October 30, 2001

#### PERSONAL AND CONFIDENTIAL

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

Members of the Board:

The forty-fifth annual actuarial valuation of the Kentucky Employees Retirement System, the forty-second annual actuarial valuation of the County Employees Retirement System, and the forty-third annual actuarial valuation of the State Police Retirement System have been completed and the reports prepared. The valuations were made on the basis of data provided by the Retirement System as of June 30, 2001.

On the basis of the assumptions as stated in each report and the data furnished us by the Administration of the Retirement Systems, it is certified that the valuations have been made by the use of generally accepted actuarial principles and that, if the recommendations of the reports are followed, adequate provision will be made for the funding of future benefits.

The three Retirement Systems are actuarially sound based on the continuation of current funding policies adopted by the Board. Adequate provision is being made for the funding of the Actuarial Accrued 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, as appropriate funding rates have been established by the Board for this purpose.

Respectfully Submitted, WILLIAM M. MERCER, INCORPORATED

By Stephen A. Gagel, F.S.A.

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### ANNUAL ACTUARIAL VALUATION

JUNE 30, 2001

KENTUCKY EMPLOYEES RETIREMENT SYSTEM COUNTY EMPLOYEES RETIREMENT SYSTEM STATE POLICE RETIREMENT SYSTEM FRANKFORT, KENTUCKY

Prepared by:

William M. Mercer, Incorporated 462 South Fourth Avenue, Suite 1500 Louisville, Kentucky 40202-3431

October, 2001

# KENTUCKY EMPLOYEES RETIREMENT SYSTEM

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# STATE POLICE RETIREMENT SYSTEM

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## FORTY-FIFTH ANNUAL ACTUARIAL VALUATION

### JUNE 30, 2001

### KENTUCKY EMPLOYEES RETIREMENT SYSTEM

FRANKFORT, KENTUCKY

### SECTION I

### **INTRODUCTION**

The results of the forty-fifth annual actuarial valuation of the Kentucky Employees Retirement System are presented in this report. The actuarial valuation was made on the basis of the data provided by the System as of June 30, 2001.

The purpose of the actuarial valuation is to determine the actuarial condition of the Retirement System and the rate of employer contributions for the ensuing fiscal year required to support the System.

The plan provisions utilized in this valuation are described in the Summary of Principal Plan Provisions in Section VI. The basis of funding, as defined in KRS 61.565, provides that the actuarial valuation method is uniform for all benefits provided by the System. The Entry Age Normal Actuarial cost method has been used for all benefits. KRS 61.565 provides that each employer participating in the System shall contribute an amount equal to the Normal Cost contribution rate, and an amount sufficient to amortize the Unfunded Actuarial Accrued Liability over 30 years using the level-percentage-of-payroll method. This is the standard used herein to determine whether the funding of the System is adequate.

The actuarial valuation results are based upon the employee census and asset data supplied by the office of the System, and upon the actuarial assumptions as stated in Section II.

### **SECTION II**

#### ACTUARIAL CONSIDERATIONS

#### **Description of Actuarial Methods**

The actuarial valuation is the means by which the contingent liabilities and contribution rates of a retirement system are evaluated and determined. It provides a guide to the System to the financing required during years of active service to accumulate the funds needed to provide member's benefits. It also makes it possible to estimate beforehand the cost of proposed changes in the System so that action can be taken in the light of the cost consequences.

The methods of valuation are prescribed by KRS 61.565. The Entry Age Normal Cost Method was used to determine costs of all benefits with the exception of the retiree medical insurance benefit. Under this method the employer's contribution to the retirement system consists of Normal Cost, a payment to fund the Unfunded Actuarial Accrued Liability, medical insurance, and administrative expenses. The Normal Cost represents the contribution (as a level percent of payroll) that completely funds benefits at retirement if made from a person's entry into employment until his retirement. The Actuarial Accrued Liability represents the sum of money and investments that would be held in the fund if the retirement system had been in effect since the date each member was first employed. The payment to fund the Unfunded Actuarial Accrued Liability is the amount necessary to amortize this liability over 30 years using the "levelpercentage-of-payroll" method. Under the "level-percentage-of-payroll" method, the amortization payment is an amount which remains constant as a percentage of payroll over the 30 years. The initial 30 year period began with the 1990 valuation. In each subsequent valuation, any change in Unfunded Actuarial Accrued Liability is identified and established as a separate amortization base with a 30 year funding period beginning with that valuation. The change in Unfunded Actuarial Accrued Liability established as a separate base in each valuation will include changes attributable to experience gains and/or losses over the prior year, as well as changes attributable to benefit improvements and revisions in actuarial assumptions and funding methods.

The medical insurance contribution rate was originally determined in the 1987 valuation as the level percent of payroll necessary to fund projected medical insurance premiums over the next sixteen years (taking into account the level of reserves in the Insurance Fund). Beginning in 1988, this rate was increased each year by a percentage amount needed to reach the Entry Age Normal funding rate within a 20 year period measured from 1987. This was continued through the 1992 valuation. In the 1992 valuation, an acceleration of the scheduled increases in the medical insurance contribution rate was recommended where possible. This acceleration in these rates was coupled with a deferral of future increases until the time of the next experience study, unless there was a deterioration in the funded position of the medical premium benefit in which case the rate levels were to be reviewed to redetermine an appropriate current funding level, or unless recommended contributions are not made in the prior year, in which case the shortfall would be spread over future years through an increase in the contribution rate. This continued through the 1995 valuation. Effective with the 1996 valuation, a new medical insurance funding policy was adopted by the Board. Under this revised policy, the medical insurance contribution rate for the 1996 valuation was set equal to the 1995 rate plus any reduction in the retirement and administrative expense rates between the 1995 and 1996 valuations (but in no event to be less

than the 1995 medical insurance contribution rate). Beginning with the 1997 valuation, the medical insurance contribution rate is to be increased at the start of each biennium (coincides with valuations in odd numbered years) by the percentage amount necessary to raise this medical insurance rate to the full Entry Age Normal Cost Method contribution rate by the year 2016. There will be no change in the even numbered years unless there are actuarial gains relative to the retirement funding which will then be used to increase the medical insurance funding rate for the next year only.

The Board reviewed this funding policy in conjunction with the experience study prepared following the 2000 valuation. The current policy relative to the establishment of the permanent portion of the insurance fund rate was not changed. But in years where there may be a temporary reduction in the retirement fund contribution rate, the Board may use the amount of that reduction as an additional temporary contribution to the insurance fund.

In computing the full Entry Age Normal Cost Method contribution rate, liabilities are to be developed based on actuarial assumptions in use in the current valuation (as adjusted from time to time due to experience studies) and actuarial value of assets based on the same method as employed for the retirement benefit valuation. The actuarial value of assets for the medical contribution rate valuation utilized book value prior to the 1996 valuation, and a 5-year market to book value average from 1996 through the 2000 valuation. The current asset valuation method was employed effective with the 2001 valuation.

The amount of the administrative expense was based on the budgeted amount for the twelve months following the date of the valuation, as allocated between Hazardous position and Non-Hazardous position employees.

### **Actuarial Assumptions**

Since the actuarial valuation involves estimates of benefits payable in the future, it is necessary that assumptions be made as to the interest earnings, rates of mortality, withdrawal, retirement, and disability, and the rate at which salaries will increase.

In addition, an assumption must be made relative to increases in medical insurance rates in order to value the liability for the medical insurance benefit.

It is desirable that the actuarial assumptions be reviewed periodically to see whether past experience and probable future experience justifies the continued use of these actuarial assumptions. Such a study was performed subsequent to the 2000 actuarial valuation and new actuarial assumptions were adopted by the Board for use in the 2001 and subsequent actuarial valuations, until such time as another experience study is performed. This valuation reflects assumptions based on the 2000 experience study. Actuarial assumptions used for hazardous position employees are similar to actuarial assumptions adopted for the State Police Retirement System (with the exception of the rate of retirement). The actuarial assumptions as used in this valuation are described later in this section.

### **Actuarial Value of Assets**

The actuarial value of assets is determined in the following manner for both the Retirement Fund and Insurance Fund:

- 1. Develop expected assets by projecting valuation assets from the prior valuation using the assumed valuation interest rate from the prior valuation and actual cash flows for the 12 months ending on the current valuation date.
- 2. The current year investment gain/loss shall be determined as the difference between actual market value as of the current valuation date and expected assets as computed in (1), further adjusted for any amount of investment gain/loss from prior years not yet recognized as of the current valuation date.
- 3. The amount of investment gain/loss for the current year shall be reflected equally over the current year and the following 4 years.
- 4. Valuation assets will be equal to expected assets from (1) plus/minus the amount of investment gain/loss from the current and prior 4 years to be recognized in the current year.
- 5. The starting point for this method shall be the actuarial value of assets as computed in the 2000 valuation under the prior asset valuation method then in effect. Only investment gains/losses occurring after June 30, 2000 shall be recognized and amortized under this method.

The following table shows the derivation of valuation assets for the Retirement Fund and the Insurance Fund as of the current valuation:

	RETIREMEN	NT FUND	INSURANC	E FUND
	Non		Non Hazardous	
	Hazardous	Hazardous		Hazardous
June 30, 2000 Valuation Assets	6,806,675,460	336,213,464	399,560,252	102,212,237
Cash Flows	.,,,	,,		
> Employer Contributions	21,911,066	10,377,708	66,874,871	13,226,298
> Member Contributions	104,125,142	10,545,410	00,071,071	10,220,220
> Retirement Benefits	291,704,431	7,995,608		
> Net Refunds	4,529,059	1,221,586		
> Insurance Premiums	.,,,,	-,,	37,286,345	1,982,382
> Administrative Expenses	3,826,370	302,411	308,411	24,658
> Investment Manager Fees	2,148,031	109,545	35,681	8,588
Valuation Interest Assumption	8.25%	8.25%	8.25%	8.25%
Expected Return on Valuation Assets				
Reflecting Actual Cash Flows *				
	554,283,644	28,203,487	34,170,054	8,894,950
Expected Valuation Assets	7,184,787,421	375,710,919	462,974,740	122,317,857
Actual Market Value of Assets	5,484,563,749	305,543,701	396,254,063	107,592,284
Investment Gain/(Loss)	(1,700,223,672)	(70,167,218)	(66,720,677)	(14,725,573)
Amortization Amounts From Prior	(1,700,223,072)	(70,107,210)	(00,720,077)	(14,725,575)
Valuations				
> Valuation Year - 1				
>> Initial Amount	N/A	N/A	N/A	N/A
>> Current Valuation Amount	N/A	N/A	N/A	N/A
>> Amortization	N/A	N/A	N/A	N/A
> Valuation Year - 2	1 1/ 7 1	1 1/ / 1	1.0/11	1 1/ 2 1
>> Initial Amount	N/A	N/A	N/A	N/A
>> Current Valuation Amount	N/A	N/A	N/A	N/A
>> Amortization	N/A	N/A	N/A	N/A
> Valuation Year - 3	1.011	1 1/11	1.011	1.011
>> Initial Amount	N/A	N/A	N/A	N/A
>> Current Valuation Amount	N/A	N/A	N/A	N/A
>> Amortization	N/A	N/A	N/A	N/A
> Valuation Year - 4		1.011	1.011	1 (1 1
>> Initial Amount	N/A	N/A	N/A	N/A
>> Current Valuation Amount	N/A	N/A	N/A	N/A
>> Amortization	N/A	N/A	N/A	N/A
Unamortized Amount of Gain/(Loss)	1 () 1 1	1.011		1011
From Prior Valuations	0	0	0	0
Investment Gain/(Loss) to be	Ű		Ű	
Amortized from Current Valuation				
Date				
> Amount	(1,700,223,672)	(70,167,218)	(66,720,677)	(14,725,573)
> Amortization	(340,044,734)	(14,033,444)	(13,344,135)	(2,945,115)
June 30, 2001 Valuation Assets	(0.0,011,701)	(1.,000,111)	(10,011,100)	(_,, 10,110)
> Expected Assets	7,184,787,421	375,710,919	462,974,740	122,317,857
> Amortization Amounts	(340,044,734)	(14,033,444)	(13,344,135)	(2,945,115)
> Amortization Amounts				

\* Cash flows are assumed equally spread throughout the year

### A. <u>STATEMENT OF ACTUARIAL ASSUMPTIONS</u>

(1)	Mortality:
-----	------------

	(a) Active & retired lives	<ul> <li>1983 Group Annuity Mortality Table, plus a pre-retirement duty death rate of .0005 per year for hazardous duty employees.</li> </ul>
	(b) Disabled lives	<ul> <li>Social Security Administration Disability Mortality Rates - Actuarial Study No. 75 (current rates used by PBGC for disabled lives receiving Social Security).</li> </ul>
(2)	Disablement	- Graduated rates based on 2000 experience study (no change from 1995 experience study).
(3)	Termination of employment #	- Graduated select (non-hazardous and hazardous) and ultimate rates based on 2000 experience study.
(4)	Retirement #	- <u>Non-Hazardous</u> :
		Age Retirement Rate
		55-57 .04
		58-59 .05
		60-61 .06
		62 .25
		63-64 .10
		65 .50
		66-67 .20
		68 .25
		69 .40
		70 & Over 1.00
		At age 55.64 in lieu of the age related

At age 55-64 in lieu of the age related rate, 25% are assumed to retire as soon as eligible for unreduced benefits.

<u>Hazardous</u>: Assumed that 50% will retire as soon as eligible for unreduced benefits and balance will continue to age 60. (5) Marital status

	(a)	Percentage married	-	100%.
	(b)	Age difference	-	Males are assumed to be 3 years older than their spouses.
(6)	Deper	ndent children	-	For hazardous position employees under duty related death benefits, it is assumed that the employee is survived by 2 dependent children, each age 6.
(7)	Invest	tment return	-	8.25% per year, net of investment related expenses, compounded annually.
(8)	Comp	pensation progression #	-	1st year:12.00%2nd year:10.00%3rd year:8.00%Thereafter:6.50%, compounded annually.
(9)	Under	rlying Inflation Rate	-	3.5% per year; reflected in investment return and compensation progression assumptions.
(10)	Retire	ee Medical Insurance #	-	It was assumed that future retirees would select medical coverage in the same proportion that current retirees have selected coverage. Monthly contribution rates were assumed to be as follows:
				Rate in EffectPlan Typeon Valuation DateSingle

	Kale III Effect
<u>Plan Type</u>	on Valuation Date
Single	
- Region 1	\$252.46
- Region 2	293.46
- Region 3	273.52
- All Others	234.00
Family	577.00
Parent Plus	350.00
Couple	525.00
Medicare*	
- Low Option	96.41
- High Option	229.03

Region 1: Boyd, Carter, Elliott, Greenup

Region 2: Christian, Daviess, Hancock, Henderson, Hopkins, McLean, Muhlenberg, Ohio, Todd, Trigg, Union, Webster

Region 3: Harlan, Lewis, Mason, Perry, Roberston

	Medicare Rate		<b>Contracts</b>	in Force
	Low	High	Low	High
Carrier	<b>Option</b>	<b>Option</b>	<b>Option</b>	<b>Option</b>
Anthem BC/BS	101.26	231.35	2,839	17,314
Bankers Life	91.78	216.94	272	156
Option 2000	83.05	216.51	504	1,767
Humana	85.00	247.00	490	1,729
Humana				
Gold Plus	85.00	136.00	17	507

\*Weighted average of current rates available from different carriers; weighting based on number of contracts in force.

In determining the target Entry Age Funding rate in valuations beginning with 1996, it was assumed that medical contribution rates would grow at the following annual levels:

Years	Medical Increase
2001 2002	100/
2001 - 2002	12%
2003 - 2005	10%
2006 - 2010	9%
2011 - 2015	8%
2016 - 2020	7.5%
Thereafter	7%

The assumed rate of growth in number of retirees receiving medical insurance was based on assumed retirement and mortality patterns used throughout the valuation.

- For those active members with incomplete data, the following assumptions were made:
  - . If reported salary was zero or blank, then monthly salary was assumed to be \$887.58
  - . If reported age was blank, then assume current age equal to age 18 plus years of service reported

(11) Missing data

#### (12) Members with Multiple Service Records

- For active members with service in more than one system, the liability has been valued as follows:
  - . Service under all systems is aggregated for purposes of determining benefit eligibility.
  - . Future service is projected only under the system in which the member is currently active.
  - . The actual benefit under each system is determined based only on service (past and projected future service, if applicable) under that system.
  - . The liability is determined under each system based on the actuarial assumptions used for the system in which the member is currently active. This liability is then included in the valuation of the system in which the service has been earned (or is projected to be earned).

For inactive members with service in more than one system, the benefit attributable to the service under each system is determined, and the liability for that benefit is then included in the valuation of the system in which the service was earned.

# Changes in assumptions from those used in 2000 valuation.

### B. <u>SAMPLE RATES FOR NON-HAZARDOUS POSITION EMPLOYEES\*</u>

	Active Mortality		Disabled Mortality	
Age	<u>Males</u>	Females	Males	Females
25	0.05%	0.03%	4.83%	2.63%
30	0.06%	0.03%	3.62%	2.37%
40	0.12%	0.07%	2.82%	2.09%
50	0.40%	0.16%	3.83%	2.57%
55	0.61%	0.25%	4.82%	2.95%
60	0.92%	0.42%	6.03%	3.31%

(1) Annual Rates of Mortality:

#### (2) Annual Rates of Decrement:

Age	Disablement	Ultimate Termination
25	0.033%	2.40%
30	0.039%	2.40%
40	0.105%	2.00%
50	0.423%	1.60%
55	0.794%	1.20%
60	1.395%	0.20%

#### (3) Select Rates of Termination:

Years of Service	Select Term	ination
	Non-Hazardous	<u>Hazardous</u>
1	35.0%	30.0%
2	10.0%	8.0%
3	7.0%	4.0%
4	5.0%	4.0%
5	4.0%	4.0%

#### (4) Compensation Progression (after 1st 3 Years):

Age	Rate of <u>Annual Increase</u>	Compensation at Normal Retirement as Percentage Of Current Annual Compensation
25	6.50%	1,241.6%
30	6.50%	906.2%
40	6.50%	482.8%
50	6.50%	257.2%
55	6.50%	187.7%
60	6.50%	137.0%

\*Sample rates for hazardous position employees (other than select termination) are included in the State Police Retirement System valuation.

### **SECTION III**

### **RESULTS OF THE 2001 ACTUARIAL VALUATION**

### **Determination of Contribution Rate**

The rate of contribution by the State required to provide 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, the employer share of the Normal Cost, medical insurance and the expenses of administration, is shown in Table I. The required contribution is expressed both in dollars and as a percentage of the estimated annual State payroll as of June 30, 2001.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 2001 are described in Section II. These costs are classified by type of benefit. The Normal Cost contribution rate of the State is determined by reducing the total Normal Cost by the expected employee contributions. A breakdown of actuarial liabilities and costs between Hazardous and Non-Hazardous position employees appears in Table II for the Retirement Fund and Table IV for the Insurance Fund. A breakdown of the total Unfunded Actuarial Accrued Liability into the amortization amounts by year is shown in Table III for the Retirement Fund and Table V for the Insurance Fund. Table VI has been included to show an estimate of projected payouts from the funds over the next 10 years based on current plan provisions and actuarial assumptions.

#### **Actuarial Balance Sheet**

Table VII is the actuarial balance sheet of the Kentucky Employees Retirement System as of June 30, 2001 for the Retirement Fund. Table VIII is the actuarial balance sheet for the Insurance Fund. The "actuarial balance sheet" displays the fundamental relationship between actual assets, future contributions, and future benefits. The asset side of the balance sheet is comprised of actual fund assets plus the actuarial present value of future contributions on behalf of current members. The actuarial present values of all projected benefit payments to present active and inactive members make up the balance sheet liabilities.

### **Accountant's Information**

Table IX contains additional information needed to comply with GASB disclosure requirements for the Retirement Fund.

Table X contains information needed to comply under GASB Statement No. 12 relative to the Insurance Fund.

	TABLE I YEES RETIREMENT SYSTEM	
	AND INSURANCE FUND	
DETERMINATION OF CON	ITRIBUTION RATE - JUNE 30, 20	01
UNFUNDED ACTUARIAL ACC	RUED LIABILITY - RETIREMENT	FUND
	-	Percent *
Total Actuarial Accrued Liability	\$ 5,729,229,055	347.49%
Assets at Actuarial Value	7,206,420,161	437.09%
Unfunded Actuarial Accrued Liability	\$ (1,477,191,106)	(89.60%)
Contribution - Payment on Unfunded		
Actuarial Accrued Liability	\$ (75,262,003)	(4.56%)
NORMAL COS	T - RETIREMENT FUND	
Retirement Benefits	\$ 132,622,005	8.04%
Disability Benefits	16,000,088	0.97%
W ithdraw al Benefits (Vested and		
Refund of Contributions)	11,052,931	0.67%
Survivor Benefits	8,420,856	0.51%
Total Normal Cost	\$ 168,095,880	10.19%
Less: Employee Contributions	85,224,762	5.17%
Normal Cost - State	\$ 82,871,118	5.02%
TOTAL ANNUAL EMPLOYER COS	T - RETIREMENT AND INSURAN	CE FUND
Non-Hazardous Duty Cost		
Normal Cost	\$ 71,104,685	4.66% **
Payment on Unfunded Actuarial		
Accrued Liability	(71,246,407)	(4.67%) **
Administrative Expense	5,364,981	0.35% **
Subtotal - Retirement Fund		
(Not Less Than Zero)	\$ 5,223,259	0.34% **
Group Hospital and Medical		
Insurance Premiums	84,642,494	5.55% **
Total Annual Cost	\$ 89,865,753	5.89% **
Hazardous Duty Cost		
Normal Cost	\$ 11,766,433	9.52% ***
Payment on Unfunded Actuarial		
Accrued Liability	(4,015,596)	(3.25%) ***
Administrative Expense	374,301	0.30% ***
Subtotal - Retirement Fund		
(Not Less Than Zero)	\$ 8,125,138	6.57% ***
Group Hospital and Medical		
Insurance Premiums	15,171,537	12.27% ***
Total Annual Cost	\$ 23,296,675	18.84% ***
Based on estimated annual salaries		
* Total	\$ 1,648,737,395	
** Non-Hazardous Position Employees	\$ 1,525,089,988	
*** Hazardous Position Employees	\$ 123,647,407	

KENTUCKY		TABLE II LOYEES RETIREM TIREMENT FUND		T SYSTEM		
CLASSIFICATION OF ACT	UAR	IAL LIABILITIES A	ND	COSTS - JUNE 30	, 20	01
	N	lon-Hazardous Position Employees		Hazardous Position Employees		Total
ACT	UARI	AL ACCRUED LIA	BILI			
Active Members						
Retirement Benefits	\$	2,382,224,431	\$	180,582,151	\$	2,562,806,582
Disability Benefits		157,611,834		10,217,619		167,829,453
W ithdraw al Benefits (Vested and						
Refund of Contributions)		85,133,457		904,066		86,037,523
Survivor Benefits		149,310,476		7,117,656		156,428,132
Total - Actives	\$	2,774,280,198	\$	198,821,492	\$	2,973,101,690
Inactive Members						
Retired Members and						
Beneficiaries	\$	2,621,725,952	\$	83,538,933	\$	2,705,264,885
Vested Retirement		34,959,866		2,055,232		37,015,098
Vested Membership		13,069,278		778,104		13,847,382
Total - Inactives	\$	2,669,755,096	\$	86,372,269	\$	2,756,127,365
Total Actuarial Accrued Liability	\$	5,444,035,294	\$	285,193,761	\$	5,729,229,055
UNFUNDE	DAC	TUARIAL ACCRU	EDL	IABILITY		
Total Actuarial Accrued Liability	\$	5,444,035,294	\$	285,193,761	\$	5,729,229,055
Less Actuarial Value of Assets		6,844,742,687		361,677,475		7,206,420,161
Unfunded Actuarial Accrued Liability	\$	(1,400,707,393)	\$	(76,483,714)	\$	(1,477,191,106)
	Ν	NORMAL COST				
Retirement Benefits	\$	115,043,802	\$	17,578,203	\$	132,622,005
Disability Benefits		14,069,688		1,930,400		16,000,088
W ithdraw al Benefits (Vested and						
Refund of Contributions)		10,283,646		769,285		11,052,931
Survivor Benefits		7,497,420		923,436		8,420,856
Total Normal Cost	\$	146,894,556	\$	21,201,324	\$	168,095,880
Less Employee Contributions	1	75,789,871		9,434,891		85,224,762
Total Normal Cost - State	\$	71,104,685	\$	11,766,433	\$	82,871,118

				TABLE III				
		KENTU	скуі	EMPLOYEES RET	IREMENT SYSTEM			
	UNFL	NDED ACTUARIAL	ACCF	RUED LIABILITY -	- RETIREMENT FUND - JUNE 30, 2001			
	Amount of	Base on						
Date	Date	Current		Amortization				
Established	Established	Valuation Date		Payment	Source of Base			
Non-Hazardous Position Employees								
6/30/1990	\$ 256,534,456	\$ 320,210,968	\$	21,867,527	Cumulative unfunded actuarial accrued liability set up as initial			
					base under revised funding policy (30 year level percent of payroll			
					method)			
6/30/1991	103,692,389	128,098,504	\$	8,425,551	Experience gains/losses for 7/1/1990 to 6/30/1991			
6/30/1992	(212,448,599)	(259,120,054)	\$	(16,455,160)	Experience gains/losses for 7/1/1991 to 6/30/1992; Retiree COLA's;			
					Asset valuation method change			
6/30/1993	(57,917,315)	(69,590,195)	\$	(4,276,039)	Experience gains/losses for 7/1/1992 to 6/30/1993; State			
					contribution shortfall			
6/30/1994	59,519,052	70,310,083	\$	4,188,653	Experience gains/losses for 7/1/1993 to 6/30/1994; Retiree COLA's;			
					State contribution shortfall			
6/30/1995	65,659,241	76,117,631	\$	4,404,471	Experience gains/losses for 7/1/1994 to 6/30/1995			
6/30/1996	(188,573,585)	(214,176,369)	\$	(12,057,487)	Experience gains/losses for 7/1/1995 to 6/30/1996; Revised actuaria			
					assumptions; Correction of pension allocation for members in pay			
					status with both non-hazardous and hazardous service in KERS			
6/30/1997	(277,888,742)	(308,486,216)	\$	(16,922,320)	Experience gains/losses for 7/1/1996 to 6/30/1997; 2.8% retiree			
					COLA effective 8/1/1996			
6/30/1998	(326,522,755)	(353,786,834)	\$	(18,936,794)	Experience gains/losses for 7/1/1997 to 6/30/1998; Increase in death			
					benefit from \$2,500 to \$5,000; 3.0% retiree COLA effective 7/1/1997			
6/30/1999	(362,615,121)	(382,978,122)	\$	(20,028,607)	Experience gains/losses for 7/1/1998 to 6/30/1999; 2.3% retiree			
					COLA effective 7/1/1998; Benefit multiplier change effective			
6/30/2000	(964,739,576)	(992,010,673)	\$	(50,749,282)	Experience gains/losses for 7/1/1999 to 6/30/2000; 1.6% retiree			
					COLA effective 7/1/1999			
6/30/2001	584,703,884	584,703,884	\$	29,293,080	Experience gains/losses for 7/1/2000 to 6/30/2001; 2.2% retiree			
					COLA effective 7/1/2000; 3-year average earnings window			
Total	\$ (1,320,596,671)	\$ (1,400,707,393)	\$	(71,246,407)				

			TABLE III (Cont	tinued)				
		KENTU	CKY EMPLOYEES RET	IREMENT SYSTEM				
UNFUNDED ACTUARIAL ACCRUED LIABILITY - RETIREMENT FUND - JUNE 30, 2001								
_								
Date	Date	Current						
Established	Established							
Hazardous Position Employees								
6/30/1990	\$ (366,782)	\$ (457,824)	\$ (31,265)	Cumulative unfunded actuarial accrued liability set up as initial base under revised funding policy (30 year level percent of payroll method)				
6/30/1991	8,515,857	10,520,238	691,958	4 5				
6/30/1992	(2,222,347)	(2,710,559)	(172,131)	Experience gains/losses for 7/1/1991 to 6/30/1992; Retiree COLA's; Asset valuation method change				
6/30/1993	1,873,766	2,251,411	138,340	Experience gains/losses for 7/1/1992 to 6/30/1993; State contribution shortfall				
6/30/1994	2,736,468	3,232,600	192,579	Experience gains/losses for 7/1/1993 to 6/30/1994; Retiree COLA's; State contribution shortfall				
6/30/1995	4,677,834	5,422,931	313,792	Experience gains/losses for 7/1/1994 to 6/30/1995				
6/30/1996	(33,735,166)	(38,315,417)	(2,157,043)	Experience gains/losses for 7/1/1995 to 6/30/1996; Revised actuarial assumptions; Correction of pension allocation for members in pay status with both non- hazardous and hazardous service in KERS				
6/30/1997	(7,971,975)	(8,849,744)	(485,462)	Experience gains/losses for 7/1/1996 to 6/30/1997; 2.8% retiree COLA effective 8/1/1996				
6/30/1998	(13,896,455)	(15,056,785)	(805,929)	Revised average salary definition from 5 years to 3 years; Increase in death benefit from \$2,500 to \$5,000; 3.0% retiree COLA effective 7/1/1997				
6/30/1999	(13,902,335)	(14,683,034)	(767,879)	Experience gains/losses for 7/1/1998 to 6/30/1999; 2.3% retiree COLA effective 7/1/1998				
6/30/2000	(35,735,060)	(36,745,212)	(1,879,812)	Experience gains/losses for 7/1/1999 to 6/30/2000; 1.6% retiree COLA effective 7/1/1999				
6/30/2001	18,907,681	18,907,681	947,256	Experience gains/losses for 7/1/2000 to 6/30/2001; 2.2% retiree COLA effective 7/1/2000				
Total	\$ (71,118,514)	\$ (76,483,714)	\$ (4,015,596)					

		TABLE IV				
KENTUCKY	ЕМРІ	OYEES RETIREM	EN.	Т SYSTEM		
		SURANCE FUND				
DETERMINATION OF EN			ION	RATE - JUNE 30,	200	01
		on-Hazardous		Hazardous		
		Position	Position			
	Employees			Employees		Total
ACT	JARI	AL ACCRUED LIA	BIL	ΙТΥ		
Active Members	\$	985,035,272	\$	137,293,626	\$	1,122,328,898
Inactive Members						
Retired Members	\$	730,675,961	\$	60,211,381	\$	790,887,342
Beneficiaries		1,126,182		13,157,907		14,284,089
Vested Retirement		52,745,683		3,787,908		56,533,591
Vested Membership		0		0		0
Total - Inactives	\$	784,547,826	\$	77,157,196	\$	861,705,022
Total Actuarial Accrued Liability	\$	1,769,583,098	\$	214,450,822	\$	1,984,033,920
UNFUNDE	DAC	TUARIAL ACCRUI	EDL	IABILITY		
Total Actuarial Accrued Liability	\$	1,769,583,098	\$	214,450,822	\$	1,984,033,920
Less Actuarial Value of Assets		449,630,605		119,372,742		569,003,346
Unfunded Actuarial Accrued Liability	\$	1,319,952,493	\$	95,078,080	\$	1,415,030,574
		IORMAL COST				
Gross Normal Cost	\$	81,313,764	\$	18,122,736	\$	99,436,500
Less Employee Contributions	Ť	0	Ŷ	0	Ψ	0
Net Normal Cost - State	\$	81,313,764	\$	18,122,736	\$	99,436,500
Estimated Annual Salaries	\$	1,525,089,988	\$	123,647,407	\$	1,648,737,395
ΤΟΤΑ	I A N	NUAL EMPLOYEI	RCO	OST		
Contribution Amount	1					
Normal Cost	\$	81,313,764	\$	18,122,736	\$	99,436,500
Payment on Unfunded Actuarial						
Accrued Liability		72,885,260		5,255,159		78,140,419
Total Annual Cost	\$	154,199,024	\$	23,377,895	\$	177,576,919
As Percent of Payroll						
Normal Cost		5.33%		14.66%		6.03%
Payment on Unfunded Actuarial						
Accrued Liability		4.78%		4.25%		4.74%
Total Annual Cost		10.11%		18.91%		10.77%
INS	IRAN	CE FUND SHORT	FA			
Full Entry Age Funding Level	T	10.11%		18.91%		10.77%
Current Funding Allocation *		4.67%		11.14%		0.00%
Additional to Pick Up By 2016		5.44%		7.77%		10.77%
Expected Increase in Insurance	-					
Fund Rate in 2002 Valuation	1	0.00%		0.00%		N /A

			TABLE V	
			CKY EMPLOYEES RET	
			RUED LIABILITY -	INSURANCE FUND - JUNE 30, 2001
Data	Amount of		<b>3</b>	
Date Established	Date	Current Valuation Date	Amortization	Source of Base
Escapitshed	Established		Payment Hazardous Positi	
6/30/1996	\$ 988,745,810			
6/30/1997	(31,222,593)	(34,660,416)	(1,901,332)	Impact of actual insurance fund contributions vs. full entry age amounts
6/30/1998	19,914,214		1,154,931	Experience gains/losses for 7/1/1997 to 6/30/1998; Impact of actual insurance fund contributions vs. full entry age amounts
6/30/1999	(69,145,663)	(73,028,604)	(3,819,177)	Experience gains/losses for 7/1/1998 to 6/30/1999; Impact of actual insurance fund contributions vs. full entry age amounts
6/30/2000	44,198,913	45,448,321	2,325,045	Impact of actual insurance fund contributions vs. full entry age amounts
6/30/2001	237,627,565	237,627,565	11,904,903	Impact of actual insurance fund contributions vs. full entry age amounts
Total	\$1,190,118,246	\$1,319,952,493	\$ 72,885,260	
			zardous Position	
6/30/1996	\$ 61,002,123	\$ 69,284,431	\$3,900,506	Cumulative unfunded actuarial accrued liability set up as initial base under revised funding policy (30 year level percent of payroll method)
6/30/1997	15,100,456	16,763,122	919,558	Experience gains/losses for 7/1/1996 to 6/30/1997; Impact of actual insurance fund contributions vs. full entry age amounts
6/30/1998	2,832,306	3,068,799	164,261	Experience gains/losses for 7/1/1997 to 6/30/1998; Impact of actual insurance fund contributions vs. full entry age amounts
6/30/1999	(10,377,564)	(10,960,325)	(573,192)	Experience gains/losses for 7/1/1998 to 6/30/1999; Impact of actual insurance fund contributions vs. full entry age amounts
6/30/2000	(3,445,265)	(3,542,656)	(181,235)	Experience gains/losses for 7/1/1999 to 6/30/2000; Impact of actual insurance fund contributions vs. full entry age amounts
6/30/2001	20,464,709	20,464,709	1,025,261	Experience gains/losses for 7/1/2000 to 6/30/2001; Impact of actual insurance fund contributions vs. full entry age amounts
Total	\$ 85,576,765	\$ 95,078,080	\$ 5,255,159	

TABLE VI KENTUCKY EMPLOYEES RETIREMENT SYSTEM BENEFIT PAYMENT PROJECTIONS					
RETIREMENT FUND PAYMENT PROJECTIONS					
Non-Hazardous         Hazardous           Position         Position					
Plan Year	Employees	Employees	Total		
7/1/2001 to 6/30/2002	314,660,000	11,226,000	325,886,000		
7/1/2002 to 6/30/2003	333,058,000	13,008,000	346,066,000		
7/1/2003 to 6/30/2004	352,130,000	14,770,000	366,900,000		
7/1/2004 to 6/30/2005 7/1/2005 to 6/30/2006	373,663,000	16,838,000	390,501,000		
	398,377,000	19,125,000	417,502,000		
	426,620,000 456,677,000	21,699,000 25,101,000	448,319,000		
			481,778,000		
7/1/2008 to 6/30/2009 7/1/2009 to 6/30/2010	490,726,000 524,749,000	29,156,000 33,535,000	519,882,000 558,284,000		
7/1/2010 to 6/30/2011	561,348,000	37,615,000	598,284,000		
	JRANCE FUND PAYMEN		370,703,000		
11130	Non-Hazardous	Hazardous			
	Position	Position			
Plan Year	Employees	Employees	Total		
7/1/2001 to 6/30/2002	47,680,000	4,144,000	51,824,000		
7/1/2002 to 6/30/2003	54,005,000	4,895,000	58,900,000		
7/1/2003 to 6/30/2004	60,485,000	5,697,000	66,182,000		
7/1/2004 to 6/30/2005	67,313,000	6,605,000	73,918,000		
7/1/2005 to 6/30/2006	75,199,000	7,683,000	82,882,000		
7/1/2006 to 6/30/2007	83,779,000	8,849,000	92,628,000		
7/1/2007 to 6/30/2008	92,595,000	10,271,000	102,866,000		
7/1/2008 to 6/30/2009	102,629,000	11,970,000	114,599,000		
7/1/2009 to 6/30/2010	114,124,000	14,088,000	128,212,000		
7/1/2010 to 6/30/2011	126,747,000	16,248,000	142,995,000		

Projected benefit payments reflect future actual experience consistent with actuarial assumptions used in current annual valuation. Future cost-of-living adjustments of 3% per annum have been assumed in retirement benefit amounts. Insurance fund payments reflect future medical inflation rates consistent with the valuation assumption. There has not been any assumption made as to the number of future new entrants who may enter the plan. Nor has any provision been made for any change in the basic benefit structure of the plan beyond changes already legislated.

#### TABLE VII KENTUCKY EMPLOYEES RETIREMENT SYSTEM RETIREMENT FUND ACTUARIAL BALANCE SHEET - JUNE 30, 2001

ACTUARIAL BALANCE S	HEET - JUI	NE 30, 2001		
ACTUARIAL	ASSETS			
Fund Assets at Actuarial Value (Plus Refunds and				
Expenses Payable) *				7,206,420,161
Actuarial Present Value of Future Member Contribut	ions			984,772,747
Actuarial Present Value of Future Employer				
Contributions				
For Normal Costs	\$	880,066,904		
For Unfunded Actuarial Accrued Liability		(1,477,191,106)	)	
Total			\$	(597,124,202)
Total Actuarial Assets			\$	7,594,068,706
ACTUARIAL I	LIABILITIES	S		
Actuarial Present Value of Future Benefits				
Inactive Members:				
Retired Members and Beneficiaries	\$	2,705,264,885		
Vested Retirement		37,015,098		
Vested Membership		13,847,382		
Total - Inactive			\$	2,756,127,365
Actuarial Present Value of Future Benefits				
Active Members:				
Retirement Benefits	\$	4,034,992,143		
Disability Benefits		335,398,531		
Withdrawal Benefits (Vested and				
Refund of Contributions)		219,022,476		
Survivor Benefits		248,528,191		
Total - Active			\$	4,837,941,341
Refunds and Expenses Payable			\$	0
Total Actuarial Liabilities			\$	7,594,068,706
Notes				
* Values as of June 30, 2001			T	
Market value of assets:	No	n-Hazardous	\$	5,484,563,749
	На	zardous	\$	305,543,701
	То	tal	\$	5,790,107,450
Actuarial value of assets:			\$	7,206,420,161
Member's Contribution Account:			\$	895,839,477
** Present value of accrued benefit deferred to no	rmal retire	ment date.		· · ·
<b>L</b>				

TABL KENTUCKY EMPLOYEES INSURAN ACTUARIAL BALANCE S	RETIREMENT SYSTEM		
ACTUARIA	LASSETS		
Fund Assets at Actuarial Value (Plus Refunds and			
Expenses Payable) *		\$	569,003,346
Actuarial Present Value of Future Member Contribut	•		
Future Member Contributions Credited Against R	etirement Fund)		0
Actuarial Present Value of Future Employer			
Contributions			
For Normal Costs	\$ 1,183,577,35		
For Unfunded Actuarial Accrued Liability	1,415,030,57		
Total	\$	2,598,607,931	
Total Actuarial Assets		\$	3,167,611,277
ACTUARIAL	LIABILITIES		
Actuarial Present Value of Future Benefits			
Inactive Members:			
Retired Members and Beneficiaries	\$ 805,171,43		
Vested Retirement	56,533,59		
Vested Membership		0	
Total - Inactive		\$	861,705,022
Actuarial Present Value of Future Benefits			
Active Members:		\$	2,305,906,255
Refunds and Expenses Payable		\$	0
Total Actuarial Liabilities		\$	3,167,611,277
Notes			
* Values as of June 30, 2001			
Market value of assets:	Non-Hazardous	\$	396,254,063
	Hazardous	\$	107,592,284
	Total	\$	503,846,347
Actuarial value of assets:		\$	569,003,346

	TABLE IX		
KENTU	CKY EMPLOYEES RETIREME	ENT SYSTEM	
ACCOUNTANT'S IN	FORMATION - RETIREMEN	T FUND - JUNE 30, 2	001
G	ASB DISCLOSURE INFORM	ATION	
	Non-Hazardous	Hazardous	
	Position	Position	
	Employees	Employees	Total
	NUMBER OF MEMBERS	S	
Inactive Members			
Retired Members	21,440	933	22,373
Beneficiaries	3,678	120	3,798
Vested Retirements	3,312	123	3,435
Vested Membership	13,429	799	14,228
Total Inactive Members	41,859	1,975	43,834
Active Members			
Vested Members	31,020	2,138	33,158
Nonvested Members	16,760	2,090	18,850
Total Active Members	47,780	4,228	52,008
Total Members	89,639	6,203	95,842

		TABLE X		
		PLOYEES RETIREMEN		
		ATION - INSURANCE RED UNDER GASB S	FUND - JUNE 30, 2001	
11		Non-Hazardous	Hazardous	
		Position	Position	
		Employees	Employees	Total
	NÜ	MBER OF MEMBERS	,	
Contracts in Force - Retirees	and Dependents			
(1) Single;	- 100% Paid	4,091	221	4,312
Pre-Medicare	- 75% Paid	232	24	256
	- 50% Paid	219	44	263
	- 25% Paid	118	12	130
	- 0% Paid	539	1	540
(2) Family;	- 100% Paid	391	64	455
Pre-Medicare	- 75% Paid	7	5	12
	- 50% Paid	3	5	8
	- 25% Paid	6	3	9
	- 0% Paid	1	0	1
(3) Parent +;	- 100% Paid	287	33	320
Pre-Medicare	- 75% Paid	6	12	18
	- 50% Paid	7	3	10
	- 25% Paid	2	3	5
	- 0% Paid	44	0	44
(4) Couple;	- 100% Paid	609	72	681
Pre-Medicare	- 75% Paid	20	6	26
	- 50% Paid	17	21	38
	- 25% Paid	13	9	22
	- 0% Paid	3	0	3
(5) Medicare Regular	- 100% Paid	712	35	747
	- 75% Paid	0	0	0
	- 50% Paid	0	0	0
	- 25% Paid	396	17	413
	- 0% Paid	710	0	710
(6) Medicare High	- 100% Paid	5,798	261	6,059
Option	- 75% Paid - 50% Paid	1,666	59	1,725
	- 25% Paid	1,227 596	72 27	1,299
	- 25% Paid - 0% Paid			623
/ested Retirements	- 0% Palu	1,820 3,312	1 123	1,821 3,435
/ested Membership		13,429	799	14,228
Active Members		47,780	4,228	52,008
		47,700	4,220	52,000
		IEDICAL BENEFIT OB	LIGATION	
Medical Benefit Obligation			-	
Retirees, Beneficiaries and				
Vested Terminated Meml	bers	\$ 784,547,826	\$ 77,157,196	\$ 861,705,022
Active Members		985,035,272	137,293,626	1,122,328,898
Total Medical Benefit Oblig	ation	\$ 1,769,583,098	\$ 214,450,822	\$ 1,984,033,920
Net Assets at Actuarial Value		\$ 449,630,605	\$ 119,372,742	\$ 569,003,346
Jnfunded Medical Benefit O	bligation	\$ 1,319,952,493	\$ 95,078,080	\$ 1,415,030,574
NOTE: Medical Benefit Oblig		y Age Normal Actuaria	al Cost Method	

### **SECTION IV**

#### **COMMENTS AND CERTIFICATION**

#### **Comments**

For the Retirement Fund, the total Actuarial Accrued Liability has increased from \$5,120,191,329 on June 30, 2000 to \$5,729,225,055 on June 30, 2001. The Unfunded Actuarial Accrued Liability has increased from \$(2,022,697,595) to \$(1,477,191,106). Total actuarial value of assets as of June 30, 2001 was equal to \$7,206,420,161. The Unfunded Actuarial Accrued Liability increased from (130.71%) to (89.60%) as a percentage of annual payroll and increased from (39.5%) to (25.8%) as a percentage of the Actuarial Accrued Liability in the year ended June 30, 2001.

For the Insurance Fund, the total Actuarial Accrued Liability has increased from \$1,632,642,971 on June 30, 2000 to \$1,984,033,920 on June 30, 2001. The Unfunded Actuarial Accrued Liability has increased from \$1,130,870,482 to \$1,415,030,574. Total actuarial value of assets as of June 30, 2001 was equal to \$569,003,346. The Unfunded Actuarial Accrued Liability increased from 69.3% to 71.3% as a percentage of the Actuarial Accrued Liability in the year ended June 30, 2001.

The change in contribution rate between the 2000 and 2001 valuations is a function of actual plan experience since the last valuation. A formal gain and loss analysis would identify the portion of the contribution rate change attributable to each element of plan experience and benefit change. However, undertaking such an analysis would be extremely time consuming and expensive. In lieu of the formal analysis, we have estimated the impact of the various components of gain and loss based on changes in statistical averages of each group. The following table shows the results of this computation:

	Non-Hazardous Position Employees	Hazardous Position Employees
June 30, 2000 Contribution Rate	5.89%	18.84%
Change in Payment Percentage Due to Covered Payroll Experience	0.10%	0.10%
Investment Return Experience	0.10%	0.10%
<ul> <li>&gt; Prior to Asset Valuation Method Change</li> </ul>	0.06%	0.04%
> Impact of Asset Valuation Method Change	1.05%	0.53%
Salary Increase Experience	0.28%	0.11%
Decrements Experience*	0.02%	(0.06%)
Change in Insurance Fund Rate		
> One-Year Temporary Funding Rate	(0.57%)	(0.78%)
> Increase in Long Term Funding Rate	0.23%	0.39%
Change in Administrative Expense Rate	(0.13%)	(0.13%)
Retiree COLA Effective 7/1/2000	0.19%	0.07%
Legislated Changes		
> 3 Year Average Window for Nonhazardous	0.25%	0.00%
Change in Actuarial Assumptions	0.13%	(0.27%)
Reduction in Amount Available from Prior Year Retirement		
Fund Rate to Offset Current Year Increases	(1.61%)	N/A
June 30, 2001 Contribution Rate	5.89%	18.84%
* Includes mortality, disability, termination of employment and	retirement experience.	

The annual State contribution rate required to provide the Normal Cost, 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, and pay administrative expenses for Non-Hazardous position employees was determined at 0.34%. An additional 5.55% is required to fund medical insurance for retirees, bringing the required contribution up to 5.89%. This is the same as the current 5.89% budgeted contribution rate. Therefore, it is our opinion that the contribution rate beginning July 1, 2002 should remain at the 5.89% level, and we so recommend.

The annual State contribution rate required to provide the Normal Cost, 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, and pay administrative expenses for Hazardous position employees was determined at 6.57%. An additional 12.27% is required to fund medical insurance for retirees, bringing the required contribution up to 18.84%. This is the same as the current 18.84% budgeted contribution rate. Therefore, it is our opinion that the contribution rate beginning

July 1, 2002 should remain at the 18.84% level, and we so recommend.

The recommended contribution rates are based on current statutory benefits. The budgeted contribution rates will again be reviewed in the June 30, 2002 valuation.

The following table shows the total Actuarial Accrued Liability, the Unfunded Actuarial Accrued Liability, percent unfunded and the growth of the invested assets relative to retirement related benefits at selected intervals since the inception of the System.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM - RETIREMENT FUND									
	Total Actuarial Accrued	Unfunded Actuarial		Actuarial Value					
July 1 of Year Shown	Liability	Accrued Liability	Percent Unfunded	of Assets	Increase in Assets				
1956	\$ 16,200,000	\$ 16,200,000	100.0%	\$ 0	\$ 0				
1961	49,201,024	31,670,465	64.4%	17,530,559	4,479,508				
1966	127,889,238	72,137,125	56.4%	55,752,113	9,085,814				
1971	185,075,453	59,614,477	32.2%	125,460,976*	18,353,116				
1975	296,343,758	77,434,549	26.1%	218,909,209*	26,529,526				
1976	387,214,910	130,838,120	33.8%	256,376,790*	37,467,581				
1977	446,255,236	149,511,331	33.5%	296,743,905*	40,367,115				
1978	507,324,915	168,497,917	33.2%	338,826,998*	42,083,093				
1979	592,095,113	202,676,662	34.2%	389,418,451*	50,591,453				
1980	710,126,703	249,770,835	35.2%	460,355,868*	70,937,417				
1981	692,160,395	164,735,129	23.8%	527,425,266	67,069,398				
1982	810,250,589	195,803,691	24.2%	614,446,898	87,021,632				
1983	862,291,959	152,196,081	17.7%	710,095,878	95,648,980				
1984	1,016,088,830	201,535,007	19.8%	814,553,823	104,457,945				
1985	1,104,429,988	169,949,215	15.4%	934,480,773	119,926,950				
1986	1,245,083,143	166,635,243	13.4%	1,079,353,421	144,872,648				
1987	1,384,259,808	120,259,389	8.7%	1,264,000,419	184,646,998				
1988	1,561,743,738	135,687,336	8.7%	1,426,056,402	162,055,983				
1989	1,734,607,903	145,998,805	8.4%	1,588,609,098	162,552,696				
1990	2,055,489,412	256,167,674	12.5%	1,799,321,738	210,712,640				
1991	2,288,611,147	375,396,216	16.4%	1,913,214,931	113,893,193				
1992**	2,525,190,930	170,708,609	6.8%	2,354,482,321	441,267,390				
1993	2,703,771,076	118,561,539	4.4%	2,585,209,537	230,727,216				
1994	2,912,050,275	183,001,288	6.3%	2,729,048,987	143,839,450				
1995	3,240,852,288	257,038,750	7.9%	2,983,813,538	244,764,551				
1996	3,415,404,483	40,108,906	1.2%	3,375,295,577	391,482,039				
1997	3,603,966,110	(246,746,133)	(6.8%)	3,850,712,243	475,416,666				
1998	3,971,749,822	(596,537,421)	(15.0%)	4,568,287,243	717,575,000				
1999	4,531,905,609	(992,274,107)	(21.9%)	5,524,179,716	955,892,473				
2000	5,120,191,329	(2,022,697,595)	(39.5%)	7,142,888,924	1,618,709,208				
2001***	5,729,229,055	(1,477,191,106)	(25.8%)	7,206,420,161	63,531,237				
*Includes capitali	zed appreciation of								
			ion from book va	lue to a five year aver	age of market to				
	et valuation method	effective in this value	ation to 5-year sn	noothing of investmen	t gains/(losses)				

Liability, percent unfunded and the growth of the invested assets relative to medical premium benefits since 1990.

The following table shows the total Actuarial Accrued Liability, the Unfunded Actuarial Accrued

	Total Actuarial	Unfunded Actuarial		Actuarial Value	
July 1 of Year	Accrued	Accrued	Percent	of Assets	Increase in
Shown	Liability	Liability	Unfunded		Assets
1990	\$ 719,493,806	\$ 686,770,874	95.5%	\$ 32,722,932	\$ N/A
1991	804,674,050	758,124,715	94.2%	46,549,335	13,826,403
1992	1,001,703,695	939,238,069	93.8%	62,465,626	15,916,291
1993	1,177,861,283	1,100,187,708	93.4%	77,673,575	15,207,949
1994	1,444,612,678	1,345,529,145	93.1%	99,083,533	21,409,958
1995	1,462,174,101	1,334,881,910	91.3%	127,292,191	28,208,658
1996**	1,222,394,138	1,049,747,933	85.9%	172,646,205	45,354,014
1997	1,274,464,242	1,063,299,895	83.4%	211,164,347	38,518,142
1998	1,379,578,155	1,114,866,185	80.8%	264,711,970	53,547,623
1999	1,422,523,386	1,064,238,850	74.8%	358,284,536	93,572,566
2000	1,632,642,971	1,130,870,482	69.3%	501,772,489	143,487,953
2001***	1,984,033,920	1,415,030,574	71.3%	569,003,346	67,230,857
**Change in asse book values.	t valuation method e	ffective in this valua	tion from book va	lue to a five year aver	age of market to

### **Certification**

On the basis of the actuarial assumptions given and the data furnished by the General Manager of the Kentucky Employees Retirement System, it is certified that the actuarial valuation has been made by the use of accepted actuarial principles and based on continuation of current funding polices adopted by the Board, that adequate provision is being made for the funding of future benefits.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Stephen A. Gagel, F.S.A.

Edward W. Maynard, F.S.A.

William M. Mercer, Incorporated 462 South Fourth Avenue, Suite 1500 Louisville, Kentucky 40202-3431 D(502) 561-4500 Date

Date

## **SECTION V**

## STATISTICAL DATA

AS OF

JUNE 30, 2001

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

EARNINGS BY AGE GROUPS

AGE		MALE			FEMALE				
GROUP	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE
0-19	858	16,520,472	19,255	91	1,536,756	16,887	949	18,057,228	19,028
20-24	1,432	31,304,532	21,861	1,097	19,710,446	17,968	2,529	51,014,978	20,172
25-29	1,446	35,273,198	24,394	2,656	59,307,067	22,329	4,102	94,580,265	23,057
30-34	1,987	57,667,238	29,022	3,248	82,720,424	25,468	5,235	140,387,662	26,817
35-39	2,233	75,641,508	33,874	3,607	100,308,362	27,809	5,840	175,949,870	30,128
40 - 44	2,696	100,328,858	37,214	4,366	131,174,848	30,045	7,062	231,503,706	32,782
45-49	3,085	124,411,140	40,328	4,801	158,086,052	32,928	7,886	282,497,192	35,823
50-54	2,921	129,174,165	44,223	4,066	137,359,146	33,782	6,987	266,533,311	38,147
55-59	1,846	81,543,708	44,173	2,454	79,344,055	32,333	4,300	160,887,763	37,416
60-64	906	37,979,239	41,920	1,137	35,891,016	31,566	2,043	73,870,255	36,158
65-69	276	12,279,768	44,492	299	8,438,328	28,222	575	20,718,096	36,031
70-74	103	4,420,752	42,920	96	2,580,948	26,885	199	7,001,700	35,184
75+	38	1,244,568	32,752	35	941,940	26,913	73	2,186,508	29,952
TOTAL	19,827	707,789,146	35,698	27,953	817,399,387	29,242	47,780	1,525,188,532	31,921

EARNINGS BY SERVICE GROUPS

SERVICE		MALE		FEMALE					
GROUP	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE
0	1,332	26,217,535	19,683	1,542	27,959,768	18,132	2,874	54,177,303	18,851
1	2,229	54,658,046	24,521	3,275	68,450,675	20,901	5,504	123,108,721	22,367
2	2,000	53,557,653	26,779	2,369	55,600,315	23,470	4,369	109,157,968	24,985
3	1,151	34,177,250	29,694	1,457	35,715,523	24,513	2,608	69,892,773	26,799
4	1,046	31,577,676	30,189	1,467	36,585,192	24,939	2,513	68,162,868	27,124
0-4	7,758	200,188,160	25,804	10,110	224,311,472	22,187	17,868	424,499,632	23,758
5-9	3,279	109,226,419	33,311	5,309	146,590,306	27,612	8,588	255,816,725	29,788
10-14	2,871	108,584,724	37,821	4,680	143,239,602	30,607	7,551	251,824,326	33,350
15-19	2,045	86,596,992	42,346	2,875	100,325,556	34,896	4,920	186,922,548	37,992
20-24	1,361	60,142,351	44,190	2,126	77,058,139	36,246	3,487	137,200,490	39,346
25-29	1,469	75,381,828	51,315	1,889	78,185,388	41,390	3,358	153,567,216	45,732
30-34	769	47,655,672	61,971	757	36,595,032	48,342	1,526	84,250,704	55,210
35-39	214	15,094,752	70,536	172	9,056,028	52,651	386	24,150,780	62,567
40+	61	4,918,248	80,627	35	2,037,864	58,225	96	6,956,112	72,460
TOTAL	19,827	707,789,146	35,698	27,953	817,399,387	29,242	47,780	1,525,188,532	31,921

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

EARNINGS BY AGE GROUPS

AGE		MALE			FEMALE					
GROUP	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	
0-19	60	894,163	14,903	3	58,104	19,368	63	952,267	15,115	
20-24	168	3,148,260	18,740	35	637,920	18,226	203	3,786,180	18,651	
25-29	337	7,234,476	21,467	113	2,480,940	21,955	450	9,715,416	21,590	
30-34	384	9,370,008	24,401	156	3,663,648	23,485	540	13,033,656	24,136	
35-39	399	11,020,116	27,619	160	4,104,156	25,651	559	15,124,272	27,056	
40 - 44	387	11,908,668	30,772	191	5,998,692	31,407	578	17,907,360	30,982	
45-49	425	14,221,860	33,463	211	6,634,788	31,444	636	20,856,648	32,793	
50-54	505	18,700,344	37,030	162	4,932,132	30,445	667	23,632,476	35,431	
55-59	280	10,244,544	36,588	86	2,683,320	31,201	366	12,927,864	35,322	
60-64	100	3,473,664	34,737	33	1,076,412	32,619	133	4,550,076	34,211	
65-69	21	692,592	32,981	б	217,944	36,324	27	910,536	33,724	
70-74	4	159,732	39,933	2	90,924	45,462	6	250,656	41,776	
75+	0	0	0	0	0	0	0	0	0	
TOTAL	3,070	91,068,427	29,664	1,158	32,578,980	28,134	4,228	123,647,407	29,245	

EARNINGS BY SERVICE GROUPS

SERVICE		MALE		FEMALE					
GROUP	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE
0	278	4,382,383	15,764	113	1,991,496	17,624	391	6,373,879	16,301
1	429	9,288,276	21,651	169	3,769,680	22,306	598	13,057,956	21,836
2	241	5,883,360	24,412	119	3,033,324	25,490	360	8,916,684	24,769
3	290	9,439,380	32,550	91	2,287,200	25,134	381	11,726,580	30,778
4	157	4,252,404	27,085	80	2,069,580	25,870	237	6,321,984	26,675
0-4	1,395	33,245,803	23,832	572	13,151,280	22,992	1,967	46,397,083	23,588
5-9	544	16,465,812	30,268	213	6,171,984	28,976	757	22,637,796	29,905
10-14	864	29,965,080	34,682	309	10,530,924	34,081	1,173	40,496,004	34,523
15-19	179	7,289,772	40,725	41	1,747,224	42,615	220	9,036,996	41,077
20-24	50	2,187,672	43,753	23	977,568	42,503	73	3,165,240	43,359
25-29	32	1,600,368	50,012	0	0	0	32	1,600,368	50,012
30-34	5	239,064	47,813	0	0	0	5	239,064	47,813
35-39	1	74,856	74,856	0	0	0	1	74,856	74,856
40+	0	0	0	0	0	0	0	0	0
TOTAL	3,070	91,068,427	29,664	1,158	32,578,980	28,134	4,228	123,647,407	29,245

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

SERVICE GROUPS BY AGE GROUPS

MALE AGE									SERVIC	E
GROUP	(J) 0 – 4	ROUP 5-9	10-14	 15-19	20-24	25-29			40+	TOTAL
0-19	849	6	10 11	1	1		50 51	55 57	101	858
20-24	1,347	84	1	-	-					1,432
25-29	1,152	284	10							1,446
30-34	1,057	623	292	15						1,987
35-39	773	495	625	313	27					2,233
40 - 44	730	427	539	563	352	85				2,696
45-49	690	444	474	423	402	527	125			3,085
50-54	602	376	386	339	282	491	379	66		2,921
55-59	352	292	277	205	162	242	188	106	22	1,846
60-64	144	159	173	125	105	94	56	33	17	906
65-69	35	59	62	39	20	21	15	7	18	276
70-74	20 7	20	27	17	7	4	4	1	3	103
75+ TOTAL		10	4	5	3	5	2	1	1	38
IOIAL	7,758	3,279	2,871	2,045	1,361	1,469	769	214	61	19,827
FEMALE										
AGE										Έ
CD OTTD										<b>—</b> ———————————————————————————————————
GROUP 0-19	0-4 89	5-9	10-14	15-19		25-29	30-34	35-39	40+	TOTAL
20-24	89 1,057	36			1 2	1 1	1			91 1,097
20-24	2,155	467	34		2	T	Ť			2,656
30-34	1,654	1,044	514	36						2,050
35-39	1,347	835	914	453	57	1				3,607
40 - 44	1,320	865	807	635	569	170				4,366
45-49	1,096	809	799	584	600	736	177			4,801
50-54	795	642	767	531	413	496	370	52		4,066
55-59	416	375	486	365	267	300	141	92	12	2,454
60-64	132	168	251	202	152	146	50	19	17	1,137
65-69	32	50	83	49	42	25	12	4	2	299
70-74	9	16	17	17	16	9	5	4	3	96
75+	8	2	8	3	7	4	1	1	1	35
TOTAL	10,110	5,309	4,680	2,875	2,126	1,889	757	172	35	27,953
TOTAL										
AGE									.SERVIC	ΞE
	Gl									
GROUP	0-4			15-19			30-34	35-39	40+	
0-19	938	б	1	1	2	1				949
20-24	2,404	120	1		2	1	1			2,529
25-29	3,307	751	44							4,102
30-34	2,711	1,667	806	51	0.4	-				5,235
35-39	2,120	1,330	1,539	766	84	1				5,840
40-44	2,050	1,292	1,346	1,198	921	255	202			7,062
45-49 50-54	1,786 1,397	1,253 1,018	1,273 1,153	1,007	1,002	1,263	302 749	110		7,886 6,987
55-59	768	1,018 667	1,153 763	870 570	695 429	987 542	329	118 198	34	6,987 4,300
60-64	276	327	424	327	257	240	106	52	34	2,043
65-69	67	109	145	88	62	46	27	11	20	575
70-74	29	36	44	34	23	13	9	5	20 6	199
75+	15	12	12	8	10	9	3	2	2	73
TOTAL	17,868	8,588	7,551	4,920	3,487	3,358	1,526	386	96	47,780

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

SERVICE GROUPS BY AGE GROUPS

MALE AGE									SERVIC	E
GROUP	0-4	5-9	10-14	15-19	20-24	25-29		35-39	 40+	TOTAL
0-19	59	1								60
20-24	161	6	1							168
25-29	288	48	1							337
30-34 35-39	211 170	133	40	0.1						384
40-44	137	85 66	123 138	21 36	10					399 387
45-49	136	67	157	42	18	5				425
50-54	130	64	223	53	15	18	2			505
55-59	75	48	125	18	6	6	2			280
60-64	25	22	39	8	1	3	1	1		100
65-69	2	4	14	1						21
70-74	1		3							4
75+ TOTAL	1,395	544	864	179	50	32	5	1	0	0 3,070
IOIAL	1,395	544	004	179	50	22	5	T	0	3,070
FEMALE										
AGE	CP(									E:
GROUP	0-4	5-9	10-14	15-19	20-24		30-34	35-39		TOTAL
0-19	3									3
20-24	33	2								35
25-29	99	14								113
30-34	101	32	23	4	1					156
35-39 40-44	81 75	30 40	44 48	4 14	1 14					160 191
45-49	86	40	40 63	14	14 7					211
50-54	60	32	60	9	1					162
55-59	25	14	46	1						86
60-64	7	6	20							33
65-69	2	1	3							б
70-74			2							2
75+ TOTAL	572	213	309	41	23	0	0	0	0	0 1,158
IOIAL	572	213	309	41	23	0	0	0	0	1,100
TOTAL										
AGE	CPC									Ε
GROUP	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	 40+	TOTAL
0-19	62	1								63
20-24	194	8	1							203
25-29	387	62	1							450
30-34	312	165	63							540
35-39	251	115	167	25	1					559
40-44 45-49	212	106	186	50	24	-				578
45-49 50-54	222 190	109 96	220 283	55 62	25 16	5 18	2			636 667
55-59	100	90 62	171	19	10	10	2			366
60-64	32	28	59	8	1	3	1	1		133
65-69	4	5	17	1						27
70-74	1		5							б
75+	1 0 6 7		1 1 5 0	000		~ ~	-	-	^	0
TOTAL	1,967	757	1,173	220	73	32	5	1	0	4,228

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

AGE			•••••							CE
GROUP	0-4		10-14							TOTAL
0-19	938 18,764				2 52,434					949 19,028
20-24	2,404 19,907	120 24,527	1 26,556		2 48,636	1 47,172	1 45,396			2,529 20,172
25-29	3,307 22,354	751 25,854								4,102 23,057
30-34	2,711 23,994	1,667 29,240		51 33,414						5,235 26,817
35-39	2,120 24,942	1,330 30,384			84 35,422					5,840 30,128
40-44	2,050 25,438				921 38,228					7,062 32,782
45-49	1,786 25,905	1,253 30,646		1,007 39,004			302 52,997			7,886 35,823
50-54	1,397 27,227	1,018 31,423					749 56,461			6,987 38,147
55-59	768 26,579	667 30,596					329 55,428		34 71,393	4,300 37,416
60-64	276 26,826	327 30,531			257 36,186		106 52,676		34 71,004	
65-69	67 26,108						27 55,453		20 77,582	575 36,031
70-74	29 26,928	36 27,777	44 33,462	34 32,496	23 41,749	13 38,560	9 50,291	5 57,626	6 73,556	
75+	15 26,509	12 23,262	12 25,884	8 25,790	10 25,327	9 39,427	3 47,320	2 60,552	2 60,816	73 29,952
TOTAL	17,868 23,758	8,588 29,788	7,551 33,350	4,920 37,992	3,487 39,346		1,526 55,210	386 62,567	96 72,460	
TOTAL EAR	RNINGS	1,525,	188,532				Note: Ea	arnings s	shown in	this

AVERAGE EARNINGS FOR SERVICE GROUPS BY AGE GROUPS

TOTAL EARNINGS	1,525,188,532	Note: Earnings shown in this
AVERAGE SERVICE	42.45	matrix
AVERAGE AGE	10.37	have not been limited by
		401(a)(17).

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

AGE									.SERVIC	CE
GROUP	0-4						30-34	35-39	• 40+	TOTAL
0-19		1 25,728								63 15,115
20-24	194 18,428	8 23,678								203 18,651
25-29	387 20,840	62 26,156								450 21,590
30-34	312 21,323	165 27,106								540 24,136
35-39	251 23,452			25 36,143						559 27,056
40-44	212 25,885			50 37,409						578 30,982
45-49	222 27,208				25 43,272					636 32,793
50-54	190 29,543				16 45,210					667 35,431
55-59	100 30,454				6 45,310					366 35,322
60-64							1 52,656	1 74,856		133 34,211
65-69		5 40,476								27 33,724
70-74	1 33,276									6 41,776
75+										0
TOTAL	1,967 23,588		1,173 34,523	220 41,077	73 43,359	32 50,012	5 47,813	1 74,856	0	4,228 29,245
TOTAL EAN AVERAGE S AVERAGE D	SERVICE	123,	647,407 41.62 6.57				matrix	arnings sho been limit 7).		this

AVERAGE EARNINGS FOR SERVICE GROUPS BY AGE GROUPS

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION TABULATION BY MONTHLY SALARY JUNE 30, 2001

	NUMBER OF MEMBERS					
MONTHLY SALARY	MALES	FEMALES	TOTAL			
UNDER \$ 500	122	91	213			
\$ 500 - \$ 749	106	143	249			
\$ 750 - \$ 999	249	540	789			
\$ 1,000 - \$ 1,249	757	1,582	2,339			
\$ 1,250 - \$ 1,499	1,692	2,706	4,398			
\$ 1,500 - \$ 1,749	1,829	3,255	5,084			
\$ 1,750 - \$ 1,999	1,719	3,070	4,789			
\$ 2,000 - \$ 2,249	1,665	3,262	4,927			
\$ 2,250 - \$ 2,499	1,502	2,662	4,164			
\$ 2,500 - \$ 2,749	1,387	2,072	3,459			
\$ 2,750 - \$ 2,999	1,234	1,879	3,113			
\$ 3,000 - \$ 3,499	1,939	2,598	4,537			
\$ 3,500 - \$ 3,999	1,461	1,619	3,080			
\$ 4,000 - \$ 4,499	1,085	956	2,041			
\$ 4,500 - \$ 4,999	825	607	1,432			
\$ 5,000 - \$ 5,499	599	373	972			
\$ 5,500 - \$ 5,999	496	218	714			
\$ 6,000 - \$ 6,499	331	110	441			
\$ 6,500 - \$ 6,999	219	74	293			
\$ 7,000 - \$ 7,499	197	47	244			
\$ 7,500 - \$ 7,999	105	21	126			
\$ 8,000 - \$ 8,499	100	21	121			
\$ 8,500 - \$ 8,999	59	11	70			
\$ 9,000 - \$ 9,499	25	5	30			
\$ 9,500 - \$ 9,999	21	8	29			
\$ 10,000 AND OVER	103	23	126			
TOTAL	19,827	27,953	47,780			
HIGHLY COMPENSATED EMPLOYEES (ESTIMATED) ANNUAL SALARY OF \$85,000 AND OVER	572	123	695			

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION TABULATION BY MONTHLY SALARY JUNE 30, 2001

	NUMBER OF MEMBERS				
MONTHLY SALARY	MALES	FEMALES	TOTAL		
UNDER \$ 500	31	6	37		
\$ 500 - \$ 749	8	2	10		
\$ 750 - \$ 999	42	22	64		
\$ 1,000 - \$ 1,249	51	28	79		
\$ 1,250 - \$ 1,499	186	65	251		
\$ 1,500 - \$ 1,749	405	200	605		
\$ 1,750 - \$ 1,999	431	189	620		
\$ 2,000 - \$ 2,249	429	148	577		
\$ 2,250 - \$ 2,499	287	102	389		
\$ 2,500 - \$ 2,749	292	94	386		
\$ 2,750 - \$ 2,999	208	81	289		
\$ 3,000 - \$ 3,499	301	96	397		
\$ 3,500 - \$ 3,999	153	67	220		
\$ 4,000 - \$ 4,499	109	22	131		
\$ 4,500 - \$ 4,999	48	18	66		
\$ 5,000 - \$ 5,499	29	7	36		
\$ 5,500 - \$ 5,999	23	4	27		
\$ 6,000 - \$ 6,499	15	3	18		
\$ 6,500 - \$ 6,999	6	2	8		
\$ 7,000 - \$ 7,499	2	0	2		
\$ 7,500 - \$ 7,999	2	0	2		
\$ 8,000 - \$ 8,499	0	0	0		
\$ 8,500 - \$ 8,999	1	0	1		
\$ 9,000 - \$ 9,499	3	0	3		
\$ 9,500 - \$ 9,999	1	0	1		
\$ 10,000 AND OVER	7	2	9		
TOTAL	3,070	1,158	4,228		
HIGHLY COMPENSATED EMPLOYEES (ESTIMATED) ANNUAL SALARY OF \$85,000 AND OVER	15	2	17		

# KENTUCKY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION MEMBERS WITH SERVICE IN ANOTHER SYSTEM JUNE 30, 2001

#### MEMBERS CURRENTLY ACTIVE IN KERS NONHAZARDOUS

SERVICE IN	ACTIVE IN OTHER SYSTEM	INACTIVE IN OTHER SYSTEM	TOTAL
KERS - HAZARDOUS	0	344	344
CERS - NONHAZARDOUS	542	2,358	2,900
CERS - HAZARDOUS	22	73	95
STATE POLICE	0	13	13
TOTAL - ALL SYSTEMS	564	2,788	3,352

#### MEMBERS CURRENTLY NOT ACTIVE IN KERS NONHAZARDOUS

SERVICE IN	ACTIVE IN OTHER SYSTEM	INACTIVE IN OTHER SYSTEM	TOTAL
KERS - HAZARDOUS	1,606	51	1,657
CERS - NONHAZARDOUS	2,028	209	2,237
CERS - HAZARDOUS	279	29	308
STATE POLICE	109	9	118
TOTAL - ALL SYSTEMS	4,022	298	4,320

NOTE: DOES NOT INCLUDE INDIVIDUALS IN PAY STATUS IN OTHER SYSTEMS

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# KENTUCKY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION MEMBERS WITH SERVICE IN ANOTHER SYSTEM JUNE 30, 2001

MEMBERS CURRENTLY ACTIVE IN KERS HAZARDOUS							
SERVICE IN	ACTIVE IN OTHER SYSTEM	INACTIVE IN OTHER SYSTEM	TOTAL				
KERS - NONHAZARDOUS	0	1,606	1,606				
CERS - NONHAZARDOUS	21	216	237				
CERS - HAZARDOUS	11	33	44				
STATE POLICE	1	7	8				
TOTAL - ALL SYSTEMS	33	1,862	1,895				

#### MEMBERS CURRENTLY NOT ACTIVE IN KERS HAZARDOUS

SERVICE IN	ACTIVE IN OTHER SYSTEM	INACTIVE IN OTHER SYSTEM	TOTAL				
KERS - NONHAZARDOUS	344	51	395				
CERS - NONHAZARDOUS	55	58	113				
CERS - HAZARDOUS	108	5	113				
STATE POLICE	20	1	21				
TOTAL - ALL SYSTEMS	527	115	642				

NOTE: DOES NOT INCLUDE INDIVIDUALS IN PAY STATUS IN OTHER SYSTEMS

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION RETIRED LIVES SUMMARY JUNE 30, 2001

	MALE LIVES		FEI	MALE LIVES	TOTAL		
	NUMBER	MONTHLY BENEFITS	NUMBER	MONTHLY BENEFITS	NUMBER	MONTHLY BENEFITS	
BASIC FORM	2,424	2,288,742.89	5,965	4,907,621.10	8,389	7,196,363.99	
STRAIGHT LIFE (OLD PLAN)	0	0.00	0	0.00	0	0.00	
JOINT & SURVIVOR							
100% TO BENEFICIARY	1,658	1,568,516.05	540	332,839.92	2,198	1,901,355.97	
66-2/3% TO BENEFICIARY	683	1,056,366.56	174	204,844.31	857	1,261,210.87	
50% TO BENEFICIARY	859	1,160,224.57	545	697,936.35	1,404	1,858,160.92	
POP-UP OPTION	1,565	2,166,629.95	868	1,057,130.33	2,433	3,223,760.28	
10 YEARS CERTAIN	0	0.00	0	0.00	0	0.00	
10 YEARS CERTAIN & LIFE	1,100	876,392.79	1,473	1,218,820.42	2,573	2,095,213.21	
SOCIAL SECURITY OPTION							
OPTION C	379	608,226.14	855	1,110,990.08	1,234	1,719,216.22	
OPTION D	781	1,152,484.56	440	580,213.86	1,221	1,732,698.42	
OPTION E	0	0.00	0	0.00	0	0.00	
OPTION F	0	0.00	0	0.00	0	0.00	
DEPENDENT CHILD	0	0.00	1	188.76	1	188.76	
REFUND	0	0.00	0	0.00	0	0.00	
15 YEARS CERTAIN & LIFE	362	364,149.64	285	258,731.28	647	622,880.92	
20 YEARS CERTAIN & LIFE	247	295,755.32	236	257,726.07	483	553,481.39	
5 YEARS ONLY	0	0.00	0	0.00	0	0.00	
TOTAL	10,058	11,537,488.47	11,382	10,627,042.48	21,440	22,164,530.95	

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION RETIRED LIVES SUMMARY JUNE 30, 2001

	М	ALE LIVES	FEN	MALE LIVES	TOTAL		
	NUMBER	MONTHLY Benefits	NUMBER	MONTHLY Benefits	NUMBER	MONTHLY BENEFITS	
BASIC FORM	149	100,814.75	101	51,163.88	250	151,978.63	
STRAIGHT LIFE (OLD PLAN)	0	0.00	0	0.00	0	0.00	
JOINT & SURVIVOR							
100% TO BENEFICIARY	103	67,906.28	4	3,426.95	107	71,333.23	
66-2/3% TO BENEFICIARY	37	30,796.55	5	3,880.64	42	34,677.19	
50% TO BENEFICIARY	49	43,550.80	5	6,367.98	54	49,918.78	
POP-UP OPTION	161	131,870.23	24	16,087.43	185	147,957.66	
10 YEARS CERTAIN	16	12,247.76	5	3,146.96	21	15,394.72	
10 YEARS CERTAIN & LIFE	64	36,254.87	23	12,733.68	87	48,988.55	
SOCIAL SECURITY OPTION							
OPTION C	27	20,191.71	15	9,027.46	42	29,219.17	
OPTION D	68	67,955.51	10	4,461.19	78	72,416.70	
OPTION E	0	0.00	0	0.00	0	0.00	
OPTION F	0	0.00	0	0.00	0	0.00	
DEPENDENT CHILD	8	1,841.55	10	2,127.82	18	3,969.37	
REFUND	0	0.00	0	0.00	0	0.00	
15 YEARS CERTAIN & LIFE	20	13,997.01	6	4,657.73	26	18,654.74	
20 YEARS CERTAIN & LIFE	22	17,368.88	1	407.10	23	17,775.98	
5 YEARS ONLY	0	0.00	0	0.00	0	0.00	
TOTAL	724	544,795.90	209	117,488.82	933	662,284.72	

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION BENEFICIARY SUMMARY JUNE 30, 2001

	MALE LIVES		FEMALE LIVES		TOTAL	
		MONTHLY		MONTHLY		MONTHLY
	NUMBER	BENEFITS	NUMBER	BENEFITS	NUMBER	BENEFITS
BASIC FORM	0	0.00	0	0.00	0	0.00
STRAIGHT LIFE (OLD PLAN)	0	0.00	0	0.00	0	0.00
JOINT & SURVIVOR						
100% TO BENEFICIARY	242	131,433.16	1,669	926,331.14	1,911	1,057,764.30
66-2/3% TO BENEFICIARY	16	8,162.48	255	133,930.48	271	142,092.96
50% TO BENEFICIARY	52	22,529.97	492	176,447.17	544	198,977.14
POP-UP OPTION	35	30,918.93	150	107,724.47	185	138,643.40
10 YEARS CERTAIN	77	59,873.24	65	53,095.53	142	112,968.77
10 YEARS CERTAIN & LIFE	61	39,572.25	82	68,826.22	143	108,398.47
SOCIAL SECURITY OPTION						
OPTION C	0	0.00	0	0.00	0	0.00
OPTION D	19	15,460.80	124	139,374.22	143	154,835.02
OPTION E	0	0.00	0	0.00	0	0.00
OPTION F	0	0.00	17	6,871.86	17	6,871.86
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	26	21,505.88	96	71,426.47	122	92,932.35
20 YEARS CERTAIN & LIFE	29	25,267.64	47	40,373.54	76	65,641.18
5 YEARS ONLY	75	61,808.82	49	63,232.97	124	125,041.79
TOTAL	632	416,533.17	3,046	1,787,634.07	3,678	2,204,167.24

#### KENTUCKY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION BENEFICIARY SUMMARY JUNE 30, 2001

	MALE LIVES		FEMALE LIVES		TOTAL	
	NUMBER	MO NTHLY BENEFITS	NUMBER	MO NTHLY BENEFITS	NUMBER	MONTHLY BENEFITS
BASIC FORM	0	0.00	0	0.00	0	0.00
STRAIGHT LIFE (OLD PLAN)	0	0.00	0	0.00	0	0.00
JOINT & SURVIVOR						
100% TO BENEFICIARY	5	1,601.55	50	29,931.87	55	31,533.42
66-2/3% TO BENEFICIARY	0	0.00	4	2,248.66	4	2,248.66
50% TO BENEFICIARY	0	0.00	8	2,298.69	8	2,298.69
POP-UP OPTION	0	0.00	9	3,137.99	9	3,137.99
10 YEARS CERTAIN	5	2,898.16	4	1,136.25	9	4,034.41
10 YEARS CERTAIN & LIFE	2	2,018.46	8	1,018.66	10	3,037.12
SOCIAL SECURITY OPTION						
OPTION C	0	0.00	0	0.00	0	0.00
OPTION D	1	17.11	7	6,474.01	8	6,491.12
OPTION E	0	0.00	0	0.00	0	0.00
OPTION F	0	0.00	0	0.00	0	0.00
DEPENDENT CHILD	2	563.16	0	0.00	2	563.16
REFUND	0	0.00	0	0.00	0	0.00
15 YEARS CERTAIN & LIFE	1	161.73	0	0.00	1	161.73
20 YEARS CERTAIN & LIFE	0	0.00	4	908.62	4	908.62
5 YEARS ONLY	8	1,909.85	2	1,696.59	10	3,606.44
TOTAL	24	9,170.02	96	48,851.34	120	58,021.36

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# KENTUCKY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION VESTED RETIREMENT SUMMARY JUNE 30, 2001

	Μ	MALE LIVES		FEMALE LIVES		TOTAL	
AGE NEAREST		MONTHLY		MONTHLY		MONTHLY	
BIRTHDAY	NUMBER	BENEFITS	NUMBER	BENEFITS	NUMBER	BENEFITS	
15-19	0	0.00	0	0.00	0	0.00	
20-24	5	835.70	3	389.22	8	1,224.92	
25-29	26	4,525.08	45	7,657.19	71	12,182.27	
30-34	87	19,948.47	253	55,877.87	340	75,826.34	
35-39	160	50,805.96	353	99,359.55	513	150,165.51	
40-44	177	62,627.69	340	107,286.25	517	169,913.94	
45-49	209	99,299.13	448	172,481.56	657	271,780.69	
50-54	251	113,721.30	432	157,703.94	683	271,425.24	
55-59	134	78,244.48	212	70,473.46	346	148,717.94	
60-64	48	22,958.69	81	22,904.66	129	45,863.35	
65-69	7	1,613.72	21	3,816.54	28	5,430.26	
70-74	6	6,125.43	7	1,257.91	13	7,383.34	
75-79	1	67.72	4	1,045.85	5	1,113.57	
80-84	1	114.18	1	66.18	2	180.36	
85 +	0	0.00	0	0.00	0	0.00	
TOTAL	1,112	460,887.55	2,200	700,320.18	3,312	1,161,207.73	

# KENTUCKY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION VESTED RETIREMENT SUMMARY JUNE 30, 2001

	Μ	MALE LIVES		FEMALE LIVES		TOTAL	
AGE NEAREST		MONTHLY		MONTHLY		MONTHLY	
BIRTHDAY	NUMBER	BENEFITS	NUMBER	BENEFITS	NUMBER	BENEFITS	
15-19	0	0.00	0	0.00	0	0.00	
20-24	0	0.00	0	0.00	0	0.00	
25-29	3	446.26	0	0.00	3	446.26	
30-34	13	2,898.94	5	1,048.31	18	3,947.25	
35-39	16	6,200.49	8	2,418.28	24	8,618.77	
40-44	14	5,850.58	7	2,165.13	21	8,015.71	
45-49	13	3,840.75	6	1,421.15	19	5,261.90	
50-54	17	5,179.96	8	1,895.71	25	7,075.67	
55-59	4	698.18	5	955.25	9	1,653.43	
60-64	2	515.84	1	462.17	3	978.01	
65-69	0	0.00	1	11.58	1	11.58	
70-74	0	0.00	0	0.00	0	0.00	
75-79	0	0.00	0	0.00	0	0.00	
80-84	0	0.00	0	0.00	0	0.00	
85 +	0	0.00	0	0.00	0	0.00	
TOTAL	82	25,631.00	41	10,377.58	123	36,008.58	

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# KENTUCKY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION VESTED MEMBERSHIP SUMMARY JUNE 30, 2001

		MALE LIVES	F	EMALE LIVES		TOTAL
AGE NEAREST		ACCUMULATED		ACCUMULATED		ACCUMULATED
BIRTHDAY	NUMBER	CONTRIBUTIONS	NUMBER	CONTRIBUTIONS	NUMBER	CONTRIBUTIONS
15-19	1,106	201,314.07	74	17,018.53	1,180	218,332.60
20-24	388	386,810.26	386	179,714.03	774	566,524.29
25-29	645	492,130.33	1,131	1,001,727.04	1,776	1,493,857.37
30-34	761	701,314.30	1,270	1,528,377.85	2,031	2,229,692.15
35-39	638	657,758.60	1,014	1,180,250.56	1,652	1,838,009.16
40-44	545	690,588.68	942	1,048,112.09	1,487	1,738,700.77
45-49	599	741,458.05	948	1,449,656.41	1,547	2,191,114.46
50-54	606	966,230.63	756	1,450,332.75	1,362	2,416,563.38
55-59	327	612,879.66	444	934,974.16	771	1,547,853.82
60-64	200	414,290.01	249	415,437.58	449	829,727.59
65-69	115	122,378.46	94	70,100.88	209	192,479.34
70-74	61	37,746.13	47	30,866.27	108	68,612.40
75-79	31	12,888.46	21	10,166.41	52	23,054.87
80-84	10	4,612.97	10	4,532.82	20	9,145.79
85 +	7	1,090.58	4	1,095.63	11	2,186.21
TOTAL	6,039	6,043,491.19	7,390	9,322,363.01	13,429	15,365,854.20

# KENTUCKY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION VESTED MEMBERSHIP SUMMARY JUNE 30, 2001

		MALE LIVES	F	EMALE LIVES		TOTAL
AGE NEAREST BIRTHDAY	NUMBED	ACCUMULATED CONTRIBUTIONS	NUMBER	ACCUMULATED CONTRIBUTIONS	NUMBER	ACCUMULATED CONTRIBUTION
DIRIHDAT	NUMBER	CONTRIBUTIONS	NUMBER		NUMBER	
15-19	97	16,650.50	0	0.00	97	16,650.50
20-24	34	22,989.56	11	7,737.06	45	30,726.62
25-29	107	73,482.01	37	37,607.40	144	111,089.41
30-34	126	119,481.11	30	30,991.38	156	150,472.49
35-39	72	57,537.19	39	64,781.17	111	122,318.36
40-44	41	42,142.92	33	57,937.93	74	100,080.85
45-49	46	33,120.63	19	26,728.11	65	59,848.74
50 - 54	37	49,073.26	17	23,851.09	54	72,924.35
55-59	20	14,706.93	14	22,095.37	34	36,802.30
60-64	13	15,959.49	3	5,078.32	16	21,037.81
65-69	2	1,335.55	0	0.00	2	1,335.55
70-74	1	211.92	0	0.00	1	211.92
75-79	0	0.00	0	0.00	0	0.00
80-84	0	0.00	0	0.00	0	0.00
85 +	0	0.00	0	0.00	0	0.00
TOTAL	596	446,691.07	203	276,807.83	799	723,498.90

# **SECTION VI**

# SUMMARY OF PRINCIPAL PLAN PROVISIONS

### **Effective Date**

The state of Kentucky established the Kentucky Employees Retirement System in July, 1956. The plan benefits have been improved several times, most recently as of August 1, 2001.

# <u>Plan Year</u>

A plan year is a twelve month period beginning on July 1.

#### **Final Compensation**

Final compensation is the average salary during the five highest paid fiscal years for nonhazardous positions. If the months of service credit during the highest five year period is less than forty-eight, one or more additional fiscal years shall be used. For a 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.

For hazardous positions, final compensation is the average salary during the three highest paid fiscal years.

### **Service**

Service means the sum of prior service and current service as defined below:

- (a) Prior service is credited for regular full-time employment of at least 100 hours of work per month with a participating agency before July 1, 1956. In some instances prior service credit is granted for time spent in the military.
- (b) Current service is obtained for regular full-time employment which averages at least 100 hours of work per month with participating agencies after July 1, 1956. Current service credit may be granted for military service and educational leaves if special criteria are met.
- (c) Service is increased by unused sick leave, up to a maximum of six months, for purposes of computing eligibility and the amount of benefits.

#### **Eligibility**

Any state department, board, or agency shall participate in the System when directed to do so by the Executive Order of the Governor. Membership in the system consists of:

(a) all persons who become employees of a department after such department first participates,

- (b) all persons who are employees on the date a department first participates and who elect within thirty days to become members and make contributions,
- (c) all persons who are employees of any credit union whose membership is limited to state government employees,
- (d) all persons who were professional staff employees of the Council on Public Higher Education or the Higher Education Assistance Authority and were making contributions to the system on the effective date of their respective Executive Order and filed a written election to continue in the System,
- (e) all persons who were professional staff employees of the Kentucky Authority for Educational Television on or after July 1, 1974,
- (f) members of the General Assembly and Constitutional officers of the General Assembly serving during the January, 1960 session or thereafter, and
- (g) officers and employees of the General Assembly and their assistants if employed by the General Assembly during the January, 1960 session and thereafter, but only after serving during six sessions of the General Assembly.

#### **Normal Retirement Date**

A member may elect to retire upon: (1) attaining age 65 for non-hazardous positions, or attaining age 55 for hazardous positions, and (2) having contributed to the System. Upon completion of 27 years of service credit, 15 of which are current service for non-hazardous positions, or completion of 20 years of service credit for hazardous positions, a member may elect to retire with an unreduced benefit.

### **Early Retirement Date**

A member may elect to retire before the normal retirement date at any time after: (1) for non-hazardous positions, attainment of age 55 and completion of 60 months of service credit at least 12 of which are current, or at any age after 25 years of service, or (2) for hazardous positions, attainment of age 50 and completion of 15 years of service credit.

#### **Normal Retirement Benefits**

For non-hazardous positions, upon attainment of age 65 and completion of 48 months of service, of which 12 months are current service, a monthly benefit equal to 1.97% of the member's final compensation multiplied by his service will be payable. However, effective February 1, 1999, a member who was participating as of January 1, 1998 and continues to participate through January 1, 1999 shall receive a benefit based on a 2.00% formula rate. In addition, any such member whose effective date of retirement is between February 1, 1999 and January 31, 2009, and who has at least 20 years of service credit, shall receive a retirement allowance based on a 2.20% benefit formula rate. For hazardous positions, a monthly benefit equal to 2.49% of the member's final compensation multiplied by his service will be payable upon attainment of age 55 and completion of 60 months of service of which 12 months

are current service. A member, with less than 48 months for non-hazardous positions or 60 months for hazardous positions, who retires on or after the normal retirement date is entitled to a retirement allowance which pays the actuarial equivalent of twice the member's accumulated contributions for life.

# **Early Retirement Benefits**

A member who elects early retirement is entitled to a monthly benefit reduced for each month by which the early retirement date precedes the first date on which the member would qualify for an unreduced benefit. If a non-hazardous position employee has 27 or more years of service credit, 15 of which are current, or a hazardous position employee has 20 or more years of service credit, an unreduced benefit is payable.

# Minimum Benefit

The normal retirement benefit for members with 10 or more years of service, at least one of which is current service, shall not be less than \$512 per year.

# **Disability Benefits**

A member with 60 months of service, 12 of which must be current service, is entitled to a retirement allowance computed in the same manner as the normal retirement benefit with service and final compensation determined as of the disability date. Service credit shall be added on to total service for the period from the last day of paid employment to the 65th birthday (55th for members in a hazardous position) up to a maximum of service credited to the last day of paid employment. Except for members with 25 or more (20 or more for hazardous) years of service on the last day of paid employment, the maximum combined service credit (total service and added service) shall not exceed 25 years (20 years for hazardous members). For non-hazardous position employees with 25 or more years of service credit, additional years of service credit will be added up to a maximum combined limit of 30, or actual service if greater. For hazardous position employees with 20 or more years of service credit, actual service 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. A partial disability benefit may be payable to hazardous employees if the disability is not total and permanent. The disability will be reduced to a rate determined by the Board.

# **Death Benefits**

If a member dies prior to retirement, but after 60 months of service, 12 of which are current and who is a contributing member, or after 12 years of service, one of which is current and who is not a contributing member, or after 48 months service if the member is age 65 or over, a benefit will be payable to the beneficiary based on the member's age, years of service and final compensation at the date of death. The benefit will be equal to the amount payable had the employee retired and elected a joint and 100% survivorship payment form.

If a member in a hazardous position dies in the line of duty and has a spouse as beneficiary, a \$5,000 lump sum payment will be made and a benefit of 25% of the member's final monthly rate of pay will be payable until death or remarriage. If the member in a hazardous position dies in the line of duty and has a dependent as beneficiary, a lump sum payment of \$10,000 will be made. Monthly payments shall be made for each dependent child equal to 10% of the member's final monthly rate of pay, but not greater than 40% of the member's final monthly rate of pay. The beneficiary of a hazardous duty member with 5 or more years of service, one of which is current, may elect a death benefit computed in the same manner as a non-hazardous employee using 2.49% rather than 1.97%.

Upon the death of a retired member, who had a minimum of 48 months of service credit, a death benefit of \$5,000 is payable.

#### **Optional Forms of Payment**

Joint and survivor annuities which provide a reduced benefit for the life of the member, with the benefit at the same or at a further reduced rate continuing after the member's death until the death of the designated beneficiary may be elected by the member prior to retirement. Other optional forms include a life annuity with 10, 15 or 20 years of payments guaranteed and a Social Security adjustment with or without survivor rights.

#### **Contributions**

Members contribute 5% of gross compensation (8% for hazardous positions). On each June 30, interest is credited at the rate to be determined by the Board on the accumulated contributions the member had in his account on the previous June 30. Upon termination a member may withdraw the contributions with interest, but will be entitled to no benefit payments.

#### Medical Insurance

Recipients of a retirement benefit may elect to participate in a voluntary hospital/medical group insurance plan for themselves as well as any beneficiaries or dependents. The cost of participation for any beneficiaries or dependents is borne by the retiree (except that dependents of hazardous position employees and legislators will have the same percentage paid by the system as the member). The retirement system will pay a portion of the cost of participation for the retiree based on years of service credit as follows:

Less than 4 years	0%
4 - 9 years	25%
10 - 14 years	50%
15 - 19 years	75%
20 or more years	100%

If a hazardous member is disabled in the line of duty, the retirement system will pay 100% of the cost of the member, spouse and eligible dependents. If a hazardous member is killed in the line of duty, the retirement system will pay 100% of the cost of the beneficiary and eligible dependents as long as they remain eligible for a monthly benefit payment.

# **Increase in Retirement Allowances**

Effective August 1, 1996, and on July 1 of each year thereafter, a recipient of a retirement allowance shall have his retirement allowance increased by the percentage increase in the annual average of the consumer price index for all urban consumers for the most recent calendar year as published by the federal Bureau of Labor Statistics, not to exceed five percent (5%). In determining the annual employer contribution rate, only the cost of increases granted as of the most recent valuation date shall be recognized. The benefits of this subsection as provided on August 1, 1996 and thereafter shall not be considered as benefits protected by the inviolable contract provisions of KRS 61.692, 16.652, and 78.852. The General Assembly reserves the right to suspend or reduce the benefits conferred in this subsection if in their judgment the welfare of the Commonwealth so demands.

# FORTY-SECOND ANNUAL ACTUARIAL VALUATION

JUNE 30, 2001

COUNTY EMPLOYEES RETIREMENT SYSTEM

FRANKFORT, KENTUCKY

# SECTION I

# **INTRODUCTION**

The results of the forty-second annual actuarial valuation of the County Employees Retirement System are presented in this report. The actuarial valuation was made on the basis of the data provided by the System as of June 30, 2001.

The purpose of the actuarial valuation is to determine the actuarial condition of the Retirement System and the rate of employer contribution for the ensuing fiscal year as required to support the System.

The plan provisions utilized in this valuation are described in the Summary of Principal Plan Provisions in Section VI. The basis of funding is defined in KRS 61.565 and provides that the actuarial valuation method would be uniform for all benefits provided by the System. The Entry Age Normal Actuarial cost method has been used for all benefits. KRS 61.565 provides that each employer participating in the System shall contribute an amount equal to the Normal Cost contribution rate, and an amount sufficient to amortize the Unfunded Actuarial Accrued Liability over 30 years using the level-percentage-of-payroll method. This is the standard used herein to determine whether the funding of the System is adequate.

The actuarial valuation results are based upon the employee census and asset data supplied by the office of the System, and upon the actuarial assumptions as stated in Section II.

#### **SECTION II**

#### ACTUARIAL CONSIDERATIONS

#### **Description of Actuarial Methods**

The actuarial valuation is the means by which the contingent liabilities and contribution rates of a retirement system are evaluated and determined. It provides a guide to the System to the financing required during years of active service to accumulate the funds needed to provide members' benefits. It also makes it possible to estimate beforehand the cost of proposed changes in the System so that action can be taken in the light of the cost consequences.

The methods of valuation are prescribed by KRS 61.565. The Entry Age Normal Cost Method was used to determine costs of all benefits with the exception of the retiree medical insurance benefit. Under this method the employer's contribution to the retirement system consists of Normal Cost, a payment to fund the Unfunded Actuarial Accrued Liability, medical insurance, and administrative expenses. The Normal Cost represents the contribution (as a level percent of payroll) that completely funds benefits at retirement if made from a person's entry into employment until his retirement. The Actuarial Accrued Liability represents the sum of money and investments that would be held in the fund if the retirement system had been in effect since the date each member was first employed. The payment to fund the Unfunded Actuarial Accrued Liability is the amount necessary to amortize this liability over 30 years using the "level-percentage-of-payroll" method. Under the "level-percentage-of-payroll" method, the amortization payment is an amount which remains constant as a percentage of payroll over the 30 years. The initial 30 year period began with the 1990 valuation. In each subsequent valuation, any change in Unfunded Actuarial Accrued Liability is identified and established as a separate amortization base with a 30 year funding period beginning with that valuation. The change in Unfunded Actuarial Accrued Liability established as a separate base in each valuation will include changes attributable to experience gains and/or losses over the prior year, as well as changes attributable to benefit improvements and revisions in actuarial assumptions and funding methods.

The medical insurance contribution rate was originally determined in the 1987 valuation as the level percent of payroll necessary to fund projected medical insurance premiums over the next sixteen years (taking into account the level of reserves in the Insurance Fund). Beginning in 1988, this rate was increased each year by a percentage amount needed to reach the Entry Age Normal funding rate within a 20 year period measured from 1987. This was continued through the 1992 valuation. In the 1992 valuation, an acceleration of the scheduled increases in the medical insurance contribution rate was recommended where possible. This acceleration in these rates was coupled with a deferral of future increases until the time of the next experience study, unless there was a deterioration in the funded position of the medical premium benefit in which case the rate levels were to be reviewed to redetermine an appropriate current funding level, or unless recommended contributions are not made in the prior year, in which case the shortfall would be spread over future years through an increase in the contribution rate. This continued through the 1995 valuation. Effective with the 1996 valuation, a new medical insurance funding policy was adopted by the Board. Under this revised policy, the medical insurance contribution rate for the 1996 valuation was set equal to the 1995 rate plus any reduction in the retirement and administrative expense rates between the 1995 and 1996 valuations (but in no event to be less than the 1995 medical insurance contribution rate). Beginning with the 1997 valuation, the medical insurance contribution rate is to be increased each year by the percentage amount necessary to

raise this medical insurance rate to the full Entry Age Normal Cost Method contribution rate by the year 2016.

The Board reviewed this funding policy in conjunction with the experience study prepared following the 2000 valuation. The current policy relative to the establishment of the permanent portion of the insurance fund rate was not changed. But in years where there may be a temporary reduction in the retirement fund contribution rate, the Board may use the amount of that reduction as an additional temporary contribution to the insurance fund.

In computing the full Entry Age Normal Cost Method contribution rate, liabilities are to be developed based on actuarial assumptions in use in the current valuation (as adjusted from time to time due to experience studies) and actuarial value of assets based on the same method as employed for the retirement benefit valuation. The actuarial value of assets for the medical contribution rate valuation utilized book value prior to the 1996 valuation, and a 5-year market to book value average from 1996 through the 2000 valuation. The current asset valuation method was employed effective with the 2001 valuation.

The amount of the administrative expense was based on the budgeted amount for the twelve months following the date of the valuation as allocated between Hazardous position and Non-Hazardous position employees.

#### **Actuarial Assumptions**

Since the actuarial valuation involves estimates of benefits payable in the future, it is necessary that assumptions be made as to the interest earnings, rates of mortality, withdrawal, retirement, and disability, and the rate at which salaries will increase. In addition, an assumption must be made relative to increases in medical insurance rates in order to value the liability for the medical insurance benefit.

It is desirable that the actuarial assumptions be reviewed periodically to see whether past experience and probable future experience justifies the continued use of these actuarial assumptions. Such a study was performed subsequent to the 2000 actuarial valuation and new actuarial assumptions were adopted by the Board for use in the 2001 and subsequent actuarial valuations, until such time as another experience study is performed. This valuation reflects assumptions based on the 2000 experience study. Actuarial assumptions used for hazardous position employees are similar to actuarial assumptions adopted for the State Police Retirement System (with the exception of the rate of retirement). The actuarial assumptions as used in this valuation are described later in this section.

#### Actuarial Value of Assets

The actuarial value of assets is determined in the following manner for the Retirement Fund and Insurance Fund:

- 1. Develop expected assets by projecting valuation assets from the prior valuation using the assumed valuation interest rate from the prior valuation and actual cash flows for the 12 months ending on the current valuation date.
- 2. The current year investment gain/loss shall be determined as the difference between actual market value as of the current valuation date and expected assets as computed in (1), further adjusted for any amount of investment gain/loss from prior years not yet recognized as of the current valuation date.
- 3. The amount of investment gain/loss for the current year shall be reflected equally over the current year and the following 4 years.
- 4. Valuation assets will be equal to expected assets from (1) plus/minus the amount of investment gain/loss from the current and prior 4 years to be recognized in the current year.
- 5. The starting point for this method shall be the actuarial value of assets as computed in the 2000 valuation under the prior asset valuation method then in effect. Only investment gains/losses occurring after June 30, 2000 shall be recognized and amortized under this method.

The following table shows the derivation of valuation assets for the Retirement Fund and the Insurance Fund as of the current valuation:

	RETIREME	NT FUND	INSURANCE FUND	
	Non		Non	
	Hazardous	Hazardous	Hazardous	Hazardous
June 30, 2000 Valuation Assets	5,284,033,534	1,445,542,794	319,642,694	168,659,912
Cash Flows				
> Employer Contributions	48,860,438	20,737,235	62,292,385	32,149,432
> Member Contributions	99,525,931	29,155,004		
> Retirement Benefits	170,256,139	56,519,865		
> Net Refunds	8,245,737	1,285,134		
> Insurance Premiums	- 7 - 7	y y -	27,523,966	11,511,058
> Administrative Expenses	6,174,091	512,265	244,142	108,621
> Investment Manager Fees	1,654,941	464,491	28,832	15,314
Valuation Interest Assumption	8.25%	8.25%	8.25%	8.25%
Expected Return on Valuation Assets	0.120 / 0	0.2070	0.2070	0.2070
Reflecting Actual Cash Flows *	434,367,554	118,890,588	27,793,459	14,760,663
Expected Valuation Assets	5,680,456,549	1,555,543,866	381,931,598	203,935,014
Actual Market Value of Assets			331,066,746	173,636,191
	4,397,346,547	1,211,154,618	, ,	
Investment Gain/(Loss)	(1,283,110,002)	(344,389,248)	(50,864,852)	(30,298,823)
Amortization Amounts From Prior				
Valuations				
> Valuation Year - 1				
>> Initial Amount	N/A	N/A	N/A	N/A
>> Current Valuation Amount	N/A	N/A	N/A	N/A
>> Amortization	N/A	N/A	N/A	N/A
> Valuation Year - 2				
>> Initial Amount	N/A	N/A	N/A	N/A
>> Current Valuation Amount	N/A	N/A	N/A	N/A
>> Amortization	N/A	N/A	N/A	N/A
> Valuation Year - 3				
>> Initial Amount	N/A	N/A	N/A	N/A
>> Current Valuation Amount	N/A	N/A	N/A	N/A
>> Amortization	N/A	N/A	N/A	N/A
> Valuation Year - 4				
>> Initial Amount	N/A	N/A	N/A	N/A
>> Current Valuation Amount	N/A	N/A	N/A	N/A
>> Amortization	N/A	N/A	N/A	N/A
Unamortized Amount of Gain/(Loss)				
From Prior Valuations	0	0	0	0
Investment Gain/(Loss) to be Amortized				
from Current Valuation Date				
> Amount	(1,283,110,002)	(344,389,248)	(50,864,852)	(30,298,823)
> Amortization	(1,205,110,002) (256,622,000)	(68,877,850)	(10,172,970)	(6,059,765)
June 30, 2001 Valuation Assets	(230,022,000)	(00,077,030)	(10,172,770)	(0,037,703)
> Expected Assets	5,680,456,549	1,555,543,866	381,931,598	203,935,014
> Expected Assets > Amortization Amounts		(68,877,850)		
	(256,622,000)		(10,172,970)	(6,059,765)
> Valuation Assets	5,423,834,549	1,486,666,016	371,758,628	197,875,249

\* Cash flows are assumed equally spread throughout the year.

# A. <u>STATEMENT OF ACTUARIAL ASSUMPTIONS</u>

(1)	Mortality:
-----	------------

(a) Active & retired lives	- 1983 Group Annuity Mortality Table, plus a pre-retirement duty death rate of .0005 per year for hazardous duty employees.
(b) Disabled lives	<ul> <li>Social Security Administration Disability Mortality Rates - Actuarial Study No. 75 (current rates used by PBGC for disabled lives receiving Social Security).</li> </ul>
Disablement	- Graduated rates based on 2000 experience study (no change from 1995 experience study).
Termination of employment #	- Graduated select (non-hazardous only) and ultimate rates based on 2000 experience study.
Retirement #	- <u>Non-Hazardous</u> :
	Age Retirement Rate
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	<ul><li>(b) Disabled lives</li><li>Disablement</li><li>Termination of employment #</li></ul>

At age 55-64 in lieu of the age related rate, 25% are assumed to retire as soon as eligible for unreduced benefits.

<u>Hazardous</u>: Assumed that 60% will retire as soon as eligible for unreduced benefits and balance will continue to age 55. (5) Marital status

	(a) Percentage marrie	ed -	100%.
	(b) Age difference	-	Males are assumed to be 3 years older than their spouses.
(6)	Dependent children	-	For hazardous position employees under duty related death benefits, it is assumed that the employee is survived by 2 dependent children each age 6.
(7)	Investment return	-	8.25% per year, net of investment related expenses, compounded annually.
(8)	Compensation progression	on # -	1st year:12.00%2nd year:10.00%3rd year:8.00%Thereafter:6.50%, compounded annually.
(9)	Underlying Inflation Rate	e -	3.5% per year; reflected in investment return and compensation progression assumptions.
(10)	Retiree Medical Insuranc	e# -	It was assumed that future retirees would select medical coverage in the same proportion that current retirees have selected coverage. Monthly contribution rates were assumed to be as follows:
			Rate in Effect <u>Plan Type</u> <u>on Valuation Date</u>

Plan Type	on Valuation Date
Single	
- Region 1	\$252.46
- Region 2	293.46
- Region 3	273.52
- All Others	234.00
Family	577.00
Parent Plus	350.00
Couple	525.00
Medicare*	
- Low Option	96.41
- High Option	229.03

Region 1: Boyd, Carter, Elliott, Greenup

Region 2: Christian, Daviess, Hancock, Henderson, Hopkins, McLean, Muhlenberg, Ohio, Todd, Trigg, Union, Webster

Region 3: Harlan, Lewis, Mason, Perry, Roberston

	Medicare Rate		<b>Contracts</b>	in Force
	Low	High	Low	High
<u>Carrier</u>	Option	<b>Option</b>	<u>Option</u>	Option
Anthem BC/BS	101.26	231.35	2,839	17,314
Bankers Life	91.78	216.94	272	156
Option 2000	83.05	216.51	504	1,767
Humana	85.00	247.00	490	1,729
Humana				
Gold Plus	85.00	136.00	17	507

\*Weighted average of current rates available from different carriers; weighting based on number of contracts in force.

In determining the target Entry Age Funding rate in valuations beginning with 1996, it was assumed that medical contribution rates would grow at the following annual levels:

Years	Medical Increase
2001 - 2002	12%
2003 - 2005	10%
2006 - 2010	9%
2011 - 2015	8%
2016 - 2020	7.5%
Thereafter	7%

The assumed rate of growth in number of retirees receiving medical insurance was based on assumed retirement and mortality patterns used throughout the valuation.

- For those active members with incomplete data, the following assumptions were made:
  - . If reported salary was zero or blank, then monthly salary was assumed to be \$887.58
  - . If reported age was blank, then assume current age equal to age 18 plus years of service reported
- (12) Members with Multiple Service Records
   For active members with service in more than one system, the liability has been valued as

(11) Missing data

#### follows:

- . Service under all systems is aggregated for purposes of determining benefit eligibility.
- . Future service is projected only under the system in which the member is currently active.
- . The actual benefit under each system is determined based only on service (past and projected future service, if applicable) under that system.
- . The liability is determined under each system based on the actuarial assumptions used for the system in which the member is currently active. This liability is then included in the valuation of the system in which the service has been earned (or is projected to be earned).

For inactive members with service in more than one system, the benefit attributable to the service under each system is determined, and the liability for that benefit is then included in the valuation of the system in which the service was earned.

# Changes in assumptions from those used in 2000 valuation.

#### **B**. SAMPLE RATES FOR NON-HAZARDOUS POSITION EMPLOYEES\*

	Active M	lortality	Disabled Mortality		
Age	Males	<b>Females</b>	Males	Females	
25	0.05%	0.03%	4.83%	2.63%	
30	0.06%	0.03%	3.62%	2.37%	
40	0.12%	0.07%	2.82%	2.09%	
50	0.40%	0.16%	3.83%	2.57%	
55	0.61%	0.25%	4.82%	2.95%	
60	0.92%	0.42%	6.03%	3.31%	

(1) Annual Rates of Mortality:

#### (2) Annual Rates of Decrement:

Age	Disablement	Ultimate Termination
	0.02204	2 4004
25	0.033%	2.40%
30	0.039%	2.40%
40	0.105%	2.00%
50	0.423%	1.60%
55	0.794%	1.20%
60	1.395%	0.20%

Select Rates of Termination: (3)

Years of Service	Select Termination
1	35.0%
2	10.0%
3	7.0%
4	5.0%
5	4.0%

Compensation Progression (after 1st 3 years): (4)

Age	Rate of <u>Annual Increase</u>	Compensation at Normal Retirement as Percentage Of Current Annual Compensation
25	6.50%	1,241.6%
30	6.50%	906.2%
40	6.50%	482.8%
50	6.50%	257.2%
55	6.50%	187.7%
60	6.50%	137.0%

\*Sample rates for hazardous position employees are included in the State Police Retirement System valuation.

## SECTION III

# **RESULTS OF THE 2001 ACTUARIAL VALUATION**

#### **Determination of Contribution Rate**

The rate of contribution by the participating Agencies required to provide 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, the employer share of the annual Normal Cost, medical insurance and the administrative costs of the System is shown in Table I. The required contribution is expressed both in dollars and as a percentage of the estimated payroll of the participating Agencies as of June 30, 2001.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 2001 are described in Section II. These costs are classified by type of benefit. The Normal Cost contribution rate of the participating Agencies is determined by reducing the total Normal Cost by the expected employee contributions. A breakdown of actuarial liabilities and costs between Hazardous and Non-Hazardous position employees appears in Table II for the Retirement Fund and Table IV for the Insurance Fund. A breakdown of the total Unfunded Actuarial Accrued Liability into the amortization amounts by year is shown in Table III for the Retirement Fund and Table V for the Insurance Fund. Table VI has been included to show an estimate of projected payouts from the funds over the next 10 years based on current plan provisions and actuarial assumptions.

#### **Actuarial Balance Sheet**

Table VII is the actuarial balance sheet of the County Employees Retirement System as of June 30, 2001 for the Retirement Fund. Table VIII is the actuarial balance sheet for the Insurance Fund. The "actuarial balance sheet" displays the fundamental relationship between actual assets, future contributions, and future benefits. The asset side of the balance sheet is comprised of actual fund assets plus the actuarial present value of future contributions on behalf of current members. The actuarial present values of all projected benefit payments to present active and inactive members make up the balance sheet liabilities.

### **Accountant's Information**

Table IX contains additional information needed to comply with GASB disclosure requirements relative to the Retirement Fund.

Table X contains information needed to comply under GASB Statement No. 12 relative to the Insurance Fund.

[	TABLE I		
COUNTY EMPLOY	EES RETIR	EMENT SYSTEM	
RETIREMENT			
DETERMINATION OF CO	NTRIBUTIO	N RATE - JUNE 30, 20	001
UNFUNDED ACTUARIAL ACC	CRUED LIAE	BILITY - RETIREMENT	FUND
			Percent *
Total Actuarial Accrued Liability	\$	4,900,142,654	255.15%
Assets at Actuarial Value		6,910,500,565	359.83%
Unfunded Actuarial Accrued Liability	\$	(2,010,357,911)	(104.68%)
Contribution - Payment on Unfunded			
Actuarial Accrued Liability	\$	(104,138,682)	(5.42%)
NORMAL COS	ST - RETIRE	MENT FUND	
Retirement Benefits	\$	180,619,180	9.40%
Disability Benefits		20,085,235	1.05%
W ithdraw al Benefits (Vested and			
Refund of Contributions)		13,909,478	0.72%
Survivor Benefits		10,969,310	0.57%
Total Normal Cost	\$	225,583,203	11.74%
Less: Employee Contributions		103,767,361	5.40%
Normal Cost - State	\$	121,815,842	6.34%
TOTAL ANNUAL EMPLOYER CO	ST - RETIRE	MENT AND INSURAN	
Non-Hazardous Duty Cost			
Normal Cost	\$	93,608,939	5.86% **
Payment on Unfunded Actuarial			
Accrued Liability		(90,122,133)	(5.64%) **
Administrative Expense		7,042,404	0.44% **
Subtotal - Retirement Fund			
(Not Less Than Zero)	\$	10,529,210	0.66% **
Group Hospital and Medical			
Insurance Premiums		90,746,709	5.68% **
Total Annual Cost	\$	101,275,919	6.34% **
Hazardous Duty Cost			
Normal Cost	\$	28,206,903	8.74% ***
Payment on Unfunded Actuarial			
Accrued Liability		(14,016,549)	(4.34%) ***
Administrative Expense		887,232	0.27% ***
Subtotal - Retirement Fund			
(Not Less Than Zero)	\$	15,077,586	4.67% ***
Group Hospital and Medical			
Insurance Premiums		37,479,293	11.61% ***
Total Annual Cost	\$	52,556,879	16.28% ***
Based on estimated annual salaries			
* Total	\$	1,920,472,384	
** Non-Hazardous Position Employees	\$	1,597,653,320	
*** Hazardous Position Employees	\$	322,819,064	
nazardous i ostron Employees	Ψ	522,017,004	

TABLE II						
COUNTY E	MPLO	OYEES RETIREMI	ENT	SYSTEM		
	RE	TIREMENT FUND				
CLASSIFICATION OF ACT	UAR	IAL LIABILITIES A	ND	COSTS - JUNE 30	, 20	01
		lon-Hazardous		Hazardous		
		Position		Position		
		Employees	Employees		Total	
ΑСΤ		AL ACCRUED LIA	RILI			Total
Active Members						
Retirement Benefits	\$	1,808,159,673	\$	573,685,697	\$	2,381,845,370
Disability Benefits	Ŷ	127,412,953	Ť	13,821,167	Ŷ	141,234,120
Withdraw al Benefits (Vested and		.2,,2,,				,201,120
Refund of Contributions)		58,946,158		7,533,279		66,479,437
Survivor Benefits		111,326,728		13,879,321		125,206,049
Total - Actives	\$	2,105,845,512	\$	608,919,464	\$	2,714,764,976
Inactive Members	+	21.0010.010.2	Ť	00017171101	÷	2,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Retired Members and	-					
Beneficiaries	\$	1,551,618,750	\$	581,315,554	\$	2,132,934,304
Vested Retirement		33,500,336		2,824,220		36,324,556
Vested Membership		15,317,614		801,204		16,118,818
Total - Inactives	\$	1,600,436,700	\$	584,940,978	\$	2,185,377,678
Total Actuarial Accrued Liability	\$	3,706,282,212	\$	1,193,860,442	\$	4,900,142,654
UNFUNDE	DAC	TUARIAL ACCRU	ED L	IABILITY		
Total Actuarial Accrued Liability	\$	3,706,282,212	\$	1,193,860,442	\$	4,900,142,654
Less Actuarial Value of Assets		5,423,834,549		1,486,666,016		6,910,500,565
Unfunded Actuarial Accrued Liability	\$	(1,717,552,337)	\$	(292,805,574)	\$	(2,010,357,911)
NORMAL COST						
Retirement Benefits	\$	134,332,071	\$	46,287,109	\$	180,619,180
Disability Benefits		17,889,877		2,195,358		20,085,235
W ithdraw al Benefits (Vested and						
Refund of Contributions)		11,206,818		2,702,660		13,909,478
Survivor Benefits		9,351,952		1,617,358		10,969,310
Total Normal Cost	\$	172,780,718	\$	52,802,485	\$	225,583,203
Less Employee Contributions		79,171,779		24,595,582		103,767,361
Total Normal Cost - State	\$	93,608,939	\$	28,206,903	\$	121,815,842

			TABLE III				
	COUNTY EMPLOYEES RETIREMENT SYSTEM						
	UNFUNDED ACTUARIAL ACCRUED LIABILITY - RETIREMENT FUND - JUNE 30, 2001						
	Amount o	f Base on					
Date	Date	Current	Amortization				
Established	Established	Valuation Date	Payment	Source of Base			
		N	on-Hazardous Positio				
6/30/1990	\$ 93,672,421	\$ 116,923,615	\$ 7,984,831	Cumulative unfunded actuarial accrued liability set up as initial			
				base under revised funding policy (30 year level percent of payroll			
				method)			
6/30/1991	61,472,822	75,941,702	4,994,990	Experience gains/losses for 7/1/1990 to 6/30/1991			
6/30/1992	(125,111,651)	(152,596,619)	(9,690,496)	Experience gains/losses for 7/1/1991 to 6/30/1992; Asset valuation			
				method change			
6/30/1993	(28,358,370)	(34,073,827)	(2,093,700)	Experience gains/losses for 7/1/1992 to 6/30/1993			
6/30/1994	59,026,195	69,727,865	4,153,968	Experience gains/losses for 7/1/1993 to 6/30/1994; Retiree COLA's			
6/30/1995	(35,766,009)	(41,462,920)	(2,399,210)	Experience gains/losses for 7/1/1994 to 6/30/1995			
6/30/1996	(188,502,047)	(214,095,120)	(12,052,913)	Experience gains/losses for 7/1/1995 to 6/30/1996; Revised actuaria			
				assumptions; Correction of pension allocation for members in pay			
				status with both non-hazardous and hazardous service in KERS			
6/30/1997	(200,122,489)	(222,157,360)	(12,186,664)	Experience gains/losses for 7/1/1996 to 6/30/1997; 2.8% retiree			
				COLA effective 8/1/1996			
6/30/1998	(311,976,854)	(338,026,376)	(18,093,200)	Experience gains/losses for 7/1/1997 to 6/30/1998; Increase in death			
				benefit from \$2,500 to \$5,000; 3.0% retiree COLA effective 7/1/1997			
6/30/1999	(379,088,077)	(400,376,132)	(20,938,471)	Experience gains/losses for 7/1/1998 to 6/30/1999; 2.3% retiree			
				COLA effective 7/1/1998			
6/30/2000	(804,685,873)	(827,432,598)	(42,329,797)	Experience gains/losses for 7/1/1999 to 6/30/2000; 1.6% retiree			
				COLA effective 7/1/1999			
6/30/2001	250,075,433	250,075,433	12,528,529	Experience gains/losses for 7/1/2000 to 6/30/2001; 2.2% retiree			
				COLA effective 7/1/2000; 3-year average earnings window			
Total	\$ (1,609,364,499)	\$ (1,717,552,337)	\$ (90,122,133)				

	TABLE III (Continued)						
	COUNTY EMPLOYEES RETIREMENT SYSTEM						
	UNFUNDED ACTUARIAL ACCRUED LIABILITY - RETIREMENT FUND - JUNE 30, 2001						
	Amount o	of Base on					
Date	Date	Current	Amortization				
Established	Established	Valuation Date	Payment	Source of Base			
			Hazardous Position				
6/30/1990	\$ 68,584,978	\$ 85,609,017	\$ 5,846,325	Cumulative unfunded actuarial accrued liability set up as initial			
				base under revised funding policy (30 year level percent of payroll			
				method)			
6/30/1991	29,934,803	36,980,569	2,432,360	Experience gains/losses for 7/1/1990 to 6/30/1991			
6/30/1992	(12,941,304)	(15,784,295)	(1,002,366)	Experience gains/losses for 7/1/1991 to 6/30/1992; Asset valuation			
				method change			
6/30/1993	(7,291,213)	(8,760,711)	(538,311)	Experience gains/losses for 7/1/1992 to 6/30/1993			
6/30/1994	1,854,577	2,190,820	130,516	Experience gains/losses for 7/1/1993 to 6/30/1994; Retiree COLA's			
6/30/1995	24,831,672	28,786,931	1,665,727	Experience gains/losses for 7/1/1994 to 6/30/1995			
6/30/1996	(65,565,268)	(74,467,116)	(4,192,275)	Experience gains/losses for 7/1/1995 to 6/30/1996; Revised actuarial			
				assumptions; Correction of pension allocation for members in pay			
				status with both non-hazardous and hazardous service in KERS			
6/30/1997	(62,908,989)	(69,835,705)	(3,830,907)	Experience gains/losses for 7/1/1996 to 6/30/1997; 2.8% retiree			
				COLA effective 8/1/1996			
6/30/1998	(50,329,820)	(54,532,272)	(2,918,894)	Experience gains/losses for 7/1/1997 to 6/30/1998; Revised average			
				salary definition from 5 years to 3 years; Increase in death benefit			
				from \$2,500 to \$5,000; 3.0% retiree COLA effective 7/1/1997			
6/30/1999	(97,060,446)	(102,510,969)	(5,361,016)	Experience gains/losses for 7/1/1998 to 6/30/1999; 2.3% retiree			
				COLA effective 7/1/1998			
6/30/2000	(194,399,700)	(199,894,958)	(10,226,226)	Experience gains/losses for 7/1/1999 to 6/30/2000; 1.6% retiree			
				COLA effective 7/1/1999			
6/30/2001	79,413,115	79,413,115	3,978,518	Experience gains/losses for 7/1/2000 to 6/30/2001; 2.2% retiree			
				COLA effective 7/1/2000			
Total	\$ (285,877,595)	\$ (292,805,574)	\$ (14,016,549)				

		TABLE IV				
COUNTY E	MPLO	OYEES RETIREME	ΞΝΤ	SYSTEM		
	IN	SURANCE FUND				
DETERMINATION OF EN	ITRY	AGE CONTRIBUT	ION	RATE - JUNE 30,	200	)1
	N	on-Hazardous		Hazardous		
		Position		Position		
		Employees		Employees		Total
ACT	UARI	AL ACCRUED LIA	BIL	ITY		
Active Members	\$	1,217,873,929	\$	404,967,126	\$	1,622,841,055
Inactive Members						
Retired Members	\$	518,728,694	\$	280,782,555	\$	799,511,249
Beneficiaries		143,179		30,879,713		31,022,892
Vested Retirement		56,964,966		4,975,898		61,940,864
Vested Membership		0		0		0
Total - Inactives	\$	575,836,839	\$	316,638,166	\$	892,475,005
Total Actuarial Accrued Liability	\$	1,793,710,768	\$	721,605,292	\$	2,515,316,060
UNFUNDED ACTUARIAL ACCR	UEDL	IABILITY				
Total Actuarial Accrued Liability	\$	1,793,710,768	\$	721,605,292	\$	2,515,316,060
Less Actuarial Value of Assets		371,758,628		197,875,249		569,633,878
Unfunded Actuarial Accrued Liability	\$	1,421,952,140	\$	523,730,043	\$	1,945,682,182
		NORMAL COST				
Gross Normal Cost		132,598,044	\$	48,025,531	\$	180,623,575
Less Employee Contributions	Ψ	132,390,044	Ψ	40,023,331	Ψ	0
Net Normal Cost - State	\$	132,598,044	\$	48,025,531	\$	180,623,575
Estimated Annual Salaries	\$	1,597,653,320	\$	322,819,064	\$	1,920,472,384
	AL AN	NUAL EMPLOYE	RCO	DST		
Contribution Amount	<b>_</b> .					
Normal Cost	\$	132,598,044	\$	48,025,531	\$	180,623,575
Payment on Unfunded Actuarial						
Accrued Liability		77,998,282		28,805,249		106,803,531
Total Annual Cost	\$	210,596,326	\$	76,830,780	\$	287,427,106
As Percent of Payroll						
Normal Cost		8.30%		14.88%		9.41%
Payment on Unfunded Actuarial						
Accrued Liability		4.88%		8.92%		5.56%
Total Annual Cost		13.18%		23.80%		14.97%
INS	URAN	ICE FUND SHORT	FFA	LL		
Full Entry Age Funding Level		13.18%		23.80%		14.97%
Current Funding Allocation *		4.60%		11.18%		0.00%
Additional to Pick Up By 2016		8.58%		12.62%		14.97%
Expected Increase in Insurance					Ī	
Fund Rate in 2002 Valuation		0.33%		0.58%		N ⁄A
* Without regard to any one-year tempo	rary a	idjustments for a	ctua	rial gains		

					TABLE V	
						REMENT SYSTEM
				ACCF	RUED LIABILITY	- INSURANCE FUND - JUNE 30, 2001
	Amount o	of Bas				
Date	Date		Current		Amortization	
Established	Established		Valuation Date		Payment	Source of Base
					azardous Positio	
6/30/1996	\$ 901,011,537	\$	1,023,342,585	\$	57,611,118	Cumulative unfunded actuarial accrued liability set up as initial
						base under revised funding policy (30 year level percent of payro
						method)
6/30/1997	29,886,573		33,177,291		1,819,973	Experience gains/losses for 7/1/1996 to 6/30/1997; Impact of actua
						insurance fund contributions vs. full entry age amounts
6/30/1998	62,468,342		67,684,340		3,622,872	Experience gains/losses for 7/1/1997 to 6/30/1998; Impact of actua
						insurance fund contributions vs. full entry age amounts
6/30/1999	(21,106,379)		(22,291,628)		(1,165,785)	Experience gains/losses for 7/1/1998 to 6/30/1999; Impact of actua
						insurance fund contributions vs. full entry age amounts
6/30/2000	70,199,744		72,184,139		3,692,796	Experience gains/losses for 7/1/1999 to 6/30/2000; Impact of actua
						insurance fund contributions vs. full entry age amounts
6/30/2001	247,855,413		247,855,413		12,417,308	Experience gains/losses for 7/1/2000 to 6/30/2001; Impact of actua
						insurance fund contributions vs. full entry age amounts
Total	\$ 1,290,315,230	\$	1,421,952,140		77,998,282	
				Haza	ardous Position	
6/30/1996	\$ 318,111,968	\$	361,302,282	\$	20,340,235	Cumulative unfunded actuarial accrued liability set up as initial
						base under revised funding policy (30 year level percent of payro
						method)
6/30/1997	53,367,623		59,243,767		3,249,876	Experience gains/losses for 7/1/1996 to 6/30/1997; Impact of actua
						insurance fund contributions vs. full entry age amounts
6/30/1998	15,379,222		16,663,359		891,923	Experience gains/losses for 7/1/1997 to 6/30/1998; Impact of actua
						insurance fund contributions vs. full entry age amounts
6/30/1999	(13,162,362)		(13,901,507)		(727,007)	Experience gains/losses for 7/1/1998 to 6/30/1999; Impact of actua
						insurance fund contributions vs. full entry age amounts
6/30/2000	17,607,673		18,105,404		926,236	Experience gains/losses for 7/1/1999 to 6/30/2000; Impact of actua
						insurance fund contributions vs. full entry age amounts
6/30/2001	82,316,738		82,316,738		4,123,986	Experience gains/losses for 7/1/2000 to 6/30/2001; Impact of actu
						insurance fund contributions vs. full entry age amounts
Total	\$ 473,620,862	\$	523,730,043	\$	28,805,249	

DETI	REMENT FUND PAYMEN							
Non-Hazardous     Hazardous       Position     Position       Plan Year     Employees     Employees								
7/1/2001 to 6/30/2002	191,701,000	63,816,000	255,517,000					
7/1/2002 to 6/30/2003	204,575,000	67,846,000	272,421,000					
7/1/2003 to 6/30/2004	218,510,000	72,483,000	290,993,000					
7/1/2004 to 6/30/2005	234,490,000	78,343,000	312,833,000					
7/1/2005 to 6/30/2006	253,500,000	85,906,000	339,406,000					
7/1/2006 to 6/30/2007	275,066,000	95,413,000	370,479,000					
7/1/2007 to 6/30/2008	298,795,000	105,373,000	404,168,000					
7/1/2008 to 6/30/2009	325,005,000	117,618,000	442,623,000					
7/1/2009 to 6/30/2010	353,349,000	130,845,000	484,194,000					
7/1/2010 to 6/30/2011	384,366,000	144,846,000	529,212,000					
INSU	JRANCE FUND PAYMEN	T PROJECTIONS						
	Non-Hazardous Position	Hazardous Position						
Plan Year	Employees	Employees	Total					
7/1/2001 to 6/30/2002	36,579,000	15,593,000	52,172,000					
7/1/2002 to 6/30/2003	42,564,000	17,669,000	60,233,000					
7/1/2003 to 6/30/2004	49,193,000	19,991,000	69,184,000					
7/1/2004 to 6/30/2005	56,555,000	22,599,000	79,154,000					
7/1/2005 to 6/30/2006	65,210,000	25,882,000	91,092,000					
7/1/2006 to 6/30/2007	74,785,000	29,610,000	104,395,000					
7/1/2007 to 6/30/2008	85,322,000	33,579,000	118,901,000					
7/1/2008 to 6/30/2009	97,516,000	38,506,000	136,022,000					
7/1/2009 to 6/30/2010	111,674,000 127,851,000	44,274,000 50,734,000	155,948,000 178,585,000					

Projected benefit payments reflect future actual experience consistent with actuarial assumptions used in current annual valuation. Future cost-of-living adjustments of 3% per annum have been assumed in retirement benefit amounts. Insurance fund payments reflect future medical inflation rates consistent with the valuation assumption. There has not been any assumption made as to the number of future new entrants who may enter the plan. Nor has any provision been made for any change in the basic benefit structure of the plan beyond changes already legislated.

ТАВІ				
COUNTY EMPLOYEES		NT SVSTEM		
ACTUARIAL BALANCE		NE 30, 2001		
	L ASSETS			
Fund Assets at Actuarial Value (Plus Refunds and	AL ASSETS		1	
Expenses Payable) *			\$	6,910,500,565
Actuarial Present Value of Future Member Contribu	itions		<u> </u>	1,198,151,209
Actuarial Present Value of Future Employer				, , . ,
Contributions				
For Normal Costs	\$	1,314,803,154		
For Unfunded Actuarial Accrued Liability		(2,010,357,911)	)	
Total			\$	(695,554,757
Total Actuarial Assets	,		\$	7,413,097,017
ACTUARIAL		s		
Actuarial Present Value of Future Benefits				
Inactive Members:				
Retired Members and Beneficiaries	\$	2,132,934,304		
Vested Retirement		36,324,556		
Vested Membership		16,118,818		
Total - Inactive			\$	2,185,377,678
Actuarial Present Value of Future Benefits				
Active Members:				
Retirement Benefits	\$	4,391,167,713		
Disability Benefits		356,409,233		
Withdrawal Benefits (Vested and				
Refund of Contributions)		234,476,889		
Survivor Benefits		245,665,504		
Total - Active			\$	5,227,719,339
Refunds and Expenses Payable	4		\$	0
Total Actuarial Liabilities			\$	7,413,097,017
Notes				
* Values as of June 30, 2001				
Market value of assets:	No	n-Hazardous	\$	4,397,346,547
	На	zardous	\$	1,211,154,618
	То	tal	\$	5,608,501,165
Actuarial value of assets:			\$	6,910,500,565
Member's Contribution Account:			\$	855,815,124
** Present value of accrued benefit deferred to n	ormal retire	ement date.	-	

TABLE COUNTY EMPLOYEES RI INSURANC ACTUARIAL BALANCE SH	ETIREMEN E FUND		
ACTUARIAL	ASSETS		
Fund Assets at Actuarial Value (Plus Refunds and			
Expenses Payable) *			\$ 569,633,878
Actuarial Present Value of Future Member Contribution	ons (Note:	AII	
Future Member Contributions Credited Against Ret	irement F	und)	(
Actuarial Present Value of Future Employer			
Contributions			
For Normal Costs	\$	2,128,671,358	
For Unfunded Actuarial Accrued Liability		1,945,682,182	
Total			\$ 4,074,353,54
Total Actuarial Assets	,		\$ 4,643,987,41
ACTUARIAL L	IABILITIES		
Actuarial Present Value of Future Benefits			
Inactive Members:			
Retired Members and Beneficiaries	\$	830,534,141	
Vested Retirement		61,940,864	
Vested Membership		0	
Total - Inactive			\$ 892,475,00
Actuarial Present Value of Future Benefits			
Active Members:			\$ 3,751,512,41
Refunds and Expenses Payable	÷		\$
Total Actuarial Liabilities			\$ 4,643,987,41
Notes			
* Values as of June 30, 2001			
Market value of assets:	Noi	n-Hazardous	\$ 331,066,74
	Haz	ardous	\$ 173,636,19
	Tot	al	\$ 504,702,93
Actuarial value of assets:			\$ 569,633,87

COUN	TABLE IX TY EMPLOYEES RETIREMEN	NT SYSTEM						
ACCOUNTANT'S IN	FORMATION - RETIREMEN	T FUND - JUNE 30, 2	001					
G	ASB DISCLOSURE INFORM	ATION						
Non-Hazardous Hazardous								
	Position	Position						
	Employees	Employees	Total					
	NUMBER OF MEMBERS	5						
Inactive Members								
Retired Members	21,706	3,004	24,710					
Beneficiaries	2,709	217	2,926					
Vested Retirements	4,080	148	4,228					
Vested Membership	24,276	462	24,738					
Total Inactive Members	52,771	3,831	56,602					
Active Members								
Vested Members	44,965	4,603	49,568					
Nonvested Members	33,808	3,983	37,791					
Total Active Members	78,773	8,586	87,359					
Total Members	131,544	12,417	143,961					

#### TABLE X COUNTY EMPLOYEES RETIREMENT SYSTEM ACCOUNTANT'S INFORMATION - INSURANCE FUND - JUNE 30, 2001 INFORMATION REQUIRED UNDER GASB STATEMENT NO. 12

IN F C	RMATION REQU	IRED	UNDER GASB S	TATEN	IENI NO. 12	
			Non-Hazardous		Hazardous	
			Position		Position	
			Employees		Employees	Total
		ΜΒΕ	R OF MEMBERS			
Contracts in Force - Retirees a						
(1) Single;	- 100% Paid		2,528		782	3,310
Pre-Medicare	- 75% Paid		468		38	506
	- 50% Paid		444		35	479
	- 25% Paid		249		14	263
/	- 0% Paid		526		0	526
(2) Family;	- 100% Paid		154		499	653
Pre-Medicare	- 75% Paid		9		14	23
	- 50% Paid		11		10	21
	- 25% Paid		8		5	13
	- 0% Paid		3		0	3
(3) Parent +;	- 100% Paid		138		177	315
Pre-Medicare	- 75% Paid		8		16	24
	- 50% Paid		2		7	9
	- 25% Paid		6		2	8
	- 0% Paid		50		0	50
(4) Couple +;	- 100% Paid		463		717	1,180
Pre-Medicare	<ul> <li>75% Paid</li> <li>50% Paid</li> </ul>		54 59		11	65 69
	- 25% Paid				10	
	- 25% Paid - 0% Paid		27 3		1 0	28 3
(5) Medicare Regular	- 100% Paid		945		19	964
(5) Medicale Regular	- 75% Paid		945		0	904 0
	- 50% Paid		0		0	0
	- 25% Paid		717		13	730
	- 0% Paid		550		0	550
(6) Medicare High	- 100% Paid		3,382		559	3,941
Option	- 75% Paid		1,626		65	1,691
o p tion	- 50% Paid		1,736		46	1,782
	- 25% Paid		967		21	988
	- 0% Paid		1,263		3	1,266
Vested Retirements			4,080		148	4,228
Vested Membership			24,276		462	 24,738
Active Members			78,773		8,586	87,359
	UNFUNDED N	MEDI	CAL BENEFIT OB	LIGAT	IO N	
Medical Benefit Obligation						
Retirees, Beneficiaries and						
Vested Terminated Membe	rs	\$	575,836,839	\$	316,638,166	\$ 892,475,005
Active Members			1,217,873,929		404,967,126	1,622,841,055
Total Medical Benefit Obligat	on	\$	1,793,710,768	\$	721,605,292	\$ 2,515,316,060
Net Assets at Actuarial Value		\$	371,758,628	\$	197,875,249	\$ 569,633,878
Unfunded Medical Benefit Obli	gation	\$	1,421,952,140	\$	523,730,043	\$ 1,945,682,182

## SECTION IV

## COMMENTS AND CERTIFICATION

### **Comments**

For the Retirement Fund, the total Actuarial Accrued Liability has increased from \$4,453,154,831 on June 30, 2000 to \$4,900,142,654 on June 30, 2001. The Unfunded Actuarial Accrued Liability has increased from \$(2,276,421,497) to \$(2,010,357,911). Total actuarial value of assets as of June 30, 2001 was equal to \$6,910,500,565. The Unfunded Actuarial Accrued Liability increased from (121.95%) to (104.68%) as a percentage of annual payroll and increased from (51.1%) to (41.0%) as a percentage of the Actuarial Accrued Liability in the year ended June 30, 2001.

For the Insurance Fund, the total Actuarial Accrued Liability has increased from \$2,066,652,957 on June 30, 2000 to \$2,515,316,060 on June 30, 2001. The Unfunded Actuarial Accrued Liability has increased from \$1,578,352,351 to \$1,945,682,182. Total actuarial value of assets as of June 30, 2001 was equal to \$569,633,878. The Unfunded Actuarial Accrued Liability increased from 76.4% to 77.4% as a percentage of the Actuarial Accrued Liability in the year ended June 30, 2001.

The change in contribution rate between the 2000 and 2001 valuations is a function of actual plan experience since the last valuation. A formal gain and loss analysis would identify the portion of the contribution rate change attributable to each element of plan experience and benefit change. However, undertaking such an analysis would be extremely time consuming and expensive. In lieu of the formal analysis, we have estimated the impact of the various components of gain and loss based on changes in statistical averages of each group. The following table shows the results of this computation:

	Non-Hazardous Position Employees	Hazardous Position Employees
June 30, 2000 Contribution Rate	6.34%	16.28%
Change in Payment Percentage Due to Covered		
Payroll Experience	(0.23%)	0.32%
Investment Return Experience		
> Prior to Asset Valuation Method Change	0.04%	0.15%
> Impact of Asset Valuation Method Change	0.76%	0.92%
Salary Increase Experience	(0.66%)	0.02%
Decrements Experience*	0.47%	(0.07%)
Change in Insurance Fund Rate		
> One-Year Temporary Funding Rate	(0.77%)	(2.16%)
> Increase in Long Term Funding Rate	0.31%	0.55%
Change in Administrative Expense Rate	(0.11%)	(0.17%)
Retiree COLA Effective 7/1/2000	0.10%	0.19%
Legislated Changes		
> 3 Year Average Window for Nonhazardous	0.09%	0.00%
Change in Actuarial Assumptions	0.00%	0.25%
Reduction in Amount Available from Prior Year Retirement		
Fund Rate to Offset Current Year Increases	N/A	N/A
June 30, 2001 Contribution Rate	6.34%	16.28%
* Includes mortality, disability, termination of employment and	retirement experience.	

The annual contribution rate required by the participating Agencies to provide the Normal Cost, 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, and pay administrative expenses for Non-Hazardous position employees is 0.66%. An additional 5.68% is required to fund medical insurance for retirees, bringing the required contribution up to 6.34%. This is the same as the current 6.34% budgeted contribution rate. Therefore, it is our opinion that the contribution rate beginning July 1, 2002 should remain at the 6.34% level, and we so recommend.

The annual contribution rate required by the participating Agencies to provide the Normal Cost, 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, and pay administrative expenses for Hazardous position employees is 4.67%. An additional 11.61% is required to fund medical insurance for retirees, bringing the required contribution up to 16.28%. This is the same as the current 16.28% budgeted contribution rate. Therefore, it is our opinion that the contribution rate beginning July 1, 2002 should be remain at the 16.28% level, and we so recommend.

The recommended contribution rates are based on current statutory benefits. The budgeted contribution rates will again be reviewed in the June 30, 2002 valuation.

The following table shows the total Actuarial Accrued Liability, the Unfunded Actuarial Accrued Liability, percent unfunded and the growth of the invested assets relative to retirement related benefits at selected intervals since the inception of the System.

July 1 of Year	Total Actuarial Accrued	Unfunded Actuarial Accrued	Percent	Actuarial Value of Assets	Increase in
Shown	Liability	Liability	Unfunded		Assets
1960	\$ 5,602,131	\$ 4,737,680	84.6%	\$ 864,451	\$ 864,451
1965	12,510,487	6,897,273	55.1%	5,613,214	1,255,742
1971	40,305,948	16,885,927	41.9%	23,420,022*	4,850,170
1975	85,322,085	24,467,454	28.7%	60,854,631*	11,704,780
1976	128,824,236	50,089,614	38.9%	78,734,622*	17,879,991
1977	152,900,347	52,474,756	34.3%	100,425,591*	21,690,969
1978	175,194,867	50,394,913	28.8%	124,799,954*	24,374,363
1979	213,834,377	60,742,472	28.4%	153,091,905*	28,291,951
1980	266,018,621	75,787,680	28.5%	190,230,941*	37,139,036
1981	260,872,162	27,101,917	10.4%	233,770,245	43,539,304
1982	306,087,531	20,552,642	6.7%	285,534,889	51,764,644
1983	340,705,763	(2,450,006)	(0.8%)	343,155,769	57,620,880
1984	421,336,269	15,148,838	3.6%	406,187,431	63,031,662
1985	463,618,532	(14,424,689)	(3.1%)	478,043,221	71,855,790
1986	535,948,094	(67,867,706)	(12.7%)	603,815,800	125,772,579
1987	678,442,760	(49,287,967)	(7.3%)	727,730,727	123,914,927
1988	829,346,323	(10,232,573)	(1.2%)	839,578,896	111,848,169
1989	1,113,868,548	35,815,913	3.2%	1,078,052,635	238,473,739
1990	1,432,323,666	162,257,399	11.3%	1,270,066,267	192,013,632
1991	1,654,338,706	258,111,701	15.6%	1,396,227,005	126,160,738
1992**	1,861,978,403	126,939,495	6.8%	1,735,038,908	338,811,903
1993	2,079,930,047	94,249,338	4.5%	1,985,680,709	250,641,801
1994	2,330,344,241	156,989,469	6.7%	2,173,354,772	187,674,063
1995	2,603,575,921	149,447,861	5.7%	2,454,128,060	280,773,288
1996	2,778,316,473	(101,712,065)	(3.7%)	2,880,028,538	425,900,478
1997	3,144,928,093	(369,096,965)	(11.7%)	3,514,025,868	633,997,330
1998	3,529,912,902	(743,349,593)	(21.1%)	4,273,262,495	759,236,627
1999	3,955,132,659	(1,241,746,262)	(31.4%)	5,196,878,921	923,616,426
2000	4,453,154,831	(2,276,421,497)	(51.1%)	6,729,576,328	1,532,697,407
2001***	4,900,142,654	(2,010,357,911)	(41.0%)	6,910,500,565	180,924,237
	ed appreciation of i		, , , , , , , , , , , , , , , , , , ,		

\*\*\*Change in asset valuation method effective in this valuation to 5-year smoothing of investment gains/(losses).

The following table shows the total Actuarial Accrued Liability, the Unfunded Actuarial Accrued Liability, percent unfunded and the growth of the invested assets relative to medical premium benefits since 1990.

	COUNTY EMPLO	YEES RETIREM	ENT SYSTEM - I	<b>NSURANCE FUND</b>	
		Unfunded			
	Total Actuarial	Actuarial		Actuarial Value	
July 1 of Year	Accrued	Accrued	Percent	of Assets	Increase in
Shown	Liability	Liability	Unfunded		Assets
1990	\$ 700,151,838	\$ 670,720,901	95.8%	\$ 29,430,397	\$ N/A
1991	823,012,809	780,592,065	94.8%	42,420,744	12,989,807
1992	1,041,905,457	984,949,556	94.5%	56,955,901	14,535,157
1993	1,244,258,042	1,170,004,170	94.0%	74,253,872	17,297,971
1994	1,551,138,800	1,451,623,905	93.6%	99,514,895	25,261,023
1995	1,679,893,225	1,554,439,285	92.5%	125,453,940	25,939,045
1996**	1,386,659,746	1,219,123,505	87.9%	167,536,241	42,082,301
1997	1,541,360,457	1,336,839,680	86.7%	204,520,777	36,984,536
1998	1,706,626,110	1,451,039,735	85.0%	255,586,375	51,065,598
1999	1,801,154,401	1,454,627,009	80.8%	346,527,392	90,941,017
2000	2,066,652,957	1,578,352,351	76.4%	488,300,606	141,773,214
2001***	2,515,316,060	1,954,682,182	77.4%	569,633,878	81,333,272
**Change in asset	t valuation method e	ffective in this value	ation from book va	lue to a five year aver	age of
market to book w	values.				
***Change in ass	et valuation method	effective in this val	uation to $\overline{5-\text{year sm}}$	oothing of investmen	t gains/(losses).

# **Certification**

On the basis of the actuarial assumptions given and the data furnished by the General Manager of the Counties Employees Retirement System, it is certified that the actuarial valuation has been made by the use of accepted actuarial principles and based on continuation of current funding polices adopted by the Board, that adequate provision is being made for the funding of future benefits.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Stephen A. Gagel, F.S.A

Edward W. Maynard, F.S.A.

William M. Mercer, Incorporated 462 South Fourth Avenue, Suite 1500 Louisville, Kentucky 40202-3431 ©(502) 561-4500 Date

Date

# **SECTION V**

# STATISTICAL DATA

AS OF

JUNE 30, 2001

#### COUNTY EMPLOYEE S RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

EARNINGS BY AGE GROUPS

AGE		MALE			FEMALE			TOTAL	
GROUP	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE
0-19	1,866	27,288,499	14,624	102	1,238,508	12,142	1,968	28,527,007	14,495
20-24	3,556	58,604,719	16,481	1,241	17,837,510	14,373	4,797	76,442,229	15,935
25-29	1,985	43,041,614	21,683	2,562	42,206,188	16,474	4,547	85,247,802	18,748
30-34	2,551	64,203,714	25,168	4,372	70,177,649	16,052	6,923	134,381,362	19,411
35-39	3,281	87,788,161	26,757	6,764	107,387,677	15,876	10,045	195,175,837	19,430
40 - 44	4,016	114,847,326	28,597	8,507	144,882,140	17,031	12,523	259,729,466	20,740
45-49	4,055	120,508,734	29,719	8,492	154,008,749	18,136	12,547	274,517,482	21,879
50-54	3,734	111,879,383	29,962	7,234	135,350,770	18,710	10,968	247,230,152	22,541
55-59	2,623	72,154,065	27,508	4,960	90,918,846	18,330	7,583	163,072,911	21,505
60-64	1,784	44,966,786	25,206	2,681	46,970,534	17,520	4,465	91,937,320	20,591
65-69	734	14,745,264	20,089	865	13,187,100	15,245	1,599	27,932,364	17,469
70-74	308	5,632,963	18,289	280	4,090,188	14,608	588	9,723,151	16,536
75+	114	2,005,992	17,596	106	1,730,244	16,323	220	3,736,236	16,983
TOTAL	30,607	767,667,218	25,081	48,166	829,986,101	17,232	78,773	1,597,653,320	20,282

EARNINGS BY SERVICE GROUPS

SERVICE		MALE			FEMALE			TOTAL	
GROUP	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE
0	2,378	42,464,564	17,857	2,017	30,641,688	15,192	4,395	73,106,252	16,634
1	4,562	82,953,610	18,184	6,248	80,749,006	12,924	10,810	163,702,616	15,144
2	3,531	71,141,865	20,148	5,284	74,704,876	14,138	8,815	145,846,741	16,545
3	2,862	63,226,010	22,092	4,302	63,358,737	14,728	7,164	126,584,747	17,670
4	1,954	44,705,712	22,879	3,255	49,674,408	15,261	5,209	94,380,120	18,119
0-4	15,287	304,491,761	19,918	21,106	299,128,715	14,173	36,393	603,620,475	16,586
5-9	6,159	160,403,627	26,044	12,713	210,660,322	16,570	18,872	371,063,949	19,662
10-14	4,272	127,975,905	29,957	7,641	150,810,606	19,737	11,913	278,786,511	23,402
15-19	2,437	78,982,387	32,410	3,527	80,574,283	22,845	5,964	159,556,670	26,753
20-24	1,540	55,128,799	35,798	2,166	54,589,939	25,203	3,706	109,718,738	29,606
25-29	714	30,676,284	42,964	792	25,434,060	32,114	1,506	56,110,344	37,258
30-34	154	7,762,632	50,407	175	6,524,856	37,285	329	14,287,488	43,427
35-39	38	1,756,092	46,213	30	1,319,928	43,998	68	3,076,020	45,236
40+	6	489,732	81,622	16	943,392	58,962	22	1,433,124	65,142
TOTAL	30,607	767,667,218	25,081	48,166	829,986,101	17,232	78,773	1,597,653,320	20,282

#### COUNTY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

EARNINGS BY AGE GROUPS

AGE					FEMALE					
GROUP	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	
0-19	126	3,055,596	24,251	3	53,652	17,884	129	3,109,248	24,103	
20-24	410	11,564,976	28,207	29	684,660	23,609	439	12,249,636	27,903	
25-29	1,229	38,964,324	31,704	135	4,089,444	30,292	1,364	43,053,768	31,564	
30-34	1,614	58,353,991	36,155	194	6,419,964	33,093	1,808	64,773,955	35,826	
35-39	1,495	59,492,510	39,794	175	6,066,444	34,665	1,670	65,558,954	39,257	
40 - 44	1,106	45,638,995	41,265	144	5,532,854	38,423	1,250	51,171,849	40,937	
45-49	848	38,273,220	45,134	111	3,989,623	35,943	959	42,262,843	44,070	
50-54	494	22,540,891	45,629	72	2,723,628	37,828	566	25,264,519	44,637	
55-59	230	9,721,860	42,269	41	1,230,924	30,023	271	10,952,784	40,416	
60-64	86	3,119,148	36,269	10	294,804	29,480	96	3,413,952	35,562	
65-69	15	442,428	29,495	5	106,728	21,346	20	549,156	27,458	
70-74	7	260,832	37,262	1	16,416	16,416	8	277,248	34,656	
75+	6	181,152	30,192	0	0	0	б	181,152	30,192	
TOTAL	7,666	291,609,923	38,039	920	31,209,141	33,923	8,586	322,819,064	37,598	

EARNINGS BY SERVICE GROUPS

SERVICE		MALE			FEMALE			TOTAL	
GROUP	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE
0	423	10,038,504	23,732	75	1,604,990	21,400	498	11,643,494	23,381
1	973	27,962,438	28,738	158	4,434,060	28,064	1,131	32,396,498	28,644
2	674	21,174,974	31,417	91	2,703,972	29,714	765	23,878,946	31,214
3	705	23,380,956	33,164	112	3,460,428	30,897	817	26,841,384	32,854
4	459	16,155,912	35,198	55	1,872,480	34,045	514	18,028,392	35,075
0-4	3,234	98,712,784	30,523	491	14,075,930	28,668	3,725	112,788,714	30,279
5-9	1,853	71,309,556	38,483	242	8,508,091	35,157	2,095	79,817,647	38,099
10-14	1,398	61,240,332	43,806	108	4,508,748	41,748	1,506	65,749,080	43,658
15-19	587	27,485,815	46,824	45	2,191,068	48,690	632	29,676,883	46,957
20-24	340	17,924,256	52,718	30	1,688,868	56,296	370	19,613,124	53,008
25-29	188	10,998,180	58,501	4	236,436	59,109	192	11,234,616	58,514
30-34	52	3,097,716	59,571	0	0	0	52	3,097,716	59,571
35-39	12	723,396	60,283	0	0	0	12	723,396	60,283
40+	2	117,888	58,944	0	0	0	2	117,888	58,944
TOTAL	7,666	291,609,923	38,039	920	31,209,141	33,923	8,586	322,819,064	37,598
		-	-		-	-		-	

#### COUNTY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

SERVICE GROUPS BY AGE GROUPS

MALE AGE								SERV	ICE	
	GROUP.									
GROUP	0-4	5-9	10-14	15-19					40+	TOTAL
0-19	1,866									1,866
20-24	3,262	294								3,556
25-29	1,452	513	20							1,985
30-34	1,550	750	241	10						2,551
35-39	1,514	781	691	278	17					3,281
40 - 44	1,526	887	706	509	348	40				4,016
45-49	1,298	907	703	490	404	234	19			4,055
50-54	1,123	793	751	437	336	221	66	7		3,734
55-59	845	582	491	314	207	121	43	17	3	2,623
60-64	492	377	386	279	147	79	16	7	1	1,784
65-69	247	184	160	71	50	12	7	3		734
70-74	93	68	89	29	19	4	2	2	2	308
75+	19	23	34	20	12	3	1	2		114
TOTAL	15,287	6,159	4,272	2,437	1,540	714	154	38	6	30,607
FEMALE AGE								SERV	TCF	
AGE										
GROUP	0-4	5-9	10-14		20-24			35-39	40+	TOTAL
0-19	102									102
20-24	1,202	39								1,241
25-29	2,157	389	16							2,562
30-34	3,145	948	256	23						4,372
35-39	4,128	1,772	626	226	12					6,764
40 - 44	3,871	2,793	1,138	393	278	34				8,507
45-49	2,752	2,793	1,763	615	366	181	22			8,492
50-54	1,867	1,926	1,806	893	465	205	65	7		7,234
55-59	1,111	1,126	1,131	763	563	202	43	16	5	4,960
60-64	522	636	596	401	348	138	30	6	4	2,681
65-69	162	215	214	144	87	26	11	1	5	865
70-74	56	61	77	48	31	4	2		1	280
75+	31	15	18	21	16	2	2	2.0	1	106
TOTAL	21,106	12,713	7,641	3,527	2,166	792	175	30	16	48,166
TOTAL AGE								SERV	ICE	
									• • • •	
GROUP	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
0-19	1,968									1,968
20-24	4,464	333	26							4,797
25-29	3,609	902	36	2.2						4,547
30-34 35-39	4,695	1,698	497	33	20					6,923
40-44	5,642	2,553 3,680	1,317	504 902	29 626	74				10,045
45-49	5,397		1,844		626 770	74 415	41			12,523
50-54	4,050 2,990	3,700 2,719	2,466 2,557	1,105 1,330	770 801	415 426	41 131	14		12,547 10,968
55-59	2,990 1,956	1,708	1,622	1,077	770	420 323	86	33	8	7,583
60-64	1,014	1,013	982	680	495	217	46	13	5	4,465
65-69	409	399	374	215	137	38	18	4	5	1,105
70-74	149	129	166	77	50	8	4	2	3	588
75+	50	38	52	41	28	5	3	2	1	220
TOTAL	36,393	18,872	11,913	5,964	3,706	1,506	329	68	22	78,773

#### COUNTY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

SERVICE GROUPS BY AGE GROUPS

MALE AGE								SERVI	ICE	
	GROUP.									
GROUP	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
0-19	126									126
20-24	402	8								410
25-29	975	252	2							1,229
30-34	775	634	204	1						1,614
35-39	373	443	539	136	4	_				1,495
40-44	221	204	340	261	79	1	0			1,106
45-49 50-54	141	162	166	119	161	91	8	1		848
	102	74	93	44	73	80	27	1		494
55-59 60-64	79	43	30	20	19	16	15	8	1	230
65-69	30 6	26 5	16 4	5	3		2	3	1	86 15
70-74	1	5	4	1					1	13
75+	⊥ 3	2	4	Ť	1				T	6
TOTAL	3,234	1,853	1,398	587	340	188	52	12	2	7,666
IOIAL	5,254	т,055	1,390	507	540	100	JZ	12	2	7,000
FEMALE										
AGE								SERVI	ICE	
GROUP	GROUP 0-4		10-14		20-24	25-29	30-34		···· 40+	TOTAL
0-19	3	2-9	10-14	12-19	20-24	23-29	20-24	22-22	40+	101AL 3
20-24	29									29
25-29	119	16								135
30-34	106	75	12	1						194
35-39	73	51	41	10						175
40-44	55	31	28	23	7					144
45-49	51	29	12	6	12	1				111
50-54	29	20	7	4	9	3				72
55-59	20	13	5	1	2					41
60-64	4	3	3							10
65-69	2	3								5
70-74		1								1
75+										0
TOTAL	491	242	108	45	30	4	0	0	0	920
TOTAL										
AGE	· · · · · · · ·							SERVI	ICE	
GROUP			10-14				30-34	35-39		Ლ∩Ლ᠌ѧ᠇
0-19	0-4 129	5-9	10-14	12-19	20-24	25-29	30-34	35-39	40+	TOTAL 129
20-24	431	8								439
25-29	1,094	268	2							1,364
30-34	881	709	216	2						1,808
35-39	446	494	580	146	4					1,670
40-44	276	235	368	284	86	1				1,250
45-49	192	191	178	125	173	92	8			959
50-54	131	94	100	48	82	83	27	1		566
55-59	99	56	35	21	21	16	15	8		271
60-64	34	29	19	5	3		2	3	1	96
65-69	8	8	4							20
70-74	1	1	4	1					1	8
75+	3	2			1					б
TOTAL	3,725	2,095	1,506	632	370	192	52	12	2	8,586

#### COUNTY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

AVERAGE EARNINGS FOR SERVICE GROUPS BY AGE GROUPS

AGE								SER	VICE	
GROUP	GROUP. 0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	 40+	TOTAL
0-19	1,968 14,495									1,968 14,495
20-24	4,464 15,673	333 19,448								4,797 15,935
25-29	3,609 17,835	902 22,175	36 24,465							4,547 18,748
30-34	4,695 17,014	1,698 23,386		33 29,313						6,923 19,411
35-39	5,642 15,724	2,553 20,454		504 30,917	29 31,507					10,045 19,430
40-44	5,397 16,373	3,680 19,154		902 32,411	626 34,368	74 40,567				12,523 20,740
45-49	4,050 17,315	3,700 18,893		1,105 29,087		415 39,108	41 46,754			12,547 21,879
50-54	2,990 18,408	2,719 19,652		1,330 25,876		426 39,854	131 45,987	14 43,168		10,968 22,541
55-59	1,956 17,107	1,708 19,153		1,077 23,649	770 25,419	323 35,281	86 42,006	33 51,930	8 53,712	7,583 21,505
60-64	1,014 16,073	1,013 17,729	982 20,869	680 22,762		217 32,014		13 38,179	5 86,131	
65-69	409 14,592	399 14,910	374 17,701	215 18,999	137 22,821	38 30,033		4 23,628	5 60,718	1,599 17,469
70-74	149 15,273	129 12,731	166 17,454		50 17,216		4 39,261		3 62,220	588 16,536
75+	50 12,654	38 14,928	52 13,726	41 19,785	28 20,451	5 31,495	3 34,140	2 48,144	1 82,524	220 16,983
TOTAL	36,393 16,586	18,872 19,662	11,913 23,402	5,964 26,753		1,506 37,258		68 45,236	22 65,142	78,773 20,282
TOTAL EAI AVERAGE S		1,597,	653,320 7.29				Note: Ea matrix have not	been lim		this
AVERAGE	AGE		43.39				401(a)(1	/).		

#### COUNTY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION JUNE 30, 2001

AVERAGE EARNINGS FOR SERVICE GROUPS BY AGE GROUPS

AGE								SER	VICE	
GROUP	GROUP 0-4			15-19	20-24	25-29	30-34	35-39	 40+	TOTAL
0-19	129 24,103									129 24,103
20-24	431 27,834									439 27,903
25-29	1,094 30,252	268 36,886								1,364 31,564
30-34			216 43,909							1,808 35,826
35-39			580 44,462							1,670 39,257
40-44	276 31,056				86 51,070	1 38,796				1,250 40,937
45-49					173 55,861		8 63,596			959 44,070
50-54		94 39,118			82 52,481		27 58,154			566 44,637
55-59					21 45,925	16 58,529	15 61,444	8 62,997		271 40,416
60-64	34 31,118						2 48,570			96 35,562
65-69	8 26,895	8 21,312								20 27,458
70-74			4 28,521							8 34,656
75+	3 28,156	2 27,342			1 42,000					6 30,192
TOTAL	3,725 30,279	2,095 38,099	1,506 43,658	632 46,957	370 53,008	192 58,514	52 59,571	12 60,283	2 58,944	8,586 37,598
TOTAL EARNINGS AVERAGE SERVICE		322,8	319,064 7.62				Note: Ea matrix have not	been lin		this
AVERAGE A	GE		37.17				401(a)(1	/)•		

### COUNTY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION TABULATION BY MONTHLY SALARY JUNE 30, 2001

	NUMBER OF MEMBERS				
MONTHLY SALARY	MALES	FEMALES	TOTAL		
UNDER \$ 500	816	1,292	2,108		
\$ 500 - \$ 749	1,778	5,159	6,937		
\$ 750 - \$ 999	2,824	11,740	14,564		
\$ 1,000 - \$ 1,249	2,718	7,509	10,227		
\$ 1,250 - \$ 1,499	3,036	5,451	8,487		
\$ 1,500 - \$ 1,749	3,207	4,354	7,561		
\$ 1,750 - \$ 1,999	2,952	3,327	6,279		
\$ 2,000 - \$ 2,249	2,551	2,633	5,184		
\$ 2,250 - \$ 2,499	2,056	1,983	4,039		
\$ 2,500 - \$ 2,749	1,780	1,405	3,185		
\$ 2,750 - \$ 2,999	1,358	986	2,344		
\$ 3,000 - \$ 3,499	2,011	1,098	3,109		
\$ 3,500 - \$ 3,999	1,188	483	1,671		
\$ 4,000 - \$ 4,499	725	265	990		
\$ 4,500 - \$ 4,999	485	171	656		
\$ 5,000 - \$ 5,499	425	135	560		
\$ 5,500 - \$ 5,999	235	60	295		
\$ 6,000 - \$ 6,499	146	43	189		
\$ 6,500 - \$ 6,999	109	23	132		
\$ 7,000 - \$ 7,499	46	14	60		
\$ 7,500 - \$ 7,999	43	5	48		
\$ 8,000 - \$ 8,499	30	5	35		
\$ 8,500 - \$ 8,999	22	4	26		
\$ 9,000 - \$ 9,499	17	8	25		
\$ 9,500 - \$ 9,999	13	2	15		
\$ 10,000 AND OVER	36	11	47		
TOTAL	30,607	48,166	78,773		
HIGHLY COMPENSATED EMPLOYEES (ESTIMATED) ANNUAL SALARY OF \$80,000 AND OVER	195	45	240		

#### COUNTY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION TABULATION BY MONTHLY SALARY JUNE 30, 2001

	NUMBER OF MEMBERS				
MONTHLY SALARY	MALES	FEMALES	TOTAL		
UNDER \$ 500	41	7	48		
\$ 500 - \$ 749	15	3	18		
\$ 750 - \$ 999	32	7	39		
\$ 1,000 - \$ 1,249	44	14	58		
\$ 1,250 - \$ 1,499	99	19	118		
\$ 1,500 - \$ 1,749	195	32	227		
\$ 1,750 - \$ 1,999	334	90	424		
\$ 2,000 - \$ 2,249	583	123	706		
\$ 2,250 - \$ 2,499	793	97	890		
\$ 2,500 - \$ 2,749	830	90	920		
\$ 2,750 - \$ 2,999	737	80	817		
\$ 3,000 - \$ 3,499	1,314	141	1,455		
\$ 3,500 - \$ 3,999	1,162	112	1,274		
\$ 4,000 - \$ 4,499	720	56	776		
\$ 4,500 - \$ 4,999	376	25	401		
\$ 5,000 - \$ 5,499	167	11	178		
\$ 5,500 - \$ 5,999	100	4	104		
\$ 6,000 - \$ 6,499	67	3	70		
\$ 6,500 - \$ 6,999	33	4	37		
\$ 7,000 - \$ 7,499	8	0	8		
\$ 7,500 - \$ 7,999	7	1	8		
\$ 8,000 - \$ 8,499	6	0	6		
\$ 8,500 - \$ 8,999	1	1	2		
\$ 9,000 - \$ 9,499	1	0	1		
\$ 9,500 - \$ 9,999	0	0	0		
\$ 10,000 AND OVER	1	0	1		
TOTAL	7,666	920	8,586		
HIGHLY COMPENSATED EMPLOYEES (ESTIMATED) ANNUAL SALARY OF \$80,000 AND OVER	22	2	24		

## COUNTY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION MEMBERS WITH SERVICE IN ANOTHER SYSTEM JUNE 30, 2001

SERVICE IN	ACTIVE IN OTHER SYSTEM	INACTIVE IN OTHER SYSTEM	TOTAL
KERS - NONHAZARDOUS	542	2,028	2,570
KERS - HAZARDOUS	21	55	76
CERS - HAZARDOUS	0	264	264
STATE POLICE	6	18	24
TOTAL - ALL SYSTEMS	569	2,365	2,934

MEMBERS CURRENTLY NOT ACTIVE IN CERS NONHAZARDOUS

SERVICE IN	ACTIVE IN OTHER SYSTEM	INACTIVE IN OTHER SYSTEM	TOTAL					
KERS - NONHAZARDOUS	2,358	209	2,567					
KERS - HAZARDOUS	216	58	274					
CERS - HAZARDOUS	2,585	54	2,639					
STATE POLICE	93	11	104					
TOTAL - ALL SYSTEMS	5,252	332	5,584					

NOTE: DOES NOT INCLUDE INDIVIDUALS IN PAY STATUS IN OTHER SYSTEMS

## COUNTY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION MEMBERS WITH SERVICE IN ANOTHER SYSTEM JUNE 30, 2001

### MEMBERS CURRENTLY ACTIVE IN CERS HAZARDOUS

SERVICE IN	ACTIVE IN OTHER SYSTEM	INACTIVE IN OTHER SYSTEM	TOTAL
KERS - NONHAZARDOUS	22	279	301
KERS - HAZARDOUS	11	108	119
CERS - NONHAZARDOUS	0	2,585	2,585
STATE POLICE	3	44	47
TOTAL - ALL SYSTEMS	36	3,016	3,052

#### MEMBERS CURRENTLY NOT ACTIVE IN CERS HAZARDOUS

SERVICE IN	ACTIVE IN OTHER SYSTEM	INACTIVE IN OTHER SYSTEM	TOTAL
KERS - NONHAZARDOUS	73	29	102
KERS - HAZARDOUS	33	5	38
CERS - NONHAZARDOUS	264	54	318
STATE POLICE	66	4	70
TOTAL - ALL SYSTEMS	436	92	528

### NOTE: DOES NOT INCLUDE INDIVIDUALS IN PAY STATUS IN OTHER SYSTEMS

## COUNTY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION RETIRED LIVES SUMMARY

### JUNE 30, 2001

	MALE LIVES		FEMALE LIVES		TOTAL	
		MONTHLY		MONTHLY		MONTHLY
	NUMBER	BENEFITS	NUMBER	BENEFITS	NUMBER	BENEFITS
BASIC FORM	2,352	1,481,788.81	7,455	3,304,148.74	9,807	4,785,937.55
STRAIGHT LIFE (OLD PLAN)	0	0.00	0	0.00	0	0.00
JOINT & SURVIVOR						
100% TO BENEFICIARY	1,636	1,065,937.33	625	219,624.32	2,261	1,285,561.65
66-2/3% TO BENEFICIARY	458	549,253.97	176	117,906.11	634	667,160.08
50% TO BENEFICIARY	695	676,875.85	437	293,347.66	1,132	970,223.51
POP-UP OPTION	1,433	1,343,458.62	826	519,820.72	2,259	1,863,279.34
10 YEARS CERTAIN	0	0.00	0	0.00	0	0.00
10 YEARS CERTAIN & LIFE	1,178	625,182.95	2,031	872,618.43	3,209	1,497,801.38
SOCIAL SECURITY OPTION						
OPTION C	193	271,742.14	318	236,966.09	511	508,708.23
OPTION D	460	624,255.79	174	136,378.31	634	760,634.10
OPTION E	0	0.00	0	0.00	0	0.00
OPTION F	0	0.00	0	0.00	0	0.00
DEPENDENT CHILD	1	324.00	1	324.00	2	648.00
REFUND	0	0.00	0	0.00	0	0.00
15 YEARS CERTAIN & LIFE	431	279,775.08	324	148,667.41	755	428,442.49
20 YEARS CERTAIN & LIFE	261	231,092.53	240	138,146.29	501	369,238.82
5 YEARS ONLY	0	0.00	1	124.55	1	124.55
TOTAL	9,098	7,149,687.07	12,608	5,988,072.63	21,706	13,137,759.70

### COUNTY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION RETIRED LIVES SUMMARY JUNE 30, 2001

	MALE LIVES		FEMALE LIVES		TOTAL	
		MONTHLY		MONTHLY		MO NTHLY
	NUMBER	BENEFITS	NUMBER	BENEFITS	NUMBER	BENEFITS
BASIC FORM	355	582,936.39	88	70,799.69	443	653,736.08
STRAIGHT LIFE (OLD PLAN)	0	0.00	0	0.00	0	0.00
JOINT & SURVIVOR						
100% TO BENEFICIARY	332	482,283.01	18	10,412.28	350	492,695.29
66-2/3% TO BENEFICIARY	159	306,674.91	5	7,067.84	164	313,742.75
50% TO BENEFICIARY	239	424,027.21	11	8,767.71	250	432,794.92
POP-UP OPTION	878	1,550,350.51	30	29,857.35	908	1,580,207.86
10 YEARS CERTAIN	40	70,985.30	6	12,446.28	46	83,431.58
10 YEARS CERTAIN & LIFE	120	180,139.02	24	30,532.62	144	210,671.64
SOCIAL SECURITY OPTION						
OPTION C	93	141,763.73	7	6,925.90	100	148,689.63
OPTION D	281	400,220.75	14	10,362.60	295	410,583.35
OPTION E	0	0.00	0	0.00	0	0.00
OPTION F	0	0.00	0	0.00	0	0.00
DEPENDENT CHILD	93	26,281.06	72	20,137.34	165	46,418.40
REFUND	0	0.00	0	0.00	0	0.00
15 YEARS CERTAIN & LIFE	40	52,654.05	3	2,544.88	43	55,198.93
20 YEARS CERTAIN & LIFE	80	122,037.19	16	13,216.72	96	135,253.91
5 YEARS ONLY	0	0.00	0	0.00	0	0.00
TOTAL	2,710	4,340,353.13	294	223,071.21	3,004	4,563,424.34

### COUNTY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION BENEFICIARY SUMMARY JUNE 30, 2001

	MALE LIVES		FEI	MALE LIVES	TOTAL	
		MONTHLY		MONTHLY		MONTHLY
	NUMBER	BENEFITS	NUMBER	BENEFITS	NUMBER	BENEFITS
BASIC FORM	0	0.00	0	0.00	0	0.00
STRAIGHT LIFE (OLD PLAN)	0	0.00	0	0.00	0	0.00
JOINT & SURVIVOR						
100% TO BENEFICIARY	197	66,728.89	1,116	397,114.03	1,313	463,842.92
66-2/3% TO BENEFICIARY	19	5,240.09	125	43,188.89	144	48,428.98
50% TO BENEFICIARY	39	9,557.99	234	66,238.26	273	75,796.25
POP-UP OPTION	49	21,353.53	152	85,480.29	201	106,833.82
10 YEARS CERTAIN	49	21,300.97	101	61,776.29	150	83,077.26
10 YEARS CERTAIN & LIFE	71	34,733.11	126	58,358.97	197	93,092.08
SOCIAL SECURITY OPTION						
OPTION C	0	0.00	0	0.00	0	0.00
OPTION D	8	1,800.63	41	43,342.82	49	45,143.45
OPTION E	0	0.00	0	0.00	0	0.00
OPTION F	1	393.19	4	615.45	5	1,008.64
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	28	16,750.31	93	47,677.60	121	64,427.91
20 YEARS CERTAIN & LIFE	24	8,329.90	47	32,165.45	71	40,495.35
5 YEARS ONLY	124	48,581.86	61	48,894.97	185	97,476.83
TOTAL	609	234,770.47	2,100	884,853.02	2,709	1,119,623.49

### COUNTY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION BENEFICIARY SUMMARY JUNE 30, 2001

	MALE LIVES		FEMALE LIVES		TOTAL	
		MONTHLY		MONTHLY		MONTHLY
	NUMBER	BENEFITS	NUMBER	BENEFITS	NUMBER	BENEFITS
BASIC FORM	0	0.00	0	0.00	0	0.00
STRAIGHT LIFE (OLD PLAN)	0	0.00	0	0.00	0	0.00
JOINT & SURVIVOR						
100% TO BENEFICIARY	2	1,428.12	76	73,161.71	78	74,589.83
66-2/3% TO BENEFICIARY	0	0.00	15	15,063.30	15	15,063.30
50% TO BENEFICIARY	0	0.00	17	9,530.30	17	9,530.30
POP-UP OPTION	0	0.00	36	46,006.80	36	46,006.80
10 YEARS CERTAIN	8	16,024.84	11	16,219.26	19	32,244.10
10 YEARS CERTAIN & LIFE	0	0.00	1	36.88	1	36.88
SOCIAL SECURITY OPTION						
OPTION C	0	0.00	0	0.00	0	0.00
OPTION D	1	3,291.27	33	45,844.74	34	49,136.01
OPTION E	0	0.00	0	0.00	0	0.00
OPTION F	0	0.00	3	2,982.82	3	2,982.82
DEPENDENT CHILD	1	290.30	0	0.00	1	290.30
REFUND	0	0.00	0	0.00	0	0.00
15 YEARS CERTAIN & LIFE	0	0.00	1	74.63	1	74.63
20 YEARS CERTAIN & LIFE	1	1,158.96	4	7,039.93	5	8,198.89
5 YEARS ONLY	6	4,964.25	1	566.73	7	5,530.98
TOTAL	19	27,157.74	198	216,527.10	217	243,684.84

# COUNTY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION VESTED RETIREMENT SUMMARY

JUNE 30, 2001

	MALE LIVES		FEN	MALE LIVES	TOTAL	
AGE NEAREST		MONTHLY		MONTHLY		MONTHLY
BIRTHDAY	NUMBER	BENEFITS	NUMBER	BENEFITS	NUMBER	BENEFITS
15-19	0	0.00	0	0.00	0	0.00
20-24	25	2,703.75	2	230.77	27	2,934.52
25-29	40	6,264.72	40	5,095.28	80	11,360.00
30-34	99	22,147.22	178	29,673.44	277	51,820.66
35-39	173	52,534.39	306	67,684.63	479	120,219.02
40-44	192	72,453.48	484	103,568.52	676	176,022.00
45-49	275	103,121.14	566	133,323.75	841	236,444.89
50-54	282	115,306.04	636	170,080.97	918	285,387.01
55-59	165	58,354.37	305	66,323.35	470	124,677.72
60-64	90	25,815.58	116	24,404.01	206	50,219.59
65-69	31	4,090.26	32	5,989.95	63	10,080.21
70-74	10	862.93	10	2,298.17	20	3,161.10
75-79	14	1,256.73	5	554.93	19	1,811.66
80-84	1	156.92	3	329.62	4	486.54
85 +	0	0.00	0	0.00	0	0.00
TOTAL	1,397	465,067.53	2,683	609,557.39	4,080	1,074,624.92

# COUNTY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION VESTED RETIREMENT SUMMARY JUNE 30, 2001

	MALE LIVES		FEN	MALE LIVES	TOTAL	
AGE NEAREST BIRTHDAY	NUMBER	MONTHLY BENEFITS	NUMBER	MONTHLY BENEFITS	NUMBER	MONTHLY BENEFITS
15-19	0	0.00	0	0.00	0	0.00
20-24	0	0.00	0	0.00	0	0.00
25-29	0 7	1,371.48	1	190.01	8	1,561.49
30-34	22	7,824.77	3	726.24	25	8,551.02
35-39	21	8,162.63	8	1,942.77	29	10,105.40
40-44	24	10,916.26	5	1,940.02	29	12,856.28
45-49	30	13,058.24	3	1,372.26	33	14,430.5
50-54	11	5,121.22	4	1,015.96	15	6,137.1
55-59	3	836.13	1	70.89	4	907.0
60-64	3	369.97	0	0.00	3	369.9
65-69	2	565.07	0	0.00	2	565.0
70-74	0	0.00	0	0.00	0	0.0
75-79	0	0.00	0	0.00	0	0.0
80-84	0	0.00	0	0.00	0	0.0
85 +	0	0.00	0	0.00	0	0.0
TOTAL	123	48,225.77	25	7,258.15	148	55,483.9

# COUNTY EMPLOYEES RETIREMENT SYSTEM NONHAZARDOUS DUTY EMPLOYEE CLASSIFICATION VESTED MEMBERSHIP SUMMARY

### JUNE 30, 2001

	MALE LIVES		F	EMALE LIVES	TOTAL	
AGE NEAREST		ACCUMULATED		ACCUMULATED		ACCUMULATED
BIRTHDAY	NUMBER	CONTRIBUTIONS	NUMBER	CONTRIBUTIONS	NUMBER	CONTRIBUTIONS
15-19	2,321	385,886.36	113	38,853.81	2,434	424,740.17
20-24	738	657,989.04	429	189,866.34	1,167	847,855.38
25-29	966	626,194.68	1,849	1,202,258.60	2,815	1,828,453.28
30-34	1,210	941,610.86	2,723	2,079,874.04	3,933	3,021,484.90
35-39	1,043	827,436.04	2,260	1,830,321.13	3,303	2,657,757.17
40-44	968	746,135.58	2,230	1,840,980.48	3,198	2,587,116.06
45-49	892	800,090.55	1,884	1,912,674.71	2,776	2,712,765.26
50-54	725	917,674.76	1,396	1,515,905.51	2,121	2,433,580.27
55-59	446	599,092.95	726	785,234.03	1,172	1,384,326.98
60-64	307	336,556.05	372	345,498.81	679	682,054.86
65-69	171	167,419.47	160	146,774.47	331	314,193.94
70-74	93	66,820.67	89	44,354.49	182	111,175.16
75-79	61	23,993.72	41	16,323.35	102	40,317.07
80-84	27	15,619.03	17	7,306.33	44	22,925.36
85 +	8	2,277.17	11	3,698.29	19	5,975.46
TOTAL	9,976	7,114,796.93	14,300	11,959,924.39	24,276	19,074,721.32

## COUNTY EMPLOYEES RETIREMENT SYSTEM HAZARDOUS DUTY EMPLOYEE CLASSIFICATION VESTED MEMBERSHIP SUMMARY JUNE 30, 2001

	MALE LIVES		F	EMALE LIVES	TOTAL	
AGE NEAREST		ACCUMULATED		ACCUMULATED	-	ACCUMULATED
BIRTHDAY	NUMBER	CONTRIBUTIONS	NUMBER	CONTRIBUTIONS	NUMBER	CONTRIBUTIONS
15-19	64	15,822.02	0	0.00	64	15,822.02
20-24	33	61,746.22	0	0.00	33	61,746.22
25-29	84	157,207.46	15	38,873.61	99	196,081.07
30-34	79	129,436.87	18	34,820.48	97	164,257.35
35-39	51	92,597.27	14	8,856.86	65	101,454.13
40-44	33	55,104.64	7	3,329.61	40	58,434.25
45-49	20	81,468.39	5	7,144.15	25	88,612.54
50-54	17	27,967.04	5	53,485.16	22	81,452.20
55-59	7	29,108.72	3	5,211.32	10	34,320.04
60-64	2	11,948.61	1	1,009.88	3	12,958.49
65-69	3	1,542.03	0	0.00	3	1,542.03
70-74	1	239.26	0	0.00	1	239.26
75-79	0	0.00	0	0.00	0	0.00
80-84	0	0.00	0	0.00	0	0.00
85 +	0	0.00	0	0.00	0	0.00
TOTAL	394	664,188.53	68	152,731.07	462	816,919.60

## **SECTION VI**

# SUMMARY OF PRINCIPAL PLAN PROVISIONS

### **Effective Date**

The state of Kentucky established the County Employees Retirement System in July, 1958. The plan benefits have been improved several times, most recently as of August 1, 1998.

### <u>Plan Year</u>

A plan year is a twelve month period beginning on July 1.

### **Final Compensation**

Final compensation is the average salary during the five highest paid fiscal years for nonhazardous positions. If the months of service credit during the highest five year period is less than forty-eight, one or more additional fiscal years shall be used. For a 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.

For hazardous positions, final compensation is the average salary during the three highest paid fiscal years.

### **Service**

Service means the sum of prior service and current service as defined below:

- (a) Prior service is credited for regular full-time employment of at least 100 hours of work per month with a participating agency before July 1, 1958. In some instances prior service credit is granted for time spent in the military.
- (b) Current service is obtained for regular full-time employment which averages at least 100 hours of work per month with participating agencies after July 1, 1958. Current service credit may be granted for military service and educational leaves if special criteria are met.
- (c) Employers may elect to purchase up to 6 months additional service credit based on an employee's unused sick leave.

## **Eligibility**

Any county or political subdivision or instrumentality, including school boards or urban county government may participate in the System upon approval by the Board. Membership in the system consists of:

- (a) all persons who become employees of a county after such county first participates,
- (b) all persons who are employees on the date a county first participates and who elect within thirty days to become members and make contributions.

Membership does not include employees of a county who are members of some other state, county, or local retirement system, supported in whole or in part by public funds.

## Normal Retirement Date

A member may elect to retire upon: (1) attaining age 65 for non-hazardous positions, or attaining age 55 for hazardous positions, and (2) having contributed to the System. Upon completion of 27 years of service credit, 15 of which are current service for non-hazardous positions, or completion of 20 years of service credit for hazardous positions, a member may elect to retire with an unreduced benefit.

# **Early Retirement Date**

A member may elect to retire before the normal retirement date at any time after: (1) for non-hazardous positions, attainment of age 55 and completion of 60 months of service credit at least 12 of which are current, or at any age after 25 years of service, or (2) for hazardous positions, attainment of age 50 and completion of 15 years of service credit.

## Normal Retirement Benefits

For non-hazardous positions, upon attainment of age 65 and completion of 48 months of service, of which 12 months are current service, a monthly benefit equal to 2.20% of the member's final compensation multiplied by his service will be payable. For hazardous positions, a monthly benefit equal to 2.50% of the member's final compensation multiplied by his service will be payable upon attainment of age 55 and completion of 60 months of service of which 12 months are current service. A member, with less than 48 months for non-hazardous positions or 60 months for hazardous positions, who retires on or after the normal retirement date is entitled to a retirement allowance which pays the actuarial equivalent of twice the member's accumulated contributions for life.

## **Early Retirement Benefits**

A member who elects early retirement is entitled to a monthly benefit reduced for each month by which the early retirement date precedes the first date on which the member would qualify for an unreduced benefit. If a non-hazardous position employee has 27 or more years of service credit, 15 of which are current, or a hazardous position employee has 20 or more years of service credit, an unreduced benefit is payable.

## **Disability Benefits**

A member with 60 months of service, 12 of which must be current service, is entitled to a retirement allowance computed in the same manner as the normal retirement benefit with service and final compensation determined as of the disability date. Service credit shall be added on to total service for the period from the last day of paid employment to the 65th birthday (55th for members in a hazardous position) up to a maximum of service credited to the last day of paid employment. Except for members with 25 or more (20 or more for hazardous) years of service on the last day of paid employment, the maximum combined service credit (total service and added service) shall not exceed 25 years (20 years for

hazardous members). For non-hazardous position employees with 25 or more years of service, additional years of service credit will be added up to maximum combined limit of 30, or actual service if greater. For hazardous position employees with 20 or more years of service credit, actual service 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. A partial disability benefit may be payable to hazardous employees if the disability is not total and permanent. The disability will be reduced to a rate determined by the Board.

# **Death Benefits**

If a member dies prior to retirement, but after 60 months of service, 12 of which are current and who is a contributing member, or after 12 years of service, one of which is current and who is not a contributing member, or after 48 months service if the member is age 65 or over, a benefit will be payable to the beneficiary based on the member's age, years of service and final compensation at the date of death. The benefit will be equal to the amount payable had the employee retired and elected a joint and 100% survivorship payment form.

If a member in a hazardous position dies in the line of duty and has a spouse as beneficiary, a \$5,000 lump sum payment will be made and a benefit of 25% of the member's final monthly rate of pay will be payable until death or remarriage. If the member in a hazardous position dies in the line of duty and has a dependent as beneficiary, a lump sum payment of \$10,000 will be made. Monthly payments shall be made for each dependent child equal to 10% of the member's final monthly rate of pay, but not greater than 40% of the member's final monthly rate of pay. The beneficiary of a hazardous duty member with 5 or more years of service, one of which is current, may elect a death benefit computed in the same manner as a non-hazardous employee using 2.50% rather than 2.20%.

Upon the death of a retired member, who had a minimum of 48 months of service credit, a death benefit of \$5,000 is payable.

## **Optional Forms of Payment**

Joint and survivor annuities which provide a reduced benefit for the life of the member, with the benefit at the same or at a further reduced rate continuing after the member's death until the death of the designated beneficiary may be elected by the member prior to retirement. Other optional forms include a life annuity with 10, 15 or 20 years of payments guaranteed and a Social Security adjustment with or without survivor rights.

## **Contributions**

Members contribute 5% of gross compensation (8% for hazardous positions). On each June 30, interest is credited at the rate to be determined by the Board on the accumulated contributions the member had in his account on the previous June 30. Upon termination a member may withdraw the contributions with interest, but will be entitled to no benefit payments.

## Medical Insurance

Recipients of a retirement benefit may elect to participate in a voluntary hospital/medical group insurance plan for themselves as well as any beneficiaries or dependents. The cost of participation for any beneficiaries or dependents is borne by the retiree (except that dependents of hazardous position employees and legislators will have the same percentage paid by the system as the member). The retirement system will pay a portion of the cost of participation for the retiree based on years of service credit as follows:

Less than 4 years	0%
4 - 9 years	25%
10 - 14 years	50%
15 - 19 years	75%
20 or more years	100%

If a hazardous member is disabled in the line of duty, the retirement system will pay 100% of the cost of the member, spouse and eligible dependents. If a hazardous member is killed in the line of duty, the retirement system will pay 100% of the cost of the beneficiary and eligible dependents as long as they remain eligible for a monthly benefit payment.

# **Increase in Retirement Allowances**

Effective August 1, 1996, and on July 1 of each year thereafter, a recipient of a retirement allowance shall have his retirement allowance increased by the percentage increase in the annual average of the consumer price index for all urban consumers for the most recent calendar year as published by the federal Bureau of Labor Statistics, not to exceed five percent (5%). In determining the annual employer contribution rate, only the cost of increases granted as of the most recent valuation date shall be recognized. The benefits of this subsection as provided on August 1, 1996 and thereafter shall not be considered as benefits protected by the inviolable contract provisions of KRS 61.692, 16.652, and 78.852. The General Assembly reserves the right to suspend or reduce the benefits conferred in this subsection if in their judgment the welfare of the Commonwealth so demands.

# FORTY-THIRD ANNUAL ACTUARIAL VALUATION

JUNE 30, 2001

STATE POLICE RETIREMENT SYSTEM

FRANKFORT, KENTUCKY

# SECTION I

# **INTRODUCTION**

The results of the forty-third annual actuarial valuation of the State Police Retirement System are presented in this report. The actuarial valuation was made on the basis of the data provided by the System as of June 30, 2001.

The purpose of the actuarial valuation is to determine the actuarial condition of the Retirement System and the rate of employer contribution for the ensuing fiscal year as required to support the System.

The plan provisions utilized in this valuation are described in the Summary of Principal Plan Provisions in Section VI. The basis of funding is defined in KRS 61.565 and provides that the actuarial valuation method would be uniform for all benefits provided by the System. The Entry Age Normal Actuarial cost method has been used for all benefits. KRS 61.565 provides that each employer participating in the System shall contribute an amount equal to the Normal Cost contribution rate, and an amount sufficient to amortize the Unfunded Actuarial Accrued Liability over 30 years using the level-percentage-of-payroll method. This is the standard used herein to determine whether the funding of the System is adequate.

The actuarial valuation results are based upon the employee census and asset data supplied by the office of the System, and upon the actuarial assumptions as stated in Section II.

# **SECTION II**

## ACTUARIAL CONSIDERATIONS

#### **Description of Actuarial Methods**

The actuarial valuation is the means by which the contingent liabilities and contribution rates of a retirement system are evaluated and determined. It provides a guide to the System as to the financing required during years of active service to accumulate the funds needed to provide members' benefits. It also makes it possible to estimate beforehand the cost of proposed changes in the System so that action can be taken in the light of the cost consequences.

The methods of valuation are prescribed by KRS 61.565. The Entry Age Normal Cost Method was used to determine costs of all benefits with the exception of the retiree medical insurance benefit. Under this method the employer's contribution to the retirement system consists of Normal Cost, a payment to fund the Unfunded Actuarial Accrued Liability, medical insurance, and administrative expenses. The Normal Cost represents the contribution (as a level percent of payroll) that completely funds benefits at retirement if made from a person's entry into employment until his retirement. The Actuarial Accrued Liability represents the sum of money and investments that would be held in the fund if the retirement system had been in effect since the date each member was first employed. The payment to fund the Unfunded Actuarial Accrued Liability is the amount necessary to amortize this liability over 30 years using the "level-percentage-of-payroll" method. Under the "level-percentage-of-payroll" method, the amortization payment is an amount which remains constant as a percentage of payroll over the 30 years. The initial 30 year period began with the 1990 valuation. In each subsequent valuation, any change in Unfunded Actuarial Accrued Liability is identified and established as a separate amortization base with a 30 year funding period beginning with that valuation. The change in Unfunded Actuarial Accrued Liability established as a separate base in each valuation will include changes attributable to experience gains and/or losses over the prior year, as well as changes attributable to benefit improvements and revisions in actuarial assumptions and funding methods.

The medical insurance contribution rate was originally determined in the 1987 valuation as the level percent of payroll necessary to fund projected medical insurance premiums over the next sixteen years (taking into account the level of reserves in the Insurance Fund). Beginning in 1988, this rate is being increased each year by a percentage amount needed to reach the Entry Age Normal funding rate within a 20 year period measured from 1987. This was continued through the 1992 valuation. In the 1992 valuation, an acceleration of the scheduled increases in the medical insurance contribution rate was recommended where possible. This acceleration in these rates was coupled with a deferral of future increases until the time of the next experience study, unless there was a deterioration in the funded position of the medical premium benefit in which case the rate levels were to be reviewed to redetermine an appropriate current funding level, or unless recommended contributions are not made in the prior year, in which case the shortfall would be spread over future years through an increase in the contribution rate. This continued through the 1995 valuation. Effective with the 1996 valuation, a new medical insurance funding policy was adopted by the Board. Under this revised policy, the medical insurance contribution rate for the 1996 valuation was set equal to the 1995 rate plus any reduction in the retirement and administrative expense rates between the 1995 and 1996 valuations (but in no event to be less than the 1995 medical insurance contribution rate). Beginning with the 1997 valuation, the

medical insurance contribution rate is to be increased at the start of each biennium (coincides with valuations in odd numbered years) by the percentage amount necessary to raise this medical insurance rate to the full Entry Age Normal Cost Method contribution rate by the year 2016. There will be no changes in the even numbered years unless there are actuarial gains relative to the retirement funding which will then be used to increase the medical insurance funding rate for the next year only.

The Board reviewed this funding policy in conjunction with the experience study prepared following the 2000 valuation. The current policy relative to the establishment of the permanent portion of the insurance fund rate was not changed. But in years where there may be a temporary reduction in the retirement fund contribution rate, the Board may use the amount of that reduction as an additional temporary contribution to the insurance fund.

In computing the full Entry Age Normal Cost Method contribution rate, liabilities are to be developed based on actuarial assumptions in use in the current valuation (as adjusted from time to time due to experience studies) and actuarial value of assets based on the same method as employed for the retirement benefit valuation. The actuarial value of assets for the medical contribution rate valuation utilized book value prior to the 1996 valuation, and a 5-year market to book value average from 1996 through the 2000 valuation. The current asset valuation method was employed effective with the 2001 valuation.

The amount of the administrative expense was based on the budgeted amount for the twelve months following the date of the valuation

## **Actuarial Assumptions**

Since the actuarial valuation involves estimates of benefits payable in the future, it is necessary that assumptions be made as to the interest earnings, rates of mortality, withdrawal, retirement, and disability, and the rate at which salaries will increase. In addition, an assumption must be made relative to increases in medical insurance rates in order to value the liability for the medical insurance benefit.

It is desirable that the actuarial assumptions be reviewed periodically to see whether past experience and probable future experience justifies the continued use of these actuarial assumptions. Such a study was performed subsequent to the 2000 actuarial valuation and new actuarial assumptions were adopted by the Board for use in the 2001 and subsequent actuarial valuations, until such time as another experience study is performed. This valuation reflects assumptions based on the 2000 experience study. The actuarial assumptions as used in this valuation are described later in this section.

# Actuarial Value of Assets

The actuarial value of assets is determined in the following manner for both the Retirement Fund and Insurance Fund:

- 1. Develop expected assets by projecting valuation assets from the prior valuation using the assumed valuation interest rate from the prior valuation and actual cash flows for the 12 months ending on the current valuation date.
- 2. The current year investment gain/loss shall be determined as the difference between actual market value as of the current valuation date and expected assets as computed in (1), further adjusted for any amount of investment gain/loss from prior years not yet recognized as of the current valuation date.
- 3. The amount of investment gain/loss for the current year shall be reflected equally over the current year and the following 4 years.
- 4. Valuation assets will be equal to expected assets from (1) plus/minus the amount of investment gain/loss from the current and prior 4 years to be recognized in the current year.
- 5. The starting point for this method shall be the actuarial value of assets as computed in the 2000 valuation under the prior asset valuation method then in effect. Only investment gains/losses occurring after June 30, 2000 shall be recognized and amortized under this method.

The following table shows the derivation of valuation assets for the Retirement Fund and the Insurance Fund as of the current valuation:

	<b>RETIREMENT FUND</b>	INSURANCE FUND
June 30. 2000 Valuation Assets	459.168.574	71.711.712
Cash Flows		
> Employer Contributions	1,516,267	8,113,391
> Member Contributions	4,138,298	
> Retirement Benefits	22,644,170	
> Net Refunds	80,369	
> Insurance Premiums		3,545,672
> Administrative Expenses	64,171	28,055
> Investment Manager Fees	149,945	6,583
Valuation Interest Assumption	8.25%	8.25%
Expected Return on Valuation Assets		
Reflecting Actual Cash Flows *	37,168,439	6,103,206
Expected Valuation Assets	479,052,923	82,347,999
Actual Market Value of Assets	364,591,852	69.925.891
Investment Gain/(Loss)	(114,461,071)	(12,422,108)
Amortization Amounts From Prior Valuations		······································
> Valuation Year – 1		
>> Initial Amount	N/A	N/A
>> Current Valuation Amount	N/A	N/A
>> Amortization	N/A	N/A
> Valuation Year – 2		
>> Initial Amount	N/A	N/A
>> Current Valuation Amount	N/A	N/A
>> Amortization	N/A	N/A
> Valuation Year – 3		
>> Initial Amount	N/A	N/A
>> Current Valuation Amount	N/A	N/A
>> Amortization	N/A	N/A
> Valuation Year – 4		
>> Initial Amount	N/A	N/A
>> Current Valuation Amount	N/A	N/A
>> Amortization	N/A	N/A
Unamortized Amount of Gain/(Loss) From Prior		
Valuations	0	0
Investment Gain/(Loss) to be Amortized from		
Current Valuation Date		
> Amount	(114,461,071)	(12, 422, 108)
> Amortization	(22,892,214)	(12, 122, 100) (2, 484, 422)
June 30. 2001 Valuation Assets	(==,::=,=::)	
> Expected Assets	479,052,923	82,347,999
> Amortization Amounts	(22,892,214)	(2,484,422)
> Valuation Assets	456,160,709	79,863,577
	450,100,709	19,003,311

\*Cash flows are assumed equally spread throughout the year

# A. STATEMENT OF ACTUARIAL ASSUMPTIONS

(1)	Mortality:	
	(a) Active & retired lives	- 1983 Group Annuity Mortality Table, plus a pre-retirement duty death rate of .0005 per year
	(b) Disabled lives	<ul> <li>Social Security Administration Disability Mortality Rates - Actuarial Study No. 75 (current rates used by PBGC for disabled lives receiving Social Security).</li> </ul>
(2)	Disablement	- Graduated rates based on 2000 experience study (no change from 1995 experience study).
(3)	Termination of employment #	- Graduated rates based on 2000 experience study.
(4)	Retirement	- 60% will retire as soon as eligible for unreduced benefits and balance will continue to age 55.
(5)	Marital status	
	(a) Percentage married	- 100%.
	(b) Age difference	- Males are assumed to be 3 years older than their spouses.
(6)	Dependent children	- For duty related death benefits, it is assumed that the employee is survived by 2 dependent children, each age 6.
(7)	Investment return	- 8.25% per year, net of investment related expenses, compounded annually.
(8)	Compensation progression #	<ul> <li>1st year: 12.00%</li> <li>2nd year: 10.00%</li> <li>3rd year: 8.00%</li> <li>Thereafter: 6.50%, compounded annually.</li> </ul>
(9)	Underlying Inflation Rate	- 3.50% per year, reflected in investment return and compensation progression assumptions.
(10)	Retiree Medical Insurance #	<ul> <li>It was assumed that future retirees would select medical coverage in the same proportion that current retirees have selected coverage. Monthly contribution rates were assumed to be as follows:</li> </ul>

	Rate in Effect
<u>Plan Type</u>	on Valuation Date
Single	
- Region 1	\$252.46
- Region 2	293.46
- Region 3	273.52
- All Others	234.00
Family	577.00
Parent Plus	350.00
Couple	525.00
Medicare*	
- Low Option	96.41
- High Option	229.03

Region 1: Boyd, Carter, Elliott, Greenup

Region 2: Christian, Daviess, Hancock, Henderson, Hopkins, McLean, Muhlenberg, Ohio, Todd, Trigg, Union, Webster

Region 3: Harlan, Lewis, Mason, Perry, Roberston

	Medicare Rate		Contracts in Force	
	Low	High	Low	High
Carrier	<b>Option</b>	<b>Option</b>	<b>Option</b>	<b>Option</b>
Anthem BC/BS	101.26	231.35	2,839	17,314
Bankers Life	91.78	216.94	272	156
Option 2000	83.05	216.51	504	1,767
Humana	85.00	247.00	490	1,729
Humana				
Gold Plus	85.00	136.00	17	507

\*Weighted average of current rates available from different carriers; weighting based on number of contracts in force.

In determining the target Entry Age Funding rate in valuations beginning with 1996, it was assumed that medical contribution rates would grow at the following annual levels:

Years	Medical Increase
2001 - 2002	12%
2003 - 2005	10%
2006 - 2010	9%
2011 - 2015	8%
2016 - 2020	7.5%
Thereafter	7%

The assumed rate of growth in number of retirees receiving medical insurance was based on assumed retirement and mortality patterns used throughout the valuation.

- For those active members with incomplete data, the following assumptions were made:

(11) Missing data

- If reported salary was zero or blank, then monthly salary was assumed to be \$2,139.58.
- If reported age was blank, then assume current age equal to age 18 plus years of service reported

.

- For active members with service in more than one system, the liability has been valued as follows:
  - . Service under all systems is aggregated for purposes of determining benefit eligibility.
  - . Future service is projected only under the system in which the member is currently active.
  - . The actual benefit under each system is determined based only on service (past and projected future service, if applicable) under that system.
  - . The liability is determined under each system based on the actuarial assumptions used for the system in which the member is currently active. This liability is then included in the valuation of the system in which the service has been earned (or is projected to be earned).

For inactive members with service in more than one system, the benefit attributable to the service under each system is determined, and the liability for that benefit is then included in the valuation of the system in which the service was earned.

# Changes in assumptions from those used in 2000 valuation.

(12) Members with Multiple Service Records

# B. <u>SAMPLE RATES</u>

	Active Mo	ortality*	Disabled Mo	ortality
Age	<u>Males</u>	Females	Males	Females
	0.0.70/	0.000	4.000	<b>a</b> <i>c</i> <b>a</b> <i>ai</i>
25	0.05%	0.03%	4.83%	2.63%
30	0.06%	0.03%	3.62%	2.37%
40	0.12%	0.07%	2.82%	2.09%
50	0.40%	0.16%	3.83%	2.57%
55	0.61%	0.25%	4.82%	2.95%
60	0.92%	0.42%	6.03%	3.31%

(1) Annual Rates of Mortality:

\*Plus 0.05% duty death rate prior to retirement.

(2) Annual Rates of Decrement:

Age	<b>Disablement</b>	Ultimate Terminati	on
		KERS and CERS Hazardous	<u>SPRS</u>
25	0.042%	3.04%	1.82%
30	0.050%	3.38%	2.03%
40	0.132%	1.50%	0.90%
50	0.530%	0.00%	0.00%
55	0.992%	0.00%	0.00%
60	1.743%	0.00%	0.00%

## (3) Compensation Progression (after 1st 3 Years):

		Compensation at Normal
	Rate of	Retirement as Percentage
Age	Annual Increase	Of Current Annual Compensation
25	6.50%	661.4%
30	6.50%	482.8%
40	6.50%	257.2%
50	6.50%	137.0%

# SECTION III

# **RESULTS OF THE 2001 ACTUARIAL VALUATION**

# **Determination of Contribution Rate**

The rate of contribution by the State required to provide 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, the employer share of the Normal Cost, medical insurance and the expenses of administration, is shown in Table I. The required contribution is expressed both in dollars and as a percentage of the estimated annual State payroll as of June 30, 2001.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 2001 are described in Section II. These costs are classified by type of benefit. The Normal Cost contribution rate is determined by reducing the total Normal Cost by the expected employee contributions. A breakdown of actuarial liabilities and costs between Hazardous and Non-Hazardous position employees appears in Table II for the Retirement Fund and Table IV for the Insurance Fund. A breakdown of the total Unfunded Actuarial Accrued Liability into the amortization amounts by year is shown in Table III for the Retirement Fund and Table V for the Insurance Fund. Table VI has been included to show an estimate of projected payouts from the funds over the next 10 years based on current plan provisions and actuarial assumptions.

## Actuarial Balance Sheet

Table VII is the actuarial balance sheet of the State Police Retirement System as of June 30, 2001 for the Retirement Fund. Table VIII is the actuarial balance sheet for the Insurance Fund. The "actuarial balance sheet" displays the fundamental relationship between actual assets, future contributions, and future benefits. The asset side of the balance sheet is comprised of actual fund assets plus the actuarial present value of future contributions on behalf of current members. The actuarial present values of all projected benefit payments to present active and inactive members make up the balance sheet liabilities.

## **Accountant's Information**

Table IX contains additional information needed to comply with GASB disclosure requirements relative to the Retirement Fund.

Table X contains additional information needed to comply under GASB Statement No. 12 relative to the Insurance Fund.

STATE POLICE RETIREMENT DETERMINATION OF COM	AND INSUF	RANCE FUND	001
UNFUNDED ACTUARIAL ACC	RUED LIAE	BILITY - RETIREMENT	-
<del>-</del>		05/ 011 0/0	Percent *
Total Actuarial Accrued Liability	\$	356,211,860	805.73%
Assets at Actuarial Value		456,160,709	1031.81%
Unfunded Actuarial Accrued Liability	\$	(99,948,849)	(226.08%)
Contribution - Payment on Unfunded Actuarial Accrued Liability	\$	(5,139,966)	(11.63%)
-			(11.03%)
NORMAL COS			
Retirement Benefits	\$	6,827,735	15.46%
Disability Benefits		283,201	0.63%
W ithdraw al Benefits (Vested and			
Refund of Contributions)		275,027	0.62%
Survivor Benefits		239,175	0.54%
Total Normal Cost	\$	7,625,138	17.25%
Less: Employee Contributions		3,426,389	7.75%
Normal Cost - State	\$	4,198,749	9.50%
TOTAL ANNUAL EMPLOYER COS	ST - RETIRE	MENT AND INSURAN	ICE FUND
Normal Cost	\$	4,198,749	9.50%
Payment on Unfunded Actuarial			
Accrued Liability		(5,139,966)	(11.63%)
Administrative Expense		194,082	0.44%
Subtotal - Retirement Fund			
(Not Less Than Zero)	\$	0	0.00%
Group Hospital and Medical			
Insurance Premiums		9,540,506	21.58%
Total Annual Cost	\$	9,540,506	21.58%
* Based on estimated annual salaries of	\$	44,209,944	

ТА	BLE II		
STATE POLICE RE	TIREMENT SYSTEM	Λ	
RETIREM	ENT FUND		
CLASSIFICATION OF ACTUARIAL LI	ABILITIES AND COS	TS - JUNE 30, 2001	
ACTUARIAL AC	CRUED LIABILITY		
Active Members			
Retirement Benefits	\$	125,496,792	
Disability Benefits		2,661,774	
W ithdraw al Benefits (Vested and			
Refund of Contributions)		649,894	
Survivor Benefits		2,970,628	
Total - Actives	\$	131,779,088	
Inactive Members			
Retired Members and			
Beneficiaries	\$	224,139,350	
Vested Retirement		232,861	
Vested Membership		60,561	
Total - Inactives	\$	224,432,772	
Total Actuarial Accrued Liability	\$	356,211,860	
UNFUNDED ACTUAR	IAL ACCRUED LIAB	ILITY	
Total Actuarial Accrued Liability	\$	356,211,860	
Less Actuarial Value of Assets		456,160,709	
Unfunded Actuarial Accrued Liability	\$	(99,948,849)	
NORM	ALCOST		
Retirement Benefits	\$	6,827,735	
Disability Benefits		283,201	
W ithdraw al Benefits (Vested and			
Refund of Contributions)		275,027	
Survivor Benefits		239,175	
Total Normal Cost	\$	7,625,138	
Less Employee Contributions		3,426,389	
Total Normal Cost - State	\$	4,198,749	

			TABLE III		
	STATE POLICE RETIREMENT SYSTEM				
	UNF	UNDED ACTUARIAL	ACCRUED LIABILITY	- RETIREMENT FUND - JUNE 30, 2001	
	Amounto	f Base on			
Date	Date	Current	Amortization		
Established	Established	Valuation Date	Payment	Source of Base	
6/30/1990	\$ 8,982,071	\$ 11,211,586	\$ 765,650	Cumulative unfunded actuarial accrued liability set up as initial	
				base under revised funding policy (30 year level percent of payroll	
				method)	
6/30/1991	9,963,656	12,308,804	809,599	Experience gains/losses for 7/1/1990 to 6/30/1991	
6/30/1992	(24,502,117)	(29,884,826)	(1,897,806)	Experience gains/losses for 7/1/1991 to 6/30/1992; Retiree COLA's;	
				Asset valuation method change	
6/30/1993	(3,706,436)	(4,453,445)	(273,646)	Experience gains/losses for 7/1/1992 to 6/30/1993; State	
				contribution shortfall	
6/30/1994	10,380,135	12,262,095	730,502	Experience gains/losses for 7/1/1993 to 6/30/1994; Retiree COLA's;	
				State contribution shortfall	
6/30/1995	22,729,292	26,349,676	1,524,698	Experience gains/losses for 7/1/1994 to 6/30/1995	
6/30/1996	(17,793,855)	(20,209,741)	(1,137,748)	Experience gains/losses for 7/1/1995 to 6/30/1996; Revised actuarial	
				assumptions	
6/30/1997	(31,021,470)	(34,437,148)	(1,889,084)	Experience gains/losses for 7/1/1996 to 6/30/1997; 2.8% retiree	
				COLA effective 8/1/1996	
6/30/1998	12,716,788	13,778,617	737,514	Experience gains/losses for 7/1/1997 to 6/30/1998; Revised average	
				salary definition from 5 years to 3 years; Increase in death benefit	
				from \$2,500 to \$5,000; 3.0% retiree COLA effective 7/1/1997	
6/30/1999	(31,317,924)	(33,076,611)	(1,729,808)	Experience gains/losses for 7/1/1998 to 6/30/1999; 2.3% retiree	
				COLA effective 7/1/1998	
6/30/2000	(77,707,399)	(79,904,019)	(4,087,730)	Experience gains/losses for 7/1/1999 to 6/30/2000; 1.6% retiree	
				COLA effective 7/1/1999	
6/30/2001	26,106,163	26,106,163	1,307,893	Experience gains/losses for 7/1/2000 to 6/30/2001; 2.2% retiree	
				COLA effective 7/1/2000	
Total	\$ (95,171,096)	\$ (99,948,849)	\$ (5,139,966)		

ТА	ABLE IV
	ETIREMENT SYSTEM
	ANCE FUND
	CONTRIBUTION RATE - JUNE 30, 2001
	CCRUED LIABILITY
Active Members	\$ 71,792,369
Inactive Members	
Retired Members	\$ 74,905,454
Beneficiaries	11,063,908
Vested Retirement	499,748
Vested Membership	0
Total - Inactives	\$ 86,469,110
Total Actuarial Accrued Liability	\$ 158,261,479
-	
UNFUNDED ACTUARIAL ACCRUED LIAB	
Total Actuarial Accrued Liability	\$ 158,261,479
Less Actuarial Value of Assets	79,863,577
Unfunded Actuarial Accrued Liability	\$ 78,397,902
NOR	MAL COST
Gross Normal Cost	\$ 6,258,315
ess Employee Contributions	0
Net Normal Cost - State	\$ 6,258,315
Estimated Annual Salaries	\$ 44,209,944
TOTAL ANNUA	L EMPLOYER COST
Contribution Amount	
Normal Cost	\$ 6,258,315
Payment on Unfunded Actuarial	
Accrued Liability	4,438,567
Total Annual Cost	\$ 10,696,882
As Percent of Payroll	
Normal Cost	14.16%
Payment on Unfunded Actuarial	
Accrued Liability	10.04%
Total Annual Cost	24.20%
	FUND SHORTFALL
Full Entry Age Funding Level	24.20%
Current Funding Allocation *	18.47%
Additional to Pick Up By 2016	5.73%
Expected Increase in Insurance	5.7070
Fund Rate in 2002 Valuation	0.00%
* Without regard to any one-year temporary adjust	

	TABLE V STATE POLICE RETIREMENT SYSTEM									
	UNFUNDED ACTUARIAL ACCRUED LIABILITY - INSURANCE FUND - JUNE 30, 2001									
	Amount o	of Base on								
Date	Date	Current	Amortization							
Established	Established	Valuation Date	Payment	Source of Base						
6/30/1996	\$ 73,323,619	\$ 83,278,826	\$ 4,688,348	Cumulative unfunded actuarial accrued liability set up as initial						
				base under revised funding policy (30 year level percent of payroll						
				method)						
6/30/1997	8,088,952	8,979,603	492,585	Experience gains/losses for 7/1/1996 to 6/30/1997; Impact of actual						
				insurance fund contributions vs. full entry age amounts						
6/30/1998	(2,668,212)	(2,891,002)	(154,744)	Experience gains/losses for 7/1/1997 to 6/30/1998; Impact of actual						
				insurance fund contributions vs. full entry age amounts						
6/30/1999	(13,378,283)	(14,129,553)	(738,933)	Experience gains/losses for 7/1/1998 to 6/30/1999; Impact of actual						
				insurance fund contributions vs. full entry age amounts						
6/30/2000	(6,431,546)	(6,613,352)	(338,326)	Experience gains/losses for 7/1/1999 to 6/30/2000; Impact of actual						
				insurance fund contributions vs. full entry age amounts						
6/30/2001	9,773,380	9,773,380	489,637	Experience gains/losses for 7/1/2000 to 6/30/2001; Impact of actual						
				insurance fund contributions vs. full entry age amounts						
Total	\$ 68,707,910	\$ 78,397,902	\$ 4,438,567							

			TABLE VI LICE RETIREMENT SYSTEM PAYMENT PROJECTIONS			
RETIREMENT FUND PAYMENT PROJECTIONS						
Pla	an Y	ear	Total			
7/1/2001	to	6/30/2002	24,097,000			
7/1/2002	to	6/30/2003	25,621,000			
7/1/2003	to	6/30/2004	27,245,000			
7/1/2004	to	6/30/2005	29,268,000			
7/1/2005	to	6/30/2006	30,727,000			
7/1/2006	to	6/30/2007	33,372,000			
7/1/2007	to	6/30/2008	35,408,000			
7/1/2008	to	6/30/2009	38,393,000			
7/1/2009	to	6/30/2010	40,983,000			
7/1/2010	to	6/30/2011	43,222,000			
		INSURANCE	FUND PAYMENT PROJECTIONS			
Plan Year			Total			
Pla	an Y	ear	Total			
Pla 7/1/2001	an Yo to	ear 6/30/2002	4,403,000			
	-					
7 /1 /2001 7 /1 /2002 7 /1 /2003	to	6/30/2002	4,403,000			
7 <i>/</i> 1 <i>/</i> 2001 7 <i>/</i> 1 <i>/</i> 2002	to to	6/30/2002 6/30/2003	4,403,000 5,014,000			
7/1/2001 7/1/2002 7/1/2003 7/1/2004 7/1/2005	to to to	6/30/2002 6/30/2003 6/30/2004 6/30/2005 6/30/2006	4,403,000 5,014,000 5,688,000 6,392,000 7,084,000			
7/1/2001 7/1/2002 7/1/2003 7/1/2004 7/1/2005 7/1/2006	to to to to	6/30/2002 6/30/2003 6/30/2004 6/30/2005 6/30/2006 6/30/2007	4,403,000 5,014,000 5,688,000 6,392,000 7,084,000 8,035,000			
7/1/2001 7/1/2002 7/1/2003 7/1/2004 7/1/2005 7/1/2006 7/1/2007	to to to to to	6/30/2002 6/30/2003 6/30/2004 6/30/2005 6/30/2006 6/30/2007 6/30/2008	4,403,000 5,014,000 5,688,000 6,392,000 7,084,000 8,035,000 8,832,000			
7/1/2001 7/1/2002 7/1/2003 7/1/2004 7/1/2005 7/1/2006 7/1/2007 7/1/2008	to to to to to to	6/30/2002 6/30/2003 6/30/2004 6/30/2005 6/30/2006 6/30/2007 6/30/2008 6/30/2009	4,403,000 5,014,000 5,688,000 6,392,000 7,084,000 8,035,000 8,832,000 9,885,000			
7/1/2001 7/1/2002 7/1/2003 7/1/2004 7/1/2005 7/1/2006 7/1/2007 7/1/2008 7/1/2009	to to to to to to to	6/30/2002 6/30/2003 6/30/2004 6/30/2005 6/30/2006 6/30/2007 6/30/2008 6/30/2009 6/30/2010	4,403,000 5,014,000 5,688,000 6,392,000 7,084,000 8,035,000 8,832,000 9,885,000 11,012,000			
7/1/2001 7/1/2002 7/1/2003 7/1/2004 7/1/2005 7/1/2006 7/1/2007 7/1/2008	to to to to to to to to	6/30/2002 6/30/2003 6/30/2004 6/30/2005 6/30/2006 6/30/2007 6/30/2008 6/30/2009	4,403,000 5,014,000 5,688,000 6,392,000 7,084,000 8,035,000 8,832,000 9,885,000			

Projected benefit payments reflect future actual experience consistent with actuarial assumptions used in current annual valuation. Future cost-of-living adjustments of 3% per annum have been assumed in retirement benefit amounts. Insurance fund payments reflect future medical inflation rates consistent with the valuation assumption. There has not been any assumption made as to the number of future new entrants who may enter the plan. Nor has any provision been made for any change in the basic benefit structure of the plan beyond changes already legislated.

TABI STATE POLICE RET		VSTEM		
ACTUARIAL BALANCE		E 30, 2001		
	LASSETS	-		
Fund Assets at Actuarial Value (Plus Refunds and				
Expenses Payable) *			\$	456,160,709
Actuarial Present Value of Future Member Contribu	tions			33,977,686
Actuarial Present Value of Future Employer				
Contributions				
For Normal Costs	\$	41,422,943		
For Unfunded Actuarial Accrued Liability		(99,948,849)		
Total			\$	(58,525,906)
Total Actuarial Assets			\$	431,612,489
ACTUARIAL	LIABILITIES		-	
Actuarial Present Value of Future Benefits				
Inactive Members:				
Retired Members and Beneficiaries	\$	224,139,350		
Vested Retirement		232,861		
Vested Membership		60,561		
Total - Inactive			\$	224,432,772
Actuarial Present Value of Future Benefits				
Active Members:				
Retirement Benefits	\$	193,083,480		
Disability Benefits		5,395,695		
Withdrawal Benefits (Vested and				
Refund of Contributions)		3,386,840		
Survivor Benefits		5,313,702		
Total - Active			\$	207,179,717
Refunds and Expenses Payable			\$	0
Total Actuarial Liabilities			\$	431,612,489
Notes				
* Values as of June 30, 2001				
Market value of assets:			\$	364,591,852
Actuarial value of assets:			\$	456,160,709
Member's Contribution Account:			\$	34,338,478
** Present value of accrued benefit deferred to n	ormal retirer	ment date.		

ТАВІ	E V III		
STATE POLICE RE		STEM	
INSURAN	ICE FUND		
ACTUARIAL BALANCE	SHEET - JUNE	30, 2001	
ACTUARI	L ASSETS		
Fund Assets at Actuarial Value (Plus Refunds and			
Expenses Payable) *			\$ 79,863,577
Actuarial Present Value of Future Member Contribu	itions (Note: A	A	
Future Member Contributions Credited Against F			0
Actuarial Present Value of Future Employer		<i>.</i>	
Contributions			
For Normal Costs	\$	69,968,924	
For Unfunded Actuarial Accrued Liability		78,397,902	
Total	\$ 148,366,826		
Total Actuarial Assets	\$ 228,230,403		
ACTUARIAL	LIABILITIES		
Actuarial Present Value of Future Benefits			
Inactive Members:			
Retired Members and Beneficiaries	\$	85,969,362	
Vested Retirement		499,748	
Vested Membership		0	
Total - Inactive			\$ 86,469,110
Actuarial Present Value of Future Benefits	÷		
Active Members:			\$ 141,761,293
Refunds and Expenses Payable			С
Total Actuarial Liabilities			\$ 228,230,403
Notes			
* Values as of June 30, 2001			
Market value of assets:			\$ 69,925,891
Actuarial value of assets:			\$ 79,863,577

TABLE IX						
STATE POLICE RETIREMENT SYSTEM						
ACCOUNTANT'S INFORMATION - RETIREMENT FUND - JUNE 30, 2001						
GASB DISCLOSURE INFORMATION						
NUMBER OF MEMBERS						
Inactive Members						
Retired Members	767					
Beneficiaries	75					
Vested Retirements	12					
Vested Membership	78					
Total Inactive Members	932					
Active Members						
Vested Members	756					
Nonvested Members	260					
Total Active Members	1,016					
Total Members	1,948					

	TABLE >	
	STATE POLICE RETIRE	MENT SYSTEM
ACCOU	NTANT'S INFORMATION - INSU	JRANCE FUND - JUNE 30, 2001
INF	ORMATION REQUIRED UNDER	GASB STATEMENT NO. 12
	NUMBER OF MI	EMBERS
Contracts in Force - Retire	-	
(1) Single;	- 100% Paid	187
Pre-Medicare	- 75% Paid	2
	- 50% Paid	4
	- 25% Paid	1
	- 0% Paid	0
(2) Family;	- 100% Paid	121
Pre-Medicare	- 75% Paid	0
	- 50% Paid	1
	- 25% Paid	0
	- 0% Paid	0
(3) Parent +;	- 100% Paid	47
Pre-Medicare	- 75% Paid	0
	- 50% Paid	0
	- 25% Paid	0
	- 0% Paid	0
(4) Couple;	- 100% Paid	222
Pre-Medicare	- 75% Paid	3
	- 50% Paid	1
	- 25% Paid	2
	- 0% Paid	0
(5) Medicare Regular	- 100% Paid	8
	- 75% Paid	0
	- 50% Paid	0
	- 25% Paid	0
///	- 0% Paid	0
(6) Medicare High	- 100% Paid	272
Option	- 75% Paid	3
	- 50% Paid	1
	- 25% Paid	1
	- 0% Paid	1
Vested Retirements		12
Vested Membership		78
Active Members		1,016
	UNFUNDED MEDICAL BEN	IEFIT OBLIGATION
Medical Benefit Obligation		
Retirees, Beneficiaries an		
Vested Terminated Me	mbers	\$ 86,469,110
Active Members		71,792,369
Total Medical Benefit Obl		\$ 158,261,479
Net Assets at Actuarial Val		\$ 79,863,577
Unfunded Medical Benefit		\$ 78,397,902
NOTE: Medical Benefit Ob	igation based on Entry Age Nor	mal Actuarial Cost Method

# SECTION IV

# COMMENTS AND CERTIFICATION

# **Comments**

For the Retirement Fund, the total Actuarial Accrued Liability has increased from \$336,579,763 on June 30, 2000 to \$356,211,860 on June 30, 2001. The Unfunded Actuarial Accrued Liability has increased from (\$122,588,811) to (\$99,948,849). Total actuarial value of assets as of June 30, 2001 was equal to \$456,160,709. The Unfunded Actuarial Accrued Liability increased from (281.19%) to (226.08%) as a percentage of annual payroll and increased from (36.4%) to (28.1%) as a percentage of the Actuarial Accrued Liability in the year ended June 30, 2001.

For the Insurance Fund, the total Actuarial Accrued Liability has increased from \$138,867,085 on June 30, 2000 to \$158,261,479 on June 30, 2001. The Unfunded Actuarial Accrued Liability has increased from \$67,155,373 to \$78,397,902. Total actuarial value of assets as of June 30, 2001 was equal to \$79,863,577. The Unfunded Actuarial Liability increased from 48.4% to 49.5% as a percentage of the Actuarial Accrued Liability in the year ended June 30, 2001.

The change in contribution rate between the 2000 and 2001 valuations is a function of actual plan experience since the last valuation. A formal gain and loss analysis would identify the portion of the contribution rate change attributable to each element of plan experience and benefit change. However, undertaking such an analysis would be extremely time consuming and expensive. In lieu of the formal analysis, we have estimated the impact of the various components of gain and loss based on changes in statistical averages of each group. The following table shows the results of this computation:

June 30, 2000 Contribution Rate	21.58%
Change in Payment Percentage Due to Covered Payroll Experience	(0.49%)
Investment Return Experience	
> Prior to Asset Valuation Method Change	0.06%
> Impact of Asset Valuation Method Change	2.54%
Salary Increase Experience	0.20%
Decrements Experience*	(0.26%)
Change in Insurance Fund Rate	
> One-Year Temporary Funding Rate	(0.33%)
> Increase in Long Term Funding Rate	0.33%
Change in Administrative Expense Rate	(0.21%)
Retiree COLA Effective 7/1/2000	0.55%
Legislated Changes	
> 3 Year Average Window for Nonhazardous	0.00%
Change in Actuarial Assumptions	1.23%
Reduction in Amount Available from Prior Year Retirement Fund Rate to	
Offset Current Year Increases	(3.62%)
June 30, 2001 Contribution Rate	21.58%
* Includes mortality, disability, termination of employment and retirement experience	e.

The annual State contribution rate required to provide the Normal Cost, 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, and pay administrative expenses is 0.00%. An additional 21.58% is required to fund medical insurance for retirees, bringing the required contribution up to 21.58%. This is the same as the current 21.58% budgeted contribution rate. Therefore, it is our opinion that the contribution rate beginning July 1, 2002 should remain at the 21.58% level, and we so recommend.

The recommended contribution rates are based on current statutory benefits. The budgeted contribution rates will again be reviewed in the June 30, 2002 valuation.

The following table shows the total Actuarial Accrued Liability, the Unfunded Actuarial Accrued Liability, percent unfunded and the growth of the invested assets relative to retirement related benefits at selected intervals since the inception of the System.

STATE POLICE RETIREMENT SYSTEM - RETIREMENT FUND									
July 1 of Year	Total Actuarial Accrued	Unfunded Actuarial Accrued Liability	Percent	Actuarial Value of Assets	Increase in				
Shown	Liability \$ 1,450,000	Liability	Unfunded	\$ 0	Assets \$ 0				
1958		\$ 1,450,000	100.0%						
1963	4,553,258	2,008,476	44.1%	2,544,782	619,167				
1968	9,079,139	3,288,103	36.2%	5,791,036	789,709				
1971	11,828,727	2,441,888	20.6%	9,386,839*	1,339,726				
1974	17,737,434	3,179,448	17.9%	14,557,986*	1,935,105				
1975	23,182,081	6,169,445	26.6%	17,012,636*	2,454,650				
1976	28,693,129	8,231,367	28.7%	20,461,762*	3,449,126				
1977	34,561,413	10,436,161	30.2%	24,125,252*	3,663,490				
1978	49,950,102	21,440,957	42.9%	28,509,145*	4,383,893				
1979	55,391,206	21,487,985	38.8%	33,903,221*	5,394,076				
1980	67,580,562	26,663,397	39.5%	40,917,165*	7,013,944				
1981	71,526,728	23,296,425	32.6%	48,230,303	7,313,138				
1982	78,713,172	21,383,042	27.2%	57,330,130	9,099,827				
1983	81,944,546	16,187,460	19.8%	65,757,086	8,426,956				
1984	91,180,668	16,200,151	17.8%	74,980,517	9,223,431				
1985	99,269,825	14,253,583	14.4%	85,016,242	10,035,725				
1986	105,559,951	8,892,252	8.4%	96,667,699	11,651,457				
1987	111,541,989	1,347,385	1.2%	110,194,604	13,526,905				
1988	120,128,367	(870,182)	(0.8%)	120,998,549	10,803,945				
1989	134,550,773	3,200,220	2.4%	131,350,553	10,352,004				
1990	154,007,622	8,982,071	5.8%	145,025,551	13,674,998				
1991	170,009,955	1 9,191,881	11.3%	150,818,074	5,792,523				
1992**	182,996,056	(4,794,955)	(2.6%)	187,791,011	36,972,937				
1993	191,653,594	(8,667,374)	(4.5%)	200,320,968	12,529,957				
1994	206,763,310	1,442,801	0.7%	205,320,509	4,999,541				
1995	241,690,631	24,186,188	10.0%	217,504,443	12,183,934				
1996	244,540,812	7,025,466	2.9%	237,515,346	20,010,903				
1997	255,784,758	(23,858,517)	(9.3%)	279,643,275	42,127,929				
1998	294,427,019	(11,891,899)	(4.0%)	306,318,918	26,675,643				
1999	314,021,673	(43,601,523)	(13.9%)	357,623,196	51,304,278				
2000	336,579,763	(122,588,811)	(36.4%)	459,168,574	101,545,378				
2001***	356,211,860	(99,948,849)	(28.1%)	456,160,709	(3,007,865)				
	ized appreciation of				(-)))				
	11		tion from book va	lue to a five year avera	age of				
market to book va				-	-				
***Change in ass	et valuation method	effective in this valu	ation to 5-year sm	oothing of investment	t gains/(losses).				

The following table shows the total Actuarial Accrued Liability, the Unfunded Actuarial Accrued Liability, percent unfunded and the growth of the invested assets relative to medical premium benefits since 1990.

STATE POLICE RETIREMENT SYSTEM - INSURANCE FUND									
July 1 of Year Shown	Total Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Percent Unfunded	Actuarial Value of Assets	Increase in Assets				
1990	\$ 64,784,801	\$ 58,268,284	89.9%	\$ 6,516,517	\$ N/A				
1991	74,163,248	65,231,704	88.0%	8,931,544	2,415,027				
1992	88,407,634	76,689,678	86.7%	11,717,956	2,786,412				
1993	95,290,099	81,004,620	85.0%	14,285,479	2,567,523				
1994	110,193,139	92,782,467	84.2%	17,410,672	3,125,193				
1995	118,995,732	97,795,537	82.2%	21,200,195	3,789,523				
1996**	101,132,886	73,323,619	72.5%	27,809,267	6,609,072				
1997	117,361,754	83,485,271	71.1%	33,876,483	6,067,216				
1998	124,501,076	83,090,576	66.7%	41,410,500	7,534,017				
1999	125,797,150	71,867,291	57.1%	53,929,859	12,519,359				
2000	138,867,085	67,155,373	48.4%	71,711,712	17,781,853				
2001***	158,261,479	78,397,902	49.5%	79,863,577	8,151,865				
<ul> <li>**Change in asset valuation method effective in this valuation from book value to a five year average of market to book values.</li> <li>***Change in asset valuation method effective in this valuation to 5-year smoothing of investment gains/(losses).</li> </ul>									

# **Certification**

On the basis of the actuarial assumptions given and the data furnished by the General Manager of the State Police Retirement System, it is certified that the actuarial valuation has been made by the use of accepted actuarial principles and based on continuation of current funding polices adopted by the Board, that adequate provision is being made for the funding of future benefits.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Stephen A. Gagel, F.S.A.

Date

Date

Edward W. Maynard, F.S.A.

William M. Mercer, Incorporated 462 South Fourth Avenue, Suite 1500 Louisville, Kentucky 40202-3431 ©(502) 561-4500

# **SECTION V**

# STATISTICAL DATA

# AS OF

# JUNE 30, 2001

# STATE POLICE RETIREMENT SYSTEM JUNE 30, 2001

AGE					FEMALE					
GROUP	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	
0-19	3	72,000	24,000	0	0	0	3	72,000	24,000	
20-24	40	1,022,640	25,566	1	8,256	8,256	41	1,030,896	25,144	
25-29	162	5,077,752	31,344	11	357,432	32,494	173	5,435,184	31,417	
30-34	230	8,691,300	37,788	11	432,696	39,336	241	9,123,996	37,859	
35-39	182	7,875,120	43,270	5	210,468	42,094	187	8,085,588	43,238	
40 - 44	146	7,111,272	48,707	7	332,472	47,496	153	7,443,744	48,652	
45-49	126	7,024,380	55,749	2	123,876	61,938	128	7,148,256	55,846	
50-54	69	4,490,196	65,075	0	0	0	69	4,490,196	65,075	
55-59	20	1,356,264	67,813	0	0	0	20	1,356,264	67,813	
60-64	0	0	0	0	0	0	0	0	0	
65-69	0	0	0	0	0	0	0	0	0	
70-74	1	23,820	23,820	0	0	0	1	23,820	23,820	
75+	0	0	0	0	0	0	0	0	0	
TOTAL	979	42,744,744	43,662	37	1,465,200	39,600	1,016	44,209,944	43,514	

EARNINGS BY AGE GROUPS

#### EARNINGS BY SERVICE GROUPS

SERVICE		MALE			FEMALE			TOTAL	
GROUP	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE	COUNT	EARNINGS	AVERAGE
0	17	291,996	17,176	1	8,256	8,256	18	300,252	16,681
1	117	3,092,172	26,429	3	83,736	27,912	120	3,175,908	26,466
2	48	1,514,400	31,550	4	124,524	31,131	52	1,638,924	31,518
3	0	0	0	0	0	0	0	0	0
4	64	2,136,828	33,388	б	205,152	34,192	70	2,341,980	33,457
0-4	246	7,035,396	28,599	14	421,668	30,119	260	7,457,064	28,681
5-9	209	8,233,812	39,396	9	363,408	40,379	218	8,597,220	39,437
10-14	148	6,556,032	44,298	5	223,776	44,755	153	6,779,808	44,312
15-19	192	9,466,668	49,306	8	378,492	47,312	200	9,845,160	49,226
20-24	69	3,900,252	56,525	1	77,856	77,856	70	3,978,108	56,830
25-29	80	5,108,184	63,852	0	0	0	80	5,108,184	63,852
30-34	32	2,241,336	70,042	0	0	0	32	2,241,336	70,042
35-39	3	203,064	67,688	0	0	0	3	203,064	67,688
40+	0	0	0	0	0	0	0	0	0
TOTAL	979	42,744,744	43,662	37	1,465,200	39,600	1,016	44,209,944	43,514
		-					-	-	

# STATE POLICE RETIREMENT SYSTEM JUNE 30, 2001

#### SERVICE GROUPS BY AGE GROUPS

MALE AGE								S	ERVICE	
GROUP	0-4	 5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
0-19 20-24	3 40									3 40
25-29	120	42								162
30-34	62	128	39	1						230
35-39	14	35	84	49						182
40 - 44	5	3	24	101	13					146
45-49	1			40	45	40				126
50-54			1	1	11	38	16	2		69
55-59		1				2	16	1		20
60-64										0
65-69										0
70-74	1									1
75+	0.4.6		1.4.0	100	60	0.0	2.0	2	0	0
TOTAL	246	209	148	192	69	80	32	3	0	979
FEMALE AGE								s	ERVICE	
	GROUP.									
GROUP	0 - 4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
0-19										0
20-24	1									1
25-29	9	2								11
30-34	3	6	2							11
35-39	1	1	3	-						5
40-44 45-49				7 1	1					7 2
50-54				T	Ť					2
55-59										0
60-64										0
65-69										0
70-74										Ũ
75+										0
TOTAL	14	9	5	8	1	0	0	0	0	37
TOTAL										
AGE								S	ERVICE	
GROUP	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL
0-19	3									3
20-24 25-29	41	4.4								41
25-29 30-34	129 65	44 134	41	1						173 241
35-39	15	134 36	41 87	49						187
40-44	5	30	24	108	13					153
45-49	1	5	21	41	46	40				128
50-54	-		1	1	11	38	16	2		69
55-59		1	-	_		2	16	1		20
60-64		_				_		_		0
65-69										0
70-74	1									1
75+										0
TOTAL	260	218	153	200	70	80	32	3	0	1,016

# STATE POLICE RETIREMENT SYSTEM JUNE 30, 2001

AGE									SERVICE	
GROUP	0-4	5-9						35-39	40+	TOTAL
0-19	3 24,000									3 24,000
20-24	41 25,144									41 25,144
25-29	129 28,960	44 38,620								173 31,417
30-34	65 30,144		41 43,819							241 37,859
35-39	15 30,450		87 44,373							187 43,238
40-44	5 28,973		24 44,903							153 48,652
45-49	1 33,492				46 56,985					128 55,846
50-54								2 67,548		69 65,075
55-59		1 37,908					16 71,177	1 67,968		20 67,813
60-64										0
65-69										0
70-74	1 23,820									1 23,820
75+										0
TOTAL	260 28,681	218 39,437	153 44,312	200 49,226	70 56,830	80 63,852	32 70,042	3 67,688	0	1,016 43,514
TOTAL EARNINGS		44,	209,944					Note: Earnings shown in this		
AVERAGE	AGE		36.92							
AVERAGE	SERVICE		11.77				401(a)(1	/).		

#### AVERAGE EARNINGS FOR SERVICE GROUPS BY AGE GROUPS

#### STATE POLICE RETIREMENT SYSTEM TABULATION BY MONTHLY SALARY JUNE 30, 2001

	NUMBER OF MEMBERS				
MONTHLY SALARY	MALES	FEMALES	TOTAL		
UNDER \$ 500	3	0	3		
\$ 500 - \$ 749	2	1	3		
\$ 750 - \$ 999	1	0	1		
\$ 1,000 - \$ 1,249	2	0	2		
\$ 1,250 - \$ 1,499	1	0	1		
\$ 1,500 - \$ 1,749	1	0	1		
\$ 1,750 - \$ 1,999	8	0	8		
\$ 2,000 - \$ 2,249	43	0	43		
\$ 2,250 - \$ 2,499	77	3	80		
\$ 2,500 - \$ 2,749	68	9	77		
\$ 2,750 - \$ 2,999	45	0	45		
\$ 3,000 - \$ 3,499	214	9	223		
\$ 3,500 - \$ 3,999	198	10	208		
\$ 4,000 - \$ 4,499	134	4	138		
\$ 4,500 - \$ 4,999	77	0	77		
\$ 5,000 - \$ 5,499	47	0	47		
\$ 5,500 - \$ 5,999	35	0	35		
\$ 6,000 - \$ 6,499	13	1	14		
\$ 6,500 - \$ 6,999	4	0	4		
\$ 7,000 - \$ 7,499	5	0	5		
\$ 7,500 - \$ 7,999	1	0	1		
\$ 8,000 - \$ 8,499	0	0	0		
\$ 8,500 - \$ 8,999	0	0	0		
\$ 9,000 - \$ 9,499	0	0	0		
\$ 9,500 - \$ 9,999	0	0	0		
\$ 10,000 AND OVER	0	0	0		
TOTAL	979	37	1,016		
HIGHLY COMPENSATED EMPLOYEES (ESTIMATED) ANNUAL SALARY OF \$66,000 AND OVER	5	0	5		

# STATE POLICE RETIREMENT SYSTEM MEMBERS WITH SERVICE IN ANOTHER SYSTEM JUNE 30, 2001

#### MEMBERS CURRENTLY ACTIVE IN SPRS

SERVICE IN	ACTIVE IN OTHER SYSTEM	INACTIVE IN OTHER SYSTEM	TOTAL					
KERS - NONHAZARDOUS	0	109	109					
KERS - HAZARDOUS	1	20	21					
CERS - NONHAZARDOUS	6	93	99					
CERS - HAZARDOUS	3	66	69					
TOTAL - ALL SYSTEMS	10	288	298					

MEMBERS CURRENTLY NOT ACTIVE IN SPRS

SERVICE IN	ACTIVE IN OTHER SYSTEM	INACTIVE IN OTHER SYSTEM	TOTAL
KERS - NONHAZARDOUS	13	9	22
KERS - HAZARDOUS	7	1	8
CERS - NONHAZARDOUS	18	11	29
CERS - HAZARDOUS	44	4	48
TOTAL - ALL SYSTEMS	82	25	107

NOTE: DOES NOT INCLUDE INDIVIDUALS IN PAY STATUS IN OTHER SYSTEMS

#### STATE POLICE RETIREMENT SYSTEM RETIRED LIVES SUMMARY JUNE 30, 2001

	MALE LIVES		FEMALE LIVES		TOTAL	
		MONTHLY		MONTHLY		MONTHLY
	NUMBER	BENEFITS	NUMBER	BENEFITS	NUMBER	BENEFITS
BASIC FORM	68	162,680.44	6	5,599.34	74	168,279.78
STRAIGHT LIFE (OLD PLAN)	0	0.00	0	0.00	0	0.00
JOINT & SURVIVOR						
100% TO BENEFICIARY	107	229,688.83	1	885.33	108	230,574.16
66-2/3% TO BENEFICIARY	57	151,924.92	0	0.00	57	151,924.92
50% TO BENEFICIARY	56	135,475.08	2	1,989.44	58	137,464.52
POP-UP OPTION	186	488,449.17	1	519.18	187	488,968.35
10 YEARS CERTAIN	5	14,816.15	0	0.00	5	14,816.15
10 YEARS CERTAIN & LIFE	22	54,358.04	0	0.00	22	54,358.04
SOCIAL SECURITY OPTION						
OPTION C	34	72,899.59	1	1,688.19	35	74,587.78
OPTION D	165	345,938.24	5	3,691.45	170	349,629.69
OPTION E	0	0.00	0	0.00	0	0.00
OPTION F	0	0.00	0	0.00	0	0.00
DEPENDENT CHILD	8	2,081.00	4	1,073.07	12	3,154.07
REFUND	0	0.00	0	0.00	0	0.00
15 YEARS CERTAIN & LIFE	10	21,371.15	0	0.00	10	21,371.15
20 YEARS CERTAIN & LIFE	25	54,241.14	4	3,342.14	29	57,583.28
5 YEARS ONLY	0	0.00	0	0.00	0	0.00
TOTAL	743	1,733,923.75 S - 3	24	18,788.14	767	1,752,711.89

#### STATE POLICE RETIREMENT SYSTEM BENEFICIARY SUMMARY JUNE 30, 2001

	MALE LIVES		FEMALE LIVES		TOTAL	
		MONTHLY		MONTHLY		MONTHLY
	NUMBER	BENEFITS	NUMBER	BENEFITS	NUMBER	BENEFITS
BASIC FORM	0	0.00	0	0.00	0	0.00
STRAIGHT LIFE (OLD PLAN)	0	0.00	0	0.00	0	0.00
JOINT & SURVIVOR						
100% TO BENEFICIARY	3	4,236.97	45	88,659.27	48	92,896.24
66-2/3% TO BENEFICIARY	0	0.00	1	1,167.87	1	1,167.87
50% TO BENEFICIARY	1	997.32	8	10,492.70	9	11,490.02
POP-UP OPTION	0	0.00	6	15,094.36	6	15,094.36
10 YEARS CERTAIN	0	0.00	0	0.00	0	0.00
10 YEARS CERTAIN & LIFE	0	0.00	0	0.00	0	0.00
SOCIAL SECURITY OPTION						
OPTION C	0	0.00	0	0.00	0	0.00
OPTION D	0	0.00	7	15,508.27	7	15,508.27
OPTION E	0	0.00	0	0.00	0	0.00
OPTION F	0	0.00	0	0.00	0	0.00
DEPENDENT CHILD	1	248.81	0	0.00	1	248.81
REFUND	0	0.00	0	0.00	0	0.00
15 YEARS CERTAIN & LIFE	1	2,990.97	0	0.00	1	2,990.97
20 YEARS CERTAIN & LIFE	0	0.00	2	7,270.97	2	7,270.97
5 YEARS ONLY	0	0.00	0	0.00	0	0.00
TOTAL	6	8,474.07 S - 3	69	138,193.44	75	146,667.51

# STATE POLICE RETIREMENT SYSTEM VESTED RETIREMENT SUMMARY

JUNE 30, 2001

	Μ	ALE LIVES	FEN	MALE LIVES	TOTAL	
AGE NEAREST		MONTHLY		MONTHLY		MONTHLY
BIRTHDAY	NUMBER	BENEFITS	NUMBER	BENEFITS	NUMBER	BENEFITS
15-19	0	0.00	0	0.00	0	0.0
20-24	0	0.00	0	0.00	0	0.0
25-29	0	0.00	0	0.00	0	0.0
30-34	2	837.44	0	0.00	2	837.4
35-39	3	1,007.34	1	279.99	4	1,287.3
40-44	4	2,442.56	0	0.00	4	2,442.5
45-49	0	0.00	0	0.00	0	0.
50-54	2	996.05	0	0.00	2	996.
55-59	0	0.00	0	0.00	0	0.
60-64	0	0.00	0	0.00	0	0.
65-69	0	0.00	0	0.00	0	0.
70-74	0	0.00	0	0.00	0	0.
75-79	0	0.00	0	0.00	0	0.
80-84	0	0.00	0	0.00	0	0.
85 +	0	0.00	0	0.00	0	0.
TOTAL	11	5,283.39	1	279.99	12	5,563.

# STATE POLICE RETIREMENT SYSTEM VESTED MEMBERSHIP SUMMARY JUNE 30, 2001

	]	MALE LIVES	F	EMALE LIVES	TOTAL		
AGE NEAREST ACCUMULATE		ACCUMULATED		ACCUMULATED	ACCUMULATED		
BIRTHDAY	NUMBER	CONTRIBUTIONS	NUMBER	CONTRIBUTIONS	NUMBER	CONTRIBUTIONS	
15-19	8	562.32	0	0.00	8	562.32	
20-24	2	774.87	0	0.00	2	774.87	
25-29	13	21,192.76	2	73.90	15	21,266.66	
30-34	21	22,687.63	1	15.39	22	22,703.02	
35-39	16	5,527.88	3	2,727.88	19	8,255.76	
40-44	5	3,450.23	1	390.78	6	3,841.01	
45-49	4	3,704.33	0	0.00	4	3,704.33	
50-54	2	7,363.10	0	0.00	2	7,363.10	
55-59	0	0.00	0	0.00	0	0.00	
60-64	0	0.00	0	0.00	0	0.00	
65-69	0	0.00	0	0.00	0	0.00	
70-74	0	0.00	0	0.00	0	0.00	
75-79	0	0.00	0	0.00	0	0.00	
80-84	0	0.00	0	0.00	0	0.00	
85 +	0	0.00	0	0.00	0	0.00	
TOTAL	71	65,263.12	7	3,207.95	78	68,471.07	

# SECTION VI

# SUMMARY OF PRINCIPAL PLAN PROVISIONS

## **Effective Date**

The state of Kentucky established the State Police Retirement System in July, 1958. The plan benefits have been improved several times, most recently as of August 1, 2001.

## <u>Plan Year</u>

A plan year is a twelve month period beginning on July 1.

#### **Final Compensation**

Final compensation is the average salary during the three highest paid fiscal years.

#### **Service**

Service means the sum of prior service and current service as defined below:

- (a) Prior service is credited for regular full-time employment of at least 100 hours of work per month with a participating agency before July 1, 1958. In some instances prior service credit is granted for time spent in the military.
- (b) Current service is obtained for regular full-time employment which averages at least 100 hours of work per month with participating agencies after July 1, 1958. Current service credit may be granted for military service and educational leaves if special criteria are met.
- (c) Service is increased by unused sick leave, up to a maximum of six months, for purposes of computing eligibility and the amount of benefits.

## <u>Eligibility</u>

The Bureau of State Police shall participate in the System. Membership in the system consists of all regular full-time officers of the Kentucky State Police who are entitled to exercise the powers of police officers.

# Normal Retirement Date

A member may elect to retire upon attaining age 55 and having contributed to the System. Upon completion of 20 years of service credit, 15 of which are current service, a member may declare the normal retirement date to be some date prior to age 55.

# **Early Retirement Date**

A member may elect to retire before the normal retirement date at any time after attainment of age 50 and completion of 15 years of service credit.

## **Normal Retirement Benefits**

A monthly benefit equal to 2.50% of the member's final compensation multiplied by his service will be payable upon attainment of age 55 and completion of 60 months of service of which 12 months are current service. A member who retires on or after the normal retirement date with less than 60 months of service is entitled to a retirement allowance which pays the actuarial equivalent of twice the member's accumulated contributions for life.

## **Early Retirement Benefits**

A member who elects early retirement is entitled to a monthly benefit reduced for each month by which the early retirement date precedes the first date on which the member would qualify for an unreduced benefit. If a member has 20 or more years of service credit (15 of which are current), an unreduced benefit is payable.

## **Disability Benefits**

A member with 60 months of service, 12 of which must be current service, is entitled to a retirement allowance computed in the same manner as the normal retirement benefit with service and final compensation determined as of the disability date. Service credit shall be added on to total service for the period from the last day of paid employment to the 55th birthday up to a maximum of service credited to the last day of paid employment. Except for members with 20 or more years of service on the last day of paid employment, the maximum combined service credit (total service and added service) shall not exceed 20 years. For members with 20 or more years of service credit, actual service will be used. The retirement benefit shall not be less than 25% of the member's final monthly rate of pay for those disabled in the line of duty. Ten percent of final monthly rate of pay for each dependent child is also payable if disability occurs in line of duty. The maximum dependent child's benefit is 40% of the member's final monthly rate of pay. A partial disability benefit may be payable if the disability is not total and permanent. The disability will be reduced to a rate determined by the Board.

# **Death Benefits**

If a member dies prior to retirement, but after 60 months of service, 12 of which are current and who is a contributing member, or after 12 years of service, one of which is current and who is not a contributing member, a benefit will be payable to the beneficiary based on the member's age, years of

service and final compensation at the date of death. The benefit will be equal to the amount payable had the employee retired and elected a joint and 100% survivorship payment form.

If a member dies in the line of duty and has a spouse as beneficiary, a \$5,000 lump sum payment will be made and a benefit of 25% of the member's final monthly rate of pay will be payable until death or remarriage. If the member dies in the line of duty and has a dependent as beneficiary, a lump sum payment of \$10,000 will be made. Monthly payments shall be made for each dependent child equal to 10% of the member's final monthly rate of pay, but not greater than 40% of the member's final monthly rate of pay. The beneficiary of a member with 5 or more years of service, one of which is current, may elect a death benefit computed in the same manner as a non-hazardous employee under KERS and CERS, using 2.50% rather than the non-hazardous benefit rate.

Upon the death of a retired member, who had a minimum of 48 months of service credit, a death benefit of \$5,000 is payable.

# **Optional Forms of Payment**

Joint and survivor annuities which provide a reduced benefit for the life of the member, with the benefit at the same or at a further reduced rate continuing after the member's death until the death of the designated beneficiary may be elected by the member prior to retirement. Other optional forms include an annuity with 10, 15 or 20 years of payments guaranteed and a Social Security adjustment with or without survivor rights.

# **Contributions**

Members contribute 8% of gross compensation until age 55. On each June 30, interest is credited at the rate to be determined by the Board on the accumulated contributions the member had in his account on the previous June 30. Upon termination a member may withdraw the contributions with interest, but will be entitled to no benefit payments.

# Medical Insurance

Recipients of a retirement benefit may elect to participate in a voluntary hospital/medical group insurance plan for themselves as well as any beneficiaries or dependents. The retirement system will pay a portion of the cost of participation for the retiree and dependents based on years of service credit as follows:

Less than 4 years	0%
4 - 9 years	25%
10 - 14 years	50%
15 - 19 years	75%
20 or more years	100%

If a member is disabled in the line of duty, the retirement system will pay 100% of the cost of the member, spouse and eligible dependents. If a member is killed in the line of duty, the retirement system will pay 100% of the cost of the beneficiary and eligible dependents as long as they remain eligible for a monthly benefit payment.

# **Increase in Retirement Allowances**

Effective August 1, 1996, and on July 1 of each year thereafter, a recipient of a retirement allowance shall have his retirement allowance increased by the percentage increase in the annual average of the consumer price index for all urban consumers for the most recent calendar year as published by the federal Bureau of Labor Statistics, not to exceed five percent (5%). In determining the annual employer contribution rate, only the cost of increases granted as of the most recent valuation date shall be recognized. The benefits of this subsection as provided on August 1, 1996 and thereafter shall not be considered as benefits protected by the inviolable contact provisions of KRS 61.692, 16.652, and 78.852. The General Assembly reserves the right to suspend or reduce the benefits conferred in this subsection if in their judgment the welfare of the Commonwealth so demands.