

# Montgomery County Employees' Retirement System

Report on 2013 Actuarial Valuation Including  
Determination of County Annual Required  
Contribution for 2013

HayGroup®



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for

**Montgomery County Employees' Retirement Board**

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**June 17, 2013**

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## I. Introduction

The primary purpose of this report is to investigate and fully and fairly disclose the actuarial position of the System as of January 1, 2013 and to establish the proper appropriation for the 2013 plan year, in accordance with the funding standards of Section 6 of Act 96, 1971 of the Commonwealth of Pennsylvania as amended.

On the basis of the actuarial methods, assumptions and major plan provisions summarized in this report and in reliance on the member data and statement of the Fund's assets furnished by the County, to the best of our knowledge the information in this report is complete and accurate.

In our opinion, this report presents fairly the financial and actuarial position for the Montgomery County Employees' Retirement Plan as of January 1, 2013 in accordance with generally accepted actuarial principles, and on the basis of actuarial assumptions and methods which, in the aggregate, are reasonable (taking into account past experience under the System and reasonable expectations) and which in combination represent our best estimate of anticipated experience.

Respectfully submitted,

### HayGroup

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## II. Findings

### Certified Annual Required Contribution (ARC)

Please note that the certified Annual Required Contribution which is reported on page 13 of this report and which must be funded in 2013 is \$11,000,294. This is required to be made by the County from the General Fund.

The County has elected to change to the Entry Age Normal funding method beginning in 2013. The Annual Required Contribution is based on this funding method.

### Special Notes

Hay Group (the actuary) believes Montgomery County may be in violation of the County Pension Law, title 16 P.S.§11661 entitled County guarantee; annual budgets which states “The regular interest charges payable, the creation and maintenance of the necessary reserves for the payment of the county and members’ annuities in accordance with this act, and the additional retirement benefits, are hereby made obligations of the county. The board shall prepare and submit to the county commissioners, on or before the first day of November of each year, an itemized estimate of the amounts necessary to be appropriated by the county to complete the payment of the obligations of the county during the next fiscal year.” (underlining our emphasis)

The actuary is required to certify to the board annually in accordance with section 11656 the amount of appropriations to be made by the county to the fund to build up and maintain adequate reserves for the payment of the county’s share of the retirement allowances.

When the annual required contribution (ARC) is not funded as in the years 2009, 2010, 2011, and 2012, we believe the actuarial soundness of the fund is impaired.

### Actuarial Adjustments

Also note that the balances in the Reserve Accounts on page 9 reflect the following transfers which are necessary to keep the balance in the Retired Member’s Reserve Account equal to the liability for the retired lives and to reflect the difference between the amount of interest credited to the respective reserves and the interest rate assumed in the valuation of the liabilities. Please make these transfers in your records:

## II. Findings (Continued)

	DEBIT	CREDIT
County Annuity Reserve Account	\$ 12,210,086	
Retired Members Annuity Reserve Account		\$ 12,210,086

### Actuarial Assumptions

Effective January 1, 2013, the actuarial cost method and the mortality table used in the valuation have been changed. The effect of these changes is a decrease in the ARC of \$2,387,057. The County recognizes that the resulting lower current ARC may be at the expense of higher future ARCs.

### III. Schedules

#### Schedule A

**Disclosure of Pension Information in Accordance with  
Statement No. 25, Statement No. 27 and Statement No. 50 of  
the Governmental Accounting Standards Board**

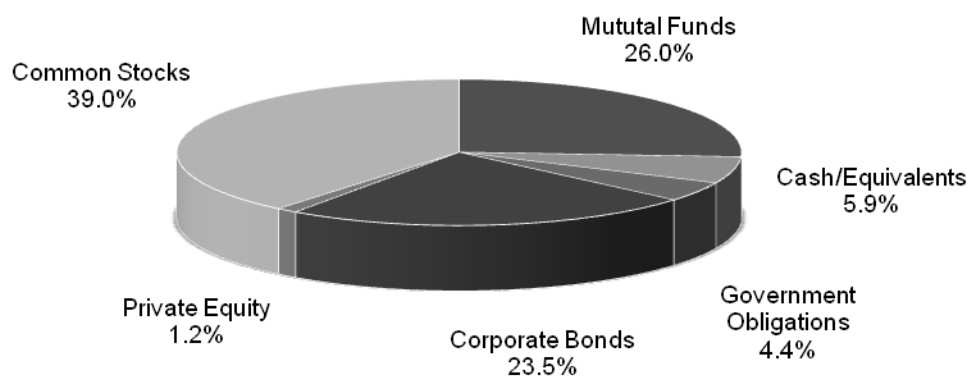
<b>MONTGOMERY COUNTY EMPLOYEES' RETIREMENT SYSTEM</b>			
<b>STATEMENT OF CHANGES IN PLAN NET ASSETS FOR THE YEAR ENDED DECEMBER 31, 2012 AND 2011</b>			
<b>Additions</b>			
		<u><b>2012 Total</b></u>	<u><b>2011 Total</b></u>
Contributions			
County	\$	0	\$ 0
Plan Members	\$	8,222,897	\$ 8,148,652
Total Contributions	\$	<u>8,222,897</u>	<u>\$ 8,148,652</u>
Investment Income			
Realized Gain	\$	10,783,328	
Unrealized Gain	\$	<u>2,794,596</u>	
Net Gain in Fair Value	\$	13,577,924	\$ (7,984,516)
Interest	\$	5,308,226	\$ 6,072,435
Dividends	\$	7,476,035	\$ 8,752,910
Net Accrued Interest	\$	15,388,936	\$ (929,826)
Investment Income	\$	<u>41,751,121</u>	<u>\$ 5,911,003</u>
Less Investment Expense	\$	1,781,666	\$ 1,452,596
Net Investment Income	\$	<u>39,969,455</u>	<u>\$ 4,458,407</u>
Total Additions	\$	<u>48,192,352</u>	<u>\$ 12,607,059</u>
<b>Deductions</b>			
Benefits	\$	25,785,069	\$ 24,589,236
Refunds of Member Contributions	\$	1,452,225	\$ 1,318,192
Administrative Expense	\$	<u>319,945</u>	<u>\$ 555,176</u>
Total Deductions	\$	<u>27,557,239</u>	<u>\$ 26,462,604</u>
Net Increase/(Decrease)	\$	<u>20,635,113</u>	<u>\$ (13,855,545)</u>
<b>Net Assets Held In Trust For Pension Benefits</b>			
Beginning of Year	\$	424,756,480	\$ 438,612,025
End of Year	\$	<u>445,391,593</u>	<u>\$ 424,756,480</u>



### Schedule A--Continued

<b>MONTGOMERY EMPLOYEES' RETIREMENT SYSTEM</b>			
<b>STATEMENT OF PLAN ASSETS AS OF DECEMBER 31, 2012 AND 2011</b>			
<b>Assets</b>			
	<u>2012 Total</u>		<u>2011 Total</u>
Cash and Short-Term Investments	\$ 24,943,930	\$	21,934,630
Receivables	\$ 1,343,750	\$	499,918
Investments, at fair market value			
Government Obligations	\$ 19,402,443	\$	23,834,497
Corporate Bonds	\$ 104,538,256	\$	117,313,378
Common Stocks	\$ 173,490,295	\$	169,309,152
International Stocks	\$ 115,920,677	\$	74,197,676
Miscellaneous	\$ 359,176	\$	4,383,260
Private Equity	\$ 5,393,066	\$	0
International Stocks	\$ 0	\$	13,283,969
Total Investments	\$ 419,103,913	\$	402,321,932
Total Assets	\$ 445,391,593	\$	424,756,480
<b>Liabilities</b>			
Refunds Payable and Other	\$ 0	\$	0
<b>Net Assets Held In Trust For Pension Benefits</b>			
	\$ 445,391,593	\$	424,756,480

#### TOTAL ASSETS (MARKET VALUE 12-31-2012)



## Schedule A -- Continued

### Montgomery County Employees' Retirement System

#### Notes to the Financial Statements for the Fiscal Year Ended December 31, 2012

#### Summary of Significant Accounting Policies

**Basis of Accounting:** The Montgomery County Employees' Retirement System financial statements are prepared using the accrual basis of accounting. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions to each plan are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan.

**Method Used to Value Investments:** Investments are reported at fair value. Short-term investments are reported at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Investments that do not have an established market are reported at estimated fair value.

#### Plan Descriptions and Contribution Information

Membership of the plan consisted of the following at December 31, 2012, the date of the latest actuarial valuation:

Retirees and Beneficiaries Receiving Benefits	1,730
Terminated Plan Members Entitled to but not yet Receiving Benefits	280
Active Plan Members	3,276
	5,286
	5,286
Number of Participating Employers	1

## Schedule A--Continued

### Montgomery County Employees' Pension System

**Plan Description:** The Montgomery County Employees' Pension Plan is a single-employer defined benefit pension plan that covers all employees of the County. The plan provides retirement, disability, and death benefits to plan members and their beneficiaries. Cost-of-living adjustments (COLA) are provided at the discretion of the Montgomery County Employees' Retirement Board. Act 96 of 1971, as amended cited as the County Pension Law provides for the creation, maintenance and operation of this plan.

**Contributions:** Plan members are required to contribute 5% of their annual covered salary. The County is required to contribute at an actuarially determined rate. Per Act 96 of 1971, as amended, contribution requirements of the plan members and the County are established and may be amended by the General Assembly of the Commonwealth of Pennsylvania. Administrative costs may be financed through investment earnings.

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#### REQUIRED SUPPLEMENTARY INFORMATION

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#### SCHEDULES OF EMPLOYER CONTRIBUTIONS

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Year	Annual Required Contribution	County Contribution
2004	\$ 0	\$ 0
2005	\$ 2,747,435	\$ 2,747,435
2006	\$ 2,702,778	\$ 2,702,778
2007	\$ 2,145,964	\$ 2,145,964
2008	\$ 0	\$ 0
2009	\$ 8,155,676	\$ 0
2010	\$ 7,857,028	\$ 0
2011	\$ 9,318,649	\$ 0
2012	\$ 11,798,202	\$ 0
2013	\$ 11,000,294	\$

*Note:* Effective in 2013 the Entry Age Funding Method was used to determine the annual required contribution. Prior to 2013 the Aggregate Method was used.

**Schedule A--Continued**

REQUIRED SUPPLEMENTARY INFORMATION						
SCHEDULES OF FUNDING PROGRESS						
Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
1/1/2008	518,798,929	446,293,013	(72,505,916)	116.2%	147,553,545	(49.1%)
1/1/2009	482,051,491	486,610,195	4,558,704	99.1%	148,705,412	3.1%
1/1/2010	493,262,574	496,642,246	3,379,672	99.3%	149,574,431	2.3%
1/1/2011	504,064,625	516,305,160	12,240,535	97.6%	148,777,159	8.2%
1/1/2012	509,707,776	537,579,876	27,872,100	94.8%	150,976,368	18.5%
1/1/2013	520,848,719	564,498,672	43,649,953	92.3%	149,732,619	29.2%

### Schedule A--Continued

NOTES TO THE REQUIRED SCHEDULES	
The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:	
Valuation Date	12/31/2012
Actuarial Cost Method	Entry Age
Asset Valuation Method	Greater of Market Value and Actuarial Value as described in Schedule J
Actuarial Assumptions:	
Investment Rate of Return *	7.5%
Projected Salary Increases *	3.5%
* Includes Inflation at	3%

ACCOUNTING PROCEDURES FOR CALCULATING - NET PENSION OBLIGATION (NPO)								
(1) Year	(2) ARC	(3) Interest On NPO ***	(4) ARC Adjustment **	(5) Pension Cost (2+3-4)	(6) Contribution	(7) Change in NPO (5-6)	(8) NPO Balance * (BB+7)	
2004	0	0	0	0	0	0	0	0
2005	2,747,435	0	0	2,747,435	2,747,435	0	0	0
2006	2,702,778	0	0	2,702,778	2,702,778	0	0	0
2007	2,145,964	0	0	2,145,964	2,145,964	0	0	0
2008	0	0	0	0	0	0	0	0
2009	8,155,676	0	0	8,155,676	0	8,155,676	8,155,676	8,155,676
2010	7,857,028	611,676	1,073,944	7,394,760	0	7,394,760	15,550,436	15,550,436
2011	9,318,649	1,166,283	2,065,778	8,419,154	0	8,419,154	23,969,590	23,969,590
2012	11,798,202	1,797,719	3,230,247	10,365,674	0	10,365,674	34,335,264	34,335,264
2013	11,000,294	2,575,145	4,579,980	8,995,459				

\* BB = Beginning balance for the year.

\*\* ARC Adjustment - Amortization factor based upon level percentage of projected payroll.

\*\*\* Interest on the balance of the NPO at the beginning of the year using the investment return rate assumed in determining ARC. The interest is an estimate of the investment earnings lost to the plan on any contributions that were not made (7.5% when applicable).

### Schedule B

Schedule B shows the allocation of the assets among the Fund's reserve accounts (see Schedule I for Determination of Reserve Balances) and the Fund's liabilities as of January 1, 2013. The liabilities were determined from the actuarial valuation of the System based upon the data submitted by the County.

<b>ASSETS</b>	
Members' Annuity Reserve Account	\$ 122,892,175
County Annuity Reserve Account	\$ 89,897,053
Retired Members' Reserve Account	\$ 208,763,915
Unrealized Appreciation of Assets	\$ 23,838,450
<i>Total Assets, (Market Value) of the Montgomery County Employees' Retirement Fund</i>	<i>\$ 445,391,593</i>
<b>LIABILITIES</b>	
Actuarial Present Value of:	
Accumulated Plan Benefits	
Vested (2,267)	\$ 135,000,653
Nonvested (1,009)	\$ 2,231,988
Future Benefit Accruals	\$ 126,379,222
Terminated Vested Benefits	\$ 16,579,509
Retired Benefits	\$ 208,763,915
Member Accumulated Deductions	\$ 122,892,175
<i>Total Liabilities of the Montgomery County Employees' Retirement Fund</i>	<i>\$ 611,847,462</i>

## Schedule C

### Unfunded Actuarial Liability and Normal Cost

Schedule C shows the development of the unfunded actuarial liability and the normal cost for 2013.

#### I. Unfunded Actuarial Liability January 1, 2013

1. Actuarial Liability:		
(a) Active Participants		
Retirement Benefits	\$	195,634,427
Termination Benefits		14,087,204
Death Benefits		6,541,442
Total	\$	216,263,073
(b) Terminated Vested Participants	\$	16,579,509
(c) Retired Members and Beneficiaries		
Retirement Benefits	\$	192,612,895
Cost-of-Living Benefits		16,151,020
Total	\$	208,763,915
(d) Member Accumulated Deductions	\$	122,892,175
(e) Total (a) + (b) + (c) + (d)	\$	564,498,672
2. Actuarial Value of Plan Assets (see page 15)	\$	520,848,719
3. Unfunded Actuarial Liability as of January 1, 2013: (1e) – (2)	\$	43,649,953

#### II. Normal Cost for 2013

1. Normal Cost for:		
(a) Retirement Benefits	\$	5,845,062
(b) Termination Benefits		744,762
(c) Death Benefits		204,965
(d) Normal Cost as of January 1, 2013	\$	6,794,789
(e) Normal Cost with interest to end of year: (d) x 1.075	\$	7,304,398

## **Schedule D**

### **Amortization Schedule**

Schedule D provides a record of the amortization amounts. Actuarial gains (losses) will be amortized over 15 years from the date determined; increases or decreases created by pension plan establishing an unfunded actuarial accrued liability will be amortized over 30 years from the effective establishment date; increases or decreases created by a modification in the benefit plan applicable to active members will be amortized over 20 years beginning with the January 1<sup>st</sup> coinciding with or next following the effective date of change; increases or decreases created by a modification in the benefit plan applicable to retired members will be amortized over 10 years beginning with the January 1<sup>st</sup> coinciding with or next following the effective date of change; increase in actuarial accrued liability attributable to the special early retirement provision will be amortized over 5 years beginning with the January 1<sup>st</sup> coinciding with or next following the end of the early retirement period; and increases or decreases created by changes in actuarial assumptions will be amortized over 15 years from the effective date of change.

### **Amortization Record for 2013**

		As of January 1, 2013				
		<u>Initial Amount</u>	<u>Effective Date</u>	<u>Remaining Period</u>	<u>Outstanding Balance</u>	<u>Amortization Charge or (Credit)</u>
1.	Amortization of Liability for:					
	(a) 2013	\$ 43,649,953	1/1/13	30 years	\$43,649,953	\$ 3,695,896
	(b) Total				\$43,649,953	\$ 3,695,896



### **Schedule E**

Schedule E determines the certified Annual Required Contribution (ARC) of \$11,000,294 for 2013 for the Montgomery County Employees' Retirement System.

1.	Total Amortization Charge/(Credit) (page 12 1(b))	\$ 3,695,896
2.	Normal Cost with interest to end of year (page 10 II 1(e))	\$ 7,304,398
3.	Total Funding Requirement for 2013 (Annual Required Contribution (ARC) for 2013): (1) + (2)	\$11,000,294

**Notes:**

The Annual Required Contribution (ARC) for 2013 as a percentage of the estimated 2013 compensation (\$149,732,619) for active members is 7.35%.

The equivalent normal cost accrual rate to be applied to actual 2012 salaries to determine reimbursable expenses is 7.61%.

## **Schedule F**

The following are notes to Schedules B and H:

### **Members' Annuity Reserve Account**

The balance of \$122,892,175 in this account is the total of the contributions deducted from the salaries of the active and terminated vested members of the retirement system and the IRC 414(h)(2) pickup contributions together with the interest additions as of January 1, 2013. Since these accumulations represent the present value as of January 1, 2013, of future benefits, the reserve balance and liability are identical.

### **County Annuity Reserve Account**

The balance of \$89,897,053 in this account as of January 1, 2013 and the amounts expected to be credited in the future, plus investment earnings, represent the reserves set aside for the payment of the county's share of the retirement allowances.

This is the account out of which regular interest is credited to the member's annuity and retired members' reserve account, administrative expenses may be paid and the pension obligations of the County are funded.

When a County Annuity is scheduled to commence for a particular member, sufficient monies are transferred from the County Annuity Reserve Account to the Retired Members' Reserve Account to provide for such County Annuities actually entered upon.

### **Retired Members' Reserve Account**

This is the account out of which monthly retirement allowances including cost-of-living increases and death benefits are paid.

The assets allocated to this reserve account as of January 1, 2013 amount to \$208,763,915. The corresponding liability for those annuitants on the roll is identical.

### **Schedule F--Continued**

#### **Adjustment for Market Value Fluctuation**

In order to reduce the fluctuations in the County normal cost which can result from full recognition of the unrealized appreciation or depreciation of the Fund's securities each year, the value of assets used to determine costs was determined by using the greater of the market value of assets as of the valuation date and adjusting the actuarial value of assets as of the prior valuation date: increased by contributions and other deposits except investment income; decreased by benefit payments and administrative expenses or other payments; and credited with interest at 1% less than the plan's assumed rate to the valuation date. The actuarial value of assets will be limited to a maximum of 120% and a minimum of 80% of the market value of assets as of the valuation date.

1. Actuarial Value of Assets as of 01/01/2012	\$ 509,707,776
2. Contributions and other deposits except investment income	\$ 8,222,897
3. Benefit Payments and Administrative Expenses of Other Payments	\$ 29,338,905
4. Interest at 1% less than the plan's assumed rate to the valuation date 01/01/2013: $0.065 \times [(1) + 0 \times (2) - 11/24 \times (3)]$	\$ 32,256,951
5. Preliminary Actuarial Value of Assets: $(1) + (2) - (3) + (4)$	\$ 520,848,719
6. Market Value of Assets as of 01/01/2013	\$ 445,391,593
7. 80% of Market Value: $.8 \times (6)$	\$ 356,313,274
8. 120% of Market Value: $1.2 \times (6)$	\$ 534,469,912
9. Actuarial Value of Assets as of 01/01/2013: Greater of (5) and (6) but not less than (7) nor more than (8)	\$ 520,848,719

### Schedule G

APPROXIMATE RATE OF RETURN FOR 2012 PLAN YEAR			
	<u>Actuarial Value</u>		<u>Market Value</u>
1. Value as of December 31, 2011	\$	509,707,776	\$ 424,756,480
2. Contributions Received During Year	\$	8,222,897	\$ 8,222,897
3. Benefits and Expenses Paid During Year	\$	29,338,905	\$ 29,338,905
4. Value as of December 31, 2012	\$	520,848,719	\$ 445,391,593
5. Non-Investment Increment: (2) - (3)	\$	(21,116,008)	\$ (21,116,008)
6. Investment Increment: (4) - (1) - (5)	\$	32,256,951	\$ 41,751,121
7. Time Weighted Value of Assets: (1) + .5(5)	\$	499,149,772	\$ 414,198,476
8. Approximate Rate of Return for 2012: (6) / (7)		6.46%	10.08%

### HISTORY OF RATE OF RETURNS

<b>Plan Year</b>	<b>Actuarial Value Rate of Return</b>	<b>Market Value Rate of Return</b>
2011	5.14 %	1.38 %
2010	6.46 %	10.43 %
2009	6.46 %	18.04 %
2008	(3.14) %	(19.06) %
2007		4.92 %
2006		10.44 %
2005		5.74 %
2004		8.90 %
2003		20.04 %
Five Year Average:	4.21 %	3.32 %
Ten Year Average:		6.55 %

## Schedule H

### Determination of Reserve Balances

	M.A.R.A.	C.A.R.A.	R.M.R.A.	TOTAL
Balance 1/1/2012	\$ 119,092,666	\$ 92,575,569	\$ 192,044,391	\$ 403,712,626
County Appropriations		0		
Member Contributions	8,205,963			
Member Purchases		16,934		
Net Investment Income		38,956,525		
Investment Expenses		(1,781,666)		
Member Contributions Refunded	(1,452,225)			
Pension Payments			(24,765,976)	
Death Benefits			(1,019,093)	
Retiree and Death Benefit Transfers	(7,731,460)	(14,943,474)	22,674,934	
Administrative Expenses		(319,945)		
Balance Before Interest	118,114,944	114,503,943	188,934,256	421,553,143
Interest Allocated in 2012	4,777,231	(12,396,804)	7,619,573	
Balance Before Actuarial Adjustments	122,892,175	102,107,139	196,553,829	421,553,143
Actuarial Adjustments		(12,210,086)	12,210,086	
Ending Balance 12/31/2012	122,892,175	89,897,053	208,763,915	421,553,143
Unrealized Appreciation				23,838,450
Total Assets (12/31/2012) (Market Value)				445,391,593

## Schedule I

### Membership History

Below is a ten-year history of the Retirement System's membership.

January 1	ACTIVE MEMBERS AND VESTED TERMINATED MEMBERS			RETIRED MEMBERS AND BENEFICIARIES		
	Male	Female	Total	Male	Female	Total
2013	1,420	2,136	3,556	664	1,066	1,730
2012	1,417	2,150	3,567	629	1,031	1,660
2011	1,375	2,137	3,512	629	1,001	1,630
2010	1,356	2,153	3,509	624	978	1,602
2009	1,358	2,185	3,543	633	974	1,607
2008	1,382	2,174	3,556	521	833	1,354
2007	1,378	2,158	3,536	501	801	1,302
2006	1,383	2,183	3,566	486	778	1,264
2005	1,402	2,153	3,555	477	754	1,231
2004	1,347	2,102	3,449	481	743	1,224

## Schedule J

### Changes in Plan Participation From January 1, 2012 to January 1, 2013

<b>ACTIVE PARTICIPANTS</b>		
Number as of January 1, 2012		3,327
Changes During Plan Year:		
Retired	(-)	108
Terminated and Vested	(-)	62
Terminated	(-)	185
Died	(-)	8
New Participants	(+)	312
Number as of January 1, 2013		3,276

<b>RETIRED PARTICIPANTS</b>		
Number as of January 1, 2012		1,660
Changes During Plan Year:		
Returned to Active Service	(-)	1
Died	(-)	65
New Retirements from Active Service	(+)	108
New Surviving Annuitants	(+)	8
Vested Terminated Participants Whose Benefits Commenced	(+)	17
Additions	(+)	3
Number as of January 1, 2013		1,730

<b>TERMINATED VESTED PARTICIPANTS</b>		
Number as of January 1, 2012		240
Changes During Plan Year:		
Returned to Active Service	(-)	0
Benefits Commenced	(-)	17
Died	(-)	0
New Termination's with Vesting	(+)	62
Number as of January 1, 2013		280

## Schedule K

### Age, Service and Average Salary Profile of the Active Members on January 1, 2013.

MALES -- FULL YEARS OF SERVICE TO JANUARY 1, 2013									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total	Average Salary
0-19	1	0	0	0	0	0	0	1	\$ 25,452
20-24	38	9	0	0	0	0	0	47	\$ 32,593
25-29	98	57	7	0	0	0	0	162	\$ 40,964
30-34	60	68	34	0	0	0	0	162	\$ 44,261
35-39	19	39	50	19	1	0	0	128	\$ 47,933
40-44	25	19	36	31	19	3	0	133	\$ 54,286
45-49	20	23	28	17	32	33	1	154	\$ 57,198
50-54	24	16	26	18	21	33	11	149	\$ 55,250
55-59	20	28	23	15	13	11	28	138	\$ 50,251
60-64	10	31	19	18	14	16	14	122	\$ 54,864
65 +	13	33	36	16	7	4	7	116	\$ 41,546
Total	328	323	259	134	107	100	61	1,312	\$ 48,938

Average Age: 45.21  
Average Service: 11.79

FEMALES -- FULL YEARS OF SERVICE TO JANUARY 1, 2013									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total	Average Salary
0-19	3	0	0	0	0	0	0	3	\$ 25,412
20-24	78	11	0	0	0	0	0	89	\$ 33,366
25-29	112	77	4	0	0	0	0	193	\$ 39,226
30-34	50	68	53	6	0	0	0	177	\$ 39,709
35-39	39	41	55	25	2	0	0	162	\$ 42,260
40-44	35	58	46	25	32	4	0	200	\$ 43,796
45-49	35	50	35	31	34	32	5	222	\$ 47,186
50-54	50	61	58	35	43	34	30	311	\$ 46,224
55-59	32	58	62	42	37	26	38	295	\$ 47,066
60-64	13	43	36	37	26	18	14	187	\$ 45,903
65 +	6	25	38	17	18	13	8	125	\$ 41,089
Total	453	492	387	218	192	127	95	1,964	\$ 43,638

Average Age: 46.21  
Average Service: 12.03



## Schedule L

### Actuarial Assumptions and Actuarial Cost Method for Funding Purposes, January 1, 2013.

#### Actuarial Assumptions

**Mortality Rates:** 2013 Annuitant and Non-Annuitant Mortality Tables for males and females with no projected improvement.

**Withdrawal Rates:** Members not eligible to retire are assumed to terminate employment in accordance with a percentage of the withdrawal rates set forth in Table T-7 of the Actuary's Handbook. The applicable percentage depends on the member's years of service as follows:

YEARS OF SERVICE	PERCENTAGE
less than 1	300 %
1 but less than 2	275 %
2 but less than 3	250 %
3 but less than 4	225 %
4 but less than 5	200 %
5 but less than 6	175 %
6 or more	100 %

It is further assumed that a percentage of members who terminate after having met the Plan's five year vesting requirement will elect an immediate refund of their own contributions with interest thus forfeiting the County -- provided pension. The applicable percentage is 100% for termination ages up to age 30. After age 30 the applicable percentage is determined as 100% less (age - 30) x 3 1/3%. Illustrative percentages are as follows:

AGE	PERCENTAGE
30 or less	100.0 %
35	83.3 %
40	66.7 %
45	50.0 %
50	33.3 %
55	16.7 %

### Schedule L--Continued

The following tables set forth illustrative withdrawal rates as determined in accordance with the methodology described on the previous page.

#### Probability of Withdrawing During Year:

LESS THAN FIVE YEARS OF SERVICE					
Age at Hire	Years of Service				
	0	1	2	3	4
20	.2982	.2720	.2460	.2202	.1947
30	.2791	.2532	.2275	.2021	.1770
40	.2326	.2067	.1814	.1570	.1335
50	.1267	.1013	.0781	.0577	.0407
59	.0086	-	-	-	-

FIVE OR MORE YEARS OF SERVICE		
Age at Beginning of Year	Probability of Withdrawing and Forfeiting County Pension	Probability of Withdrawing and Retaining County Pension
30	.0930	.0000
40	.0517	.0258
50	.0141	.0281
59	.0001	.0028

## **Schedule L--Continued**

**Retirement Rates:**

Members eligible to retire are assumed to retire in accordance with the following rates:

AGE AT BEGINNING OF YEAR	PROBABILITY OF RETIRING DURING YEAR
55-59	.07
60-61	.08
62-64	.15
65	.34
66-70	.23
71-79	.21
80	1.00

**Disability Rates**

Disability rates are not used.

**Investment Return**

7.5% per annum, compounded annually.

**Salary Increases**

3.5% per annum.

**Valuation Assets**

The greater of the market value of assets as of the valuation date and the actuarial value of assets as of the prior valuation date plus contributions and other deposits except investment income minus benefit payments and administrative expenses or other payments plus credited interest at 1% less than the plans' assumed rate to the valuation date. The actuarial value of assets will be limited to a maximum of 120% and a minimum of 80% of the market value of assets as of the valuation date.

**Administrative Expenses**

Assumed to be paid from the County's general fund and not from plan assets. However, administrative expenses may from year to year be paid from the fund unless it is determined by the actuary that such payment will impair the actuarial soundness of the fund.

**Actuarial Cost Method**

The actuarial cost method used to determine the plan's funding requirements is the entry age normal method. Under this method, an actuarial accrued liability is determined as the actuarial present value of projected benefits for all participants minus the actuarial present value of future normal costs. The normal cost is determined as the annual amount required to fund between entry age and assumed exit age the actuarial present value of projected benefits for each active participant under the assumed retirement age.

## Schedule M

### Summary of Plan Provisions

- 1. Effective Date** The effective date of this plan is January 1, 1938.
- 2. Eligibility for Plan Membership** An employee shall be eligible to become a participant immediately upon becoming an employee.
- 3. Accrued Benefit** The Retirement Board has authorized benefits equal to a percentage of the members Final Average Salary for each year of service the member has participated in the following Classes:

<u>CLASS</u>	<u>PERCENTAGE</u>	<u>EFFECTIVE</u>
1/120	0.833%	01/01/1938
1/100	1.000%	01/01/1953
1/80	1.250%	01/01/1963
1/60	1.667%	07/01/1993

- 4. Normal Retirement (Superannuation)** *Eligibility:* Retirement occurs at age 60 or at age 55 if the participant has completed 20 years of service.

*Pension:* A monthly pension equal to (a) and (b), as follows:

- (a) 0.833% of 1/12th of Final "Average" Salary multiplied by years of credited service on the 1/120 Class,
- 1.000% of 1/12th of Final "Average" Salary multiplied by years of credited service on the 1/100 Class,
- 1.250% of 1/12th of Final "Average" Salary multiplied by years of credited service on the 1/80 Class,
- 1.667% of 1/12th of Final "Average" Salary multiplied by years of credited service on the 1/60 Class,

PLUS

- (b) a monthly annuity based on the actuarial equivalent of the member's accumulated contributions with credited interest.

## ***Schedule M--Continued***

- 5. Final “Average” Salary** The average of the member’s annual compensation received for the three years which produce the highest such average.
- 6. Compensation** Pick-up contributions plus remuneration received as a county employee excluding refunds for expenses, contingency and accountable expense allowances and excluding severance payments or payments for unused vacation or sick leave.
- 7. Early Retirement**
- Eligibility:***
- Voluntary:*** Upon completion of 20 years of service.
- Involuntary:*** Upon completion of 8 years of service.
- Pension:***
- (a) a monthly pension equal to the actuarial equivalent of the benefits calculated in 4(a),
- PLUS
- (b) a monthly annuity based on the actuarial equivalent of the member’s accumulated contributions with credited interest.
- 8. Vesting** One Hundred Percent (100%) upon completion of five years of credited service. A member who terminates employment after five years of credited service will receive a deferred annuity commencing at age 60 (or at age 55 if the member has at least 20 years of service at termination). The deferred benefit shall be calculated using the normal retirement pension formula but based on credited service, final average salary and accumulated contributions at termination.
- If a member terminates employment prior to entitlement to Plan benefits, he will receive his accumulated contributions with interest.
- 9. Postponed Retirement** A member may work past normal retirement age and continue to accrue pension credits.

## **Schedule M--Continued**

### **10. Disability Retirement**

**Eligibility:** Total and permanent disability prior to Superannuation (Normal Retirement) age and after completion of five years of credited service.

**Pension:** A total monthly pension commencing on the last day of the month following disability retirement equal to 25% of the 1/12th of Final Average Salary at time of retirement. Such total monthly pension shall include the monthly disability that is actuarially equivalent to the member's accumulated contributions at retirement.

### **11. Normal Form of Pension**

Benefits are payable in the form of a modified cash refund life annuity, that is for the member's lifetime only, except that disability benefits shall cease upon cessation of disability.

### **12. Optional Retirement Benefits**

A member may elect to receive the actuarial equivalent of his retirement benefit as a full cash refund annuity (Option One) or a reduced joint and survivor pension payable for the remainder of his life, with either 100% or 50% of the member's pension continuing after death to the designated beneficiary. A member may also elect to receive, in one payment, the full amount of his accumulated deductions and continue to receive the annuity provided by the county.

### **13. Death Benefits**

(a) Pre-Retirement. If a member dies after having attained age 60 or having completed ten years of credited service, his beneficiary will receive a lump sum equal to the actuarially determined present value of the benefits calculated in (7a) based on the member's Final Average Salary and credited service at time of death plus the member's accumulated contributions with interest at time of death.

(b) Post-Retirement. Upon the death of a terminated or retired member, his beneficiary will receive survivor benefits, if any, in accordance with the form under which benefits were being paid to the member. In any event, the total amount of benefits paid to the deceased member and beneficiary must, at least, equal the member's accumulated contributions with interest.

**Schedule M--Continued**

**14. Employee Contributions**

The Retirement Board has authorized each member of the retirement system to individually elect to contribute between 5% and 15% of his salary.

**15. Deposit Administrator**

Investment Managers:  
 Alex Brown Advisory  
 J. P. Morgan Investment Management  
 Valley Forge Asset Management  
 PMG Advisors  
 Goldman Sachs Asset Management  
 Emerald Advisers  
 CBRE Clarion  
 Swarthmore Group, Inc.  
 Sterling Capital Management

Custodian:  
 Wells Fargo Bank

Financial Consultant:  
 Cornerstone Advisors Asset Management, Inc.

**16. Administration**

Retirement Board as designated in Act 96 of 1971, the County Pension Law.

**17. Cost-of-Living**

The cost-of-living increase shall be reviewed at least once in every three years by the Retirement Board. The Board has granted cost-of-living increases eighteen times in the past from January, 1972 through January, 1999 and since then as follows:

PERCENTAGE CHANGE IN C.P.I.	EFFECTIVE DATE OF INCREASE
100 %	1/1/2000
100 %	1/1/2001
100 %	1/1/2002
100 %	1/1/2003
100 %	1/1/2004
100 %	1/1/2005
100 %	1/1/2006
100 %	1/1/2007
100 %	1/1/2008
95 %	1/1/2009

**Schedule M--Continued**

**18. Early Retirement  
Provision**

The Retirement Board has authorized the following Early Retirement Provisions:

<u>Percent of Additional Service</u>	<u>Early Retirement Period</u>
15%	2/1/95 - 12/31/95
20%	2/1/00 - 12/31/00
20%	1/1/08 - 06/30/08



## Schedule N

### Historical Trend Information

REVENUES BY SOURCE					
Fiscal Year	Employee Contributions	Employer Contributions	Investment Income	Miscellaneous	Total
2003	\$ 6,541,894	\$ 0	\$ 11,634,327	\$ 0	\$ 18,176,221
2004	7,283,783	0	29,328,853	0	36,612,636
2005	7,453,024	2,747,435	28,661,412	29,022	38,890,893
2006	7,723,760	2,702,778	32,549,004	50,884	43,026,426
2007	8,057,607	2,145,964	60,906,377	15,231,429	86,341,377
2008	8,279,585	0	(14,457,452)	0	(6,177,867)
2009	8,222,947	0	(10,403,277)	0	(2,180,330)
2010	8,041,279	0	20,985,355	0	29,026,634
2011	8,148,652	0	28,383,823	0	36,532,475
2012	8,222,897	0	38,956,525	0	47,179,422

EXPENSES BY TYPE				
Fiscal Year	Benefits	Refunds	Administrative/ Miscellaneous	Total
2003	\$ 11,341,036	\$ 1,724,206	\$ 1,330,394	\$ 14,395,636
2004	12,795,967	1,640,468	1,759,454	16,195,889
2005	13,691,498	1,207,837	1,918,990	16,818,325
2006	13,708,197	1,646,229	2,036,243	17,390,669
2007	16,796,419	1,997,474	2,546,038	21,339,931
2008	25,241,628	1,602,316	2,230,391	29,074,335
2009	24,044,688	1,271,291	2,209,211	27,525,190
2010	24,869,935	1,499,868	2,083,812	28,453,615
2011	24,589,236	1,318,192	2,007,772	27,915,200
2012	25,785,069	1,452,225	2,101,611	29,338,905