

**MONTGOMERY COUNTY EMPLOYEES' RETIREMENT SYSTEM**  
**ACTUARIAL VALUATION AS OF JULY 1, 2013**

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November 12, 2013

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

Dear Ms. Herman:

We are pleased to provide our formal annual Actuarial Valuation Report as of July 1, 2013, for the Montgomery County Employees' Retirement System ("System"). The actuarial valuation was performed at the request of the Executive Director of the Montgomery County Employees' Retirement System and is intended for use by the System and Montgomery County ("County") and those designated by the System and the County. This report may be provided to parties other than the System and the County only in its entirety and only with the permission of the System and the County.

This report provides, among other things, the recommended annual contribution of the Plan for the Plan Year commencing July 1, 2014, and ending on June 30, 2015. The actuarial assumptions and the actuarial cost method used in this valuation are the same as those used in the prior actuarial valuation. There have been no additional changes in plan provisions since the actuarial valuation as of July 1, 2012.

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. The undersigned 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.

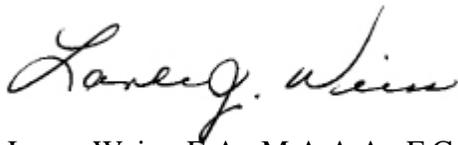
This report should not be relied on for any purpose other than the purpose stated.

The signing actuaries are independent of the plan sponsor.

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, E.A., M.A.A.A., F.C.A.  
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**SECTION A**  
VALUATION RESULTS

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## COMMENTS ON THE VALUATION

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At your request, we have performed an actuarial valuation of the Montgomery County Employees' Retirement System as of July 1, 2013.

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, 2014; and
- To provide accounting and other data required by the System.

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 5,606 active members (including DRSP and DROP) were included in the valuation as of July 1, 2013. Between the 2012 and 2013 valuations, the number of active employees increased by 52 members, or 0.9 percent. The average annual valuation pay (including DRSP and DROP) decreased by 1.5 percent, from \$71,743 to \$70,636 between the 2012 and 2013 valuation. The number of benefit recipients increased from 5,824 to 5,961, or 2.4 percent, since the last valuation. The average monthly benefit increased by 1.1 percent, from \$2,915 to \$2,946. 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, 2013, since the actuarial valuation at July 1, 2012.

Section D outlines the actuarial assumptions and methods used in the valuation. The actuarial cost method and other assumptions used in this valuation are the same as those used in the actuarial valuation at July 1, 2012. The assumption for administrative expenses is equal to the average of the prior three years administrative expenses. This amount has decreased from \$3,177,300 to \$3,008,700.

During the plan year ending July 1, 2013, the unfunded actuarial accrued liability ("UAAL") decreased from \$877,310,399 as of July 1, 2012, to \$808,833,488 as of July 1, 2013, which is a decrease of \$68,476,911. The key factors contributing to the decrease in the UAAL were lower than expected salary increases for active members, lower than expected cost of living (COLA) increases for retired members, and demographic experience. (The COLA increase was 1.167 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 0.70 percent compared to an assumption of 1.80 percent.) These gains were partially offset by recognition of prior years' actuarial investment losses in the actuarial value of assets.

## COMMENTS ON THE VALUATION (CONTINUED)

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On a market value basis, the Plan assets had an investment return of approximately 10.3<sup>1</sup> percent (net of investment expenses). Final recognition of the fiscal year end 2009 investment loss and continued recognition of the fiscal year end 2012 investment loss, which was partially offset by recognition of investment gains during fiscal years ending 2010, 2011 and 2013, resulted in an estimated net asset rate of return of 6.34 percent on an actuarial basis which compares to the assumed rate of return of 7.50 percent.

### **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 (15 years remaining at the valuation as of July 1, 2013). 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, 2012, establishes the County contribution rate for fiscal year beginning July 1, 2014.

### **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 County contribution rate for fiscal year 2015 decreased for Public Safety and increased for non-Public Safety (non-GRIP) members from the fiscal year 2014 rate. Both Public Safety and non-Public Safety Groups experienced favorable experience during fiscal year 2013, including lower salary increases and retiree COLA increases than expected under the actuarial assumptions, and fewer retirements and more terminations than expected under the actuarial assumptions. This favorable experience was partially offset by the loss on the actuarial value of assets compared to the assumption of 7.50 percent and data changes, in particular, for terminated vested members. Despite the overall favorable experience, the contribution rate increased for the non-Public Safety group because this is a closed group that is not enrolling new active members. The level percentage of pay amortization policy results in amortization payments that increase as a dollar amount by 4.0 percent each year. If total payroll increases by a rate of less than 4.0 percent, the amortization payment calculated as a percentage of pay will increase.

The actuarial value of assets is currently 95 percent of the market value of assets. There is \$171,697,967 in net asset gains currently being deferred that will be phased into the actuarial value of assets over the next four years. Beginning with the fiscal year 2016 contribution, there is projected to be a decrease in the recommended County contribution as the remaining gains are recognized.

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

## COMMENTS ON THE VALUATION (CONTINUED)

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### GRIP

The County contribution rate for fiscal year 2015 increased for GRIP members from the fiscal year 2014 rate. The increase in the County contribution rate is mainly attributable to a decrease in the expected average total employee contribution rate.

The actuarial value of assets is currently 96 percent of the market value of assets. There is \$3,489,201 in net gains currently being deferred that will be phased into the actuarial value of assets over the next four years. This will decrease the recommended County contribution rate beginning in fiscal year 2016 as these deferred gains are recognized.

## SUMMARY OF ACTUARIAL VALUATION RESULTS

		July 1, 2012	July 1, 2013
		Results	Results
<b>Membership</b>			
<b>Data</b>			
	Active Members	5,364	5,435
	DRSP/DROP	190	171
	Deferred Vested	413	358
	Retirees and Beneficiaries	5,824	5,961
	<b>TOTAL</b>	<b>11,791</b>	<b>11,925</b>
<b>Plan</b>			
<b>Liabilities</b>			
	Actuarial Accrued Liability:		
	Active Members	\$ 1,303,031,570	\$ 1,294,536,578
	DRSP/DROP	203,738,279	183,373,681
	Deferred Vested	17,468,410	21,718,538
	Retirees and Beneficiaries	2,244,507,703	2,321,751,935
	<b>TOTAL</b>	<b>\$ 3,768,745,962</b>	<b>\$ 3,821,380,732</b>
	Actuarial Value of Assets at Valuation Date	\$ 2,891,435,563	\$ 3,012,547,244
	Unfunded (Overfunded) Actuarial Accrued Liability	\$ 877,310,399	\$ 808,833,488
	<b>Funded Position of Plan's Actuarial Accrued Liability</b> <sup>1</sup>	<b>76.7 %</b>	<b>78.8 %</b>
<b>Recommended</b>			
<b>Annual Contribution</b>			
<b>Requirements</b> <sup>2</sup>			
	Annual Normal Cost as of Valuation Date	\$ 74,340,043	\$ 73,892,381
	Normal Cost Expense Load	3,177,300	3,008,701
	Amortization Payment	69,161,593	67,898,374
	<b>Total Annual Required Contribution</b>	<b>146,678,936</b>	<b>144,799,456</b>
	Expected Employee Contributions	21,456,899	20,971,463
	County Contribution Requirement	\$ 125,222,037	\$ 123,827,993
	Contribution Basis Payroll	\$ 342,536,983	\$ 340,690,660
	County Contribution % of Payroll		
	Public Safety	45.84%	45.17%
	Non-Public Safety	39.17%	41.04%
	GRIP	6.45%	6.72%

<sup>1</sup> Equals the ratio of the actuarial value of assets to the total actuarial accrued liability.

<sup>2</sup> Includes the Retirement Incentive cost.

## CONTRIBUTION RATE SUMMARY ALL PLANS

	Valuation as of July 1, 2013									July 1, 2012	
	Non-Public Safety			Public Safety						Total	Total
	Group A	Group H	Total Non PS	Group E	Group F	Group G	Total PS	GRIP	Total		
<b>County Contribution Requirement (\$)</b>											
<b>(Includes Retirement Incentive)<sup>1</sup></b>											
Mandatory Integrated Plan	\$ 15,948,918	\$ 17,996,653	\$ 33,945,571	\$ 13,616,687	\$ 32,198,772	\$ 33,303,351	\$ 79,118,810	\$ -	\$ 113,064,381	\$ 111,922,292	
Optional Integrated Plan	2,053,861	1,611,023	3,664,884	-	-	-	-	-	3,664,884	6,516,659	
Optional Non-Integrated Plan	604,179	975,361	1,579,540	-	-	951,741	951,741	-	2,531,281	2,709,408	
GRIP	-	-	-	-	-	-	-	4,567,447	4,567,447	4,073,678	
Total All Plans	18,606,958	20,583,037	39,189,995	13,616,687	32,198,772	34,255,092	80,070,551	4,567,447	123,827,993	125,222,037	
<b>County Contribution Requirement (% of Payroll)</b>											
<b>(Excludes Retirement Incentive)<sup>1</sup></b>											
Mandatory Integrated Plan	35.68%	34.49%	35.04%	37.41%	43.27%	49.98%	44.60%		41.33%	40.12%	
Optional Integrated Plan	127.68%	188.40%	148.71%	0.00%	0.00%	0.00%	0.00%		148.71%	209.20%	
Optional Non-Integrated Plan	129.67%	130.99%	130.48%	0.00%	0.00%	1712.49%	1712.49%		203.47%	158.16%	
GRIP								6.72%	6.72%	6.45%	
Total All Plans	39.75%	38.26%	38.96%	37.41%	43.27%	51.37%	45.12%	6.72%	35.74%	35.97%	
<b>County Contribution Requirement (% of Payroll)</b>											
<b>(Includes Retirement Incentive)<sup>1</sup></b>											
Mandatory Integrated Plan	37.32%	36.52%	36.89%	37.66%	43.27%	49.98%	44.65%		42.00%	40.75%	
Optional Integrated Plan	135.10%	199.99%	157.58%	0.00%	0.00%	0.00%	0.00%		157.58%	215.76%	
Optional Non-Integrated Plan	135.23%	138.90%	137.47%	0.00%	0.00%	1712.49%	1712.49%		210.14%	162.81%	
GRIP								6.72%	6.72%	6.45%	
Total All Plans	41.63%	40.53%	41.04%	37.66%	43.27%	51.37%	45.17%	6.72%	36.35%	36.56%	

<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

	Valuation as of July 1, 2013							July 1, 2012			
	Non-Public Safety		Public Safety				GRIP	Total	% of Payroll	Total	% of Payroll
	Group A	Group H	Group E	Group F	Group G	Total					
<b>Total All Plans</b>											
<b>Active Members</b>											
Number	576	884	619	1,101	1,053	1,202	5,435			5,364	
Average Age	56.3	56.2	43.5	38.5	37.9	49.4	46.1			46.3	
Average Service	25.8	23.9	12.2	13.2	12.2	8.5	14.9			15.0	
Total Base Payroll	\$ 52,169,701	\$ 59,235,390	\$ 40,996,829	\$ 80,387,753	\$ 71,798,132	\$ 74,797,959	\$ 379,385,763			\$ 379,772,487	
Contribution Basis Payroll	44,698,766	50,789,970	36,154,764	74,410,216	66,683,416	67,953,529	340,690,660			342,536,983	
<b>DRSP/DROP Members</b>											
Number				68	103		171			190	
Total Base Payroll				\$ 6,649,533	\$ 9,952,730		\$ 16,602,263			\$ 18,687,761	
Total Benefits				4,783,402	6,325,902		\$ 11,109,304			12,753,685	
<b>Terminated Vested Members</b>											
Number	63	82	20	34	17	142	358			413	
Total Benefits	\$ 675,255	\$ 635,023	\$ 193,353	\$ 366,393	\$ 117,331		\$ 1,987,355			2,910,410	
<b>Retired Members and Beneficiaries</b>											
Number							1			5,824	
Total Benefits							5,024	210,686,878		203,710,715	
Total Membership								11,925		11,791	
<b>Actuarial Accrued Liability</b>											
Active Members	\$ 225,728,332	\$ 227,976,475	\$ 153,056,818	\$ 338,977,005	\$ 281,625,888	\$ 67,172,060	\$ 1,294,536,578			\$ 1,303,031,570	
DRSP/DROP Members				76,708,288	106,665,394		183,373,681			203,738,279	
Terminated Vested Members	5,095,944	4,631,962	1,653,461	3,278,174	1,128,637	5,930,360	21,718,538			17,468,410	
Retired Members and Beneficiaries						44,523	2,321,751,935			2,244,507,703	
Total						73,146,943	3,821,380,732			3,768,745,962	
<b>Actuarial Value of Assets</b>											
						79,738,860	3,012,547,244			2,891,435,563	
<b>Unfunded Actuarial Accrued Liability</b>											
						(6,591,917)	808,833,488			877,310,399	
<b>Funded Ratio (Actuarial Value of Assets)</b>											
						109.0%	78.8%			76.7%	
<b>Annual Gross Normal Cost</b>											
Benefits	\$ 7,570,748	\$ 8,095,952	\$ 10,021,832	\$ 21,978,685	\$ 18,555,743	\$ 7,669,421	\$ 73,892,381	(21.69%)		\$ 74,340,043	(21.70%)
Expenses of Administration	537,690	534,628	334,211	783,927	664,816	153,429	3,008,701	(0.88%)		3,177,300	(0.93%)
Total	8,108,438	8,630,580	10,356,043	22,762,612	19,220,559	7,822,850	76,901,082	(22.57%)		77,517,343	(22.63%)
<b>Excluding Retirement Incentive</b>											
Amortization of Unfunded Liability	\$ 12,383,943	\$ 13,865,523	\$ 5,612,829	\$ 14,474,699	\$ 19,972,978	\$ (488,586)	\$ 65,821,386	(19.32%)		\$ 67,164,489	(19.61%)
<b>Annual Contribution Requirement:</b>											
County Portion	\$ 17,769,267	\$ 19,434,661	\$ 13,525,766	\$ 32,198,772	\$ 34,255,092	\$ 4,567,447	\$ 121,751,005	(35.74%)		\$ 123,224,933	(35.97%)
Employee Portion	2,723,114	3,061,442	2,443,106	5,038,539	4,938,445	2,766,817	20,971,463	(6.15%)		21,456,899	(6.27%)
Total	20,492,381	22,496,103	15,968,872	37,237,311	39,193,537	7,334,264	142,722,468	(41.89%)		144,681,832	(42.24%)
Non-Public Safety/Public Safety/GRIP		\$ 37,203,928			\$ 79,979,630	\$ 4,567,447					
<b>Including Retirement Incentive</b>											
Amortization of Unfunded Liability	\$ 13,221,634	\$ 15,013,899	\$ 5,703,750	\$ 14,474,699	\$ 19,972,978	\$ (488,586)	\$ 67,898,374	(19.93%)		\$ 69,161,593	(20.19%)
<b>Annual Contribution Requirement:</b>											
County Portion	\$ 18,606,958	\$ 20,583,037	\$ 13,616,687	\$ 32,198,772	\$ 34,255,092	\$ 4,567,447	\$ 123,827,993	(36.35%)		\$ 125,222,037	(36.56%)
Employee Portion	2,723,114	3,061,442	2,443,106	5,038,539	4,938,445	2,766,817	20,971,463	(6.15%)		21,456,899	(6.26%)
Total	21,330,072	23,644,479	16,059,793	37,237,311	39,193,537	7,334,264	144,799,456	(42.50%)		146,678,936	(42.82%)
Non-Public Safety/Public Safety/GRIP		\$ 39,189,995			\$ 80,070,551	\$ 4,567,447					

# ACTUARIAL VALUATION RESULTS ALL PLANS (EXCLUDING GRIP)

	Valuation as of July 1, 2013							July 1, 2012		
	Non-Public Safety		Public Safety			GRIP	Total	% of Payroll	Total	% of Payroll
	Group A	Group H	Group E	Group F	Group G					
<b>Mandatory Integrated Plan</b>										
Number	549	854	619	1,101	1,051		4,174		4,188	
Total Base Payroll	\$ 49,810,925	\$ 57,105,820	\$ 40,996,829	\$ 80,387,753	\$ 71,570,698		\$ 299,872,024		\$ 304,421,231	
Contribution Basis Payroll	42,731,746	49,282,242	36,154,764	74,410,216	66,627,840		269,206,806		274,662,607	
Active Actuarial Accrued Liability	211,139,445	214,088,028	153,056,818	338,977,005	279,463,835		1,196,725,131		1,205,468,678	
Annual Gross Normal Cost										
Benefits	\$ 7,228,470	\$ 7,825,479	\$ 10,021,832	\$ 21,978,685	\$ 18,540,462		\$ 65,594,928	(24.37%)	\$ 66,322,589	(24.15%)
Expenses of Administration	498,964	500,439	334,211	783,927	662,715		2,780,256	(1.03%)	2,865,424	(1.04%)
Total	7,727,434	8,325,918	10,356,043	22,762,612	19,203,177		68,375,184	(25.40%)	69,188,013	(25.19%)
	<b>Excluding Retirement Incentive</b>									
Amortization of Unfunded Liability	\$ 10,117,207	\$ 11,628,294	\$ 5,612,829	\$ 14,474,699	\$ 19,032,783		\$ 60,865,812	(22.61%)	\$ 59,319,750	(21.60%)
Annual Contribution Requirement:										
County Portion	\$ 15,248,821	\$ 16,997,278	\$ 13,525,767	\$ 32,198,772	\$ 33,303,351		\$ 111,273,989	(41.33%)	\$ 110,200,761	(40.12%)
Employee Portion	2,595,820	2,956,934	2,443,105	5,038,539	4,932,609		17,967,007	(6.68%)	18,307,002	(6.67%)
Total	17,844,641	19,954,212	15,968,872	37,237,311	38,235,960		129,240,996	(48.01%)	128,507,763	(46.79%)
Non-Public Safety/Public Safety/GRIP		\$ 32,246,099			\$ 79,027,890					
<b>Optional Integrated Plan</b>										
Number	21	16	-	-	1		38		47	
Total Base Payroll	\$ 1,826,782	\$ 1,004,197	\$ -	\$ -	\$ 129,429		\$ 2,960,407		\$ 3,897,229	
Contribution Basis Payroll	1,520,227	805,549	-	-	-		2,325,776		3,020,315	
Active Actuarial Accrued Liability	10,591,160	5,260,707	-	-	1,160,916		17,012,783		23,977,390	
Annual Gross Normal Cost										
Benefits	\$ 246,568	\$ 118,121	\$ -	\$ -	\$ -		\$ 364,689	(15.68%)	\$ 504,861	(16.72%)
Expenses of Administration	30,335	16,081	-	-	-		46,416	(2.00%)	95,595	(3.16%)
Total	276,903	134,202	-	-	-		411,105	(17.68%)	600,456	(19.88%)
	<b>Excluding Retirement Incentive</b>									
Amortization of Unfunded Liability <sup>1</sup>	\$ 1,755,726	\$ 1,431,754	\$ -	\$ -	\$ -		\$ 3,187,480	(137.05%)	\$ 5,902,994	(195.44%)
Annual Contribution Requirement:										
County Portion	\$ 1,941,076	\$ 1,517,623	\$ -	\$ -	\$ -		\$ 3,458,699	(148.71%)	\$ 6,318,404	(209.20%)
Employee Portion	91,553	48,333	-	-	-		139,886	(6.02%)	185,046	(6.12%)
Total	2,032,629	1,565,956	-	-	-		3,598,585	(154.73%)	6,503,450	(215.32%)
Non-Public Safety/Public Safety/GRIP		\$ 3,458,699			\$ -					
<b>Optional Non-Integrated Plan</b>										
Number	6	14	-	-	1		21		27	
Total Base Payroll	\$ 531,995	\$ 1,125,373	\$ -	\$ -	\$ 98,005		\$ 1,755,373		\$ 2,199,026	
Contribution Basis Payroll	446,793	702,180	-	-	55,576		1,204,549		1,664,184	
Active Actuarial Accrued Liability	3,997,727	8,627,740	-	-	1,001,137		13,626,604		17,224,607	
Annual Gross Normal Cost										
Benefits	\$ 95,710	\$ 152,352	\$ -	\$ -	\$ 15,281		\$ 263,343	(21.86%)	\$ 374,657	(22.51%)
Expenses of Administration	8,391	18,108	-	-	2,101		28,600	(2.38%)	80,286	(4.83%)
Total	104,101	170,460	-	-	17,382		291,943	(24.24%)	454,943	(27.34%)
	<b>Excluding Retirement Incentive</b>									
Amortization of Unfunded Liability <sup>1</sup>	\$ 511,011	\$ 805,475	\$ -	\$ -	\$ 940,195		\$ 2,256,681	(187.35%)	\$ 2,314,610	(139.08%)
Annual Contribution Requirement:										
County Portion	\$ 579,369	\$ 919,761	\$ -	\$ -	\$ 951,741		\$ 2,450,871	(203.47%)	\$ 2,632,091	(158.16%)
Employee Portion	35,743	56,174	-	-	5,836		97,753	(8.11%)	137,462	(8.26%)
Total	615,112	975,935	-	-	957,577		2,548,624	(211.58%)	2,769,553	(166.42%)
Non-Public Safety/Public Safety/GRIP		\$ 1,499,130			\$ 951,741					

<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)

	Valuation as of July 1, 2013						July 1, 2012		
	Agency					Total GRIP	Total		
	CC	CM	CN	CP	CZ				
<b>Total All Plans</b>									
<b>Active Members</b>									
Number	3	806	383	3	7	1,202		1,102	
Average Age	54.6	49.0	49.8	58.7	54.4	49.4		49.3	
Average Service	9.8	8.6	8.3	11.9	8.5	8.5		8.0	
Total Base Payroll	\$ 122,306	\$ 42,514,945	\$ 30,860,934	\$ 561,216	\$ 738,557	\$ 74,797,959		\$ 69,255,000	
Contribution Basis Payroll	111,480	38,917,424	27,798,898	459,434	666,292	67,953,529		63,189,877	
<b>Actuarial Accrued Liability</b>									
Active Members	\$ 128,835	\$ 36,858,442	\$ 28,411,039	\$ 1,136,243	\$ 637,501	\$ 67,172,060		\$ 56,360,895	
Terminated Vested Members	37,755	2,800,667	3,091,938	-	-	5,930,360		4,878,350	
Retired Members and Beneficiaries	-	44,523	-	-	-	44,523		-	
<b>Total</b>	<b>166,590</b>	<b>39,703,632</b>	<b>31,502,977</b>	<b>1,136,243</b>	<b>637,501</b>	<b>73,146,943</b>		<b>61,239,245</b>	
Actuarial Value of Assets	181,603	43,281,677	34,341,988	1,238,640	694,952	79,738,860		66,349,577	
Unfunded Actuarial Accrued Liability	(15,013)	(3,578,045)	(2,839,011)	(102,397)	(57,451)	(6,591,917)		(5,110,332)	
Funded Ratio (Actuarial Value of Assets)	109.0%	109.0%	109.0%	109.0%	109.0%	109.0%		108.3%	
<b>Annual Gross Normal Cost</b>									
Benefits	\$ 12,675	\$ 4,362,339	\$ 3,156,707	\$ 61,910	\$ 75,790	\$ 7,669,421	(11.29%)	\$ 7,137,936	(11.30%)
Expenses of Administration	349	83,280	66,079	2,383	1,337	153,429	(0.22%)	135,995	(0.22%)
<b>Total</b>	<b>13,025</b>	<b>4,445,619</b>	<b>3,222,786</b>	<b>64,293</b>	<b>77,127</b>	<b>7,822,850</b>	<b>(11.51%)</b>	<b>7,273,931</b>	<b>(11.51%)</b>
Amortization of Unfunded Liability	\$ (1,113)	\$ (265,201)	\$ (210,425)	\$ (7,590)	\$ (4,258)	\$ (488,586)	-(0.72%)	\$ (372,864)	-(0.59%)
<b>Annual Contribution Requirement:</b>									
County Portion	\$ 7,453	\$ 2,623,721	\$ 1,852,399	\$ 37,684	\$ 46,190	\$ 4,567,447	(6.72%)	\$ 4,073,678	(6.45%)
Employee Portion	4,459	1,556,697	1,159,963	19,019	26,679	2,766,817	(4.07%)	2,827,389	(4.47%)
<b>Total</b>	<b>11,912</b>	<b>4,180,418</b>	<b>3,012,362</b>	<b>56,703</b>	<b>72,869</b>	<b>7,334,264</b>	<b>(10.79%)</b>	<b>6,901,067</b>	<b>(10.92%)</b>

**ACTUARIAL VALUATION RESULTS**  
**AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY**

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Base Year	Description	Unfunded Liability Base			Remaining Financing Period	Amortization Factor	Non-GRIP	GRIP	Dollar Contribution
		Non-GRIP	GRIP	Total					
2010*	Retirement Incentive	\$ 24,964,968	\$ -	\$ 24,964,968	15 yrs.	12.019799	\$ 2,076,987	\$ -	\$ 2,076,987
2010*	Plan Changes	199,921,917	(2,229,366)	197,692,551	15	12.019799	16,632,717	(185,474)	16,447,243
2010*	Plan Experience	615,104,560	163,925	615,268,485	15	12.019799	51,174,280	13,638	51,187,918
2011	Plan Changes	(48,012,763)	0	(48,012,763)	18	13.786967	(3,482,475)	0	(3,482,475)
2011	Plan Experience	73,198,708	(1,722,516)	71,476,192	18	13.786967	5,309,268	(124,938)	5,184,330
2012	Plan Experience	8,675,354	(1,304,821)	7,370,533	19	14.338089	605,057	(91,004)	514,053
2013	Plan Experience	(58,427,340)	(1,499,138)	(59,926,478)	20	14.871268	(3,928,874)	(100,808)	(4,029,682)
Unfunded Liability		\$ 815,425,405	\$ (6,591,917)	\$ 808,833,488	14.8	11.912413	\$ 68,386,960	\$(488,586)	\$ 67,898,374

*\*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, 2013, that were attributable to each of those items for periods before July 1, 2010.*

## ACTUARIAL VALUATION RESULTS AMORTIZATION PAYMENTS BY GROUP

Optional Non-Integrated		Group					Total
		A	E	F	G	H	
Base Year	Description						
2010*	Retirement Incentive	\$ 24,810	\$ -	\$ -	\$ -	\$ 55,600	\$ 80,409
2010*	Plan Changes	213,833	0	0	781,715	257,697	1,253,245
2010*	Plan Experience	277,245	0	0	143,363	516,498	937,107
2011	Plan Changes	(2,630)	0	0	(1,308)	(2,567)	(6,505)
2011	Plan Experience	28,764	0	0	14,874	53,586	97,224
2012	Plan Experience	5,343	0	0	4,442	5,174	14,958
2013	Plan Experience	(11,544)	0	0	(2,891)	(24,913)	(39,348)
<b>Total</b>		<b>535,821</b>	<b>0</b>	<b>0</b>	<b>940,195</b>	<b>861,074</b>	<b>2,337,090</b>
<b>Excluding Retirement Incentive</b>		<b>511,011</b>	<b>0</b>	<b>0</b>	<b>940,195</b>	<b>805,475</b>	<b>2,256,681</b>

Optional Integrated		Group					Total
		A	E	F	G	H	
Base Year	Description						
2010*	Retirement Incentive	\$ 112,785	\$ -	\$ -	\$ -	\$ 93,400	\$ 206,185
2010*	Plan Changes	822,645	0	0	0	915,227	1,737,873
2010*	Plan Experience	880,794	0	0	0	487,228	1,368,022
2011	Plan Changes	(6,121)	0	0	0	(4,413)	(10,534)
2011	Plan Experience	91,381	0	0	0	50,549	141,931
2012	Plan Experience	8,761	0	0	0	5,288	14,048
2013	Plan Experience	(41,735)	0	0	0	(22,125)	(63,860)
<b>Total</b>		<b>1,868,511</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,525,155</b>	<b>3,393,666</b>
<b>Excluding Retirement Incentive</b>		<b>1,755,726</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,431,754</b>	<b>3,187,480</b>

Mandatory Integrated		Group					Total
		A	E	F	G	H	
Base Year	Description						
2010*	Retirement Incentive	\$ 700,097	\$ 90,920	\$ -	\$ -	\$ 999,375	\$ 1,790,392
2010*	Plan Changes	1,893,651	967,603	1,984,319	6,019,801	2,776,224	13,641,599
2010*	Plan Experience	8,195,109	5,078,681	13,782,988	13,021,370	8,791,003	48,869,151
2011	Plan Changes	(237,014)	(571,573)	(1,809,049)	(579,829)	(267,971)	(3,465,436)
2011	Plan Experience	850,232	526,907	1,429,968	1,350,951	912,056	5,070,114
2012	Plan Experience	101,977	71,123	165,006	132,259	105,685	576,050
2013	Plan Experience	(686,749)	(459,912)	(1,078,533)	(911,769)	(688,702)	(3,825,666)
<b>Total</b>		<b>10,817,303</b>	<b>5,703,750</b>	<b>14,474,699</b>	<b>19,032,783</b>	<b>12,627,670</b>	<b>62,656,205</b>
<b>Excluding Retirement Incentive</b>		<b>10,117,207</b>	<b>5,612,829</b>	<b>14,474,699</b>	<b>19,032,783</b>	<b>11,628,294</b>	<b>60,865,812</b>

Total All Plans		Group					Total
		A	E	F	G	H	
Base Year	Description						
2010*	Retirement Incentive	\$ 837,691	\$ 90,920	\$ -	\$ -	\$ 1,148,375	\$ 2,076,987
2010*	Plan Changes	2,930,130	967,603	1,984,319	6,801,517	3,949,148	16,632,717
2010*	Plan Experience	9,353,149	5,078,681	13,782,988	13,164,733	9,794,729	51,174,280
2011	Plan Changes	(245,765)	(571,573)	(1,809,049)	(581,137)	(274,951)	(3,482,475)
2011	Plan Experience	970,378	526,907	1,429,968	1,365,825	1,016,191	5,309,268
2012	Plan Experience	116,081	71,123	165,006	136,700	116,146	605,057
2013	Plan Experience	(740,028)	(459,912)	(1,078,533)	(914,660)	(735,740)	(3,928,874)
<b>Total</b>		<b>13,221,635</b>	<b>5,703,750</b>	<b>14,474,699</b>	<b>19,972,978</b>	<b>15,013,899</b>	<b>68,386,960</b>
<b>Excluding Retirement Incentive</b>		<b>12,383,943</b>	<b>5,612,829</b>	<b>14,474,699</b>	<b>19,972,978</b>	<b>13,865,523</b>	<b>66,309,973</b>

\*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, 2013, 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

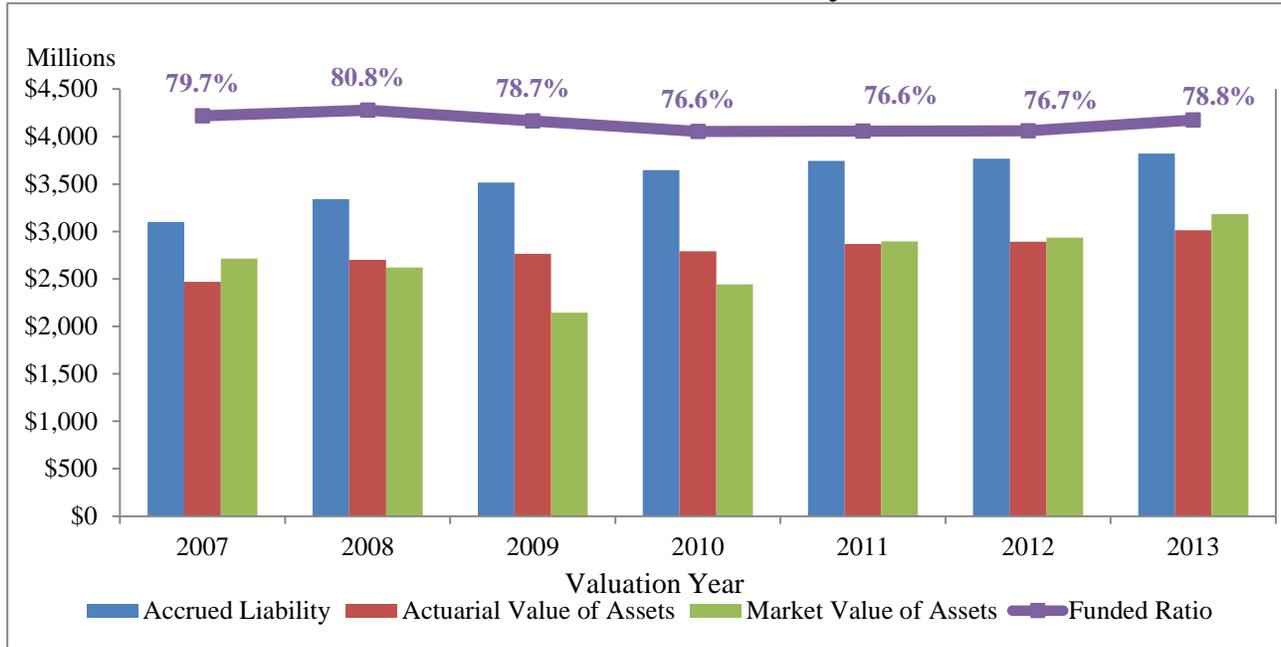
	Non-GRIP	GRIP	Total
Unfunded liability at previous valuation	\$882,420,731	(\$5,110,332)	\$877,310,399
<u>Expected unfunded liability at current valuation</u>			
Normal cost for plan year	67,202,107	7,137,936	74,340,043
Interest on unfunded liability and normal cost	71,221,713	152,070	71,373,783
Contributions with interest to current valuation date	<u>146,991,806</u>	<u>7,272,453</u>	<u>154,264,259</u>
Total expected change in unfunded liability at current valuation	(8,567,986)	17,553	(8,550,433)
Total expected unfunded liability at current valuation	873,852,745	(5,092,779)	868,759,966
Change due to:			
Recognition of asset (gains)/losses	35,080,834	(1,946,340)	33,134,494
Salary increases	(44,952,980)	0	(44,952,980)
COLA increases	(44,328,694)	0	(44,328,694)
Amount and timing of contributions	(2,977,875)	(1,124,092)	(4,101,967)
Demographic Experience and Other	(1,248,625)	1,571,294	322,669
Change in actuarial assumptions	0	0	0
Plan improvements	0	0	0
Measurement improvements	<u>0</u>	<u>0</u>	<u>0</u>
Total change	(58,427,340)	(1,499,138)	(59,926,478)
Unfunded liability at current valuation	815,425,405	(6,591,917)	808,833,488

	Public Safety	Non-Public Safety	GRIP
FY 2014 County Contribution	45.84%	39.17%	6.45%
Expected FY 2015 County Contribution	45.64%	39.30%	6.49%
Change due to:			
Recognition of asset (gains)/losses	0.78%	1.02%	-0.08%
Salary increases	-0.11%	-0.01%	-0.03%
COLA increases	-0.99%	-1.29%	0.00%
Amount and timing of contributions	-0.07%	-0.09%	-0.05%
Demographic Experience and Other	-0.08%	2.11%	0.39%
Change in actuarial assumptions	0.00%	0.00%	0.00%
Plan improvements	0.00%	0.00%	0.00%
Measurement improvements	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
Total change	-0.47%	1.74%	0.23%
FY 2015 County Contribution	45.17%	41.04%	6.72%

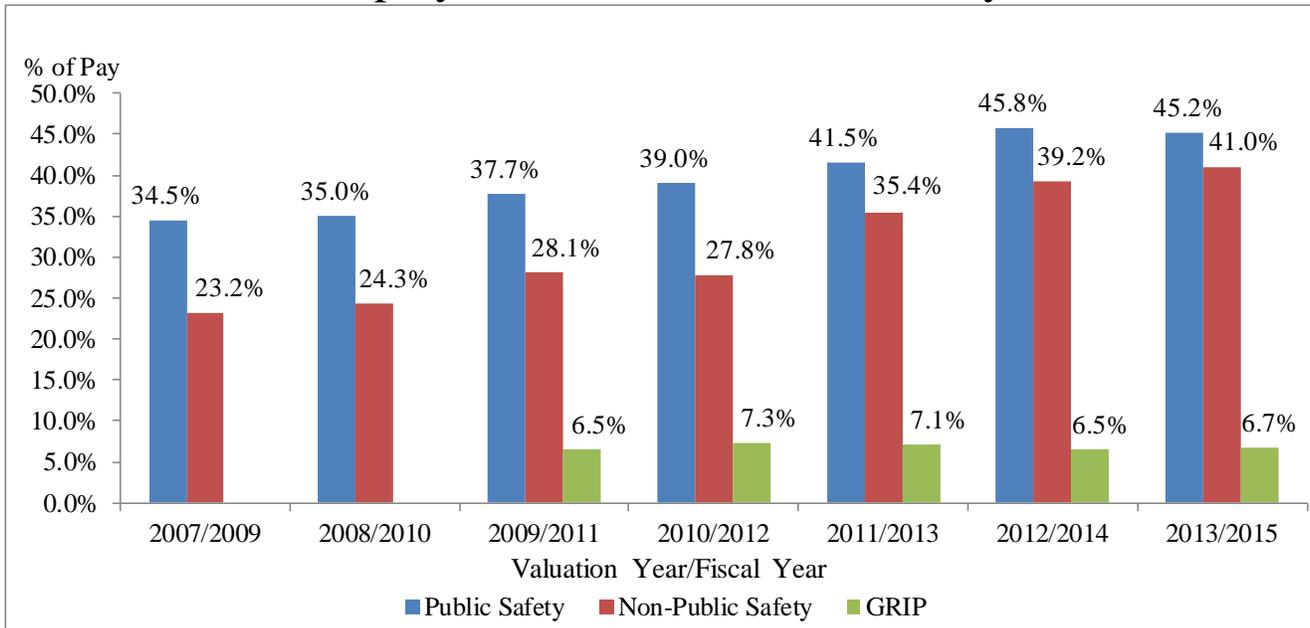
*Demographic Experience and Other includes changes due to retirement, mortality, disability and termination experience that varied from the actuarial assumptions, and data changes.*

# HISTORICAL TRENDS OF FUNDED RATIO AND EMPLOYER CONTRIBUTIONS

## Funded Ratio History



## Employer Contribution Rate History



## ACTUARIAL VALUATION RESULTS SOLVENCY TEST

Valuation Date 6/30	Total Actuarial Accrued Liability	(1)	(2)	(3)	Actuarial Value of Assets	Portion (%) of Present Value Covered By Assets		
		Active Member Contributions	Retirees, Term Vested and Beneficiaries	Active Members (Employer Financed Portion)		(1)	(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%

*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 NET PLAN ASSETS

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	Fiscal Year Ending	
	<u>June 30, 2012</u>	<u>June 30, 2013</u>
<b>Assets</b>		
Equity in County's pooled cash and investments	\$ 814,725	\$ 1,108,905
Investments :		
Government and agency obligations	303,907,668	282,344,930
Municipal/Provincial obligations	28,647,969	22,924,377
Asset-backed securities	2,966,713	3,212,480
Corporate bonds	572,946,146	582,765,510
Collateralized mortgage obligations	2,547,786	25,117
Commercial mortgage-backed securities	1,196,517	-
Common and preferred stock	1,266,564,139	1,356,684,162
Mutual and commingled funds	78,696,158	150,413,530
Short-term investments	292,635,896	295,135,604
Cash collateral received under securities lending agreements	303,900,721	291,568,717
Real estate	150,047,987	235,951,453
Private equity	229,073,503	238,964,221
Total Investments	<u>3,233,131,203</u>	<u>3,459,990,101</u>
Dividend, interest, and other receivables	6,132,660	14,762,968
Contributions receivable	<u>5,053,707</u>	<u>6,423,088</u>
Total assets	<u>3,245,132,295</u>	<u>3,482,285,062</u>
<b>Liabilities</b>		
Payable for collateral received under securities lending agreements	303,900,721	291,568,717
Benefit payable and other liabilities	<u>4,457,880</u>	<u>6,471,134</u>
Total liabilities	<u>308,358,601</u>	<u>298,039,851</u>
Net assets held in trust for pension benefits, end of year	<u>\$ 2,936,773,694</u>	<u>\$ 3,184,245,211</u>

**RECONCILIATION OF MARKET VALUE OF ASSETS  
TOTAL EMPLOYEES' RETIREMENT SYSTEM (ERS)**

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	<b>Fiscal Year Ending</b>	
	<u>June 30, 2012</u>	<u>June 30, 2013</u>
Additions:		
Contributions:		
Employer	\$ 107,855,595	\$ 127,887,620
Members	22,833,310	24,854,331
Total contributions	<u>130,688,905</u>	<u>152,741,951</u>
Investment income	134,103,217	324,135,736
Less investment expense	<u>17,585,825</u>	<u>17,748,344</u>
Net gain from investment activities	116,517,392	306,387,392
Income from securities lending	787,831	1,186,186
Less securities lending expenses	<u>(386,458)</u>	<u>(285,825)</u>
Net income from securities lending	<u>1,174,289</u>	<u>1,472,011</u>
Total additions	<u>248,380,586</u>	<u>460,601,354</u>
Deductions:		
Retiree benefits	150,413,170	153,566,262
Disability benefits	44,127,146	46,635,541
Survivor benefits	8,233,185	8,601,914
Refunds and distributions	2,495,447	1,925,124
Administrative expenses	<u>3,545,654</u>	<u>2,400,996</u>
Total deductions	<u>208,814,602</u>	<u>213,129,837</u>
Net increase (decrease)	39,565,984	247,471,517
Net assets held in trust for pension benefits, beginning of year	<u>2,897,207,710</u>	<u>2,936,773,694</u>
Net assets held in trust for pension benefits, end of year	<u>\$ 2,936,773,694</u>	<u>\$ 3,184,245,211</u>

**RECONCILIATION OF MARKET VALUE OF ASSETS  
ALLOCATION BETWEEN GRIP AND NON-GRIP ASSETS**

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	Fiscal Year Ending June 30, 2012	Fiscal Year Ending June 30, 2013		Total
	Total	Non-GRIP	GRIP	
Additions:				
Contributions:				
Employer	\$ 107,855,595	\$ 122,751,957	\$ 5,135,663	\$ 127,887,620
Members	22,833,310	21,891,647	2,962,684	24,854,331
Total contributions	<u>130,688,905</u>	<u>144,643,604</u>	<u>8,098,347</u>	<u>152,741,951</u>
Net Investment income	<u>117,691,681</u>	<u>300,194,516</u>	<u>7,664,887</u>	<u>307,859,403</u>
Total additions	<u>248,380,586</u>	<u>444,838,120</u>	<u>15,763,234</u>	<u>460,601,354</u>
Deductions:				
Benefit Payments and distributions	205,268,948	209,003,552	1,725,289	210,728,841
Administrative expenses	<u>3,545,654</u>	<u>2,265,001</u>	<u>135,995</u>	<u>2,400,996</u>
Total deductions	<u>208,814,602</u>	<u>211,268,553</u>	<u>1,861,284</u>	<u>213,129,837</u>
Net increase (decrease)	39,565,984	233,569,567	13,901,950	247,471,517
Net assets held in trust for pension benefits (beginning of year)	<u>2,897,207,710</u>	<u>2,867,447,583</u>	<u>69,326,111</u>	<u>2,936,773,694</u>
Net assets held in trust for pension benefits (end of year)	<u>\$ 2,936,773,694</u>	<u>\$ 3,101,017,150</u>	<u>\$ 83,228,061</u>	<u>\$ 3,184,245,211</u>

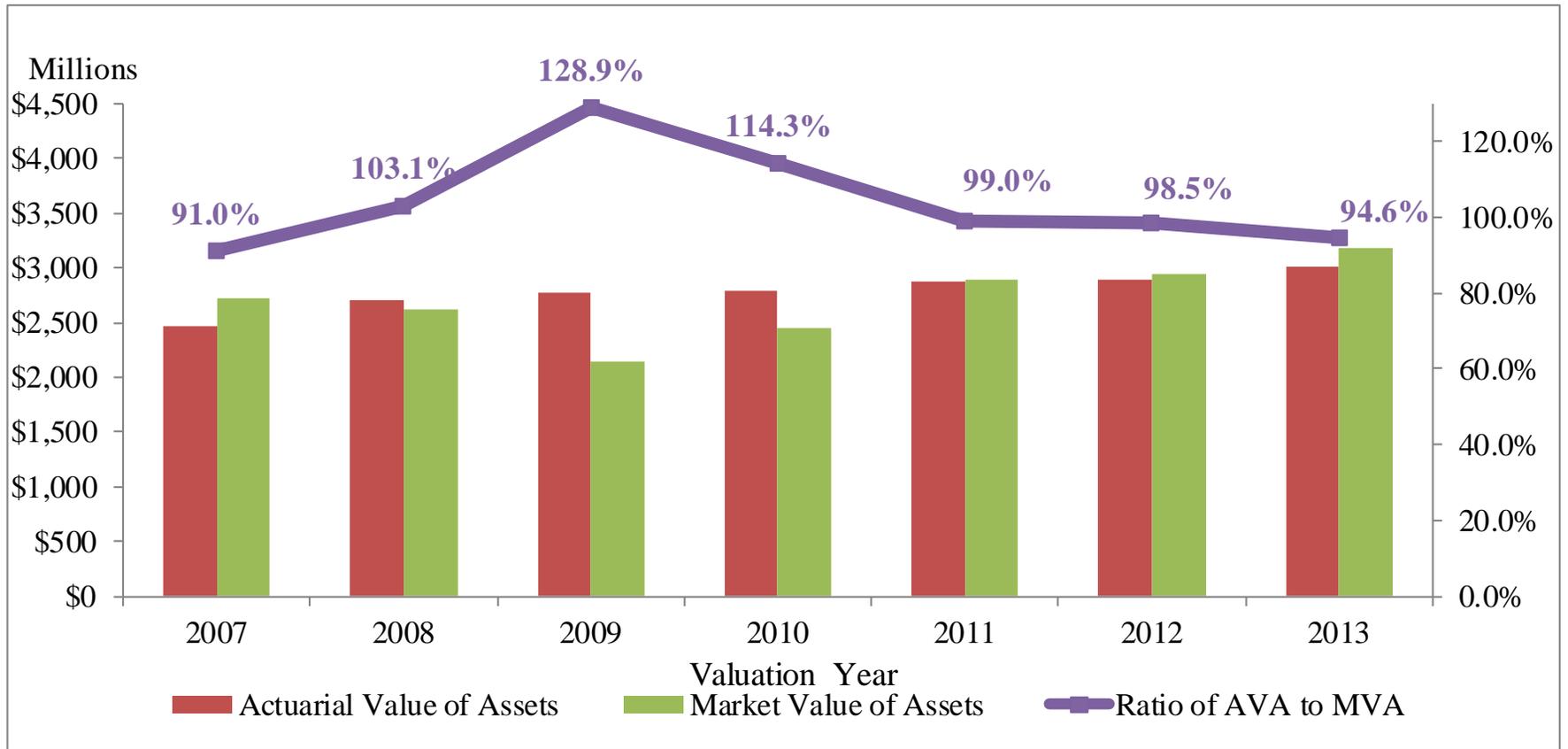
## DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS (TOTAL ERS)

Fiscal Year Ending	2013	2014	2015	2016	2017
Beginning of Year:					
(1) Market Value of Assets	\$ 2,936,773,694				
(2) Actuarial Value of Assets	2,891,435,563				
End of Year:					
(3) Market Value of Assets	3,184,245,211				
(4a) Contributions	152,741,951				
(4b) Net Disbursements	213,129,837				
(5) Total Investment Income					
=(3)-(1)-(4a)+(4b)	307,859,403				
(6) Projected Rate of Return	7.50%				
(7) Projected Investment Income					
=(1)x(6)-([1+(6)] <sup>.5</sup> -1)x(4a-4b)	218,034,420				
(8) Asset Adjustment	0				
(9) Investment Income in Excess of Projected Income	89,824,983				
(10) Excess Investment Income Recognized					
This Year (5 year recognition)					
(10a) From This Year	17,964,997				
(10b) From One Year Ago	(19,346,169)	\$ 17,964,997			
(10c) From Two Years Ago	65,778,647	(19,346,169)	\$ 17,964,997		
(10d) From Three Years Ago	26,319,195	65,778,647	(19,346,169)	\$ 17,964,997	
(10e) From Four Years Ago	(127,251,523)	26,319,196	65,778,645	(19,346,169)	\$ 17,964,995
(10f) Total Recognized Investment Gain/(Loss)	(36,534,853)	90,716,671	64,397,473	(1,381,172)	17,964,995
(11) Change in Actuarial Value of Assets					
=(4a)-(4b)+(7)+(8)+(10f)	121,111,681				
End of Year:					
<b>(3) Market Value of Assets</b>	<b>3,184,245,211</b>				
<b>(12) Final Actuarial Value of Assets as of 6/30 = (2)+(11)</b>	<b>3,012,547,244</b>				
(13) Difference Between Market & Actuarial Values	171,697,967				
(14) Estimated Market Value Rate of Return on Total Plan Assets	10.59%				
(15) Estimated Market Value Return on Invested Plan Assets	10.34%				
(16) Actuarial Value Rate of Return	6.34%				
(17) Ratio of Actuarial Value to Market Value	95%				

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

Fiscal Year Ending	2013	2014	2015	2016	2017
Beginning of Year:					
(1) Market Value of Assets	\$ 69,326,111				
(2) Actuarial Value of Assets	66,349,577				
End of Year:					
(3) Market Value of Assets	83,228,061				
(4a) Contributions	8,098,347				
(4b) Net Disbursements	1,861,284				
(5) Total Investment Income					
=(3)-(1)-(4a)+(4b)	7,664,887				
(6) Projected Rate of Return	7.50%				
(7) Projected Investment Income					
=(1)x(6)-([1+(6)] <sup>5</sup> -1)x(4a-4b)	5,429,120				
(8) Asset Adjustment	0				
(9) Investment Income in Excess of Projected Income	2,235,767				
(10) Excess Investment Income Recognized					
This Year (5 year recognition)					
(10a) From This Year	447,153				
(10b) From One Year Ago	(430,854)	\$ 447,153			
(10c) From Two Years Ago	1,286,347	(430,854)	\$ 447,153		
(10d) From Three Years Ago	420,454	1,286,347	(430,854)	\$ 447,153	
(10e) From Four Years Ago	0	420,454	1,286,347	(430,853)	\$ 447,155
(10f) Total Recognized Investment Gain/(Loss)	1,723,100	1,723,100	1,302,646	16,300	447,155
(11) Change in Actuarial Value of Assets					
=(4a)-(4b)+(7)+(8)+(10f)	13,389,283				
End of Year:					
<b>(3) Market Value of Assets</b>	<b>83,228,061</b>				
<b>(12) Final Actuarial Value of Assets as of 6/30 = (2)+(11)</b>	<b>79,738,860</b>				
(13) Difference Between Market & Actuarial Values	3,489,201				
(14) Estimated Market Value Rate of Return on Total Plan Assets	10.58%				
(15) Estimated Market Value Return on Invested Plan Assets	10.34%				
(16) Actuarial Value Rate of Return	10.30%				
(17) Ratio of Actuarial Value to Market Value	96%				

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



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## **SECTION B**

### **GASB STATEMENTS NOS. 25 AND 27**

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**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.**

## SCHEDULE OF FUNDING PROGRESS FOR GASB #25

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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]
7/1/2008	\$ 2,701,119,470	\$ 3,341,549,425	\$ 640,429,955	80.8 %	\$ 376,002,333	170.3 %
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

*Amounts prior to 2012 as shown in prior actuary's report.  
Total payroll includes DRSP and DROP payroll.*

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**SCHEDULE OF EMPLOYER CONTRIBUTIONS FOR GASB #25**

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<b>Fiscal Year Ended</b>	<b>Annual Required Contribution (a)</b>	<b>Total Employer Contribution (b)</b>	<b>Percentage Contributed (b / a)</b>
6/30/2008	\$ 117,686,375	\$ 117,686,375	100.0 %
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

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

## SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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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:

<i>Valuation Date</i>	July 1, 2013
<i>Actuarial Cost Method</i>	Projected Unit Credit (non-GRIP) Traditional Unit Credit (GRIP)
<i>Actuarial Value of Assets</i>	5-year smoothed market
<i>Amortization Method</i>	Level percentage of pay, separate closed period bases
<i>Amortization Period</i>	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 15 years

### *Actuarial Assumptions:*

<i>Investment Rate of Return</i>	7.50% per year
<i>Projected Salary Increases</i>	Wage inflation of 4.0% per year plus additional service-based increases of up to 5.25%
<i>Cost of Living Increases</i>	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

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**SECTION C**  
VALUATION DATA

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## SUMMARY OF PARTICIPANT DATA (JULY 1, 2013 AND JULY 1, 2012)

	Valuation as of July 1, 2013							
	Non-Public Safety		Public Safety				GRIP	Total
	Group A	Group H	Group E	Group F	Group G			
<b>Total All Plans</b>								
Active Members								
Number	576	884	619	1,101	1,053	1,202	5,435	
Average Age	56.3	56.2	43.5	38.5	37.9	49.4	46.1	
Average Service	25.8	23.9	12.2	13.2	12.2	8.5	14.9	
Total Base Payroll	\$ 52,169,701	\$ 59,235,390	\$ 40,996,829	\$ 80,387,753	\$ 71,798,132	\$ 74,797,959	\$ 379,385,763	
Contribution Basis Payroll	44,698,766	50,789,970	36,154,764	74,410,216	66,683,416	67,953,529	340,690,660	
DRSP/DROP Members								
Number				68	103		171	
Total Base Payroll				\$ 6,649,533	\$ 9,952,730		\$ 16,602,263	
Total Benefits				4,783,402	6,325,902			
Terminated Vested Members								
Number	63	82	20	34	17	142	358	
Total Benefits	\$ 675,255	\$ 635,023	\$ 193,353	\$ 366,393	\$ 117,331		\$ 1,987,355	
Retired Members and Beneficiaries								
Number						1	5,961	
Total Benefits						\$ 5,024	\$ 210,686,878	
Total Membership							11,925	

	Valuation as of July 1, 2012							
	Non-Public Safety		Public Safety				GRIP	Total
	Group A	Group H	Group E	Group F	Group G			
<b>Total All Plans</b>								
Active Members								
Number	609	963	614	1,040	1,036	1,102	5,364	
Average Age	55.8	55.5	43.4	38.7	38.0	49.3	46.3	
Average Service	25.3	23.1	12.1	13.5	12.3	8.0	15.0	
Total Base Payroll	\$ 55,278,025	\$ 64,285,054	\$ 41,165,673	\$ 77,946,056	\$ 71,842,678	\$ 69,255,000	\$ 379,772,487	
Contribution Basis Payroll	47,681,140	55,807,312	36,461,856	72,524,767	66,872,031	63,189,877	342,536,983	
DRSP/DROP Members								
Number				85	105		190	
Total Base Payroll				\$ 8,370,461	\$ 10,317,300		\$ 18,687,761	
Total Benefits				6,145,388	6,608,297		12,753,685	
Terminated Vested Members								
Number	89	109	27	41	20	127	413	
Total Benefits	\$ 1,011,052	\$ 845,997	\$ 303,181	\$ 598,299	\$ 151,881		\$ 2,910,410	
Retired Members and Beneficiaries								
Number							5,824	
Total Benefits							\$ 203,710,715	
Total Membership							11,791	



## AGE/SERVICE BY GROUP AS OF JULY 1, 2013

### Group A

Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 and Over	Totals	Valuation Payroll
Under 25	-	-	-	-	-	-	-	-	-	0	\$ -
25-29	-	-	-	-	-	-	-	-	-	0	-
30-34	1	1	-	-	-	-	-	-	-	2	106,024
35-39	-	3	2	2	-	-	-	-	-	7	455,465
40-44	-	1	1	5	13	3	-	-	-	23	1,596,043
45-49	-	-	2	9	44	17	3	-	-	75	6,143,727
50-54	-	-	-	10	52	52	11	3	-	128	11,907,944
55-59	-	2	3	6	47	68	18	17	-	161	15,168,361
60-64	-	1	1	9	27	55	16	16	3	128	11,962,475
65-69	-	-	1	1	4	17	10	6	-	39	3,686,858
70-74	-	-	-	-	6	2	-	-	1	9	848,319
75 and Over	-	-	-	-	-	2	2	-	-	4	294,486
<b>Total</b>	<b>1</b>	<b>8</b>	<b>10</b>	<b>42</b>	<b>193</b>	<b>216</b>	<b>60</b>	<b>42</b>	<b>4</b>	<b>576</b>	<b>\$ 52,169,702</b>

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:	56.3	Average Age:	55.8
Average Service:	25.8	Average Service:	25.3
Average Annual Pay:	\$90,572	Average Annual Pay:	\$90,769
Vested Participants	575	Vested Participants	608
Nonvested Participants	1	Nonvested Participants	1

### Group H

Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 and Over	Totals	Valuation Payroll
Under 25	-	-	-	-	-	-	-	-	-	0	\$ -
25-29	-	3	-	-	-	-	-	-	-	3	139,898
30-34	-	4	2	-	-	-	-	-	-	6	316,576
35-39	1	1	1	-	-	-	-	-	-	3	200,223
40-44	2	2	2	17	18	5	-	-	-	46	2,962,552
45-49	-	2	14	28	52	22	-	-	-	118	7,587,457
50-54	-	1	6	29	88	60	15	1	-	200	13,560,505
55-59	-	1	7	36	74	83	22	11	1	235	15,885,453
60-64	1	1	5	28	55	46	30	13	4	183	12,669,450
65-69	-	-	1	10	24	18	7	3	3	66	4,453,929
70-74	-	1	-	3	9	4	1	2	1	21	1,278,411
75 and Over	-	-	-	1	-	2	-	-	-	3	180,937
<b>Total</b>	<b>4</b>	<b>16</b>	<b>38</b>	<b>152</b>	<b>320</b>	<b>240</b>	<b>75</b>	<b>30</b>	<b>9</b>	<b>884</b>	<b>\$ 59,235,391</b>

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:	56.2	Average Age:	55.5
Average Service:	23.9	Average Service:	23.1
Average Annual Pay:	\$67,008	Average Annual Pay:	\$66,755
Vested Participants	880	Vested Participants	956
Nonvested Participants	4	Nonvested Participants	7

## AGE/SERVICE BY GROUP AS OF JULY 1, 2013

### Group E

Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 and Over	Totals	Valuation Payroll
Under 25	13	-	-	-	-	-	-	-	-	13	\$ 557,783
25-29	28	11	-	-	-	-	-	-	-	39	1,767,411
30-34	22	38	11	-	-	-	-	-	-	71	3,735,756
35-39	12	29	46	10	-	-	-	-	-	97	5,912,868
40-44	6	31	28	36	4	-	-	-	-	105	7,065,916
45-49	6	25	32	30	31	11	-	-	-	135	9,912,445
50-54	3	14	30	10	13	15	2	-	-	87	6,603,582
55-59	5	4	15	9	11	5	3	-	-	52	3,887,121
60-64	-	2	4	1	4	2	1	-	-	14	1,099,631
65-69	1	-	3	-	1	1	-	-	-	6	454,316
70-74	-	-	-	-	-	-	-	-	-	0	-
75 and Over	-	-	-	-	-	-	-	-	-	0	-
<b>Total</b>	<b>96</b>	<b>154</b>	<b>169</b>	<b>96</b>	<b>64</b>	<b>34</b>	<b>6</b>	<b>-</b>	<b>-</b>	<b>619</b>	<b>\$ 40,996,829</b>

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:	43.4
Average Service:	12.2	Average Service:	12.1
Average Annual Pay:	\$66,231	Average Annual Pay:	\$67,045
Vested Participants	523	Vested Participants	507
Nonvested Participants	96	Nonvested Participants	107

### Group F

Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 and Over	Totals	Valuation Payroll
Under 25	42	-	-	-	-	-	-	-	-	42	\$ 1,978,545
25-29	114	56	-	-	-	-	-	-	-	170	8,952,178
30-34	26	141	35	-	-	-	-	-	-	202	12,503,232
35-39	9	53	95	25	-	-	-	-	-	182	12,995,671
40-44	6	23	56	138	34	1	-	-	-	258	21,400,645
45-49	-	12	14	51	58	35	1	-	-	171	15,541,040
50-54	-	1	1	10	19	49	18	-	-	98	9,492,265
55-59	3	1	1	2	2	9	16	3	-	37	3,318,113
60-64	-	-	-	1	1	-	3	2	1	8	768,823
65-69	-	-	-	-	-	1	-	-	-	1	86,773
70-74	-	-	-	-	-	-	-	-	-	0	-
75 and Over	-	-	-	-	-	-	-	-	-	0	-
<b>Total</b>	<b>200</b>	<b>287</b>	<b>202</b>	<b>227</b>	<b>114</b>	<b>95</b>	<b>38</b>	<b>5</b>	<b>1</b>	<b>1,169</b>	<b>\$ 87,037,285</b>

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:	39.4	Average Age:	39.9
Average Service:	14.6	Average Service:	14.7
Average Annual Pay:	\$74,454	Average Annual Pay:	\$76,726
Vested Participants	969	Vested Participants	1,013
Nonvested Participants	200	Nonvested Participants	112

Data includes DRSP members.

## AGE/SERVICE BY GROUP AS OF JULY 1, 2013

### Group G

Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 and Over	Totals	Valuation Payroll
Under 25	69	6	-	-	-	-	-	-	-	75	\$ 3,291,336
25-29	62	96	1	-	-	-	-	-	-	159	7,702,559
30-34	22	121	41	2	-	-	-	-	-	186	10,563,873
35-39	12	67	54	42	-	-	-	-	-	175	11,615,144
40-44	1	37	64	53	53	8	-	-	-	216	17,218,276
45-49	2	11	18	33	49	64	-	-	-	177	15,601,808
50-54	1	6	2	3	21	49	24	1	-	107	9,958,874
55-59	-	3	1	2	5	19	18	6	-	54	5,088,588
60-64	-	1	-	-	-	2	-	1	1	5	456,804
65-69	-	-	-	-	-	1	-	-	1	2	253,602
70-74	-	-	-	-	-	-	-	-	-	0	-
75 and Over	-	-	-	-	-	-	-	-	-	0	-
<b>Total</b>	<b>169</b>	<b>348</b>	<b>181</b>	<b>135</b>	<b>128</b>	<b>143</b>	<b>42</b>	<b>8</b>	<b>2</b>	<b>1,156</b>	<b>\$ 81,750,864</b>

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:	39.3	Average Age:	39.3
Average Service:	13.6	Average Service:	13.8
Average Annual Pay:	\$70,719	Average Annual Pay:	\$72,007
Vested Participants	987	Vested Participants	957
Nonvested Participants	169	Nonvested Participants	184

Data includes DROP members.

### Group GRIP

Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 and Over	Totals	Valuation Payroll
Under 25	5	1	-	-	-	-	-	-	-	6	\$ 235,082
25-29	50	4	1	-	-	-	-	-	-	55	2,509,777
30-34	52	27	5	-	-	-	-	-	-	84	3,899,874
35-39	38	37	29	6	-	-	-	-	-	110	6,483,350
40-44	38	56	38	13	-	-	-	-	-	145	8,950,120
45-49	48	63	45	16	2	2	-	-	-	176	10,838,216
50-54	50	76	72	19	4	1	-	-	-	222	14,209,348
55-59	41	65	64	37	2	-	-	-	-	209	13,728,577
60-64	27	39	47	16	1	1	-	-	-	131	9,337,708
65-69	2	13	21	11	-	-	-	-	-	47	3,476,007
70-74	1	1	9	3	-	-	-	-	-	14	917,271
75 and Over	-	1	1	1	-	-	-	-	-	3	212,631
<b>Total</b>	<b>352</b>	<b>383</b>	<b>332</b>	<b>122</b>	<b>9</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,202</b>	<b>\$ 74,797,961</b>

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:	49.4	Average Age:	49.3
Average Service:	8.5	Average Service:	8
Average Annual Pay:	\$62,228	Average Annual Pay:	\$62,845
Vested Participants	996	Vested Participants	896
Nonvested Participants	206	Nonvested Participants	206

## AGE/SERVICE BY GROUP AS OF JULY 1, 2013

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### Total All Groups

Current Age	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 and Over	Totals	Valuation Payroll
Under 25	129	7	-	-	-	-	-	-	-	136	\$ 6,062,746
25-29	254	170	2	-	-	-	-	-	-	426	21,071,823
30-34	123	332	94	2	-	-	-	-	-	551	31,125,335
35-39	72	190	227	85	-	-	-	-	-	574	37,662,721
40-44	53	150	189	262	122	17	-	-	-	793	59,193,552
45-49	56	113	125	167	236	151	4	-	-	852	65,624,693
50-54	54	98	111	81	197	226	70	5	-	842	65,732,518
55-59	49	76	91	92	141	184	77	37	1	748	57,076,213
60-64	28	44	57	55	88	106	50	32	9	469	36,294,891
65-69	3	13	26	22	29	38	17	9	4	161	12,411,485
70-74	1	2	9	6	15	6	1	2	2	44	3,044,001
75 and Over	-	1	1	2	-	4	2	-	-	10	688,054
<b>Total</b>	<b>822</b>	<b>1,196</b>	<b>932</b>	<b>774</b>	<b>828</b>	<b>732</b>	<b>221</b>	<b>85</b>	<b>16</b>	<b>5,606</b>	<b>\$ 395,988,032</b>

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:	46.1	Average Age:	46.3
Average Service:	14.9	Average Service:	15.0
Average Annual Pay:	\$70,636	Average Annual Pay:	\$71,743
Vested Participants	4,930	Vested Participants	4,937
Nonvested Participants	676	Nonvested Participants	617

Data includes DRSP and DROP members.

## SCHEDULE OF ACTIVE MEMBER DATA AS OF JULY 1, 2013

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<b>Valuation Date 7/1</b>	<b>Number</b>	<b>Annual Payroll</b>	<b>Average Annual Pay</b>	<b>% Increase in Avg Pay</b>
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%

*Counts and payroll include DRSP and DROP members.*

## SCHEDULE OF MEMBERS IN PAY STATUS AS OF JULY 1, 2013

Valuation Date 7/1	Annuitants	Survivors	Disableds	Total Number	Total Annual Benefits	Total Average 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

*Total Annual Benefits first shown in actuarial valuation report in 2012. Amounts in prior years are not readily available.*

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**SECTION D**

VALUATION PROCEDURES

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## ACTUARIAL COST METHOD

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*Normal cost and the allocation of benefit values* between service rendered before and after the valuation date for **non-GRIP** was determined using the *Projected Unit Credit actuarial cost method* having the following characteristics:

- The normal cost for each individual active member equals the portion of the actuarial present value of projected benefits allocated to service during the current year; and
- The actuarial accrued liability for each individual active member equals the portion of the actuarial present value of projected benefits allocated to service earned during prior plan years and includes the value of future salary increases. The actuarial accrued liability for retired and inactive members equals the present value of benefits.

*Normal cost and the allocation of benefit values* between service rendered before and after the valuation date for **GRIP** was determined using the *Traditional Unit Credit actuarial cost method* having the following characteristics:

- The normal cost for each individual active member equals the portion of the actuarial present value of projected benefits allocated to service during the current year; and
- The actuarial accrued liability for each individual active member equals the portion of the actuarial present value of projected benefits allocated to service earned during prior plan years and excludes the value of future salary increases. The actuarial accrued liability for retired and inactive members equals the present value of benefits.

*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.

## ACTUARIAL ASSUMPTIONS IN THE VALUATION PROCESS

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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

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**The assumed rate of price inflation** is 3.00%.

**The assumed COLA** is as follows:

	<b>Assumed COLA</b>
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.

<b>Salary Increases</b>		
<b>Service</b>	<b>Public Safety</b>	<b>Non-Public Safety*</b>
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%

*\*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%.

## VALUATION ASSUMPTIONS (CONTINUED)

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.

Age	Healthy Mortality			
	Mortality Rate		Future Life Expectancy (years)	
	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

Age	Disabled Mortality			
	Mortality Rate		Future Life Expectancy (years)	
	Men	Women	Men	Women
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.

## VALUATION ASSUMPTIONS (CONTINUED)

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**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.

<u>Service</u>	<u>Groups A and H (Non Public Safety)</u>	<u>Groups E, F, G (Public Safety)</u>	<u>GRIP</u>
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%

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

**VALUATION ASSUMPTIONS  
(CONTINUED)**

Rates of disability were as follows:

Age	Non-Public Safety Groups A and H		Group E		Public Safety Group F		Group G	
	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:

Group	Total Non-Service Connected	Total Service Connected	Service Connected Disability		
			Total Incapacity 70% Benefit	Partial Incapacity 52.5% Benefit	Alternate Position 5% Pay Increase
A	60%	40%	20%	20%	NA
H	60%	40%	20%	20%	NA
E	15%	85%	25%	60%	NA
F	7%	93%	28%	65%	NA
G	7%	93%	26%	62%	5%

## VALUATION ASSUMPTIONS (CONTINUED)

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

Age	Groups A and H (Non Public Safety)			Group E		Group F				Group G		GRIP
	1st Elig. for Normal Ret			1st Elig. For	Ultimate	Before	1st Elig. For	Ultimate	30 through	1st Elig. For	Ultimate	Rate
	PT/SLT	Non-PT/SLT	Ultimate Rate	Normal Ret	Rate	1st Elig.	Normal Ret	Rate	35 Years	Normal Ret	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	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

## VALUATION ASSUMPTIONS (CONTINUED)

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**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.

<b>Group</b>	<b>Years of Sick Leave Per Year of Credited Service</b>
A	0.020
E	0.024
F	0.045
G	0.032
H	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>	<b>Normal Form</b>	<b>Assumed in Valuation</b>
Mandatory Integrated	Life Annuity, guaranteed returned employee contributions with interest	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 Operation:**

Turnover decrements do not operate after the member reaches retirement eligibility.

**Eligibility Testing:**

Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.

**Pay Increase Timing:**

End of (fiscal) year.

## VALUATION ASSUMPTIONS (CONTINUED)

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**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:

<b>Valuation Year</b>	<b>Assumed Expenses Added to Normal Cost</b>
2011	\$2,940,000
2012	\$3,177,300
2013	\$3,008,700

**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.

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**SECTION E**  
BENEFIT PROVISIONS

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## **BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013**

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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.

**BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013  
(CONTINUED)**

- 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
<b>Group A</b>	6%	6%	7%	8%
<b>Group B*</b>	7%	n/a	n/a	n/a
<b>Group D**</b>	n/a	n/a	n/a	n/a
<b>Group E</b>	7½%	8½%	9½%	10½%
<b>Group F</b>	7½%	8½%	9½%	10½%
<b>Group G</b>	7½%	8½%	9½%	10½%
<b>Group H</b>	6%	6%	7%	8%

\* The last Group B member retired August 1, 1998

\*\* The last Group D member retired November 1, 1992

B. Optional integrated plan:

	Prior to 7/1/2001*		Effective 7/1/2001*		Effective 7/1/2011		Effective 7/1/2012 and After	
	Up to SSTWB	In excess of SSTWB	Up to SSTWB	In excess of SSTWB	Up to SSTWB	In excess of SSTWB	Up to SSTWB	In excess of SSTWB
<b>Group A</b>	3%	6%	4%	6%	5%	7%	6%	8%
<b>Group B**</b>	3½%	7%	4½%	7%	n/a	n/a	n/a	n/a
<b>Group D</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Group E</b>	3¾%	7½%	4¾%	8½%	5¾%	9½%	6¾%	10½%
<b>Group F</b>	4%	8%	4¾%	8½%	5¾%	9½%	6¾%	10½%
<b>Group G with less than 25 years of service</b>								
	4¾%	8½%	5½%	9¼%	6½%	10¼%	7½%	11¼%
<b>Group G with at least 25 years of service</b>								
	4¾%	8½%	4¾%	8½%	5¾%	9½%	6¾%	10½%
<b>Group H</b>	3%	6%	4%	6%	5%	7%	6%	8%

\* 7/1/2007 for Group G

\*\* The last Group B member retired February 1, 2008

SSTWB means Social Security Taxable Wage Base.

**BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013  
(CONTINUED)**

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C. Mandatory integrated plan:

	Prior to 7/1/2001*		Effective 7/1/2001*		Effective 7/1/2011		Effective 7/1/2012 and After	
	Up to SSTWB	In excess of SSTWB	Up to SSTWB	In excess of SSTWB	Up to SSTWB	In excess of SSTWB	Up to SSTWB	In excess of SSTWB
<b>Group A</b>	3%	6%	4%	6%	5%	7%	6%	8%
<b>Group B</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Group D</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Group E</b>	3¾%	7½%	4¾%	8½%	5¾%	9½%	6¾%	10½%
<b>Group F</b>	4%	8%	4¾%	8½%	5¾%	9½%	6¾%	10½%
<b>Group G with less than 25 years of service</b>								
	4¾%	8½%	5½%	9¼%	6½%	10¼%	7½%	11¼%
<b>Group G with at least 25 years of service</b>								
	4¾%	8½%	4¾%	8½%	5¾%	9½%	6¾%	10½%
<b>Group H</b>	3%	6%	4%	6%	5%	7%	6%	8%

\*7/1/2007 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

# BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013 (CONTINUED)

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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

## 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.

## BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013 (CONTINUED)

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- 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.

## BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013 (CONTINUED)

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- 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 21st year through 24th year, plus 8% of average final earnings for the 25th 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. Integrated plans:

#### 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 21st year through 24th year, plus 8% of average final earnings for the 25th 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

## BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013 (CONTINUED)

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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.

**BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013  
(CONTINUED)**

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- 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
MONTHS EARLY	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%	
	2	99.67%	97.50%	94.33%	90.17%	85.00%	78.67%	70.67%	62.67%	54.67%	46.67%	
	3	99.50%	97.25%	94.00%	89.75%	84.50%	78.00%	70.00%	62.00%	54.00%	46.00%	
	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%	
	6	99.00%	96.50%	93.00%	88.50%	83.00%	76.00%	68.00%	60.00%	52.00%	44.00%	
	7	98.83%	96.25%	92.67%	88.08%	82.50%	75.33%	67.33%	59.33%	51.33%	43.33%	
	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 33½% of final earnings.

B. Service-connected disability retirement:

Age and service requirement: None

## BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013 (CONTINUED)

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Benefit amount:

1. For total incapacity: The greater of the accrued benefit under 11(B) or 66 $\frac{2}{3}$ % 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 52 $\frac{1}{2}$ % 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 52 $\frac{1}{2}$ % 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.
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#### 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*

## BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013 (CONTINUED)

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*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

**BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013**  
**(CONTINUED)**

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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

**BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013**  
**(CONTINUED)**

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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.

*\* 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.

**BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013  
(CONTINUED)**

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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:

<i>Modified Cash Refund Annuity</i>	Lifetime benefit with return of employee contributions with interest guaranteed
<i>10-Year Certain and Continuous Annuity</i>	Lifetime benefit with 120 monthly payments guaranteed
<i>Social Security Adjustment Option Combined with either Modified Cash Refund Annuity or a 10-Year Certain and Continuous Annuity</i>	Provides a nearly level total income, from the Plan and Social Security, from date of retirement to date of death. At death, payment will continue to the beneficiary if the guarantee provided under the normal form of payment has not been exhausted.
<i>Joint and Survivor Annuity</i>	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.
<i>Joint and Survivor Annuity with Pop-Up</i>	Provides a lifetime benefit and a continuation of a percentage of 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.
<i>Social Security Adjustment Option Combined with Joint and Survivor Annuity Option</i>	Provides a nearly level total income, from the Plan and Social Security, from date of retirement to date of death and a continuation of a percentage of the retiree benefit upon death to the beneficiary. The minimum percentage is 10%.
<i>Social Security Adjustment Option Combined with Joint and Survivor Annuity Pop-Up Option</i>	Provides a nearly level total income, from the Plan and Social Security, from date of retirement to date of death and a continuation of a percentage of 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.

**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%.

## **BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013 (CONTINUED)**

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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.

## BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013 (CONTINUED)

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### 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

**BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013**  
**(CONTINUED)**

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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. Deferred Retirement Option Plan (DROP) for Group G

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

## BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013 (CONTINUED)

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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.
- 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.

#### 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 may 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 is 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 is 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.

## **BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013 (CONTINUED)**

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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)

The Retirement Incentive Program 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

## **BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2013 (CONTINUED)**

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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 actuarial valuation as of July 1, 2012.

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**SECTION F**  
**GLOSSARY OF TERMS**

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## GLOSSARY OF TERMS

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**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 \$1.08 after a year, the asset return is 8.00 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.”