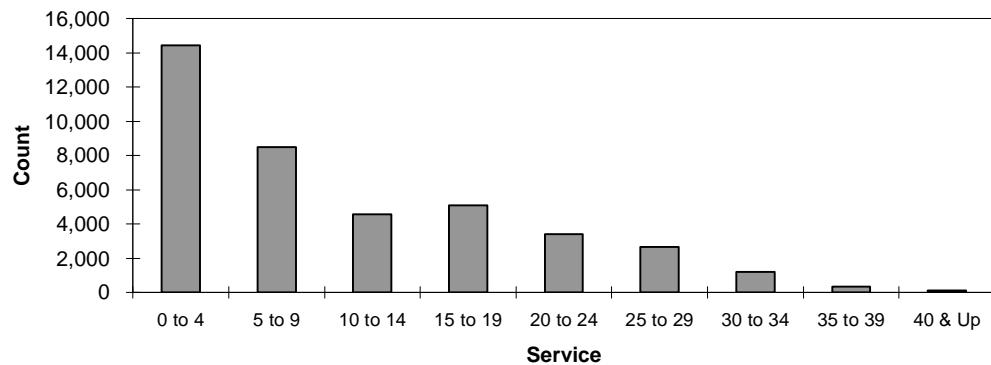
**Regular Members**

Age	Service										Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up		
Under 25	1,128	10	0	0	0	0	0	0	0	0	1,138
25 to 29	2,367	410	3	0	0	0	0	0	0	0	2,780
30 to 34	1,980	1,116	184	6	0	0	0	0	0	0	3,286
35 to 39	1,890	1,265	653	284	7	0	0	0	0	0	4,099
40 to 44	1,745	1,172	702	942	446	57	0	0	0	0	5,064
45 to 49	1,736	1,264	749	1,008	954	702	44	0	0	0	6,457
50 to 54	1,553	1,214	801	1,029	799	947	455	27	0	0	6,825
55 to 59	1,182	1,038	775	970	684	556	475	184	23	0	5,887
60 to 64	605	695	485	589	386	291	198	114	63	0	3,426
65 to 69	170	237	167	202	83	67	35	18	20	0	999
70 & Up	76	80	59	80	40	28	18	4	7	0	392
Total	14,432	8,501	4,578	5,110	3,399	2,648	1,225	347	113	0	40,353

**Age Distribution**



**Service Distribution**



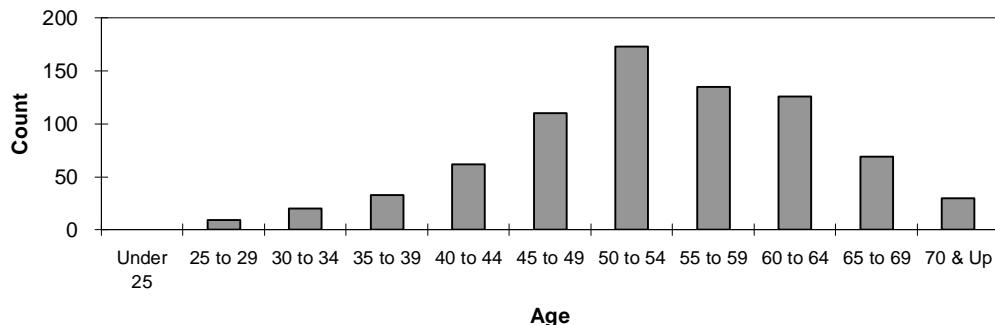
Excludes members who have not filed an application

**APPENDIX A**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**DISTRIBUTION OF ACTIVE MEMBERS**  
as of July 1, 2006

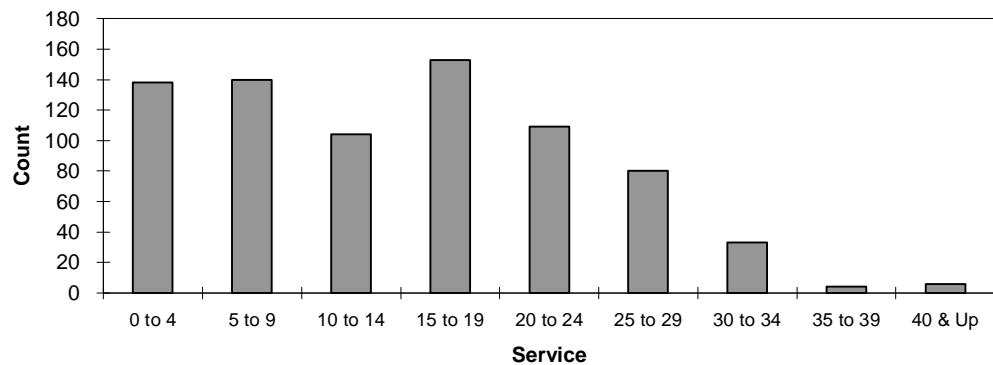
**Elected Members**

Age	Service										Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up		
Under 25	0	0	0	0	0	0	0	0	0	0	0
25 to 29	8	1	0	0	0	0	0	0	0	0	9
30 to 34	10	6	3	1	0	0	0	0	0	0	20
35 to 39	10	16	7	0	0	0	0	0	0	0	33
40 to 44	13	10	12	15	12	0	0	0	0	0	62
45 to 49	19	15	11	23	23	16	3	0	0	0	110
50 to 54	23	21	24	33	28	33	9	2	0	0	173
55 to 59	19	27	16	27	20	13	13	0	0	0	135
60 to 64	22	23	13	31	16	13	4	1	3	126	
65 to 69	10	15	13	14	8	3	4	0	2	69	
70 & Up	4	6	5	9	2	2	0	1	1	30	
Total	138	140	104	153	109	80	33	4	6	767	

**Age Distribution**



**Service Distribution**

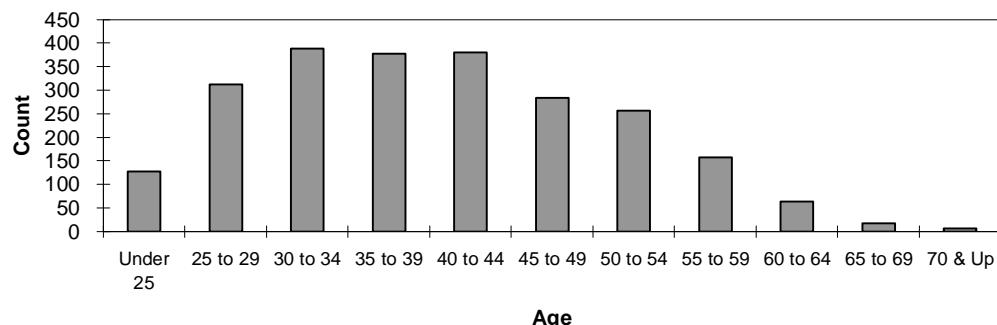


**APPENDIX A**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**DISTRIBUTION OF ACTIVE MEMBERS**  
as of July 1, 2006

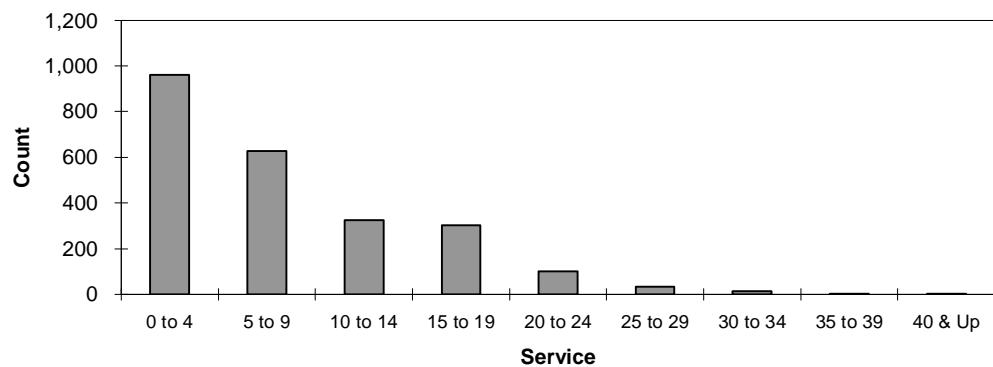
**Hazardous Duty Members**

Age	Service										Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up		
Under 25	127	0	0	0	0	0	0	0	0	0	127
25 to 29	262	50	0	0	0	0	0	0	0	0	312
30 to 34	202	159	27	0	0	0	0	0	0	0	388
35 to 39	127	135	91	25	0	0	0	0	0	0	378
40 to 44	100	92	62	108	18	0	0	0	0	0	380
45 to 49	55	70	49	68	32	9	1	0	0	0	284
50 to 54	47	59	49	54	27	13	6	1	0	0	256
55 to 59	28	34	31	34	16	8	7	0	0	0	158
60 to 64	9	20	10	12	6	2	1	2	2	2	64
65 to 69	3	8	4	0	2	0	0	0	0	0	17
70 & Up	2	1	2	0	0	1	0	0	0	0	6
Total	962	628	325	301	101	33	15	3	2	2,370	

**Age Distribution**



**Service Distribution**



## APPENDIX B

### OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM

### SUMMARY OF SYSTEM PROVISIONS

Following is a summary of the major System provisions used in the actuarial valuation of the System.

<b>Effective date and fiscal year</b>	The System became effective January 1, 1964. The fiscal year is July 1 to June 30.
<b>Administration</b>	The System is administered by a 13 member Oklahoma Public Employees Retirement System Board of Trustees. The Board acts as the fiduciary for investment and administration of the System.
<b>Employees included</b>	All permanent employees of the State of Oklahoma, legislated agencies, and any other employer such as county, county hospital, city, or trust in which a municipality is the primary beneficiary, are eligible to join if: <ul style="list-style-type: none"><li>- the employee is not eligible for or participating in another retirement system authorized under Oklahoma law, is covered by Social Security and not participating in the U.S. Civil Service retirement System,</li><li>- the employee is scheduled for 1,000 hours per year and salary is not less than the hourly rate of the monthly minimum wage for State employees (for employees of local government employers, not less than the hourly rate of the monthly minimum wage for such employees).</li></ul>
	Membership is mandatory for new eligible employees on the first of the month following employment.
<b>Employer and employee contributions</b>	Most State employees except elected officials and Hazardous Duty employees:  Employee: 3.5% Employer: 12.5%* Total: 16.0%
	*The employer contribution rate will increase by 1% annually through the fiscal year ending June 30, 2011 at which time it reaches 16.5%.
	Prior to July 1, 2006 the employee contribution rate varied on pay above/below \$25,000 as shown in the chart at the end of this section. This plan provision was changed by the 2006 Legislature.
	Elected officials contribute 4.5%, 6%, 7.5%, 8.5%, 9%, or 10% depending upon the computation factor used in determining their benefit.

**APPENDIX B**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF SYSTEM PROVISIONS**

(continued)

**Employer and employee contributions**  
 (continued)

Contributions for Hazardous Duty employees are summarized at the end of this appendix.

Local government employees contribute from 3.5% to 8.5% of pay, depending on the rate chosen by their employers.

Starting in 2004, regular members may make an election to contribute an additional 2.91% of pay and increase their accrual rate for future years of service to 2.5% (referred to as Step Up Option).

Contributions are based on compensation defined by the Board.

**Contribution Summary:**

**Regular State Employee Contributions  
For Pay Under \$25,000**

Fiscal Year	Employer Contribution	Employee Contribution	Total Contribution	Applicable Salary Cap
1994-1995	11.5%	2.0%	13.5%	\$50,000
1995-1996	11.5%	2.0%	13.5%	\$60,000
1996-1997	12.0%	2.5%	14.5%	\$70,000
1997-1998	12.5%	3.0%	15.5%	\$80,000
1998-1999	12.5%	3.0%	16.0%	No Cap
1999-2005	10.0%	3.0%	13.0%	No Cap
2005-2006	11.5%	3.0%	14.5%	No Cap

**Regular State Employee Contributions  
For Pay Between \$25,000 and Cap**

Fiscal Year	Employer Contribution	Employee Contribution	Total Contribution	Applicable Salary Cap
1994-1995	11.5%	3.5%	15.0%	\$50,000
1995-1996	11.5%	3.5%	15.0%	\$60,000
1996-1997	12.0%	3.5%	15.5%	\$70,000
1997-1998	12.5%	3.5%	16.0%	\$80,000
1998-1999	12.5%	3.5%	16.0%	No Cap
1999-2005	10.0%	3.5%	13.5%	No Cap
2005-2006	11.5%	3.5%	15.0%	No Cap

**APPENDIX B**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF SYSTEM PROVISIONS**

(continued)

**Employer and employee contributions (continued)**

**Contribution Summary:** (continued)

<b>Fiscal Year</b>	<b>Regular State Employee Contributions For All Pay</b>		
	<b>Employer Contribution</b>	<b>Employee Contribution</b>	<b>Total Contribution</b>
2006-2007	12.5%	3.5%	16.0%
2007-2008	13.5%	3.5%	17.0%
2008-2009	14.5%	3.5%	18.0%
2009-2010	15.5%	3.5%	19.0%
2010-2011	16.5%	3.5%	20.0%

**Service**

**Prior service**

All service of the employee prior to the employer's entry date is credited prior service providing the participating employer joined on or before January 1, 1975. Prior service for employees of employers who join after January 1, 1975, may be purchased by the employee. Prior service is allowed for certain active wartime military service (maximum 5 years credit) for members employed prior to July 1, 2000 and for employment with public schools or Board of Regents for Higher Education prior to July, 1943. Service need not be continuous employment to be credited.

**Participating service**

After the employer's entry date, a member's participating service is credited for all periods of employment for which required contributions are made. Service is prorated according to hours worked per month on and after July 1, 1979. Certain active wartime military service is credited, provided the contribution accumulation is not withdrawn. Active and retired members are credited with additional participating service based on their accumulated contributions prior to June 30, 1977 (if not withdrawn prior to retirement), according to the following:

<b>Member Accumulation</b>		<b>Additional Years</b>
\$ 1	to	\$ 500
501	to	1,000
1,001	to	1,500
1,501	to	2,000
2,001	or	More

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.

**APPENDIX B**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF SYSTEM PROVISIONS**  
(continued)

**Service (continued)**

**Participating service**

A member may receive credit for those years of service as an elected official if the member is not receiving credit for that service in any other public retirement system. The member must pay an amount equal to the actuarial cost to fund the difference between the member's projected benefits with and without the additional service credit.

The total participating service of a member who retires or terminates employment and elects a vested benefit shall include up to one hundred thirty (130) days of unused sick leave accumulated subsequent to August 1, 1959, during the member's employment with any participating employer. Such credit shall be added in terms of whole months. If unused sick leave entitles the member to an additional year of service, the additional cost is borne by the employer.

A member may receive credit for those years of credited service accumulated by the member while a member of the Oklahoma Firefighters Pension and Retirement System, the Oklahoma Police Pension and Retirement System, the Uniform Retirement System for Justices and Judges, the Oklahoma Law Enforcement Retirement System, or the Teachers' Retirement System of Oklahoma, if the member is not receiving or eligible to receive retirement credit or benefits from this service in any other public retirement system. The member may receive credit for this service by paying the amount actuarially determined to cover the cost of the previous service.

**Credited service**

Credited service equals prior service plus participating service. This service is added together and the result is rounded up to the next year if the number of remaining months is equal to or greater than six.

**Compensation**

The member's basic salary and wages as defined by the Board of Trustees includes amounts for deferred tax sheltered annuities. Overtime and moving expenses are excluded. Any compensation in excess of the maximum applicable amount is excluded.

**APPENDIX B**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF SYSTEM PROVISIONS**  
(continued)

**Final average compensation**

The average of the thirty-six highest months of compensation earned within the last ten (10) years of participating service, subject to any applicable salary caps and on which contributions have been made.

For all members hired prior to July 1, 1995, the minimum final average compensation is \$13,800. For members hired on or after July 1, 1995, no minimum is applied until the member has fifteen (15) years of service. For members with between fifteen (15) and twenty (20) years of service, the minimum final average compensation is \$6,900. For members with more than twenty (20) years of service, the minimum is \$13,800.

**Normal retirement date**

Normal retirement is the earliest of: first day of the month coinciding with or next following the 62<sup>nd</sup> birthday; or, the first day of the month coinciding with or following the date at which the sum of a member's age and number of years of credited service total eighty (80) if the member was hired prior to July 1, 1992; or following the date at which the sum of member's age and number of years of credited service total ninety (90) if the member was hired after July 1, 1992. Members employed after January 1, 1983 must complete at least six years of full-time equivalent employment with a participating employer before receiving any retirement benefits.

The normal retirement date for elected officials is the first of the month coinciding with or following the official's 60<sup>th</sup> birth date or the first day of the month coinciding with or following the date at which the sum of the member's age and years of credited service total eighty (80).

**Normal retirement benefit**

The benefit on or after normal retirement, payable monthly for life to non-elected members, is as follows:

2% of final average compensation up to applicable maximum compensation multiplied by years of credited service.

For members who have elected the "step up" option, a 2.5% multiplier is applied to the full "stepped up" years.

**APPENDIX B**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF SYSTEM PROVISIONS**  
(continued)

The benefit payable monthly for life to elected officials is the greater of 1) the preceding benefit, or 2) the benefit calculated using highest annual compensation as an elected official up to the maximum applicable limit times credited service multiplied by the following applicable contribution rate:

<u>% of Compensation Contributed</u>	<u>% of Highest Annual Compensation</u>
4.5%	1.9%
6.0	2.5
7.5	3.0
8.5	3.4
9.0	3.6
10.0	4.0

Elected officials who became members after July 1, 1990 must participate in the System as an elected official for at least six years to qualify for the elected official benefit formula.

**Early retirement benefit**

A member with at least ten (10) years of participating service may retire as early as age 55. The benefit is determined by the normal retirement formula based on years of credited service and Final Average Compensation (highest annual compensation for elected officials) at termination. The percentage payable at early retirement age is:

<u>Elected Officials</u>		<u>Other Members</u>	
Age	Percentage	Age	Percentage
60	100%	62	100.0%
59	94	61	93.3
58	88	60	86.7
57	82	59	80.0
56	76	58	73.3
55	70	57	66.7
		56	63.3
		55	60.0

**Disability benefit**

A member with at least eight (8) years of credited service is eligible for a disability benefit provided the member qualifies for disability benefits as certified by the Social Security Administration or the Railroad Retirement Board within one year after the date last physically on the job. The benefit is determined by the normal retirement formula based on service and salary history at date of disability. The benefit is payable immediately without actuarial reduction.

Option A is the only available form of survivor payment.

**APPENDIX B**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF SYSTEM PROVISIONS**  
(continued)

**Vested benefit**

A member who terminates after eight years of credited service (six years for elected officials) is eligible for a vested benefit determined by the normal retirement formula, based on service and compensation to date of termination.

The benefit is payable at age 62 (or age 60 if an elected official), provided the member's contribution accumulation is not withdrawn and the member has at least six years of full time equivalent employment. A member with 10 or more years of service also has the option of reduced benefits at early retirement age.

Members terminating with less than eight years (or six years if an elected official) of credited service may elect to receive a refund of their contribution accumulation.

A limited additional retirement service benefit of \$200 per month is payable up to the total of excess contributions paid by the member for those vested members as of July 1, 1998. This is not applicable for active members who received a transfer of excess contributions or retired members as of July 1, 1998.

**Preretirement death benefit**

The spouse of a deceased active member who had met normal, early or vested retirement provisions may elect a spouse's benefit. The spouse's benefit is the benefit that would have been paid if the member had retired and elected the joint and 100% survivor option (Option B). If named as the designated beneficiary, the spouse may elect a refund of the member's contribution accumulation in lieu of the Option B monthly benefit.

In addition to the provisions above, the eligible spouse of a deceased elected official with at least six (6) years of elected service and married at least three years immediately preceding death may elect to receive 50% of the benefit the member would be eligible to receive. The starting date of benefits is the date the deceased member would have been eligible for early or normal retirement. Benefits cease upon death or remarriage of the surviving spouse.

Any other designated beneficiary of a member other than an eligible spouse will receive a refund of the members' contribution accumulation.

**APPENDIX B**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF SYSTEM PROVISIONS**

(continued)

**Postretirement death benefit**

Upon the death of a retired member, a \$5,000 lump-sum death benefit will be paid to the member's beneficiary, or estate if there is no beneficiary.

**Optional forms of retirement benefits**

The normal form of benefit for a single member other than an elected official is a single life monthly annuity with a guaranteed refund of the contribution accumulation. The normal form for a married member is a 50% joint and survivor annuity benefit. Optional forms of payment with actuarial reduction are available to all members retiring under the normal retirement, early retirement or vested retirement provisions. These options are:

Option A – Joint and 50% Survivor Annuity with a return to the unreduced amount if the joint annuitant dies.

Option B – Joint and 100% Survivor Annuity with a return to the unreduced amount if the joint annuitant dies.

Option C – Life Annuity with a minimum of 120 monthly payments.

For married members, spousal consent is required for any option other than Option A.

Medicare Gap Benefit Option allows members under age 65 to receive a higher benefit before age 65 (to help pay health insurance premiums) and a permanently lower benefit after age 65.

**Postretirement medical benefit**

The System will contribute the lesser of \$105 per month or the Medicare Supplement Premium to the Oklahoma State and Education Employee's Group Health Insurance Program (or other eligible employer health plans) for members receiving retirement benefits.

**Expenses**

The expenses of administering the retirement system are paid from the retirement trust fund.

**Hazardous Duty Members  
(Department of Corrections,  
Oklahoma Military Department Firefighters)  
Benefits**

Members covered by the Hazardous Duty Provisions have the retirement eligibility requirements, contribution rates and benefit formula described below.

**Department of Corrections:**

The normal retirement is the earliest of: 20 years of service as a member covered by the Department of Corrections Hazardous Duty Provisions; or, the first day of the month coinciding with or next following the 62<sup>nd</sup> birthday; or, the first day of the month coinciding with or following the date at which the sum of a member's age and number of years of credited

**APPENDIX B**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF SYSTEM PROVISIONS**  
(continued)

**Hazardous Duty Members  
(Department of Corrections,  
Oklahoma Military Department Firefighters)  
Benefits (continued)**

service total eighty (80) if the member was hired prior to July 1, 1992, or following the date at which the sum of a member's age and number of years of credited service total ninety (90) if the member was hired after July 1, 1992. Members employed after January 1, 1983 must complete at least six years of full-time equivalent employment with a participating employer before receiving any retirement benefits. The benefit formula is 2.5% of final average compensation, multiplied by the number of years of service as an eligible officer for service, not exceeding 20 years. For service in excess of 20 years the benefit formula is 2% of final average compensation.

Members eligible for these benefits with at least five years of experience in their positions remain eligible to retire after 20 years even if they transfer to positions within DOC that are not eligible to retire after 20 years.

Special Surviving Spouse and Child benefits for any member employed by the Department of Corrections (DOC) killed or mortally wounded during the performance of duty are equal to 2.5% of final average monthly compensation multiplied by the greater of the member's actual service or 20 years.

In addition, an amount of \$400 per month will be paid as long as a child of the deceased member is under the age of 18 (or 22 if enrolled fulltime at an institution of higher education).

Contributions for members covered by the Department of Corrections Hazardous Duty Provisions are:

<u>Year</u>	<u>Up to \$25,000</u>	<u>Above \$25,000</u>
1994/1995	6.5%	8.0%
1995/1996	6.5%	8.0%
1996/1997	7.0%	8.0%
1997/1998	7.5%	8.0%

<u>First 20 Years of Service</u>	<u>Service Beyond 20 Years</u>	
	<u>Up to \$25,000</u>	<u>Above \$25,000</u>
1998/1999	8.0%	3.0%
1999/2000	8.0%	3.0%
2000 and on	8.0%	3.0%
		3.5%

**APPENDIX B**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**SUMMARY OF SYSTEM PROVISIONS**  
(continued)

**Hazardous Duty Members  
(Department of Corrections,  
Oklahoma Military Department Firefighters)  
Benefits (continued)**

**Oklahoma Military Department Firefighters:**

The benefit for Oklahoma Military Department firefighters who began employment July 1, 2002 and after is based on a 2.5% benefit multiplier. They are also eligible for full benefits after 20 years as a firefighter and their employee contribution rate is 8%. Oklahoma Military Department firefighters employed prior to July 1, 2002 were given a one time option to (a) have their benefit formula, retirement eligibility, and employee contribution rate remain unchanged, (b) apply the new provisions (including the new contribution rate) to service after January 1, 2003, or (c) apply the new benefit formula and retirement eligibility to all of the member's service, apply the 8% contribution rate for service after July 1, 2002, and make a contribution equal to the increase in the actuarial value of the member's retirement benefit.

In contrast to DOC members, the 2.5% formula and 8% contribution rate applies to service after 20 years.

## APPENDIX C

### OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM

#### ACTUARIAL METHODS AND ASSUMPTIONS

##### **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 of the annual actuarial cost of pension System 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.

##### **Asset Valuation Method**

The actuarial value of assets is based on a five-year moving average of expected and actual market values determined as follows:

- at the beginning of each fiscal 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 fiscal 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 fiscal year;
- the difference between the expected actuarial asset value and the market value is the investment gain or loss for the previous fiscal year;
- the (final) actuarial asset value is the preliminary value plus 20% of the investment gains and losses for each of the five previous fiscal years, but in no case more than 120% of the market value or less than 80% of the market value.

##### **Amortization Method**

The Unfunded Actuarial Accrued Liability is amortized as a level dollar amount over a 40 year period from July 1, 1987. Given a stable active workforce, this amortization method is expected to produce a payment stream that decreases as a percent of covered payroll.

**APPENDIX C**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
(continued)

**Valuation Procedures**

No actuarial accrued liability in excess of the unclaimed contributions 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 has not occurred as of the valuation date.

The wages used in the projection of benefits and liabilities are considered earnings for the year ending June 30, 2006, increased by the salary scale to develop expected earnings for the current valuation year. Earnings are annualized for members with less than twelve months of reported earnings.

The calculations for the required State contribution are determined as of mid-year. This is a reasonable estimate since contributions are made on a monthly basis throughout the year.

Benefits above the projected 415 limit for active participants are assumed to be immaterial for the valuation.

The compensation limitation under IRC Section 401(a)(17) is considered in this valuation. On a projected basis, the impact of this limitation is insignificant.

Liability is included for members who appear to be deferred vested, but who are not in the vested data provided. An estimated benefit was calculated based on pay and service from prior valuations. A corrected benefit and status will be provided by the System when the actual benefit and status have been finalized.

Included in the valuation are "Members Without Applications." These members are contributing to the System but have not yet filled out an enrollment application. For these members, amounts are added to the active liability and normal cost based on the average liability and normal cost for a new member. They are also assigned the average compensation for new members. Additional compensation equal to the average for new members is added to total earnings so that these members would be reflected in the normal cost contribution.

A liability is included for contribution amounts due to be refunded to terminated vested members who made voluntary contributions to increase the maximum compensation limit prior to July 1, 1998. The System supplied the included amounts.

The System uses an assumption of a 2% annual COLA each year in developing liabilities and contribution rates. The System does not have an automatic COLA provision, but ad hoc COLAs have historically been granted by the Legislature every other year. In order to avoid actuarial gains in the year in which a COLA is not granted and an actuarial loss in the years in which a COLA is granted, the System's liabilities include a "COLA Reserve". The COLA Reserve is included in the actuarial accrued liability to account for expected cost of living adjustments to the benefits of retired participants that have not been granted by the valuation date. Any ad hoc increase granted will decrease the reserve amount by the cost of the increase. When the cost of an ad hoc increase is greater than the amount of the reserve, the reserve is set to zero and the period for calculating ungranted increases is set to the valuation date.

**APPENDIX C**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
(continued)

**SUMMARY OF ACTUARIAL ASSUMPTIONS**

**Economic Assumptions**

**Investment Return:** 7.5% net of investment expenses per annum, compounded annually.

**Salary Increases:** Sample rates below (midpoint of range shown):

<u>Nearest Age</u>	<u>% Increase</u>
20 - 24	9.0
25 - 29	8.0
30 - 34	6.7
35 - 39	6.1
40 - 44	5.8
45 - 49	5.4
50 - 54	5.1
55 - 59	5.1
60 - 64	5.1
65+	5.1

**Ad hoc benefit increase assumption:**

Monthly benefits                            2% per year.  
Medical supplement                        No increases assumed.

**Projection of 401(a)(17)  
compensation limit:**

Projected with inflation at 2.5%.

**APPENDIX C**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
(continued)

**Demographic Assumptions**

**Retirement age:**

Elected and non-elected members

<u>Nearest Age</u>	Annual Rates of Retirement Per 100 Eligible Members	
	<u>Those Eligible For Unreduced Retirement</u>	<u>Those Not Eligible For Unreduced Retirement</u>
50	10	N/A
51	10	N/A
52	10	N/A
53	10	N/A
54	10	N/A
55	10	4
56	10	5
57	11	5
58	12	6
59	13	7
60	14	7
61	35	20
62	30	N/A
63	15	N/A
64	25	N/A
65	30	N/A
66	25	N/A
67	23	N/A
68	22	N/A
69	21	N/A
70	100	N/A

**APPENDIX C**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
(continued)

**Demographic Assumptions (continued)**

**Retirement age (continued):**

Hazardous Duty	Annual Rates of Retirement Per 100 Eligible Members		
	<u>Service</u>	<u>Rate</u>	<u>Nearest Age</u>
20-21	25	50	N/A
21-30	18	51	N/A
30+	100	52	N/A
		53	N/A
		54	N/A
		55	4
		56	5
		57	5
		58	6
		59	7
		60	7
		61	20
		62	40
		63	22
		64	25
		65	40
		66	25
		67	23
		68	22
		69	21
		70	100

**Mortality Rates:**

Active Participants and nondisabled pensioners	RP-2000 combined active/retiree healthy mortality table projected to 2010 using Scale AA.
Disabled pensioners	RP-2000 combined active/retiree healthy mortality table projected to 2010 using Scale AA set forward 15 years for disabled experience.
Hazardous Duty	For Department of Corrections officers, we assumed the mortality rate is 10% higher than the above table while the participant is active. This 10% is assumed to be in-line-of-duty.

**APPENDIX C**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
(continued)

## Demographic Assumptions (continued)

**Disability Rates:** Graduated rates  
Disabled rates per 100 members

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	.01	.01
30	.02	.03
40	.08	.10
50	.41	.31
60	.85	.63

## **Withdrawal Rates:**

<u>Age</u>	<u>0-2 Years</u>	<u>2-3 Years</u>	<u>3-4 Years</u>	<u>4-5 Years</u>	<u>Over 5 Years</u>
25	0.2355	0.1891	0.1709	0.1369	0.1426
30	0.2210	0.1704	0.1554	0.1268	0.1004
35	0.2044	0.1535	0.1365	0.1215	0.0769
40	0.1809	0.1398	0.1207	0.1094	0.0589
45	0.1667	0.1248	0.1131	0.0945	0.0468
50	0.1400	0.1085	0.1029	0.0834	0.0436
55	0.1314	0.0934	0.0869	0.0704	0.0436

**Marital Status:**

Percentage married Males: 85%; Females: 85%

Males are assumed to be four years older than spouses.

## **Children:**

Special death benefits are provided upon the in-line-of-duty death of Department of Corrections employees who have young children. We have assumed the average age of the youngest child of such employees is nine and that 50% of such children will attend an institution of higher education to age 22.

## **Form of Payment:**

Participants are assumed to elect a life-only form of payment and are assumed to not elect a return of contributions if they are vested.

**APPENDIX C**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
(continued)

**Other Assumptions**

<b>Assumed age of commencement for deferred benefits</b>	Currently active members assumed to terminate in the future prior to retirement eligibility are assumed to benefits at age 62 (non-elected members) or age 60 (elected members). Currently inactive members with deferred benefits are assumed to commence benefits on a date provided by OPERS.
<b>Provision for expenses</b>	Administrative expenses, as budgeted by the Oklahoma Public Employees Retirement System.



**APPENDIX D**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**GLOSSARY OF TERMS**

<b>Actuarial Accrued Liability</b>	The difference between the actuarial present value of system benefits and the actuarial value of future normal costs. Also referred to as "accrued liability" or "actuarial liability".
<b>Actuarial Assumptions</b>	Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
<b>Accrued Service</b>	Service credited under the system which was rendered before the date of the actuarial valuation.
<b>Actuarial Equivalent</b>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate assumptions.
<b>Actuarial Cost Method</b>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement system benefit between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial funding method".
<b>Experience Gain (Loss)</b>	The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.
<b>Actuarial Present Value</b>	The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
<b>Amortization</b>	Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with lump sum payment.
<b>Normal Cost</b>	The actuarial present value of retirement system benefits allocated to the current year by the actuarial cost method.

**APPENDIX D**  
**OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
**GLOSSARY OF TERMS**  
(continued)

**Unfunded Actuarial Accrued Liability**      The difference between actuarial accrued liability and the valuation assets. Sometimes referred to as “unfunded actuarial liability” or “unfunded accrued liability”.

Most retirement systems have unfunded actuarial accrued liability. They arise each time new benefits are added and each time an actuarial loss is realized.

The existence of unfunded actuarial accrued liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liability and the trend in its amount (after due allowance for devaluation of the dollar).

## **ADDENDUM**

## ADDENDUM

### **OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM CERTIFICATION**

We have prepared an actuarial valuation of the State of Oklahoma Public Employees Retirement System as of July 1, 2006, for the fiscal year ending June 30, 2007. The results of the valuation are set forth in this addendum, which reflects the benefit provisions in effect on July 1, 2006.

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

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 (74 Okla.Stat, Section 909.1(H)):

Interest rate: 7.50%

COLA assumption: 2.00%

Mortality: RP-2000 Mortality Table for Employees, Healthy Retirees and Disabled Retirees with Mortality Projected Forward from 2000 using Scale AA.

Amortization period: 30 years, open period

Sources of all contributions and revenues, including dedicated tax free revenue and federal monies

All other assumptions, methodologies, and System provisions used are consistent with those used in the July 1, 2006 valuation.

The results shown in this Addendum are not consistent with those in the July 1, 2006, valuation. The July 1, 2006, valuation results were determined in accordance with generally accepted actuarial principles and practices that are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying opinion and supporting recommendations of the American Academy of Actuaries. 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, 2006, actuarial valuation.

Milliman's work product was prepared exclusively for the Oklahoma Public Employees Retirement System (OPERS) for a specific and limited purpose. It is a complex technical analysis that assumes a high level of knowledge concerning OPERS' operations, and used OPERS data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose other than to provide the required reporting to the Oklahoma State Pension Commission. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage a qualified professional for advice appropriate to its own specific needs.

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

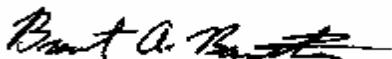
The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.



Patrice A. Beckham, F.S.A.

October 9, 2006

Date



Brent A. Banister, F.S.A.

October 9, 2006

Date



**Milliman**

This work product was prepared solely for OPERS for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

## ADDENDUM

### **OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM SUMMARY OF VALUATION RESULTS UNDER PRESCRIBED ASSUMPTIONS**

This supplemental report has been prepared to present the results of a valuation of the State of Oklahoma Public Employees Retirement System as of July 1, 2006, based on the prescribed assumptions under 74 Okla.Stat, Section 909.1(H), of current statutes and regulations issued thereunder.

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

	Actuarial Valuation as of		Change Between Years	
	July 1, 2006	July 1, 2005	Amount	Percent
<b>Summary of Costs</b>				
Required employer contribution for current year	\$333,987,922	\$301,743,270	\$32,244,652	10.7%
Actual employer contributions received in prior year	171,273,052	139,757,160	31,515,892	22.6%
<b>Funded Status</b>				
Actuarial accrued liability	\$8,080,284,787	\$7,665,911,831	\$414,372,956	5.4%
Actuarial value of assets	5,654,276,043	5,450,664,963	203,611,080	3.7%
Unfunded actuarial accrued liability	2,426,008,744	2,215,246,868	210,761,876	9.5%
Funded Ratio	70.0%	71.1%	(1.1%)	(1.6%)
<b>Market Value of Assets and Additional Liabilities</b>				
Market value of assets	\$5,817,165,538	\$5,504,489,147	\$312,676,391	5.7%

## ADDENDUM

### **OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM SUMMARY OF VALUATION RESULTS UNDER PRESCRIBED ASSUMPTIONS (continued)**

This supplemental report has been prepared to present the results of a valuation of the State of Oklahoma Public Employees Retirement System as of July 1, 2006, based on the prescribed assumptions under 74 Okla.Stat, Section 909.1(H), of current statutes and regulations issued thereunder.

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

	Actuarial Valuation as of			Percent Change in Amount	
			Amount		
	July 1,2006	July 1,2005			
<b>Summary of Contribution Requirements</b>					
1. Expected annual payroll	\$ 1,568,350,023	\$ 1,454,210,509		7.8%	
2. Total normal cost	\$ 186,295,904	\$ 166,494,032		11.9%	
3. Unfunded actuarial accrued liability	\$ 2,426,008,744	\$ 2,215,246,868		9.5%	
4. Amortization of unfunded actuarial accrued liability over 30 years	\$ 198,118,042	\$ 181,024,631		9.4%	
5. Budgeted expenses (provided by the System)	\$ 6,496,405	\$ 8,053,062		(19.3%)	
6. Total required contribution (2) + (4) + (5)	\$ 390,910,351	\$ 355,571,725		9.9%	
7. Estimated member contribution	\$ 56,922,429	\$ 53,828,455		5.7%	
8. Required employer contributions (not less than \$0) (6) – (7)	\$ 333,987,922	\$ 301,743,270		10.7%	
9. Previous year's actual contribution					
a. Member	\$ 55,988,703	\$ 52,017,896		7.6%	
b. Employer	\$ 171,273,052	\$ 139,757,160		22.6%	
c. Total	\$ 227,261,755	\$ 191,775,056		18.5%	

## ADDENDUM

### **OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM UNFUNDED ACTUARIAL ACCRUED LIABILITY**

This supplemental report has been prepared to present the results of a valuation of the State of Oklahoma Public Employees Retirement System as of July 1, 2006, based on the prescribed assumptions under 74 Okla.Stat, Section 909.1(H), of current statutes and regulations issued thereunder.

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

	<b>July 1, 2006</b>	<b>July 1, 2005</b>
1. Actuarial present value of benefits		
a. Active members	\$ 5,347,986,345	\$ 4,984,571,519
b. Terminated vested members and other nonactives	396,633,761	390,612,932
c. Retirees, disableds and beneficiaries	3,710,679,863	3,532,888,557
d. Total (a) + (b) + (c)	<u>\$ 9,455,299,969</u>	<u>\$ 8,908,073,008</u>
2. Actuarial present value of future normal costs	\$ 1,375,015,182	\$ 1,242,161,177
3. Total actuarial accrued liability (1 – 2)	\$ 8,080,284,787	\$ 7,665,911,831
4. Actuarial value of assets	\$ 5,654,276,043	\$ 5,450,664,963
5. Unfunded actuarial accrued liability (3) – (4), not less than \$0	\$ 2,426,008,744	\$ 2,215,246,868

## ADDENDUM

### **OKLAHOMA PUBLIC EMPLOYEES RETIREMENT SYSTEM NORMAL COST**

This supplemental report has been prepared to present the results of a valuation of the State of Oklahoma Public Employees Retirement System as of July 1, 2006, based on the prescribed assumptions under 74 Okla.Stat, Section 909.1(H), of current statutes and regulations issued thereunder.

The components of normal cost under the System's funding method are:

<b>Component</b>	<b>July 1, 2006</b>	<b>July 1, 2005</b>
Retirement benefits	\$ 126,860,568	\$ 113,716,485
Withdrawal benefits	23,431,707	18,873,200
Disability benefits	2,526,802	5,473,001
Death benefits	7,896,229	3,915,820
Refunds	10,973,368	6,946,778
Supplemental medical insurance premiums	9,032,513	9,749,637
Normal cost for people who have not submitted an application	5,574,717	1,801,254
Total normal cost	\$ 186,295,904	\$ 166,494,032