



**LEXINGTON-FAYETTE  
URBAN COUNTY GOVERNMENT**  
*Lexington, Kentucky*

**Policemen's & Firefighters'  
Retirement Fund**



**GASB Update Report of the  
Lexington-Fayette Urban County  
Government Policemen's and  
Firefighters' Retirement Fund**

**Prepared as of July 1, 2011**



# Cavanaugh Macdonald

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December 7, 2011

Lexington Fayette Urban County Government  
Policemen's and Firefighters' Retirement Fund  
200 East Main Street  
Lexington, KY 40507

Dear Members of the Board:

We are pleased to submit herewith the results of the bi-annual GASB disclosure update of the Lexington Fayette Urban County Government Policemen's and Firefighters' Retirement Fund prepared as of July 1, 2011. The purpose of this report is to provide accounting information under Governmental Accounting Standards Board Statements No. 25 and 27 (GASB 25 and 27).

This update is based on membership data and Fund assets as of June 30, 2011 supplied by the County. While not verifying the data at source, the actuary performed tests for consistency and reasonability.

The update has been prepared in accordance with the parameters set forth in Statement Nos. 25 and 27 of the Governmental Accounting Standards Board. The annual required contribution (ARC) of the Government under GASB for the fiscal year ending June 30, 2012 is 44.67% of payroll, which will liquidate the unfunded accrued liability over a 23 year period on the assumption that payroll will increase 3% annually.

We trust that the report will meet the approval of the Board and will furnish the desired information concerning the financial condition of the Fund. The undersigned is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

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Chief Executive Officer

Todd B. Green, ASA, FCA, MAAAA  
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TJC/TBG:jw

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## **SECTION I – INTRODUCTION**

This report provides updated disclosure information in accordance with GASB Statements 25 and 27. The information was developed from the results of the July 1, 2010 valuation, adjusted to reflect basic changes in the active and retired membership on June 30, 2011 as well as the actual investment experience of the Fund for the year ended June 30, 2011.

Section II of this report provides the updated disclosure information. Schedule A presents the development of the actuarial value of assets as of July 1, 2011. Schedule B shows the Fund's receipts and disbursements for the year ended June 30, 2011. Schedule C provides an outline of the assumptions used in the July 1, 2010 valuation and Schedule D discusses the actuarial cost method used to develop the Annual Required Contribution (ARC), which form the basis for the updated results provided in Section II. Finally Schedule E provides a summary of the benefit structure for the Fund.



**SECTION II – ACCOUNTING INFORMATION**

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

**NUMBER OF ACTIVE AND RETIRED PARTICIPANTS  
AS OF JULY 1, 2011**

<b>GROUP</b>	<b>NUMBER</b>
Retired participants and beneficiaries currently receiving benefits	935
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	0
Active Participants	<u>1,051</u>
Total	1,986

- Another such item is the schedule of funding progress as shown below.

**SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
7/1/2006	373,314,278	594,804,448	221,490,170	62.8	57,192,876	387.3
7/1/2007	397,712,302	627,939,926	230,227,624	63.3	57,717,156	398.9
7/1/2008	418,311,038	664,935,356	246,624,318	62.9	61,368,960	401.9
7/1/2009	441,772,820	699,851,128	258,078,308	63.1	65,765,448	392.4
7/1/2010	502,259,967	724,140,738	221,880,771	69.4	60,512,412	366.7
7/1/2011	501,069,884	758,851,546	257,781,662	66.0	64,258,162	401.2



3. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2011.

**Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending June 30, 2011**

(a)	Employer annual required contribution	\$28,216,938
(b)	Interest on net pension obligation	(3,930,219)
(c)	Adjustment to annual required contribution	<u>(3,636,504)</u>
(d)	Annual pension cost (a) + (b) – (c)	\$27,923,223
(e)	Employer contributions made for fiscal year ending June 30, 2011	<u>14,408,809</u>
(f)	Increase (decrease) in net pension obligation (d) – (e)	\$13,514,414
(g)	Net pension obligation beginning of fiscal year	<u>(49,127,742)</u>
(h)	Net pension obligation end of fiscal year (f) + (g)	\$(35,613,328)

**TREND INFORMATION**

<u>Year Ending</u>	<u>Annual Pension Cost (APC)</u>	<u>Percentage of APC Contributed</u>	<u>Net Pension Obligation (NPO)</u>
June 30, 2009	28,839,699	291.3	(30,143,003)
June 30, 2010	30,485,067	162.3	(49,127,742)
June 30, 2011	27,923,223	51.6	(35,613,328)

4. The annual required contribution (ARC) as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below.

**EMPLOYER ANNUAL REQUIRED CONTRIBUTION (ARC)**

<b>EMPLOYER ANNUAL REQUIRED CONTRIBUTION (ARC)</b>	<b>FISCAL YEAR ENDING JUNE 30, 2012</b>
Normal (including expenses)	17.51%
Accrued liability	<u>27.16</u>
Total	44.67%



5. Additional information as of July 1, 2011 follows:

Valuation date	7/1/2011
Actuarial cost method	Entry Age
Amortization period	Level Percent of Payroll
Remaining amortization period	23 years
Asset valuation method	Market Related Value
Actuarial assumptions:	
Investment rate of return (includes inflation)	8.00%
Projected salary increases (includes inflation)	5.00%
Inflation	3.00%
Cost-of-living adjustments	3.00%



**SCHEDULE A**

**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS**

(1)	Actuarial Value of Assets on July 1, 2010	\$502,259,969
(2)	Market Value of Assets on July 1, 2011	491,370,669
(3)	Market Value of Assets on July 1, 2010	421,629,959
(4)	Net Cash Flow During the Fiscal Year	
	a. Contributions	22,251,294
	b. Other Revenue	54,292
	c. Benefit Payments	(40,242,987)
	d. Administrative Expenses	(108,497)
	e. Investment Expenses	<u>(2,543,556)</u>
	f. Net Cash Flow (a. + b. + c. + d. + e.)	(20,589,454)
(5)	Actual Investment Return [(2) - (3) - (4)f.]	90,330,164
(6)	Assumed Rate of Return on Assets	8.00%
(7)	Expected Investment Return [(3) * (6) + {(4)a. + (4)b. + (4)c. + (4)d.} * .5 * (6)] - (4)e.]	35,664,954
(8)	Investment Gain/(Loss) for the Fiscal Year [(5) - (7)]	54,665,210
(9)	Phased-In Recognition of Investment Gain/(Loss)	
	a. Current Fiscal Year [.2 * (8)]	10,933,042
	b. Prior Fiscal Year	656,893
	c. Second Prior Fiscal Year	(24,101,088)
	d. Third Prior Fiscal Year	(7,199,883)
	e. Fourth Prior Fiscal Year	<u>3,445,451</u>
	f. Total Recognized Investment Gain/(Loss) for Fiscal Year	(16,265,585)
(10)	Contribution Receivable	0
(11)	Preliminary Actuarial Value of Assets on July 1, 2011 (1) + (4)f. + (7) + (9)f. + (10)	\$501,069,884
(12)	Actuarial Value Corridor	
	a. 80% of Market Value End of Year [.8 * (2)]	\$393,096,535
	b. 120% of Market Value End of Year [1.2 * (2)]	\$585,644,803
(13)	Final Actuarial Value of Assets on July 1, 2011	\$501,069,884
(14)	Rate of Return on Actuarial Value of Assets	3.42%





**SCHEDULE B**

**SUMMARY OF RECEIPTS AND DISBURSEMENTS**

<u>Receipts for the Period</u>	
Contributions:	
Members	\$ 7,896,777
Employer	<u>14,354,517</u>
Total	22,251,294
Other	54,292
Investment Income	<u>87,786,608</u>
TOTAL	\$ 110,092,194
<u>Disbursements for the Period</u>	
Benefit Payments	40,242,987
Refunds to Members	0
Administrative Expense	<u>108,497</u>
TOTAL	\$ 40,351,484
<u>Excess of Receipts over Disbursements</u>	\$ 69,740,710
<u>Reconciliation of Asset Balances</u>	
Market Value of Assets as of July 1, 2010	\$ 421,629,959
Excess of Receipts over Disbursements	<u>69,740,740</u>
Market Value of Assets as of July 1, 2011	\$ 491,370,669
Contribution Receivable	0
Market Value of Assets as of July 1, 2011 including Receivable	491,370,669
Rate of Return on Market Value of Assets	21.28%



**SCHEDULE C**

**OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

INVESTMENT RATE OF RETURN: 8.00% per year, compounded annually.

SALARY INCREASES: Representative values of the assumed annual rates of salary increases are as follows:

<u>Age</u>	<u>Rate</u>
20	5.00%
25	5.00
30	5.00
35	5.00
40	5.00
45	5.00
50	5.00
55	5.00

SEPARATIONS FROM ACTIVE SERVICE: For death rates, the UP 1994 Mortality Table projected to 2002 set forward three years was used. Representative values of the assumed annual rates of separation from active service are as follows:

<u>Age</u>	<u>Withdrawal</u>	<u>Annual Rate of</u>		
		<u>Disability</u>	<u>Death</u>	
			<u>Male</u>	<u>Female</u>
20	6.58%	1.00%	0.05%	0.03%
25	5.27	1.00	0.07	0.03
30	4.83	1.40	0.09	0.04
35	4.47	1.40	0.10	0.06
40	3.84	2.00	0.14	0.08
45	3.21	2.50	0.20	0.11
50	1.52	3.00	0.33	0.18
55	0.33	3.00	0.58	0.34



SERVICE RETIREMENT: Representative annual rates of assumed service retirement are as follows:

<u>Service</u>	<u>Rate</u>
20	25.0%
21	10.0
22	11.1
23	12.5
24	14.3
25	16.7
26	20.0
27	25.0
28	33.3
29	50.0
30	100.0

DEATHS AFTER RETIREMENT: The UP 1994 Mortality Table projected to 2002 is used for the period following service retirement and for beneficiaries of deceased members. For disabled lives, mortality was assumed to be consistent with rates issued by the IRS in Revenue Ruling 96-7 for use in determining current liability for disabled lives prior to January 1, 1995.

OCCUPATIONAL VS. NON OCCUPATIONAL DEATH: 20% of all deaths are assumed to be due to occupational causes.

OCCUPATIONAL VS. NON OCCUPATIONAL DISABILITY: 75% of disabilities are assumed to be due to occupational causes. For occupational disabilities the average benefit percentage is assumed to be 67.5%.

PERCENT MARRIED: 75% of employees who die before retirement are assumed to be married with the husband 3 years older than the wife. 85% of employees who die after retirement are assumed to be married with the husband 3 years older than the wife.

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

VALUATION METHOD: Entry age actuarial cost method. See Schedule F for a brief description of this method.



## **SCHEDULE D**

### **ACTUARIAL COST METHOD**

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 8.00%), of each member's expected benefits at retirement or death is determined, based on age, service and sex. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his terminating with a service, disability or survivor's benefit. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable from the Plan on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the Plan are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the entry age actuarial cost method. Under this method, a calculation is made to determine the level percentage of payroll which, if applied for the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
4. The unfunded accrued liability is determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets held, from the present value of expected benefits to be paid from the Plan.



**SCHEDULE E**

**SUMMARY OF MAIN PLAN PROVISIONS  
AS INTERPRETED FOR VALUATION PURPOSES**

Member	Any member of the police and fire department who is included in the membership of the fund.
Membership Service	Service rendered on or after the date of establishment of the fund or the fund of a city existing within the boundaries of the government immediately prior to the establishment of the urban-county government.
Total Service	Prior service, membership service, and service credit purchased by a member as provided in KRS 67A.402.
Average Salary	The highest average salary of the member for any three consecutive years of service.
Retirement Annuity	
Eligibility	Anytime after completion of 20 years of Total Service (including service purchased up to 4 years).
Benefit	Annuity is 2½% of Average Salary multiplied by years of Total Service. The minimum monthly benefit is \$1,250.  Upon the death of a retired member whose marriage was in effect at least six months before retirement or one year prior to death, the surviving spouse shall receive an annuity equal to 60% of the member's final annuity or final rate of pay, whichever is greater, unless the retired member elected an alternative actuarial equivalent form at the time of retirement of either a joint and 75% or and joint and 100% survivor payment form.
Occupational Disability Benefit	
Eligibility	No requirements.
Benefit	Annuity equal to a minimum of 60% of member's last rate of salary, increased above the 60% minimum by ½ the amount by which the member's percentage of disability exceeds 20%, but not greater than 75%. The member's percentage of disability shall be the average of the impairment rating determined by two physicians selected by the Board using the American Medical Association "Guide to the Evaluation of Permanent Impairment". If a member is eligible for a service retirement annuity and the amount of the service retirement annuity exceeds the amount of the disability benefit, then the member may elect to receive an additional service retirement annuity equal to this difference.



Upon the death of a retired member whose marriage was in effect at least six months before retirement or one year prior to death, the surviving spouse shall receive an annuity equal to 60% of the member's final annuity or final rate of pay, whichever is greater, unless the retired member elected an alternative actuarial equivalent form at the time of retirement of either a joint and 75% or and joint and 100% survivor payment form.

In addition, any minor children will receive benefits as provided under the occupational death benefit provisions.

#### Non-Occupational Disability Benefit

Eligibility

5 years of Total Service.

Benefit

2½% of Average Salary times years of Total Service subject to a minimum payment of 25% of Average Salary and a maximum payment of 75% of Average Salary.

Upon the death of a retired member whose marriage was in effect at least six months before retirement or one year prior to death, the surviving spouse shall receive an annuity equal to 60% of the member's final annuity or final rate of pay, whichever is greater, unless the retired member elected an alternative actuarial equivalent form at the time of retirement of either a joint and 75% or and joint and 100% survivor payment form.

In addition, any minor children will receive benefits provided under the non-occupational death benefit provisions.

#### Termination Benefit

If a member is terminated with less than 20 years of total service credit, he is entitled to a return of his accumulated contributions, without interest.

#### Occupational Death Benefit

Eligibility

No requirements.

Benefit

Surviving Spouse receives immediate annuity equal to 60% of the member's last rate of salary until death or remarriage.

In addition, 10% of the member's last rate of salary is payable for each minor child until each child attains age 18 (age 23 if involved in educational activities). Maximum total income is 75% of final rate of salary.



If no surviving spouse or upon remarriage, then minor children will receive a benefit based on the following schedule:

One minor child	50% of Salary
Two minor children	65% of Salary
Three of more minor children	75% of Salary

#### Non-Occupational Death Benefit

##### Eligibility

5 Years of Total Service, married 6 months prior to death.

##### Benefit

Surviving spouse received immediate annuity equal to  $1\frac{1}{2}\%$  of the Average Salary multiplied by years of Total Service, until death or remarriage. The minimum benefit is 15% of Average Salary. In addition, this annuity is increased by  $\frac{1}{2}$  for the first minor child and by  $\frac{1}{4}$  for each additional child. Maximum total income is 75% of Average Salary.

If no surviving spouse or upon remarriage, then minor children will receive a benefit based on the following schedule:

One minor child	50% of Salary
Two minor children	65% of Salary
Three of more minor children	75% of Salary

#### Member Contributions

Each active member contributes 11% of current salary.

#### Employer Contributions

The government shall make current contributions to the fund on an actuarially funded basis. Such contributions shall be equal to the sum of:

- (1) An amount resulting from the application of a rate percent of salaries of active members determined under the entry age normal cost funding method (fixed by the board every two years), and
- (2) An amount resulting from the application of a rate percent of salaries of active members which will provide each year regular interest on any remaining liability for prior service.

In any event, the total contribution of the government shall be at least 17% of salaries of active members participating in the fund.

#### Post Retirement Cost-Of-Living Increases

Each retired member will have his pension increased each year by an amount, to be determined by the board, of not less than 2.00% nor more than 5.00%, compounded annually. This increase shall also apply to beneficiaries of deceased members.