



**Report on the Annual Valuations of the  
Kentucky Employees Retirement System  
County Employees Retirement System  
State Police Retirement System**

**Prepared as of June 30, 2006**



**Cavanaugh Macdonald**  
CONSULTING, LLC  
*The experience and dedication you deserve*

November 1, 2006

Board of Trustees  
Kentucky Retirement Systems  
Perimeter Park West  
1260 Louisville Road  
Frankfort, Kentucky 40601

**Subject: Certification of Actuarial Results**

Dear Members of the Board:

The fiftieth annual actuarial valuation of the Kentucky Employees Retirement System, the forty-seventh annual actuarial valuation of the County Employees Retirement System, and the forty-eighth annual actuarial valuation of the State Police Retirement System have been completed and the reports prepared. These reports describe the current actuarial condition of the Kentucky Retirement Systems (KRS), determine the calculated employer contribution rates, and analyze fluctuations in these contribution rates.

Under state statute, the Board of Trustees must approve the employer contribution rate for the upcoming fiscal year based upon the results of the most recent annual valuation. These rates are determined actuarially based upon current membership data, plan provisions, and the assumptions and funding policies adopted by the KRS Board. Employer contribution rates become effective one year after the valuation date. The recently completed June 30, 2006 actuarial valuation will be used by the Board of Trustees to certify the employer contribution rates for the fiscal year beginning July 1, 2007 and ending June 30, 2008.

**Funding Objectives & Policies**

For each retirement system, KRS administers both a pension and insurance fund to provide for monthly retirement allowances and retiree insurance benefits respectively. The total employer contribution rate is comprised of a contribution to each respective fund.

Relative to the pension fund, a contribution rate has been established which consists of the normal cost and an amortization payment on the unfunded accrued liability (UAL). The normal cost is expected to remain level as a percent of payroll in future years. The amortization of any UAL is made over 30 years from the establishment of the amortization base using a level percent of payroll amortization method. Each year any actuarial gains or losses, along with any other changes in the actuarial liability (such as the retiree COLA or other benefit improvements) are established as a new amortization base to be amortized over the following 30 years.

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Overall, the total contribution for the pension fund is expected to remain stable as a percentage of payroll over future years in the absence of benefit improvements and material experience gains or losses. However, the current valuation contribution rate does not anticipate any future cost of living increases to benefit recipients as required by statute. Should these cost of living increases occur in the future, the contribution rate for the pension fund will be expected to increase as a percentage of payroll in the absence of material aggregate experience gains.

Relative to the insurance fund, the Board's funding objective is to establish a contribution rate which consists of the normal cost and an amortization payment on the UAL over a 30 year period. Beginning with the June 30, 2006 valuation, the assumptions and methods used are to meet the requirements of GASB Statement No. 43. Going forward, new UAL bases will be established at each valuation date and will be amortized over the following 30 years.

Administrative expenses of the plans are also included as part of the total pension fund contribution. This portion of the funding is expected to remain stable as a percentage of payroll over future years.

#### **Progress towards Realization of Funding Objectives**

The progress towards achieving the intended funding objectives, both relative to the pension and insurance funds, can be measured by the relationship of actuarial assets of each fund to the actuarial accrued liabilities. This relationship is known as the funding level and in the absence of benefit improvements, should increase over time until it reaches 100%.

In recent years, funding levels for the pension funds have fallen dramatically in response to investment returns less than the actuarially assumed rate, higher than anticipated retirement rates, the 2006 assumption changes, and increasing expenditures for retiree Cost of Living Adjustments (COLA). Within the KERS and SPRS plans, employer contribution rate reductions enacted by the State Legislature have limited the plans ability to correct the declining funding levels. As of June 30, 2006 the funding levels for the pension funds are as follows:

<b>System</b>	<b>Pension Funding Level</b>
KERS Non-Hazardous Pension Fund	60.0%
KERS Hazardous Pension Fund	84.1%
CERS Non-Hazardous Pension Fund	83.5%
CERS Hazardous Pension Fund	75.0%
SPRS Pension Fund	66.6%

The funding level for the insurance funds is not anywhere near 100% at this time, and the Board's funding objective is to increase this funded level consistently over time. While the funding level relative to the insurance funds has improved steadily since 1990, medical inflation rates in excess of the assumed rates as well as recent employer contribution rate reductions under KERS and SPRS have significantly limited this improvement. The recent adoption of new actuarial assumptions and the application of GASB Statement 43 requirements have further reduced the measured funding level. As of June 30, 2006 the funding level for the insurance funds are as follows:





System	Insurance Funding Level
KERS Non-Hazardous Insurance Fund	7.8%
KERS Hazardous Insurance Fund	34.3%
CERS Non-Hazardous Insurance Fund	16.9%
CERS Hazardous Insurance Fund	21.9%
SPRS Insurance Fund	18.1%

### Data

In completing the valuation of these systems, we have relied on data provided by Kentucky Retirement Systems, as well as financial data provided by the plan's external auditor. We have reviewed this data for reasonableness, and made some general edit checks to impute certain information that may not have been provided with the original employee data. However, we have not audited this data, nor has there been any reconciliation of data used in the prior year's valuation with this current valuation data. Any schedules of trend data over the past ten years or less contained in the Actuarial Section, as well as the Schedule of Funding Progress and Schedule of Employer Contributions in the Financial Section, have been based on valuation reports fully prepared by the actuary for the plan at the time of each valuation.

### Assumptions & Methods

The Board of Trustees, in consultation with the actuary, sets the actuarial assumptions and methods used in the valuation. Once every five years the actuary conducts a thorough review of plan experience for the preceding five years, and then makes recommendations to the Board. The actuarial assumptions and methods used for the funding calculations of the valuation, as adopted by the Board on January 19, 2006 based on the experience investigation report dated January 12, 2006, meet the parameters set for disclosure under GASB Statements No. 25 and 43. These assumptions have been adopted by the Board of Trustees of the Kentucky Retirement Systems in accordance with the recommendation of the actuary. The next experience study is schedule to be completed in January 2011 and any adjustments will be reflected in the June 30, 2011 actuarial valuation.

### Closing

The information presented in this letter describes the pertinent issues relative to the valuation. There are no other specific issues that need to be raised beyond these items in order to fairly assess the funded position of the plan as presented in the current valuation.



Board of Trustees  
November 1, 2006  
Page 4

Based on the continuation of current funding policies adopted by the Board, adequate provision is being determined for the funding of the actuarial liabilities of the Kentucky Employees Retirement System, the County Employees Retirement System, and the State Police Retirement System as required by the Kentucky Revised Statutes. The funding rates established by the Board are appropriate for this purpose.

Sincerely,

A handwritten signature in purple ink that reads "Thomas J. Cavanaugh".

Thomas J. Cavanaugh FSA, FCA, MAAA, EA  
Chief Executive Officer

A handwritten signature in purple ink that reads "Edward A. Macdonald".

Edward A. Macdonald ASA, FCA, MAAA  
President

TJC/EAM:sh

Enclosures

### Summary of June 30, 2006 Actuarial Valuation Results

	KERS Non-Hazardous	KERS Hazardous	CERS Non-Hazardous	CERS Hazardous	SPRS
<b><u>Recommended Contribution Rate</u></b> <b><u>(Fiscal Year 2007-2008)</u></b>					
Pension Fund Contribution	15.55%	10.20%	6.98%	15.01%	28.95%
Insurance Fund Contribution	<u>32.82</u>	<u>36.91</u>	<u>20.51</u>	<u>39.52</u>	<u>91.05</u>
Recommended Employer Contribution	48.37%	47.11%	27.49%	54.53%	120.00%
<b><u>Funded Status as of Valuation Date</u></b>					
<i><b>Pension Fund</b></i>					
Actuarial Liability	\$8,994,826,247	\$508,655,903	\$6,179,569,267	\$2,020,142,770	\$516,482,298
Actuarial Value of Assets	5,394,086,323	427,984,192	\$5,162,894,136	\$1,515,075,017	344,016,197
Unfunded Actuarial Liability on Actuarial Value of Assets	3,600,739,924	80,671,711	\$1,016,675,131	\$505,067,753	172,466,101
Funding Level as a % of Actuarial Value of Assets	59.97%	84.14%	83.55%	75.00%	66.61%
Market Value of Assets	\$5,440,132,708	\$437,029,583	\$5,191,376,948	\$1,528,845,357	\$352,841,486
Unfunded Actuarial Liability on Market Value of Assets	3,554,693,539	71,626,320	\$988,192,319	\$491,297,413	163,640,812
Funding Level on Market Value of Assets	60.48%	85.92%	84.01%	75.68%	68.32%
<i><b>Insurance Fund</b></i>					
Actuarially Accrued Liability	\$7,815,480,774	\$621,237,856	\$4,607,223,639	\$1,928,481,371	\$582,580,867
Actuarial Value of Assets	611,350,765	212,833,318	\$777,726,590	\$422,785,042	105,580,269
Unfunded Actuarial Liability as a % of Actuarial Value of Assets	7,204,130,009	408,404,538	\$3,829,497,049	\$1,505,696,329	477,000,598
Funding Level as a % of Actuarial Value of Assets	7.82%	34.26%	16.88%	21.92%	18.12%
Market Value of Assets	\$632,642,846	\$223,523,081	\$813,250,744	\$441,278,796	\$110,491,075
Unfunded Actuarial Liability as a % of Market Value of Assets	7,182,837,928	397,714,775	\$3,793,972,895	\$1,487,202,575	472,089,792
Funding Level on Market Value of Assets	8.09%	35.98%	17.65%	22.88%	18.97%
<b><u>Member Data</u></b>					
Number of Active Members	46,707	4,320	83,694	9,635	1,028
Total Annual Payroll (Active Members)	\$1,702,230,777	\$138,747,320	\$1,982,437,473	\$426,927,550	\$47,743,865
Average Annual Pay (Active Members)	\$36,445	\$32,117	\$23,687	\$44,310	\$46,443
Number of Retired Members & Beneficiaries	32,140	1,980	33,102	4,712	1,067
Average Annual Retirement Allowance	\$17,616	\$11,809	\$9,313	\$21,284	\$32,475
Number of Vested Inactive Members	4,998	265	7,379	393	48





### Additional Valuation Notes

In addition to the valuation results presented in the three reports that follow, certain calculations were made to round out the presentation and put the results in greater perspective. That information follows.

- Recent Contribution Shortfall – Although it has happened periodically in the past, there has been an ongoing contribution shortfall for KERS and SPRS since the 2002-2003 fiscal year. That shortfall has placed additional pressure on contribution rates, and that impact is compounding. The table below shows the recommended and budgeted contribution rates as a percent of payroll for KERS and SPRS over the last four fiscal years. The rates shown are the combined rates for retirement and insurance.

Fiscal Year	Recommended Rate	Budgeted Rate
<u>KERS Non-Hazardous</u>		
2002-2003	5.89%	3.76%
2003-2004	7.53	5.89
2004-2005	10.29	5.89
2005-2006	13.62	5.89
<u>KERS Hazardous</u>		
2002-2003	18.84%	17.60%
2003-2004	18.84	18.84
2004-2005	19.47	18.84
2005-2006	21.59	18.84
<u>SPRS</u>		
2002-2003	21.58%	17.37%
2003-2004	21.58	21.58
2004-2005	28.08	21.58
2005-2006	34.83	21.58

Had the recommended contributions been made over this period of time, the contribution rates recommended as a result of the June 30, 2006 valuations would have been reduced by 1.00% of payroll for KERS Non-Hazardous, .29% for KERS Hazardous and 1.43% for SPRS.



- Market Value of Assets and COLA Liability Impact on Funding Ratio - The funding ratio for all the Plans is based on the actuarial liabilities and asset values computed for the purpose of meeting funding requirements on the basis required by state law. This basis does not take all actuarial liabilities and investment performance to date into account. It also does not consider the contractual nature of the retiree medical benefits provided. If the Retirement and Insurance results were combined, if the market value instead of actuarial value of assets were used, and if a 3% annual cost-of-living adjustment for retirement benefits were assumed to be in effect for all future years, then the funding ratio for the combined Retirement and Insurance plans would be lower, as shown in the table below.

System	Reported Funding Ratio	Adjusted Funding Ratio
KERS Non-Hazardous	35.72%	30.86%
KERS Hazardous	56.71	50.98
CERS Non-Hazardous	55.07	47.40
CERS Hazardous	49.08	42.23
SPRS	40.91	36.31

- Impact of Blended Interest Rates on Insurance Valuations - The June 30, 2006 Insurance Plan valuations recognize the parameters required by GASB Statements No. 43 and 45. One of the parameters is that a blended interest rate must be used when the benefits are not being fully funded. This rate reflects the level of advanced funding that is occurring. Because of the contribution rate shortfall noted above, blended rates were required for KERS Non-Hazardous and SPRS. The rate used for the June 30, 2006 valuation is 4.50% for both KERS Non-Hazardous and SPRS. If KERS Non-Hazardous and SPRS were being fully funded, an interest rate of 7.75% would be used, reducing liabilities and therefore contribution rates. The impact on rates is shown in the table below.

Insurance Plan	"Blended" Contribution Rate	"Full Funding" Contribution Rate
KERS Non-Hazardous	32.82%	18.68%
SPRS	91.05	43.05





- Unrecognized Investment Gains and Losses - The actuarial value of assets is determined by smoothing market gains and losses over a five year period. This results in a difference between market value and actuarial value of assets on each valuation date representing the gains and losses that have yet to be recognized in the valuation. The total unrecognized investment loss as of June 30, 2006 for each of the plans is shown in the table below.

Plan	Unrecognized investment gains/(losses)	Actuarial value as a % of market value
<u>KERS Non-Hazardous</u>		
Retirement	\$46,046,385	99.2%
Insurance	21,292,081	96.6
<u>KERS Hazardous</u>		
Retirement	\$9,045,391	97.9%
Insurance	10,689,763	95.2
<u>CERS Non-Hazardous</u>		
Retirement	\$28,482,812	99.5%
Insurance	35,524,154	95.6
<u>CERS Hazardous</u>		
Retirement	\$13,770,340	99.1%
Insurance	18,493,754	95.8
<u>SPRS</u>		
Retirement	\$8,825,289	97.5%
Insurance	4,910,806	95.6



**Report on the Annual Valuation of the  
Kentucky Employees Retirement System**

**Prepared as of June 30, 2006**

November 1, 2006

Board of Trustees  
Kentucky Retirement Systems  
Perimeter Park West  
1260 Louisville Road  
Frankfort, KY 40601

Dear Members of the Board:

Presented in this report are the results of the annual actuarial valuation of the retirement and insurance benefits provided under the Kentucky Employees Retirement System (KERS). The purpose of the valuation was to measure the System's funding progress and to determine the required employer contribution rates for the fiscal year beginning July 1, 2007.

The date of the valuation was June 30, 2006.

The valuation was based upon data, furnished by the Executive Director and the Kentucky Retirement Systems (KRS) staff, concerning active, inactive and retired members along with pertinent financial information. The complete cooperation of the KRS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the summary of results on page 1 and the comments on page 6.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the system, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the system.

Respectfully submitted,

Thomas J. Cavanaugh, FSA, FCA, EA, MAAA  
Chief Executive Officer

Edward A. Macdonald, ASA, FCA, MAAA  
President

TJC/EAM:sh



## TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page No.</u>
I	Summary of Principal Results	1
II	Membership Data	3
III	Assets	5
IV	Comments on Valuation	6
V	Derivation of Experience Gains and Losses	9
VI	Required Contribution Rates	14
VII	Accounting Information	17
 <u>Schedule</u>		
A	Valuation Balance Sheet and Solvency Test	23
B	Development of Actuarial Value of Assets	31
C	Statement of Actuarial Assumptions and Methods	35
D	Summary of Main Benefit and Contribution Provisions	40
E	Detailed Tabulations of the Data	45
F	Amortization Bases	55

**REPORT ON THE ANNUAL VALUATION OF THE  
KENTUCKY EMPLOYEES RETIREMENT SYSTEM**

**PREPARED AS OF JUNE 30, 2006**

**SECTION I – SUMMARY OF PRINCIPAL RESULTS**

1. This report, prepared as of June 30, 2006, presents the results of the annual actuarial valuation of the retirement and insurance benefits provided under the System. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results, broken down between non-hazardous and hazardous members, are summarized in the following table.

**SUMMARY OF PRINCIPAL RESULTS**

	KERS Non-Hazardous		KERS Hazardous		KERS Totals	
	6/30/06	6/30/05*	6/30/06	6/30/05*	6/30/06	6/30/05*
<b>Contributions for next fiscal year:</b>						
Retirement	15.55%	10.68%	10.20%	9.28%		
Insurance	<u>32.82</u>	<u>6.45</u>	<u>36.91</u>	<u>14.04</u>	N/A	N/A
Total	48.37%	17.13%	47.11%	23.32%		
<b>Funded status as of valuation date:</b>						
<b>Retirement</b>						
Actuarial accrued liability	\$8,994,826,247	\$7,579,074,839	\$508,655,903	\$438,994,257	\$9,503,482,150	\$8,018,069,096
Actuarial value of assets	5,394,086,323	5,578,685,746	427,984,192	405,288,662	5,822,070,515	5,983,974,408
Unfunded liability on actuarial value of assets	3,600,739,924	2,000,389,093	80,671,711	33,705,595	3,681,411,635	2,034,094,688
Funded ratio on actuarial value of assets	59.97%	73.61%	84.14%	92.32%	61.26%	74.63%
Market value of assets	\$5,440,132,708	\$5,362,630,697	\$437,029,583	\$398,308,897	\$5,877,162,291	\$5,760,939,594
Unfunded liability on market value of assets	3,554,693,539	2,216,444,142	71,626,320	40,685,360	3,626,319,859	2,257,129,502
Funded ratio on market value of assets	60.48%	70.76%	85.92%	90.73%	61.84%	71.85%
<b>Insurance**</b>						
Actuarial accrued liability	\$7,815,480,774	\$2,680,559,188	\$621,237,856	\$386,844,695	\$8,436,718,630	\$3,067,403,883
Actuarial value of assets	611,350,765	607,068,351	212,833,318	187,947,644	824,184,083	795,015,995
Unfunded liability on actuarial value of assets	7,204,130,009	2,073,490,837	408,404,538	198,897,051	7,612,534,547	2,272,387,888
Funded ratio on actuarial value of assets	7.82%	22.65%	34.26%	48.58%	9.77%	25.92%
Market value of assets	\$632,642,846	\$610,901,623	\$223,523,081	\$188,871,226	\$856,165,927	\$799,772,849
Unfunded liability on market value of assets	7,182,837,928	2,069,657,565	397,714,775	197,973,469	7,580,552,703	2,267,631,034
Funded ratio on market value of assets	8.09%	22.79%	35.98%	48.82%	10.15%	26.07%
<b>Demographic data as of valuation date:</b>						
Number of retired participants and beneficiaries	32,140	30,770	1,980	1,752	34,120	32,522
Number of vested former members	4,998	5,240	265	307	5,263	5,547
Number of former members due a refund	24,145	23,105	2,236	1,997	26,381	25,102
Number of active members	46,707	47,118	4,320	4,274	51,027	51,392
Total salary	\$1,702,230,777	\$1,655,907,288	\$138,747,320	\$131,687,088	\$1,840,978,097	\$1,787,594,376
Average salary	36,445	35,144	32,117	30,811	36,079	34,784

\*Reported by prior actuarial firm.

\*\*For 6/30/2006 valuation, assumed investment rate of return for insurance liabilities is 4.50% for KERS Non-Hazardous and 7.75% for KERS Hazardous.

2. The valuation balance sheets showing the results of the valuation are given in Schedule A.
3. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains during the valuation year are given in Section V, and the rates of contribution payable by employers are given in Section VI.
4. There were no changes in benefit provisions since the last valuation. There were, however, several changes in actuarial assumptions and methods adopted by the Board based on an experience investigation dated January 12, 2006 covering the period July 1, 2000 through June 30, 2005. Since the previous valuation, the assumptions and methods were changed as follows:
  - Investment return was reduced from 8.25% per year to 7.75% per year for retirement benefits, and Hazardous insurance benefits. In addition, the rate of investment return for Non-Hazardous insurance benefits was reduced from 8.25% to 4.50% as required under GASB Statements No. 43 and 45 due to the lack of pre-funding of insurance benefits
  - The mortality table was changed for members who retire after June 30, 2006 from the 1983 GAM table to the 1994 GAM table
  - The mortality table for disabled members was changed from the PBGC Table for Disabled Lives Receiving Social Security to the 1994 GAM table set forward five years
  - The salary scale was changed from a service based scale ranging from 12.0% to 6.5% to a service based scale ranging from 13.5% to 4.0% for Non-Hazardous employees and from 14.5% to 4.0% for Hazardous employees
  - Rates of disablement, termination and retirement were adjusted to more closely reflect the actual experience of the system
  - 6 months additional service credit will be assumed at retirement to reflect unused accumulated sick leave
  - Medical trend rates were increased through 2020 and reduced thereafter in a range starting at 12.0% per year in 2006-2008 and declining to an ultimate rate of 5.5% in 2027 and later
  - The method used to determine the actuarial value of assets has been changed to a method that truly smoothes market fluctuations over the five year smoothing period
  - The insurance accrued liability amortization bases were consolidated and reset to a new 30-year amortization period beginning with the June 30, 2006 valuation.
5. Schedule B of this report presents the development of the actuarial value of assets. Schedule C details the actuarial assumptions and methods employed. Schedule D gives a summary of the benefit and contribution provisions of the plan.



## SECTION II – MEMBERSHIP DATA

Data regarding the membership of the System for use as a basis for the valuation were furnished by the System's office. The following tables summarize the membership of the system as of June 30, 2006 upon which the valuation was based. Detailed tabulations of the data are given in Schedule E.

### Active Members

Employee Group	Number	Payroll	Group Averages		
			Salary	Age	Service
Non-Hazardous	46,707	\$ 1,702,230,777	\$36,445	43.0	9.7
Hazardous	4,320	138,747,320	32,117	41.6	7.0
Total in KERS	51,027	\$ 1,840,978,097	\$36,079	42.9	9.5

The following tables show a six-year history of active member valuation data.

### SCHEDULE OF NON-HAZARDOUS KERS ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2001	47,780	\$1,525,188,532	\$31,921	4.5%
6/30/2002	48,555	1,597,447,963	32,900	3.1
6/30/2003	49,158	1,658,604,696	33,740	2.6
6/30/2004	47,599	1,645,412,496	34,568	2.5
6/30/2005	47,118	1,655,907,288	35,144	1.7
6/30/2006	46,707	1,702,230,777	36,445	3.7

### SCHEDULE OF HAZARDOUS KERS ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2001	4,228	\$123,647,407	\$29,245	1.8%
6/30/2002	4,211	125,371,604	29,772	1.8
6/30/2003	4,189	129,088,956	30,816	3.5
6/30/2004	4,014	126,664,812	31,556	2.4
6/30/2005	4,274	131,687,088	30,811	(2.4)
6/30/2006	4,320	138,747,320	32,117	4.2

The following tables show the number and annual retirement allowances payable to retired members and their beneficiaries on the roll of the Retirement System as of the valuation date as well as certain group averages.

**Non-Hazardous Retired Lives**

Type of Benefit Payment	No.	Annual Benefits	Group Averages	
			Benefit	Age
Retiree	26,486	\$510,011,451	\$19,256	66.2
Disability	1,879	19,764,770	10,519	62.1
Beneficiary	3,775	36,390,782	9,640	69.1
Total in KERS	32,140	\$566,167,003	17,616	66.3

**Hazardous Retired Lives**

Type of Benefit Payment	No.	Annual Benefits	Group Averages	
			Benefit	Age
Retiree	1,659	\$21,117,855	\$12,729	61.1
Disability	120	872,900	7,274	56.2
Beneficiary	201	1,390,782	6,919	56.5
Total in KERS	1,980	\$23,381,537	11,809	60.4

This valuation also includes 31,644 inactive members (29,143 Non-Hazardous and 2,501 Hazardous; of which 4,998 Non-Hazardous are vested and 265 Hazardous are vested.)

**SECTION III – ASSETS**

1. As of June 30, 2006 the total market value of assets amounted to \$6,733,328,218 as shown in the following table.

**MARKET VALUE OF ASSETS BY FUND  
AS OF JUNE 30, 2006**

<b>Member Group</b>	<b>Retirement</b>	<b>Insurance</b>	<b>KERS Total</b>
Non-Hazardous	\$5,440,132,708	\$632,642,846	\$6,072,775,554
Hazardous	<u>437,029,583</u>	<u>223,523,081</u>	<u>660,552,664</u>
Total	\$5,877,162,291	\$856,165,927	\$6,733,328,218

2. The five-year smoothed market related actuarial value of assets used for the current valuation was \$6,646,254,598. Schedule B shows the development of the actuarial value of assets as of June 30, 2006. The following table shows the actuarial value of assets allocated among member groups.

**COMPARISON OF ACTUARIAL VALUE OF ASSETS**

	<b>JUNE 30, 2006</b>	<b>JUNE 30, 2005</b>
<b>Retirement</b>		
Non-Hazardous	\$ 5,394,086,323	\$ 5,578,685,746
Hazardous	<u>427,984,192</u>	<u>405,288,662</u>
Total	\$ 5,822,070,515	\$ 5,983,974,408
<b>Insurance</b>		
Non-Hazardous	\$ 611,350,765	\$ 607,068,351
Hazardous	<u>212,833,318</u>	<u>187,947,644</u>
Total	\$ 824,184,083	\$ 795,015,995
<b>KERS Total</b>		
Non-Hazardous	\$ 6,005,437,088	\$ 6,185,754,097
Hazardous	<u>640,817,510</u>	<u>593,236,306</u>
Total	\$ 6,646,254,598	\$ 6,778,990,403



## **SECTION IV - COMMENTS ON VALUATION**

Schedule A of this report contains the valuation balance sheets which show the present and prospective assets and liabilities of the System as of June 30, 2006. Separate balance sheets are shown for each employee group as well as in total for Retirement and Insurance.

### **Retirement**

1. The total valuation balance sheet on account of retirement benefits shows that the System has total prospective retirement benefit liabilities of \$10,855,751,619, of which \$6,011,881,083 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$132,556,377 is for the prospective benefits payable on account of present inactive members, and \$4,711,314,159 is for the prospective benefits payable on account of present active members. Against these retirement benefit liabilities the System has a total present actuarial value of assets of \$5,822,070,515 as of June 30, 2006. The difference of \$5,033,681,104 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of retirement benefits. Of this amount, \$806,014,046 is the present value of future contributions expected to be made by members, and the balance of \$4,227,667,058 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the System on account of retirement benefits consist of normal contributions, accrued liability contributions and contributions for administrative expenses. The valuation indicates that employer normal contributions at the rate of 3.27% of payroll for non-hazardous members and 6.80% of payroll for hazardous members are required to provide the benefits of the System for the average new member of KERS.
3. Prospective employer normal contributions on account of retirement benefits at the above rates have a present value of \$546,255,423. When this amount is subtracted from \$4,227,667,058, which is the present value of the total future contributions to be made by the employers, there remains \$3,681,411,635 as the amount of future accrued liability contributions.
4. For non-hazardous members, it is recommended that the accrued liability contribution rate payable by the State on account of retirement benefits be set at 11.83% of payroll. For hazardous members, it is recommended that the accrued liability contribution rate payable by the State on account of retirement benefits be set at 2.93% of payroll. These rates are based on a 30 year amortization of bases established each year as specified in the law governing the Plan. The bases are amortized on the assumption that the aggregate payroll for non-hazardous and hazardous members will increase by 3.50% each year.

5. The contribution rate for administrative expenses is determined to be 0.45% of payroll for non-hazardous members and 0.47% of payroll for hazardous members.
6. The development of all accrued liability amortization bases is shown in Schedule F.

### **Insurance**

1. The total valuation balance sheet on account of insurance benefits shows that the System has total prospective insurance benefit liabilities of \$11,171,443,911, of which \$3,293,611,256 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$483,572,834 is for the prospective benefits payable on account of present inactive members, and \$7,394,259,821 is for the prospective benefits payable on account of present active members. Against these retirement benefit liabilities the System has a total present actuarial value of assets of \$824,184,083 as of June 30, 2006. The difference of \$10,347,259,828 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of retirement benefits. Of this amount, \$0 is the present value of future contributions expected to be made by members, and the balance of \$10,347,259,828 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the System on account of insurance benefits consist of normal contributions, accrued liability contributions and contributions for administrative expenses. The valuation indicates that employer normal contributions at the rate of 16.41% of payroll for non-hazardous members and 19.62% of payroll for hazardous members are required to provide the benefits of the System for the average new member of KERS.
3. Prospective employer normal contributions on account of insurance benefits at the above rates have a present value of \$2,734,725,281. When this amount is subtracted from \$10,347,259,828, which is the present value of the total future contributions to be made by the employers, there remains \$7,612,534,547 as the amount of future accrued liability contributions.
4. For non-hazardous members, it is recommended that the accrued liability contribution rate payable by the State on account of insurance benefits be set at 16.32% of payroll. For hazardous members, it is recommended that the accrued liability contribution rate payable by the State on account of insurance benefits be set at 17.24% of payroll. These rates are sufficient to liquidate the unfunded accrued liability of \$7,204,130,009 for non-hazardous members and \$408,404,538 for hazardous members over 30 years on the assumption that the aggregate payroll for non-hazardous and hazardous members will increase by 3.50% each year.

5. The contribution rate for administrative expenses is determined to be 0.09% of payroll for non-hazardous members and 0.05% of payroll for hazardous members.
6. The development of all accrued liability amortization bases is shown in Schedule F.

**SECTION V – DERIVATION OF EXPERIENCE GAINS AND LOSSES**

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2006 is shown below (\$ millions).

**Experience Gain/(Loss)  
Retirement Benefits**

		Non-Hazardous Group	Hazardous Group	Total
(1)	UAAL* as of 6/30/05	\$ 2,000.4	\$ 33.7	\$ 2,034.1
(2)	Normal cost from last valuation	80.5	10.9	91.4
(3)	Actual employer contributions	60.7	10.8	71.5
(4)	Interest accrual: (1) x .0825 + [(2) – (3)] x .04125]	165.8	2.8	168.6
(5)	Expected UAAL before changes: (1) + (2) – (3) + (4)	\$ 2,186.0	\$ 36.6	\$ 2,222.6
(6)	Change due to plan amendments	133.4	5.4	138.8
(7)	Change due to new actuarial assumptions or methods	702.3	18.1	720.4
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 3,021.7	\$ 60.1	\$ 3,081.8
(9)	Actual UAAL as of 6/30/06	\$ 3,600.7	\$ 80.7	\$ 3,681.4
(10)	Gain/(loss): (8) – (9)	\$ (579.0)	\$ (20.6)	\$ (599.6)
(11)	Accrued liabilities as of 6/30/05	\$ 7,579.1	\$ 439.0	\$ 8,018.1
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year	(7.6%)	(4.7)%	(7.5)%

\*Unfunded actuarial accrued liability.

**Experience Gain/(Loss)  
Insurance Benefits**

		Non-Hazardous Group	Hazardous Group	Total
(1)	UAAL* as of 6/30/05	\$ 2,073.5	\$ 198.9	\$ 2,272.4
(2)	Normal cost from last valuation	98.3	20.0	118.3
(3)	Actual employer contributions	53.4	17.1	70.5
(4)	Interest accrual: (1) x .0825 + [(2) – (3)] x .04125]	172.9	16.5	189.4
(5)	Expected UAAL before changes: (1) + (2) – (3) + (4)	2,291.3	218.3	2,509.6
(6)	Change due to plan amendments	0.0	0.0	0.0
(7)	Change due to new actuarial assumptions or methods	4,617.5	143.7	4,761.2
(8)	Expected UAAL after changes: (5) + (6) + (7)	6,908.8	362.0	7,270.8
(9)	Actual UAAL as of 6/30/06	7,204.1	408.4	7,612.5
(10)	Gain/(loss): (8) – (9)	\$ (295.3)	(46.4)	(341.7)
(11)	Accrued liabilities as of 6/30/05	\$ 2,680.6	\$ 386.8	\$ 3,067.4
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year	(11.0)%	(12.0)%	(11.1)%

\*Unfunded actuarial accrued liability.



**NON-HAZARDOUS KERS MEMBERS  
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities  
Resulting from Difference Between  
Assumed Experience & Actual Experience  
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/06	Insurance \$ Gain (or Loss) For Year Ending 6/30/06
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (205.8)	\$ (193.6)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(2.6)	(1.9)
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.2	0.2
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	16.8	15.8
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	15.3	0.0
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(17.9)	(16.8)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(186.1)	(0.2)
<b>Death After Retirement.</b> If retired members live longer than assumed, there is a loss. If not as long, a gain.	(1.2)	(1.1)
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(197.7)</u>	<u>(97.7)</u>
<b>Gain (or Loss) During Year From Financial Experience</b>	\$ (579.0)	\$ (295.3)
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, method changes and contribution timing.	<u>(961.4)</u>	<u>(4,617.5)</u>
<b>Composite Gain (or Loss) During Year</b>	\$ (1,540.4)	\$ (4,912.8)

**HAZARDOUS KERS MEMBERS  
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities  
Resulting from Difference Between  
Assumed Experience & Actual Experience  
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/06	Insurance \$ Gain (or Loss) For Year Ending 6/30/06
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (7.9)	\$ (6.4)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	0.2	0.2
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.2	(0.2)
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	4.8	4.1
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(2.3)	0.0
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(3.5)	(2.9)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(7.2)	(1.7)
<b>Death After Retirement.</b> If retired members live longer than assumed, there is a loss. If not as long, a gain.	(1.2)	(1.0)
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(3.7)</u>	<u>(38.5)</u>
<b>Gain (or Loss) During Year From Financial Experience</b>	\$ (20.6)	\$ (46.4)
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, method changes and contribution timing.	<u>(24.9)</u>	<u>(143.7)</u>
<b>Composite Gain (or Loss) During Year</b>	\$ (45.5)	\$ (190.1)

**TOTAL KERS MEMBERS  
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities  
Resulting from Difference Between  
Assumed Experience & Actual Experience  
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/06	Insurance \$ Gain (or Loss) For Year Ending 6/30/06
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (213.7)	\$ (200.0)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(2.4)	(1.7)
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.4	0.0
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	21.6	19.9
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	13.0	0.0
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(21.4)	(19.7)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(193.3)	(1.9)
<b>Death After Retirement.</b> If retired members live longer than assumed, there is a loss. If not as long, a gain.	(2.4)	(2.1)
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(201.4)</u>	<u>(136.2)</u>
<b>Gain (or Loss) During Year From Financial Experience</b>	\$ (599.6)	\$ (341.7)
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, method changes and contribution timing.	<u>(986.3)</u>	<u>(4,761.2)</u>
<b>Composite Gain (or Loss) During Year</b>	\$ (1,585.9)	\$ (5,102.9)

**SECTION VI – REQUIRED CONTRIBUTION RATES**

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement System. The following tables show the rates of contribution payable by employers as determined from the present valuation for the 2007/2008 fiscal year.

**Required Contribution Rates  
Non-Hazardous Retirement**

Contribution for	Amount	% of Payroll
A. Normal Cost:		
(1) Service retirement benefits	\$ 121,709,501	7.15%
(2) Disability benefits	15,320,077	0.90
(3) Survivor benefits	<u>3,744,907</u>	<u>0.22</u>
(4) Total	\$ 140,774,485	8.27%
B. Member Contributions	\$ 85,111,539	5.00%
C. Employer Normal Cost: [A(4) – B]	\$ 55,662,946	3.27%
D. Administrative Expenses	\$ 7,660,038	0.45%
E. Unfunded Actuarial Accrued Liability Contributions*:		
(1) UAAL Contribution Based on 6/30/05 Valuation:	\$ 99,920,947	5.87%
(2) Change due to:		
a. Active decrements	\$ 10,213,385	0.60%
b. Pay increases	(851,115)	(0.05)
c. Retiree mortality	170,223	0.01
d. Investment return	9,362,269	0.55
e. COLA	6,638,700	0.39
f. Assumption Change	57,365,177	3.37
g. Other	<u>18,600,415</u>	<u>1.09</u>
h. Total Change	\$ 101,499,054	5.96%
(3) UAAL Contribution Based on 6/30/06 Valuation: [E(1) + E(2)h]	\$ 201,420,001	11.83%
F. Total Recommended Employer Contribution Rate: [C+D+E(3)]	\$ 264,742,985	15.55%

\*Development of the amortization bases of the UAAL is provided in Schedule F

**Required Contribution Rates  
Hazardous Retirement**

Contribution for	Amount	% of Payroll
A. Normal Cost:		
(1) Service retirement benefits	\$ 17,024,296	12.27%
(2) Disability benefits	2,539,076	1.83
(3) Survivor benefits	<u>971,231</u>	<u>0.70</u>
(4) Total	\$ 20,534,603	14.80%
B. Member Contributions	\$ 11,099,786	8.00%
C. Employer Normal Cost: [A(4) – B]	\$ 9,434,817	6.80%
D. Administrative Expenses	\$ 652,112	0.47%
E. Unfunded Actuarial Accrued Liability Contributions:*		
(1) UAAL Contribution based on 6/30/05 Valuation:	\$ 1,262,601	0.91%
(2) Changes due to:		
a. Active decrements	\$ 305,244	0.22%
b. Pay increases	110,998	0.08
c. Retiree mortality	55,499	0.04
d. Investment return	360,743	0.26
e. COLA	790,860	0.57
f. Assumption Change	1,429,097	1.03
g. Other	<u>(254,630)</u>	<u>(0.18)</u>
h. Total Change	\$ 2,797,811	2.00%
(3) UAAL Contribution based on 6/30/06 Valuation: [E(1) + E(2)h]	\$ 4,060,412	2.93%
F. Total Recommended Employer Contribution Rate: [C + D + E(3)]	\$ 14,147,341	10.20%

\*Development of the amortization bases of the UAAL is provided in Schedule F



**Required Contribution Rates  
Non-Hazardous Insurance**

Contribution for	Amount	% of Payroll
A. Normal Cost	\$ 279,297,162	16.41%
B. Member Contributions*	\$ 0	0.00%
C. Employer Normal Cost: [A – B]	\$ 279,297,182	16.41%
D. Administrative Expenses	\$ 1,679,307	0.09%
E. Unfunded Actuarial Accrued Liabilities**	\$ 277,769,351	16.32%
F. Total Recommended Employer Contribution Rate: [C + D + E]	\$ 558,745,820	32.82%

\*The liabilities are net of retiree contributions towards their healthcare

\*\*Development of the amortization base of the UAAL is provided in Schedule F

**Required Contribution Rates  
Hazardous Insurance**

Contribution for	Amount	% of Payroll
A. Normal Cost	\$ 27,227,885	19.62%
B. Member Contributions*	\$ 0	0.00%
C. Employer Normal Cost: [A – B]	\$ 27,227,885	19.62%
D. Administrative Expenses	\$ 63,250	0.05%
E. Unfunded Actuarial Accrued Liabilities**	\$ 23,923,794	17.24%
F. Total Recommended Employer Contribution Rate: [C + D + E]	\$ 51,214,929	36.91%

\*The liabilities are net of retiree contributions towards their healthcare

\*\*Development of the amortization base of the UAAL is provided in Schedule F

**SECTION VII - ACCOUNTING INFORMATION**

Governmental Accounting Standards Board Statements 25, 27, 43 and 45 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED MEMBERS  
AS OF JUNE 30, 2006**

GROUP	NUMBER		
	Non-Hazardous	Hazardous	Total
Retirees and beneficiaries currently receiving benefits	32,140	1,981	34,121
Terminated employees entitled to benefits but not yet receiving benefits	29,143	2,501	31,644
Active members	<u>46,707</u>	<u>4,320</u>	<u>51,027</u>
Total	107,990	8,802	116,792

Another such item is the Schedule of Funding Progress for retirement and insurance benefits separately as shown in the following tables.

**RETIREMENT BENEFITS  
SCHEDULE OF FUNDING PROGRESS**

Actuarial Actuarial Valuation Date	Value of Plan Assets ( a )	Actuarial Accrued Liability (AAL) Entry Age ( b )	Unfunded AAL (UAAL) ( b - a )	Funded Ratio ( a / b )	Covered Payroll ( c )	UAAL as a Percentage of Covered Payroll ( ( b - a ) / c )
<b>Non-Hazardous Members</b>						
6/30/2001	\$6,844,742,687	\$5,444,035,294	\$(1,400,707,393)	125.7%	\$1,525,089,988	(91.8)%
6/30/2002	6,654,084,196	6,026,094,764	(627,989,432)	110.4	1,597,344,487	(39.3)
6/30/2003	6,351,318,832	6,520,463,188	169,144,356	97.4	1,658,604,696	10.2
6/30/2004	6,000,513,743	7,049,613,171	1,049,099,428	85.1	1,645,412,496	63.8
6/30/2005	5,578,685,746	7,579,074,839	2,000,389,093	73.6	1,655,907,288	120.8
6/30/2006	5,394,086,323	8,994,826,247	3,600,739,924	60.0	1,702,230,777	211.5
<b>Hazardous Members</b>						
6/30/2001	\$361,677,475	\$285,193,761	\$(76,483,714)	126.8%	\$123,647,407	(61.9)%
6/30/2002	376,384,302	322,069,164	(54,315,138)	116.9	125,371,604	(43.3)
6/30/2003	385,925,722	356,879,133	(29,046,589)	108.1	129,088,956	(22.5)
6/30/2004	397,212,763	403,578,036	6,365,273	98.4	126,664,812	5.0
6/30/2005	405,288,662	438,994,257	33,705,595	92.3	131,687,088	25.6
6/30/2006	427,984,192	508,655,903	80,671,711	84.1	138,747,320	58.1
<b>Total KERS Members</b>						
6/30/2001	\$7,206,420,161	\$5,729,229,055	\$(1,477,191,106)	125.8%	\$ 1,648,737,395	(89.6)%
6/30/2002	7,030,468,498	6,348,163,928	(682,304,570)	110.7	1,722,716,091	(39.6)
6/30/2003	6,737,244,554	6,877,342,321	140,097,767	98.0	1,787,693,652	7.8
6/30/2004	6,397,726,506	7,453,191,207	1,055,464,701	85.8	1,772,077,308	59.6
6/30/2005	5,983,974,408	8,018,069,096	2,034,094,688	74.6	1,787,594,376	113.8
6/30/2006	5,822,070,515	9,503,482,151	3,681,411,635	61.3	1,840,978,097	200.0

**INSURANCE BENEFITS  
SCHEDULE OF FUNDING PROGRESS**

Actuarial Actuarial Valuation Date	Value of Plan Assets ( a )	Actuarial Accrued Liability (AAL) Entry Age ( b )	Unfunded AAL (UAAL) ( b - a )	Funded Ratio ( a / b )	Covered Payroll ( c )	UAAL as a Percentage of Covered Payroll ( ( b - a ) / c )
<b>Non-Hazardous Members</b>						
6/30/2001	\$449,630,605	\$1,769,583,098	\$1,319,952,493	25.4%	\$1,525,089,988	86.6%
6/30/2002	521,250,455	1,907,683,881	1,386,433,426	27.3	1,597,344,487	86.8
6/30/2003	553,885,082	2,093,210,321	1,539,325,239	26.5	1,658,604,696	92.8
6/30/2004	600,586,961	2,335,905,365	1,735,318,404	25.7	1,645,412,496	105.5
6/30/2005	607,068,351	2,680,559,188	2,073,490,837	22.7	1,655,907,288	125.2
6/30/2006	611,350,765	7,815,480,774	7,204,130,009	7.8	1,702,230,777	423.2
<b>Hazardous Members</b>						
6/30/2001	\$119,372,742	\$214,450,822	\$95,078,080	55.7%	\$123,647,407	76.9%
6/30/2002	135,874,582	236,819,050	100,944,468	57.4	125,371,604	80.5
6/30/2003	151,459,500	283,178,335	131,718,835	53.5	129,088,956	102.0
6/30/2004	169,158,879	323,503,563	154,344,684	52.3	126,664,812	121.9
6/30/2005	187,947,644	386,844,695	198,897,051	48.6	131,687,088	151.0
6/30/2006	212,833,318	621,237,856	408,404,538	34.3	138,747,320	294.4
<b>Total KERS Members</b>						
6/30/2001	\$569,003,347	\$1,984,033,920	\$1,415,030,573	28.7%	\$ 1,648,737,395	85.8%
6/30/2002	657,125,037	2,144,502,931	1,487,377,894	30.6	1,722,716,091	86.3
6/30/2003	705,344,582	2,376,388,656	1,671,044,074	29.7	1,787,693,652	93.5
6/30/2004	769,745,840	2,659,408,928	1,889,663,088	28.9	1,772,077,308	106.6
6/30/2005	795,015,995	3,067,403,883	2,272,387,888	25.9	1,787,594,376	127.1
6/30/2006	824,184,083	8,436,718,630	7,612,534,547	9.8	1,840,978,097	413.5

The final item of required supplementary information, the Schedule of Employer Contributions, is shown in the following tables.

**Retirement Benefits**  
**Schedule of Employer Contributions**

Year Ended	Annual Required Contribution	Actual Contributions	Percentage Contributed
<b>Non-Hazardous Members</b>			
June 30, 2001	\$21,787,253	\$23,482,080	107.8%
June 30, 2002	0	1,760,328	N/A
June 30, 2003	4,905,399	7,597,450	134.9
June 30, 2004	47,739,067	21,696,543	45.4
June 30, 2005	85,798,943	50,332,750	58.7
June 30, 2006	129,125,800	60,680,607	47.0
<b>Hazardous Members</b>			
June 30, 2001	\$9,920,148	\$10,626,663	107.1%
June 30, 2002	7,742,052	17,933,817	102.5
June 30, 2003	8,511,402	7,322,607	86.0
June 30, 2004	9,600,978	9,769,580	101.8
June 30, 2005	9,449,878	9,758,547	103.3
June 30, 2006	10,787,472	10,803,206	100.1
<b>Total KERS Members</b>			
June 30, 2001	\$31,707,401	\$34,108,743	107.6%
June 30, 2002	7,742,052	9,694,145	125.2
June 30, 2003	13,416,801	14,920,057	111.2
June 30, 2004	57,340,045	31,466,123	54.9
June 30, 2005	95,248,821	60,091,297	63.1
June 30, 2006	139,913,272	71,483,813	51.1



**Insurance Benefits**  
**Schedule of Employer Contributions**

Year Ended	Annual Required Contribution*	Actual Contributions	Percentage Contributed
<b>Non-Hazardous Members</b>			
June 30, 2001	\$66,874,871	\$66,874,871	100.0%
June 30, 2002	93,993,177	93,912,017	99.9
June 30, 2003	92,052,561	65,335,219	71.0
June 30, 2004	77,951,553	78,016,737	100.1
June 30, 2005	86,974,271	49,909,228	57.4
June 30, 2006	202,498,302	47,634,639	23.5
<b>Hazardous Members</b>			
June 30, 2001	\$13,226,298	\$13,226,298	100.0%
June 30, 2002	15,859,932	15,887,398	100.2
June 30, 2003	15,839,215	15,883,263	100.3
June 30, 2004	14,942,092	14,959,617	100.1
June 30, 2005	15,892,977	15,395,977	96.9
June 30, 2006	28,517,563	17,011,745	59.7
<b>Total KERS Members</b>			
June 30, 2001	\$80,101,169	\$80,101,169	100.0%
June 30, 2002	109,853,109	109,799,416	100.0
June 30, 2003	107,891,776	81,218,482	75.3
June 30, 2004	92,893,645	92,976,354	100.1
June 30, 2005	102,867,248	65,305,205	63.5
June 30, 2006	231,015,865	64,646,384	28.0

\* ARC for years after June 30, 2005 are based on GASB Statement 43.

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2006. Additional information as of the latest actuarial valuation follows.

#### Retirement Benefits

	Non-Hazardous Members	Hazardous Members
Valuation date	6/30/2006	6/30/2006
Actuarial cost method	Entry Age	Entry Age
Amortization method	Level percent Closed	Level percent Closed
Remaining amortization period	14 - 30 years	14 - 30 years
Asset valuation method	5 year smoothed Market	5 year smoothed Market
Actuarial assumptions:		
Investment rate of return*	7.75%	7.75%
Projected salary increases*	4.0% - 13.5%	4.0% - 14.5%
Cost-of-living adjustment	None	None
*Includes inflation at	3.5%	3.5%

#### Insurance Benefits

	Non-Hazardous Members	Hazardous Members
Valuation date	6/30/2006	6/30/2006
Actuarial cost method	Entry Age	Entry Age
Amortization method	Level percent Closed	Level percent Closed
Remaining amortization period	30 years	30 years
Asset valuation method	5 year smoothed Market	5 year smoothed Market
Medical Trend Assumption	12.0% - 5.5%	12.0% - 5.5%
Year of Ultimate Trend	2027	2027
Actuarial assumptions:		
Investment rate of return*	4.50%	7.75%
*Includes inflation at	3.50%	3.50%

**SCHEDULE A**

**Valuation Balance Sheet and Solvency Test**

The following valuation balance sheets show the assets and liabilities of the retirement system as of the current valuation date of June 30, 2006 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2005. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date.

**VALUATION BALANCE SHEETS  
SHOWING THE ASSETS AND LIABILITIES OF THE  
KENTUCKY EMPLOYEES RETIREMENT SYSTEM  
  
RETIREMENT BENEFITS  
NON-HAZARDOUS KERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 5,394,086,323	\$ 5,578,685,746
Prospective contributions		
Member contributions	\$ 711,518,422	**
Employer normal contributions	465,884,489	\$ 1,779,733,404
Unfunded accrued liability contributions	<u>3,600,739,924</u>	<u>2,000,389,093</u>
Total prospective contributions	\$ <u>4,778,142,835</u>	\$ <u>3,780,122,497</u>
 Total assets	 \$ <u>10,172,229,158</u>	 \$ <u>9,358,808,243</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 5,763,076,811	\$ 4,939,967,757
Present value of benefits payable on account of active members	4,290,238,304	4,302,560,635
Present value of benefits payable on account of inactive members	<u>118,914,043</u>	<u>116,279,851</u>
 Total liabilities	 \$ <u>10,172,229,158</u>	 \$ <u>9,358,808,243</u>

\*Reported by prior actuarial firm.

\*\*Prospective member contributions and employer normal contributions not reported separately by previous actuary.

**VALUATION BALANCE SHEET  
RETIREMENT BENEFITS  
HAZARDOUS KERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 427,984,192	\$ 405,288,662
Prospective contributions		
Member contributions	\$ 94,495,624	**
Employer normal contributions	80,370,934	\$ 189,953,721
Unfunded accrued liability contributions	<u>80,671,711</u>	<u>33,705,595</u>
Total prospective contributions	<u>\$ 255,538,269</u>	<u>\$ 223,659,316</u>
 Total assets	 <u>\$ 683,522,461</u>	 <u>\$ 628,947,978</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 248,804,272	\$ 201,390,551
Present value of benefits payable on account of active members	421,075,855	415,637,428
Present value of benefits payable on account of inactive members	<u>13,642,334</u>	<u>11,919,999</u>
 Total liabilities	 <u>\$ 683,522,461</u>	 <u>\$ 628,947,978</u>

\*Reported by prior actuarial firm.

\*\*Prospective member contributions and employer normal contributions not reported separately by previous actuary.

**VALUATION BALANCE SHEET  
RETIREMENT BENEFITS  
TOTAL KERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 5,822,070,515	\$ 5,983,974,408
Prospective contributions		
Member contributions	\$ 806,014,046	**
Employer normal contributions	546,255,423	\$ 1,969,687,125
Unfunded accrued liability contributions	<u>3,681,411,635</u>	<u>2,034,094,688</u>
Total prospective contributions	<u>\$ 5,033,681,104</u>	<u>\$ 4,003,781,813</u>
 Total assets	 <u>\$ 10,855,751,619</u>	 <u>\$ 9,987,756,221</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 6,011,881,083	\$ 5,141,358,308
Present value of benefits payable on account of active members	4,711,314,159	4,718,198,063
Present value of benefits payable on account of inactive members	<u>132,556,377</u>	<u>128,199,850</u>
 Total liabilities	 <u>\$ 10,855,751,619</u>	 <u>\$ 9,987,756,221</u>

\*Reported by prior actuarial firm.

\*\*Prospective member contributions and employer normal contributions not reported separately by previous actuary.

**VALUATION BALANCE SHEET  
INSURANCE BENEFITS  
NON-HAZARDOUS KERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 611,350,765	\$ 607,068,351
Prospective employer contributions		
Normal contributions	\$ 2,538,834,443	\$ 1,144,308,709
Unfunded accrued liability contributions	<u>7,204,130,009</u>	<u>2,073,490,837</u>
Total prospective contributions	<u>\$ 9,742,964,452</u>	<u>\$ 3,217,799,546</u>
 Total assets	 <u>\$ 10,354,315,217</u>	 <u>\$ 3,824,867,897</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 3,067,574,794	\$ 1,448,911,773
Present value of benefits payable on account of active members	6,811,189,842	2,274,248,439
Present value of benefits payable on account of inactive members	<u>475,550,581</u>	<u>101,707,685</u>
Total liabilities	<u>\$ 10,354,315,217</u>	<u>\$ 3,824,867,897</u>

\*Reported by prior actuarial firm.



**VALUATION BALANCE SHEET  
INSURANCE BENEFITS  
HAZARDOUS KERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 212,833,318	\$ 187,947,644
Prospective employer contributions		
Normal contributions	\$ 195,890,838	\$ 191,503,057
Unfunded accrued liability contributions	<u>408,404,538</u>	<u>198,897,051</u>
Total prospective contributions	<u>\$ 604,295,376</u>	<u>\$ 390,400,108</u>
 Total assets	 <u>\$ 817,128,694</u>	 <u>\$ 578,347,752</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 226,036,462	\$ 175,343,661
Present value of benefits payable on account of active members	583,069,979	390,464,102
Present value of benefits payable on account of inactive members	<u>8,022,253</u>	<u>12,539,989</u>
Total liabilities	<u>\$ 817,128,694</u>	<u>\$ 578,347,752</u>

\*Reported by prior actuarial firm.

**VALUATION BALANCE SHEET  
INSURANCE BENEFITS  
TOTAL KERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 824,184,083	\$ 795,015,995
Prospective employer contributions		
Normal contributions	\$ 2,734,725,281	\$ 1,335,811,766
Unfunded accrued liability contributions	<u>7,612,534,547</u>	<u>2,272,387,888</u>
Total prospective contributions	<u>\$ 10,347,259,828</u>	<u>\$ 3,608,199,654</u>
 Total assets	 <u>\$ 11,171,443,911</u>	 <u>\$ 4,403,215,649</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 3,293,611,256	\$ 1,624,255,434
Present value of benefits payable on account of active members	7,394,259,821	2,664,712,541
Present value of benefits payable on account of inactive members	<u>483,572,834</u>	<u>114,247,674</u>
Total liabilities	<u>\$ 11,171,443,911</u>	<u>\$ 4,403,215,649</u>

\*Reported by prior actuarial firm.

The following tables provide the solvency test for non-hazardous and hazardous KERS members.

**Solvency Test  
Retirement Benefits  
Non-Hazardous KERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)	Actuarial Value of Assets	(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)				
6/30/2001*	\$825,433,562	\$2,669,755,096	\$1,948,846,636	\$6,844,742,687	100.0%	100.0%	171.9%
6/30/2002*	910,956,664	3,242,343,193	1,872,794,907	6,654,084,196	100.0	100.0	133.5
6/30/2003*	859,895,312	3,844,696,149	1,815,871,727	6,351,318,832	100.0	100.0	90.7
6/30/2004*	915,105,103	4,452,864,748	1,681,643,320	6,000,513,743	100.0	100.0	37.6
6/30/2005*	866,044,474	5,056,247,608	1,656,782,757	5,578,685,746	100.0	93.2	-
6/30/2006	866,050,799	5,881,990,853	2,246,784,595	5,394,086,323	100.0	77.0	-

\*Reported by prior actuarial firm.

**Solvency Test  
Retirement Benefits  
Hazardous KERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1)	(2)	(3)	Actuarial Value of Assets	(1)	(2)	(3)
	Active Member Contributions	Retired Members & Beneficiaries	Active Members (Employer Financed Portion)				
6/30/2001*	\$70,405,915	\$86,372,269	\$128,415,577	\$361,677,475	100.0%	100.0%	159.6%
6/30/2002*	77,700,666	110,048,474	134,320,024	376,384,302	100.0	100.0	140.4
6/30/2003*	71,414,721	135,622,333	149,842,079	385,925,722	100.0	100.0	119.4
6/30/2004*	78,817,575	175,102,848	149,657,613	397,212,763	100.0	100.0	95.7
6/30/2005*	75,098,321	213,310,550	150,585,386	405,288,662	100.0	100.0	77.6
6/30/2006	87,092,538	262,446,606	159,116,759	427,984,192	100.0	100.0	49.3

\*Reported by prior actuarial firm.

**Solvency Test  
Insurance Benefits  
Non-Hazardous KERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)	Actuarial Value of Assets	(1)	(2)	(3)
6/30/2001*	\$0	\$784,547,826	\$985,035,272	\$449,630,605	100.0%	57.3%	--
6/30/2002*	0	900,313,022	1,007,370,859	521,250,455	100.0	57.9	--
6/30/2003*	0	1,089,606,122	1,003,604,199	553,885,082	100.0	50.8	--
6/30/2004*	0	1,282,214,660	1,053,690,705	600,586,961	100.0	46.8	--
6/30/2005*	0	1,550,619,458	1,129,939,730	607,068,351	100.0	39.2	--
6/30/2006	0	3,543,125,375	4,272,355,400	611,350,765	100.0	17.3	--

\*Reported by prior actuarial firm.

**Solvency Test  
Insurance Benefits  
Hazardous KERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)	Actuarial Value of Assets	(1)	(2)	(3)
6/30/2001*	\$0	\$77,157,196	\$137,293,626	\$119,372,742	100.0%	100.0%	30.7%
6/30/2002*	0	90,978,506	145,840,544	135,874,582	100.0	100.0	30.8
6/30/2003*	0	113,979,451	169,198,884	151,459,500	100.0	100.0	22.2
6/30/2004*	0	142,872,557	180,631,006	169,158,879	100.0	100.0	14.6
6/30/2005*	0	187,883,650	198,961,045	187,947,644	100.0	100.0	--
6/30/2006	0	234,058,715	387,179,141	212,833,318	100.0	90.9	--

\*Reported by prior actuarial firm.

## SCHEDULE B

### Development of Actuarial Value of Assets Retirement Benefits Non-Hazardous Members

Valuation Date June 30:	2005	2006	2007	2008	2009	2010
A. Actuarial Value Beginning of Year	\$6,000,513,743	\$5,578,685,745				
B. Market Value End of Year	5,362,630,697	5,440,132,708				
C. Market Value Beginning of Year	5,258,994,145	5,362,630,697				
D. Cash Flow						
D1. Contributions	178,133,769	168,287,852				
D2. Benefit Payments	(531,219,607)	(587,578,810)				
D3. Administrative Expenses	(5,916,003)	(7,567,641)				
D4. Investment Expenses	<u>(4,380,304)</u>	<u>(4,466,247)</u>				
D5. Net	(363,376,145)	(431,324,846)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	467,012,697	508,826,857				
E2. Assumed Rate	8.25%	8.25%				
E3. Amount for Immediate Recognition	480,053,118	429,275,362				
E4. Amount for Phased-In Recognition	(13,040,421)	79,551,495				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	(2,608,084)	15,910,299				
F2. First Prior Year	28,891,832	(2,608,084)	15,910,299			
F3. Second Prior Year	(67,554,224)	28,891,832	(2,608,084)	15,910,299		
F4. Third Prior Year	(157,189,761)	(67,554,224)	28,891,832	(2,608,084)	15,910,299	
F5. Fourth Prior Year	<u>(340,044,734)</u>	<u>(157,189,761)</u>	<u>(67,554,224)</u>	<u>28,891,832</u>	<u>(2,608,084)</u>	<u>15,910,299</u>
F6. Total Recognized Investment Gain	(538,504,971)	(182,549,938)	(25,360,177)	(42,194,047)	13,302,215	15,910,299
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$5,578,685,745	\$5,394,086,323				
H. Difference Between Market & Actuarial Values	\$(216,055,048)	\$46,046,385	\$71,406,562	\$29,212,515	\$15,910,299	\$0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

**Development of Actuarial Value of Assets  
Retirement Benefits  
Hazardous Members**

Valuation Date June 30:	2005	2006	2007	2008	2009	2010
A. Actuarial Value Beginning of Year	\$397,212,763	\$405,288,662				
B. Market Value End of Year	398,308,897	437,029,583				
C. Market Value Beginning of Year	366,569,507	398,308,897				
D. Cash Flow						
D1. Contributions	21,383,377	22,858,959				
D2. Benefit Payments	(22,255,069)	(25,172,682)				
D3. Administrative Expenses	(511,021)	(645,377)				
D4. Investment Expenses	<u>(389,065)</u>	<u>(352,105)</u>				
D5. Net	(1,717,787)	(3,311,205)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	33,457,177	42,031,891				
E2. Assumed Rate	8.25%	8.25%				
E3. Amount for Immediate Recognition	32,699,194	33,090,526				
E4. Amount for Phased-In Recognition	757,983	8,941,365				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	151,597	1,788,273				
F2. First Prior Year	2,340,134	151,597	1,788,273			
F3. Second Prior Year	(3,242,759)	2,340,134	151,597	1,788,273		
F4. Third Prior Year	(8,121,036)	(3,242,759)	2,340,134	151,597	1,788,273	
F5. Fourth Prior Year	<u>(14,033,444)</u>	<u>(8,121,036)</u>	<u>(3,242,759)</u>	<u>2,340,134</u>	<u>151,597</u>	<u>1,788,273</u>
F6. Total Recognized Investment Gain	(22,905,508)	(7,083,791)	1,037,245	4,280,004	1,939,870	1,788,273
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$405,288,662	\$427,984,192				
H. Difference Between Market & Actuarial Values	\$(6,979,765)	\$9,045,391	\$8,088,146	\$3,728,142	\$1,788,273	\$0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.



**Development of Actuarial Value of Assets  
Insurance Benefits  
Non-Hazardous Members**

Valuation Date June 30:	2005	2006	2007	2008	2009	2010
A. Actuarial Value Beginning of Year	\$600,586,961	\$607,068,351				
B. Market Value End of Year	610,901,623	632,642,846				
C. Market Value Beginning of Year	587,680,647	610,901,623				
D. Cash Flow						
D1. Contributions	51,431,954	53,404,601				
D2. Benefit Payments	(75,571,076)	(95,822,805)				
D3. Administrative Expenses	(463,299)	(1,679,307)				
D4. Investment Expenses	<u>(435,551)</u>	<u>(442,465)</u>				
D5. Net	(25,037,972)	(44,539,976)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	48,258,948	66,281,199				
E2. Assumed Rate	8.25%	8.25%				
E3. Amount for Immediate Recognition	48,515,608	49,022,827				
E4. Amount for Phased-In Recognition	(256,660)	17,258,372				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	(51,332)	3,451,674				
F2. First Prior Year	7,351,776	(51,332)	3,451,674			
F3. Second Prior Year	(7,064,172)	7,351,776	(51,332)	3,451,674		
F4. Third Prior Year	(3,888,383)	(7,064,172)	7,351,776	(51,332)	3,451,674	
F5. Fourth Prior Year	<u>(13,344,135)</u>	<u>(3,888,383)</u>	<u>(7,064,172)</u>	<u>7,351,776</u>	<u>(51,332)</u>	<u>3,451,674</u>
F6. Total Recognized Investment Gain	(16,996,246)	(200,437)	3,687,946	10,752,118	3,400,342	3,451,674
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$607,068,351	\$611,350,765				
H. Difference Between Market & Actuarial Values	\$3,833,272	\$21,292,081	\$17,604,135	\$6,852,017	\$3,451,674	\$0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

**Development of Actuarial Value of Asset  
Insurance Benefits  
Hazardous Members**

Valuation Date June 30:	2005	2006	2007	2008	2009	2010
A. Actuarial Value Beginning of Year	\$169,158,879	\$187,947,644				
B. Market Value End of Year	188,871,226	223,523,081				
C. Market Value Beginning of Year	162,127,373	188,871,226				
D. Cash Flow						
D1. Contributions	15,653,592	17,100,064				
D2. Benefit Payments	(4,852,962)	(6,513,266)				
D3. Administrative Expenses	(54,640)	(63,250)				
D4. Investment Expenses	<u>(129,342)</u>	<u>(211,889)</u>				
D5. Net	10,616,648	10,311,659				
E. Investment Income						
E1. Market Total: B.-C.-D5.	16,127,205	24,340,195				
E2. Assumed Rate	8.25%	8.25%				
E3. Amount for Immediate Recognition	14,393,544	16,227,862				
E4. Amount for Phased-In Recognition	1,733,661	8,112,334				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	346,732	1,622,467				
F2. First Prior Year	2,465,285	346,732	1,622,467			
F3. Second Prior Year	(1,770,872)	2,465,285	346,732	1,622,467		
F4. Third Prior Year	(4,317,459)	(1,770,872)	2,465,285	346,732	1,622,467	
F5. Fourth Prior Year	<u>(2,950,515)</u>	<u>(4,317,459)</u>	<u>(1,770,872)</u>	<u>2,465,285</u>	<u>346,732</u>	<u>1,622,467</u>
F6. Total Recognized Investment Gain	(6,226,829)	(1,653,847)	2,663,612	4,434,484	1,969,199	1,622,467
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$187,947,644*	\$212,833,318				
H. Difference Between Market & Actuarial Values	\$923,582	\$10,689,763	\$8,026,151	\$3,591,667	\$1,622,467	\$0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

\*This is the actuarial value as reported by the previous actuary. It differs from the method in the table above by \$5,402. The difference is not material.

**SCHEDULE C**

**STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

The assumptions and methods used in the valuation were selected by the prior actuarial firm based on the actuarial experience study prepared as of June 30, 2005, submitted January 12, 2006, and adopted by the Board on January 19, 2006.

INVESTMENT RATE OF RETURN: 7.75% per annum, compounded annually for retirement benefits. A blended rate is necessary to meet GASB Statement 43 requirements for insurance benefits. The current blended rate for KERS non-hazardous is 4.50% and for KERS hazardous is 7.75%.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases for both non-hazardous and hazardous members are as follows and include inflation at 3.50% per annum:

Service	Annual Rates of				
	Merit & Seniority		Base (Economy)	Increase Next Year	
	Non-Hazardous	Hazardous		Non-Hazardous	Hazardous
0-1	10.0%	11.0%	3.5%	13.5%	14.5%
1-2	3.5	4.0	3.5	7.0	7.5
2-3	2.0	3.5	3.5	5.5	7.0
3-4	1.5	3.0	3.5	5.0	6.5
4-5	1.5	2.5	3.5	5.0	6.0
5-6	1.0	2.0	3.5	4.5	5.5
6-7	1.0	1.5	3.5	4.5	5.0
7-8	1.0	1.5	3.5	4.5	5.0
8-9	0.5	1.0	3.5	4.0	4.5
9-10	0.5	1.0	3.5	4.0	4.5
10 & over	0.5	0.5	3.5	4.0	4.0

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of death, disability, withdrawal and retirement are shown in the following tables:

**Non-Hazardous Members**

Age	Withdrawal and Vesting*	Death		Disability	Service Retirement**
		Male	Female		
20	6.00%	0.05%	0.03%	0.05%	
25	5.40	0.07	0.03	0.07	
30	4.80	0.08	0.04	0.09	
35	3.60	0.09	0.05	0.13	
40	2.66	0.11	0.07	0.20	
45	1.98	0.16	0.10	0.33	
50	1.92	0.26	0.14	0.56	
55	1.08	0.44	0.23	0.92	8.0%
60	0.75	0.80	0.44	1.46	10.0
65		1.45	0.86		25.0
70		2.37	1.37		25.0
75					100.0

\* Select rates of withdrawal apply in the first five years of employment regardless of age. The rates are 15.0%, 14.0%, 10.0%, 8.0% and 6.0%, respectively.

\*\* If service is at least 27 years, the rate is 25%. All rates are doubled during the window period expiring January 1, 2009, for those eligible for enhanced benefits.

**Hazardous Members**

Age	Withdrawal and Vesting*	Death**			Service Retirement***	
		Male	Female	Disability	Service	Rate
20	6.00%	0.10%	0.08%	0.07%	20	20.0%
25	5.40	0.12	0.08	0.09	25	20.0
30	4.80	0.13	0.09	0.12	30	35.0
35	3.60	0.14	0.10	0.17	35	60.0
40	2.66	0.16	0.12	0.27		
45	1.98	0.21	0.15	0.44		
50	1.92	0.31	0.19	0.75		
55	1.08	0.49	0.28	1.23		
60	0.75	0.85	0.49	1.95		

\* Select rates of withdrawal apply in the first five years of employment regardless of age. The rates are 15.0%, 14.0%, 10.0%, 8.0% and 6.0%, respectively.

\*\* 75% are presumed to be non-duty related, and 25% are assumed to be duty related.

\*\*\* The annual rate of service retirement is 100% at age 65.

HEALTH CARE COST TREND RATES: Following is a chart detailing trend assumptions.

Year	Trend
2006-08	12.0%
2009-11	11.0
2012-14	10.0
2015-17	9.0
2018-20	8.0
2021-23	7.0
2024-26	6.0
2027 and beyond	5.5

AGE RELATED MORBIDITY: Per capita costs are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims was assumed to be:

Participant Age	Annual Increase
65 – 69	3.0%
70 – 74	2.5%
75 – 79	2.0%
80 – 84	1.0%
85 – 89	0.5%
90 and over	0.0%

ANTICIPATED PLAN PARTICIPATION: The assumed annual rates of plan participation are as follows:

Medical	Non-Hazardous	Hazardous
Participation	90%	100%

Following are charts detailing expected premiums for pre- and post-Medicare for the year following the valuation date.

**MEDICAL INSURANCE CONTRIBUTION RATES  
PRE-MEDICARE ELIGIBLE**

<b>July – December 2006</b>				
	<b>Single</b>	<b>Parent Plus</b>	<b>Couple</b>	<b>Family</b>
<b>TOTAL PREMIUMS</b>				
Essential	N/A	\$550.62	\$ 845.36	\$ 942.72
Enhanced	\$432.08	\$662.71	\$1,014.67	\$1,130.82
Premier	\$447.20	\$688.87	\$1,048.68	\$1,168.62

**MEDICARE ELIGIBLE**

<b>Available Plan</b>	<b>Cost</b>
Kentucky Retirement System Health Plan - Medical Only	\$143.00
Kentucky Retirement System Health Plan – PLUS	\$237.00
Kentucky Retirement System Health Plan – PREMIUM	\$310.00
Anthem Senior Advantage (HMO Local Network)	\$168.00
Anthem Blue Medicare Access (PPO Regional Network)	\$208.00

**DEATH AFTER RETIREMENT:** The rates of mortality for the period after service retirement are according to the 1983 Group Annuity Mortality Table for all retired members and beneficiaries as of June 30, 2006 and the 1994 Group Annuity Mortality Table for all other members. The Group Annuity Mortality Table set forward 5 years is used for the period after disability retirement.

**PERCENT MARRIED:** 100% of employees are assumed to be married, with the wife 3 years younger than the husband.

**DEPENDENT CHILDREN:** For hazardous members' duty-related death benefits, it is assumed that the member is survived by two dependent children each age 6.

**UNUSED SICK LEAVE:** It is assumed that a member will be granted one-half year of service credit for unused sick leave at termination of employment.

**ACTUARIAL METHOD:** Entry age normal cost method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability. For pre-Medicare retiree healthcare liabilities, the current premium charged by the Kentucky Employees' Health Plan (KEHP) is used as the base cost and is projected forward using the healthcare trend assumption shown above. No implicit rate subsidy is calculated or recognized as the subsidy is the responsibility of KEHP. For the Medicare-eligible retirees, claims were analyzed and current premiums were utilized with appropriate aging factors applied.

**ASSETS:** Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value.



**SCHEDULE D**

**SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS**

This schedule summarizes the major retirement benefit provisions of KERS included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

**Plan Year:** July 1 through June 30

**Non-Hazardous Normal Retirement:**

*Age Requirement* 65

*Service Requirement* None

*Amount* If a member has at least 48 months of service, the monthly benefit is 1.97% times final average compensation times years of service. For members who were participants in any one of the state retirement systems from January 1, 1998 through January 1, 1999, the benefit factor is 2.00%. For these members who retire between January 1, 1999 and January 31, 2009 with at least 240 months of service, the benefit factor is 2.20%.

Final compensation is the average salary during the five highest paid fiscal years. If the months of service credit during the highest five-year period are less than forty-eight, one or more additional fiscal years shall be used. For a non-hazardous member whose effective retirement date is between August 1, 2001 and January 1, 2009, and whose total service credit is at least 27 years and whose age and years of service total at least 75, final compensation is based on three years rather than five years. If the months of service credit during the highest three-year period are less than twenty-four, one or more additional fiscal years shall be used.

**Hazardous Normal Retirement:**

*Age Requirement* 55

*Service Requirement* None

*Amount* If a member has at least 60 months of service, the monthly benefit is 2.49% times final average compensation times years of service.

Final compensation is the average salary during the three highest paid fiscal years. If the months of service credit during the highest three-year period are less than twenty-four, one or more additional fiscal years shall be used.

If a member has less than 60 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.

**Non-Hazardous Early Retirement:**

<i>Requirement</i>	Age 55 with 60 months of service or any age with 25 years of service.
<i>Amount</i>	Normal retirement benefit reduced by 5% per year for the first five years and 4% per year for the next five years for each year the member is younger than age 65 or has less than 27 years of service, whichever is smaller.

**Hazardous Early Retirement:**

<i>Requirement</i>	Age 50 with 15 years of service or any age with 20 years of service.
<i>Amount</i>	Normal retirement benefit reduced by 5.5% per year for each year the member is younger than age 55 or has less than 20 years of service, whichever is smaller.

**Non-Hazardous Disability:**

<i>Age Requirement</i>	None
<i>Service Requirement</i>	60 months
<i>Members whose participation began before 8/1/2004</i>	Normal retirement benefit except that service credit will be added to total service for the period from the last day of plan employment to the member's 65th birthday or until the combined total service as of the last day of paid employment and added service equals 25 years. The total amount of service credit added shall not exceed the member's actual service credit on the last day of paid employment. For members with at least 25 years of service but less than 27 years service, total service shall be 27 years. For employees with 27 or more years of service credit, actual service will be used.

A contributing member in a non-hazardous position who is disabled in the line of duty is entitled to a retirement benefit of not less than 25% of the member's final monthly rate of pay plus 10% of the member's final monthly rate of pay for each dependent child. The maximum dependent child's benefit is 40% of the member's final monthly rate of pay.

<i>Members whose participation began on or after 8/1/2004</i>	Normal retirement benefit based on actual service with no penalty or, if larger, 20% of the Final Rate of Pay. May apply for disability even after normal retirement age.
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**Hazardous Disability:**

*Age Requirement*

None

*Service Requirement*

60 months

*Members whose participation began before 8/1/2004*

Normal retirement benefit except that service credit will be added to total service for the period from the last day of plan employment to the member's 55th birthday or until the combined total service as of the last day of paid employment and added service equals 20 years. The total amount of service credit added shall not exceed the member's actual service credit on the last day of paid employment. For employees with 20 or more years of service credit, actual service credit will be used.

A member in a hazardous position who is disabled in the line of duty is entitled to a retirement benefit of not less than 25% of the member's final monthly rate of pay plus 10% of his final monthly rate of pay for each dependent child. The maximum dependent child's benefit is 40% of the member's final monthly rate of pay.

*Members whose participation began on or after 8/1/2004*

Normal retirement benefit based on actual service with no penalty or, if larger, 25% of the Final Rate of Pay. May apply for disability even after normal retirement age.

**Vesting:**

*Age Requirement*

None

*Service Requirement*

60 months. Service purchased after August 1, 2004 does not count toward vesting insurance benefits. Service purchased by employees who began participating on or after August 1, 2004 does not count toward vesting retirement benefits.

*Amount*

Normal retirement benefit deferred to normal retirement age or reduced benefit payable at early retirement age.

*Normal Retirement Age*

65 for non-hazardous members and 55 for hazardous members.

**Pre-Retirement Death Benefit (not in line of duty):**

<i>Requirement</i>	Any age with 60 months of service or age 65 with 48 months of service.
<i>Amount</i>	Benefit equal to the benefit the member would have received had the member retired on the day before the date of death and elected a 100% joint and survivor form. Benefit is actuarially reduced if member is less than age 55 at date of death.

**Spouse's Pre-Retirement Death Benefit (in line of duty):**

<i>Requirement</i>	None
<i>Amount</i>	The spouse may choose (1) a \$10,000 lump sum payment and monthly payments of 25% of the member's final monthly rate of pay or (2) benefits based on the member's age, years of service and final compensation at date of death.

**Dependent Non-Spouse's Death Benefit (in line of duty) – Hazardous Plan:**

<i>Requirement</i>	None
<i>Amount</i>	The non-spouse may choose (1) a \$10,000 lump sum payment or (2) benefits based upon the member's age, years of service and final compensation at date of death.

**Dependent Child's Death Benefit (in line of duty):**

<i>Requirement</i>	None
<i>Amount</i>	10% of member's final monthly rate of pay up to a maximum of 40%.

**Post-Retirement Death Benefit:**

<i>Lump-sum Benefit</i>	\$5,000
<i>Husband and Wife</i>	The choice of payment option selected by the member will determine the monthly benefits provided to the beneficiary upon the member's death.

**Insurance Plan for Retirees:**

*Members whose participation began before July 1, 2003*

The Retirement System pays a portion of medical premiums for retirees, and in the case of hazardous duty retirees, their dependents and beneficiaries. The Insurance Fund will pay 0%, 25%, 50%, 75%, or 100% of the premiums depending on retiree eligibility as reported by the System.

*Members whose participation began on or after July 1, 2003*

The Retirement System pays \$10 per month per year of service toward medical premiums for non-hazardous retirees, \$15 per month per year of service for hazardous retirees, and \$10 per month per year of service for surviving spouses of hazardous employees. "Line of duty" insurance benefits will be calculated as if the member had at least 20 years of hazardous service.

**Member Contributions:**

*Non-hazardous Members*

5% of salary.

*Hazardous Members*

8% of salary.

**SCHEDULE E**

**DETAILED TABULATIONS OF THE DATA**

**Schedule of Non-Hazardous Retired Members Added to and Removed From Rolls  
Last Six Fiscal Years**

<b>Year Ending June 30</b>	<b>2001</b>	<b>2002</b>	<b>2003*</b>	<b>2004*</b>	<b>2005*</b>	<b>2006</b>
			<b><u>Number</u></b>			
Beginning of Year	N/A	N/A	26,703	27,233	28,892	30,770
Added	N/A	N/A	2,148	2,473	2,481	2,481
Removed	N/A	N/A	1,618	814	603	1,111
End of Year	N/A	N/A	27,233	28,892	30,770	32,140
			<b><u>Annual Allowances</u></b>			
Beginning of Year	N/A	N/A	N/A	\$393,048,800	\$449,410,400	\$509,347,800
Added	N/A	N/A	48,272,600	57,329,301	56,489,600	65,942,585
Removed	N/A	N/A	13,060,300	6,092,500	5,298,200	9,123,382
End of Year	N/A	N/A	\$393,048,800	\$449,410,400	\$509,347,800	\$566,167,003
% Increase in Allowances	N/A	N/A	N/A	14.34%	13.34%	11.31%
Average Annual Allowance	N/A	N/A	\$14,433	\$15,555	\$16,553	\$17,611

\*Reported by prior actuarial firm.

**Schedule of Hazardous Retired Members Added to and Removed From Rolls  
Last Six Fiscal Years**

Year Ending June 30	2001	2002	2003*	2004*	2005*	2006
			<b><u>Number</u></b>			
Beginning of Year	N/A	N/A	1,208	1,357	1,549	1,752
Added	N/A	N/A	170	227	234	256
Removed	N/A	N/A	21	35	31	28
End of Year	N/A	N/A	1,357	1,549	1,752	1,980
			<b><u>Annual Allowances</u></b>			
Beginning of Year	N/A	N/A	N/A	\$12,974,700	\$16,099,000	\$19,640,700
Added	N/A	N/A	2,333,400	3,070,600	3,415,500	3,929,666
Removed	N/A	N/A	130,400	155,000	191,000	188,829
End of Year	N/A	N/A	\$12,974,700	\$16,099,000	\$19,640,700	\$23,381,537
% Increase in Allowances	N/A	N/A	N/A	24.08%	22.00%	19.25%
Average Annual Allowance	N/A	N/A	\$9,561	\$10,393	\$11,210	\$11,809

\*Reported by prior actuarial firm.



**Non-Hazardous  
Retired Lives Summary**

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	2,783	\$4,333,702.22	7,611	\$9,531,240.44	10,394	\$13,864,942.66
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	1721	2,567,728.11	654	634,980.44	2,375	3,202,708.55
66-2/3% to Beneficiary	781	1,831,408.67	297	550,776.23	1,078	2,382,184.90
50% to Beneficiary	1,013	2,178,170.85	924	1,691,633.43	1,937	3,869,804.28
Pop-up Option	2,682	5,855,634.82	1,946	3,447,216.24	4,628	9,302,851.06
10 Years Certain	0	0.00	0	0.00	0	0.00
10 Years Certain & Life	973	1,286,851.54	1,720	2,147,809.83	2,693	3,434,661.37
Social Security Option						
Age 62 Basic	415	848,310.79	947	1,473,616.80	1,362	2,321,927.59
Age 62 Survivorship	870	1,645,945.57	540	858,935.41	1,410	2,504,880.98
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	1	1,683.30	0	0.00	1	1,683.30
15 Years Certain & Life	380	531,044.36	411	554,131.14	791	1,085,175.50
20 Years Certain & Life	346	666,786.86	363	554,369.99	709	1,221,156.85
5 Years Certain	0	0.00	0	0.00	0	0.00
PLSO 12 Month Basic	47	61,778.24	153	195,428.92	200	257,207.16
PLSO 24 Month Basic	18	21,033.62	93	84,157.11	111	105,190.73
PLSO 36 Month Basic	85	60,812.07	179	106,492.55	264	167,304.62
PLSO 12 Month Survivor	55	88,329.08	43	63,871.73	98	152,200.81
PLSO 24 Month Survivor	50	51,108.81	42	52,503.42	92	103,612.23
PLSO 36 Month Survivor	147	120,827.59	75	49,697.94	222	170,525.53
<b>Total</b>	<b>12,367</b>	<b>\$22,151,156.50</b>	<b>15,998</b>	<b>\$21,996,861.62</b>	<b>28,365</b>	<b>\$44,148,018.12</b>

**Hazardous  
Retired Lives Summary**

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	253	\$240,459.50	192	\$151,188.21	445	\$391,647.71
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	152	150,866.42	10	7,751.73	162	158,618.15
66-2/3% to Beneficiary	58	63,077.75	7	6,652.67	65	69,730.42
50% to Beneficiary	98	130,416.57	15	19,824.61	113	150,241.18
Pop-up Option	368	447,549.65	64	63,094.27	432	510,643.92
10 Years Certain	18	23,972.48	5	5,120.26	23	29,092.74
10 Years Certain & Life	86	70,029.17	36	23,602.88	122	93,632.05
Social Security Option						
Age 62 Basic	45	44,964.82	21	15,326.98	66	60,291.80
Age 62 Survivorship	102	132,841.35	12	7,355.41	114	140,196.76
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	0	0.00	0	0.00	0	0.00
15 Years Certain & Life	33	36,189.32	9	8,647.78	42	44,837.10
20 Years Certain & Life	32	27,628.38	14	19,678.55	46	47,306.93
5 Years Certain	0	0.00	0	0.00	0	0.00
PLSO 12 Month Basic	7	6,691.04	8	7,450.41	15	14,141.45
PLSO 24 Month Basic	12	12,294.46	6	3,506.98	18	15,801.44
PLSO 36 Month Basic	27	24,205.03	16	10,477.31	43	34,682.34
PLSO 12 Month Survivor	13	15,877.49	3	2,327.85	16	18,205.34
PLSO 24 Month Survivor	12	12,663.17	6	7,908.15	18	20,571.32
PLSO 36 Month Survivor	28	20,627.94	11	12,292.97	39	32,920.91
<b>Total</b>	<b>1,344</b>	<b>\$1,460,354.54</b>	<b>435</b>	<b>\$372,207.02</b>	<b>1,779</b>	<b>\$1,832,561.56</b>

**Non-Hazardous  
Beneficiary Lives Summary**

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	2	\$348.20	20	\$17,466.98	22	\$17,815.18
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	219	159,964.74	1,611	1,216,922.13	1,830	1,376,886.87
66-2/3% to Beneficiary	23	17,857.72	276	181,502.86	299	199,360.58
50% to Beneficiary	72	39,060.14	470	217,819.55	542	256,879.69
Pop-up Option	60	78,739.84	271	282,918.80	331	361,658.64
10 Years Certain	43	44,603.90	59	59,752.45	102	104,356.35
10 Years Certain & Life	40	37,700.17	59	63,593.52	99	101,293.69
Social Security Option						
Age 62 Basic	0	0.00	2	1,105.02	2	1,105.02
Age 62 Survivorship	27	30,180.82	189	257,336.48	216	287,517.30
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	11	3,721.61	11	3,721.61
Dependent Child	3	1,058.14	3	1,360.47	6	2,418.61
Refund	0	0.00	5	4,673.09	5	4,673.09
15 Years Certain & Life	27	31,334.89	60	57,829.52	87	89,164.41
20 Years Certain & Life	33	32,393.55	70	79,127.95	103	111,521.50
5 Years Certain	43	46,079.56	49	49,856.97	92	95,936.53
PLSO 12 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 24 Month Basic	1	529.18	0	0.00	1	529.18
PLSO 36 Month Basic	1	558.75	7	3,104.24	8	3,662.99
PLSO 12 Month Survivor	2	2,763.69	2	2,588.46	4	5,352.15
PLSO 24 Month Survivor	0	0.00	4	1,684.01	4	1,684.01
PLSO 36 Month Survivor	4	1,195.45	7	5,833.50	11	7,028.95
<b>Total</b>	<b>600</b>	<b>\$524,368.74</b>	<b>3,175</b>	<b>\$2,508,197.61</b>	<b>3,775</b>	<b>\$3,032,566.35</b>

**Hazardous  
Beneficiary Lives Summary**

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	0	\$0.00	2	\$276.03	2	\$276.03
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	7	2,799.22	75	49,126.28	82	51,925.50
66-2/3% to Beneficiary	0	0.00	6	2,388.46	6	2,388.46
50% to Beneficiary	1	403.23	15	4,692.12	16	5,095.35
Pop-up Option	3	991.97	23	12,612.99	26	13,604.96
10 Years Certain	2	2,297.43	9	7,064.91	11	9,362.34
10 Years Certain & Life	1	283.92	6	2,909.89	7	3,193.81
Social Security Option						
Age 62 Basic	0	0.00	0	0.00	0	0.00
Age 62 Survivorship	1	19.43	10	8,309.26	11	8,328.69
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	8	2,376.89	9	2,584.77	17	4,961.66
Refund	0	0.00	3	1,875.88	3	1,875.88
15 Years Certain & Life	3	1,099.51	1	729.32	4	1,828.83
20 Years Certain & Life	0	0.00	4	1,031.46	4	1,031.46
5 Years Certain	2	3,357.59	7	6,559.65	9	9,917.24
PLSO 12 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 24 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 36 Month Basic	1	320.64	0	0.00	1	320.64
PLSO 12 Month Survivor	0	0.00	1	1,088.04	1	1,088.04
PLSO 24 Month Survivor	0	0.00	1	699.69	1	699.69
PLSO 36 Month Survivor	0	0.00	0	0.00	0	0.00
<b>Total</b>	<b>29</b>	<b>\$13,949.83</b>	<b>172</b>	<b>\$101,948.75</b>	<b>201</b>	<b>\$115,898.58</b>

**Non-Hazardous Members**

**Retired and Beneficiary Information June 30, 2006  
Tabulated by Attained Ages**

Attained Age	Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	89	\$1,697,295	78	\$766,487	295	\$3,045,576	462	\$5,509,358
45-49	1,034	\$28,029,748	124	\$1,341,815	143	\$1,552,510	1,301	\$30,924,073
50-54	2,792	\$81,525,008	226	\$2,657,579	228	\$2,320,983	3,246	\$86,503,570
55-59	4,553	\$124,536,371	333	\$3,955,368	271	\$3,641,210	5,157	\$132,132,949
60-64	4,368	\$96,864,488	339	\$3,669,747	348	\$4,390,163	5,055	\$104,924,398
65-69	3,984	\$66,102,506	353	\$3,662,923	404	\$4,607,133	4,741	\$74,372,562
70-74	3,267	\$44,579,263	238	\$2,259,073	460	\$5,058,915	3,965	\$51,897,251
75-79	2,752	\$34,028,654	99	\$847,698	510	\$4,703,274	3,361	\$39,579,626
80-84	2,027	\$20,569,101	54	\$401,237	504	\$3,542,787	2,585	\$24,513,125
85-89	1,109	\$8,719,978	27	\$166,948	378	\$2,326,777	1,514	\$11,213,703
90 & Over	511	\$3,359,039	8	\$35,895	234	\$1,201,454	753	\$4,596,388
Totals	26,486	\$510,011,451	1,879	\$19,764,770	3,775	\$36,390,782	32,140	\$566,167,003

## Hazardous Members

### Retired and Beneficiary Information June 30, 2006 Tabulated by Attained Ages

Attained Age	Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	34	\$582,673	10	\$73,682	41	\$248,945	85	\$905,300
45-49	107	\$1,940,819	15	\$149,409	12	\$67,713	134	\$2,157,941
50-54	212	\$3,615,850	24	\$221,934	18	\$145,766	254	\$3,983,550
55-59	408	\$6,305,434	37	\$297,261	24	\$180,141	469	\$6,782,836
60-64	356	\$4,220,147	14	\$83,238	30	\$244,656	400	\$4,548,041
65-69	247	\$2,417,835	8	\$16,661	27	\$152,730	282	\$2,587,226
70-74	182	\$1,267,743	10	\$24,965	22	\$157,183	214	\$1,449,891
75-79	85	\$402,527	2	\$5,750	16	\$65,831	103	\$474,108
80-84	21	\$283,394			7	\$74,403	28	\$357,797
85-89	5	\$62,508			4	\$53,414	9	\$115,922
90 & Over	2	\$18,925					2	\$18,925
Totals	1,659	\$21,117,855	120	\$872,900	201	\$1,390,782	1,980	\$23,381,537

**Total Non-Hazardous Active Members as of June 30, 2006  
Tabulated by Attained Ages and Years of Service**

Attained Age	Years of Service to Valuation Date								Totals
	0-4	5-9	10-14	15-19	20-24	25-26	27-29	30+	
Under 20	774								774
Avg. Pay	\$24,255								\$24,255
20-24	1,568	76							1,644
Avg. Pay	\$23,892	\$29,030							\$24,129
25-29	3,629	890	27						4,546
Avg. Pay	\$27,409	\$29,440	\$30,834						\$27,827
30-34	2,678	2,131	459	27					5,295
Avg. Pay	\$30,371	\$34,029	\$36,112	\$40,955					\$32,395
35-39	2,124	1,879	1,272	553	69				5,897
Avg. Pay	\$31,643	\$35,498	\$40,348	\$39,907	\$47,609				\$35,711
40-44	1,981	1,554	1,029	1,076	793	157			6,590
Avg. Pay	\$30,733	\$36,433	\$40,510	\$42,438	\$47,879	\$52,993			\$38,109
45-49	1,776	1,544	976	983	872	395	416	85	7,047
Avg. Pay	\$31,178	\$34,966	\$39,467	\$41,775	\$47,575	\$52,567	\$51,289	\$56,896	\$39,360
50-54	1,524	1,398	948	835	755	291	326	446	6,523
Avg. Pay	\$32,804	\$34,979	\$39,206	\$41,990	\$46,900	\$51,623	\$52,558	\$59,363	\$40,651
55-59	1,116	1,053	772	746	566	216	190	347	5,006
Avg. Pay	\$33,597	\$35,853	\$40,454	\$41,071	\$44,563	\$47,530	\$55,091	\$63,617	\$40,980
60-64	455	553	374	454	258	96	74	140	2,404
Avg. Pay	\$33,233	\$35,852	\$37,568	\$40,175	\$47,140	\$50,258	\$51,638	\$65,331	\$40,429
65-69	104	141	131	142	60	32	25	54	689
Avg. Pay	\$36,695	\$35,731	\$37,450	\$43,425	\$41,021	\$44,330	\$45,150	\$59,348	\$40,842
70 & over	41	54	46	74	31	10	12	24	292
Avg. Pay	\$31,182	\$26,977	\$38,030	\$34,322	\$40,751	\$42,667	\$55,173	\$68,806	\$37,766
<b>Totals</b>	<b>17,770</b>	<b>11,273</b>	<b>6,034</b>	<b>4,890</b>	<b>3,404</b>	<b>1,197</b>	<b>1,043</b>	<b>1,096</b>	<b>46,707</b>
<b>Avg. Pay</b>	<b>\$29,724</b>	<b>\$34,703</b>	<b>\$39,450</b>	<b>\$41,421</b>	<b>\$46,785</b>	<b>\$50,996</b>	<b>\$52,301</b>	<b>\$61,487</b>	<b>\$36,445</b>

**Total Hazardous Active Members as of June 30, 2006  
Tabulated by Attained Ages and Years of Service**

Attained Age	Years of Service to Valuation Date								Totals
	0-4	5-9	10-14	15-19	20-24	25-26	27-29	30+	
Under 20	73								73
Avg. Pay	\$20,002								\$20,002
20-24	209	5							214
Avg. Pay	\$22,373	\$25,908							\$22,456
25-29	428	52							480
Avg. Pay	\$24,049	\$29,082							\$24,594
30-34	348	197	34						579
Avg. Pay	\$26,343	\$31,736	\$34,171						\$28,638
35-39	267	167	118	47	1				600
Avg. Pay	\$26,446	\$32,360	\$35,956	\$41,558	\$45,228				\$31,177
40-44	216	133	87	129	16	2			583
Avg. Pay	\$26,709	\$32,366	\$39,247	\$39,676	\$43,440	\$42,240			\$33,252
45-49	169	137	68	143	24	3	4		548
Avg. Pay	\$28,345	\$33,475	\$38,952	\$42,553	\$49,952	\$47,112	\$71,616		\$36,016
50-54	163	135	80	141	21	4	2	2	548
Avg. Pay	\$28,209	\$37,647	\$37,131	\$42,080	\$48,415	\$56,781	\$49,512	\$48,432	\$36,540
55-59	133	106	71	135	16	2	2	1	466
Avg. Pay	\$29,241	\$38,207	\$39,042	\$43,298	\$48,037	\$46,188	\$66,744	\$59,496	\$37,790
60-64	47	56	29	54	4	1		2	193
Avg. Pay	\$30,145	\$38,051	\$39,849	\$42,984	\$52,947	\$46,572		\$64,212	\$38,400
65-69	5	14	7	6					32
Avg. Pay	\$22,231	\$31,533	\$34,479	\$47,704					\$33,756
70 & over		2		2					4
Avg. Pay		\$29,580		\$40,638					\$35,109
<b>Totals</b>	<b>2,058</b>	<b>1,004</b>	<b>494</b>	<b>657</b>	<b>82</b>	<b>12</b>	<b>8</b>	<b>5</b>	<b>4,320</b>
<b>Avg. Pay</b>	<b>\$25,866</b>	<b>\$33,817</b>	<b>\$37,667</b>	<b>\$42,045</b>	<b>\$48,003</b>	<b>\$49,324</b>	<b>\$64,872</b>	<b>\$56,957</b>	<b>\$32,117</b>



**SCHEDULE F**

**AMORTIZATION BASES**

**Non-Hazardous Retirement Bases**

Date Established	Initial Years	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
06/30/1990	30	\$256,534,456	\$29,570,786	14	\$322,916,424
06/30/1991	30	103,692,389	11,439,894	15	131,437,427
06/30/1992	30	(212,448,599)	(22,431,577)	16	(269,991,277)
06/30/1993	30	(57,917,315)	(5,852,169)	17	(73,511,830)
06/30/1994	30	59,519,052	5,754,900	18	75,193,546
06/30/1995	30	65,659,241	6,074,652	19	82,315,425
06/30/1996	30	(188,573,585)	(16,692,507)	20	(233,964,848)
06/30/1997	30	(277,888,742)	(23,514,649)	21	(340,099,850)
06/30/1998	30	(326,522,755)	(26,410,970)	22	(393,334,339)
06/30/1999	30	(362,615,121)	(28,034,757)	23	(429,083,695)
06/30/2000	30	(964,739,576)	(71,288,128)	24	(1,119,346,569)
06/30/2001	30	584,703,884	41,292,974	25	664,090,094
06/30/2002	30	811,152,084	54,746,035	26	900,466,003
06/30/2003	30	811,953,677	52,368,341	27	879,751,228
06/30/2004	30	871,195,298	53,692,958	28	920,118,936
06/30/2005	30	917,439,825	54,028,263	29	943,374,187
06/30/2006	30	1,540,409,062	<u>86,675,954</u>	30	<u>1,540,409,062</u>
Total			\$201,420,001		\$3,600,739,924

\* Level percent of salary

### Hazardous Retirement Bases

Date Established	Initial Years	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
06/30/1990	30	\$(366,782)	\$(42,279)	14	\$(461,692)
06/30/1991	30	8,515,857	939,515	15	10,794,451
06/30/1992	30	(2,222,347)	(234,648)	16	(2,824,278)
06/30/1993	30	1,873,766	189,332	17	2,378,286
06/30/1994	30	2,736,468	264,589	18	3,457,124
06/30/1995	30	4,677,834	432,783	19	5,864,488
06/30/1996	30	(33,735,166)	(2,986,232)	20	(41,855,509)
06/30/1997	30	(7,971,975)	(674,580)	21	(9,756,663)
06/30/1998	30	(13,896,455)	(1,124,022)	22	(16,739,886)
06/30/1999	30	(13,902,335)	(1,074,827)	23	(16,450,681)
06/30/2000	30	(35,735,060)	(2,640,594)	24	(41,461,878)
06/30/2001	30	18,907,681	1,335,299	25	21,474,807
06/30/2002	30	24,131,600	1,628,683	26	26,788,670
06/30/2003	30	26,494,066	1,708,780	27	28,706,301
06/30/2004	30	35,826,765	2,208,053	28	37,838,686
06/30/2005	30	26,677,621	1,571,052	29	27,431,749
06/30/2006	30	45,487,736	<u>2,559,510</u>	30	<u>45,487,736</u>
Total			\$4,060,412		\$80,671,711

\* Level percent of salary

**Non-Hazardous Insurance Bases**

Date Established	Initial Years	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
06/30/2006	30	\$7,204,130,009	<u>\$277,769,351</u>	30	<u>\$7,204,130,009</u>
Total		\$7,204,130,009	\$277,769,351		\$7,204,130,009

\* Level percent of salary

**Hazardous Insurance Bases**

Date Established	Initial Years	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
06/30/2006	30	\$408,404,538	<u>\$23,923,794</u>	30	<u>\$408,404,538</u>
Total		\$408,404,538	\$23,923,794		\$408,404,538

\* Level percent of salary



**Report on the Annual Valuation of the  
County Employees Retirement System**

**Prepared as of June 30, 2006**

November 1, 2006

Board of Trustees  
Kentucky Retirement Systems  
Perimeter Park West  
1260 Louisville Road  
Frankfort, KY 40601

Dear Members of the Board:

Presented in this report are the results for the annual actuarial valuation of the retirement and insurance benefits provided under the County Employees Retirement System (CERS). The purpose of the valuation was to measure the System's funding progress and to determine the required employer contribution rates for the fiscal year beginning July 1, 2007.

The date of the valuation was June 30, 2006.

The valuation was based upon data, furnished by the Executive Director and the Kentucky Retirement Systems (KRS) staff, concerning active, inactive and retired members along with pertinent financial information. The complete cooperation of the KRS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the summary of results on page 1 and the comments on page 6.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the system, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the system.

Respectfully submitted,

Thomas J. Cavanaugh, FSA, FCA, EA, MAAA  
Chief Executive Officer

Edward A. Macdonald, ASA, FCA, MAAA  
President

TJC/EAM:sh

## TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page No.</u>
I	Summary of Principal Results	1
II	Membership Data	3
III	Assets	5
IV	Comments on Valuation	6
V	Derivation of Experience Gains and Losses	8
VI	Required Contribution Rates	13
VII	Accounting Information	16
 <u>Schedule</u>		
A	Valuation Balance Sheet and Solvency Test	22
B	Development of Actuarial Value of Assets	30
C	Statement of Actuarial Assumptions and Methods	34
D	Summary of Main Benefit and Contribution Provisions	39
E	Detailed Tabulations of the Data	44
F	Amortization Bases	54

**REPORT ON THE ANNUAL VALUATION OF THE  
COUNTY EMPLOYEES RETIREMENT SYSTEM**

**PREPARED AS OF JUNE 30, 2006**

**SECTION I – SUMMARY OF PRINCIPAL RESULTS**

1. This report, prepared as of June 30, 2006, presents the results of the annual actuarial valuation the retirement and insurance benefits provided under the System. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results, broken down between non-hazardous and hazardous members, are summarized in the following table.

**SUMMARY OF PRINCIPAL RESULTS**

	CERS Non-Hazardous		CERS Hazardous		CERS Totals	
	6/30/06	6/30/05*	6/30/06	6/30/05*	6/30/06	6/30/05*
<b>Contributions for next fiscal year:</b>						
Retirement	6.98%	5.97%	15.01%	13.11%		
Insurance	<u>20.51</u>	<u>7.22</u>	<u>39.52</u>	<u>15.10</u>	N/A	N/A
Total	27.49%	13.19%	54.53%	28.21%		
<b>Funded status as of valuation date:</b>						
<b>Retirement</b>						
Actuarial accrued liability	\$6,179,569,267	\$5,385,156,690	\$2,020,142,770	\$1,795,617,335	\$8,199,712,037	\$7,180,774,025
Actuarial value of assets	\$5,162,894,136	\$5,059,208,687	\$1,515,075,017	\$1,452,353,023	\$6,677,969,153	\$6,511,561,710
Unfunded liability on actuarial value of assets	\$1,016,675,131	\$325,948,003	\$505,067,753	\$343,264,312	\$1,521,742,884	\$669,212,315
Funded ratio on actuarial value of assets	83.55%	93.95%	75.00%	80.88%	81.44%	90.68%
Market value of assets	\$5,191,376,948	\$4,893,599,997	\$1,528,845,357	\$1,411,245,719	\$6,720,222,305	\$6,304,845,716
Unfunded liability on market value of assets	\$988,192,319	\$491,556,693	\$491,297,413	\$384,371,616	\$1,479,489,732	\$875,928,386
Funded ratio on market value of assets	84.01%	90.87%	75.68%	78.59%	81.96%	87.80%
<b>Insurance</b>						
Actuarial accrued liability	\$4,607,223,639	\$2,788,754,654	\$1,928,481,371	\$1,283,299,092	\$6,535,705,010	\$4,072,053,746
Actuarial value of assets	\$777,726,590	\$663,941,949	\$422,785,042	\$359,180,461	\$1,200,511,632	\$1,023,122,410
Unfunded liability on actuarial value of assets	\$3,829,497,049	\$2,124,812,705	\$1,505,696,329	\$924,118,631	\$5,335,193,378	\$3,048,931,336
Funded ratio on actuarial value of assets	16.88%	23.81%	21.92%	27.99%	18.37%	25.13%
Market value of assets	\$813,250,744	\$668,485,367	\$441,278,796	\$360,938,669	\$1,254,529,540	\$1,029,424,036
Unfunded liability on market value of assets	\$3,793,972,895	\$2,120,269,287	\$1,487,202,575	\$922,360,423	\$5,281,175,470	\$3,042,629,710
Funded ratio on market value of assets	17.65%	23.97%	22.88%	28.13%	19.20%	25.28%
<b>Demographic data as of valuation date:</b>						
Number of retired participants and beneficiaries	33,102	31,347	4,712	4,361	37,814	35,708
Number of vested former members	7,379	7,771	393	482	7,772	8,253
Number of former members due a refund	42,667	41,098	1,562	1,489	44,229	42,587
Number of active members	83,694	81,240	9,635	9,464	93,329	90,704
Total salary	\$1,982,437,473	\$1,885,275,000	\$426,927,550	\$411,121,728	\$2,409,365,023	\$2,296,396,728
Average salary	\$23,687	\$23,206	\$44,310	\$43,441	\$25,816	\$25,317

\*Reported by prior actuarial firm.

2. The valuation balance sheets showing the results of the valuation are given in Schedule A.
3. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains during the valuation year are given in Section V, and the rates of contribution payable by employers are given in Section VI.
4. There were no changes in benefit provisions since the last valuation. There were, however, several changes in actuarial assumptions and methods adopted by the Board based on an experience investigation dated January 12, 2006 covering the period July 1, 2000 through June 30, 2005. Since the previous valuation, the assumptions and methods were changed as follows:
  - Investment return was reduced from 8.25% per year to 7.75% per year
  - The mortality table was changed for members who retire after June 30, 2006 from the 1983 GAM table to the 1994 GAM table
  - The mortality table for disabled members was changed from the PBGC Table for Disabled Lives Receiving Social Security to the 1994 GAM table set forward five years
  - The salary scale was changed from a service based scale ranging from 12.0% to 6.5% to a service based scale ranging from 13.5% to 4.0% for Non-Hazardous employees and from 14.5% to 4.0% for Hazardous employees
  - Rates of disablement, termination and retirement were adjusted to more closely reflect the actual experience of the system
  - Medical trend rates were increased through 2020 and reduced thereafter in a range starting at 12.0% per year in 2006-2008 and declining to an ultimate rate of 5.5% in 2027 and later
  - The method used to determine the actuarial value of assets was changed to a method that truly smoothes market fluctuations over a five year smoothing period
  - The insurance accrued liability amortization bases were consolidated and reset to a new 30-year amortization period beginning with the June 30, 2006 valuation.
5. Schedule B of this report presents the development of the actuarial value of assets. Schedule C details the actuarial assumptions and methods employed. Schedule D gives a summary of the benefit and contribution provisions of the plan.



## **SECTION II – MEMBERSHIP DATA**

Data regarding the membership of the System for use as a basis for the valuation were furnished by the System's office. The following table summarizes the membership of the system as of June 30, 2006 upon which the valuation was based. Detailed tabulations of the data are given in Schedule E.

### **Active Members**

Employee Group	Number	Payroll	Group Averages		
			Salary	Age	Service
Non-Hazardous	83,694	\$ 1,982,437,473	\$23,687	45.1	8.1
Hazardous	9,635	426,927,550	44,310	37.8	8.3
<b>Total in CERS</b>	<b>93,329</b>	<b>\$ 2,409,365,023</b>	<b>\$25,816</b>	<b>44.3</b>	<b>8.1</b>

The following tables show a six-year history of active member valuation data.

### **SCHEDULE OF NON-HAZARDOUS CERS ACTIVE MEMBER VALUATION DATA**

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2001	78,773	\$1,597,653,320	\$20,282	(0.3)%
6/30/2002	79,850	1,688,460,789	21,145	4.3
6/30/2003	82,288	1,796,451,180	21,831	3.2
6/30/2004	80,922	1,826,870,880	22,576	3.4
6/30/2005	81,240	1,885,275,000	23,206	2.8
6/30/2006	83,694	1,982,437,473	23,687	2.1

### **SCHEDULE OF HAZARDOUS CERS ACTIVE MEMBER VALUATION DATA**

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2001	8,586	\$322,819,064	\$37,598	2.7%
6/30/2002	8,949	346,319,146	38,699	2.9
6/30/2003	9,286	374,700,732	40,351	4.3
6/30/2004	9,349	392,562,624	41,990	4.1
6/30/2005	9,464	411,121,728	43,441	3.5
6/30/2006	9,635	426,927,550	44,310	2.0

The following tables show the number and annual retirement allowances payable to retired members and their beneficiaries on the roll of the Retirement System as of the valuation date as well as certain group averages.

#### Non-Hazardous Retired Lives

Type of Benefit Payment	No.	Annual Benefits	Group Averages	
			Benefit	Age
Normal	26,943	\$261,654,664	\$9,711	68.1
Disability	2,911	25,742,481	8,843	61.9
Beneficiary	3,248	20,872,506	6,426	66.0
Total in CERS	33,102	\$308,269,651	\$9,313	67.3

#### Hazardous Retired Lives

Type of Benefit Payment	No.	Annual Benefits	Group Averages	
			Benefit	Age
Normal	3,776	\$88,848,324	\$23,530	58.4
Disability	350	4,985,817	14,245	51.4
Beneficiary	586	6,455,911	11,017	46.2
Total in CERS	4,712	\$100,290,052	\$21,284	56.3

This valuation also includes 52,001 inactive members (50,046 Non-Hazardous and 1,955 Hazardous; of which 7,379 Non-Hazardous are vested and 393 Hazardous are vested).

**SECTION III – ASSETS**

1. As of June 30, 2006 the total market value of assets amounted to \$7,974,751,845 as shown in the following table.

**MARKET VALUE OF ASSETS BY FUND  
AS OF JUNE 30, 2006**

<b>Member Group</b>	<b>Retirement</b>	<b>Insurance</b>	<b>CERS Total</b>
Non-Hazardous	\$5,191,376,948	\$ 813,250,744	\$6,004,627,692
Hazardous	<u>1,528,845,357</u>	<u>441,278,796</u>	<u>1,970,124,153</u>
Total	\$6,720,222,305	\$1,254,529,540	\$7,974,751,845

2. The five-year smoothed market related actuarial value of assets used for the current valuation was \$7,878,480,785. Schedule B shows the development of the actuarial value of assets as of June 30, 2006. The following table shows the actuarial value of assets allocated among member groups.

**COMPARISON OF ACTUARIAL VALUE OF ASSETS**

	<b>JUNE 30, 2006</b>	<b>JUNE 30, 2005</b>
<b>Retirement</b>		
Non-Hazardous	\$ 5,162,894,136	\$ 5,059,208,687
Hazardous	<u>1,515,075,017</u>	<u>1,452,353,023</u>
Total	\$ 6,677,969,153	\$ 6,511,561,710
<b>Insurance</b>		
Non-Hazardous	\$ 777,726,590	\$ 663,941,949
Hazardous	<u>422,785,042</u>	<u>359,180,461</u>
Total	\$ 1,200,511,632	\$ 1,023,122,410
<b>CERS Total</b>		
Non-Hazardous	\$ 5,940,620,726	\$ 5,723,150,636
Hazardous	<u>1,937,860,059</u>	<u>1,811,533,484</u>
Total	\$ 7,878,480,785	\$ 7,534,684,120

## SECTION IV - COMMENTS ON VALUATION

Schedule A of this report contains the valuation balance sheets which show the present and prospective assets and liabilities of the System as of June 30, 2006. Separate balance sheets are shown for each employee group as well as in total for all groups.

### Retirement

1. The total valuation balance sheet on account of retirement benefits shows that the System has total prospective retirement benefit liabilities of \$10,363,937,042, of which \$4,172,113,342 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$166,146,299 is for the prospective benefits payable on account of inactive members and \$6,025,677,401 is for the prospective benefits payable on account of present active members. Against these retirement benefit liabilities the System has a total present actuarial value of assets of \$6,677,969,153 as of June 30, 2006. The difference of \$3,685,967,889 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of retirement benefits. Of this amount, \$1,166,412,934 is the present value of future contributions expected to be made by members, and the balance of \$2,519,554,955 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the System on account of retirement benefits consist of normal contributions, accrued liability contributions and contributions for administrative expenses. The valuation indicates that employer normal contributions at the rate of 4.04% of payroll for non-hazardous members and 7.86% of payroll for hazardous members are required to provide the benefits of the System for the average new member of CERS.
3. Prospective employer normal contributions on account of retirement benefits at the above rates have a present value of \$997,812,071. When this amount is subtracted from \$2,519,554,955, which is the present value of the total future contributions to be made by the employers, there remains \$1,521,742,884 as the amount of future accrued liability contributions.
4. For non-hazardous members, it is recommended that the accrued liability contribution rate payable by the Counties on account of retirement benefits be set at 2.29% of payroll. For hazardous members, it is recommended that the accrued liability contribution rate payable by the Counties on account of retirement benefits be set at 6.89% of payroll. These rates are based on a 30-year amortization of bases established each year as specified in the law governing the plan. The bases are amortized on the assumption that the aggregate payroll for non-hazardous and hazardous members will increase by 3.50% each year.

5. For non-hazardous members, the contribution rate for administrative expenses is determined to be 0.65% of payroll. For hazardous members, the contribution rate for administrative expenses is determined to be 0.26% of payroll.
6. The development of all accrued liability amortization bases is shown in Schedule F.

### Insurance

1. The total valuation balance sheet on account of insurance benefits shows that the System has total prospective insurance benefit liabilities of \$8,497,223,674, of which \$2,210,799,793 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$271,471,623 is for the prospective benefits payable on account of inactive members and \$6,014,952,258 is for the prospective benefits payable on account of present active members. Against these insurance benefit liabilities the System has a total present actuarial value of assets of \$1,200,511,632 as of June 30, 2006. The difference of \$7,296,712,042 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of insurance benefits. Of this amount, \$0 is the present value of future contributions expected to be made by members, and the balance of \$7,296,712,042 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the System on account of insurance benefits consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of 9.11% of payroll for non-hazardous members and 18.81% of payroll for hazardous members are required to provide the benefits of the System for the average new member of CERS.
3. Prospective employer normal contributions on account of insurance benefits at the above rates have a present value of \$1,961,518,664. When this amount is subtracted from \$7,296,712,042, which is the present value of the total future contributions to be made by the employers, there remains \$5,335,193,378 as the amount of future accrued liability contributions.
4. For non-hazardous members, it is recommended that the accrued liability contribution rate payable by the Counties on account of insurance benefits be set at 11.32% of payroll. For hazardous members, it is recommended that the accrued liability contribution rate payable by the Counties on account of insurance benefits be set at 20.66% of payroll. These rates are sufficient to liquidate the unfunded accrued liability of \$3,829,497,049 for non-hazardous members and \$1,505,696,329 for hazardous members over 30 years on the assumption that the aggregate payroll for non-hazardous and hazardous members will increase by 3.50% each year.
5. The contribution rate for administrative expenses is determined to be 0.08% of payroll for non-hazardous employees and 0.05% of payroll for hazardous employees.
6. The development of all accrued liability amortization bases is shown in Schedule F.

**SECTION V – DERIVATION OF EXPERIENCE GAINS AND LOSSES**

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2006 is shown below (\$ millions).

**Experience Gain/(Loss)  
Retirement Benefits**

		Non-Hazardous Group	Hazardous Group	Total
(1)	UAAL* as of 6/30/05	\$ 325.9	\$ 343.3	\$ 669.2
(2)	Normal cost from last valuation	105.9	34.5	140.4
(3)	Actual employer contributions	90.8	50.0	140.8
(4)	Interest accrual: (1) x .0825 + [(2) – (3)] x .04125]	27.5	27.7	55.2
(5)	Expected UAAL before changes: (1) + (2) – (3) + (4)	\$ 368.5	\$ 355.5	\$ 724.0
(6)	Change due to plan amendments	72.2	25.5	97.7
(7)	Change due to new actuarial assumptions or methods	313.3	82.7	396.0
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 754.0	\$ 463.7	\$ 1,217.7
(9)	Actual UAAL as of 6/30/06	\$ 1,016.7	\$ 505.1	\$ 1,521.8
(10)	Gain/(loss): (8) – (9)	\$ (262.7)	\$ (41.4)	(304.1)
(11)	Accrued liabilities as of 6/30/05	\$ 5,385.2	\$ 1,795.6	\$ 7,180.8
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year	(4.9)%	(2.3)%	(4.2)%

\*Unfunded actuarial accrued liability.

**Experience Gain/(Loss)  
Insurance Benefits**

		Non-Hazardous Group	Hazardous Group	Total
(1)	UAAL* as of 6/30/05	\$ 2,124.8	\$ 924.1	\$ 3,048.9
(2)	Normal cost from last valuation	161.0	62.8	223.8
(3)	Actual employer contributions	135.2	65.0	200.2
(4)	Interest accrual: (1) x .0825 + [(2) – (3)] x .04125]	176.4	76.1	252.5
(5)	Expected UAAL before changes: (1) + (2) – (3) + (4)	\$ 2,327.0	\$ 998.0	\$ 3,325.0
(6)	Change due to plan amendments	0.0	0.0	0.0
(7)	Change due to new actuarial assumptions or methods	869.3	358.7	1,228.0
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 3,196.3	\$ 1,356.7	\$ 4,553.0
(9)	Actual UAAL as of 6/30/06	\$ 3,829.5	\$ 1,505.7	\$ 5,335.2
(10)	Gain/(loss): (8) – (9)	\$ (633.2)	\$ (149.0)	\$ (782.2)
(11)	Accrued liabilities as of 6/30/05	\$ 2,788.8	\$ 1,283.3	\$ 4,072.1
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year	(22.7%)	(11.6%)	(19.2%)

\*Unfunded actuarial accrued liability.

**NON-HAZARDOUS CERS MEMBERS  
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities  
Resulting from Difference Between  
Assumed Experience & Actual Experience  
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/06	Insurance \$ Gain (or Loss) For Year Ending 6/30/06
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (74.3)	\$ (25.5)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(3.0)	(1.0)
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(1.4)	(0.5)
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	24.6	8.4
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	32.1	0.0
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(19.8)	(6.8)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(150.4)	(4.6)
<b>Death After Retirement.</b> If retired members live longer than assumed, there is a loss. If not as long, a gain.	0.5	0.2
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(71.0)</u>	<u>(603.4)</u>
<b>Gain (or Loss) During Year From Financial Experience</b>	\$ (262.7)	\$ (633.2)
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, method changes and contribution timing.	<u>(406.3)</u>	<u>(869.3)</u>
<b>Composite Gain (or Loss) During Year</b>	\$ (669.0)	\$ (1,502.5)



**HAZARDOUS CERS MEMBERS  
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities  
Resulting from Difference Between  
Assumed Experience & Actual Experience  
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/06	Insurance \$ Gain (or Loss) For Year Ending 6/30/06
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (21.6)	\$ (12.9)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(1.1)	(0.7)
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.0	0.0
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	0.5	0.3
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	18.9	0.0
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(5.3)	(3.2)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(38.4)	(2.6)
<b>Death After Retirement.</b> If retired members live longer than assumed, there is a loss. If not as long, a gain.	(3.9)	(2.3)
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>9.5</u>	<u>(127.6)</u>
<b>Gain (or Loss) During Year From Financial Experience</b>	\$ (41.4)	\$ (149.0)
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, method changes and contribution timing.	<u>(111.3)</u>	<u>(358.7)</u>
<b>Composite Gain (or Loss) During Year</b>	\$ (152.7)	\$ (507.7)

**TOTAL CERS MEMBERS  
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities  
Resulting from Difference Between  
Assumed Experience & Actual Experience  
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/06	Insurance \$ Gain (or Loss) For Year Ending 6/30/06
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (95.9)	\$ (38.4)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(4.1)	(1.7)
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(1.4)	(0.5)
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	25.1	8.7
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	51.0	0.0
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(25.1)	(10.0)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(188.8)	(7.2)
<b>Death After Retirement.</b> If retired members live longer than assumed, there is a loss. If not as long, a gain.	(3.4)	(2.1)
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(61.5)</u>	<u>(731.0)</u>
<b>Gain (or Loss) During Year From Financial Experience</b>	\$ (304.1)	\$ (782.2)
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, method changes and contribution timing.	<u>(517.6)</u>	<u>(1,228.0)</u>
<b>Composite Gain (or Loss) During Year</b>	\$ (821.7)	\$ (2,010.2)

**SECTION VI – REQUIRED CONTRIBUTION RATES**

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement System. The following tables show the rates of contribution payable by employers as determined from the present valuation for the 2007/2008 fiscal year.

**Required Contribution Rates  
Non-Hazardous Retirement**

Contribution for	Amount	% of Payroll
A. Normal Cost:		
(1) Service retirement benefits	\$ 152,251,198	7.68%
(2) Disability benefits	21,410,325	1.08
(3) Survivor benefits	<u>5,550,825</u>	<u>0.28</u>
(4) Total	\$ 179,212,348	9.04%
B. Member Contributions	\$ 99,121,874	5.00%
C. Employer Normal Cost: [A(4) – B]	\$ 80,090,474	4.04%
D. Administrative Expenses	\$ 12,885,844	0.65%
E. Unfunded Actuarial Accrued Liability Contributions*:		
(1) UAAL Contribution Based on 6/30/05 Valuation	\$ 4,956,094	0.25%
(2) Change due to:		
a. Active decrements	\$ 3,766,631	0.19%
b. Pay increases	(1,585,950)	(0.08)
c. Retiree mortality	198,244	(0.01)
d. Investment return	7,533,262	0.38
e. COLA	3,568,387	0.18
f. Assumption change	22,599,788	1.14
g. Other	<u>4,298,624</u>	<u>0.22</u>
h. Total Change	\$ 40,378,986	2.04%
(3) UAAL Contribution Based on 6/30/06 Valuation: [E(1) + E(2)h]	\$ 45,335,080	2.29%
F. Total Recommended Employer Contribution: [C + D + E(3)]	\$ 138,311,398	6.98%

\*Development of the amortization bases of the UAAL is provided in Schedule F

**Required Contribution Rates  
Hazardous Retirement**

Contribution for	Amount	% of Payroll
A. Normal Cost:		
(1) Service retirement benefits	\$ 59,385,622	13.91%
(2) Disability benefits	6,019,678	1.41
(3) Survivor benefits	<u>2,305,409</u>	<u>0.54</u>
(4) Total	\$ 67,710,709	15.86%
B. Member Contributions	\$ 34,154,204	8.00%
C. Employer Normal Cost: [A(4) – B]	\$ 33,556,505	7.86%
D. Administrative Expenses	\$ 1,110,012	0.26%
E. Unfunded Actuarial Accrued Liability Contributions*:		
(1) UAAL Contribution Based on 6/30/05 Valuation	\$ 18,443,270	4.32%
(2) Change due to:		
a. Active decrements	\$ 1,366,168	0.32%
b. Pay increases	(939,241)	(0.22)
c. Retiree mortality	213,464	0.05
d. Investment return	1,921,174	0.45
e. COLA	1,280,783	0.30
f. Assumption Change	7,257,768	1.70
g. Other	<u>(127,840)</u>	<u>(0.03)</u>
h. Total Change	\$ 10,972,276	2.57%
(3) UAAL Contribution Based on 6/30/06 Valuation: [E(1) + E(2)h]	\$ 29,415,546	6.89%
F. Total Recommended Employer Contribution: [C + D + E(3)]	\$ 64,082,063	15.01%

\*Development of the amortization bases of the UAAL is provided in Schedule F

**Required Contribution Rates  
Non-Hazardous Insurance**

Contribution for	Amount	% of Payroll
A. Normal Cost	\$ 180,675,380	9.11%
B. Member Contributions*	\$ 0	0.00%
C. Employer Normal Cost: [A – B]	\$ 180,675,380	9.11%
D. Administrative Expenses	\$ 1,539,512	0.08%
E. Unfunded Actuarial Accrued Liability Contributions**	\$ 224,326,837	11.32%
F. Total Recommended Employer Contribution: [C + D + E]	\$ 406,541,729	20.51%

\*The liabilities are net of retiree contributions toward their healthcare

\*\*Development of the amortization bases of the UAAL is provided in Schedule F

**Required Contribution Rates  
Hazardous Insurance**

Contribution for	Amount	% of Payroll
A. Normal Cost	\$ 80,309,510	18.81%
B. Member Contributions*	\$ 0	0.00%
C. Employer Normal Cost: [A – B]	\$ 80,309,510	18.81%
D. Administrative Expenses	\$ 212,443	0.05%
E. Unfunded Actuarial Accrued Liability Contributions**	\$ 88,201,686	20.66%
F. Total Recommended Employer Contribution: [C + D + E]	\$ 168,723,639	39.52%

\*The liabilities are net of retiree contributions toward their healthcare

\*\*Development of the amortization bases of the UAAL is provided in Schedule F

**SECTION VII - ACCOUNTING INFORMATION**

Governmental Accounting Standards Board Statements 25, 27, 43 and 45 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED MEMBERS  
AS OF JUNE 30, 2006**

GROUP	NUMBER		
	Non-Hazardous	Hazardous	Total
Retirees and beneficiaries currently receiving benefits	33,102	4,712	37,814
Terminated employees entitled to benefits but not yet receiving benefits	50,046	1,955	52,001
Active members	<u>83,694</u>	<u>9,635</u>	<u>93,329</u>
Total	166,842	16,302	183,144

Another such item is the Schedule of Funding Progress for retirement and insurance benefits separately as shown in the following tables.

**RETIREMENT BENEFITS  
SCHEDULE OF FUNDING PROGRESS**

Actuarial Actuarial Valuation Date	Value of Plan Assets ( a )	Actuarial Accrued Liability (AAL) Entry Age ( b )	Unfunded AAL (UAAL) ( b - a )	Funded Ratio ( a / b )	Covered Payroll ( c )	UAAL as a Percentage of Covered Payroll ( ( b - a ) / c )
<b>Non-Hazardous Members</b>						
6/30/2001	\$5,423,834,549	\$3,706,282,212	\$(1,717,552,337)	146.3%	\$1,597,653,320	(107.5)%
6/30/2002	5,397,787,158	4,165,355,149	(1,232,432,009)	129.6	1,688,460,789	(73.0)
6/30/2003	5,286,580,047	4,417,597,802	(868,982,245)	119.7	1,796,451,180	(48.4)
6/30/2004	5,187,851,530	4,936,459,488	(251,392,042)	105.1	1,826,870,880	(13.8)
6/30/2005	5,059,208,687	5,385,156,690	325,948,003	94.0	1,885,275,000	17.3
6/30/2006	5,162,894,136	6,179,569,267	1,016,675,131	83.5	1,982,437,473	51.3
<b>Hazardous Members</b>						
6/30/2001	\$1,486,666,016	\$1,193,860,442	\$(292,805,574)	124.5%	\$322,819,064	(90.7)%
6/30/2002	1,485,511,793	1,327,291,273	(158,220,520)	111.9	346,319,146	(45.7)
6/30/2003	1,467,004,856	1,499,628,782	32,623,926	97.8	374,700,732	8.7
6/30/2004	1,457,612,042	1,640,830,120	183,218,078	88.8	392,562,624	46.7
6/30/2005	1,452,353,023	1,795,617,335	343,264,312	80.9	411,121,728	83.5
6/30/2006	1,515,075,017	2,020,142,770	505,067,753	75.0	426,927,550	118.3
<b>Total CERS Members</b>						
6/30/2001	\$6,910,500,565	\$4,900,142,654	\$(2,010,357,911)	141.0%	\$1,920,472,384	(104.7)%
6/30/2002	6,883,298,951	5,492,646,422	(1,390,652,529)	125.3	2,034,779,935	(68.3)
6/30/2003	6,753,584,903	5,917,226,584	(836,358,319)	114.1	2,171,151,912	(38.5)
6/30/2004	6,645,463,572	6,577,289,608	(68,173,964)	101.0	2,219,433,504	(3.1)
6/30/2005	6,511,561,710	7,180,774,025	669,212,315	90.7	2,296,396,728	29.2
6/30/2006	6,677,969,153	8,199,712,037	1,521,742,884	81.4	2,409,365,023	63.2

**INSURANCE BENEFITS  
SCHEDULE OF FUNDING PROGRESS**

Actuarial Actuarial Valuation Date	Value of Plan Assets ( a )	Actuarial Accrued Liability (AAL) Entry Age ( b )	Unfunded AAL (UAAL) ( b - a )	Funded Ratio ( a / b )	Covered Payroll ( c )	UAAL as a Percentage of Covered Payroll ( ( b - a ) / c )
<b>Non-Hazardous Members</b>						
6/30/2001	\$371,758,628	\$1,793,710,768	\$1,421,952,140	20.7%	\$1,597,653,320	89.0%
6/30/2002	450,497,307	1,977,577,038	1,527,079,731	22.8	1,688,460,789	90.4
6/30/2003	520,060,105	2,176,963,259	1,656,903,154	23.9	1,796,451,180	92.2
6/30/2004	585,399,072	2,438,734,696	1,853,335,624	24.0	1,826,870,880	101.5
6/30/2005	663,941,949	2,788,754,654	2,124,812,705	23.8	1,885,275,000	112.7
6/30/2006	777,726,590	4,607,223,639	3,829,497,049	16.9	1,982,437,473	193.2
<b>Hazardous Members</b>						
6/30/2001	\$197,875,249	\$721,605,292	\$523,730,043	27.4%	\$322,819,064	162.2%
6/30/2002	234,683,878	781,184,974	546,501,096	30.0	346,319,146	157.8
6/30/2003	269,190,080	935,650,662	666,460,582	28.8	374,700,732	177.9
6/30/2004	310,578,162	1,025,684,477	715,106,315	30.3	392,562,624	182.2
6/30/2005	359,180,461	1,283,299,092	924,118,631	28.0	411,121,728	224.8
6/30/2006	422,785,042	1,928,481,371	1,505,696,329	21.9	426,927,550	352.7
<b>Total CERS Members</b>						
6/30/2001	\$569,633,877	\$2,515,316,060	\$1,945,682,183	22.6%	\$1,920,472,384	101.3%
6/30/2002	685,181,185	2,758,762,012	2,073,580,827	24.8	2,034,779,935	101.9
6/30/2003	789,250,185	3,112,613,921	2,323,363,736	25.4	2,171,151,912	107.0
6/30/2004	8985,977,234	3,464,419,173	2,568,441,939	25.9	2,219,433,504	115.7
6/30/2005	1,023,122,410	4,072,053,746	3,048,931,336	25.1	2,296,396,728	132.8
6/30/2006	1,200,511,632	6,535,705,010	5,335,193,378	18.4	2,409,365,023	221.4



The final item of required supplementary information, the Schedule of Employer Contributions, is shown in the following tables.

**Retirement Benefits**  
**Schedule of Employer Contributions**

Year Ended	Annual Required Contribution	Actual Contributions	Percentage Contributed
<b>Non-Hazardous Members</b>			
June 30, 2001	\$35,658,922	\$48,914,435	137.2%
June 30, 2002	3,326,367	5,528,348	166.2
June 30, 2003	8,682,257	11,855,694	136.6
June 30, 2004	43,111,505	44,028,465	102.1
June 30, 2005	53,117,955	54,616,800	102.8
June 30, 2006	83,123,669	90,834,052	109.3
<b>Hazardous Members</b>			
June 30, 2001	\$19,409,377	\$20,983,360	108.1%
June 30, 2002	10,582,988	11,054,949	104.5
June 30, 2003	19,920,223	16,905,556	84.9
June 30, 2004	27,050,382	27,640,775	102.2
June 30, 2005	39,437,725	39,947,747	101.3
June 30, 2006	44,059,404	49,976,485	113.4
<b>Total CERS Members</b>			
June 30, 2001	\$55,068,299	\$69,897,795	126.9%
June 30, 2002	13,909,355	16,583,297	119.2
June 30, 2003	28,602,480	28,761,250	100.6
June 30, 2004	70,161,887	71,669,240	102.1
June 30, 2005	92,555,680	94,564,547	102.2
June 30, 2006	127,183,073	140,810,537	110.7

**Insurance Benefits**  
**Schedule of Employer Contributions**

Year Ended	Annual Required Contribution*	Actual Contributions	Percentage Contributed
<b>Non-Hazardous Members</b>			
June 30, 2001	\$62,292,385	\$62,292,385	100.0%
June 30, 2002	102,119,475	102,150,543	100.0
June 30, 2003	102,038,427	99,234,843	97.3
June 30, 2004	189,289,520	89,344,241	100.1
June 30, 2005	106,612,633	106,638,253	100.0
June 30, 2006	272,942,757	128,867,817	47.2
<b>Hazardous Members</b>			
June 30, 2001	\$32,149,432	\$32,149,432	100.0%
June 30, 2002	45,721,274	45,730,333	100.0
June 30, 2003	43,502,755	45,243,950	104.0
June 30, 2004	47,018,046	47,036,777	100.0
June 30, 2005	54,094,495	54,106,577	100.0
June 30, 2006	98,297,535	64,853,778	66.0
<b>Total CERS Members</b>			
June 30, 2001	\$94,441,817	\$94,441,817	100.0%
June 30, 2002	147,840,749	147,880,876	100.0
June 30, 2003	145,541,182	144,478,793	99.3
June 30, 2004	136,307,566	136,381,018	100.1
June 30, 2005	160,707,128	160,744,830	100.0
June 30, 2006	371,240,292	193,721,595	52.2

\*ARC for years after June 30, 2005 are based on GASB Statement 43. In previous years employers contributed the full contribution requested by the Board in accordance with the insurance benefits funding policy then in effect.

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2006. Additional information as of the latest actuarial valuation follows.

### Retirement Benefits

	Non-Hazardous Members	Hazardous Members
Valuation date	6/30/2006	6/30/2006
Actuarial cost method	Entry Age	Entry Age
Amortization method	Level percent Closed	Level percent Closed
Remaining amortization period	14 - 30 years	14 - 30 years
Asset valuation method	5 year smoothed Market	5 year smoothed Market
Actuarial assumptions:		
Investment rate of return*	7.75%	7.75%
Projected salary increases*	4.0% - 13.5%	4.0% - 14.5%
Cost-of-living adjustment	None	None
*Includes inflation at	3.5%	3.5%

### Insurance Benefits

	Non-Hazardous Members	Hazardous Members
Valuation date	6/30/2006	6/30/2006
Actuarial cost method	Entry Age	Entry Age
Amortization method	Level percent Closed	Level percent Closed
Remaining amortization period	30 years	30 years
Asset valuation method	5 year smoothed Market	5 year smoothed Market
Medical Trend Assumption	12.0% - 5.5%	12.0% - 5.5%
Year of Ultimate Trend	2027	2027
Actuarial assumptions:		
Investment rate of return*	7.75%	7.75%
*Includes inflation at	3.50%	3.50%

**SCHEDULE A**

**Valuation Balance Sheet and Solvency Test**

The following valuation balance sheets show the assets and liabilities of the retirement system as of the current valuation date of June 30, 2006 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2005. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date.

**VALUATION BALANCE SHEETS  
SHOWING THE ASSETS AND LIABILITIES OF THE  
COUNTY EMPLOYEES RETIREMENT SYSTEM**

**RETIREMENT BENEFITS  
NON-HAZARDOUS CERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 5,162,894,136	\$ 5,059,208,687
Prospective employer contributions		
Member contributions	\$ 849,924,564	**
Employer normal contributions	686,781,563	\$ 2,113,330,886
Unfunded accrued liability contributions	<u>1,016,675,131</u>	<u>325,948,003</u>
Total prospective contributions	\$ <u>2,553,381,258</u>	\$ <u>2,439,278,889</u>
 Total assets	 \$ <u>7,162,753,922</u>	 \$ <u>7,498,487,576</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 3,060,649,619	\$ 2,673,500,272
Present value of benefits payable on account of active members	4,506,180,371	4,684,277,221
Present value of benefits payable on account of inactive members	<u>149,445,404</u>	<u>140,710,083</u>
 Total liabilities	 \$ <u>7,162,753,942</u>	 \$ <u>7,498,487,576</u>

\*Reported by prior actuarial firm.

\*\*Prospective member normal contributions not reported separately by previous actuary.

**VALUATION BALANCE SHEET  
RETIREMENT BENEFITS  
HAZARDOUS CERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 1,515,075,017	\$ 1,452,353,023
Prospective employer contributions		
Member contributions	\$ 316,488,370	**
Employer normal contributions	311,030,508	\$ 652,612,383
Unfunded accrued liability contributions	<u>505,067,753</u>	<u>343,264,310</u>
Total prospective contributions	<u>\$ 1,132,586,631</u>	<u>\$ 995,876,693</u>
Total assets	<u>\$ 2,647,661,648</u>	<u>\$ 2,448,229,716</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 1,111,463,723	\$ 944,739,105
Present value of benefits payable on account of active members	1,519,497,030	1,488,177,411
Present value of benefits payable on account of inactive members	<u>16,700,895</u>	<u>15,313,200</u>
Total liabilities	<u>\$ 2,647,661,648</u>	<u>\$ 2,448,229,716</u>

\*Reported by prior actuarial firm.

\*\*Prospective member contributions and employer normal contributions not reported separately by previous actuary.

**VALUATION BALANCE SHEET  
RETIREMENT BENEFITS  
TOTAL CERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 6,677,969,153	\$ 6,511,561,710
Prospective employer contributions		
Member contributions	\$ 1,166,412,934	**
Employer normal contributions	997,812,071	\$ 2,765,943,269
Unfunded accrued liability contributions	<u>1,521,742,884</u>	<u>669,212,313</u>
Total prospective contributions	<u>\$ 3,685,967,889</u>	<u>\$ 3,435,155,582</u>
Total assets	<u>\$ 10,363,937,042</u>	<u>\$ 9,946,717,292</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 4,172,113,342	\$ 3,618,239,377
Present value of benefits payable on account of active members	6,025,677,401	6,172,454,632
Present value of benefits payable on account of inactive members	<u>166,146,299</u>	<u>150,023,283</u>
Total liabilities	<u>\$ 10,363,937,042</u>	<u>\$ 9,946,717,292</u>

\*Reported by prior actuarial firm.

\*\*Prospective member contributions not reported separately by previous actuary.

**VALUATION BALANCE SHEET  
INSURANCE BENEFITS  
NON-HAZARDOUS CERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 777,726,590	\$ 663,941,949
Prospective employer contributions		
Normal contributions	\$ 1,300,307,643	\$ 1,766,592,779
Unfunded accrued liability contributions	<u>3,829,497,049</u>	<u>2,124,812,705</u>
Total prospective contributions	<u>\$ 5,129,804,692</u>	<u>\$ 3,891,405,484</u>
 Total assets	 <u>\$ 5,907,531,282</u>	 <u>\$ 4,555,347,433</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 1,435,145,235	\$ 1,012,106,665
Present value of benefits payable on account of active members	4,212,931,139	3,411,128,326
Present value of benefits payable on account of inactive members	<u>259,454,908</u>	<u>132,112,442</u>
 Total liabilities	 <u>\$ 5,907,531,282</u>	 <u>\$ 4,555,347,433</u>

\*Reported by prior actuarial firm.

**VALUATION BALANCE SHEET  
INSURANCE BENEFITS  
HAZARDOUS CERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 422,785,042	\$ 359,180,461
Prospective employer contributions		
Normal contributions	\$ 661,211,021	\$ 612,347,892
Unfunded accrued liability contributions	<u>1,505,696,329</u>	<u>924,118,631</u>
Total prospective contributions	<u>\$ 2,166,907,350</u>	<u>\$ 1,536,466,523</u>
 Total assets	 <u>\$ 2,589,692,392</u>	 <u>\$ 1,895,646,984</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 775,654,558	\$ 565,434,903
Present value of benefits payable on account of active members	1,802,021,119	1,309,542,858
Present value of benefits payable on account of inactive members	<u>12,016,715</u>	<u>20,669,223</u>
 Total liabilities	 <u>\$ 2,589,692,392</u>	 <u>\$ 1,895,646,984</u>

\*Reported by prior actuarial firm.



**VALUATION BALANCE SHEET  
INSURANCE BENEFITS  
TOTAL CERS MEMBERS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 1,200,511,632	\$ 1,023,122,410
Prospective employer contributions		
Normal contributions	\$ 1,961,518,664	\$ 2,378,940,671
Unfunded accrued liability contributions	<u>5,335,193,378</u>	<u>3,048,931,336</u>
Total prospective contributions	<u>\$ 7,296,712,042</u>	<u>\$ 5,427,872,007</u>
 Total assets	 <u>\$ 8,497,223,674</u>	 <u>\$ 6,450,994,417</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 2,210,799,793	\$ 1,577,541,568
Present value of benefits payable on account of active members	6,014,952,258	4,720,671,184
Present value of benefits payable on account of inactive members	<u>271,471,623</u>	<u>152,781,665</u>
 Total liabilities	 <u>\$ 8,497,223,674</u>	 <u>\$ 6,450,994,417</u>

\*Reported by prior actuarial firm.

The following tables provide the solvency test for non-hazardous and hazardous CERS members.

**Solvency Test  
Retirement Benefits  
Non-Hazardous CERS Members**

Valuation Date	Aggregate Accrued Liabilities For			Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
6/30/2001*	\$653,242,370	\$1,600,436,700	\$1,452,603,142	\$5,423,834,549	100.0%	100.0%	218.2%
6/30/2002*	768,656,315	1,861,419,517	1,535,279,317	5,397,787,158	100.0	100.0	180.3
6/30/2003*	759,938,261	2,068,481,586	1,589,177,955	5,286,580,047	100.0	100.0	154.7
6/30/2004*	814,908,627	2,478,195,080	1,643,355,781	5,187,851,530	100.0	100.0	115.3
6/30/2005*	837,513,907	2,814,210,355	1,733,432,428	5,059,208,687	100.0	100.0	81.2
6/30/2006	883,946,564	3,210,095,023	2,085,527,680	5,162,894,136	100.0	100.0	51.3

\*Reported by prior actuarial firm.

**Solvency Test  
Retirement Benefits  
Hazardous CERS Members**

Valuation Date	Aggregate Accrued Liabilities For			Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
6/30/2001*	\$202,572,754	\$584,940,978	\$406,346,710	\$1,486,666,016	100.0%	100.0%	172.1%
6/30/2002*	238,363,024	664,188,862	424,739,387	1,485,511,793	100.0	100.0	137.3
6/30/2003*	227,629,402	769,804,746	502,194,634	1,467,004,856	100.0	100.0	93.5
6/30/2004*	256,366,204	851,354,443	533,109,473	1,457,612,042	100.0	100.0	65.6
6/30/2005*	264,913,465	960,052,305	570,651,565	1,452,353,023	100.0	100.0	39.8
6/30/2006	300,200,800	1,128,164,618	591,777,352	1,515,075,017	100.0	100.0	14.7

\*Reported by prior actuarial firm.

**Solvency Test  
Insurance Benefits  
Non-Hazardous CERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)	Actuarial Value of Assets	(1)	(2)	(3)
6/30/2001*	\$0	\$575,836,839	\$1,217,873,929	\$371,758,628	100.0%	64.6%	--
6/30/2002*	0	656,812,900	1,320,764,138	450,497,307	100.0	68.6	--
6/30/2003*	0	799,777,264	1,377,185,995	520,060,105	100.0	65.0	--
6/30/2004*	0	955,930,091	1,482,804,605	585,399,072	100.0	61.2	--
6/30/2005*	0	1,144,219,107	1,644,535,547	663,941,949	100.0	58.0	--
6/30/2006	0	1,694,600,143	2,912,623,496	777,726,590	100.0	45.9	--

\*Reported by prior actuarial firm.

**Solvency Test  
Insurance Benefits  
Hazardous CERS Members**

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)	Actuarial Value of Assets	(1)	(2)	(3)
6/30/2001*	\$0	\$316,638,166	\$404,967,126	\$197,875,249	100.0%	62.5%	--
6/30/2002*	0	343,821,677	437,363,297	234,683,878	100.0	68.3	--
6/30/2003*	0	401,276,347	534,374,315	269,190,080	100.0	67.1	--
6/30/2004*	0	450,288,687	575,395,790	310,578,162	100.0	69.0	--
6/30/2005*	0	586,104,126	697,194,966	359,180,461	100.0	61.3	--
6/30/2006	0	787,671,273	1,140,810,098	422,785,042	100.0	53.7	--

\*Reported by prior actuarial firm.

## SCHEDULE B

### Development of Actuarial Value of Assets Retirement Benefits Non-Hazardous Members

Valuation Date June 30:	2005	2006	2007	2008	2009	2010
A. Actuarial Value Beginning of Year	\$5,187,851,530	\$5,059,208,687				
B. Market Value End of Year	4,893,599,997	5,191,376,948				
C. Market Value Beginning of Year	4,613,335,957	4,893,599,997				
D. Cash Flow						
D1. Contributions	182,253,535	203,205,884				
D2. Benefit Payments	(305,632,428)	(336,724,204)				
D3. Administrative Expense	(10,029,042)	(12,797,224)				
D4. Investment Expense	<u>(3,976,844)</u>	<u>(4,251,662)</u>				
D5. Net	(137,384,779)	(150,567,206)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	417,648,819	448,344,157				
E2. Assumed Rate	8.25%	8.25%				
E3. Amount for Immediate Recognition	422,330,629	401,938,146				
E4. Amount for Phased-In Recognition	(4,681,810)	46,406,011				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	(936,362)	9,281,202				
F2. First Prior Year	24,906,205	(936,362)	9,281,202			
F3. Second Prior Year	(55,645,322)	24,906,205	(936,362)	9,281,202		
F4. Third Prior Year	(125,291,214)	(55,645,322)	24,906,205	(936,362)	9,281,202	
F5. Fourth Prior Year	<u>(256,622,000)</u>	<u>(125,291,214)</u>	<u>(55,645,322)</u>	<u>24,906,205</u>	<u>(936,362)</u>	<u>9,281,202</u>
F6. Total Recognized Investment Gain	(413,588,693)	(147,685,491)	(22,394,277)	33,251,045	8,344,840	9,281,202
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$5,059,208,687	\$5,162,894,136				
H. Difference Between Market & Actuarial Values	\$(165,608,690)	\$28,482,812	\$50,877,089	\$17,626,044	\$9,281,202	\$0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

**Development of Actuarial Value of Assets  
Retirement Benefits  
Hazardous Members**

Valuation Date June 30:	2005	2006	2007	2008	2009	2010
A. Actuarial Value Beginning of Year	\$1,457,612,042	\$1,452,353,023				
B. Market Value End of Year	1,411,245,719	1,528,845,357				
C. Market Value Beginning of Year	1,305,011,472	1,411,245,719				
D. Cash Flow						
D1. Contributions	79,462,785	89,031,633				
D2. Benefit Payments	(92,258,060)	(103,233,867)				
D3. Administrative Expenses	(871,614)	(1,112,916)				
D4. Investment Expenses	<u>(1,172,517)</u>	<u>(1,256,675)</u>				
D5. Net	(14,839,406)	(16,571,825)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	121,073,653	134,171,463				
E2. Assumed Rate	8.25%	8.25%				
E3. Amount for Immediate Recognition	119,640,868	117,052,697				
E4. Amount for Phased-In Recognition	1,432,785	17,118,766				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	286,557	3,423,753				
F2. First Prior Year	7,052,555	286,557	3,423,753			
F3. Second Prior Year	(14,889,455)	7,052,555	286,557	3,423,753		
F4. Third Prior Year	(33,632,288)	(14,889,455)	7,052,555	286,557	3,423,753	
F5. Fourth Prior Year	<u>(68,877,850)</u>	<u>(33,632,288)</u>	<u>(14,889,455)</u>	<u>7,052,555</u>	<u>286,557</u>	<u>3,423,753</u>
F6. Total Recognized Investment Gain	(110,060,481)	(37,758,878)	(4,126,590)	10,762,865	3,710,310	3,423,753
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$1,452,353,023	\$1,515,075,017				
H. Difference Between Market & Actuarial Values	\$(41,107,304)	\$13,770,340	\$17,896,930	\$7,134,065	\$3,423,753	\$0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

**Development of Actuarial Value of Assets  
Insurance Benefits  
Non-Hazardous Members**

Valuation Date June 30:	2005	2006	2007	2008	2009	2010
A. Actuarial Value Beginning of Year	\$585,399,072	\$663,941,949				
B. Market Value End of Year	668,485,367	813,250,744				
C. Market Value Beginning of Year	563,877,594	668,485,367				
D. Cash Flow						
D1. Contributions	107,631,980	135,232,560				
D2. Benefit Payments	(58,262,157)	(72,918,573)				
D3. Administrative Expenses	(544,987)	(1,539,512)				
D4. Investment Expenses	<u>(484,830)</u>	<u>(741,200)</u>				
D5. Net	48,340,006	60,033,275				
E. Investment Income						
E1. Market Total: B.-C.-D5.	56,267,767	84,732,102				
E2. Assumed Rate	8.25%	8.25%				
E3. Amount for Immediate Recognition	50,289,449	58,398,190				
E4. Amount for Phased-In Recognition	5,978,318	26,333,912				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	1,195,664	5,266,783				
F2. First Prior Year	8,317,853	1,195,664	5,266,783			
F3. Second Prior Year	(5,765,671)	8,317,853	1,195,664	5,266,783		
F4. Third Prior Year	(13,661,453)	(5,765,671)	8,317,853	1,195,664	5,266,783	
F5. Fourth Prior Year	<u>(10,172,970)</u>	<u>(13,661,453)</u>	<u>(5,765,671)</u>	<u>8,317,853</u>	<u>1,195,664</u>	<u>5,266,783</u>
F6. Total Recognized Investment Gain	(20,086,577)	(4,646,824)	9,014,629	14,780,300	6,462,447	5,266,783
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$663,941,949	\$777,726,590				
H. Difference Between Market & Actuarial Values	\$4,543,418	\$35,524,154	\$26,509,525	\$11,729,225	\$5,266,783	\$(0)

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

**Development of Actuarial Value of Assets  
Insurance Benefits  
Hazardous Members**

Valuation Date June 30:	2005	2006	2007	2008	2009	2010
A. Actuarial Value Beginning of Year	\$310,578,162	\$359,180,461				
B. Market Value End of Year	360,938,669	441,278,796				
C. Market Value Beginning of Year	297,734,286	360,938,669				
D. Cash Flow						
D1. Contributions	55,551,937	64,952,086				
D2. Benefit Payments	(21,984,644)	(29,717,549)				
D3. Administrative Expenses	(252,567)	(212,443)				
D4. Investment Expenses	<u>(183,233)</u>	<u>(391,835)</u>				
D5. Net	33,131,493	34,630,259				
E. Investment Income						
E1. Market Total: B.-C.-D5.	30,072,890	45,709,868				
E2. Assumed Rate	8.25%	8.25%				
E3. Amount for Immediate Recognition	26,989,372	31,613,937				
E4. Amount for Phased-In Recognition	3,083,518	14,095,931				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	616,704	2,819,186				
F2. First Prior Year	4,199,719	616,704	2,819,186			
F3. Second Prior Year	(3,032,540)	4,199,719	616,704	2,819,186		
F4. Third Prior Year	(7,242,684)	(3,032,540)	4,199,719	616,704	2,819,186	
F5. Fourth Prior Year	<u>(6,059,765)</u>	<u>(7,242,684)</u>	<u>(3,032,540)</u>	<u>4,199,719</u>	<u>616,704</u>	<u>2,819,186</u>
F6. Total Recognized Investment Gain	(11,518,566)	(2,639,615)	4,603,069	7,635,609	3,434,890	2,819,186
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$359,180,461	\$422,785,042				
H. Difference Between Market & Actuarial Values	\$1,758,208	\$18,493,754	\$13,890,685	\$6,255,076	\$2,819,186	\$(0)

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

**SCHEDULE C**

**STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

The assumptions and methods used in the valuation were selected by the prior actuarial firm based on the actuarial experience study prepared as of June 30, 2005, submitted January 12, 2006, and adopted by the Board on January 19, 2006.

INVESTMENT RATE OF RETURN: 7.75% per annum, compounded annually for retirement and insurance benefits.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases for both non-hazardous and hazardous members are as follows and include inflation at 3.50% per annum:

Service	Annual Rates of				
	Merit & Seniority			Increase Next Year	
	Non-Hazardous	Hazardous	Base (Economy)	Non-Hazardous	Hazardous
0-1	10.0%	11.0%	13.5%	13.5%	14.5%
1-2	3.5%	4.0%	13.5%	7.0%	7.5%
2-3	2.0%	3.5%	13.5%	5.5%	7.0%
3-4	1.5%	3.0%	13.5%	5.0%	6.5%
4-5	1.5%	2.5%	13.5%	5.0%	6.0%
5-6	1.0%	2.0%	13.5%	4.5%	5.5%
6-7	1.0%	1.5%	13.5%	4.5%	5.0%
7-8	1.0%	1.5%	13.5%	4.5%	5.0%
8-9	0.5%	1.0%	13.5%	4.0%	4.5%
9-10	0.5%	1.0%	13.5%	4.0%	4.5%
10 & Over	0.5%	0.5%	13.5%	4.0%	4.0%



SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of death, disability, withdrawal and retirement are shown in the following tables:

**Non-Hazardous Members**

Age	Withdrawal and Vesting*	Death		Disability	Service Retirement**
		Male	Female		
20	6.00%	0.05%	0.03%	0.05%	
25	5.40	0.07	0.03	0.07	
30	4.80	0.08	0.04	0.09	
35	3.60	0.09	0.05	0.13	
40	2.66	0.11	0.07	0.20	
45	1.98	0.16	0.10	0.33	
50	1.92	0.26	0.14	0.56	
55	1.08	0.44	0.23	0.92	8.0%
60	0.75	0.80	0.44	1.46	10.0
65		1.45	0.86		25.0
70		2.37	1.37		25.0
75					100.0

\* Select rates of withdrawal apply in the first five years of employment regardless of age. The rates are 15.0%, 14.0%, 10.0%, 8.0% and 6.0%, respectively.

\*\* If service is at least 27 years, the rate is 25%.

**Hazardous Members**

Age	Withdrawal and Vesting*	Death**			Service Retirement***	
		Male	Female	Disability	Service	Rate
20	4.56%	0.10%	0.08%	0.07%	20	30.0%
25	3.04	0.12	0.08	0.09	25	25.0
30	3.01	0.13	0.09	0.12	30	40.0
35	1.95	0.14	0.10	0.17	35	30.0
40	1.50	0.16	0.12	0.27		
45	0.75	0.21	0.15	0.44		
50	0.50	0.31	0.19	0.75		
55		0.49	0.28	1.23		
60		0.85	0.49	1.95		

\* Select rates of withdrawal apply in the first five years of employment regardless of age. The rates are 10.0%, 7.0%, 5.0%, 4.0% and 3.5%, respectively.

\*\* 75% are presumed to be non-duty related, and 25% are assumed to be duty related.

\*\*\* The annual rate of service retirement is 100% at age 62.

HEALTH CARE COST TREND RATES: Following is a chart detailing trend assumptions.

Year	Trend
2006-08	12.0%
2009-11	11.0
2012-14	10.0
2015-17	9.0
2018-20	8.0
2021-23	7.0
2024-26	6.0
2027 and beyond	5.5

AGE RELATED MORBIDITY: Per capita costs are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims was assumed to be:

Participant Age	Annual Increase
65 – 69	3.0%
70 – 74	2.5%
75 – 79	2.0%
80 – 84	1.0%
85 – 89	0.5%
90 and over	0.0%

ANTICIPATED PLAN PARTICIPATION: The assumed annual rates of plan participation are as follows:

Medical	Non-Hazardous	Hazardous
Participation	85%	100%

Following are charts detailing expected premiums for pre- and post-Medicare for the year following the valuation date.

**MEDICAL INSURANCE CONTRIBUTION RATES  
PRE-MEDICARE ELIGIBLE**

<b>July – December 2006</b>				
	<b>Single</b>	<b>Parent Plus</b>	<b>Couple</b>	<b>Family</b>
<b>TOTAL PREMIUMS</b>				
Essential	N/A	\$550.62	\$ 845.36	\$ 942.72
Enhanced	\$432.08	\$662.71	\$1,014.67	\$1,130.82
Premier	\$447.20	\$688.87	\$1,048.68	\$1,168.62

**MEDICARE ELIGIBLE**

<b>Available Plan</b>	<b>Cost</b>
Kentucky Retirement System Health Plan - Medical Only	\$143.00
Kentucky Retirement System Health Plan - PLUS	\$237.00
Kentucky Retirement System Health Plan - PREMIUM	\$310.00
Anthem Senior Advantage (HMO Local Network)	\$168.00
Anthem Blue Medicare Access (PPO Regional Network)	\$208.00

**DEATH AFTER RETIREMENT:** The rates of mortality for the period after service retirement are according to the 1983 Group Annuity Mortality Table for all retired members and beneficiaries as of June 30, 2006 and the 1994 Group Annuity Mortality Table for all other members. The Group Annuity Mortality Table set forward 5 years is used for the period after disability retirement.

**PERCENT MARRIED:** 100% of employees are assumed to be married, with the wife 3 years younger than the husband.

**DEPENDENT CHILDREN:** For hazardous members' duty-related death benefits, it is assumed that the member is survived by two dependent children each age 6.

**ACTUARIAL METHOD:** Entry age normal cost method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability. For pre-Medicare retiree healthcare liabilities, the current premium charged by the Kentucky Employees' Health Plan (KEHP) is used as the base cost is projected forward using the healthcare trend assumption shown above. No implicit rate subsidy is calculated or recognized as the subsidy is the responsibility of KEHP. For the Medicare-eligible retirees, claims were analyzed and current premiums were utilized with appropriate aging factors applied.

**ASSETS:** Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value.

## SCHEDULE D

### SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

This schedule summarizes the major retirement benefit provisions of CERS included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

**Plan Year:** July 1 through June 30

**Non-Hazardous Normal Retirement:**

*Age Requirement* 65

*Service Requirement* None

*Members whose participation began before 8/1/2004*

If a member has at least 48 months of service, the monthly benefit is 2.20% times final average compensation times years of service.

Final compensation is the average salary during the five highest paid fiscal years. If the months of service credit during the highest five-year period are less than forty-eight, one or more additional fiscal years shall be used. For a non-hazardous member whose effective retirement date is between August 1, 2001 and January 1, 2009, and whose total service credit is at least 27 years and whose age and years of service total at least 75, final compensation is based on three years rather than five years. If the months of service credit during the highest three-year period are less than twenty-four, one or more additional fiscal years shall be used.

If a member has less than 48 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.

*Members whose participation began on or after 8/1/2004*

Monthly benefit as calculated above but with a benefit factor of 2.0% instead of 2.2%.

**Hazardous Normal Retirement:**

*Age Requirement* 55

*Service Requirement* None

*Amount*

If a member has at least 60 months of service, the monthly benefit is 2.50% times final average compensation time years of service.

Final compensation is the average salary during the three highest paid fiscal years. If the months of service credit during the highest three-year period are less than twenty-four, one or more additional fiscal years shall be used.

If a member has less than 60 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.

**Non-Hazardous Early Retirement:**

<i>Requirement</i>	Age 55 with 60 months of service or any age with 25 years of service.
<i>Amount</i>	Normal retirement benefit reduced by 5% per year for the first five years and 4% per year for the next five years for each year the member is younger than age 65 or has less than 27 years of service, whichever is smaller.

**Hazardous Early Retirement:**

<i>Requirement</i>	Age 50 with 15 years of service or any age with 20 years of service.
<i>Amount</i>	Normal retirement benefit reduced by 5.5% per year for each year the member is younger than age 55 or has less than 20 years of service, whichever is smaller.

**Non-Hazardous Disability:**

<i>Age Requirement</i>	None
<i>Service Requirement</i>	60 months

*Members whose participation began before 8/1/2004*

Normal retirement benefit except that service credit will be added to total service for the period from the last day of plan employment to the member's 65th birthday or until the combined total service as of the last day of paid employment and added service equals 25 years. The total amount of service credit added shall not exceed the member's actual service credit on the last day of paid employment. For members with at least 25 years of service but less than 27 years of service, total service shall be 27 years. For employees with 27 or more years of service credit, actual service will be used.

A contributing member in a non-hazardous position who is disabled in the line of duty is entitled to a retirement benefit of not less than 25% of the member's final monthly rate of pay plus 10% of the member's final monthly rate of pay for each dependent child. The maximum dependent child's benefit is 40% of the member's final monthly rate of pay.

*Members whose participation began on or after 8/1/2004*

Normal retirement benefit based on actual service with no penalty or, if larger, 20% of the Final Rate of Pay. May apply for disability even after normal retirement age.

**Hazardous Disability:**

*Age Requirement*

None

*Service Requirement*

60 months

*Members whose participation began before 8/1/2004*

Normal retirement benefit except that service credit will be added to total service for the period from the last day of plan employment to the member's 55th birthday or until the combined total service as of the last day of paid employment and added service equals 20 years. The total amount of service credit added shall not exceed the member's actual service credit on the last day of paid employment. For employees with 20 or more years of service credit, actual service credit will be used.

A member in a hazardous position who is disabled in the line of duty is entitled to a retirement benefit of not less than 25% of the member's final monthly rate of pay plus 10% of his final monthly rate of pay for each dependent child. The maximum dependent child's benefit is 40% of the member's final monthly rate of pay.

*Members whose participation began on or after 8/1/2004*

Normal retirement benefit based on actual service with no penalty or, if larger, 25% of the Final Rate of Pay. May apply for disability even after normal retirement age.

**Vesting:**

*Age Requirement*

None

*Service Requirement*

60 months. Service purchased after August 1, 2004 does not count toward vesting insurance benefits. Service purchased by employees who began participating on or after August 1, 2004 does not count toward vesting retirement benefits.

*Amount*

Normal retirement benefit deferred to normal retirement age or reduced benefit payable at early retirement age.

*Normal Retirement Age*

65 for non-hazardous members and 55 for hazardous members.

**Pre-Retirement Death Benefit (not in line of duty):**

<i>Requirement</i>	Any age with 60 months of service or age 65 with 48 months of service.
<i>Amount</i>	Benefit equal to the benefit the member would have received had the member retired on the day before the date of death and elected a 100% joint and survivor form. Benefit is actuarially reduced if member is less than age 55 at date of death.

**Spouse's Pre-Retirement Death Benefit (in line of duty):**

<i>Requirement</i>	None
<i>Amount</i>	The spouse may choose (1) a \$10,000 lump sum payment and monthly payments of 25% of the member's final monthly rate of pay or (2) benefits based on the member's age, years of service and final compensation at date of death.

**Dependent Non-Spouse's Death Benefit (in line of duty) – Hazardous Plan:**

<i>Requirement</i>	None
<i>Amount</i>	The non-spouse may choose (1) a \$10,000 lump sum payment or (2) benefits based upon the member's age, years of service and final compensation at date of death.

**Dependent Child's Death Benefit (in line of duty):**

<i>Requirement</i>	None
<i>Amount</i>	10% of member's final monthly rate of pay up to a maximum of 40%.

**Post-Retirement Death Benefit:**

<i>Lump-sum Benefit</i>	\$5,000
<i>Husband and Wife</i>	The choice of payment option selected by the member will determine the monthly benefits provided to the beneficiary upon the member's death.



**Insurance Plan for Retirees:**

*Members whose participation began before July 1, 2003*

The Retirement System pays a portion of medical premiums for retirees, and in the case of hazardous duty retirees, their dependents and beneficiaries. The Insurance Fund will pay 0%, 25%, 50%, 75%, or 100% of the premiums depending on retiree eligibility as reported by the System.

*Members whose participation began on or after July 1, 2003*

The Retirement System pays \$10 per month per year of service toward medical premiums for non-hazardous retirees, \$15 per month per year of service for hazardous retirees, and \$10 per month per year of service for surviving spouses of hazardous employees. "Line of duty" insurance benefits will be calculated as if the member had at least 20 years of hazardous service.

**Member Contributions:**

*Non-hazardous Members*

5% of salary.

*Hazardous Members*

8% of salary.

**SCHEDULE E**

**DETAILED TABULATIONS OF THE DATA**

**Schedule of Non-Hazardous Retired Members Added to and Removed From Rolls  
Last Six Fiscal Years**

<b>Year Ending June 30</b>	<b>2001</b>	<b>2002</b>	<b>2003*</b>	<b>2004*</b>	<b>2005*</b>	<b>2006</b>
			<b><u>Number</u></b>			
Beginning of Year	N/A	N/A	26,147	27,092	29,129	31,347
Added	N/A	N/A	2,411	2,805	2,808	2,782
Removed	N/A	N/A	1,466	768	590	1,027
End of Year	N/A	N/A	27,092	29,129	31,347	33,102
			<b><u>Annual Allowances</u></b>			
Beginning of Year	N/A	N/A	N/A	\$219,848,200	\$247,534,300	\$279,590,300
Added	N/A	N/A	\$24,855,000	28,181,800	30,397,300	34,559,599
Removed	N/A	N/A	8,111,100	3,587,800	3,161,200	5,880,248
End of Year	N/A	N/A	\$219,848,200	\$247,534,300	\$279,590,300	\$308,269,651
% Increase in Allowances	N/A	N/A	N/A	12.59%	12.95%	10.26%
Average Annual Allowance	N/A	N/A	\$8,115	\$8,498	\$8,919	\$9,313

\*Reported by prior actuarial firm.

**Schedule of Hazardous Retired Members Added to and Removed From Rolls  
Last Six Fiscal Years**

Year Ending June 30	2001	2002	2003*	2004*	2005*	2006
			<b><u>Number</u></b>			
Beginning of Year	N/A	N/A	3,483	3,737	4,005	4,361
Added	N/A	N/A	293	343	403	427
Removed	N/A	N/A	39	75	47	76
End of Year	N/A	N/A	3,737	4,005	4,361	4,712
			<b><u>Annual Allowances</u></b>			
Beginning of Year	N/A	N/A	N/A	\$72,322,200	\$79,559,200	\$89,224,700
Added	N/A	N/A	\$6,258,300	6,712,500	8,536,100	11,876,922
Removed	N/A	N/A	355,100	605,100	502,700	811,570
End of Year	N/A	N/A	\$72,322,200	\$79,559,200	\$89,224,700	\$100,290,052
% Increase in Allowances	N/A	N/A	N/A	10.01%	12.15%	12.40%
Average Annual Allowance	N/A	N/A	\$19,353	\$19,865	\$20,460	\$21,284

\*Reported by prior actuarial firm.

**Non-Hazardous  
Retired Lives Summary**

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	2,897	\$2,448,412.37	9,918	\$5,798,209.54	12,815	\$8,246,621.91
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	1,803	1,658,892.13	752	375,250.83	2,555	2,034,142.96
66-2/3% to Beneficiary	546	849,394.11	259	230,025.27	805	1,079,419.38
50% to Beneficiary	785	1,037,546.35	735	681,066.46	1,520	1,718,612.81
Pop-up Option	2,284	3,107,476.83	1,667	1,484,831.50	3,951	4,592,308.33
10 Years Certain	0	0.00	0	0.00	0	0.00
10 Years Certain & Life	1,161	873,290.15	2,360	1,404,367.76	3,521	2,277,657.91
Social Security Option						
Age 62 Basic	213	353,420.97	404	348,632.64	617	702,053.61
Age 62 Survivorship	505	825,419.90	225	207,869.37	730	1,033,289.27
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	0	0.00	0	0.00	0	0.00
15 Years Certain & Life	486	392,940.78	472	296,442.55	958	689,383.33
20 Years Certain & Life	317	365,455.34	387	290,876.04	704	656,331.38
5 Years Certain	0	0.00	0	0.00	0	0.00
PLSO 12 Month Basic	67	56,655.66	220	152,677.00	287	209,332.66
PLSO 24 Month Basic	29	16,149.62	128	74,191.21	157	90,340.83
PLSO 36 Month Basic	163	67,000.77	400	152,227.02	563	219,227.79
PLSO 12 Month Survivor	99	96,563.00	58	47,543.22	157	144,106.22
PLSO 24 Month Survivor	63	47,791.52	45	23,429.21	108	71,220.73
PLSO 36 Month Survivor	254	134,480.24	152	51,226.95	406	185,707.19
<b>Total</b>	<b>11,672</b>	<b>\$12,330,889.74</b>	<b>18,182</b>	<b>\$11,618,866.57</b>	<b>29,854</b>	<b>\$23,949,756.31</b>

**Hazardous  
Retired Lives Summary**

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	496	\$934,500.14	149	\$200,651.03	645	\$1,135,151.17
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	445	780,655.17	19	16,644.30	464	797,299.47
66-2/3% to Beneficiary	189	439,750.51	3	7,212.23	192	446,962.74
50% to Beneficiary	299	614,646.61	15	22,147.39	314	636,794.00
Pop-up Option	1,477	3,211,911.74	49	78,563.85	1,526	3,290,475.59
10 Years Certain	27	41,262.12	2	1,801.76	29	43,063.88
10 Years Certain & Life	147	260,226.72	28	44,979.24	175	305,205.96
Social Security Option						
Age 62 Basic	92	139,332.02	6	7,345.59	98	146,677.61
Age 62 Survivorship	281	419,840.03	9	8,102.40	290	427,942.43
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	0	0.00	0	0.00	0	0.00
15 Years Certain & Life	51	79,055.62	7	6,138.14	58	85,193.76
20 Years Certain & Life	93	156,571.30	8	8,203.33	101	164,774.63
5 Years Certain	0	0.00	0	0.00	0	0.00
PLSO 12 Month Basic	17	26,405.69	5	5,953.09	22	32,358.78
PLSO 24 Month Basic	15	28,749.81	3	3,811.62	18	32,561.43
PLSO 36 Month Basic	27	33,936.83	7	3,712.32	34	37,649.15
PLSO 12 Month Survivor	37	77,296.57	1	2,700.90	38	79,997.47
PLSO 24 Month Survivor	35	52,533.88	3	2,481.39	38	55,015.27
PLSO 36 Month Survivor	80	99,811.49	4	2,576.37	84	102,387.86
<b>Total</b>	<b>3,808</b>	<b>\$7,396,486.25</b>	<b>318</b>	<b>\$423,024.95</b>	<b>4,126</b>	<b>\$7,819,511.20</b>

**Non-Hazardous  
Beneficiary Lives Summary**

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	2	\$895.61	24	\$15,613.87	26	\$16,509.48
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	236	97,627.94	1,307	620,782.26	1,543	718,410.20
66-2/3% to Beneficiary	20	7,083.44	156	80,051.66	176	87,135.10
50% to Beneficiary	53	16,192.38	265	98,950.55	318	115,142.93
Pop-up Option	71	39,211.01	272	185,152.30	343	224,363.31
10 Years Certain	55	34,311.48	106	70,623.73	161	104,935.21
10 Years Certain & Life	61	29,134.88	83	55,937.46	144	85,072.34
Social Security Option						
Age 62 Basic	0	0.00	0	0.00	0	0.00
Age 62 Survivorship	13	8,847.88	75	83,548.94	88	92,396.82
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	4	698.62	4	698.62
Dependent Child	4	1,365.19	5	1,306.36	9	2,671.55
Refund	0	0.00	4	2,426.11	4	2,426.11
15 Years Certain & Life	25	18,945.68	68	44,248.20	93	63,193.88
20 Years Certain & Life	29	12,901.49	65	56,757.78	94	69,659.27
5 Years Certain	97	54,679.53	112	83,447.67	209	138,127.20
PLSO 12 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 24 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 36 Month Basic	0	0.00	8	2,229.97	8	2,229.97
PLSO 12 Month Survivor	2	1,078.64	6	8,519.45	8	9,598.09
PLSO 24 Month Survivor	0	0.00	2	665.69	2	665.69
PLSO 36 Month Survivor	7	2,487.00	11	3,652.95	18	6,139.95
<b>Total</b>	<b>675</b>	<b>\$324,762.15</b>	<b>2,573</b>	<b>\$1,414,613.57</b>	<b>3,248</b>	<b>\$1,739,375.72</b>

**Hazardous  
Beneficiary Lives Summary**

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	0	\$0.00	20	\$16,952.68	20	\$16,952.68
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	5	3,182.82	112	129,387.75	117	132,570.57
66-2/3% to Beneficiary	0	0.00	27	33,454.06	27	33,454.06
50% to Beneficiary	0	0.00	32	22,550.82	32	22,550.82
Pop-up Option	0	0.00	79	107,758.31	79	107,758.31
10 Years Certain	5	14,351.61	16	14,818.69	21	29,170.30
10 Years Certain & Life	0	0.00	3	2,059.84	3	2,059.84
Social Security Option						
Age 62 Basic	0	0.00	2	386.37	2	386.37
Age 62 Survivorship	1	2,519.78	58	79,822.49	59	82,342.27
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	3	2,419.26	3	2,419.26
Dependent Child	95	31,348.87	80	26,587.51	175	57,936.38
Refund	0	0.00	6	3,914.97	6	3,914.97
15 Years Certain & Life	0	0.00	5	5,261.34	5	5,261.34
20 Years Certain & Life	1	1,599.68	22	25,941.11	23	27,540.79
5 Years Certain	5	2,207.52	4	8,799.97	9	11,007.49
PLSO 12 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 24 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 36 Month Basic	0	0.00	3	1,388.33	3	1,388.33
PLSO 12 Month Survivor	0	0.00	0	0.00	0	0.00
PLSO 24 Month Survivor	0	0.00	1	148.67	1	148.67
PLSO 36 Month Survivor	0	0.00	1	1,129.09	1	1,129.09
<b>Total</b>	<b>112</b>	<b>\$55,210.28</b>	<b>474</b>	<b>\$482,781.26</b>	<b>586</b>	<b>\$537,991.54</b>

**Non-Hazardous Members**

**Retired and Beneficiary Information June 30, 2006  
Tabulated by Attained Ages**

Attained Age	Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	67	\$1,220,390	76	\$681,315	349	\$2,170,991	492	\$4,072,696
45-49	655	\$14,055,400	176	\$1,813,585	166	\$1,163,437	997	\$17,032,422
50-54	1,522	\$32,168,836	300	\$2,980,824	201	\$1,395,877	2,023	\$36,545,537
55-59	3,231	\$48,254,501	583	\$5,890,612	297	\$2,374,334	4,111	\$56,519,447
60-64	4,386	\$47,456,951	625	\$5,712,405	305	\$2,320,291	5,316	\$55,489,647
65-69	5,531	\$46,933,086	626	\$5,225,294	422	\$3,103,957	6,579	\$55,262,337
70-74	4,639	\$33,598,805	344	\$2,401,698	400	\$2,680,410	5,383	\$38,680,913
75-79	3,360	\$21,428,160	110	\$687,861	416	\$2,387,734	3,886	\$24,503,755
80-84	2,119	\$10,923,326	38	\$203,886	338	\$1,856,831	2,495	\$12,984,043
85-89	1,052	\$4,211,257	29	\$126,775	244	\$997,459	1,325	\$5,335,491
90 & Over	381	\$1,403,952	4	\$18,226	110	\$421,185	495	\$1,843,363
Totals	26,943	\$261,654,664	2,911	\$25,742,481	3,248	\$20,872,506	33,102	\$308,269,651



## Hazardous Members

### Retired and Beneficiary Information June 30, 2006 Tabulated by Attained Ages

Attained Age	Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	137	\$3,482,341	73	\$1,120,191	210	\$1,107,657	4210	\$5,710,189
45-49	358	\$9,069,648	70	\$1,047,180	38	\$468,582	466	\$10,585,410
50-54	758	\$20,680,167	83	\$1,164,603	57	\$742,409	898	\$22,587,179
55-59	1,002	\$25,426,942	72	\$994,455	60	\$853,824	1,134	\$27,275,221
60-64	703	\$15,155,429	34	\$452,882	78	\$1,342,414	815	\$16,950,725
65-69	436	\$8,309,925	8	\$112,616	58	\$826,290	502	\$9,248,831
70-74	239	\$4,369,596	7	\$61,302	41	\$606,504	287	\$5,037,402
75-79	107	\$1,875,485	2	\$15,222	28	\$287,453	137	\$2,178,160
80-84	31	\$471,900	1	\$17,366	11	\$109,228	43	\$598,494
85-89	4	\$6,201			3	\$22,019	7	\$28,220
90 & Over	1	\$690			2	\$89,531	3	\$90,221
Totals	3,776	\$88,848,324	350	\$4,985,817	586	\$6,455,911	4,712	\$100,290,052

**Total Non-Hazardous Active Members as of June 30, 2006  
Tabulated by Attained Ages and Years of Service**

Attained Age	Years of Service to Valuation Date								Totals
	0-4	5-9	10-14	15-19	20-24	25-26	27-29	30+	
Under 20	2,511								2,511
Avg. Pay	\$13,410								\$13,410
20-24	2,839	225							3,064
Avg. Pay	\$17,916	\$22,288							\$18,237
25-29	3,538	1,067	64						4,669
Avg. Pay	\$20,207	\$26,523	\$28,370						\$21,762
30-34	3,898	1,970	456	12					6,336
Avg. Pay	\$19,844	\$27,611	\$31,625	\$31,444					\$23,129
35-39	4,707	3,048	1,167	335	26				9,283
Avg. Pay	\$18,755	\$24,786	\$32,140	\$36,515	\$45,668				\$23,134
40-44	4,593	4,070	1,831	943	492	78			12,007
Avg. Pay	\$19,194	\$22,594	\$28,503	\$35,779	\$42,216	\$45,102			\$24,180
45-49	4,053	4,189	2,862	1,316	720	250	205	33	13,628
Avg. Pay	\$19,564	\$22,657	\$25,701	\$32,193	\$40,396	\$43,007	\$48,259	\$53,840	\$25,068
50-54	3,211	3,241	2,901	1,818	921	261	183	134	12,670
Avg. Pay	\$20,580	\$23,190	\$24,637	\$28,990	\$36,162	\$40,583	\$45,257	\$55,080	\$25,649
55-59	2,565	2,361	2,067	1,787	873	292	176	160	10,281
Avg. Pay	\$20,622	\$23,457	\$25,277	\$27,522	\$32,370	\$35,863	\$44,748	\$55,803	\$25,799
60-64	1,505	1,427	1,105	938	506	161	108	80	5,830
Avg. Pay	\$18,544	\$21,636	\$23,818	\$25,943	\$30,175	\$34,352	\$36,350	\$48,441	\$23,677
65-69	628	582	416	342	151	53	41	39	2,252
Avg. Pay	\$15,960	\$19,815	\$21,330	\$24,747	\$27,628	\$25,895	\$29,730	\$48,989	\$21,122
70 & over	285	305	225	180	92	20	24	32	1,163
Avg. Pay	\$14,141	\$16,994	\$18,146	\$22,676	\$22,937	\$27,014	\$28,511	\$46,410	\$19,086
<b>Totals</b>	<b>34,333</b>	<b>22,485</b>	<b>13,094</b>	<b>7,671</b>	<b>3,781</b>	<b>1,115</b>	<b>737</b>	<b>478</b>	<b>83,694</b>
<b>Avg. Pay</b>	<b>\$18,934</b>	<b>\$23,494</b>	<b>\$26,156</b>	<b>\$29,655</b>	<b>\$35,482</b>	<b>\$38,365</b>	<b>\$43,256</b>	<b>\$53,048</b>	<b>\$23,687</b>

**Total Hazardous Active Members as of June 30, 2006  
Tabulated by Attained Ages and Years of Service**

Attained Age	Years of Service to Valuation Date								Totals
	0-4	5-9	10-14	15-19	20-24	25-26	27-29	30+	
Under 20	168								168
Avg. Pay	\$27,226								\$27,226
20-24	443	12							455
Avg. Pay	\$31,605	\$37,132							\$31,751
25-29	1,021	247	2						1,270
Avg. Pay	\$35,910	\$44,658	\$47,562						\$37,629
30-34	750	907	185	2					1,844
Avg. Pay	\$35,904	\$45,678	\$50,109	\$45,936					\$42,148
35-39	532	713	615	176	9				2,045
Avg. Pay	\$36,377	\$44,624	\$52,197	\$54,633	\$60,424				\$45,687
40-44	294	371	388	507	118	5			1,683
Avg. Pay	\$35,540	\$43,339	\$50,562	\$57,330	\$62,296	\$55,800			\$49,223
45-49	145	202	195	292	152	24	11	2	1,023
Avg. Pay	\$37,162	\$41,814	\$48,699	\$55,187	\$62,545	\$66,757	\$61,910	\$92,490	\$50,265
50-54	147	125	115	127	52	26	32	24	648
Avg. Pay	\$38,467	\$43,484	\$49,160	\$52,054	\$63,863	\$64,638	\$71,550	\$73,465	\$50,013
55-59	81	82	40	51	13	8	14	16	305
Avg. Pay	\$36,972	\$41,443	\$43,619	\$53,004	\$58,698	\$56,331	\$71,411	\$78,488	\$46,919
60-64	44	45	23	10	2	1	2	3	130
Avg. Pay	\$32,698	\$40,821	\$44,606	\$56,554	\$62,076	\$37,020	\$55,470	\$90,316	\$41,617
65-69	22	15	7	3	2				49
Avg. Pay	\$37,243	\$47,219	\$41,203	\$36,552	\$69,252				\$42,127
70 & over	8	1	2	2	2				15
Avg. Pay	\$22,209	\$26,664	\$27,252	\$51,768	\$74,532				\$34,096
<b>Totals</b>	<b>3,655</b>	<b>2,720</b>	<b>1,572</b>	<b>1,170</b>	<b>350</b>	<b>64</b>	<b>59</b>	<b>45</b>	<b>9,635</b>
<b>Avg. Pay</b>	<b>\$35,141</b>	<b>\$44,358</b>	<b>\$50,476</b>	<b>\$55,539</b>	<b>\$62,564</b>	<b>\$63,272</b>	<b>\$69,175</b>	<b>\$77,220</b>	<b>\$44,310</b>

**SCHEDULE F**

**AMORTIZATION BASES**

**Non-Hazardous Retirement Bases**

<b>Date Established</b>	<b>Initial Years</b>	<b>Initial Amount</b>	<b>Annual Payment*</b>	<b>Years Remaining</b>	<b>Outstanding Balance</b>
06/30/1990	30	\$93,672,421	\$10,797,641	14	\$117,911,499
06/30/1991	30	61,472,822	6,782,007	15	77,921,143
06/30/1992	30	(125,111,651)	(13,210,027)	16	(158,998,717)
06/30/1993	30	(28,358,370)	(2,865,429)	17	(35,993,999)
06/30/1994	30	59,026,195	5,707,245	18	74,570,890
06/30/1995	30	(35,766,009)	(3,308,995)	19	(44,838,993)
06/30/1996	30	(188,502,047)	(16,686,175)	20	(233,876,090)
06/30/1997	30	(200,122,489)	(16,934,151)	21	(244,924,023)
06/30/1998	30	(311,976,854)	(25,234,417)	22	(375,812,125)
06/30/1999	30	(379,088,077)	(29,308,326)	23	(448,576,198)
06/30/2000	30	(804,685,873)	(59,461,176)	24	(933,643,016)
06/30/2001	30	250,075,433	17,660,834	25	284,028,586
06/30/2002	30	529,261,185	35,720,739	26	587,536,806
06/30/2003	30	391,393,784	25,243,612	27	424,074,885
06/30/2004	30	633,089,111	39,018,148	28	668,641,440
06/30/2005	30	573,411,726	33,768,362	29	589,621,036
06/30/2006	30	669,032,006	<u>37,645,187</u>	30	<u>669,032,066</u>
Total			\$45,335,080		\$1,016,675,131

\* Level percent of salary

### Hazardous Retirement Bases

Date Established	Initial Years	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
06/30/1990	30	\$68,584,978	\$7,905,806	14	\$86,332,326
06/30/1991	30	29,934,803	3,302,566	15	37,944,477
06/30/1992	30	(12,941,304)	(1,366,419)	16	(16,446,515)
06/30/1993	30	(7,291,213)	(736,729)	17	(9,254,404)
06/30/1994	30	1,854,577	179,319	18	2,342,985
06/30/1995	30	24,831,672	2,297,373	19	31,130,876
06/30/1996	30	(65,565,268)	(5,803,828)	20	(81,347,384)
06/30/1997	30	(62,908,989)	(5,323,292)	21	(76,992,462)
06/30/1998	30	(50,329,820)	(4,070,955)	22	(60,628,077)
06/30/1999	30	(97,060,446)	(7,504,006)	23	(114,851,952)
06/30/2000	30	(194,399,700)	(14,364,903)	24	(225,553,757)
06/30/2001	30	79,413,115	5,608,315	25	90,195,164
06/30/2002	30	143,568,600	9,689,689	26	159,376,579
06/30/2003	30	195,752,270	12,625,377	27	212,097,444
06/30/2004	30	149,965,899	9,242,603	28	158,387,521
06/30/2005	30	155,230,047	9,141,537	29	159,618,119
06/30/2006	30	152,716,813	<u>8,593,091</u>	30	<u>152,716,813</u>
Total			\$29,415,596		\$505,067,753

\* Level percent of salary

**Non-Hazardous Insurance Bases**

Date Established	Initial Years	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
06/30/2006	30	\$3,829,497,049	<u>\$224,326,837</u>	30	<u>\$3,829,497,049</u>
Total		\$3,829,497,049	\$224,326,837		\$3,829,497,049

\* Level percent of salary

**Hazardous Insurance Bases**

Date Established	Initial Years	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
06/30/2006	30	\$1,505,696,329	<u>\$88,201,686</u>	30	<u>\$1,505,696,329</u>
Total		\$1,505,696,329	\$88,201,686		\$1,505,696,329

\* Level percent of salary



**Report on the Annual Valuation of the  
State Police Retirement System**

**Prepared as of June 30, 2006**

November 1, 2006

Board of Trustees  
Kentucky Retirement Systems  
Perimeter Park West  
1260 Louisville Road  
Frankfort, KY 40601

Dear Members of the Board:

Presented in this report are the results of the annual actuarial valuation of the retirement and insurance benefits provided under the State Police Retirement System (SPRS). The purpose of the valuation was to measure the System's funding progress and to determine the required employer contribution rates for the fiscal year beginning July 1, 2007.

The date of the valuation was June 30, 2006.

The valuation was based upon data, furnished by the Executive Director and the Kentucky Retirement Systems (KRS) staff, concerning active, inactive and retired members along with pertinent financial information. The complete cooperation of the KRS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the summary of results on page 1 and the comments on page 5.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the system, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the system.

Respectfully submitted,

Thomas J. Cavanaugh, FSA, FCA, EA, MAAA  
Chief Executive Officer

Edward A. Macdonald, ASA, FCA, MAAA  
President

TJC/EAM:sh



## TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page No.</u>
I	Summary of Principal Results	1
II	Membership Data	3
III	Assets	4
IV	Comments on Valuation	5
V	Derivation of Experience Gains and Losses	7
VI	Required Contribution Rates	10
VII	Accounting Information	12
 <u>Schedule</u>		
A	Valuation Balance Sheet and Solvency Test	16
B	Development of Actuarial Value of Assets	19
C	Statement of Actuarial Assumptions and Methods	21
D	Summary of Main Benefit and Contribution Provisions	25
E	Detailed Tabulations of the Data	28
F	Amortization Bases	33

**REPORT ON THE ANNUAL VALUATION OF THE  
STATE POLICE RETIREMENT SYSTEM**

**PREPARED AS OF JUNE 30, 2006**

**SECTION I – SUMMARY OF PRINCIPAL RESULTS**

1. This report, prepared as of June 30, 2006, presents the results of the annual actuarial valuation of the retirement and insurance benefits provided under the System. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized in the following table.

**SUMMARY OF PRINCIPAL RESULTS**

	6/30/06	6/30/05*
<b>Contributions for next fiscal year:</b>		
Retirement	28.95%	20.64%
Insurance	<u>91.05</u>	<u>21.66</u>
Total	120.00%	42.30%
<b>Funded status as of valuation date:</b>		
Retirement		
Actuarial accrued liability	\$516,482,298	\$458,593,576
Actuarial value of assets	344,016,197	353,511,622
Unfunded liability on actuarial value of assets	172,466,101	105,081,954
Funded ratio on actuarial value of assets	66.61%	77.09%
Market value of assets	\$352,841,486	\$339,405,873
Unfunded liability on market value of assets	163,640,812	119,187,703
Funded ratio on market value of assets	68.32%	74.01%
Insurance		
Actuarial accrued liability	\$582,580,867	\$234,159,510
Actuarial value of assets	105,580,269	100,207,082
Unfunded liability on actuarial value of assets	477,000,598	133,952,428
Funded ratio on actuarial value of assets	18.12%	42.79%
Market value of assets	\$110,491,075	\$99,408,106
Unfunded liability on market value of assets	472,089,792	134,751,404
Funded ratio on market value of assets	18.97%	42.45%
<b>Demographic data as of valuation date:</b>		
Number of retired participants and beneficiaries	1,067	1,036
Number of vested former members	48	42
Number of former members due a refund	218	210
Number of active members	1,028	987
Total salary	\$47,743,865	\$43,720,092
Average salary	\$46,443	\$44,296

\*Reported by prior actuarial firm.

2. The valuation balance sheets showing the results of the valuation are given in Schedule A.
3. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains during the valuation year are given in Section V, and the rates of contribution payable by employers are given in Section VI.
4. There were no changes in benefit provisions since the last valuation. There were, however, several changes in actuarial assumptions and methods adopted by the Board based on an experience investigation dated January 12, 2006 covering the period July 1, 2000 through June 30, 2005. Since the previous valuation, the assumptions and methods were changed as follows:
  - Investment return was reduced from 8.25% per year to 7.75% per year for retirement benefits. Investment return was reduced from 8.25% per year to 4.50% per year for insurance benefits as required under GASB Statements No. 43 and 45 due to the lack of pre-funding of insurance benefits
  - The mortality table was changed for members who retire after June 30, 2006 from the 1983 GAM table to the 1994 GAM table
  - The mortality table for disabled members was changed from the PBGC Table for Disabled Lives Receiving Social Security to the 1994 GAM table set forward five years
  - The salary scale was changed from a service based scale ranging from 12.0% to 6.5% to a service based scale ranging from 14.5% to 4.0%
  - Rates of disablement, termination and retirement were adjusted to more closely reflect the actual experience of the system
  - 18 months additional service credit will be assumed at retirement to reflect unused accumulated sick leave
  - Medical trend rates were increased through 2020 and reduced thereafter in a range starting at 12.0% per year in 2006-2008 and declining to an ultimate rate of 5.5% in 2027 and later
  - The method used to determine the actuarial value of assets was changed to a method that truly smoothes market fluctuations over the five year smoothing period
  - The insurance accrued liability amortization bases were consolidated and reset to a new 30-year amortization period beginning with the June 30, 2006 valuation.
5. Schedule B of this report presents the development of the actuarial value of assets. Schedule C details the actuarial assumptions and methods employed. Schedule D gives a summary of the benefit and contribution provisions of the plan.

## **SECTION II – MEMBERSHIP DATA**

Data regarding the membership of the System for use as a basis for the valuation were furnished by the System's office. The following tables summarize the membership of the system as of June 30, 2006 upon which the valuation was based. Detailed tabulations of the data are given in Schedule E.

### **Active Members**

Group Averages					
Number	Payroll	Salary	Age	Service	
1,028	\$ 47,743,865	\$46,443	36.5	10.5	

The following table shows a six-year history of active member valuation data.

### **SCHEDULE OF SPRS ACTIVE MEMBER VALUATION DATA**

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2001	1,016	\$44,209,944	\$43,514	2.1%
6/30/2002	1,002	43,961,844	43,874	0.8
6/30/2003	1,019	43,760,832	42,945	(2.1)
6/30/2004	999	43,835,208	43,879	2.2
6/30/2005	987	43,720,092	44,296	1.0
6/30/2006	1,028	47,743,865	46,443	4.8

The following table shows the number and annual retirement allowances payable to retired members and their beneficiaries on the roll of the Retirement System as of the valuation date as well as certain group averages.

### **Retired Lives**

Type of Benefit Payment	No.	Annual Benefits	Group Averages	
			Benefit	Age
Retiree	908	\$ 31,323,376	\$34,497	59.84
Disability	37	611,513	16,527	55.43
Beneficiary	122	2,716,362	22,265	60.02
Total in SPRS	1,067	\$34,651,251	32,475	59.71

This valuation also includes 266 inactive members of which 48 are vested.

**SECTION III - ASSETS**

1. As of June 30, 2006 the total market value of assets amounted to \$463,332,561 as shown in the following table.

<b>Retirement</b>	<b>Insurance</b>	<b>SPRS Total</b>
\$352,841,486	\$110,491,075	\$463,332,561

2. The five-year smoothed market related actuarial value of assets used for the current valuation was \$449,596,466. Schedule B shows the development of the actuarial value of assets as of June 30, 2006. The following table shows the actuarial value of assets.

**COMPARISON OF ACTUARIAL VALUE OF ASSETS**

	<b>JUNE 30, 2006</b>	<b>JUNE 30, 2005</b>
<b>Retirement</b>	\$ 344,016,197	\$ 353,511,622
<b>Insurance</b>	<u>105,580,269</u>	<u>100,207,082</u>
<b>Total</b>	\$ 449,596,466	\$ 453,718,704

## **SECTION IV - COMMENTS ON VALUATION**

Schedule A of this report contains the valuation balance sheets which show the present and prospective assets and liabilities of the System as of June 30, 2006. Separate balance sheets are shown for Retirement and Insurance.

### **Retirement**

1. The total valuation balance sheet on account of retirement benefits shows that the System has total prospective retirement benefit liabilities of \$587,666,904, of which \$371,485,440 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$2,102,705 is for the prospective benefits payable on account of inactive members, \$214,078,759 is for the prospective benefits payable on account of present active members. Against these retirement benefit liabilities the System has a total present actuarial value of assets of \$344,016,197 as of June 30, 2006. The difference of \$243,650,707 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of retirement benefits. Of this amount, \$33,653,343 is the present value of future contributions expected to be made by members, and the balance of \$209,997,364 represents the present value of future contributions payable by the State.
2. The State's contributions to the System on account of retirement benefits consist of normal contributions, accrued liability contributions and contributions for administrative expenses. The valuation indicates that employer normal contributions at the rate of 8.92% of payroll are required to provide the benefits of the System for the average new member of SPRS.
3. Prospective employer normal contributions on account of retirement benefits at the above rates have a present value of \$37,531,263. When this amount is subtracted from \$209,997,364, which is the present value of the total future contributions to be made by the State, there remains \$172,466,101 as the amount of future accrued liability contributions.
4. It is recommended that the accrued liability contribution rate payable by the State on account of retirement benefits be set at 19.75% of payroll. This rate is based on a 30 year amortization of bases established each year as specified in the law governing the Plan. These bases are amortized on the assumption that the aggregate payroll for non-hazardous and hazardous members will increase by 3.50% each year.
5. The contribution rate for administrative expenses is determined to be 0.28% of payroll.
6. The development of all accrued liability amortization bases is shown in Schedule F.

## Insurance

1. The total valuation balance sheet on account of insurance benefits shows that the System has total prospective insurance benefit liabilities of \$823,590,001, of which \$235,676,003 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$5,237,865 is for the prospective benefits payable to current inactive members, and \$582,676,133 is for the prospective benefits payable on account of present active members. Against these insurance benefit liabilities the System has a total present actuarial value of assets of \$105,580,269 as of June 30, 2006. The difference of \$718,009,732 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of insurance benefits. Of this amount, \$0 is the present value of future contributions expected to be made by members, and the balance of \$718,009,732 represents the present value of future contributions payable by the State.
2. The State's contributions to the System on account of insurance benefits consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of 52.38% of payroll are required to provide the benefits of the System for the average new member of SPRS.
3. Prospective employer normal contributions on account of insurance benefits at the above rates have a present value of \$241,009,134. When this amount is subtracted from \$718,009,732, which is the present value of the total future contributions to be made by the employers, there remains \$477,000,598 as the amount of future accrued liability contributions.
4. It is recommended that the accrued liability contribution rate payable by the State on account of insurance benefits be set at 38.52% of payroll. This rate is sufficient to liquidate the unfunded accrued liability of \$477,000,598 over 30 years on the assumption that the aggregate payroll for non-hazardous and hazardous members will increase by 3.50% each year.
5. The contribution rate for administrative expenses is determined to be 0.15% of payroll.
6. The development of the accrued liability amortization bases is shown in Schedule F.

## SECTION V – DERIVATION OF EXPERIENCE GAINS AND LOSSES

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2006 is shown below (\$ millions).

### Experience Gain/(Loss) Retirement Benefits

		Amount
(1)	UAAL* as of 6/30/05	\$ 105.1
(2)	Normal cost from last valuation	4.1
(3)	Actual employer contributions	4.2
(4)	Interest accrual: (1) x .0825 + [(2) – (3)] x .04125]	8.7
(5)	Expected UAAL before changes: (1) + (2) – (3) + (4)	\$ 113.7
(6)	Change due to plan amendments	9.1
(7)	Change due to new actuarial assumptions or methods	34.6
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 157.4
(9)	Actual UAAL as of 6/30/06	\$ 172.5
(10)	Gain/(loss): (8) – (9)	\$ (15.1)
(11)	Accrued liabilities as of 6/30/05	\$ 458.6
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year	(3.3)%

\*Unfunded actuarial accrued liability.



**Experience Gain/(Loss)  
Insurance Benefits**

		Amount
(1)	UAAL* as of 6/30/05	\$ 134.0
(2)	Normal cost from last valuation	7.3
(3)	Actual employer contributions	6.9
(4)	Interest accrual: (1) x .0825 + [(2) – (3)] x .04125]	11.1
(5)	Expected UAAL before changes: (1) + (2) – (3) + (4)	\$ 145.5
(6)	Change due to plan amendments	0.0
(7)	Change due to new actuarial assumptions or methods	343.0
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$ 488.5
(9)	Actual UAAL as of 6/30/06	\$ 477.0
(10)	Gain/(loss): (8) – (9)	\$ 11.5
(11)	Accrued liabilities as of 6/30/05	\$ 234.2
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year	4.9%

\*Unfunded actuarial accrued liability.

**SPRS MEMBERS  
ANALYSIS OF FINANCIAL EXPERIENCE**

**Gains & Losses in Accrued Liabilities  
Resulting from Difference Between  
Assumed Experience & Actual Experience  
(\$ Millions)**

Type of Activity	Retirement \$ Gain (or Loss) For Year Ending 6/30/06	Insurance \$ Gain (or Loss) For Year Ending 6/30/06
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (3.9)	\$ (1.8)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(0.2)	(0.1)
<b>Death-in Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	0.0	0.0
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	0.6	0.3
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(1.7)	0.0
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(0.5)	(0.2)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(10.7)	(1.8)
<b>Death After Retirement.</b> If retired members live longer than assumed, there is a loss. If not as long, a gain.	0.4	0.2
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>0.9</u>	<u>14.9</u>
<b>Gain (or Loss) During Year From Financial Experience</b>	\$ (15.1)	\$ 11.5
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, method changes, and contribution shortfall.	<u>(48.9)</u>	<u>(343.0)</u>
<b>Composite Gain (or Loss) During Year</b>	\$ (64.0)	\$ (331.5)

**SECTION VI – REQUIRED CONTRIBUTION RATES**

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by the State to the Retirement System. The following tables show the rates of contribution payable by employers as determined from the present valuation for the 2007/2008 fiscal year.

**Required Contribution Rates  
Retirement**

Contribution for	Amount	% of Payroll
A. Normal Cost:		
(1) Service retirement benefits	\$ 7,323,909	15.34%
(2) Disability benefits	544,280	1.14
(3) Survivor benefits	<u>210,073</u>	<u>0.44</u>
(4) Total	\$ 8,078,262	16.92%
B. Member Contributions	3,819,509	8.00%
C. Employer Normal Cost: [A(4) – B]	\$ 4,258,753	8.92%
D. Administrative Expenses	\$ 133,683	0.28%
E. Unfunded Actuarial Accrued Liability Contributions*:		
(1) UAAL Contribution Based on 6/30/05 Valuation	\$ 5,352,087	11.21%
(2) Change due to:		
a. Active decrements	\$ 200,524	0.42%
b. Pay increases	81,165	0.17
c. Retiree mortality	(19,098)	(0.04)
d. Investment return	539,506	1.13
e. COLA	458,341	0.96
f. Assumption change	2,807,339	5.88
g. Other	<u>11,190</u>	<u>0.02</u>
h. Total Change	\$ 4,078,967	8.54%
(3) UAAL Contribution Based on 6/30/06 Valuation: [E(1) + E(2)h]	\$ 9,431,054	19.75%
F. Total Recommended Employer Contribution Rate: [C + D + E(3)]	\$ 13,823,490	28.95%

\*Development of the amortization bases of the UAAL is provided in Schedule F

**Required Contribution Rates  
Insurance**

Contribution for	Amount	% of Payroll
A. Normal Cost	\$ 25,010,455	52.38%
B. Member Contributions*	\$ 0	0.00%
C. Employer Normal Cost: [A – B]	\$ 25,010,455	52.38%
D. Administrative Expenses	\$ 67,587	0.15%
E. Unfunded Actuarial Accrued Liabilities**	\$ 18,391,693	38.52%
F. Total Recommended Employer Contribution Rate: [C + D + E]	\$ 43,469,735	91.05%

\*The liabilities are net of retiree contributions toward their healthcare.

\*\*Development of the amortization base of the UAAL is provided in Schedule F

**SECTION VII - ACCOUNTING INFORMATION**

Governmental Accounting Standards Board Statements 25, 27, 43 and 45 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED MEMBERS  
AS OF JUNE 30, 2006**

<b>GROUP</b>	<b>NUMBER</b>
Retirees and beneficiaries currently receiving benefits	1,067
Terminated employees entitled to benefits but not yet receiving benefits	266
Active members	<u>1,028</u>
Total	2,361

Another such item is the Schedule of Funding Progress for retirement and insurance benefits separately as shown in the following tables.

**RETIREMENT BENEFITS  
SCHEDULE OF FUNDING PROGRESS**

Actuarial Actuarial Valuation Date	Value of Plan Assets ( a )	Actuarial Accrued Liability (AAL) Entry Age ( b )	Unfunded AAL (UAAL) ( b - a )	Funded Ratio ( a / b )	Covered Payroll ( c )	UAAL as a Percentage of Covered Payroll ( ( b - a ) / c )
6/30/2001	\$456,160,709	\$356,211,860	\$ (99,948,849)	128.1%	\$44,209,944	(226.1)%
6/30/2002	438,955,465	380,790,346	(58,165,119)	115.3	43,961,844	(132.3)
6/30/2003	413,063,576	414,881,459	1,817,883	99.6	43,760,832	4.2
6/30/2004	385,077,195	437,482,425	52,405,230	88.0	43,835,208	119.6
6/30/2005	353,511,622	458,593,576	105,081,954	77.1	43,720,092	240.4
6/30/2006	344,016,197	516,482,298	172,466,101	66.6	47,743,865	361.2

**INSURANCE BENEFITS  
SCHEDULE OF FUNDING PROGRESS**

Actuarial Actuarial Valuation Date	Value of Plan Assets ( a )	Actuarial Accrued Liability (AAL) Entry Age ( b )	Unfunded AAL (UAAL) ( b - a )	Funded Ratio ( a / b )	Covered Payroll ( c )	UAAL as a Percentage of Covered Payroll ( ( b - a ) / c )
6/30/2001	\$79,863,577	\$158,261,479	\$78,397,902	50.5%	\$44,209,944	177.3%
6/30/2002	86,867,391	165,445,412	78,578,021	52.5	43,961,844	178.7
6/30/2003	90,747,967	184,501,205	93,753,238	49.2	43,760,832	214.2
6/30/2004	96,622,908	197,604,301	100,981,393	48.9	43,835,208	230.4
6/30/2005	100,207,082	234,159,510	133,952,428	42.8	43,720,092	306.4
6/30/2006	105,580,269	582,580,867	477,000,598	18.1	47,743,865	999.1

The final item of required supplementary information, the Schedule of Employer Contributions, is shown in the tables below.

**Retirement Benefits**  
**Schedule of Employer Contributions**

Year Ended	Annual Required Contribution	Actual Contributions	Percentage Contributed
June 30, 2001	\$1,826,883	\$1,811,299	99.0%
June 30, 2002	1,464,204	1,448,864	99.0
June 30, 2003	0	(20,061)	0.0
June 30, 2004	1,175,711	1,152,752	98.0
June 30, 2005	3,730,805	2,851,461	76.4
June 30, 2006	6,352,777	4,244,445	66.8

**Insurance Benefits**  
**Schedule of Employer Contributions**

Year Ended	Annual Required Contribution*	Actual Contributions	Percentage Contributed
June 30, 2001	\$7,807,870	\$7,817,613	100.1%
June 30, 2002	8,098,907	8,113,391	100.2
June 30, 2003	9,443,588	9,654,313	81.1
June 30, 2004	8,434,834	8,455,498	100.2
June 30, 2005	8,608,536	6,631,031	77.0
June 30, 2006	12,554,648	6,880,517	54.8

\* ARC for years after June 30, 2005 are based on GASB Statement 43.

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2006. Additional information as of the latest actuarial valuation follows.

<b>Retirement Benefits</b>	
Valuation date	6/30/2006
Actuarial cost method	Entry Age
Amortization method	Level Percent Closed
Remaining amortization period	14 to 30 Years
Asset valuation method	5 Year Smoothed Market
Actuarial assumptions:	
Investment rate of return*	7.75%
Projected salary increases*	4.0% - 14.5%
Cost-of-living adjustment	None
*Includes inflation at	3.5%

<b>Insurance Benefits</b>	
Valuation date	6/30/2006
Actuarial cost method	Entry Age
Amortization method	Level Percent Closed
Remaining amortization period	30 Years
Asset valuation method	5 Year Smoothed Market
Medical Trend Assumption	12.0% - 5.5%
Year of Ultimate Trend	2027
Actuarial assumptions:	
Investment rate of return*	4.50%
*Includes inflation at	3.5%



**SCHEDULE A**

**Valuation Balance Sheet and Solvency Test**

The following valuation balance sheets show the assets and liabilities of the retirement system as of the current valuation date of June 30, 2006 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2005. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date.

**VALUATION BALANCE SHEETS  
SHOWING THE ASSETS AND LIABILITIES OF THE  
STATE POLICE RETIREMENT SYSTEM**

**RETIREMENT BENEFITS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 344,016,197	\$ 353,511,622
Prospective contributions		
Member contributions	\$ 33,653,343	\$ **
Employer normal contributions	37,531,263	76,261,787
Unfunded accrued liability contributions	<u>172,466,101</u>	<u>105,081,954</u>
Total prospective contributions	<u>\$ 243,650,707</u>	<u>\$ 181,343,741</u>
 Total assets	 <u>\$ 587,666,904</u>	 <u>\$ 534,855,363</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 371,485,440	\$ 339,769,169
Present value of benefits payable on account of active members	214,078,759	193,457,000
Present value of benefits payable on account of inactive members	<u>2,102,705</u>	<u>1,629,194</u>
Total liabilities	<u>\$ 587,666,904</u>	<u>\$ 534,855,363</u>

\*Reported by prior actuarial firm.

\*\*Prospective member contributions and employer normal contributions not reported separately by previous actuary.

**VALUATION BALANCE SHEET  
INSURANCE BENEFITS**

	JUNE 30, 2006	JUNE 30, 2005*
<b>ASSETS</b>		
Current actuarial value of assets	\$ 105,580,269	\$ 100,207,082
Prospective employer contributions		
Normal contributions	\$ 241,009,134	\$ 76,719,821
Unfunded accrued liability contributions	<u>477,000,598</u>	<u>133,952,428</u>
Total prospective contributions	<u>\$ 718,009,732</u>	<u>\$ 210,672,249</u>
 Total assets	 <u>\$ 823,590,001</u>	 <u>\$ 310,879,331</u>
<b>LIABILITIES</b>		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 235,676,003	\$ 139,093,506
Present value of benefits payable on account of active members	582,676,133	169,293,637
Present value of benefits payable on account of inactive members	<u>5,237,865</u>	<u>2,492,188</u>
Total liabilities	<u>\$ 823,590,001</u>	<u>\$ 310,879,331</u>

\*Reported by prior actuarial firm.

The following tables provide the solvency test for SPRS members.

**Solvency Test  
Retirement Benefits**

Valuation Date	Aggregate Accrued Liabilities For			Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
6/30/2001*	\$34,338,478	\$224,432,772	\$97,440,610	\$456,160,709	100.0%	100.0%	202.6%
6/30/2002*	36,886,477	252,498,613	91,405,256	438,955,613	100.0	100.0	163.6
6/30/2003*	35,832,095	290,012,792	89,036,572	413,063,576	100.0	100.0	98.0
6/30/2004*	37,658,106	318,664,694	81,159,625	385,077,195	100.0	100.0	35.4
6/30/2005*	35,670,717	341,398,363	81,524,496	353,511,622	100.0	93.1	--
6/30/2006	37,866,774	373,588,145	105,027,379	344,016,197	100.0	81.9	--

\*Reported by prior actuarial firm.

**Solvency Test  
Insurance Benefits**

Valuation Date	Aggregate Accrued Liabilities For			Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
6/30/2001*	\$0	\$86,469,110	\$71,792,369	\$79,863,577	100.0%	92.4%	--
6/30/2002*	0	94,205,237	71,240,175	86,867,391	100.0	92.2	--
6/30/2003*	0	106,317,750	78,183,455	90,747,967	100.0	85.4	--
6/30/2004*	0	119,104,851	78,499,450	96,622,908	100.0	81.1	--
6/30/2005*	0	141,585,694	92,573,816	100,207,082	100.0	70.8	--
6/30/2006	0	240,913,868	341,666,999	105,580,269	100.0	43.8	--

\*Reported by prior actuarial firm.

**SCHEDULE B**

**Development of Actuarial Value of Assets  
Retirement Benefits**

Valuation Date June 30:	2005	2006	2007	2008	2009	2010
A. Actuarial Value Beginning of Year	\$385,077,195	\$353,511,622				
B. Market Value End of Year	339,405,873	352,841,486				
C. Market Value Beginning of Year	335,720,408	339,405,873				
D. Cash Flow						
D1. Contributions	7,079,879	9,058,705				
D2. Benefit Payments	(33,051,482)	(34,836,365)				
D3. Administrative Expenses	(104,594)	(133,540)				
D4. Investment Expenses	<u>(279,552)</u>	<u>(284,289)</u>				
D5. Net	(26,355,749)	(26,195,490)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	30,041,214	39,631,102				
E2. Assumed Rate	8.25%	8.25%				
E3. Amount for Immediate Recognition	30,681,694	27,216,436				
E4. Amount for Phased-In Recognition	(640,480)	12,414,667				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	(128,096)	2,482,933				
F2. First Prior Year	1,765,427	(128,096)	2,482,933			
F3. Second Prior Year	(4,253,012)	1,765,427	(128,096)	2,482,933		
F4. Third Prior Year	(10,383,623)	(4,253,012)	1,765,427	(128,096)	2,482,933	
F5. Fourth Prior Year	<u>(22,892,214)</u>	<u>(10,383,623)</u>	<u>(4,253,012)</u>	<u>1,765,427</u>	<u>(128,096)</u>	<u>2,482,933</u>
F6. Total Recognized Investment Gain	(35,891,518)	(10,516,731)	(132,748)	4,120,264	2,354,837	2,482,933
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$353,511,622	\$344,016,197				
H. Difference Between Market & Actuarial Values	\$(14,105,749)	\$8,825,289	\$8,958,037	\$4,837,773	\$2,482,933	\$0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

**Development of Actuarial Value of Assets  
Insurance Benefits**

Valuation Date June 30:	2005	2006	2007	2008	2009	2010
A. Actuarial Value Beginning of Year	\$96,622,908	\$100,207,082*				
B. Market Value End of Year	99,408,106	110,491,075				
C. Market Value Beginning of Year	90,422,080	99,408,106				
D. Cash Flow						
D1. Contributions	6,974,102	6,885,334				
D2. Benefit Payments	(6,220,807)	(7,816,174)				
D3. Administrative Expenses	(44,584)	(67,587)				
D4. Investment Expenses	<u>(65,388)</u>	<u>(100,954)</u>				
D5. Net	643,323	(1,099,381)				
E. Investment Income						
E1. Market Total: B.-C.-D5.	8,342,703	12,182,350				
E2. Assumed Rate	8.25%	8.25%				
E3. Amount for Immediate Recognition	7,997,927	8,260,938				
E4. Amount for Phased-In Recognition	344,776	3,921,412				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20*E4.	68,955	784,282				
F2. First Prior Year	1,373,499	68,955	784,282			
F3. Second Prior Year	(1,180,186)	1,373,499	68,955	784,282		
F4. Third Prior Year	(2,834,921)	(1,180,186)	1,373,499	68,955	784,282	
F5. Fourth Prior Year	<u>(2,484,422)</u>	<u>(2,834,921)</u>	<u>(1,180,186)</u>	<u>1,373,499</u>	<u>68,955</u>	<u>784,282</u>
F6. Total Recognized Investment Gain	(5,057,075)	(1,788,371)	1,046,550	2,226,736	853,237	784,282
G. Actuarial Value End of Year:						
A.+D5.+E3.+F6.	\$100,207,082*	\$105,580,269				
H. Difference Between Market & Actuarial Values	\$(798,976)	\$4,910,806	\$3,864,256	\$1,637,520	\$784,282	\$0

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.

\*This is the actuarial value as reported by the previous actuary. It differs from the method in the table above by \$1. The difference is obviously not material.

**SCHEDULE C**

**STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

The assumptions and methods used in the valuation were selected by the prior actuarial firm based on the actuarial experience study prepared as of June 30, 2005, submitted January 12, 2006, and adopted by the Board on January 19, 2006.

INVESTMENT RATE OF RETURN: 7.75% per annum, compounded annually for retirement benefits. A blended rate is necessary to meet GASB Statement 43 requirements for insurance benefits. The current blended rate for SPRS is 4.50%.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases for members are as follows and include inflation at 3.50% per annum:

Service	Annual Rates of		
	Merit & Seniority	Base (Economy)	Increase Next Year
0-1	11.0%	3.5%	14.5%
1-2	4.0	3.5	7.5
2-3	3.5	3.5	7.0
3-4	3.0	3.5	6.5
4-5	2.5	3.5	6.0
5-6	2.0	3.5	5.5
6-7	1.5	3.5	5.0
7-8	1.5	3.5	5.0
8-9	1.0	3.5	4.5
9-10	1.0	3.5	4.5
10 & over	0.5	3.5	4.0

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of death, disability, withdrawal and retirement are shown in the following tables:

Age	Withdrawal and Vesting*	Death**		Disability	Service Retirement***	
		Male	Female		Service	Rate
20	2.50%	0.10%	0.08%	0.07%	20	20.0%
25	2.28	0.12	0.08	0.09	25	20.0
30	1.83	0.13	0.09	0.12	30	45.0
35	1.31	0.14	0.10	0.17	35	70.0
40	0.81	0.16	0.12	0.27		
45	0.41	0.21	0.15	0.44		
50		0.31	0.19	0.75		
55		0.49	0.28	1.23		
60		0.85	0.49	1.95		

\* Select rates of withdrawal apply in the first five years of employment regardless of age. The rates are 10.0%, 7.0%, 5.0%, 4.0% and 3.5%, respectively.

\*\* 75% are presumed to be non-duty related, and 25% are assumed to be duty related.

\*\*\* The annual rate of service retirement is 100% at age 55.

HEALTH CARE COST TREND RATES: Following is a chart detailing trend assumptions.

Year	Trend
2006-08	12.0%
2009-11	11.0
2012-14	10.0
2015-17	9.0
2018-20	8.0
2021-23	7.0
2024-26	6.0
2027 and beyond	5.5

AGE RELATED MORBIDITY: Per capita costs are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims was assumed to be:

Participant Age	Annual Increase
65 – 69	3.0%
70 – 74	2.5%
75 – 79	2.0%
80 – 84	1.0%
85 – 89	0.5%
90 and over	0.0%

ANTICIPATED PLAN PARTICIPATION: The assumed annual rates of plan participation and spouse coverage are as follows:

Participation	100%
Spouse Coverage	100%

Following are charts detailing expected premiums for pre- and post-Medicare for the year following the valuation date.

**MEDICAL INSURANCE CONTRIBUTION RATES  
PRE-MEDICARE ELIGIBLE**

July – December 2006				
	Single	Parent Plus	Couple	Family
<b>TOTAL PREMIUMS</b>				
Essential	N/A	\$550.62	\$ 845.36	\$ 942.72
Enhanced	\$432.08	\$662.71	\$1,014.67	\$1,130.82
Premier	\$447.20	\$688.87	\$1,048.68	\$1,168.62

**MEDICARE ELIGIBLE**

Available Plan	Cost
Kentucky Retirement System Health Plan - Medical Only	\$143.00
Kentucky Retirement System Health Plan – PLUS	\$237.00
Kentucky Retirement System Health Plan – PREMIUM	\$310.00
Anthem Senior Advantage (HMO Local Network)	\$168.00
Anthem Blue Medicare Access (PPO Regional Network)	\$208.00



**DEATH AFTER RETIREMENT:** The rates of mortality for the period after service retirement are according to the 1983 Group Annuity Mortality Table for all retired members and beneficiaries as of June 30, 2006 and the 1994 Group Annuity Mortality Table for all other members. The Group Annuity Mortality Table set forward 5 years is used for the period after disability retirement.

**PERCENT MARRIED:** 100% of employees are assumed to be married, with the wife 3 years younger than the husband.

**DEPENDENT CHILDREN:** For hazardous members' duty-related death benefits, it is assumed that the member is survived by two dependent children each age 6.

**UNUSED SICK LEAVE:** It is assumed that a member will be granted one and one-half year of service credit for unused sick leave at termination of employment.

**ACTUARIAL METHOD:** Entry age normal cost method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability. For pre-Medicare retiree healthcare liabilities, the current premium charged by the Kentucky Employees' Health Plan (KEHP) is used as the base cost is projected forward using the healthcare trend assumption shown above. No implicit rate subsidy is calculated or recognized as the subsidy is the responsibility of KEHP. For the Medicare-eligible retirees, claims were analyzed and current premiums were utilized with appropriate aging factors applied.

**ASSETS:** Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value.

## SCHEDULE D

### SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

This schedule summarizes the major retirement benefit provisions of SPRS included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

**Plan Year:** July 1 through June 30

**Normal Retirement:**

<i>Age Requirement</i>	55
<i>Service Requirement</i>	None
<i>Amount</i>	If a member has at least 60 months of service, the monthly benefit is 2.50% times final average compensation time years of service.

Final compensation is the average salary during the three highest paid fiscal years. If the months of service credit during the highest three-year period are less than twenty-four, one or more additional fiscal years shall be used.

If a member has less than 60 months of service, the monthly benefit is the actuarial equivalent of two times the member's contributions with interest.

**Early Retirement:**

<i>Requirement</i>	Age 50 with 15 years of service or any age with 20 years service.
<i>Amount</i>	Normal retirement benefit reduced by 5.5% per year for each year the member is younger than age 55 or has less than 20 years service, whichever is smaller.

**Disability:**

<i>Age Requirement</i>	None
<i>Service Requirement</i>	60 months

<i>Members whose participation began before 8/1/2004</i>	Normal retirement benefit except that service credit will be added to total service for the period from the last day of plan employment to the member's 55th birthday or until the combined total service as of the last day of paid employment and added service equals 20 years. The total amount of service credit added shall not exceed the member's actual service credit on the last day of paid employment. For employees with 20 or more years of service credit, actual service credit will be used.
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A member in a hazardous position who is disabled in the line of duty is entitled to a retirement benefit of not less than 25% of the member's final monthly rate of pay plus 10% of his final monthly rate of pay for each dependent child. The maximum dependent child's benefit is 40% of the member's final monthly rate of pay.

*Members whose participation began on or after 8/1/2004*

Normal retirement benefit based on actual service with no penalty or, if larger, 25% of the Final Rate of Pay. May apply for disability even after normal retirement age.

**Vesting:**

*Age Requirement*

None

*Service Requirement*

60 months. Service purchased after August 1, 2004 does not count toward vesting insurance benefits. Service purchased by employees who began participating on or after August 1, 2004 does not count toward vesting retirement benefits.

*Amount*

Normal retirement benefit deferred to normal retirement age or reduced benefit payable at early retirement age.

*Normal Retirement Age*

55

**Pre-Retirement Death Benefit (not in line of duty):**

*Requirement*

Any age with 60 months service or age 65 with 48 months service.

*Amount*

Benefit equal to the benefit the member would have received had the member retired on the day before the date of death and elected a 100% joint and survivor form. Benefit is actuarially reduced if member is less than age 55 at date of death.

**Spouse's Pre-Retirement Death Benefit (in line of duty):**

*Requirement*

None

*Amount*

The spouse may choose (1) a \$10,000 lump sum payment and monthly payments of 25% of the member's final monthly rate of pay or (2) benefits based on the member's age, years of service and final compensation at date of death.

**Dependent Non-Spouse's Death Benefit (in line of duty):**

*Requirement*

None

*Amount*

The non-spouse may choose (1) a \$10,000 lump sum payment or (2) benefits based upon the member's age, years of service and final compensation at date of death.

**Dependent Child's Death Benefit (in line of duty):**

<i>Requirement</i>	None
<i>Amount</i>	10% of member's final monthly rate of pay up to a maximum of 40%.

**Post-Retirement Death Benefit:**

<i>Lump-sum Benefit</i>	\$5,000
<i>Husband and Wife</i>	The choice of payment option selected by the member will determine the monthly benefits provided to the beneficiary upon the member's death.

**Insurance Plan for Retirees:**

<i>Members whose participation began before July 1, 2003</i>	The Retirement System pays a portion of medical premiums for retirees, their dependents and beneficiaries. The Insurance Fund will pay 0%, 25%, 50%, 75%, or 100% of the premiums depending on retiree eligibility as reported by the System.
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<i>Members whose participation began on or after July 1, 2003</i>	The Retirement System pays \$15 per month per year of service for retirees, and \$10 per month per year of service for surviving spouses employees. "Line of duty" insurance benefits will be calculated as if the member had at least 20 years of service.
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<b>Member Contributions:</b>	8% of salary.
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**SCHEDULE E**

**DETAILED TABULATIONS OF THE DATA**

**Schedule of Retired Members Added to and Removed From Rolls  
Last Six Fiscal Years**

<b>Year Ending June 30</b>	<b>2001</b>	<b>2002</b>	<b>2003*</b>	<b>2004*</b>	<b>2005*</b>	<b>2006</b>
			<b><u>Number</u></b>			
Beginning of Year	N/A	N/A	897	941	992	1,036
Added	N/A	N/A	53	62	50	43
Removed	N/A	N/A	9	11	6	10
End of Year	N/A	N/A	941	992	1,036	1,067
			<b><u>Annual Allowances</u></b>			
Beginning of Year	N/A	N/A	N/A	\$28,115,500	\$30,805,600	\$32,983,900
Added	N/A	N/A	\$2,040,300	2,580,100	1,813,000	1,943,760
Removed	N/A	N/A	135,000	189,900	159,600	276,409
End of Year	N/A	N/A	\$28,115,500	\$30,805,600	\$32,983,900	\$34,651,251
% Increase in Allowances	N/A	N/A	N/A	9.57%	7.07%	5.06%
Average Annual Allowance	N/A	N/A	\$29,878	\$31,054	\$31,838	\$32,475

\*Reported by prior actuarial firm.

**Retired Lives Summary**

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	88	\$239,703.32	4	\$9,871.59	92	\$249,574.91
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	117	308,937.68	1	3,126.65	118	312,064.33
66-2/3% to Beneficiary	76	245,656.29	1	2,653.98	77	248,310.27
50% to Beneficiary	74	232,933.80	0	0.00	74	232,933.80
Pop-up Option	307	967,062.14	0	0.00	307	967,062.14
10 Years Certain	3	12,529.16	0	0.00	3	12,529.16
10 Years Certain & Life	28	81,996.68	0	0.00	28	81,996.68
Social Security Option						
Age 62 Basic	36	82,850.34	0	0.00	36	82,850.34
Age 62 Survivorship	158	333,970.74	1	4,609.10	159	338,579.84
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	0	0.00	0	0.00	0	0.00
Refund	0	0.00	0	0.00	0	0.00
15 Years Certain & Life	10	26,136.20	1	3,388.21	11	29,524.41
20 Years Certain & Life	28	73,389.50	1	2,452.08	29	75,841.58
5 Years Certain	0	0.00	0	0.00	0	0.00
PLSO 12 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 24 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 36 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 12 Month Survivor	4	11,074.90	0	0.00	4	11,074.90
PLSO 24 Month Survivor	1	6,408.83	0	0.00	1	6,408.83
PLSO 36 Month Survivor	6	12,489.33	0	0.00	6	12,489.33
<b>Total</b>	<b>936</b>	<b>\$2,635,138.91</b>	<b>9</b>	<b>\$26,101.61</b>	<b>945</b>	<b>\$2,661,240.52</b>

**Beneficiary Lives Summary**

	Male Lives		Female Lives		Total	
	Number	Monthly Benefits	Number	Monthly Benefits	Number	Monthly Benefits
Basic Form	0	\$0.00	4	\$2,656.98	4	\$2,656.98
Straight Life (Old Plan)	0	0.00	0	0.00	0	0.00
Joint & Survivor						
100% to Beneficiary	2	3,658.03	55	128,995.64	57	132,653.67
66-2/3% to Beneficiary	0	0.00	2	3,431.44	2	3,431.44
50% to Beneficiary	1	1,132.13	13	19,268.71	14	20,400.84
Pop-up Option	0	0.00	11	27,120.18	11	27,120.18
10 Years Certain	1	515.67	1	2,563.48	2	3,079.15
10 Years Certain & Life	0	0.00	0	0.00	0	0.00
Social Security Option						
Age 62 Basic	0	0.00	1	1,916.40	1	1,916.40
Age 62 Survivorship	0	0.00	17	25,112.08	17	25,112.08
Partial Deferred (Old Plan)	0	0.00	0	0.00	0	0.00
Widows Age 60	0	0.00	0	0.00	0	0.00
Dependent Child	7	2,241.08	2	507.15	9	2,748.23
Refund	0	0.00	0	0.00	0	0.00
15 Years Certain & Life	0	0.00	0	0.00	0	0.00
20 Years Certain & Life	0	0.00	4	7,224.05	4	7,224.05
5 Years Certain	0	0.00	1	20.28	1	20.28
PLSO 12 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 24 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 36 Month Basic	0	0.00	0	0.00	0	0.00
PLSO 12 Month Survivor	0	0.00	0	0.00	0	0.00
PLSO 24 Month Survivor	0	0.00	0	0.00	0	0.00
PLSO 36 Month Survivor	0	0.00	0	0.00	0	0.00
<b>Total</b>	<b>11</b>	<b>\$7,546.91</b>	<b>111</b>	<b>\$218,816.39</b>	<b>122</b>	<b>\$226,363.30</b>

**Retired and Beneficiary Information June 30, 2006  
Tabulated by Attained Ages**

Attained Age	Retirement		Disability Retirement		Survivors and Beneficiaries		Totals	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	18	\$447,522	3	\$38,309	17	\$156,271	38	\$642,102
45-49	54	\$1,746,684	7	\$118,781	2	\$13,511	63	\$1,878,976
50-54	166	\$5,934,647	7	\$92,424	17	\$278,191	190	\$6,305,262
55-59	284	\$10,159,956	9	\$173,606	19	\$416,781	312	\$10,750,343
60-64	151	\$5,284,978	5	\$87,657	13	\$324,491	169	\$5,697,126
65-69	108	\$3,270,157	3	\$65,232	10	\$335,733	121	\$3,671,122
70-74	58	\$1,986,398	3	\$35,504	18	\$453,983	79	\$2,475,885
75-79	45	\$1,574,740			17	\$510,780	62	\$2,085,520
80-84	19	\$860,878			8	\$226,378	27	\$1,087,256
85-89	5	\$57,416					5	\$57,416
90 & Over					1	\$243	1	\$243
Totals	908	\$31,323,376	37	\$611,513	122	\$2,716,362	1,067	\$34,651,251



**Total Active Members as of June 30, 2006  
Tabulated by Attained Ages and Years of Service**

Attained Age	Years of Service to Valuation Date								Totals
	0-4	5-9	10-14	15-19	20-24	25-26	27-29	30+	
Under 20	5								5
Avg. Pay	\$24,463								\$24,463
20-24	34								34
Avg. Pay	\$28,593								\$28,593
25-29	138	36							174
Avg. Pay	\$31,844	\$40,875							\$33,712
30-34	73	106	41						220
Avg. Pay	\$34,299	\$42,156	\$49,542						\$40,926
35-39	45	51	115	46	3				260
Avg. Pay	\$33,813	\$41,960	\$50,922	\$55,553	\$58,564				\$47,110
40-44	15	14	28	88	29	1			175
Avg. Pay	\$36,233	\$39,472	\$49,738	\$57,535	\$62,679	\$54,384			\$53,851
45-49	4	3	3	27	52	9	8		106
Avg. Pay	\$35,187	\$40,028	\$48,124	\$58,127	\$64,410	\$68,021	\$70,056		\$61,288
50-54	1	1		2	19	5	8	4	40
Avg. Pay	\$30,324	\$46,632		\$61,572	\$62,172	\$70,313	\$71,690	\$71,580	\$64,819
55-59						3	1	4	8
Avg. Pay						\$72,508	\$61,428	\$85,809	\$77,774
60-64			1					3	4
Avg. Pay			\$56,628					\$80,256	\$74,349
65-69				1					1
Avg. Pay				\$56,016					\$56,016
70 & over		1							1
Avg. Pay		\$42,324							\$42,324
<b>Totals</b>	<b>315</b>	<b>212</b>	<b>188</b>	<b>164</b>	<b>103</b>	<b>18</b>	<b>17</b>	<b>11</b>	<b>1,028</b>
<b>Avg. Pay</b>	<b>\$32,473</b>	<b>\$41,706</b>	<b>\$50,430</b>	<b>\$57,117</b>	<b>\$63,340</b>	<b>\$68,648</b>	<b>\$70,317</b>	<b>\$79,120</b>	<b>\$46,443</b>

**SCHEDULE F**

**AMORTIZATION BASES**

**Retirement Bases**

Date Established	Initial Years	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
06/30/1990	30	\$8,982,071	\$1,035,366	14	\$11,306,313
06/30/1991	30	9,963,656	1,099,243	15	12,629,636
06/30/1992	30	(24,502,117)	(2,587,078)	16	(31,138,625)
06/30/1993	30	(3,706,436)	(374,511)	17	(4,704,412)
06/30/1994	30	10,380,135	1,003,656	18	13,113,774
06/30/1995	30	22,729,292	2,102,865	19	28,495,170
06/30/1996	30	(17,793,855)	(1,575,109)	20	(22,076,986)
06/30/1997	30	(31,021,470)	(2,625,004)	21	(37,966,264)
06/30/1998	30	12,716,788	1,028,604	22	15,318,837
06/30/1999	30	(31,317,924)	(2,421,273)	23	(37,058,602)
06/30/2000	30	(77,707,399)	(5,742,083)	24	(90,160,612)
06/30/2001	30	26,106,163	1,843,670	25	29,650,641
06/30/2002	30	44,465,495	3,001,052	26	49,361,477
06/30/2003	30	61,350,968	3,956,936	27	66,473,730
06/30/2004	30	50,162,333	3,091,573	28	52,979,295
06/30/2005	30	50,784,900	2,990,736	29	52,220,497
06/30/2006	30	64,022,232	<u>3,602,412</u>	30	<u>64,022,232</u>
Total			\$9,431,054		\$172,466,101

\* Level percent of salary

**Insurance Bases**

Date Established	Initial Years	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
06/30/2006	30	\$477,000,598	<u>\$18,391,693</u>	30	<u>\$477,000,598</u>
Total		\$477,000,598	\$18,391,693		\$477,000,598

\* Level percent of salary