

MONTGOMERY COUNTY EMPLOYEES' RETIREMENT SYSTEM ACTUARIAL VALUATION AS OF JULY 1, 2014

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November 4, 2014

Ms. Linda Herman
Executive Director
Montgomery County Employee Retirement Plans
101 Monroe Street, 15<sup>th</sup> Floor
Rockville, MD 20850

#### Dear Linda:

We are pleased to provide our formal annual Actuarial Valuation Report as of July 1, 2014, for the Montgomery County Employees' Retirement System ("System"). The actuarial valuation was performed at the request of Montgomery County ("County") and is intended for use by the County and the System and those designated by the County and the System. This report may be provided to parties other than the County and System only in its entirety and only with the permission of the County and System.

This report provides, among other things, the recommended annual contribution of the Plan for the Plan Year commencing July 1, 2015, and ending on June 30, 2016. Beginning with this valuation, the actuarial cost method was changed from Projected Unit Credit for non-GRIP and Traditional Unit Credit for GRIP to individual Entry-Age Normal for both non-GRIP and GRIP. In addition, the payroll basis used for calculating the contribution rates was changed. The other actuarial assumptions and methods used in this valuation are the same as those used in the prior actuarial valuation. There have been no changes in plan provisions since the last actuarial valuation as of July 1, 2013.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Montgomery County Employees' Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Lance Weiss and Amy Williams are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose stated.

The signing actuaries are independent of the plan sponsor.

Ms. Linda Herman Montgomery County Employees' Retirement System Page 2

The valuation was based upon information furnished by the County Staff, concerning benefits provided by the Montgomery County Employees' Retirement System, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the County Staff.

We will be pleased to review this report with you at your convenience.

Respectfully submitted, Gabriel, Roeder, Smith & Company

Lance Weiss, F.A., M.A.A.A., F.C.A.

Senior Consultant

My Williams
Amy Williams, A.S.A., M.A.A.A., F.C.A.

Consultant

AW:rg



VALUATION RESULTS

#### COMMENTS ON THE VALUATION

At your request, we have performed an actuarial valuation of the Montgomery County Employees' Retirement System as of July 1, 2014.

The purposes of this actuarial valuation are as follows:

- To determine the funding status of the Plan as of the valuation date;
- To determine the recommended contribution for the fiscal year beginning July 1, 2015; and
- To provide accounting and other data required by the System.
  - This report includes information required under GASB Statement No. 27. Information required under GASB Statement No. 67 has been provided in a separate report.

We received the data from the Montgomery County Employees' Retirement System Staff. We performed certain checks for reasonableness and found the data to be complete and reliable for valuation purposes. However, we did not audit the data.

A total of 5,535 active members (excluding DRSP and DROP) were included in the valuation as of July 1, 2014. Between the 2013 and 2014 valuations, the number of active employees increased by 100 members, or 1.8 percent. The average annual valuation pay (excluding DRSP and DROP) increased by 4.3 percent, from \$69,804 to \$72,791 between the 2013 and 2014 valuation. The number of benefit recipients increased from 6,132 to 6,242, or 1.8 percent, since the last valuation. The average monthly benefit increased by 1.7 percent, from \$3,014 to \$3,065. Section C summarizes the membership data.

There is a group of retirees that have benefits that are insured by Aetna. The total benefit amounts reported for these members in the valuation report include the insured benefit amount. The actuarial liabilities calculated in the valuation report exclude the value of the insured benefits. The liabilities for these members that are included in the actuarial valuation are for the cost of living adjustments provided and are paid by the Montgomery County Employees' Retirement System.

Section E outlines the principal benefit provisions of the System. There have been no new plan changes reflected in the valuation as of July 1, 2014, since the last actuarial valuation at July 1, 2013.

Section D outlines the actuarial assumptions and methods used in the valuation. Beginning with the July 1, 2014, actuarial valuation, the actuarial cost method was changed from Projected Unit Credit for non-GRIP and Traditional Unit Credit for GRIP to individual Entry-Age Normal for both non-GRIP and GRIP. The other actuarial assumptions used in this valuation are the same as those used in the actuarial valuation at July 1, 2013. The assumption for administrative expenses is equal to the average of the prior three years administrative expenses. This amount has decreased from \$3,008,700 to \$2,966,800.

During the plan year ending July 1, 2014, the unfunded actuarial accrued liability ("UAAL") decreased from \$808,833,488 as of July 1, 2013, to \$625,444,994 as of July 1, 2014, which is a decrease of \$183,388,494. The key factors contributing to the decrease in the UAAL were recognition of deferred asset gains in fiscal years 2010, 2011, 2013 and 2014, higher contributions than expected, and lower than expected cost of living (COLA) increases for retired members. (The COLA increase was 2.166 percent compared to an assumed COLA increase of 3.00 percent for benefits attributable to service prior to July 1, 2011, and an assumed COLA increase of 2.30 percent for benefits attributable to service on or after July 1, 2011. For members that receive an increase based on 60 percent of CPI, the actual increase was 1.30 percent compared to an assumption of 1.80 percent.) These gains were partially offset by the change in the actuarial cost method and

## COMMENTS ON THE VALUATION (CONTINUED)

demographic experience.

On a market value basis, the Plan assets had an investment return of approximately 17.7<sup>1</sup> percent (net of investment expenses). Continued recognition of the fiscal year end 2012 investment loss, which was offset by recognition of investment gains during fiscal years ending 2010, 2011, 2013 and 2014 resulted in an estimated net asset rate of return of 12.98 percent on an actuarial value of assets basis which compares to the assumed rate of return of 7.50 percent.

The funded ratio (ratio of assets to liabilities) is 84.2 percent on an actuarial value of assets basis and 92.3 percent on a market value of assets basis.

#### **Recommended County Contributions**

The total contribution rate is equal to the normal cost rate plus amortization of the unfunded liability as a level percentage of payroll. The unfunded liability as of July 1, 2010, was amortized over an initial closed period of 18 years (14 years remaining at the valuation as of July 1, 2014). The additional unfunded liability from each subsequent valuation is amortized over a 20-year closed period. The total contribution rate minus the average employee contribution rate equals the County contribution rate. The valuation as of July 1, 2013, established the County contribution rate for fiscal year beginning July 1, 2014 and ending June 30, 2015. The valuation as of July 1, 2014, establishes the county contribution rate for fiscal year beginning July 1, 2015, and ending June 30, 2016.

The payroll basis used for calculating the contribution rates was changed from the prior valuation. Beginning with the actuarial valuation as of July 1, 2014, the unfunded liability contribution rate is calculated as a percentage of payroll equal to the total base payroll for the open groups (groups that are enrolling new members) and projected payroll for the period July 1, 2015, through June 30, 2016, for the closed groups (groups that are closed to new members). Groups A and H are closed and the remaining groups are open.

#### **Non-GRIP**

The amortization payments for non-GRIP members are allocated between Groups A, E, F, G and H. The allocations between the groups for the bases established in the 2010 and 2011 valuations are based on the allocation established by the prior actuary. The allocation of the amortization payments from the bases established after the 2011 valuation are based on the sum of the active liability and the liability for new retirees and terminated vested members by group. This method is consistent with that used by the prior actuary. This is one of many reasonable methods that can be used. Other methods could result in a significantly different allocation of the amortization payments by group. The amortization bases for GRIP are separately tracked. The allocation of the amortization payments due to the change in the unfunded liability from the change in actuarial cost method was based on the increase in the active liability for each group and plan.

The County contribution rate for fiscal year 2016 decreased for both Public Safety and non-Public Safety (non-GRIP) members from the fiscal year 2015 rate. Both Public Safety and non-Public Safety Groups experienced favorable experience during fiscal year 2014, including lower retiree COLA increases than expected under the actuarial assumptions, and fewer retirements and more terminations than expected

<sup>&</sup>lt;sup>1</sup> As provided by Montgomery County ERS.

## COMMENTS ON THE VALUATION (CONTINUED)

under the actuarial assumptions. This favorable experience was partially offset by larger salary increases than expected under the actuarial assumptions and the change in the actuarial cost favorable experience and the recognition of deferred asset gains led to the decrease in the County contribution rates for Public Safety and non-Public Safety.

The actuarial value of assets is currently 91 percent of the market value of assets. There is \$311,092,362 in net asset gains currently being deferred (\$319,382,373 in total for GRIP and non-GRIP) that will be phased into the actuarial value of assets over the next four years. Assuming all future assumptions are realized, there is projected to be a decrease in the recommended County contribution as the remaining deferred asset gains are recognized.

#### **GRIP**

The County contribution rate for fiscal year 2016 decreased for GRIP members from the fiscal year 2015 rate. The decrease in the County contribution rate is mainly attributable to the favorable investment experience and recognition of deferred gains.

The actuarial value of GRIP assets is currently 92 percent of the market value of assets. There is \$8,290,011 in net gains currently being deferred that will be phased into the actuarial value of assets over the next four years. Assuming all future assumptions are realized, the recommended County contribution is projected to decrease in future years as the remaining deferred asset gains are recognized.

### SUMMARY OF ACTUARIAL VALUATION RESULTS

Membership		 July 1, 2013 Results	July 1, 2014 Results
Data	Active Members	5,435	5,535
Dutu	DRSP/DROP	171	99
	Deferred Vested	358	403
	Retirees and Beneficiaries	 5,961	6,143
	TOTAL	11,925	12,180
Plan			
Liabilities	Actuarial Accrued Liability:		
	Active Members	\$ 1,294,536,578	\$ 1,373,483,134
	DRSP/DROP	183,373,681	99,437,744
	Deferred Vested	21,718,538	26,461,195
	Retirees and Beneficiaries	2,321,751,935	2,459,547,645
	TOTAL	\$ 3,821,380,732	\$ 3,958,929,718
	Actuarial Value of Assets at Valuation Date	\$ 3,012,547,244	\$ 3,333,484,724
	Unfunded (Overfunded) Actuarial		
	Accrued Liability	\$ 808,833,488	\$ 625,444,994
	Funded Position of Plan's Actuarial Accrued Liability <sup>1</sup>	78.8 %	84.2 %

#### Recommended

Annual Contribution Requirements <sup>2</sup>	 Fiscal Year 2015	 Fiscal Year 2016
Annual Normal Cost as of Valuation Date	\$ 73,892,382	\$ 74,984,370
Normal Cost Expense Load	3,008,700	2,966,800
Amortization Payment	67,898,374	59,111,574
Total Annual Required Contribution	 144,799,456	 137,062,744
Expected Employee Contributions	20,971,463	22,235,192
County Contribution Requirement	\$ 123,827,993	\$ 114,827,552
Contribution Basis Payroll:		
For Normal Cost	\$ 340,690,660	\$ 360,825,073
For Amortization of Unfunded Liability	340,690,660	378,030,049
County Contribution % of Payroll		
Public Safety	45.17%	37.73%
Non-Public Safety	41.04%	40.02%
GRIP	6.72%	6.61%

 $<sup>^{1}</sup>$  Equals the ratio of the actuarial value of assets to the total actuarial accrued liability.  $^{2}$  Includes the Retirement Incentive cost.

## CONTRIBUTION RATE SUMMARY ALL PLANS

				Val	uation as of July 1,					July 1, 2013
		Non-Public Safety				Safety				
	Group A	Group H	Total Non PS	Group E	Group F	Group G	Total PS	GRIP	Total	Total
County Contribution Requirement (\$)										
(Includes Retirement Incentive) <sup>1</sup>										
Mandatory Integrated Plan	\$ 13,099,584	\$ 15,437,679	\$ 28,537,263	\$ 12,587,119	\$ 30,448,176	\$ 32,335,457	\$ 75,370,752	\$ -	\$ 103,908,015	\$ 113,064,381
Optional Integrated Plan	1,949,942	1,598,742	3,548,684	-	-	-	-	· ·	3,548,684	3,664,884
Optional Non-Integrated Plan	568,446	891,687	1,460,133	-	-	980,712	980,712	_	2,440,845	2,531,281
GRIP	´-	-	-	-	-		-	4,930,008	4,930,008	4,567,447
Total All Plans	15,617,972	17,928,108	33,546,080	12,587,119	30,448,176	33,316,169	76,351,464	4,930,008	114,827,552	123,827,993
County Normal Cost Contribution Requ	uirement (% of	Pavroll)								
Mandatory Integrated Plan	8.40%	8.56%	8.48%	21.57%	23.04%	20.65%	21.84%		17.69%	18.72%
Optional Integrated Plan	8.10%	8.49%	8.25%	0.00%	0.00%	0.00%	0.00%		8.25%	11.66%
Optional Non-Integrated Plan	9.24%	10.18%	9.75%	0.00%	0.00%	20.42%	20.42%		10.38%	16.12%
GRIP								7.27%	7.27%	7.44%
Total All Plans	8.40%	8.58%	8.49%	21.57%	23.04%	20.65%	21.84%	7.27%	15.44%	16.42%
County Contribution Requirement (%	of Payroll)									
(Excludes Retirement Incentive) <sup>1</sup>	_									
Mandatory Integrated Plan	31.98%	33.42%	32.73%	31.76%	35.97%	41.56%	37.24%		35.50%	41.33%
Optional Integrated Plan	185.54%	248.85%	209.58%	0.00%	0.00%	0.00%	0.00%		209.58%	148.71%
Optional Non-Integrated Plan	153.60%	203.26%	180.30%	0.00%	0.00%	983.25%	983.25%		274.10%	203.47%
GRIP								6.61%	6.61%	6.72%
Total All Plans	36.92%	38.03%	37.50%	31.76%	35.97%	42.75%	37.69%	6.61%	30.51%	35.74%
County Contribution Requirement (%	of Payroll)									
(Includes Retirement Incentive) <sup>1</sup>	• /									
Mandatory Integrated Plan	33.91%	35.90%	34.95%	31.98%	35.97%	41.56%	37.28%		36.14%	42.00%
Optional Integrated Plan	197.52%	265.05%	223.16%	0.00%	0.00%	0.00%	0.00%		223.16%	157.58%
Optional Non-Integrated Plan	160.99%	217.51%	191.37%	0.00%	0.00%	983.25%	983.25%		283.87%	210.14%
GRIP	100.5570	217.5170	1,71.5770	0.0070	3.3370	200.2070	>03.2570	6.61%	6.61%	6.72%
Total All Plans	39.15%	40.81%	40.02%	31.98%	35.97%	42.75%	37.73%	6.61%	31.08%	36.35%
- Committee Hills	37.1370	-10.0170	10.02/0	31.7070	33.7170	12.73/0	31.7370	0.0170	31.00/0	30.3370

<sup>&</sup>lt;sup>1</sup>Amortization payments for Optional Non-Integrated and Optional Integrated plans have been reallocated to the Mandatory Integrated plan for each group when contribution basis payroll is \$0 and new entrants are not expected in the coming year.

# ACTUARIAL VALUATION RESULTS ALL PLANS

		Non-Pub	lic S	Safety				aluation as of a	July	1,2014							July 1, 2	013
		Group A		Group H	_	Group E		Group F		Group G	_	GRIP	_	Total	% of Payroll	_	Total	% of Payroll
Total All Plans				<u></u>														
Active Members																		
Number		527		799		626		1,190		1,130		1,263		5,535			5,435	
Average Age		56.7		56.8		43.5		38.1		37.5		49.5		45.7			46.1	
Average Service		26.7		24.6		12.4		12.9		11.7		8.3		14.5			14.9	
Total Base Payroll	\$	50,976,638	\$	55,866,352	\$	42,951,126	\$	89,215,131	\$	80,663,980	\$	83,225,868	\$	402,899,096		\$	379,385,763	
Contribution Basis Payroll:					_				_									
For Normal Cost	\$	43,189,541	\$	47,460,110	\$	37,611,162	\$	82,124,733	\$	75,043,449	\$	75,396,078	\$	360,825,073		\$	340,690,660	
For Amortization of Unfunded Liability		38,979,842		42,994,102		42,951,126		89,215,131		80,663,980		83,225,868		378,030,049			340,690,660	
DRSP/DROP Members								-										
Number							Φ.	39	Φ.	5.044.122			•	99		Φ.	171	
Total Base Payroll							\$	3,740,247	\$	5,944,122			\$	9,684,369		\$	16,602,263	
Total Benefits								2,523,134		3,626,704				6,149,838			11,109,304	
Terminated Vested Members																		
Number		68		88	_	26		35	_	19		167		403			358	
Total Benefits	\$	751,726	\$	740,739	\$	334,743	\$	411,385	\$	121,662			\$	2,360,255			1,987,355	
Retired Members and Beneficiaries																		
Number												1		6,143			5,961	
Total Benefits												5,024		223,419,018			210,686,878	
Total Membership														12,180			11,925	
17:17:																		
Actuarial Accrued Liability Active Members	e	231,957,468	¢.	223,270,720	\$	162,527,468	e.	270 110 020	Ф	204 077 074	\$	80,640,384	\$	1 272 492 124		\$	1 204 526 579	
DRSP/DROP Members	э	231,937,408	Э	223,270,720	Э	102,327,408	3	370,110,020 40,220,589	Э	59,217,155	Э	80,040,384	Э	1,373,483,134 99,437,744		Э	1,294,536,578 183,373,681	
Terminated Vested Members		5,705,103		5,770,770		3,084,308		3,567,202		804,484		7,529,328		26,461,195			21,718,538	
Retired Members and Beneficiaries		3,703,103		3,770,770		3,064,306		3,307,202		004,404		43,394		2,459,547,645			2,321,751,935	
Total												88,213,106		3,958,929,718	-	_	3,821,380,732	=
Total												00,213,100		3,730,727,710			3,021,300,732	
Actuarial Value of Assets												95,461,457		3,333,484,724			3,012,547,244	
Unfunded Actuarial Accrued Liability												(7,248,351)		625,444,994			808,833,488	
Funded Ratio (Actuarial Value of Assets)												108.2%		84.2%			78.8%	
Annual Gross Normal Cost																		
Benefits	\$	5,761,406	\$	6,448,080	\$	10,324,699	\$	23,688,943	\$	20,369,041	\$	8,392,201	\$	74,984,370	(20.78%)	\$	73,892,382	(21.69%)
Expenses of Administration		505,440		479,476		327,921		799,471		685,359		169,133		2,966,800	(0.82%)		3,008,700	(0.88%)
Total		6,266,846		6,927,556		10,652,620		24,488,414		21,054,400		8,561,334		77,951,170	(21.60%)		76,901,082	(22.57%)
										P D (		·						
Amortization of Unfunded Liability	•	11.118.846	\$	12,663,707	\$	4,381,570	\$		\$	uding Retirer 17.818.719	ment \$	(554,344)	\$	56,951,509	(15.07%)	•	65,821,386	(19.32%)
Amortization of Chiunded Liability	φ	11,110,040	Ф	12,003,707	Ф	4,361,370	φ	11,323,011	Ф	17,010,719	Ф	(334,344)	Φ	30,931,309	(13.07%)	Ф	03,821,380	(19.32%)
Annual Contribution Requirement:																		
County Portion	\$	14,746,774	\$	16,733,798	\$	12,492,562	\$	30,448,176	\$	33,316,169	\$	4,930,008	\$	112,667,487	(30.51%)	\$	121,751,005	(35.74%)
Employee Portion	-	2,638,918	7	2,857,465	-	2,541,628	-	5,563,249	-	5,556,950	-	3,076,982	_	22,235,192	(6.16%)	7	20,971,463	(6.15%)
Total		17,385,692		19,591,263		15,034,190		36,011,425		38,873,119		8,006,990		134,902,679	(36.67%)		142,722,468	(41.89%)
Non-Public Safety/Public Safety/GRIP			\$	31,480,572					\$ inch	76,256,907 uding Retiren	\$ nent	4,930,008						
Amortization of Unfunded Liability	\$	11,990,044	\$	13,858,017	\$	4,476,127	\$	11,523,011		17,818,719	\$	(554,344)	\$	59,111,574	(15.64%)	\$	67,898,374	(19.93%)
Annual Contribution Requirement:																		
County Portion	\$	15,617,972	\$	17,928,108	\$	12,587,119	\$	30,448,176	\$	33,316,169	\$	4,930,008	\$	114,827,552	(31.08%)	\$	123,827,993	(36.35%)
Employee Portion	Ψ	2,638,918	Ψ	2,857,465	Ψ	2,541,628	Ψ	5,563,249	Ψ	5,556,950	Ψ	3,076,982	Ψ	22,235,192	(6.16%)	Ψ	20,971,463	(6.15%)
Total	-	18,256,890		20,785,573	_	15,128,747		36,011,425		38,873,119	_	8,006,990		137,062,744	(37.24%)	_	144,799,456	(42.50%)
		,								, -					,/		,, ***	

### ACTUARIAL VALUATION RESULTS ALL PLANS (EXCLUDING GRIP)

Part								V	aluation as of	Jul	1,2014						July 1, 2	013
Number		_		dic S				P										
Post		_	Group A		Group H		Group E		Group F		Group G	GRIP		Total	% of Payroll		Total	% of Payroll
Procession   Pro			505		774		626		1,190		1,128			4,223			4,174	
Processing Control of Control o		\$	48,930,444	\$	54,073,556	\$	42,951,126	\$	89,215,131	\$	80,430,468		\$	315,600,725		\$	299,872,024	
Active Actuarial Accuned Liability Active Actuaria		\$	41,604,901	\$	46,252,534	\$	37,611,162	\$	82,124,733	\$	74,986,538		\$	282,579,867		\$	269,206,806	
Renefix			37,651,087		41,988,724		42,951,126		89,215,131		80,563,330			292,369,398				
Peneris			219,138,319		211,765,787		162,527,468		370,110,020		302,831,926			1,266,373,520			1,196,725,131	
Control	Benefits	\$		\$		\$		\$		\$			\$			\$		
Amortization of Unfunded Liability		_				_												
Annual Contribution Requirement:   County Portion			***********		-,,,,					Excl		nent Incentive		,	(=111070)		,,	(,
County Portion	Amortization of Unfunded Liability	\$	8,876,659	\$	10,439,087	\$	4,381,570	\$	11,523,011	\$	16,849,627		\$	52,069,954	(17.81%)	\$	60,865,812	(22.61%)
Employee Portion																		
Total		\$		\$		\$		\$		\$			\$			\$		
Non-Public Safety/Public Safety   Public Saf		_																
Number	Total		14,906,306		17,173,481		15,034,190		36,011,425		37,886,430			121,011,832	(42.21%)		129,240,996	(48.01%)
Number   1,1   1	Non-Public Safety/Public Safety			\$	26,769,812					\$	75,276,195							
Total Base Payroll																		
Contribution Basis Payroll:   For Normal Cost   S   1,69320   \$ 714,650   \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$							-		-		1							
For Normal Cost   S   1,169,320   \$   714,650   \$   \$   \$   \$   \$   \$   \$   \$   \$		\$	1,552,828	\$	914,277	\$	-	\$	-	\$	132,862		\$	2,599,967		\$	2,960,407	
Por Amortization of Unfunded Liability				_				_		_			_			_		
Active Actuarial Accrued Liability 9,050,472 4,713,446 - 1,122,105 14,886,023 17,012,783 Annual Cross Normal Cost  Benefits 5 143,796 5 92,594 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		\$		\$		\$	-	\$	-	\$	-		\$			\$		
Annual Gross Normal Cost  Benefits	For Amortization of Unfunded Liability		9/9,462		599,474		-		-		-			1,578,935			2,325,776	
Renefits			9,050,472		4,713,446		-		-		1,122,105			14,886,023			17,012,783	
Expenses of Administration 21,783 10,974 32,757 (1,74%) 46,416 (2,00%) Total 165,579 103,568 269,147 (14,29%) 411,105 (17,68%) Excluding Retirement Incentive Excluding Retirement Incentive County Fortion   \$1,737,936 \$1,440,917 \$ - \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		¢	1/12 706	•	02 504	¢		¢		e			¢	226 200	(12.55%)	•	264 690	(15.69%)
Total 165,579 103,568	Delicins	φ		φ		φ		φ		φ			φ			φ		
Amortization of Unfunded Liability		-				_					<del></del>							
Annual Contribution Requirement:  County Portion   \$ 1,832,646   \$ 1,501,606   \$ - \$   \$ - \$   \$ 3,334,252   (209.58%)   \$ 3,458,699   (148.71%)   Employee Portion   70,869   42,879   - \$ - \$ - \$   113,748   (6.04%)   139,886   (6.02%)   Total   1,903,515   1,544,885   - \$ - \$ - \$   3,448,000   (215.62%)   3,598,585   (154.73%)    Non-Public Safety/Public Safety   \$ 3,334,252   \$ - \$   \$ - \$    Number   5   5   11   - \$   1   17   21    Total Base Payroll   \$ 493,366   \$ 878,520   \$ - \$   \$ - \$ 100,650   \$ 1,472,536   \$ 1,755,373    Contribution Basis Payroll:  For Normal Cost   \$ 415,320   \$ 405,904   \$ - \$   \$ 56,911   \$ 965,158   \$ 1,204,549    Active Actuarial Accrued Liability   3,768,677   6,791,487   - \$   \$ 1,023,043   11,583,207   13,626,604    Annual Cross Normal Cost	10111		100,077		105,500					Excl	uding Retirem	nent Incentive		209,117	(11.2570)		111,100	(17.0070)
County Portion \$ 1,832,646 \$ 1,501,606 \$ - \$ - \$ - \$ - \$ 3,334,252 (209,8%) \$ 3,458,699 (148,71%) Employee Portion 70,869 42,879 3,448,000 (215,62%) \$ 3,598,585 (60.2%) \$ 1,544,485	Amortization of Unfunded Liability <sup>1</sup>	\$	1,737,936	\$	1,440,917	\$	-	\$	-		-		\$	3,178,853	(201.33%)	\$	3,187,480	(137.05%)
Employee Portion 70,869 42,879 113,748 (6.04%) 139,886 (6.02%) Total 1,903,515 1,544,485 3,448,000 (215,62%) 3,598,585 (154,73%)  Non-Public Safety/Public Safety \$ 3,334,252 \$	Annual Contribution Requirement:																	
Total   1,903.515   1,544.485   -   -     3,448.000   (215.62%)   3,598,585   (154.73%)		\$	1,832,646	\$	1,501,606	\$	-	\$	-	\$	-		\$	3,334,252	(209.58%)	\$	3,458,699	(148.71%)
Non-Public Safety/Public Safety \$ 3,334,252 \$ 5 -    Optional Non-Integrated Plan   5   11   -   -   1   17   21     Total Base Payroll   5   493,366   8 878,520   8   -   8   -   8   1,472,536   8   1,755,373     Contribution Basis Payroll:   For Normal Cost   8   415,320   8   492,926   8   -   8   -   8   56,911   8   965,158   8   1,204,549     For Amortization of Unfunded Liability   349,293   405,904   -   -   1,002,043   11,583,207   13,626,604     Annual Gross Normal Cost   1,752,373   13,626,604	Employee Portion		70,869		42,879		-		-					113,748	(6.04%)		139,886	(6.02%)
Optional Non-Integrated Plan           Number         5         11         -         -         1         17         21           Total Base Payroll         \$ 493,366         \$ 878,520         \$ -         \$ -         \$ 1,00,650         \$ 1,472,536         \$ 1,755,373           Contribution Basis Payroll:         ***         ***         ***         ***         \$ 56,911         \$ 965,158         \$ 1,204,549           For Normal Cost         \$ 415,320         \$ 492,926         \$ -         \$ -         \$ 56,911         \$ 965,158         \$ 1,204,549           For Amortization of Unfunded Liability         349,293         405,904         -         -         100,650         855,848         1,204,549           Active Actuarial Accrued Liability         3,768,677         6,791,487         -         -         1,023,043         11,583,207         13,626,604	Total		1,903,515		1,544,485		-		-		-			3,448,000	(215.62%)		3,598,585	(154.73%)
Number         5         11         -         -         1         17         21           Total Base Payroll         \$ 493,366         \$ 878,520         \$ -         \$ 100,650         \$ 1,472,536         \$ 1,755,373           Contribution Basis Payroll:         For Normal Cost         \$ 415,320         \$ 492,926         \$ -         \$ -         \$ 56,911         \$ 965,158         \$ 1,204,549           For Amortization of Unfunded Liability         349,293         405,904         -         -         100,650         855,848         1,204,549           Active Actuarial Accrued Liability         3,768,677         6,791,487         -         -         1,023,043         11,583,207         13,626,604           Annual Gross Normal Cost         -         -         1,023,043         11,583,207         13,626,604	Non-Public Safety/Public Safety			\$	3,334,252					\$	-							
Total Base Payroll \$ 493,366 \$ 878,520 \$ - \$ - \$ 100,650 \$ 1,472,536 \$ 1,755,373 Contribution Basis Payroll:  For Normal Cost \$ 415,320 \$ 492,926 \$ - \$ - \$ 5,6911 \$ 965,158 \$ 1,204,549 For Amortization of Unfunded Liability 349,293 405,904 - \$ - 100,650 855,848 1,204,549  Active Actuarial Accrued Liability 3,768,677 6,791,487 1,023,043 11,583,207 13,626,604	Optional Non-Integrated Plan																	
Contribution Basis Payroll:  For Normal Cost \$ 415,320 \$ 492,926 \$ - \$ - \$ 56,911 \$ 965,158 \$ 1,204,549 For Amortization of Unfunded Liability 349,293 \$ 405,904 \$ - \$ - \$ 100,650 \$ 855,848 \$ 1,204,549 \$ 1,204,5	Number		5		11		-		-		1			17			21	
For Normal Cost \$ 415,320 \$ 492,926 \$ - \$ - \$ 56,911 \$ 965,158 \$ 1,204,549 For Amortization of Unfunded Liability 349,293 405,904 100,650 855,848 1,204,549  Active Actuarial Accrued Liability 3,768,677 6,791,487 1,023,043 11,583,207 13,626,604 Annual Gross Normal Cost		\$	493,366	\$	878,520	\$	-	\$	-	\$	100,650		\$	1,472,536		\$	1,755,373	
For Amortization of Unfunded Liability 349,293 405,904 100,650 855,848 1,204,549  Active Actuarial Accrued Liability 3,768,677 6,791,487 1,023,043 11,583,207 13,626,604  Annual Gross Normal Cost	Contribution Basis Payroll:																	
Active Actuarial Accrued Liability 3,768,677 6,791,487 1,023,043 11,583,207 13,626,604 Annual Gross Normal Cost		\$		\$		\$	-	\$	-	\$			\$			\$		
Annual Gross Normal Cost	For Amortization of Unfunded Liability		349,293		405,904		-		-		100,650			855,848			1,204,549	
			3,768,677		6,791,487		-		-		1,023,043			11,583,207			13,626,604	
+ $0.951 + 0.950 +$		\$	64.391	s	76.566	s		\$	_	s	15.635		s	156.592	(16.22%)	s	263.343	(21.86%)
Expenses of Administration 7,229 13,028 1,962 22,219 (2.31%) 28,600 (2.38%)		-		-		-	-	-	_	-			-			-		
Total 7,1620 89,594 17,597 178,811 (18.53%) 291,943 (24.24%)		_				_	-		-									
Excluding Retirement Incentive										Excl		nent Incentive			(,			
Amortization of Unfunded Liability \(^1\) \(^5\) 504,250 \(^5\) \(^7\)83,703 \(^5\) \(^1\) \(^5\) \(^5\) \(^5\) \(^5\)969,091 \(^5\) \(^5\) \(^2\)2,257,044 \(^2\)63.72\(^5\) \(^5\) \(^5\)2,256,681 \(^2\)67.35\(^5\)	Amortization of Unfunded Liability <sup>1</sup>	\$	504,250	\$	783,703	\$	-	\$	-	\$	969,091		\$	2,257,044	(263.72%)	\$	2,256,681	(187.35%)
Annual Contribution Requirement:	Annual Contribution Requirement:																	
County Portion \$ 542,644 \$ 833,863 \$ - \$ - \$ 980,712 \$ 2,357,219 (274.10%) \$ 2,450,871 (203.47%)		\$		\$		\$	-	\$	-	\$			\$			\$		
Employee Portion 33,226 39,434 5,976 78,636 (8.15%) 97,753 (8.11%)							-		-									
Total 575,870 873,297 - 986,688 2,435,855 (282,25%) 2,548,624 (211.58%)	Total		575,870		873,297		-		-		986,688			2,435,855	(282.25%)		2,548,624	(211.58%)
Non-Public Safety/Public Safety \$ 1,376,507 \$ 980,712	Non-Public Safety/Public Safety			\$	1,376,507					\$	980,712							

<sup>&</sup>lt;sup>1</sup>Amortization payments for Optional Non-Integrated and Optional Integrated plans have been reallocated to the Mandatory Integrated plan for each group when contribution basis payroll is \$0 and new entrants are not expected in the coming year.

# ACTUARIAL VALUATION RESULTS GUARANTEED RETIREMENT INCOME PLAN (GRIP)

							tion	as of July 1,	201	14					July 1, 20	013
		CC		CM		Agency CN		CP		CZ	7	Total GRIP			Total	
Total All Plans		cc		CIVI		CIV		CI		CL		otai Otti		-	Total	
Active Members																
Number		2		833		418		3		7		1,263			1,202	
Average Age		51.6		49.3		49.8		59.7		55.4		49.5			49.4	
Average Service		9.1		8.3		8.2		12.9		8.9		8.3			8.5	
Total Base Payroll	\$	76,980	\$		\$		\$	582,660	5	750,373	\$	83,225,868		\$	74,797,959	
Contribution Basis Payroll:	_	,	-	,,	-		-	, ,		,	-	,,,		-	,,	
For Normal Cost	\$	73,649	\$	42,314,598	\$	31,885,352	\$	470,408 \$	8	652,071	\$	75,396,078		\$	67,953,529	
For Amortization of Unfunded Liability		76,980		46,449,598		35,366,257		582,660		750,373		83,225,868			67,953,529	
Terminated Members		,.		-, -,		,,		,,,,,		,		, -,			, , .	
Number		1		89		77						167			142	
Retired Members and Beneficiaries		1		0)		,,						107			142	
Number				1								1			1	
Total Benefits		-		5,024		-		-		-		_			5,024	
Total Membership		3		923		495		3		7		5,024 1,431			1,345	
Total Membership		3		923		493		3		/		1,431			1,343	
Actuarial Accrued Liability																
Active Members	\$	81.416	\$	43,428,222	\$	34,998,419	\$	1.333.232		799,095	\$	80,640,384		\$	67.172.060	
Terminated Vested Members	Ψ	72,674	Ψ	3,033,961	Ψ	4,422,693	Ψ	-	,	-	Ψ	7,529,328		Ψ	5,930,360	
Retired Members and Beneficiaries		72,074		43,394		-,422,073		_		_		43,394			44,523	
Total		154,090		46,505,577		39,421,112		1,333,232		799,095	-	88,213,106		-	73,146,943	
10111		10 1,000		10,000,011		57, 121,112		1,000,202		,,,,,,,		00,210,100			, 5,1 .6,5 .6	
Actuarial Value of Assets		166,752		50,326,877		42,660,291		1,442,782		864,756		95,461,457			79,738,860	
Unfunded Actuarial Accrued Liability		(12,662)		(3,821,300)		(3,239,179)		(109,550)		(65,661)		(7,248,351)			(6,591,917)	
Funded Ratio (Actuarial Value of Assets)		108.2%		108.2%		108.2%		108.2%		108.2%		108.2%			109.0%	
A 16 N 16 .																
Annual Gross Normal Cost Benefits	\$	8,202	\$	4 605 610	Ф	2 550 151	¢	57,280 \$	r	72,646	\$	8,392,201	(11 120/ )	\$	7 660 421	(11.29%)
Expenses of Administration	Ф	8,202 295	Þ	4,695,619 89,166	Þ	3,558,454 75,583	Ф	2,556	Þ	1,532	Þ	8,392,201 169,133	(11.13%) (0.23%)	Þ	7,669,421 153,429	(11.29%)
Total		8,497		4,784,785		3,634,037		59,836		74,178		8,561,334	(11.36%)		7,822,850	(0.22%)
Amortization of Unfunded Liability	\$	(968)	\$	(292,248)	\$	(247,728)	\$	(8,378) \$	5	(5,022)	\$	(554,344)	-(0.67%)	\$	(488,586)	-(0.72%)
		( /		( - , - ,		( ',' ',		(-, , - ,		(-,-,		( ,- ,	(,		(,,	(*** ***)
Annual Contribution Requirement:																
County Portion	\$	4,583	\$	2,799,953	\$	2,050,470	\$	31,928 \$	\$	43,073	\$	4,930,008	(6.61%)	\$	4,567,447	(6.72%)
Employee Portion		2,946		1,692,584		1,335,839		19,530		26,083		3,076,982	(4.08%)		2,766,817	(4.07%)
Total		7,529		4,492,537		3,386,309		51,458		69,156		8,006,990	(10.69%)		7,334,264	(10.79%)
Non-Public Safety County Portion												4,898,080	(6.61%)			
Public Safety County Portion												31,928	(7.13%)			
												,/	()			

## ACTUARIAL VALUATION RESULTS AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

					Remaining				
Base		Un	funded Liability I	Base	Financing	Amortization			Dollar
Year	Description	Non-GRIP	GRIP	Total	Period	Factor	Non-GRIP	GRIP	Contribution
2010*	Retirement Incentive	\$ 24,604,580	\$ -	\$ 24,604,580	14 yrs.	11.390658	\$ 2,160,067	\$ -	\$ 2,160,067
2010*	Plan Changes	197,035,890	(2,197,183)	194,838,707	14	11.390658	17,298,026	(192,893)	17,105,132
2010*	Plan Experience	606,225,051	161,558	606,386,610	14	11.390658	53,221,251	14,183	53,235,435
2011	Plan Changes	(47,870,060)	-	(47,870,060)	17	13.217298	(3,621,774)	-	(3,621,774)
2011	Plan Experience	72,981,148	(1,717,397)	71,263,751	17	13.217298	5,521,639	(129,936)	5,391,704
2012	Plan Experience	8,675,570	(1,304,854)	7,370,716	18	13.786967	629,259	(94,644)	534,615
2013	Plan Experience	(58,585,851)	(1,503,205)	(60,089,056)	19	14.338089	(4,086,029)	(104,840)	(4,190,869)
2014	Plan Experience	(185,317,859)	(2,954,380)	(188,272,239)	20	14.871268	(12,461,470)	(198,664)	(12,660,134)
2014	Cost Method Change	14,944,876	2,267,109	17,211,985	20	14.871268	1,004,950	152,449	1,157,399
Unfunded Lia	bility	\$ 632,693,345	\$ (7,248,351)	\$ 625,444,994	12.8	10.580754	\$ 59,665,918	\$(554,344)	\$ 59,111,574

<sup>\*</sup>Amortization bases were recombined as of July 1, 2010, into a single amortization base equal to the total unfunded liability as of July 1, 2010. The amounts shown for retirement incentive, plan changes and plan experience for the base year 2010 represent the portion of the unfunded liability remaining at July 1, 2014, that were attributable to each of those items for periods before July 1, 2010.

## ACTUARIAL VALUATION RESULTS AMORTIZATION PAYMENTS BY GROUP

Optional 1	Non-Integrated			Group			
Base Year	r Description	A	E	F	G	Н	Total
2010*	Retirement Incentive	\$ 25,802	\$ -	\$ -	\$ -	\$ 57,824	\$ 83,626
2010*	Plan Changes	222,386	_	_	812,984	268,005	1,303,375
2010*	Plan Experience	288,335	_	_	149,098	537,158	974,591
2011	Plan Changes	(2,735)	_	_	(1,360)	(2,670)	(6,766)
2011	Plan Experience	29,914	-	_	15,469	55,730	101,113
2012	Plan Experience	5,556	_	_	4,619	5,381	15,557
2013	Plan Experience	(12,005)	_	_	(3,007)	(25,910)	(40,922)
2014	Plan Experience	(32,100)	_	_	(8,714)	(59,662)	(100,476)
2014	Cost Method Change	4,898	_	_	3	5,671	10,572
Total	2	530,052	_	_	969,091	841,526	2,340,670
Excludi	ng Retirement Incentive	504,250	-	-	969,091	783,703	2,257,045
-	Integrated			Group			
	r Description	A	$\mathbf{E}$	$\mathbf{F}$	G	Н	Total
2010*	Retirement Incentive	\$ 117,296	\$ -	\$ -	\$ -	\$ 97,136	\$ 214,433
2010*	Plan Changes	855,551	-	-	=	951,836	1,807,388
2010*	Plan Experience	916,026	-	-	-	506,717	1,422,743
2011	Plan Changes	(6,366)	-	-	=	(4,589)	(10,955)
2011	Plan Experience	95,037	-	-	=	52,571	147,608
2012	Plan Experience	9,111	-	-	=	5,499	14,610
2013	Plan Experience	(43,406)	-	-	-	(23,008)	(66,414)
2014	Plan Experience	(96,722)	-	-	-	(49,306)	(146,028)
2014	Cost Method Change	8,705	-	-	-	1,196	9,901
Total		1,855,232	-	-	-	1,538,053	3,393,285
Excludi	ng Retirement Incentive	1,737,936	-	-	-	1,440,917	3,178,853
Mandato	ry Integrated			Group			
	ry Integrated r Description	A	E	Group F	G	Н	Total
	•	<b>A</b> \$ 728,101	<b>E</b> \$ 94,557		<b>G</b>	<b>H</b> \$1,039,350	<b>Total</b> \$1,862,008
Base Year	r Description			F			
Base Year 2010*	r Description Retirement Incentive	\$ 728,101	\$ 94,557	<b>F</b> -	\$ -	\$1,039,350	\$1,862,008
Base Year 2010* 2010*	r Description Retirement Incentive Plan Changes	\$ 728,101 1,969,398	\$ 94,557 1,006,308	<b>F</b> \$ - 2,063,692	\$ - 6,260,593	\$1,039,350 2,887,273	\$1,862,008 14,187,263
Base Year 2010* 2010* 2010*	r Description Retirement Incentive Plan Changes Plan Experience	\$ 728,101 1,969,398 8,522,913	\$ 94,557 1,006,308 5,281,828	<b>F</b> \$ - 2,063,692 14,334,308	\$ - 6,260,593 13,542,225	\$1,039,350 2,887,273 9,142,643	\$1,862,008 14,187,263 50,823,917
Base Year 2010* 2010* 2010* 2011	r Description Retirement Incentive Plan Changes Plan Experience Plan Changes	\$ 728,101 1,969,398 8,522,913 (246,495)	\$ 94,557 1,006,308 5,281,828 (594,436)	F \$ - 2,063,692 14,334,308 (1,881,411)	\$ - 6,260,593 13,542,225 (603,023)	\$1,039,350 2,887,273 9,142,643 (278,689)	\$1,862,008 14,187,263 50,823,917 (3,604,053)
Base Year 2010* 2010* 2010* 2011 2011	r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167	\$ - 6,260,593 13,542,225 (603,023) 1,404,989	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919
Base Year 2010* 2010* 2010* 2011 2011 2012	r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience Plan Experience Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968	F 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248)	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092
Base Year 2010* 2010* 2010* 2011 2011 2012 2013	r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217)	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311)	F 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676)	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241)	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248)	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693)
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014	r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068)	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921)	F 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561)	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789)	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627)	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966)
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 <b>Total</b>	r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 <b>Total</b> <b>Excludie</b>	r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Cost Method Change  range Retirement Incentive	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b>	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 <b>4,476,127</b>	F 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 <b>16,849,627</b>	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 <b>11,478,438</b>	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 <b>53,931,963</b>
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 Total Excluding	r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Cost Method Change  rg Retirement Incentive Plans	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b> <b>8,876,659</b>	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 4,476,127 4,381,570	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011 Group	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 Total All Base Year	r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Cost Method Change  r Description	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 9,604,760 8,876,659	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 4,476,127 4,381,570	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011 Group F	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 Total All Base Year 2010*	r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Cost Method Change  r Description Retirement Incentive	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b> <b>8,876,659</b>	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 4,476,127 4,381,570 E \$ 94,557	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011 Group F \$ -	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087 H \$1,194,310	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954 Total \$2,160,067
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 Total All Base Year 2010* 2010*	r Description Retirement Incentive Plan Changes Plan Experience Cost Method Change  r Description Retirement Incentive Plan Changes	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b> <b>8,876,659</b> <b>A</b> \$ 871,199 3,047,335	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 4,476,127 4,381,570 E \$ 94,557 1,006,308	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011 Group F \$ - 2,063,692	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087 H \$1,194,310 4,107,114	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954 Total \$2,160,067 17,298,026
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 Total All Base Year 2010* 2010* 2010*	r Description Retirement Incentive Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Cost Method Change  r Description Retirement Incentive Plan Changes Plan Changes Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b> <b>8,876,659</b> <b>A</b> \$ 871,199 3,047,335 9,727,275	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 4,476,127 4,381,570 E \$ 94,557 1,006,308 5,281,828	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011 Group F \$ - 2,063,692 14,334,308	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087 H \$1,194,310 4,107,114 10,186,518	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954  Total \$2,160,067 17,298,026 53,221,251
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 Total All Base Year 2010* 2010* 2010* 2011	r Description Retirement Incentive Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Cost Method Change  r Description Retirement Incentive Plan Changes Plan Changes Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b> <b>8,876,659</b> <b>A</b> \$ 871,199 3,047,335 9,727,275 (255,596)	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 <b>4,476,127</b> <b>4,381,570</b> <b>E</b> \$ 94,557 1,006,308 5,281,828 (594,436)	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011  Group F \$ - 2,063,692 14,334,308 (1,881,411)	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627  G \$ - 7,073,577 13,691,322 (604,383)	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087 H \$1,194,310 4,107,114 10,186,518 (285,949)	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954  Total \$2,160,067 17,298,026 53,221,251 (3,621,774)
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 Total All Base Year 2010* 2010* 2010* 2011 2011	r Description Retirement Incentive Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Cost Method Change  Retirement Incentive  Plans r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b> <b>8,876,659</b> <b>A</b> \$ 871,199 3,047,335 9,727,275 (255,596) 1,009,193	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 <b>4,476,127</b> <b>4,381,570</b> <b>E</b> \$ 94,557 1,006,308 5,281,828 (594,436) 547,983	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011  Group F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627  G \$ - 7,073,577 13,691,322 (604,383) 1,420,458	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087 H \$1,194,310 4,107,114 10,186,518 (285,949) 1,056,839	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954  Total \$2,160,067 17,298,026 53,221,251 (3,621,774) 5,521,639
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 Total All Base Year 2010* 2010* 2010* 2011 2011 2011	r Description Retirement Incentive Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Cost Method Change  Retirement Incentive  Plans r Description Retirement Incentive Plan Changes Plan Experience Plan Experience Plan Changes Plan Experience Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b> <b>8,876,659</b> <b>A</b> \$ 871,199 3,047,335 9,727,275 (255,596) 1,009,193 120,724	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 <b>4,476,127</b> <b>4,381,570</b> <b>E</b> \$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011  Group F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627  G \$ - 7,073,577 13,691,322 (604,383) 1,420,458 142,168	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954  Total \$2,160,067 17,298,026 53,221,251 (3,621,774) 5,521,639 629,259
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 Total All Base Year 2010* 2010* 2010* 2011 2011 2011 2012 2013	r Description Retirement Incentive Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Cost Method Change  r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b> <b>8,876,659</b> <b>A</b> \$ 871,199 3,047,335 9,727,275 (255,596) 1,009,193 120,724 (769,628)	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 <b>4,476,127</b> <b>4,381,570</b> <b>E</b> \$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311)	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011  Group F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676)	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627  G \$ - 7,073,577 13,691,322 (604,383) 1,420,458 142,168 (951,248)	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954  Total \$2,160,067 17,298,026 53,221,251 (3,621,774) 5,521,639 629,259 (4,086,029)
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 Total All Base Year 2010* 2010* 2010* 2011 2011 2011 2011 2	r Description Retirement Incentive Plan Changes Plan Experience Cost Method Change  Retirement Incentive  Plans r Description Retirement Incentive Plan Changes Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b> <b>8,876,659</b> <b>A</b> \$ 871,199 3,047,335 9,727,275 (255,596) 1,009,193 120,724 (769,628) (2,253,890)	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 <b>4,476,127</b> <b>4,381,570</b> <b>E</b> \$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921)	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011  Group F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561)	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627   G \$ - 7,073,577 13,691,322 (604,383) 1,420,458 142,168 (951,248) (3,043,503)	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954  Total \$2,160,067 17,298,026 53,221,251 (3,621,774) 5,521,639 629,259 (4,086,029) (12,461,470)
Base Year 2010* 2010* 2010* 2011 2011 2012 2013 2014 2014 Total All Base Year 2010* 2010* 2010* 2011 2011 2011 2012 2013 2014 2014	r Description Retirement Incentive Plan Changes Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Plan Experience Cost Method Change  r Description Retirement Incentive Plan Changes Plan Experience Plan Changes Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b> <b>8,876,659</b> <b>A</b> \$ 871,199 3,047,335 9,727,275 (255,596) 1,009,193 120,724 (769,628) (2,253,890) 493,433	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 <b>4,476,127</b> <b>4,381,570</b> <b>E</b> \$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011  Group F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627   G \$ - 7,073,577 13,691,322 (604,383) 1,420,458 142,168 (951,248) (3,043,503) 90,326	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954  Total \$2,160,067 17,298,026 53,221,251 (3,621,774) 5,521,639 629,259 (4,086,029) (12,461,470) 1,004,950
Base Year 2010* 2010* 2011 2011 2012 2013 2014 Total All Base Year 2010* 2010* 2010* 2010* 20101 2011 2012 2013 2014 Total All Base Year 2010* 2010* 2011 2011 2012 2013 2014 2014 Total	r Description Retirement Incentive Plan Changes Plan Experience Cost Method Change  Retirement Incentive  Plans r Description Retirement Incentive Plan Changes Plan Experience	\$ 728,101 1,969,398 8,522,913 (246,495) 884,242 106,057 (714,217) (2,125,068) 479,830 <b>9,604,760</b> <b>8,876,659</b> <b>A</b> \$ 871,199 3,047,335 9,727,275 (255,596) 1,009,193 120,724 (769,628) (2,253,890)	\$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921) 14,150 <b>4,476,127</b> <b>4,381,570</b> <b>E</b> \$ 94,557 1,006,308 5,281,828 (594,436) 547,983 73,968 (478,311) (1,469,921)	F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561) 23,887 11,523,011 11,523,011  Group F \$ - 2,063,692 14,334,308 (1,881,411) 1,487,167 171,606 (1,121,676) (3,554,561)	\$ - 6,260,593 13,542,225 (603,023) 1,404,989 137,549 (948,241) (3,034,789) 90,323 16,849,627 16,849,627   G \$ - 7,073,577 13,691,322 (604,383) 1,420,458 142,168 (951,248) (3,043,503)	\$1,039,350 2,887,273 9,142,643 (278,689) 948,538 109,912 (716,248) (2,030,627) 376,286 11,478,438 10,439,087	\$1,862,008 14,187,263 50,823,917 (3,604,053) 5,272,919 599,092 (3,978,693) (12,214,966) 984,477 53,931,963 52,069,954  Total \$2,160,067 17,298,026 53,221,251 (3,621,774) 5,521,639 629,259 (4,086,029) (12,461,470)

<sup>\*</sup>Amortization bases were recombined as of July 1, 2010, into a single amortization base equal to the total unfunded liability as of July 1, 2010. The amounts shown for retirement incentive, plan changes and plan experience for the base year 2010 represent the portion of the unfunded liability remaining at July 1, 2014, that were attributable to each of those items for periods before July 1, 2010.

Amortization payments for Optional Non-Integrated and Optional Integrated plans have been reallocated to the Mandatory Integrated plan for each group when contribution basis payroll is \$0 and new entrants are not expected in the coming year.

## ACTUARIAL VALUATION RESULTS GAIN/LOSS ANALYSIS

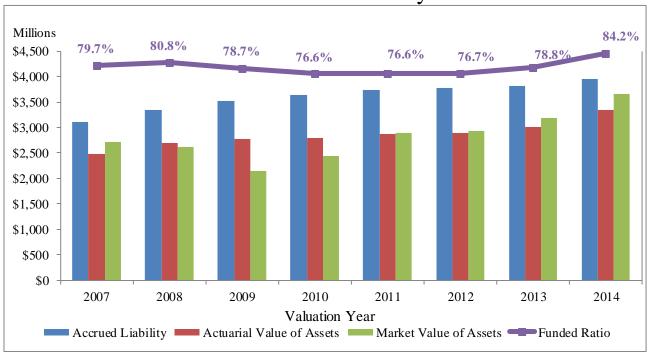
	Non-GRIP	GRIP	Total
Unfunded liability at previous valuation	\$815,425,405	(\$6,591,917)	\$808,833,488
Expected unfunded liability at current valuation	<u></u>		
Normal cost for plan year	66,222,961	7,669,421	73,892,382
Interest on unfunded liability and normal cost	66,123,627	80,813	66,204,440
Contributions with interest to current valuation date	144,705,666	7,719,398	152,425,064
Total expected change in unfunded liability at current valuation	(12,359,078)	30,836	(12,328,242)
Total expected unfunded liability at current valuation	803,066,327	(6,561,081)	796,505,246
Change due to:			
Recognition of asset (gains)/losses	(159,578,520)	(3,615,767)	(163,194,287)
Salary increases	13,239,455	0	13,239,455
COLA increases	(18,281,295)	0	(18,281,295)
Amount and timing of contributions	(23,985,014)	(134,032)	(24,119,046)
Demographic experience and other	3,287,516	795,420	4,082,936
Change in actuarial assumptions and cost method	14,944,876	2,267,109	17,211,985
Plan improvements	0	0	0
Measurement improvements	0	0	0
Total change	(170,372,982)	(687,270)	(171,060,252)
Unfunded liability at current valuation	632,693,345	(7,248,351)	625,444,994

	Public Safety	Non-Public Safety	GRIP
FY 2015 County Contribution	45.17%	41.04%	6.72%
Expected FY 2016 County Contribution	44.24%	44.29%	6.70%
Change due to:			
Recognition of asset (gains)/losses	-3.12%	-5.13%	-0.14%
Salary increases	-0.02%	0.00%	0.06%
COLA increases	-0.36%	-0.59%	0.00%
Amount and timing of contributions	-0.47%	-0.77%	-0.01%
Demographic experience and other	-1.40%	1.16%	0.02%
Change in actuarial assumptions and cost method	0.45%	-1.84%	-0.09%
Plan improvements	0.00%	0.00%	0.00%
Measurement improvements and Contribution Rate Calculation Method	-1.59%	<u>2.90%</u>	0.07%
Total change	-6.51%	-4.27%	-0.09%
FY 2016 County Contribution	37.73%	40.02%	6.61%

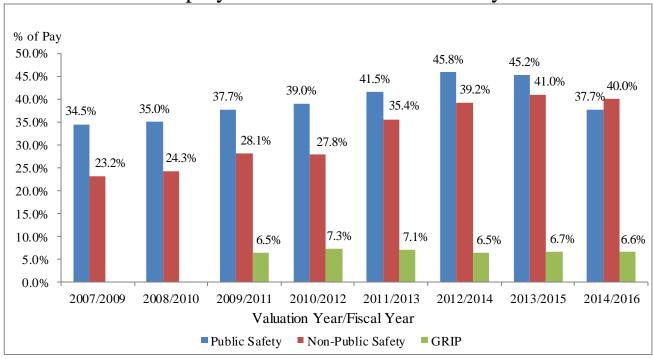
Demographic Experience and Other includes changes due to retirement, mortality, disability and termination experience that varied from the actuarial assumptions, and data changes.

## HISTORICAL TRENDS OF FUNDED RATIO AND EMPLOYER CONTRIBUTIONS

#### **Funded Ratio History**



### **Employer Contribution Rate History**



## ACTUARIAL VALUATION RESULTS SOLVENCY TEST

Valuation		(1) Active	(2) Retirees,	(3) Active Members	Actuarial	Portion (%)	) of Present Valu	e Covered
Date 6/30	Total Actuarial Accrued Liability	Member Contributions	Term Vested and Beneficiaries	(Employer Financed Portion)	Value of Assets	(1)	By Assets (2)	(3)
1998	\$1,660,034,038	\$121,197,443	\$899,019,607	\$639,816,988	\$1,496,651,390	100%	100%	74%
1999	1,818,990,623	124,544,357	943,551,243	750,895,023	1,707,450,187	100%	100%	85%
2000	1,931,914,313	136,181,427	1,014,314,792	781,418,094	1,911,114,401	100%	100%	97%
2001	2,111,946,453	143,356,036	1,029,982,653	938,607,764	1,990,882,017	100%	100%	87%
2002	2,273,179,216	146,500,545	1,125,070,362	1,001,608,309	2,036,100,709	100%	100%	76%
2003	2,411,492,724	155,686,014	1,247,359,872	1,008,446,838	2,029,314,438	100%	100%	62%
2004	2,561,328,232	160,523,789	1,354,272,329	1,046,532,114	2,045,098,796	100%	100%	51%
2005	2,775,047,412	166,078,802	1,426,030,001	1,182,938,609	2,100,532,623	100%	100%	43%
2006	2,918,336,073	177,391,695	1,578,703,590	1,162,240,788	2,222,724,295	100%	100%	40%
2007	3,100,637,723	187,104,227	1,661,692,386	1,251,841,110	2,469,933,200	100%	100%	50%
2008	3,341,549,425	186,171,030	1,847,516,034	1,307,862,361	2,701,119,470	100%	100%	51%
2009	3,516,824,342	210,385,653	1,892,331,796	1,414,106,893	2,766,230,073	100%	100%	47%
2010	3,645,576,341	213,191,851	2,054,949,883	1,377,434,607	2,791,144,974	100%	100%	38%
2011	3,744,713,474	237,074,023	2,181,816,842	1,325,822,609	2,869,422,276	100%	100%	34%
2012	3,768,745,962	210,537,737	2,465,714,392	1,092,493,833	2,891,435,563	100%	100%	20%
2013	3,821,380,732	248,331,006	2,526,844,154	1,046,205,572	3,012,547,244	100%	100%	23%
2014	3,958,929,718	265,055,643	2,585,446,584	1,108,427,491	3,333,484,724	100%	100%	44%

DRSP and DROP member liability included in item (2) with retirees beginning in 2012.

Results in 2009 and 2011 are measured as of July 1, and differ from the Comprehensive Annual Financial Report (CAFR). Results in the CAFR are as of June 30, and do not reflect the transfer of members effective July 1 of those years.

## STATEMENT OF FIDUCIARY NET POSITION

#### Fiscal Year Ending

Assets	June 30, 2013	June 30, 2014
Equity in County's pooled cash and investments	\$ 1,108,905	\$ 971,114
Investments:		
Government and agency obligations	282,344,930	359,793,807
Municipal/Provincial obligations	22,924,377	58,203,905
Asset-backed securities	3,212,480	3,345,101
Corporate bonds	582,765,510	632,632,391
Collateralized mortgage obligations	25,117	419,500
Commercial mortgage-backed securities	-	<u>-</u>
Common and preferred stock	1,356,684,162	1,391,796,570
Mutual and commingled funds	150,413,530	453,648,456
Short-term investments	295,135,604	99,565,286
Cash collateral received under		
securities lending agreements	291,568,717	233,431,419
Real estate	235,951,453	391,199,845
Private equity	238,964,221	257,774,913
Total Investments	3,459,990,101	3,881,811,193
Dividend, interest, and other receivables	14,762,968	3,875,781
Contributions receivable	6,423,088	7,717,664
Capital Assets	-	900,043
Total assets	3,482,285,062	3,895,275,795
Liabilities		
Payable for collateral received under		
securities lending agreements	291,568,717	233,431,419
Benefit payable and other liabilities	6,471,134	8,977,279
• •		
Total liabilities	298,039,851	242,408,698
Net position restricted for pensions	\$ 3,184,245,211	\$3,652,867,097

# STATEMENT OF CHANGES IN FIDUCIARY NET POSITION TOTAL EMPLOYEES' RETIREMENT SYSTEM (ERS)

#### **Fiscal Year Ending**

	June 30, 2013	June 30, 2014
Additions:		
Contributions:		
Employer	\$ 127,887,620	\$ 144,709,675
Members	24,854,331	26,462,839
Total contributions	152,741,951	171,172,514
Investment income	324,135,736	553,599,474
Less investment expense	17,748,344	20,357,819
Net gain from investment activities	306,387,392	533,241,655
Income from securities lending	1,186,186	1,077,992
Less securities lending expenses	(285,825)	(78,086)
Net income from securities lending	1,472,011	1,156,078
Total additions	460,601,354	705,570,247
Deductions:		
Retiree benefits	153,566,262	172,472,289
Disability benefits	46,635,541	48,606,540
Survivor benefits	8,601,914	8,585,891
Refunds and distributions	1,925,124	4,329,834
Administrative expenses	2,400,996	2,953,807
Total deductions	213,129,837	236,948,361
Increase in net position	247,471,517	468,621,886
Net position restricted for pensions		
Beginning of year	2,936,773,694	3,184,245,211
End of year	\$3,184,245,211	\$3,652,867,097

## STATEMENT OF CHANGES IN FIDUCIARY NET POSITION ALLOCATION BETWEEN GRIP AND NON-GRIP ASSETS

	Fiscal Year Ending June 30, 2013	<b>;</b>	Fiscal Year Ending June 30, 2014	
	Total	Non-GRIP	GRIP	Total
Additions:				
Contributions:				
Employer	\$ 127,887,620	\$ 139,500,735	\$ 5,208,940	\$ 144,709,675
Members	24,854,331	23,199,004	3,263,835	26,462,839
Total contributions	152,741,951	162,699,739	8,472,775	171,172,514
Net Investment income	307,859,403	519,783,166	14,614,567	534,397,733
Total additions	460,601,354	682,482,904	23,087,343	705,570,247
Deductions:				
Benefit Payments and distributions	210,728,841	231,584,048	2,410,506	233,994,554
Administrative expenses	2,400,996	2,800,378	153,429	2,953,807
Total deductions	213,129,837	234,384,426	2,563,935	236,948,361
Increase in net position	247,471,517	448,098,479	20,523,407	468,621,886
Net position restricted for pensions				
Beginning of year	2,936,773,694	3,101,017,150	83,228,061	3,184,245,211
End of year	\$3,184,245,211	\$3,549,115,629	\$ 103,751,468	\$3,652,867,097

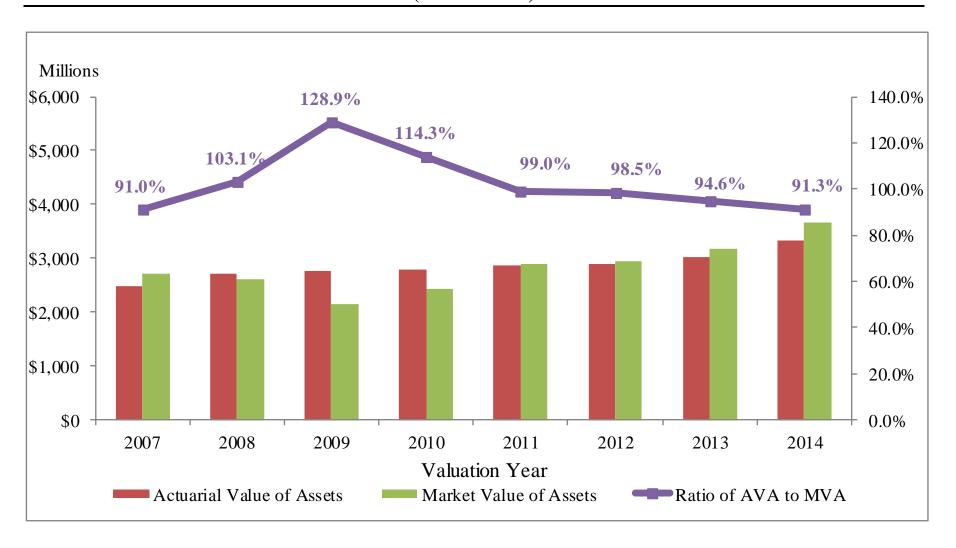
## **DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS (TOTAL ERS)**

Fiscal Year Ending	2014	2015	2016	2017	2018
Beginning of Year:					
(1) Market Value of Assets	\$ 3,184,245,211				
(2) Actuarial Value of Assets	3,012,547,244				
End of Year:					
(3) Market Value of Assets	3,652,867,097				
(4a) Contributions	171,172,514				
(4b) Net Disbursements	236,948,361				
(5) Total Investment Income					
=(3)-(1)-(4a)+(4b)	534,397,733				
(6) Projected Rate of Return	7.50%				
(7) Projected Investment Income					
$=(1)x(6)-([1+(6)]^{5}-1)x(4a-4b)$	236,396,388				
(8) Asset Adjustment	-				
(9) Investment Income in					
Excess of Projected Income	298,001,345				
(10) Excess Investment Income Recognized					
This Year (5 year recognition)					
(10a) From This Year	59,600,269				
(10b) From One Year Ago	17,964,997	\$ 59,600,269			
(10c) From Two Years Ago	(19,346,169)	17,964,997	\$ 59,600,269		
(10d) From Three Years Ago	65,778,647	(19,346,169)	17,964,997	\$ 59,600,269	
(10e) From Four Years Ago	26,319,195	65,778,645	(19,346,169)	17,964,996	\$ 59,600,269
(10f) Total Recognized Investment Gain/(Loss)	150,316,939	123,997,742	58,219,097	77,565,265	59,600,269
(11) Change in Actuarial Value of Assets					
=(4a)-(4b)+(7)+(8)+(10f)	320,937,480				
End of Year:					
(3) Market Value of Assets	3,652,867,097				
(12) Final Actuarial Value of Assets as of $6/30 = (2)+(11)$	3,333,484,724				
(13) Difference Between Market & Actuarial Values	319,382,373				
(14) Estimated Market Value Rate of Return on Total Plan Assets	16.96%				
(15) Estimated Market Value Return on Invested Plan Assets	17.66%				
(16) Actuarial Value Rate of Return	12.98%				
(17) Ratio of Actuarial Value to Market Value	91%				

# DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS (ASSETS ALLOCATED TO GRIP)

Fiscal Year Ending		2014	2015	2016	2017		2018
Beginning of Year:	·					_	
(1) Market Value of Assets	\$	83,228,061					
(2) Actuarial Value of Assets		79,738,860					
End of Year:							
(3) Market Value of Assets		103,751,468					
(4a) Contributions		8,472,775					
(4b) Net Disbursements		2,563,935					
(5) Total Investment Income							
=(3)-(1)-(4a)+(4b)		14,614,567					
(6) Projected Rate of Return		7.50%					
(7) Projected Investment Income							
$=(1)x(6)-([1+(6)]^{2}-1)x(4a-4b)$		6,459,680					
(8) Asset Adjustment		_					
(9) Investment Income in							
Excess of Projected Income		8,154,887					
(10) Excess Investment Income Recognized							
This Year (5 year recognition)							
(10a) From This Year		1,630,977					
(10b) From One Year Ago		447,153	\$ 1,630,977				
(10c) From Two Years Ago		(430,854)	447,153	\$ 1,630,977			
(10d) From Three Years Ago		1,286,347	(430,854)	447,153 \$	1,630,977		
(10e) From Four Years Ago		420,454	1,286,347	(430,853)	447,155	\$	1,630,979
(10f) Total Recognized Investment Gain/(Loss)		3,354,077	2,933,623	1,647,277	2,078,132		1,630,97
(11) Change in Actuarial Value of Assets							
=(4a)-(4b)+(7)+(8)+(10f)		15,722,597					
End of Year:							
(3) Market Value of Assets		103,751,468					
(12) Final Actuarial Value of Assets as of $6/30 = (2)+(11)$		95,461,457					
(13) Difference Between Market & Actuarial Values		8,290,011					
(14) Estimated Market Value Rate of Return on Total Plan Assets		16.96%					
(15) Estimated Market Value Return on Invested Plan Assets		17.66%					
(16) Actuarial Value Rate of Return		11.87%					
(17) Ratio of Actuarial Value to Market Value		92%					

## HISTORICAL COMPARISON OF ACTUARIAL VALUE OF ASSETS TO MARKET VALUE OF ASSETS (TOTAL ERS)



# SECTION B ACCOUNTING DISCLOSURES

This information is presented in draft form for review by the Plan's auditor. Please let us know if there are any changes so that we may maintain consistency with the Plan's financial statements.

The measurements required under GASB Statement No. 67 are provided in a separate report.

## SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (UAAL) (b – a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Payroll [(b – a)/c]
7/1/2009	\$ 2,766,230,073	\$3,516,824,342	\$ 750,594,269	78.7 %	\$ 440,745,776	170.3 %
7/1/2010	2,791,144,974	3,645,576,341	854,431,367	76.6	431,226,155	198.1
7/1/2011	2,869,422,276	3,744,713,474	875,291,198	76.6	405,336,529	215.9
7/1/2012	2,891,435,563	3,768,745,962	877,310,399	76.7	398,460,248	220.2
7/1/2013	3,012,547,244	3,821,380,732	808,833,488	78.8	395,988,026	204.3
7/1/2014	3,333,484,724	3,958,929,718	625,444,994	84.2	402,899,096	155.2

Amounts prior to 2012 as shown in prior actuary's report. Prior to the July 1, 2014, valuation, total payroll includes DRSP and DROP payroll.

### SCHEDULE OF EMPLOYER CONTRIBUTIONS

_	Fiscal Year Ended	Annual Required Contribution (a)	Total Employer Contribution (b)	Percentage Contributed (b/a)
	6/30/2009	\$ 109,567,014	\$ 109,567,014	100.0 %
	6/30/2010	113,957,784	113,957,784	100.0
	6/30/2011	109,343,933	109,343,933	100.0
	6/30/2012	107,855,595	107,855,595	100.0
	6/30/2013	127,887,620	127,887,620	100.0
	6/30/2014	144,709,675	144,709,675	100.0

Amounts prior to 2012 as shown in prior actuary's report.

### SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

The information requested 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	July 1, 2014
Actuarial Cost Method	Individual Entry Age Normal (non-GRIP) Individual Entry Age Normal (GRIP)
Actuarial Value of Assets	5-year smoothed market
Amortization Method	Level percentage of pay, separate closed period bases
Amortization Period	Initial amortization period of 18 years for the base established July 1, 2010
	Initial amortization period of 20 years for subsequent bases Average amortization period of 13 years
Actuarial Assumptions:	
Investment Rate of Return	7.50% per year
Projected Salary Increases	Wage inflation of 4.0% per year plus additional service-based increases of up to 5.25%. Total increases of 4.0%-9.25%.
Cost of Living Increases	3.0% for portion of benefit attributable to pre July 1, 2011, service
	2.3% for portion of benefit attributable to service on or after July 1, 2011, where the increase is capped at 2.5%
	1.8% for members that receive COLA equal to 60% of the change in CPI

## **SECTION C**

VALUATION DATA

# SUMMARY OF PARTICIPANT DATA (JULY 1, 2014 AND JULY 1, 2013)

				Valua	tion as of July	1, 201	4			
	Non-Pu			Public Safety						
	Group A	Group H	Group E		Group F		Group G	GRIP		Total
Total All Plans										
Active Members										
Number	527	799	626		1,190		1,130	1,263		5,535
Average Age	56.7	56.8	43.5		38.1		37.5	49.5		45.7
Average Service	26.7	24.6	12.4		12.9		11.7	8.3		14.5
Total Base Payroll	\$ 50,976,638	\$ 55,866,352	\$ 42,951,126	\$	89,215,131	\$	80,663,980	\$ 83,225,868	\$	402,899,096
Contribution Basis Payroll:										
For Normal Cost	\$ 43,189,541	\$ 47,460,110	\$ 37,611,162	\$	82,124,733	\$	75,043,449	\$ 75,396,078	\$	360,825,073
For Amortization of Unfunded Liability	38,979,842	42,994,102	42,951,126		89,215,131		80,663,980	83,225,868		378,030,049
DRSP/DROP Members										
Number					39		60			99
Total Base Payroll					3,740,247		5.944.122		\$	9,684,369
Total Benefits					2,523,134		3,626,704			6,149,838
Terminated Vested Members					_,,		-,,			0,2 12,020
Number	68	88	26		35		19	167		403
Total Benefits	\$ 751,726	\$ 740,739	\$ 334,743	\$	411,385	\$	121,662	107	\$	2,360,255
	\$ 731,720	\$ 740,739	\$ 334,743	Ф	411,363	Ф	121,002		Ф	2,300,233
Retired Members and Beneficiaries										c 1.10
Number								1		6,143
Total Benefits								\$ 5,024	\$	223,419,018
										12,180
Total Membership				Valua	tion as of July	1, 201	3			12,180
		ıblic Safety			Public Safety	1,201				
Total Members hip	Non-Pu Group A	ıblic Safety Group H	Group E		•	1,201	3 Group G	GRIP		12,180 Total
					Public Safety	1, 201		GRIP		
Total Membership					Public Safety	1, 201 —		GRIP		
Total Membership <u>Total All Plans</u>					Public Safety	1, 201		GRIP 1,202		
Total Membership  Total All Plans Active Members	Group A	Group H	Group E		Public Safety Group F	1, 201	Group G			Total
Total Membership  Total All Plans Active Members Number	Group A	Group H 884	Group E		Public Safety Group F  1,101	1, 201	Group G 1,053	1,202		Total 5,435
Total Membership  Total All Plans Active Members Number Average Age	Group A 576 56.3	Group H 884 56.2	Group E 619 43.5		Public Safety Group F 1,101 38.5	\$	Group G 1,053 37.9	1,202 49.4	\$	Total 5,435 46.1
Total Membership  Total All Plans Active Members Number Average Age Average Service	Group A 576 56.3 25.8	884 56.2 23.9	Group E 619 43.5 12.2		Public Safety Group F  1,101 38.5 13.2		Group G 1,053 37.9 12.2	1,202 49.4 8.5	\$	Total 5,435 46.1 14.9
Total Membership  Total All Plans Active Members Number Average Age Average Service Total Base Payroll	Group A 576 56.3 25.8	884 56.2 23.9	Group E 619 43.5 12.2		Public Safety Group F  1,101 38.5 13.2		Group G 1,053 37.9 12.2	1,202 49.4 8.5		Total 5,435 46.1 14.9
Total Membership  Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll:	576 56.3 25.8 \$ 52,169,701	884 56.2 23.9 \$ 59,235,390	Group E  619 43.5 12.2 \$ 40,996,829	\$	Public Safety Group F  1,101 38.5 13.2 80,387,753	\$	Group G 1,053 37.9 12.2 71,798,132	1,202 49,4 8.5 \$ 74,797,959		Total 5,435 46.1 14.9 379,385,763
Total Membership  Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll: For Normal Cost	576 56.3 25.8 \$ 52,169,701 \$ 44,698,766	Sroup H  884 56.2 23.9 \$ 59,235,390 \$ 50,789,970	Group E  619 43.5 12.2 \$ 40,996,829 \$ 36,154,764	\$	Public Safety Group F  1,101 38.5 13.2 80,387,753  74,410,216	\$	1,053 37.9 12.2 71,798,132 66,683,416	1,202 49,4 8.5 \$ 74,797,959 \$ 67,953,529		Total 5,435 46.1 14.9 379,385,763 340,690,660
Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll: For Normal Cost For Amortization of Unfunded Liability DRSP/DROP Members	576 56.3 25.8 \$ 52,169,701 \$ 44,698,766	Sroup H  884 56.2 23.9 \$ 59,235,390 \$ 50,789,970	Group E  619 43.5 12.2 \$ 40,996,829 \$ 36,154,764	\$	Public Safety Group F  1,101 38.5 13.2 80,387,753  74,410,216 80,387,753	\$	1,053 37.9 12.2 71,798,132 66,683,416 71,798,132	1,202 49,4 8.5 \$ 74,797,959 \$ 67,953,529		Total 5,435 46.1 14.9 379,385,763 340,690,660 354,873,423
Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll: For Normal Cost For Amortization of Unfunded Liability DRSP/DROP Members Number	576 56.3 25.8 \$ 52,169,701 \$ 44,698,766	Sroup H  884 56.2 23.9 \$ 59,235,390 \$ 50,789,970	Group E  619 43.5 12.2 \$ 40,996,829 \$ 36,154,764	\$	Public Safety Group F  1,101 38.5 13.2 80,387,753  74,410,216 80,387,753	\$	1,053 37.9 12.2 71,798,132 66,683,416 71,798,132	1,202 49,4 8.5 \$ 74,797,959 \$ 67,953,529	\$	5,435 46.1 14.9 379,385,763 340,690,660 354,873,423
Total Membership  Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll: For Normal Cost For Amortization of Unfunded Liability DRSP/DROP Members Number Total Base Payroll	576 56.3 25.8 \$ 52,169,701 \$ 44,698,766	Sroup H  884 56.2 23.9 \$ 59,235,390 \$ 50,789,970	Group E  619 43.5 12.2 \$ 40,996,829 \$ 36,154,764	\$	Public Safety Group F  1,101 38.5 13.2 80,387,753  74,410,216 80,387,753  68 6,649,533	\$	Group G  1,053 37.9 12.2 71,798,132  66,683,416 71,798,132  103 9,952,730	1,202 49,4 8.5 \$ 74,797,959 \$ 67,953,529		5,435 46.1 14.9 379,385,763 340,690,660 354,873,423
Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll: For Normal Cost For Amortization of Unfunded Liability DRSP/DROP Members Number Total Base Payroll Total Base Payroll	576 56.3 25.8 \$ 52,169,701 \$ 44,698,766	Sroup H  884 56.2 23.9 \$ 59,235,390 \$ 50,789,970	Group E  619 43.5 12.2 \$ 40,996,829 \$ 36,154,764	\$	Public Safety Group F  1,101 38.5 13.2 80,387,753  74,410,216 80,387,753	\$	1,053 37.9 12.2 71,798,132 66,683,416 71,798,132	1,202 49,4 8.5 \$ 74,797,959 \$ 67,953,529	\$	5,435 46.1 14.9 379,385,763 340,690,660 354,873,423
Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll: For Normal Cost For Amortization of Unfunded Liability DRSP/DROP Members Number Total Base Payroll Total Benefits Terminated Vested Members	576 56.3 25.8 \$ 52,169,701 \$ 44,698,766 40,388,748	884 56.2 23.9 \$ 59,235,390 \$ 50,789,970 46,504,003	Group E  619 43.5 12.2 \$ 40,996,829  \$ 36,154,764 40,996,829	\$	Public Safety Group F  1,101 38.5 13.2 80,387,753  74,410,216 80,387,753  68 6,649,533 4,783,402	\$	1,053 37.9 12.2 71,798,132 66,683,416 71,798,132 103 9,952,730 6,325,902	1,202 49.4 8.5 \$ 74,797,959 \$ 67,953,529 74,797,959	\$	5,435 46.1 14.9 379,385,763 340,690,660 354,873,423 171 16,602,263
Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll: For Normal Cost For Amortization of Unfunded Liability DRSP/DROP Members Number Total Base Payroll Total Benefits Terminated Vested Members Number	576 56.3 25.8 \$ 52,169,701 \$ 44,698,766 40,388,748	884 56.2 23.9 \$ 59,235,390 \$ 50,789,970 46,504,003	Group E  619 43.5 12.2 \$ 40,996,829  \$ 36,154,764 40,996,829	\$ \$	Public Safety Group F  1,101 38.5 13.2 80,387,753  74,410,216 80,387,753  68 6,649,533 4,783,402	\$ \$	1,053 37.9 12.2 71,798,132 66,683,416 71,798,132 103 9,952,730 6,325,902	1,202 49,4 8.5 \$ 74,797,959 \$ 67,953,529	\$	70tal 5,435 46.1 14.9 379,385,763 340,690,660 354,873,423 171 16,602,263
Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll: For Normal Cost For Amortization of Unfunded Liability DRSP/DROP Members Number Total Base Payroll Total Benefits Terminated Vested Members Number Total Benefits	576 56.3 25.8 \$ 52,169,701 \$ 44,698,766 40,388,748	884 56.2 23.9 \$ 59,235,390 \$ 50,789,970 46,504,003	Group E  619 43.5 12.2 \$ 40,996,829  \$ 36,154,764 40,996,829	\$	Public Safety Group F  1,101 38.5 13.2 80,387,753  74,410,216 80,387,753  68 6,649,533 4,783,402	\$	1,053 37.9 12.2 71,798,132 66,683,416 71,798,132 103 9,952,730 6,325,902	1,202 49.4 8.5 \$ 74,797,959 \$ 67,953,529 74,797,959	\$	5,435 46.1 14.9 379,385,763 340,690,660 354,873,423 171 16,602,263
Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll: For Normal Cost For Amortization of Unfunded Liability DRSP/DROP Members Number Total Base Payroll Total Benefits Terminated Vested Members Number Total Benefits Retired Members and Beneficiaries	576 56.3 25.8 \$ 52,169,701 \$ 44,698,766 40,388,748	884 56.2 23.9 \$ 59,235,390 \$ 50,789,970 46,504,003	Group E  619 43.5 12.2 \$ 40,996,829  \$ 36,154,764 40,996,829	\$ \$	Public Safety Group F  1,101 38.5 13.2 80,387,753  74,410,216 80,387,753  68 6,649,533 4,783,402	\$ \$	1,053 37.9 12.2 71,798,132 66,683,416 71,798,132 103 9,952,730 6,325,902	1,202 49.4 8.5 \$ 74,797,959 \$ 67,953,529 74,797,959	\$	75,435 46.1 14.9 379,385,763 340,690,660 354,873,423 171 16,602,263 358 1,987,355
Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll: For Normal Cost For Amortization of Unfunded Liability DRSP/DROP Members Number Total Base Payroll Total Benefits Terminated Vested Members Number Total Benefits Retired Members and Beneficiaries Number	576 56.3 25.8 \$ 52,169,701 \$ 44,698,766 40,388,748	884 56.2 23.9 \$ 59,235,390 \$ 50,789,970 46,504,003	Group E  619 43.5 12.2 \$ 40,996,829  \$ 36,154,764 40,996,829	\$ \$	Public Safety Group F  1,101 38.5 13.2 80,387,753  74,410,216 80,387,753  68 6,649,533 4,783,402	\$ \$	1,053 37.9 12.2 71,798,132 66,683,416 71,798,132 103 9,952,730 6,325,902	1,202 49.4 8.5 \$ 74,797,959 \$ 67,953,529 74,797,959	\$	70tal 5,435 46.1 14.9 379,385,763 340,690,660 354,873,423 171 16,602,263 358 1,987,355 5,961
Total All Plans Active Members Number Average Age Average Service Total Base Payroll Contribution Basis Payroll: For Normal Cost For Amortization of Unfunded Liability DRSP/DROP Members Number Total Base Payroll Total Benefits Terminated Vested Members Number Total Benefits Retired Members and Beneficiaries	576 56.3 25.8 \$ 52,169,701 \$ 44,698,766 40,388,748	884 56.2 23.9 \$ 59,235,390 \$ 50,789,970 46,504,003	Group E  619 43.5 12.2 \$ 40,996,829  \$ 36,154,764 40,996,829	\$ \$	Public Safety Group F  1,101 38.5 13.2 80,387,753  74,410,216 80,387,753  68 6,649,533 4,783,402	\$ \$	1,053 37.9 12.2 71,798,132 66,683,416 71,798,132 103 9,952,730 6,325,902	1,202 49.4 8.5 \$ 74,797,959 \$ 67,953,529 74,797,959	\$	75,435 46.1 14.9 379,385,763 340,690,660 354,873,423 171 16,602,263 358 1,987,355

# SUMMARY OF ACTIVE PARTICIPANT DATA BY PLAN

			Valuation as of Ju	ıly 1, 2014 Including	DROP/DRSP Activ	es	
	Non-P	ublic Safety	_	Public Safety		<u> </u>	
	Group A	Group H	Group E	Group F	Group G	GRIP	Total
Optional Non-Integrated							
Number	5	11	-	<del>-</del>	1		17
Total Base Payroll	\$ 493,366	\$ 878,520	\$ -	\$ -	\$ 100,650		\$ 1,472,536
Optional Integrated							
Number	17	14		1	2		34
Total Base Payroll	\$ 1,552,828	\$ 914,277		\$ 93,025	\$ 224,525		\$ 2,784,654
Mandatory Integrated							
Number	505	774	626	1,228	1,187		4,320
Total Base Payroll	\$ 48,930,444	\$ 54,073,556	\$ 42,951,126	\$ 92,862,353	\$ 86,282,927		\$ 325,100,406
GRIP							
Number						1,263	1,263
Total Base Payroll						\$ 83,225,868	\$ 83,225,868
Total All Plans							
Number	527	799	626	1,229	1,190	1,263	5,634
Total Base Payroll	\$ 50,976,638	\$ 55,866,352	\$ 42,951,126	\$ 92,955,378	\$ 86,608,103	\$ 83,225,868	\$ 412,583,465
			Valuation as of Ju	ly 1, 2014 Excluding	DROP/DRSP Activ	ves	
	Non-P	ublic Safety		Public Safety		_	
	Group A	Group H	Group E	Group F	Group G	GRIP	Total
Optional Non-Integrated							
Number	5	11	-		1		17
Total Base Payroll	\$ 493,366	\$ 878,520	\$ -		\$ 100,650		\$ 1,472,536
Optional Integrated							
Number	17	14			1		32
Total Base Payroll	\$ 1,552,828	\$ 914,277			\$ 132,862		\$ 2,599,967
Mandatory Integrated							
Number	505	774	626	1,190	1,128		4,223
Total Base Payroll	\$ 48,930,444	\$ 54,073,556	\$ 42,951,126	\$ 89,215,131	\$ 80,430,468		\$ 315,600,725
·	Ψ 40,730,444	φ 54,075,550	\$ 42,731,120	Φ 07,213,131	\$ 60,430,406		\$ 313,000,723
GRIP Number						1,263	1,263
Total Base Payroll						\$ 83,225,868	\$ 83,225,868
·						\$ 05, <u>22</u> 5,000	<i>\$ 05,225,000</i>
Total All Plans Number	507	700	626	1 100	1 120	1 262	5 525
Number Total Base Payroll	527 \$ 50,976,638	799 \$ 55,866,352	626 \$ 42,951,126	1,190 \$ 89,215,131	1,130 \$ 80,663,980	1,263 \$ 83,225,868	5,535 \$ 402,899,096
Total Base Faylon	φ <i>50,710,03</i> 6	φ 33,000,332	φ 42,731,120	φ 07,413,131	φ ου,υυσ,7ου	φ 05,225,000	Ψ 402,077,090

#### Group A

									<b>40</b> and		Valuation
Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	Over	Totals	Payroll
Under 25	-	-	-	-	-	-	-	-	-	0	\$ -
25-29	-	-	-	-	-	-	-	-	-	0	-
30-34	-	1	-	-	-	-	-	-	-	1	56,966
35-39	-	2	2	-	-	-	-	-	-	4	274,578
40-44	-	-	1	5	8	3	-	-	-	17	1,182,040
45-49	-	-	3	4	36	22	3	-	-	68	5,670,505
50-54	-	-	-	3	40	50	19	3	-	115	11,323,797
55-59	-	2	2	4	31	73	19	16	2	149	14,898,538
60-64	-	1	2	2	31	40	24	13	5	118	11,968,617
65-69	-	-	1	2	5	16	6	8	2	40	4,083,750
70-74	-	-	-	-	5	3	2	1	1	12	1,272,907
75 and Over	-	-	-	-	1	1	1	-	-	3	244,940
Total	_	6	11	20	157	208	74	41	10	527	\$ 50,976,638

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Current Valuation		Previous Valuation				
Average Age:	56.7	Average Age:	56.3			
Average Service:	26.7	Average Service:	25.8			
Average Annual Pay:	\$96,730	Average Annual Pay:	\$90,572			
Vested Participants	527	Vested Participants	575			
Nonvested Participants	_	Nonvested Participants	1			

#### Group H

									<b>40</b> and		Valuation
Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	Over	Totals	Payroll
Under 25	-	-	-	-	-	-	-	-	-	0	\$ -
25-29	-	1	-	-	-	-	-	-	-	1	54,030
30-34	-	2	2	-	-	-	-	-	-	4	212,380
35-39	-	2	2	1	-	-	-	-	-	5	300,929
40-44	-	3	4	8	11	5	-	-	-	31	2,104,297
45-49	-	1	8	14	45	31	1	-	-	100	6,809,264
50-54	-	-	9	16	67	63	9	2	-	166	11,829,903
55-59	-	2	4	22	71	86	24	12	2	223	15,613,184
60-64	-	1	5	17	49	58	25	18	6	179	12,825,221
65-69	-	-	2	6	26	14	7	8	1	64	4,345,301
70-74	-	1	_	-	7	5	2	2	2	19	1,332,689
75 and Over	-	-	-	2	1	3	1	-	-	7	439,154
Total	_	13	36	86	277	265	69	42	11	799	\$ 55.866.352

Current Valuation		Previous Valuation	
Average Age:	56.8	Average Age:	56.2
Average Service:	24.6	Average Service:	23.9
Average Annual Pay:	\$69,920	Average Annual Pay:	\$67,008
Vested Participants	799	Vested Participants	880
Nonvested Participants	-	Nonvested Participants	4

#### Group E

									<b>40</b> and		1	<b>Valuation</b>
Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	Over	Totals		Payroll
Under 25	21	-	-	-	-	-	-	-	-	21	\$	916,516
25-29	29	13	-	-	-	-	-	-	-	42		1,995,827
30-34	29	35	12	-	-	-	-	-	-	76		4,106,368
35-39	13	19	44	9	1	-	-	-	-	86		5,541,579
40-44	6	29	33	34	8	1	-	-	-	111		7,782,225
45-49	7	24	24	24	29	14	-	-	-	122		9,474,134
50-54	4	8	41	14	11	13	4	-	-	95		7,354,729
55-59	1	6	14	4	6	11	6	-	-	48		3,881,906
60-64	2	2	6	3	3	3	1	-	-	20		1,514,428
65-69	1	-	2	-	1	1	-	-	-	5		383,414
70-74	-	-	-	-	-	-	-	-	-	0		-
75 and Over	-	-	-	-	-	-	-	-	-	0		-
Total	113	136	176	88	59	43	11	_	_	626	\$	42,951,126

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Current Valuation		Previous Valuation	
Average Age:	43.5	Average Age:	43.5
Average Service:	12.4	Average Service:	12.2
Average Annual Pay:	\$68,612	Average Annual Pay:	\$66,231
Vested Participants	513	Vested Participants	523
Nonvested Participants	113	Nonvested Participants	96

#### Group F

									<b>40</b> and		Valuat	ion
Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	Over	Totals	Payro	oll
Under 25	82	-	-	-	-	_	-	-	-	82	\$ 4,00	3,527
25-29	133	48	-	-	-	-	-	-	-	181	9,74	1,388
30-34	32	129	54	-	-	-	-	-	-	215	13,83	0,960
35-39	11	45	106	24	-	-	-	-	-	186	13,92	3,637
40-44	6	19	58	112	39	1	-	-	-	235	20,18	8,798
45-49	-	9	22	52	79	26	1	-	-	189	17,57	6,400
50-54	-	2	1	7	22	34	9	-	-	75	7,47	9,183
55-59	2	2	1	2	4	5	7	1	-	24	2,19	2,035
60-64	-	-	-	1	1	-	-	-	-	2	19	0,607
65-69	-	-	-	-	_	-	1	-	-	1	8	8,596
70-74	-	-	_	-	-	-	-	-	-	0		-
75 and Over	-	-	-	-	-	-	-	-	_	0		
Total	266	254	242	198	145	66	18	1	_	1.190	\$ 89.21	5.131

Current Valuation		Previous Valuation	
Average Age:	38.1	Average Age:	39.4
Average Service:	12.9	Average Service:	14.6
Average Annual Pay:	\$74,971	Average Annual Pay:	\$74,454
Vested Participants	924	Vested Participants	969
Nonvested Participants	266	Nonvested Participants	200

#### Group G

									40 and		Valuation
Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	Over	Totals	Payroll
Under 25	90	3	-	-	-	-	-	-	-	93	\$ 4,227,700
25-29	105	72	2	-	-	-	-	-	-	179	9,081,633
30-34	37	121	50	1	-	-	-	-	-	209	12,811,408
35-39	18	66	61	41	-	-	-	-	-	186	13,374,686
40-44	6	37	56	47	37	14	-	-	-	197	16,496,147
45-49	2	14	14	33	56	45	-	-	-	164	15,167,519
50-54	2	7	3	7	12	36	10	-	-	77	7,169,367
55-59	-	3	1	2	-	10	3	3	-	22	2,031,734
60-64	-	1	-	-	-	-	-	-	1	2	188,054
65-69	-	-	-	-	-	1	-	-	-	1	115,732
70-74	-	-	-	-	-	-	-	-	-	0	-
75 and Over	-	-	-	-	-	-	-	-	-	0	-
Total	260	324	187	131	105	106	13	3	1	1 130	\$ 80 663 980

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Current Valuation		Previous Valuation	
Average Age:	37.5	Average Age:	39.3
Average Service:	11.7	Average Service:	13.6
Average Annual Pay:	\$71,384	Average Annual Pay:	\$70,719
Vested Participants	870	Vested Participants	987
Nonvested Participants	260	Nonvested Participants	169

#### Group GRIP

									40 and		Valuation
Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	Over	Totals	Payroll
Under 25	6	-	-	-	-	-	-	-	-	6	\$ 252,015
25-29	58	7	-	-	-	-	-	-	-	65	3,157,928
30-34	65	17	3	-	-	-	-	-	-	85	4,381,197
35-39	49	36	20	-	-	-	_	-	-	105	6,591,020
40-44	50	46	37	19	-	-	-	-	-	152	10,051,566
45-49	66	60	47	19	-	-	-	-	-	192	12,271,430
50-54	57	68	57	26	1	1	-	-	-	210	13,869,864
55-59	49	64	72	43	-	-	-	-	-	228	16,246,755
60-64	33	44	31	33	-	1	1	-	-	143	10,609,265
65-69	3	16	28	14	-	-	-	-	-	61	4,663,109
70-74	1	-	7	5	-	-	_	-	-	13	904,494
75 and Over	1	1	-	1	-	-	-	-	-	3	227,225
Total	438	359	302	160	1	2	1	-	-	1,263	\$ 83,225,868

Current Valuation		Previous Valuation				
Average Age:	49.5	Average Age:	49.4			
Average Service:	8.3	Average Service:	8.5			
Average Annual Pay:	\$65,895	Average Annual Pay:	\$62,228			
Vested Participants	961	Vested Participants	996			
Nonvested Participants	302	Nonvested Participants	206			

#### **Total All Groups**

									<b>40</b> and		Valuation
Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	Over	Totals	Payroll
Under 25	199	3	-	-	-	-	-	-	-	202	\$ 9,399,758
25-29	325	141	2	-	-	-	-	-	-	468	24,030,806
30-34	163	305	121	1	-	-	-	-	-	590	35,399,279
35-39	91	170	235	75	1	-	-	-	-	572	40,006,429
40-44	68	134	189	225	103	24	-	-	-	743	57,805,073
45-49	75	108	118	146	245	138	5	-	-	835	66,969,253
50-54	63	85	111	73	153	197	51	5	-	738	59,026,843
55-59	52	79	94	77	112	185	59	32	4	694	54,864,152
60-64	35	49	44	56	84	102	51	31	12	464	37,296,192
65-69	4	16	33	22	32	32	14	16	3	172	13,679,902
70-74	1	1	7	5	12	8	4	3	3	44	3,510,090
75 and Over	1	1	-	3	2	4	2	-	-	13	911,319
Total	1,077	1,092	954	683	744	690	186	87	22	5,535	\$ 402,899,096

Current Valuation		Previous Valuation				
Average Age:	45.7	Average Age:	46.1			
Average Service:	14.5	Average Service:	14.9			
Average Annual Pay:	\$72,791	Average Annual Pay:	\$70,636			
Vested Participants	4,594	Vested Participants	4,930			
Nonvested Participants	941	Nonvested Participants	676			

## SCHEDULE OF ACTIVE MEMBER DATA AS OF JULY 1, 2014

Valuation Date 7/1	Number	Annual Payroll	Awerage Annual Pay	% Increase in Avg Pay
2002	5,983	\$333,449,862	\$55,733	5.33%
2003	5,876	336,019,788	57,185	2.61%
2004	5,670	341,629,327	60,252	5.36%
2005	5,628	355,105,993	63,096	4.72%
2006	5,362	357,361,131	66,647	5.63%
2007	5,294	374,792,608	70,796	6.23%
2008	5,060	376,002,333	74,309	4.96%
2009	5,012	376,014,994	75,023	0.96%
2010	5,786	431,226,155	74,529	-0.66%
2011	5,515	405,336,529	73,497	-1.38%
2012	5,554	398,460,248	71,743	-2.39%
2013	5,606	395,988,026	70,636	-1.54%
2014	5,535	402,899,096	72,791	3.05%

Prior to the July 1, 2014, valuation, counts and payroll include DRSP and DROP members.

### SCHEDULE OF MEMBERS IN PAY STATUS AS OF JULY 1, 2014

Valuation					Total Annual	Total Average
Date 7/1	Annuitants	Survivors	Disableds	Total Number	Benefits	Annual Benefit
2002	3,002	330	783	4,115		\$24,259
2003	3,203	350	817	4,370		25,204
2004	3,348	360	851	4,559		26,276
2005	3,443	369	853	4,665		27,591
2006	3,564	365	919	4,848		29,229
2007	3,661	361	975	4,997		30,011
2008	3,905	380	1,021	5,306		31,808
2009	3,957	386	1,036	5,379		31,698
2010	4,132	380	1,079	5,591		32,606
2011	4,245	393	1,074	5,712		34,348
2012	4,309	438	1,077	5,824	\$203,710,715	34,978
2013	4,412	448	1,101	5,961	210,686,878	35,344
2014	4,669	452	1,121	6,242	229,568,856	36,778

Total Annual Benefits first shown in actuarial valuation report in 2012. Amounts in prior years are not readily available. Beginning with the July 1, 2014, valuation, counts for annuitants and annual benefit amounts include DRSP and DROP members.



### ACTUARIAL COST METHOD

Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using the *Individual Entry-Age Normal* actuarial cost method having the following characteristics:

- The normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and
- Each annual normal cost is a constant percentage of the member's year by year projected covered pay.

*Financing of Unfunded Actuarial Accrued Liabilities.* The unfunded actuarial accrued liability is amortized using a level-percentage of pay amortization of closed-period separate amortization bases. The initial amortization period for the base established on July 1, 2010, was 18 years, and the initial amortization period for bases established thereafter is 20 years.

Actuarial Value of Pension Plan Assets. The asset value is the actuarial value of assets which is calculated by recognizing 20% of the investment gain or loss (the difference between the actual investment return and the expected investment return, which is 7.50%) on the market value of assets for each of the five following fiscal years.

*Contribution Basis Payroll.* The payroll for each member that is active at the valuation date is called the Base Payroll. For purposes of calculating the contribution rates based on the dollar contributions determined, different payroll amounts are used.

Contribution Basis Payroll for Normal Cost is the expected payroll for current active members payable in the upcoming year and reflects that a percentage of members will exit the active population due to retirement, termination, death or disability. This payroll is on a consistent basis with the normal cost dollars shown in the report.

Contribution Basis Payroll for Amortization of Unfunded Liability is equal to the total base payroll for the open groups (groups that are enrolling new members) and projected payroll for the period July 1, 2015, through June 30, 2016, for the closed groups (groups that are closed to new members). The projected payroll for the closed groups reflects that a percentage of members will exit the active population due to retirement, termination, death or disability and no additional employees will be hired into those groups. Groups A and H are closed and the remaining groups are open.

### **ACTUARIAL ASSUMPTIONS IN THE VALUATION PROCESS**

The contribution and benefit values of the System are calculated by applying actuarial assumptions to the benefit provisions and census information furnished, using the actuarial cost method described on the previous page.

The principal areas of financial risk which require assumptions about future experiences are:

- Long-term rates of investment return to be generated by the assets of the Plan;
- Patterns of pay increases to members;
- Rates of mortality among members, retirees and beneficiaries;
- Rates of withdrawal of active members:
- Rates of disability among members; and
- The age patterns of actual retirement.

In a valuation, the monetary effect of each assumption is calculated for as long as a present covered person survives; a period of time which can be as long as a century.

Actual experience of the Plan will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations). We recommend that an experience analysis be completed in the coming year to make certain that the assumptions continue to reflect current experience and expected future trends.

### VALUATION ASSUMPTIONS

The assumed rate of price inflation is 3.00%.

#### **The assumed COLA** is as follows:

	Assumed COLA
100% of CPI, benefit attributable to pre 7/1/2011 service	3.00%
60% of CPI, benefit attributable to pre 7/1/2011 service	1.80%
100% of CPI*, benefit attributable to service on or after 7/1/2011	2.30%
*Capped at 2.5%.	

### The following groups have a COLA equal to 60% of the increase in CPI:

- Unrepresented Non-Public Safety Enrolled 7/1/78 & after-retired before 11/1/01
- Certain Sheriffs and Inspectors Enrolled 7/1/78 & after-retired prior to 11/1/01
- Represented Non-Public Safety Enrolled 7/1/78 & after-retired prior to 11/1/01
- Sheriffs/Corrections Enrolled 7/1/78 & after-retired prior to 11/1/01
- Fire Enrolled 7/1/78 & after-retired prior to 3/1/00
- Police Enrolled 7/1/78 & after-retired prior to 3/1/00

The assumed rate of investment return used was 7.50%, net of expenses, annually.

The rates of annual salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefit amounts will be based.

### **Salary Increases**

Service	<b>Public Safety</b>	Non-Public Safety*
0	9.25%	6.00%
5	8.25%	6.00%
10	6.25%	6.00%
15	5.50%	6.00%
20	5.00%	4.25%
25	4.50%	4.00%
30	4.25%	4.00%

<sup>\*</sup>Includes GRIP.

The assumed rate of total payroll growth used in amortizing the unfunded liability as a level percentage of pay is 4.00%.

The assumed increase in the Social Security Taxable Wage Base is 4.00%.

The mortality table used to measure retirement mortality was based on the RP2000 Mortality Table, sex-distinct, projected to the year 2030 for healthy mortality and projected to the year 2010 for disabled mortality. Rates are set forward five years for the disabled mortality assumption. The healthy mortality assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. We expect that because the mortality table is projected to the year 2030, this provides a margin for future mortality improvement.

		Healthy M	Iortality				
	Future Life						
	Mortali	ty Rate	Expectance	y (years)			
Age	Men	Women	Men	Women			
20	0.0194%	0.0118%	62.87	64.68			
25	0.0278%	0.0136%	57.94	59.71			
30	0.0382%	0.0195%	53.03	54.76			
35	0.0665%	0.0341%	48.15	49.83			
40	0.0848%	0.0449%	43.33	44.91			
45	0.1018%	0.0693%	38.51	40.03			
50	0.1240%	0.1002%	33.71	35.18			
55	0.2038%	0.2135%	28.94	30.40			
60	0.4159%	0.4349%	24.32	25.81			
65	0.8344%	0.8351%	19.94	21.49			
70	1.4111%	1.4405%	15.89	17.51			
75	2.4785%	2.2088%	12.11	13.86			
80	4.7613%	3.7161%	8.79	10.54			
85	8.9712%	6.4653%	6.17	7.64			
90	16.2629%	12.0332%	4.22	5.48			
95	25.1898%	18.3171%	3.02	4.15			
100	33.4368%	23.0445%	2.32	3.36			
105	39.7886%	29.3116%	2.05	2.66			

		Disabled N	<b>Iortality</b>			
	Future Life					
	Mortali	ty Rate	Expectano	cy (years)		
Age	Men	Women	Men	Women		
20	0.02400/	0.01000/	55.07	50.56		
20	0.0340%	0.0180%	55.97	58.56		
25	0.0422%	0.0239%	51.06	53.61		
30	0.0735%	0.0425%	46.19	48.69		
35	0.0996%	0.0607%	41.38	43.81		
40	0.1323%	0.0957%	36.59	38.96		
45	0.1783%	0.1412%	31.85	34.16		
50	0.2991%	0.2507%	27.17	29.44		
55	0.5742%	0.4808%	22.66	24.89		
60	1.1062%	0.9231%	18.44	20.61		
65	1.9091%	1.5923%	14.60	16.69		
70	3.2859%	2.5937%	11.12	13.15		
75	5.8213%	4.2767%	8.13	10.00		
80	10.3244%	7.2923%	5.75	7.31		
85	17.6202%	12.7784%	4.00	5.29		
90	26.2189%	19.0654%	2.93	4.06		
95	34.1126%	23.5103%	2.30	3.34		
100	39.7886%	29.3116%	2.05	2.66		
105	40.0000%	36.4617%	2.03	2.18		

100% of pre-retirement deaths for Groups A, E, and H are assumed to be non-service connected. For Groups F and G, 100% of deaths corresponding to the healthy mortality rates shown above are assumed to be non-service connected. An additional 15% of the rates shown above are assumed to be service connected.

**Rates of separation from active membership** are represented by the following table (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members terminating employment.

Service	Groups A and H (Non Public Safety)	Groups E, F, G (Public Safety)	GRIP
0	5.200%	8.000%	9.500%
1	5.200%	8.000%	9.500%
2	5.200%	6.000%	6.000%
3	5.200%	4.000%	6.000%
4	5.200%	3.500%	5.000%
5	4.250%	3.100%	4.250%
6	4.250%	2.875%	3.000%
7	4.250%	2.650%	3.000%
8	4.250%	2.425%	2.500%
9	4.250%	2.200%	2.500%
10	3.250%	2.000%	2.500%
11	3.250%	1.750%	2.500%
12	3.250%	1.500%	2.500%
13	3.250%	1.250%	2.500%
14	3.250%	1.000%	2.500%
15	3.100%	0.900%	2.500%
16	2.825%	0.825%	2.500%
17	2.550%	0.750%	2.500%
18	2.275%	0.675%	2.500%
19	2.000%	0.600%	2.500%
20	1.700%	0.600%	2.500%
21	1.500%	0.600%	2.500%
22	1.300%	0.600%	2.500%
23	1.100%	0.600%	2.500%
24	0.900%	0.600%	2.500%
25	0.900%	0.600%	2.500%
26	0.900%	NA	2.500%

<sup>25%</sup> of vested participants that terminate are assumed to elect a refund of their accumulated contributions with interest instead of a deferred benefit.

### Rates of disability were as follows:

	Non-Public Safety		n-Public Safety Public Safety					
	Groups A	A and H	Group E		Group F		Group G	
Age	Male	Female	Male	Female	Male	Female	Male	Female
20	0.0975%	0.0375%	0.0882%	0.0675%	0.1470%	0.1125%	0.1029%	0.1575%
25	0.1800%	0.0975%	0.1806%	0.1800%	0.3010%	0.3000%	0.2107%	0.4200%
30	0.2475%	0.1800%	0.3696%	0.4800%	0.6160%	0.8000%	0.4312%	1.1200%
35	0.2925%	0.2550%	0.4536%	0.7050%	0.7560%	1.1750%	0.5292%	1.6450%
40	0.3300%	0.3150%	0.6006%	0.9825%	1.0010%	1.6375%	0.7007%	2.2925%
45	0.5880%	0.3375%	1.1424%	1.3155%	1.9040%	4.3850%	1.3328%	3.0695%
50	0.7080%	0.5100%	1.8984%	1.7685%	3.9550%	5.8950%	2.2148%	4.1265%
55	0.5400%	0.5800%	2.3184%	1.8585%	4.8300%	6.1950%	2.7048%	4.3365%
60	0.8625%	0.5625%	2.8434%	1.9035%	5.9238%	6.3450%	4.7390%	4.4415%

The assumed split of service-connected and non-service connected disabilities is as follows:

	Total	Total	Service Connected Disability			
	Non-Service	Service	<b>Total Incapacity</b>	Partial Incapacity	<b>Alternate Position</b>	
Group	Connected	Connected	70% Benefit	52.5% Benefit	5% Pay Increase	
$\mathbf{A}$	60%	40%	20%	20%	NA	
H	60%	40%	20%	20%	NA	
${f E}$	15%	85%	25%	60%	NA	
${f F}$	7%	93%	28%	65%	NA	
$\mathbf{G}$	7%	93%	26%	62%	5%	

Rates of retirement for members eligible to retire during the next year were as follows:

	Groups A	and H (Non Publ	ic Safety)	Grou	рE	Group F			Grou	GRIP		
	1st Elig. for	Normal Ret		1st Elig. For	Ultimate	Before	1st Elig. For	Ultimate	30 through	1st Elig. For	Ultimate	
Age	PT/SLT	Non-PT/SLT U	Itimate Rate	Normal Ret	Rate	1st Elig.	Normal Ret	Rate	35 Years	Normal Ret	Rate	Rate
Under 45	0.00%	0.00%	2.00%	3.50%	3.50%	3.75%	15.00%	5.00%	5.00%	20.00%	3.00%	0.00%
45	0.00%	0.00%	2.00%	3.50%	3.50%	3.75%	15.00%	5.00%	5.00%	20.00%	3.00%	0.00%
46	0.00%	0.00%	2.00%	15.00%	8.00%	7.50%	15.00%	9.00%	5.00%	20.00%	7.00%	0.00%
47	0.00%	0.00%	2.00%	15.00%	8.00%	7.50%	15.00%	9.00%	5.00%	20.00%	7.00%	0.00%
48	0.00%	0.00%	2.00%	15.00%	8.00%	7.50%	15.00%	9.00%	5.00%	20.00%	7.00%	0.00%
49	0.00%	0.00%	2.00%	15.00%	8.00%	7.50%	15.00%	9.00%	5.00%	20.00%	7.00%	0.00%
50	16.00%	0.00%	6.00%	20.00%	10.00%	15.00%	15.00%	15.00%	7.00%	20.00%	10.00%	0.00%
51	16.00%	0.00%	6.00%	20.00%	10.00%	15.00%	15.00%	15.00%	7.00%	20.00%	10.00%	0.00%
52	16.00%	0.00%	6.00%	20.00%	18.00%	20.00%	15.00%	15.00%	17.00%	30.00%	15.00%	0.00%
53	16.00%	0.00%	6.00%	20.00%	18.00%	20.00%	15.00%	15.00%	17.00%	30.00%	15.00%	0.00%
54	16.00%	0.00%	6.00%	20.00%	18.00%	20.00%	15.00%	15.00%	17.00%	30.00%	15.00%	0.00%
55	20.00%	20.00%	9.00%	50.00%	50.00%	50.00%	45.00%	40.00%	45.00%	40.00%	40.00%	0.00%
56	20.00%	20.00%	9.00%	50.00%	50.00%	50.00%	45.00%	40.00%	45.00%	40.00%	40.00%	0.00%
57	20.00%	20.00%	9.00%	50.00%	50.00%	50.00%	45.00%	40.00%	45.00%	40.00%	40.00%	0.00%
58	20.00%	20.00%	9.00%	50.00%	50.00%	50.00%	45.00%	40.00%	45.00%	40.00%	40.00%	0.00%
59	20.00%	20.00%	9.00%	50.00%	50.00%	50.00%	45.00%	40.00%	45.00%	40.00%	40.00%	0.00%
60	20.00%	15.00%	16.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	5.00%
61	20.00%	15.00%	16.00%									5.00%
62	20.00%	15.00%	16.00%									15.00%
63	20.00%	15.00%	16.00%									15.00%
64	20.00%	15.00%	16.00%									15.00%
65	50.00%	50.00%	30.00%									40.00%
66	50.00%	50.00%	30.00%									40.00%
67	75.00%	75.00%	30.00%									40.00%
68	100.00%	100.00%	30.00%									40.00%
69	100.00%	100.00%	30.00%									40.00%
70	100.00%	100.00%	100.00%									100.00%

### **Assumption for DRSP and DROP eligible members** are as follows:

	Group F (DRSP)	Group G (DROP)
Percent Assumed to Participate	70%	70%
Average Years of Participation	3 years	3 years

### **Assumed Additional**

**Sick Leave Credit:** 

Members are assumed to have additional service credit at termination or retirement for unused sick leave credit up to a maximum of 2 years.

	Years of Sick Leave Per
Group	Year of Credited Service
A	0.020
E	0.024
F	0.045
G	0.032
Н	0.020

**Marital Status:** 

It is assumed that 80% of active participants have an eligible spouse. The male spouse is assumed to be three years older than the female spouse.

Form of Payment:	<b>Plan</b> Mandatory Integrated	Normal Form Life Annuity, guaranteed returned employee contributions with interest	Assumed in Valuation 3 Year Certain and Continuous Annuity
	Optional Integrated	Life Annuity with 120 monthly payments guaranteed	10 Year Certain and Continuous Annuity
	Optional Non- Integrated	Life Annuity with 120 monthly payments guaranteed	10 Year Certain and Continuous Annuity
	GRIP	Lump Sum	Lump Sum at Termination or Retirement

**Benefit Service:** Exact fractional years of service are used to determine the amount of benefit

payable.

**Decrement Timing:** All decrements are assumed to occur at the beginning of the year.

**Decrement** Turnover decrements do not operate after the member reaches retirement

**Operation:** eligibility.

Eligibility for benefits is determined based upon the age nearest birthday and **Eligibility Testing:** 

service on the date the decrement is assumed to occur.

**Pay Increase Timing:** End of (fiscal) year.

**Expenses:** Assumed administrative expenses were added to the Normal Cost and are

based on the average of the administrative expenses over the past 3 years.

The assumed amount added to the Normal Cost is:

Valuation	Actual Administrative Expenses								As	sumed Expenses
Year	3	Years Prior	2	Years Prior	1	Year Prior	3 Y	ear Average	A	Added to Normal
2012	\$	2,906,988	\$	3,079,377	\$	3,545,654	\$	3,177,340	\$	3,177,300
2013		3,079,377		3,545,654		2,400,996		3,008,676		3,008,700
2014		3,545,654		2,400,996		2,953,807		2,966,819		2,966,800

Assumptions for Missing or Incomplete Data:

Active members:

If payroll was not provided, the current year payroll was set equal to the prior year payroll. For new hires, the current year payroll was set equal to the average payroll for new hires in the same group (A, E, F, G, H, GRIP).

Vesting service and credited service were calculated for GRIP members based on date of hire and the valuation date.

### Retired members:

If a beneficiary date of birth was not provided for members with a joint and survivor option, it was assumed that there was a beneficiary and males are three years older than their female spouses.

## **SECTION E**

BENEFIT PROVISIONS

### BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2014

Following is a summary of the major plan provisions used in the valuation summarized in this report. Montgomery County is solely responsible for the validity, accuracy and comprehensiveness of this information. If any of the plan provisions shown below are not accurate and complete, the valuation results may differ significantly from those shown in this report and may require a revision of this report. Moreover, these plan provisions may be susceptible to different interpretations, each of which could be reasonable, and the different interpretations could lead to different valuation results.

### 1. Effective Date of the Plan

August 15, 1965. Latest changes to the plan were made for group A, group E, group F, group G, group H and GRIP members in FY11 and were reflected in the 2011 actuarial valuation. Some of the changes were effective July 1, 2011, while others were effective July 1, 2012.

### 2. Employee Eligibility Requirements

- A. Optional non-integrated retirement plan: Employees enrolled prior to July 1, 1978, who do not elect to join the integrated retirement plan.
- B. Optional integrated plan: Employees enrolled prior to July 1, 1978, who elect to join the integrated retirement plan.
- C. Mandatory integrated retirement plan: Employees enrolled on or after July 1, 1978. The Plan is closed to Non-Public Safety employees hired or rehired after September 30, 1994.

### 3. Membership Groups and Eligibility

- Group A: Any employee who is not eligible for coverage under another membership group.
- Group B: Any correctional officer, fire prevention officer, or deputy sheriff appointed or promoted to the position on or before June 30, 1978 who has not elected to transfer to another membership group.
- Group D: Any full-time police officer appointed on or before August 15, 1965, who has been continuously employed as a police officer and has not elected to transfer to any other membership group.
- Group E: The chief administrative officer, the director of the council staff, the hearing examiners, the county attorney, and each head of a principal department, office or agency of the county government, if appointed before July 30, 1978, or a member having held such position on or before October 1, 1972. Any sworn deputy sheriff and such correctional staff as designated by the chief administrative officer.
- Group F: Any sworn police officer who is not eligible for coverage under another membership group.

- Group G: Any paid firefighter, paid fire officer, or paid rescue service personnel not eligible for coverage under another membership group.
- Group H: Any member, including any probationary employee, who holds a bargaining unit position, unless the member is eligible for membership in Groups B, D, E, F or G.

### 4. Member Contributions as a Percent of Regular Base Earnings

Effective July 1, 1989, member contributions are pre-tax and interest shall be credited annually on each member's accumulated contributions at a 4.0% annual rate.

### A. Optional non-integrated plan:

	Prior to 7/1/2001	Effective 7/1/2001	Effective 7/1/2011	Effective 7/1/2012 and After
Group A	6%	6%	7%	8%
Group B*	7%	n/a	n/a	n/a
Group D**	n/a	n/a	n/a	n/a
Group E	7½%	81/2%	91/2%	101/2%
Group F	7½%	81/2%	91/2%	101/2%
Group G	7½%	81/2%	91/2%	101/2%
Group H	6%	6%	7%	8%

<sup>\*</sup> The last Group B member retired August 1, 1998

### B. Optional integrated plan:

							Effective 7/	1/2012 and		
	Prior to 7/1/2001*		<b>Effective</b>	Effective 7/1/2001*		7/1/2011	After			
	Up to	In excess of	Up to	In excess of	Up to	In excess of	Up to	In excess of		
	SSTWB	SSTWB	SSTWB	SSTWB	SSTWB	SSTWB	SSTWB	SSTWB		
Group A	3%	6%	4%	6%	5%	7%	6%	8%		
Group B**	31/2%	7%	41/2%	7%	n/a	n/a	n/a	n/a		
Group D	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
Group E	33/4%	7½%	43/4%	81/2%	53/4%	91/2%	63/4%	101/2%		
Group F	4%	8%	43/4%	81/2%	53/4%	91/2%	63/4%	101/2%		
Group G witl	Group G with less than 25 years of service									
	43/4%	81/2%	51/2%	91/4%	61/2%	101/4%	71/2%	111/4%		
Group G witl	Group G with at least 25 years of service									
	43/4%	81/2%	43/4%	81/2%	53/4%	91/2%	63/4%	101/2%		
Group H	3%	6%	4%	6%	5%	7%	6%	8%		

<sup>\* 7/1/2007</sup> for Group G

SSTWB means Social Security Taxable Wage Base.

<sup>\*\*</sup> The last Group D member retired November 1, 1992

<sup>\*\*</sup> The last Group B member retired February 1, 2008

### C. Mandatory integrated plan:

							Effective 7/	1/2012 and	
	Prior to 7/1/2001*		<b>Effective</b>	ctive 7/1/2001* Effective		7/1/2011	After		
	Up to	In excess of	Up to	In excess of	Up to	In excess of	Up to	In excess of	
	SSTWB	SSTWB	SSTWB	SSTWB	SSTWB	SSTWB	SSTWB	SSTWB	
Group A	3%	6%	4%	6%	5%	7%	6%	8%	
Group B	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Group D	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Group E	33/4%	71/2%	43/4%	81/2%	53/4%	91/2%	63/4%	101/2%	
Group F	4%	8%	43/4%	81/2%	53/4%	91/2%	63/4%	101/2%	
Group G with	h less than 25	5 years of ser	vice						
	43/4%	81/2%	51/2%	91/4%	61/2%	101/4%	71/2%	111/4%	
Group G with at least 25 years of service									
	43/4%	81/2%	43/4%	81/2%	53/4%	91/2%	63/4%	101/2%	
Group H	3%	6%	4%	6%	5%	7%	6%	8%	

<sup>\* 7/1/2007</sup> for Group G

### 5. Credited Service

A member's credited service is the total service rendered under the Employees' Retirement System of Montgomery County, plus credited service earned under State of Maryland and/or Montgomery County Police Relief and Retirement Fund Law or any other Maryland Public Plan, plus any purchased prior service or granted.

- A. Full-time: Full-time members receive one year of credited service for rendering the full normal working time in a 12-month period.
- B. Part-time: Part-time members working less than the normal scheduled workweek for full-time employees on a continuing basis shall receive one year of credited service for each 12-month period.
- C. Combined part-time and full-time: Combined part-time and full-time employees will receive one month of credited service for 176 hours worked each fiscal year. Accumulated hours of 88 to 176 or 15 days or more in any calendar month will equal one month of credited service.
- D. Sick Leave: Any employee whose retirement is effective on or after May 1, 1970, will have 176 hours of accumulated sick leave equivalent to one month of credited service up to a maximum of 4,224 hours. Accumulated sick leave of less than 11 days shall not be credited; 11 to 22 days shall be credited as one month for retirement purposes. Any member who vests on or after October 1, 1971, may have sick leave credited for vesting purposes on the same basis.

### 6. Average Final Earnings

For members enrolled on or before June 30, 1978, average final earnings are equal to the

regular earnings for the 12-month period immediately preceding retirement, or any consecutive 12-month period, if greater.

For members enrolled on or after July 1, 1978, average final earnings are equal to the average of regular annual earnings for the 36-month period immediately preceding retirement, or any consecutive 36-month period, if greater.

### 7. Social Security Wage Base

For any particular year, the maximum amount of earnings creditable for benefit computation purposes under the Old Age, Survivors and Disabilities Insurance Program established by the Federal Social Security Act.

Year	Social Security Taxable Wage Base
2011	\$106,800
2012	\$110,100
2013	\$113,700
2014	\$117,000

### 8. Social Security Maximum Compensation Level

The maximum dollar amount of earnings upon which Social Security benefits are based, assuming: (1) an employee's annual compensation is at least as great as the taxable wage base each year, for a 35-year period through the year in which the employee attains Social Security Retirement Age, (2) the employee remained in covered employment during each calendar year, (3) the taxable wage base stays level from date of retirement to Social Security Retirement Age.

### 9. Social Security Retirement Age

- Age 65 for employees born prior to January 1, 1938.
- Age 66 for employees born on or after January 1, 1938, and prior to January 1, 1955.
- Age 67 for employees born on or after January 1, 1955.

### 10. Regular Earnings

Gross pay for actual hours worked, excluding overtime.

Imputed Compensation for FY2010 only (effective July 1, 2009):

• Regular earnings for a Group A, E or H member who is employed on July 1, 2009, includes amounts as if the member had received an increase of 4.5% in the member's gross pay as of July 1, 2009, except for the purpose of calculating a member's contribution.

- Regular earnings for a Group F member who is employed on July 1, 2009, includes amounts as if the member had received an increase of 4.25% in the member's gross pay as of July 1, 2009, except for the purpose of calculating a member's contribution.
- Regular earnings for a Group G member who is employed on July 1, 2009, includes amounts as if the member had received an increase of 4.00% in the member's gross pay as of July 1, 2009, except for the purpose of calculating a member's contribution.

### 11. Benefits

#### A. Normal Retirement Date:

Age and Service Requirement:

- Group A: Age 60 and five years of credited service, or age 55 and 30 years of credited service (after June 30, 2002, age 60 and five years of credited service, or age 50 and 30 years of credited service for members who are Police Telecommunicators).
- Group B: Age 55 and 15 years of credited service, or age 51 and 30 years of credited service.
- Group D: The requirements contained in the police relief and retirement fund law of the county.
- Group E: Age 55 and 15 years of credited service, or age 46 and 25 years of credited service.
- Group F: Age 55 and 15 years of credited service, or 25 years of credited service (effective July 1, 2008; previously, age 55 and 15 years of credited service, or age 46 and 25 years of credited service).
- Group G: Age 55 and 15 years of credited service, or any age with 20 years of credited service (effective July 1, 2007; previously age 55 and 15 years of credited service, or any age with 25 years of credited service).
- Group H: Age 60 and five years of credited service, or age 55 and 30 years of credited service (after June 30, 2002, age 60 and five years of credited service, or age 50 and 30 years of credited service for members who are Police Telecommunicators or members of the Service, Labor and Trades (SLT) bargaining unit).

### B. Benefit Amount:

1. Optional non-integrated plan: All groups other than Group E, F or G-2% of average final earnings multiplied by years of credited service, up to a maximum of 36 years, plus sick leave credits.

- Group E: 2.4% of average final earnings for each of the first 25 years of credited service, plus 2% of average final earnings for each year of credited service after 25 years up to a maximum of 31 years, plus sick leave credits. Sick leave credit in excess of 25 years is credited at 2% of average final earnings.
- Group F: 2.4% of average final earnings for each year of credited service, up to a maximum of 36 years, plus sick leave credits.
- Group G: 2.5% of average final earnings for each of the first 20 years of credited service, plus 2% of average final earnings for each year of credited service after 20 years up to a maximum of 31 years, plus sick leave credits (effective July 1, 2007; previously 2% of average final earnings for each of the first 20 years of credited service, plus 3% of average final earnings for each year of credited service from 21<sup>st</sup> year through 24<sup>th</sup> year, plus 8% of average final earnings for the 25<sup>th</sup> year of credited service, plus 2% of average final earnings for each year of credited service after 25 years up to a maximum of 31 years, plus sick leave credits).

### 2. <u>Integrated plans:</u>

- a. From date of retirement to Social Security Retirement Age:
  - For groups other than Groups E, F or G: 2% of average final earnings multiplied by years of credited service, up to a maximum of 36 years, plus sick leave credits.
  - Group E: 2.4% of average final earnings for each of the first 25 years of credited service, plus 2% of average final earnings for each year of credited service more than 25 years up to a maximum of 31 years, plus sick leave credits.
  - Group F: 2.4% of average final earnings multiplied by years of credited service, up to a maximum of 36 years of service including sick leave credits. (Effective 7/1/2008; previously 2.4% of average final earnings for each year of credited service, up to a maximum of 30 years, plus sick leave credits. Sick leave credit in excess of 30 years is credited at 2% of average final earnings).
  - Group G: 2.5% of average final earnings for each of the first 20 years of credited service, plus 2% of average final earnings for each year of credited service after 20 years up to a maximum of 31 years, plus sick leave credits (effective 7/1/2007; previously 2% of average final earnings for each of the first 20 years of credited service, plus 3% of average final earnings for each year of credited service from 21<sup>st</sup> year through 24<sup>th</sup> year, plus 8% of average final earnings for the 25<sup>th</sup> year of credited service, plus 2% of average final earnings for each year of credited service after 25 years up to a maximum of 31 years, plus sick leave credits).

- b. From attainment of Social Security Retirement Age:
  - For Groups A, B or H: 1.25% of average final earnings up to Social Security maximum covered compensation plus 2% of average final earnings above Social Security maximum covered compensation, multiplied by years of credited service up to 36 years, plus sick leave credits.
  - Group D: 1% of average final earnings up to Social Security maximum covered compensation plus 2% of average final earnings above Social Security maximum covered compensation, multiplied by years of credited service up to 36 years, plus sick leave credits.
  - Group E: 1.25% (effective 7/1/2009: 1.65%) of average final earnings up to Social Security maximum covered compensation for each year of credited service up to a maximum of 31 years plus sick leave credits, plus 2.4% of average final earnings above Social Security maximum covered compensation for each of the first 25 years, and 2% of average final earnings above Social Security maximum covered compensation for each year of credited service after 25 years up to a maximum of 31 years, plus sick leave credits. Sick leave credits used for years in excess of 25 years is credited at 2% of average final earnings above Social Security maximum covered compensation.
  - Group F: 1.65% of average final earnings up to Social Security maximum covered compensation for each year of credited service up to a maximum of 36 years including sick leave credits and 2.4% of average final earnings above Social Security maximum covered compensation for each year of credited service up to a maximum of 36 years including sick leave credits. (Effective 7/1/2008; previously 1.65% of average final earnings up to Social Security maximum covered compensation for each year of credited service up to a maximum of 30 years, plus 1.25% of average final earnings up to Social Security maximum covered compensation for each year of credited service in excess of 30 years, plus sick leave credits, and 2.4% of average final earnings above Social Security maximum covered compensation for each year of credited service up to a maximum of 30 years, plus sick leave credits. Sick leave credits used for years in excess of 30 years is credited at 2% of average final earnings above Social Security maximum covered compensation).
  - Group G: 1.71875% of average final earnings for each of the first 20 years of credited service, plus 1.375% of average final earnings for each year of credited service after 20 years up to a maximum of 31 years, plus sick leave credits.

### 12. Early Pension

### A. Age and service requirements:

- Group A: Age 50 and 15 years of credited service, or age 45 and 20 years of credited service.
- Group B: Age 45 and 15 years of credited service.
- Group D: Not applicable.
- Group E: Age 45 and 15 years of credited service, or age 41 and 20 years of credited service.
- Group F: Age 45 and 15 years of credited service, or age 41 and 20 years of credited service.
- Group G: Only normal retirement is allowed (effective 7/1/2007, previously age 45 and 15 years of credited service, or age 41 and 20 years of credited service).
- Group H: Age 50 with 15 years of credited service, or age 45 and 20 years of credited service.

## B. Benefit amount: Regular pension accrued, reduced by the following schedule: YEARS EARLY

		0	1	2	3	4	5	6	7	8	9	10
	0	100.00%	98.00%	95.00%	91.00%	86.00%	80.00%	72.00%	64.00%	56.00%	48.00%	40.00%
	1	99.83%	97.75%	94.67%	90.58%	85.50%	79.33%	71.33%	63.33%	55.33%	47.33%	
٨.	2	99.67%	97.50%	94.33%	90.17%	85.00%	78.67%	70.67%	62.67%	54.67%	46.67%	
EARLY	3	99.50%	97.25%	94.00%	89.75%	84.50%	78.00%	70.00%	62.00%	54.00%	46.00%	
AR	4	99.33%	97.00%	93.67%	89.33%	84.00%	77.33%	69.33%	61.33%	53.33%	45.33%	
	5	99.17%	96.75%	93.33%	88.92%	83.50%	76.67%	68.67%	60.67%	52.67%	44.67%	
MONTHS	6	99.00%	96.50%	93.00%	88.50%	83.00%	76.00%	68.00%	60.00%	52.00%	44.00%	
Z	7	98.83%	96.25%	92.67%	88.08%	82.50%	75.33%	67.33%	59.33%	51.33%	43.33%	
MO	8	98.67%	96.00%	92.33%	87.67%	82.00%	74.67%	66.67%	58.67%	50.67%	42.67%	
	9	98.50%	95.75%	92.00%	87.25%	81.50%	74.00%	66.00%	58.00%	50.00%	42.00%	
	10	98.33%	95.50%	91.67%	86.83%	81.00%	73.33%	65.33%	57.33%	49.33%	41.33%	
	11	98.17%	95.25%	91.33%	86.42%	80.50%	72.67%	64.67%	56.67%	48.67%	40.67%	

Unreduced early retirement benefits are available if the member's age and service equals 85 with at least 35 years of credited service.

### 13. Disability Pension

### A. Non-service-connected disability retirement:

Age and service requirement: Five years of credited service.

Amount: The greater of the accrued benefit under 11(B) or 331/3% of final earnings.

### B. Service-connected disability retirement:

Age and service requirement: None

### Benefit amount:

- 1. For total incapacity: The greater of the accrued benefit under 11(B) or 66% of final earnings.
- 2. For Group G members: Benefits described in (1.) above are modified as follows:
  - The minimum benefit is 70% of final earnings if the member meets the definition of Social Security disability.
  - The minimum benefit is 52½% of final earnings if the member is disabled but does not qualify for the 70% minimum benefit above. The Chief Administrative Officer of the County may offer a disabled member an alternative position with the County with a 5% pay increase in lieu of this disability benefit.
  - Certain causes of disability are automatically deemed to be service-connected.

Effective July 1, 2012, the service-connected benefit amount is modified as follows:

- Total incapacity: the minimum benefit is 70% of final earnings if the Disability Review Panel approves. If the member has been granted Social Security disability benefits, the Disability Review Panel must recommend total incapacity status if the Social Security award is based primarily on the impairment for which plan benefits are paid.
- Partial incapacity: the minimum benefit is 52½% of final earnings if the member is disabled but does not qualify for the 70% minimum benefit above.
- Group G: The Chief Administrative Officer of the County may offer a disabled member an alternative position with the County with a 5% pay increase in lieu of this disability benefit. This does not apply to Group F.

### 14. Termination of Employment

### A. Vesting provision:

Service requirement: Effective July 1, 1989, all employees who render five or more years of credited service become fully vested. Previously, vesting was based on a five to 10-year graded vesting schedule. Elected officials become vested after five years of service with a minimum monthly benefit of \$150.

Benefit amount: The monthly vested pension payable at normal retirement date is the

benefit determined according to the normal retirement pension provisions based on credited service to the date of termination.

Effective July 1, 2010, unreduced benefit commencement date provision clarification for future terminated vested members: The unreduced benefit commencement date for groups A and H is age 60. The comparable date for groups E, F and G members is age 70 ½ for members who are not 55 years old with 15 years of service at their termination date.

### B. Return of employee contributions:

A member's contributions plus interest will be refunded if:

- A member's service with the county terminates before the member becomes eligible to vest.
- A member eligible to vest terminates service and voluntarily elects to withdraw.

### 15. Discontinued Service Pension

Applies if employment ends because of an administrative action and participant has 10 or more years of continuous service. Discontinued service pension begins at early retirement date but no reductions are made for early retirement. A participant may not receive a discontinued service pension if the participant was terminated for cause or resigned.

### A. Groups A, E, F, G and H

1. Optional Non-Integrated plan members and Optional Non-Integrated plan members who elected to transfer to the Optional Integrated plan on or before September 26, 1983.

Eligibility: 10 or more years of continuous or credited service, and not an elected or appointed member.

Benefit amount: The amount of pension that the participant would receive for a regular retirement modified as follows:

- Substitute final earnings for average final earnings
- Add 5% of final earnings
- No reduction at Social Security Normal Retirement Age
- 2. Optional Non-Integrated plan members who transferred to the Optional Integrated plan after September 26, 1983.

Eligibility: 10 or more years of credited or continuous service, and not an elected or appointed member.

Benefit amount: The amount of pension that the participant would receive for a regular retirement modified as follows:

- Substitute final earnings for average final earnings
- Add 5% of final earnings

### 3. Mandatory Integrated plan:

Eligibility: 10 or more years of continuous service and not an elected or appointed member.

Benefit amount: The amount of pension that the participant would receive for a regular retirement without any reduction for early retirement.

### B. Elected and appointed members:

On or before September 26, 1983

Eligibility: 10 or more years of credited service and enrolled or re-enrolled *on or before* September 26, 1983, or submits an application to transfer from the optional plan to the integrated plan *before* September 26, 1983.

Benefit amount: Regular pension accrued under 11(B) except that "final earnings" replaces "average final earnings" in the calculation, minimum \$300.00 monthly.

After September 26, 1983

Eligibility: 10 or more years of credited service and enrolled or re-enrolled after September 26, 1983, or submits an application to transfer from the optional plan to the integrated plan after September 26, 1983.

Benefit amount: Regular pension accrued under 11(B) except that "final earnings" replaces "average final earnings" in the calculation, minimum \$300.00 monthly.

C. Notwithstanding the above provisions, any member covered by this plan on April 1, 1970, who has reached early retirement date with 20 years of continuous or credited service is eligible to receive a pension commencing immediately in an amount not less than 50% of final earnings.

#### 16. Death Benefits

#### A. Non service-connected:

Eligibility: None.

#### Benefit amount:

1. Return of member contributions with interest;

plus

2. 50% of average final earnings if the member was a member of the Employees' Retirement System on or before December 31, 1966, and was a Maryland State plan member on August 15, 1965.

or

3. Alternate death benefits listed under (C.) below.

#### B. Service-connected:

Eligibility requirement: None

#### Benefit amount:

1. The spouse\* will receive a benefit equal to 25% of the member's final earnings, with a minimum of \$250.00 per month. The child will receive a benefit equal to 5% of the member's final earnings with a minimum of \$50.00 per month to age 21 or life if disabled;

plus

2. 50% of average final earnings if the member was a member of the Employees' Retirement System on or before December 31, 1966, and was a Maryland State plan member on August 15, 1965;

or

- 3. Alternate death benefits listed under (C.) below.
- 4. For Group F and Group G members: if the member dies while performing duties for the County, the plan will pay death benefits to the spouse or domestic partner and child as if they were receiving a service-connected disability at the 70% minimum benefit level at the time of death and had elected the 100% joint and survivor option.

#### C. Alternative death benefits:

Eligibility: Member was eligible for vesting or retirement.

#### Benefit amount:

- 1. Spouse\* or child may elect to receive the amount that would have been paid had the member elected to receive a 100% joint and survivor pension; plus
- 2. 50% of average final earnings if the member was a member of the Employees' Retirement System on or before December 31, 1966, and was a Maryland State plan member at August 15, 1965.

<sup>\*</sup> Domestic partners who meet the requirements for domestic partnership are also eligible.

### 17. Forms of Payment

#### A. Normal form:

- 1. Optional non-integrated plan: Lifetime benefit, with first 120 monthly payments guaranteed.
- 2. Optional integrated plan: Lifetime benefit, with first 120 monthly payments guaranteed.
- 3. Mandatory integrated plan: Lifetime benefit with refund of remaining contributions and interest.
- B. Optional forms: A member may elect an optional form of pension actuarially equivalent to the normal form of retirement, otherwise payable, excluding members who qualified for a non-service-connected disability retirement before reaching early retirement date.

Available forms of payment are:

Modified Cash Refund Annuity	Lifetime benefit with return of employee contributions with
	interest guaranteed
10-Year Certain and	Lifetime benefit with 120 monthly payments guaranteed
Continuous Annuity	
Social Security Adjustment	Provides a nearly level total income, from the Plan and Social
Option Combined with either	Security, from date of retirement to date of death. At death,
Modified Cash Refund Annuity	payment will continue to the beneficiary if the guarantee provided
or a 10-Year Certain and	under the normal form of payment has not been exhausted.
Continuous Annuity	
Joint and Survivor Annuity	Provides a lifetime benefit and a continuation of a percentage of the retiree benefit upon death to the beneficiary. The minimum percentage is 10%. A guaranteed payment of employee contributions with interest is provided for the mandatory plan and 120 monthly payments from date of retirement for the optional plans.
Joint and Survivor Annuity with	Provides a lifetime benefit and a continuation of a percentage of
Pop-Up	the retiree benefit upon death to the beneficiary. The minimum
	percentage is 10%. If the beneficiary predeceases or divorces
	from the retiree, the monthly benefit pops up to the amount it
	would have been under the Modified Cash Refund option. A
	guaranteed payment of employee contributions with interest is provided.
Social Security Adjustment	Provides a nearly level total income, from the Plan and Social
Option Combined with Joint	Security, from date of retirement to date of death and a
and Survivor Annuity Option	continuation of a percentage of the retiree benefit upon death to
	the beneficiary. The minimum percentage is 10%.
Social Security Adjustment	Provides a nearly level total income, from the Plan and Social
Option Combined with Joint	Security, from date of retirement to date of death and a
and Survivor Annuity Pop-Up	continuation of a percentage of the retiree benefit upon death to
Option	the beneficiary. The minimum percentage is 10%. If the
	beneficiary predeceases or divorces from the retiree, the monthly
	benefit pops up to the amount it would have been under the
	Modified Cash Refund option. A guaranteed payment of
	employee contributions with interest is provided.

### 18. Post-Retirement Increases

Optional non-integrated plan: Annual adjustment to the benefit equal to 100% of the change in Consumer Price Index for the Washington Metro Area for years and months of credited service before July 1, 2011. For years and months of credited service after June 30, 2011, any adjustment will not exceed 2.5%.

Optional integrated plan: Annual adjustment to the benefit equal to 100% of the change in Consumer Price Index for the Washington Metro Area for years and months of credited service before July 1, 2011. For years and months of credited service after June 30, 2011, any adjustment will not exceed 2.5%.

### Mandatory integrated plan:

- Participants who enrolled on or after July 1, 1978, and retired before November 1, 2001 Annual adjustment to the benefit equal to 60% of CPI increase, limited to 5%. However, if over age 65 or disabled, then the maximum limit of 5% does not apply.
- Participants who enrolled on or after July 1, 1978, and retired on or after November 1, 2001 Annual adjustment to the benefit equal to 100% of the change in Consumer Price Index for the Washington Metro Area up to 3%, plus 60% of any change in Consumer Price Index greater than 3%, not to exceed a total of 7.5% for years and months of credited service before July 1, 2011. The maximum 7.5% does not apply to disability retirees or retirees over age 65 for years of service before July 1, 2011. For years and months of credited service after June 30, 2011, any adjustment will not exceed 2.5%.

### **Disability Benefits:**

For a disability occurring after June 30, 2011, as determined by the Disability Review Panel, any postretirement adjustment of the disability retirement benefit will not exceed 2.5%.

#### Sick Leave:

For purposes of applying any post-retirement adjustment, any sick leave will be credited as years and months of service as of the date of retirement. For participants who retire after July 1, 2011, any post-retirement adjustment will not exceed 2.5% on any sick leave credited as years and months of service.

### **DRSP** Participants:

Effective July 1, 2011, any additional sick leave credited as years and months of service at DRSP exit is subject to the 2.5% post-retirement adjustment limit.

### **DROP** Participants:

Effective July 1, 2011, any additional sick leave credited as years and months of service at DROP exit is subject to the 2.5% post-retirement adjustment limit.

#### **Transferred Service:**

For purposes of applying any post-retirement adjustment, any transferred service will be credited as years and months of service as of the date a properly completed application is filed with the Benefits Team. For applications to transfer service credit filed after June 30, 2011, any post-retirement adjustment will not exceed 2.5% on the transferred service.

#### Purchased Service:

For purposes of applying any post-retirement adjustment, any purchased service will be credited as years and months of service as of the date a properly completed application is filed with the Benefits Team. For applications to purchase service credit filed after June 30, 2011, any post-retirement adjustment will not exceed 2.5% on the purchased service.

### 19. Discontinued Retirement Service Program (DRSP) for Group F (effective 7/1/2008)

### A. Eligibility for DRSP entry:

Any group F member who has attained age 46 and 25 years of credited service may participate in the DRSP plan.

#### B. Exit from DRSP:

The first day of any month not to exceed 36 months.

### C. The DRSP account is:

- A member-directed account outside the System's usual investment.
- Credited with the investment gains and losses of the chosen investments.
- Credited with the monthly benefits that the member would have received if the member had retired at DRSP entry.

Upon exit from DRSP, the member can receive the DRSP account as a lump sum payment or as actuarially equivalent monthly benefits.

### D. Post-DRSP monthly benefit:

The amount the participant would have received at DRSP entry with post-retirement increases for the period in DRSP.

### E. Disability while in DRSP:

Non-Service Connected: The member will receive a pension benefit calculated as if they retired with a non-service connected disability on the date they exited DRSP and their DRSP account.

Service Connected Disability: The member can elect (i) their DRSP account and the post-DRSP monthly benefit or (ii) a disability benefit calculated as if the member had never entered DRSP.

#### F. Death while in DRSP:

The beneficiary will receive the greater of (i) the death benefit that the beneficiary would have received if the member had died at DRSP entry with post-retirement increases plus the DRSP account or (ii) the death benefit calculated as if the member had never entered DRSP.

#### G. Member Contributions:

Members do not contribute while in DRSP.

### 20. <u>Deferred Retirement Option Plan (DROP) for Group G</u>

### A. Eligibility for DROP entry:

Any group G member who has met the age and service requirements for a normal retirement may participate in the DROP plan (effective 7/1/2007; previously only Group G members with at least 25 years of credited service).

#### B. Exit from DROP:

The first day of any month not to exceed 36 months.

#### C. The DROP account collects:

- The member's contributions while in DROP.
- The monthly benefits that the member would have received if the member had retired at DROP entry.
- 8.25% interest on the amount in the account.

Upon exit from DROP, the member can receive the DROP account as a lump sum payment or as actuarially equivalent monthly benefits.

### D. Post-DROP monthly benefit:

The amount the participant would have received at DROP entry with post-retirement increases for the period in DROP.

#### E. Disability while in DROP:

Non-Service Connected: The member will receive a pension benefit calculated as if they retired with a non-service connected disability on the date they entered DROP and their DROP account.

Service Connected Disability: The member can elect (i) their DROP account and the post-DROP monthly benefit or (ii) a disability benefit calculated as if the member had never entered DROP.

#### F. Death while in DROP:

The beneficiary will receive the greater of (i) the death benefit that the beneficiary would have received if the member had died at DROP entry with post-retirement increases plus the DROP account or (ii) the death benefit calculated as if the member had never entered DROP.

### 21. Guaranteed Retirement Income Plan (effective 7/1/2009)

### A. Eligibility for GRIP entry:

- Full-time Non-Public Safety employees hired on or after July 1, 2009 who do not participate in the retirement savings plan may make a one-time irrevocable election to participate in the GRIP within the first 150 days of full time employment. Participation in the plan begins 180 days after employment.
- Part-time or temporary Non-Public Safety employees hired on or after October 1, 1994 who do not participate in the retirement savings plan may make a one-time irrevocable election to participate in the GRIP after at least 150 days of employment. Participation in the plan begins 180 days after employment.

### B. The GRIP account collects:

- Member contributions (pre-tax unless noted otherwise)
  - a. Non-public safety employees: 4% of regular base earnings up to the maximum Social Security wage base plus 8% of the excess.
  - b. Public safety employees: 3% of regular base earnings up to the maximum Social Security wage base plus 6% of the excess.
  - c. Effective July 1, 2011, members had the option to contribute an additional 2% of regular earnings for service between June 30, 2011 and July 1, 2012, on an after-tax basis by making an election in writing on or before September 1, 2011.

### Employer contributions

- a. Non-public safety employees: 8% of regular base earnings. Effective July 1, 2011, the employer contribution was 6% of regular base earnings for service between June 30, 2011, and July 1, 2012.
- b. Public safety employees: 10% of regular base earnings. Effective July 1, 2011, the employer contribution was 8% of regular base earnings for service between June 30, 2011, and July 1, 2012.
- 7.25% interest credited from the date of contribution.

### C. Vesting Schedule:

- Employees are 100% vested in employee contributions at all times.
- County contributions are 0% vested from 0-3 years of credited service and 100% vested at 3 or more years of credited service.
- Participants become 100% vested at death or disability.
- D. Normal Form of Payment Lump sum
- E. Optional Forms of Payment:
  - Direct rollover
  - Life annuity purchased from MCERP

### F. Eligible Agencies:

- CC credit union employees (outside agency)
- CM union employees (represented)
- CN non-bargaining employees (non-represented)
- CP public safety employees
- CZ elected officials who transferred from the EOP

### 22. Retirement Incentive Program (effective 6/1/2010 for one time election)

The Retirement Incentive Program offered a one-time election in June 2010 and provided enhanced benefits to 64 group A, group H and group E participants. Each retiree received up to a \$35,000 lump sum payment. The early retirement reductions that would normally apply were reduced for some participants and eliminated for others.

#### 23. Elected Officials' Plan (EOP)

The Elected Officials' Plan is a defined contribution plan within the Employees' Retirement System.

#### A. Participant and Eligibility:

- Elected officials are eligible to participate in the EOP. An elected official is the sheriff, the state's attorney, a County Council member, the County Executive and any County official elected for a fixed term as specifically provided in the Charter.
- Unless an elected official was an active member of a County retirement plan before becoming an elected official, which includes being on leave without pay, an elected official must participate in the EOP upon becoming an elected official. An elected official who chooses to continue to participate in another County retirement plan may become a member of the EOP at any time while an elected official after terminating participation in the other plan.

### B. Transfer to the Guaranteed Retirement Income Plan (GRIP):

- An individual who is an elected official after December 6, 2010, may make a one-time irrevocable decision to terminate participation in the EOP and participate in the GRIP. An elected official must elect to participate in the GRIP during the first 150 days after becoming an elected official. Participation will begin on the first pay period after the elected official has been in office for 180 days. The elected official will have his or her EOP account transferred to the GRIP and the amount transferred into the GRIP will become the elected official's beginning GRIP account balance.
- An elected official who does not elect to participate in the GRIP must continue to participate in the EOP.

### C. EOP Contributions:

- Employee contributions: 4% of pay (regular earnings) on a before-tax basis. Members may make an additional voluntary after tax contributions into the account of up to 7% of bi-weekly gross pay.
- Employer contributions: 8% of pay (regular earnings before taxes).

### 24. Changes in plan provisions

There were no additional changes in plan provisions since the last actuarial valuation as of July 1, 2013.

## **SECTION F**

GLOSSARY OF TERMS

### GLOSSARY OF TERMS

Actuarial Accrued Liability (AAL). The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

**Actuarial Assumptions.** Estimates of future plan experience such as investment return, expected lifetimes and the likelihood of receiving a pension from the Pension Plan. Demographic, or "people" assumptions, include rates of mortality, retirement and separation. Economic, or "money" assumptions, include expected investment return, inflation and salary increases.

**Actuarial Cost Method.** A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Present Value of Future Plan Benefits. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Actuarial Value of Assets (AVA). Smoothed value of assets that recognizes the difference between the expected investment return using the valuation assumption of 7.50 percent and the actual investment return over a five-year period. Dampens volatility of asset value over time.

**Amortization**. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Annual Required Contribution. The sum of the normal cost and amortization of the unfunded actuarial accrued liability.

**Asset Return.** The net investment return for the asset divided by the mean asset value. Example: if \$1.00 is invested and yields \$1.075 after a year, the asset return is 7.50 percent.

*Funded Ratio*. The actuarial value of assets divided by the actuarial accrued liability. Measures the portion of the actuarial accrued liability that is currently funded.

*Market Value of Assets (MVA)*. The value of assets currently held in the trust available to pay for benefits of the Pension Plan. Each of the investments in the trust is valued at market price which is the price at which buyers and sellers trade similar items in the open market

**Normal Cost (NC)**. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

*Unfunded Actuarial Accrued Liability (UAAL)*. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."