

MONTGOMERY COUNTY EMPLOYEES' RETIREMENT SYSTEM
ACTUARIAL VALUATION AS OF JULY 1, 2015

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November 24, 2015

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

Dear Linda:

We are pleased to provide our formal annual Actuarial Valuation Report as of July 1, 2015, for the Montgomery County Employees' Retirement System ("System"). The actuarial valuation was performed at the request of Montgomery County ("County") and is intended for use by the County and the System and those designated by the County and the System. This report may be provided to parties other than the County and System only in its entirety and only with the permission of the County and System.

This report provides, among other things, the recommended annual contribution to the System for the Plan Year commencing July 1, 2016, and ending on June 30, 2017. This valuation also provides historical information through fiscal year 2014 as required by Governmental Accounting Standards Board ("GASB") Statement Nos. 25 and 27. Information required by GASB Statement Nos. 67 and 68 is provided in a separate report. This report should not be relied on for any purpose other than the purpose described.

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 census data for active members, terminated members, retirees and beneficiaries as of July 1, 2015. 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.

The actuarial assumptions used were based on an experience review for the five-year period ending July 1, 2014, and were first adopted for use commencing with the July 1, 2015, valuation. The actuarial cost method used in this valuation is the same as the actuarial cost method used in the prior valuation. The amortization period used to calculate the unfunded liability portion of the contribution rate was changed to a single nine-year closed period for the Non-Public Safety groups and separate 20-year closed periods for the Public Safety groups and GRIP. The average County contribution requirement as a percentage of payroll calculated in this valuation is approximately 8 percent of pay lower than the County contribution requirement calculated in the last actuarial valuation. The current amortization periods are reasonable. However, because the System is less than 100 percent funded, we recommend that either a shorter amortization period be used for the unfunded liability as of July 1, 2015, or an additional contribution be made in fiscal year 2017, in addition to the amount calculated under the current amortization period.

Effective July 1, 2015, a DROP was implemented for eligible uniformed correctional officers and sworn deputy sheriffs participating in Group E. This provision change has been reflected in this valuation. All other plan provisions have remained unchanged since the last valuation, performed as of July 1, 2014.

To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Montgomery County Employees' Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Lance Weiss and Amy Williams are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

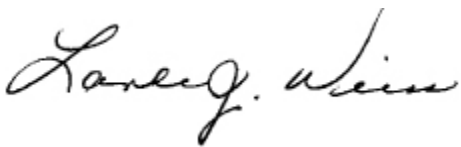
The signing actuaries are independent of the plan sponsor.

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.

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.
Senior Consultant



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AW:rg

SECTION A
VALUATION RESULTS

COMMENTS ON THE VALUATION

At your request, we have performed an actuarial valuation of the Montgomery County Employees' Retirement System as of July 1, 2015.

The purposes of this actuarial valuation are as follows:

- To determine the funding status of the System as of the valuation date;
- To determine the recommended contribution for the fiscal year beginning July 1, 2016; and
- To provide other data required by the System.

Pension plan financial reporting and employer financial reporting under GASB Statement Nos. 67 and 68 is provided in a separate report. Historical information through fiscal year ending June 30, 2014, required under GASB Statements Nos. 25 and 27 and additional background on the change in the accounting standards can be found in Section B.

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 5,541 active members (excluding DRSP and DROP) were included in the valuation as of July 1, 2015. Between the 2014 and 2015 valuations, the number of active employees increased by six members, or 0.1 percent. The average annual valuation pay (excluding DRSP and DROP) increased by 3.8 percent, from \$72,791 to \$75,569 between the 2014 and 2015 valuation. The number of benefit recipients (including DRSP and DROP) increased from 6,242 to 6,380, or 2.2 percent, since the last valuation. The average monthly benefit increased by 0.4 percent, from \$3,065 to \$3,077. 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. Effective July 1, 2015, a DROP was implemented for eligible uniformed correctional officers and sworn deputy sheriffs participating in Group E. This plan change has been reflected in this actuarial valuation as of July 1, 2015. There were no other plan changes since the last actuarial valuation as of July 1, 2014.

Since the July 1, 2014, actuarial valuation, an experience review of the Montgomery County Employees' Retirement System for the period from July 1, 2009, to July 1, 2014, was performed. The primary purpose of the study was to compare the actual demographic and economic experience against the actuarial assumptions used in the valuations. The study was based on the information used to perform the annual actuarial valuations for the period from July 1, 2009, to July 1, 2014.

Following is a summary of the key findings and changes, as approved by the Directors:

- **Price Inflation:** Decrease the price inflation assumption from 3.00 percent to 2.75 percent. The price inflation assumption underlies all economic assumptions including: investment return, retiree COLA, payroll growth and salary increase.

COMMENTS ON THE VALUATION (CONTINUED)

- **Investment Return:** Maintain the investment return assumption of 7.50 percent, net of investment expenses, compounded annually. This reflects an underlying price inflation assumption of 2.75 percent.
- **Retiree COLA:** Decrease the retiree COLA assumption from 3.00 percent to 2.75 percent based on increases equal to 100 percent of the increase in the Consumer Price Index (CPI) and from 1.80 percent to 1.65 percent based on increases equal to 60 percent of the increase in CPI. Maintain the assumption of 2.30 percent for increases that are based on 100 percent of the increase in CPI and capped at 2.50 percent (increases for benefits attributable to service after July 1, 2011).
- **Payroll Growth Assumption:** Decrease the payroll growth assumption from 4.00 percent to 3.25 percent, which reflects a decrease in the underlying inflation assumption from 3.00 percent to 2.75 percent, and a decrease in the underlying productivity increase assumption from 1.00 percent to 0.50 percent.
- **Salary Increase:** Decrease the salary increase assumption to reflect 3.25 percent wage inflation (2.75 percent inflation plus 0.50 percent for productivity) increases plus a service-based component for merit and promotional increases.
- **Retirement Rates:** Modify the retirement rate structure from having different age-based rates that depend on whether a member has reached first retirement eligibility to age-based rates that differ based on the number of years of service that a member has completed. In addition, increase the age at which 100 percent retirement is assumed from age 70 to 75 for the non-public safety plans (including GRIP) and from 60 to 65 for the public safety plans.
- **Turnover Rates:** Modify the current service-based rates in order to recognize differences in turnover patterns between males and females and between the public safety groups.
- **Mortality Rates:** Update the mortality table from the RP 2000 Combined Mortality table, with a static projection to the year 2030 for healthy mortality and to 2010 for disabled mortality, to the RP-2014 Mortality tables with projected generational mortality improvements based on scale MP-2014.
- **Cost Method:** Maintain the entry age normal actuarial cost method.
- **Amortization Period:** The amortization period was changed from an 18-year closed period amortization of the base established on July 1, 2010, and 20-year closed period amortization of the bases established thereafter, to recombining all amortization bases established prior to July 1, 2015, into a single amortization base equal to the unfunded actuarial liability as of July 1, 2015. The single amortization base as of July 1, 2015, and subsequent unfunded liability arising in future valuations are amortized over a single nine-year closed period for Non-Public Safety groups and separate 20-year closed periods for Public Safety groups and GRIP beginning July 1, 2015.
- **Amortization Method:** Maintain level percentage of pay amortization method.

COMMENTS ON THE VALUATION (CONTINUED)

- **Asset Smoothing Method:** Maintain smoothing investment gains and losses over a five-year period at a rate of 20 percent per year.
- **Administrative Expenses:** Modify the current administrative expense assumption from 100 percent of the average of actual non-investment administrative expenses incurred in the last three fiscal years to 105 percent of the average of actual non-investment administrative expenses incurred in the last three fiscal years.
- **Dependent Assumptions:** Maintain the current dependent assumptions of 80 percent of members assumed to be married for purposes of valuing the death-in-service benefits and the assumption that males are three years older than their spouses.
- **Unused Leave Time:** Slightly modify the assumption for conversion of unused leave time to pension credit.
- **DROP Participation:** Slightly increase the DROP participation rates for Group F and G from 70 percent to 75 percent. The same DROP participation rate was used for Group E for the DROP implemented on July 1, 2015.

The cost impact of the assumption and method changes measured as of July 1, 2015, can be found on pages A-15.

Section D outlines the actuarial assumptions and methods used in the valuation. The assumption for administrative expenses is equal to 105 percent of the average of the prior three years' administrative expenses. This amount has decreased from \$2,966,800 to \$2,813,800.

During the plan year ending July 1, 2015, the unfunded actuarial accrued liability ("UAAL") decreased from \$625,444,994 as of July 1, 2014, to \$416,023,324 as of July 1, 2015, which is a decrease of \$209,421,670. The key factors contributing to the decrease in the UAAL were changes in assumptions, recognition of deferred asset gains in fiscal years 2011, 2013 and 2014, higher contributions than expected and lower than expected cost of living (COLA) increases for retired members. (The COLA increase was 0.44 percent compared to an assumed COLA increase of 3.00 percent from last year's valuation 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 0.26 percent compared to an assumption of 1.80 percent from last year's valuation.) These gains were partially offset by salary increases greater than assumed, demographic experience and plan improvements for Group E (implementation of a DROP for eligible uniformed correctional officers and sworn deputy sheriffs).

On a market value basis, the Plan assets had an investment return of approximately 2.82¹ percent (net of investment expenses). Partial recognition of investment gains during fiscal years ending 2011, 2013 and 2014 were partially offset by recognition of the fiscal year end 2012 and 2015 investment losses, which resulted in an estimated net asset rate of return of 10.74 percent on an actuarial value of assets basis, which compares to the assumed rate of return of 7.50 percent.

¹ As provided by Montgomery County ERS.

COMMENTS ON THE VALUATION (CONTINUED)

The funded ratio (ratio of assets to liabilities) is 89.6 percent on an actuarial value of assets basis and 90.4 percent on a market value of assets basis.

The funded ratio and unfunded actuarial accrued liability are appropriate for assessing the need for and the amount of future unfunded liability contributions (excludes normal cost contributions). They are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the System's benefit obligations.

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, 2015, was amortized over a closed period of nine years for the non-public safety groups and 20 years for public safety groups and GRIP. The single equivalent amortization period for the System in total as of July 1, 2015, is 11.7 years. The current unfunded liability as of July 1, 2015, is expected to be fully paid off after nine years (at the end of fiscal year 2025) for the non-public safety groups and after 20 years (at the end of fiscal year 2036) for the public safety groups and GRIP.

The unfunded liability is amortized as a level percentage of payroll and assumes that total payroll will increase by 3.25 percent each year. Groups A and H are closed plans (no new members are entering), and payroll is expected to decrease as members retire or otherwise exit the active population. Based on the level percentage of payroll amortization method, the portion of the County contribution rate attributable to the unfunded liability is expected to increase significantly as a percentage of payroll, as payroll declines. However, if all assumptions are realized, the unfunded liability contribution will increase as a dollar amount by 3.25 percent each year. The payroll basis used in calculating the percentage of pay contribution for amortizing the unfunded liability for fiscal year 2017 reflects the assumption that payroll will decrease for the closed groups.

The total contribution rate minus the average employee contribution rate equals the County contribution rate. The valuation as of July 1, 2014, established the County contribution rate for fiscal year beginning July 1, 2015 and ending June 30, 2016. The valuation as of July 1, 2015, establishes the County contribution rate for fiscal year beginning July 1, 2016, and ending June 30, 2017.

Non-GRIP

The amortization payments for non-GRIP members are allocated between Groups A, E, F, G and H. The amortization payment schedule by group for the bases established in the 2010 and 2011 valuations is based on the allocation established by the prior actuary. The amortization payment schedule by group for the bases established beginning in the 2012 valuation is based on allocations calculated by GRS using a consistent method with the prior actuary.

The unfunded liability as of July 1, 2014, was calculated for each group based on the amortization payment amounts in that valuation and the remaining amortization period for each payment. Beginning with the July 1, 2015, valuation, changes in the unfunded liability will be separately calculated and reported for each group.

The actuarial value of assets by group as of July 1, 2014, was calculated as the difference between the actuarial accrued liability and the unfunded liability as of July 1, 2014. The non-GRIP actuarial value of

COMMENTS ON THE VALUATION (CONTINUED)

assets by group as of July 1, 2015 (and in future years) is calculated on page A-23 using the following methodology:

- (1) Beginning of year actuarial value of assets for each benefit group (calculated in the prior year's valuation); plus
- (2) Non-investment cash flows (allocated based on each group's projected non-investment cash flows from the prior valuation); plus
- (3) Assumed investment return on the actuarial value of assets (rate of return equal to the rate of return on an actuarial value of assets basis for non-GRIP assets; approximately 10.7 percent for fiscal year 2015).

The unfunded liability by group as of July 1, 2015, was calculated as the difference between the actuarial accrued liability and the actuarial value of assets as of July 1, 2015. The unfunded liability as of July 1, 2015, is amortized over a single closed nine year period for non-Public Safety (Groups A and H) and over separate closed 20-year periods for Public Safety (Groups E, F and G) as a level percentage of payroll.

The amortization base for GRIP is separately tracked. In determining the unfunded actuarial accrued liability base and amortization of unfunded liability contribution rate for Group A, the non-GRIP outside agencies' unfunded liability was deducted along with excluding non-GRIP outside agencies' contribution basis payroll for amortization of the unfunded actuarial accrued liability.

The County contribution rate for fiscal year 2017 decreased for both Public Safety and non-Public Safety (non-GRIP) members from the fiscal year 2016 rate. Favorable demographic experience, changes in the actuarial assumptions, the amount and timing of contributions and the recognition of deferred asset gains led to the decrease in the County contribution rates for Public Safety and non-Public Safety groups. Both Public Safety and non-Public Safety groups experienced favorable experience during fiscal year 2015, including lower retiree COLA increases than expected under the actuarial assumptions, and fewer retirements and more terminations than expected under the actuarial assumptions used in the previous valuation. This favorable experience was partially offset by larger salary increases than expected under the actuarial assumptions and changes to the plan provisions (implementation of a DROP for certain Group E plan members).

The average County contribution requirement as a percentage of payroll calculated in this valuation is approximately 8 percent of pay lower than the County contribution requirement calculated in the last actuarial valuation. The current amortization periods are reasonable. However, because the System is less than 100 percent funded, we recommend that either a shorter amortization period be used for the unfunded liability as of July 1, 2015, or an additional contribution be made in fiscal year 2017, in addition to the amount calculated under the current amortization period.

The actuarial value of assets is currently 99 percent of the market value of assets. There is \$31,063,960 in net asset gains currently being deferred (\$31,585,634 in total for GRIP and non-GRIP) that will be phased into the actuarial value of assets over the next four years. Assuming all future assumptions are realized, there is projected to be a slight decrease in the recommended County contribution as the remaining deferred asset gains are recognized.

COMMENTS ON THE VALUATION (CONTINUED)

GRIP

Beginning with the July 1, 2015, valuation, amortization bases established prior to July 1, 2015, were recombined into a single amortization base equal to the unfunded liability as of July 1, 2015. The unfunded liability as of July 1, 2015, is amortized over separate closed 20-year periods for GRIP as a level percentage of payroll.

The County contribution rate for fiscal year 2017 decreased for GRIP members from the fiscal year 2016 rate. The decrease in the County contribution rate is mainly attributable to the change in the actuarial assumptions and the recognition of deferred asset gains.

The actuarial value of GRIP assets is approximately 100 percent of the market value of assets. There is \$521,674 in net gains currently being deferred that will be phased into the actuarial value of assets over the next four years. Assuming all future assumptions are realized, the recommended County contribution is projected to decrease slightly in future years as the remaining deferred asset gains are recognized.

SUMMARY OF ACTUARIAL VALUATION RESULTS

		July 1, 2014 Results	July 1, 2015 Results
Membership			
Data			
	Active Members	5,535	5,541
	DRSP/DROP	99	95
	Deferred Vested	403	402
	Retirees and Beneficiaries	6,143	6,285
	TOTAL	12,180	12,323
Plan			
Liabilities			
	Actuarial Accrued Liability:		
	Active Members	\$ 1,373,483,134	\$ 1,352,696,130
	DRSP/DROP	99,437,744	94,230,847
	Deferred Vested	26,461,195	27,037,115
	Retirees and Beneficiaries	2,459,547,645	2,576,772,760
	TOTAL	\$ 3,958,929,718	\$ 4,050,736,852
	Actuarial Value of Assets at Valuation Date	\$ 3,333,484,724	\$ 3,630,075,610
	Unfunded (Overfunded) Actuarial Accrued Liability	\$ 625,444,994	\$ 420,661,242
	Funded Position of Plan's Actuarial Accrued Liability ¹	84.2 %	89.6 %
Recommended			
Annual Contribution			
Requirements ²			
	Annual Normal Cost as of Valuation Date	\$ 74,984,370	\$ 70,847,993
	Normal Cost Expense Load	2,966,800	2,813,800
	Amortization Payment	59,111,574	42,872,473
	Total Annual Required Contribution	137,062,744	116,534,266
	Expected Employee Contributions	22,235,192	24,551,555
	County Contribution Requirement	\$ 114,827,552	\$ 91,982,711
	Contribution Basis Payroll:		
	For Normal Cost	\$ 360,825,073	\$ 399,844,856
	For Amortization of Unfunded Liability	378,030,049	399,838,119
	County Contribution % of Payroll		
	Public Safety	37.73%	23.51%
	Non-Public Safety	40.02%	42.71%
	GRIP	6.61%	5.35%

¹ Equals the ratio of the actuarial value of assets to the total actuarial accrued liability.

² Includes the Retirement Incentive cost. Excludes the non-GRIP outside agency unfunded liability contribution of \$1,244,997 for fiscal year 2017.

CONTRIBUTION RATE SUMMARY ALL PLANS

	Valuation as of July 1, 2015									July 1, 2014	
	Non-Public Safety			Public Safety						Total	
	Group A	Group H	Total Non PS	Group E	Group F	Group G	Total PS	GRIP	Total	Total	
County Contribution Requirement (\$)											
Non-GRIP	\$ 15,808,781	\$ 20,193,086	\$ 36,001,867	\$ 7,124,759	\$ 18,746,781	\$ 25,414,118	\$ 51,285,658	\$ -	\$ 87,287,525	\$ 109,897,544	
GRIP	-	-	-	-	-	-	-	4,695,186	4,695,186	4,930,008	
Total All Plans	\$ 15,808,781	\$ 20,193,086	\$ 36,001,867	\$ 7,124,759	\$ 18,746,781	\$ 25,414,118	\$ 51,285,658	\$ 4,695,186	\$ 91,982,711	\$ 114,827,552	
County Normal Cost Contribution Requirement (% of Payroll)											
Non-GRIP	5.63%	5.56%	5.60%	14.00%	17.93%	18.99%	17.56%		13.90%	17.60%	
GRIP								6.61%	6.61%	7.27%	
Total All Plans	5.63%	5.56%	5.60%	14.00%	17.93%	18.99%	17.56%	6.61%	12.28%	15.44%	
County UAL Contribution Requirement (% of Payroll)											
Non-GRIP	34.23%	39.63%	37.11%	2.61%	2.47%	11.61%	5.95%		14.34%	20.24%	
GRIP								-1.26%	-1.26%	-0.66%	
Total All Plans	34.23%	39.63%	37.11%	2.61%	2.47%	11.61%	5.95%	-1.26%	10.72%	15.64%	
Total County Contribution Requirement (% of Payroll)											
Non-GRIP	39.86%	45.19%	42.71%	16.61%	20.40%	30.60%	23.51%		28.24%	37.84%	
GRIP								5.35%	5.35%	6.61%	
Total All Plans	39.86%	45.19%	42.71%	16.61%	20.40%	30.60%	23.51%	5.35%	23.00%	31.08%	

Non-GRIP outside agency unfunded liability contribution of \$1,244,997 for fiscal year 2017 is not included in the amounts above.

The unfunded liability for the non-Public Safety groups was amortized over a nine year closed period and the unfunded liability for the Public Safety groups and GRIP was amortized over a 20-year closed period beginning July 1, 2015.

ACTUARIAL VALUATION RESULTS

ALL PLANS

	Valuation as of July 1, 2015							July 1, 2014		
	Non-Public Safety		Public Safety				Total	% of Payroll	Total	% of Payroll
	Group A	Group H	Group E	Group F	Group G	GRIP				
Total All Plans										
Active Members										
Number	483	719	630	1,232	1,125	1,352	5,541		5,535	
Average Age	57.1	57.2	43.6	38.1	37.9	49.5	45.6		45.7	
Average Service	26.5	24.8	12.2	12.3	11.6	8.4	14.0		14.5	
Total Base Payroll	\$ 49,347,557	\$ 52,217,370	\$ 44,963,880	\$ 94,711,068	\$ 84,799,795	\$ 92,688,914	\$ 418,728,584		\$ 402,899,096	
Contribution Basis Payroll:										
For Normal Cost	\$ 46,199,907	\$ 48,913,390	\$ 42,488,047	\$ 91,504,350	\$ 81,984,821	\$ 88,754,341	\$ 399,844,856		\$ 360,825,073	
For Amortization of Unfunded Liability*	38,579,217	44,095,246	44,963,880	94,711,068	84,799,795	92,688,914	399,838,119		378,030,049	
DRSP/DROP Members										
Number				39	56		95		99	
Total Base Payroll				\$ 3,932,109	\$ 5,863,262		\$ 9,795,371		\$ 9,684,369	
Total Benefits				2,506,780	3,543,896		6,050,676		6,149,838	
Terminated Vested Members										
Number	64	81	28	33	19	177	402		403	
Total Benefits	\$ 685,941	\$ 641,753	\$ 355,828	\$ 384,579	\$ 126,296		\$ 2,194,397		\$ 2,360,255	
Retired Members and Beneficiaries										
Number						1	6,285		6,143	
Total Benefits						5,024	229,562,199		223,419,018	
Total Membership										
							12,323		12,180	
Actuarial Accrued Liability										
Active Members	\$ 228,878,492	\$ 211,818,244	\$ 158,621,103	\$ 362,111,678	\$ 304,886,680	\$ 86,379,933	\$ 1,352,696,130		\$ 1,373,483,134	
DRSP/DROP Members				39,129,042	55,101,805		94,230,847		99,437,744	
Terminated Vested Members	5,614,077	5,164,686	3,111,407	3,367,880	790,379	8,988,686	27,037,115		26,461,195	
Retired Members and Beneficiaries	728,048,962	523,060,053	253,083,953	598,998,199	473,537,062	44,531	2,576,772,760		2,459,547,645	
Total	962,541,531	740,042,983	414,816,463	1,003,606,799	834,315,926	95,413,150	4,050,736,852		3,958,929,718	
Actuarial Value of Assets										
	\$ 847,202,948	\$ 605,492,066	\$ 398,313,672	\$ 970,774,943	\$ 696,466,564	\$ 111,825,416	\$ 3,630,075,610		\$ 3,333,484,724	
Unfunded Actuarial Accrued Liability										
Outside Agency Non-GRIP Unfunded Liability	\$ 115,338,583	\$ 134,550,917	\$ 16,502,791	\$ 32,831,855	\$ 137,849,362	\$ (16,412,266)	\$ 420,661,242		\$ 625,444,994	
Net Unfunded Actuarial Accrued Liability	13,644,019	-	-	-	-	-	13,644,019		-	
	101,694,564	134,550,917	16,502,791	32,831,855	137,849,362	(16,412,266)	407,017,223		625,444,994	
Funded Ratio (Actuarial Value of Assets)										
	88.0%	81.8%	96.0%	96.7%	83.5%	117.2%	89.6%		84.2%	
Annual Gross Normal Cost										
Benefits	\$ 4,956,877	\$ 5,224,411	\$ 8,487,581	\$ 21,843,257	\$ 21,018,884	\$ 9,316,983	\$ 70,847,993	(17.72%)	\$ 74,984,370	(20.78%)
Expenses of Administration	476,100	440,610	329,954	753,244	634,208	179,684	2,813,800	(0.70%)	2,966,800	(0.82%)
Total	5,432,977	5,665,021	8,817,535	22,596,501	21,653,092	9,496,667	73,661,793	(18.42%)	77,951,170	(21.60%)
Amortization of Unfunded Liability ¹										
	\$ 13,206,142	\$ 17,472,896	\$ 1,178,332	\$ 2,344,258	\$ 9,842,712	\$ (1,171,867)	\$ 42,872,473	(10.72%)	\$ 59,111,574	(15.64%)
Annual Contribution Requirement:										
County Portion	\$ 15,808,781	\$ 20,193,086	\$ 7,124,759	\$ 18,746,781	\$ 25,414,118	\$ 4,695,186	\$ 91,982,711	(23.00%)	\$ 114,827,552	(31.08%)
Employee Portion	2,830,338	2,944,831	2,871,108	6,193,978	6,081,686	3,629,614	24,551,555	(6.14%)	22,235,192	(6.16%)
Total	18,639,119	23,137,917	9,995,867	24,940,759	31,495,804	8,324,800	116,534,266	(29.14%)	137,062,744	(37.24%)
Non-Public Safety/Public Safety/GRIP County Portion \$ 36,001,867										
*Excludes Non-GRIP Payroll from Outside Agencies										
Outside Agency UAL Payroll \$ 2,810,590										

¹ Amortization bases established prior to the July 1, 2015, valuation were recombined into a single amortization base equal to the total unfunded liability as of July 1, 2015. Beginning July 1, 2015, amortization of the current and future unfunded liability will occur over a single closed period of nine years for non-Public Safety groups and separate closed 20 year amortization periods for Public Safety groups and GRIP.

ACTUARIAL VALUATION RESULTS OUTSIDE AGENCIES (EXCLUDING GRIP)

Valuation as of July 1, 2015

	Assessment and Taxation	Circuit Court	CRU 92 Credit Union	District Court	Housing Opportunities Commission	Revenue Authority	Strathmore Hall	Town of Chevy Chase	Washington Suburban Transit Commission	Total Agency (Excluding GRIP)	Total Non-Agency (Excluding GRIP)	Total ERS (Excluding GRIP)
Actuarial Accrued Liability												
Active Members (Non-GRIP)	\$ -	\$ 600,041	\$ 784,466	\$ -	\$ 12,126,301	\$ 377,554	\$ 734,811	\$ 183,993	\$ -	\$ 14,807,166	\$ 1,251,509,031	\$ 1,266,316,197
DRSP/DROP Members	-	-	-	-	-	-	-	-	-	-	94,230,847	94,230,847
Terminated Vested Members	-	-	-	-	1,256,121	-	-	23,335	-	1,279,456	16,768,973	18,048,429
Retired Members and Beneficiaries	13,268,186	-	3,678,077	1,357,121	34,718,527	5,363,036	2,469,033	755,279	263,125	61,872,384	2,514,855,845	2,576,728,229
Total	\$ 13,268,186	\$ 600,041	\$ 4,462,543	\$ 1,357,121	\$ 48,100,948	\$ 5,740,590	\$ 3,203,844	\$ 962,608	\$ 263,125	\$ 77,959,006	\$ 3,877,364,696	\$ 3,955,323,702
Actuarial Accrued Liability by Group												
Group A	\$ 13,268,186	\$ 600,041	\$ 4,462,543	\$ 1,357,121	\$ 48,100,948	\$ 5,740,590	\$ 3,203,844	\$ 962,608	\$ 263,125	\$ 77,959,006		
Remaining unfunded Actuarial Accrued Liability												
Non-GRIP	\$ 2,311,123	\$ 84,548	\$ 765,735	\$ 405,657	\$ 8,265,803	\$ 1,007,149	\$ 547,032	\$ 142,582	\$ 114,379	\$ 13,644,008	\$ 423,429,500	\$ 437,073,508
20-Year Level Dollar Amortization of Unfunded Actuarial Accrued Liability												
Non-GRIP	\$ 210,887	\$ 7,715	\$ 69,872	\$ 37,016	\$ 754,243	\$ 91,901	\$ 49,916	\$ 13,010	\$ 10,437	\$ 1,244,997		

Beginning in fiscal year 2017 for non-GRIP members, outside agencies will make normal cost contributions for their active employees (based on payroll) plus the level dollar amortization payment shown above. The level dollar amortization payment will be made for 20 years and is not based on payroll. Contributions for GRIP members will continue to be made based on the contribution rates determined in the actuarial valuations and actual payroll.

ACTUARIAL VALUATION RESULTS GUARANTEED RETIREMENT INCOME PLAN (GRIP)

	Valuation as of July 1, 2015						July 1, 2014		
	Agency					Total GRIP	Total		
	CC	CM	CN	CP	CZ				
Total All Plans									
Active Members									
Number	1	886	451	6	8	1,352		1,263	
Average Age	43.4	49.0	50.3	55.4	56.6	49.5		49.5	
Average Service	15.2	8.4	8.3	11.0	6.8	8.4		8.3	
Total Base Payroll	\$ 42,738	\$ 51,267,240	\$ 39,724,889	\$ 736,236	\$ 917,811	\$ 92,688,914		\$ 83,225,868	
Contribution Basis Payroll:									
For Normal Cost	\$ 42,202	\$ 49,179,096	\$ 37,962,348	\$ 705,641	\$ 865,054	\$ 88,754,341		\$ 75,396,078	
For Amortization of Unfunded Liability	42,738	51,267,240	39,724,889	736,236	917,811	92,688,914		83,225,868	
Terminated Members									
Number	2	102	73			177		167	
Retired Members and Beneficiaries									
Number	-	1	-	-	-	1		1	
Total Benefits		5,024				5,024		5,024	
Total Membership	3	989	524	6	8	1,530		1,431	
Actuarial Accrued Liability									
Active Members	\$ 73,787	\$ 46,445,810	\$ 38,080,380	\$ 1,093,146	\$ 686,810	\$ 86,379,933		\$ 80,640,384	
Terminated Vested Members	97,956	4,021,659	4,869,071	-	-	8,988,686		7,529,328	
Retired Members and Beneficiaries	-	44,531	-	-	-	44,531		43,394	
Total	171,743	50,512,000	42,949,451	1,093,146	686,810	95,413,150		88,213,106	
Actuarial Value of Assets	\$ 201,285	\$ 59,200,701	\$ 50,337,299	\$ 1,281,181	\$ 804,950	\$ 111,825,416		\$ 95,461,457	
Unfunded Actuarial Accrued Liability	\$ (29,542)	\$ (8,688,701)	\$ (7,387,848)	\$ (188,035)	\$ (118,140)	\$ (16,412,266)		\$ (7,248,351)	
Funded Ratio (Actuarial Value of Assets)	117.2%	117.2%	117.2%	117.2%	117.2%	117.2%		108.2%	
Annual Gross Normal Cost									
Benefits	\$ 4,373	\$ 5,136,365	\$ 4,002,538	\$ 83,306	\$ 90,401	\$ 9,316,983	(10.50%)	\$ 8,392,201	(11.13%)
Expenses of Administration	323	95,126	80,883	2,059	1,293	179,684	(0.20%)	169,133	(0.23%)
Total	4,696	5,231,491	4,083,421	85,365	91,694	9,496,667	(10.70%)	8,561,334	(11.36%)
Amortization of Unfunded Liability	\$ (2,109)	\$ (620,391)	\$ (527,506)	\$ (13,426)	\$ (8,435)	\$ (1,171,867)	-(1.26%)	\$ (554,344)	-(0.67%)
Annual Contribution Requirement:									
County Portion	\$ 899	\$ 2,643,936	\$ 1,956,752	\$ 45,179	\$ 48,420	\$ 4,695,186	(5.35%)	\$ 4,930,008	(6.61%)
Employee Portion	1,688	1,967,164	1,599,163	26,760	34,839	3,629,614	(4.09%)	3,076,982	(4.08%)
Total	2,587	4,611,100	3,555,915	71,939	83,259	8,324,800	(9.44%)	8,006,990	(10.69%)
Non-Public Safety County Portion						\$ 4,650,007	(5.34%)	\$ 4,898,080	(6.61%)
Public Safety County Portion						\$ 45,179	(6.48%)	\$ 31,928	(7.13%)

ACTUARIAL VALUATION RESULTS
AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY AND AMORTIZATION PAYMENTS
BY GROUP

Non-Public Safety

Base Year	Description	Unfunded Liability Base			Remaining Financing Period	Amortization Factor	Amortization Payment		
		Group A	Group H	Total			Group A	Group H	Total
2015	Pre FY 2015 Retirement Incentive	\$ 9,731,255	\$ 13,340,397	\$ 23,071,652	9 yrs.	7.700551	\$ 1,263,709	\$ 1,732,395	\$ 2,996,104
2015	Pre FY 2015 Plan Experience	78,922,635	86,447,360	165,369,996	9	7.700551	10,248,960	11,226,127	21,475,087
2015	Pre FY 2015 Plan Changes	30,681,707	42,120,757	72,802,464	9	7.700551	3,984,352	5,469,837	9,454,189
2015	Pre FY 2015 Cost Method Changes	7,357,883	5,713,437	13,071,320	9	7.700551	955,501	741,952	1,697,453
2015	FY 2015 Plan Experience	(53,709,553)	(31,502,207)	(85,211,761)	9	7.700551	(6,974,768)	(4,090,903)	(11,065,671)
2015	FY 2015 Assumption and Method Changes	28,710,637	18,431,174	47,141,811	9	7.700551	3,728,388	2,393,488	6,121,876
2015	FY 2015 Plan Changes	-	-	-	9	7.700551	-	-	-
Unfunded Liability		\$ 101,694,564	\$ 134,550,917	\$ 236,245,481	9.0 yrs.	7.700551	\$ 13,206,142	\$ 17,472,896	\$ 30,679,038

Public Safety

Base Year	Description	Unfunded Liability Base				Remaining Financing Period	Amortization Factor	Amortization Payment			
		Group E	Group F	Group G	Total			Group E	Group F	Group G	Total
2015	Pre FY 2015 Retirement Incentive	\$ 1,056,199	\$ -	\$ -	\$ 1,056,199	20 yrs.	14.005222	\$ 75,415	\$ -	\$ -	\$ 75,415
2015	Pre FY 2015 Plan Experience	38,434,418	112,917,009	114,518,493	265,869,920	20	14.005222	2,744,292	8,062,493	8,176,842	18,983,627
2015	Pre FY 2015 Plan Changes	3,433,334	(1,658,341)	71,073,839	72,848,832	20	14.005222	245,147	(118,409)	5,074,810	5,201,548
2015	Pre FY 2015 Cost Method Changes	211,003	356,194	1,346,904	1,914,101	20	14.005222	15,066	25,433	96,172	136,671
2015	FY 2015 Plan Experience	(23,099,388)	(60,202,554)	(40,853,785)	(124,155,727)	20	14.005222	(1,649,341)	(4,298,579)	(2,917,039)	(8,864,959)
2015	FY 2015 Assumption and Method Changes	(8,126,340)	(18,580,453)	(8,236,089)	(34,942,883)	20	14.005222	(580,236)	(1,326,680)	(588,073)	(2,494,989)
2015	FY 2015 Plan Changes	4,593,565	-	-	4,593,565	20	14.005222	327,989	-	-	327,989
Unfunded Liability		\$ 16,502,791	\$ 32,831,855	\$ 137,849,362	\$ 187,184,008	20.0 yrs.	14.005222	\$ 1,178,332	\$ 2,344,258	\$ 9,842,712	\$ 13,365,302

ACTUARIAL VALUATION RESULTS
AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY AND AMORTIZATION PAYMENTS
BY GROUP (CONTINUED)

GRIP

Base Year	Description	Unfunded Liability Base		Remaining Financing Period	Amortization Factor	Amortization Payment
		GRIP	Total			
2015	Pre FY 2015 Retirement Incentive	\$ -	\$ -	20 yrs.	14.005222	\$ -
2015	Pre FY 2015 Plan Experience	(7,314,705)	(7,314,705)	20	14.005222	(522,284)
2015	Pre FY 2015 Plan Changes	(2,154,612)	(2,154,612)	20	14.005222	(153,843)
2015	Pre FY 2015 Cost Method Changes	2,273,260	2,273,260	20	14.005222	162,315
2015	FY 2015 Plan Experience	(3,470,977)	(3,470,977)	20	14.005222	(247,834)
2015	FY 2015 Assumption and Method Changes	(5,745,232)	(5,745,232)	20	14.005222	(410,221)
2015	FY 2015 Plan Changes	-	-	20	14.005222	-
Unfunded Liability		\$ (16,412,266)	\$ (16,412,266)	20.0 yrs.	14.005229	\$ (1,171,867)

ACTUARIAL VALUATION RESULTS
AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY AND AMORTIZATION PAYMENTS
BY GROUP (CONTINUED)

Total

Base Year	Description	Unfunded Liability Base							Total
		Group A	Group H	Group E	Group F	Group G	GRIP		
2015	Pre FY 2015 Retirement Incentive	\$ 9,731,255	\$ 13,340,397	\$ 1,056,199	\$ -	\$ -	\$ -	\$ 24,127,851	
2015	Pre FY 2015 Plan Experience	78,922,635	86,447,360	38,434,418	112,917,009	114,518,493	(7,314,705)	423,925,210	
2015	Pre FY 2015 Plan Changes	30,681,707	42,120,757	3,433,334	(1,658,341)	71,073,839	(2,154,612)	143,496,685	
2015	Pre FY 2015 Cost Method Changes	7,357,883	5,713,437	211,003	356,194	1,346,904	2,273,260	17,258,680	
2015	Plan Experience	(53,709,553)	(31,502,207)	(23,099,388)	(60,202,554)	(40,853,785)	(3,470,977)	(212,838,464)	
2015	Assumption and Method Changes	28,710,637	18,431,174	(8,126,340)	(18,580,453)	(8,236,089)	(5,745,232)	6,453,696	
2015	Plan Changes	-	-	4,593,565	-	-	-	4,593,565	
Unfunded Liability		\$ 101,694,564	\$ 134,550,917	\$ 16,502,791	\$ 32,831,855	\$ 137,849,362	\$ (16,412,266)	\$ 407,017,223	

Base Year	Description	Remaining Financing Period	Amortization Factor	Amortization of Unfunded Liability Base							Dollar Contribution
				Group A	Group H	Group E	Group F	Group G	GRIP		
2015	Pre FY 2015 Retirement Incentive	9.2 yrs.	7.855348	\$ 1,263,709	\$ 1,732,395	\$ 75,415	\$ -	\$ -	\$ -	\$ 3,071,519	
2015	Pre FY 2015 Plan Experience	13.5	10.615000	10,248,960	11,226,127	2,744,292	8,062,493	8,176,842	(522,284)	39,936,430	
2015	Pre FY 2015 Plan Changes	12.3	9.895031	3,984,352	5,469,837	245,147	(118,409)	5,074,810	(153,843)	14,501,894	
2015	Pre FY 2015 Cost Method Changes	10.4	8.644732	955,501	741,952	15,066	25,433	96,172	162,315	1,996,439	
2015	Plan Experience	13.4	10.547803	(6,974,768)	(4,090,903)	(1,649,341)	(4,298,579)	(2,917,039)	(247,834)	(20,178,464)	
2015	Assumption and Method Changes	2.0	2.006331	3,728,388	2,393,488	(580,236)	(1,326,680)	(588,073)	(410,221)	3,216,666	
2015	Plan Changes	20.0	14.005241	-	-	327,989	-	-	-	327,989	
Amortization Payments		11.7 yrs.	9.493673	\$ 13,206,142	\$ 17,472,896	\$ 1,178,332	\$ 2,344,258	\$ 9,842,712	\$ (1,171,867)	\$ 42,872,473	

ACTUARIAL VALUATION RESULTS GAIN/LOSS ANALYSIS

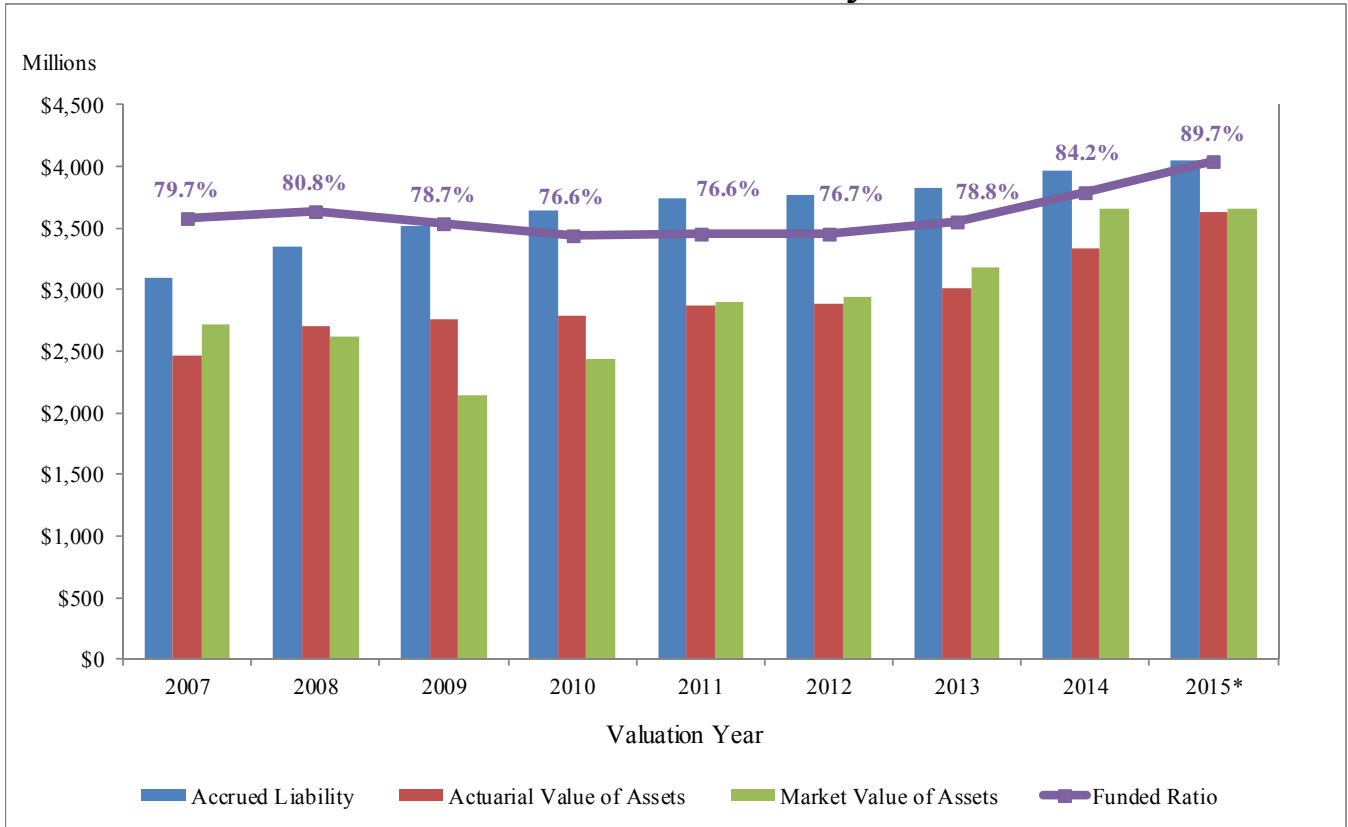
	Non-Public Safety	Public Safety	GRIP	Total
Unfunded liability at previous valuation	\$ 281,025,207	\$ 351,668,138	\$ (7,248,351)	\$ 625,444,994
Expected unfunded liability at current valuation				
Normal cost for plan year	12,209,486	54,382,683	8,392,201	74,984,370
Interest on unfunded liability and normal cost	21,526,469	28,377,593	(234,608)	49,669,454
Contributions with interest to current valuation date	40,445,731	92,739,361	8,105,299	141,290,391
Total expected change in unfunded liability at current valuation	(6,709,776)	(9,979,085)	52,294	(16,636,567)
Total expected unfunded liability at current valuation	274,315,431	341,689,053	(7,196,057)	608,808,427
Change due to:				
Recognition of asset (gains)/losses	(43,922,498)	(60,732,478)	(2,346,695)	(107,001,671)
Salary increases	3,721,471	2,437,273	-	6,158,744
COLA increases	(28,881,953)	(30,912,522)	-	(59,794,475)
Amount and timing of contributions	(7,971,558)	(33,289,032)	-	(41,260,590)
Demographic experience and other	5,486,796	(1,658,968)	(1,124,282)	2,703,546
Change in actuarial assumptions	47,141,811	(34,942,883)	(5,745,232)	6,453,696
Plan improvements	-	4,593,565	-	4,593,565
Measurement improvements	-	-	-	-
Total change	(24,425,931)	(154,505,045)	(9,216,209)	(188,147,185)
Unfunded liability at current valuation	\$ 249,889,500	\$ 187,184,008	\$ (16,412,266)	\$ 420,661,242

	Non-Public Safety	Public Safety	GRIP
FY 2016 County Contribution	40.02%	37.73%	6.61%
Expected FY 2017 County Contribution	40.06%	37.59%	6.97%
Change due to:			
Recognition of asset (gains)/losses	-3.57%	-1.82%	-0.17%
Salary increases	0.14%	-0.01%	0.00%
COLA increases	-2.35%	-0.93%	0.00%
Amount and timing of contributions	-0.65%	-1.00%	0.00%
Demographic experience and other	0.63%	0.00%	-1.45%
Measurement improvements	0.00%	0.00%	0.00%
Plan improvements	0.00%	0.17%	0.00%
Change in assumptions and amortization period	8.45%	-10.49%	0.00%
Total change	2.65%	-14.08%	-1.62%
FY 2017 County Contribution	42.71%	23.51%	5.35%

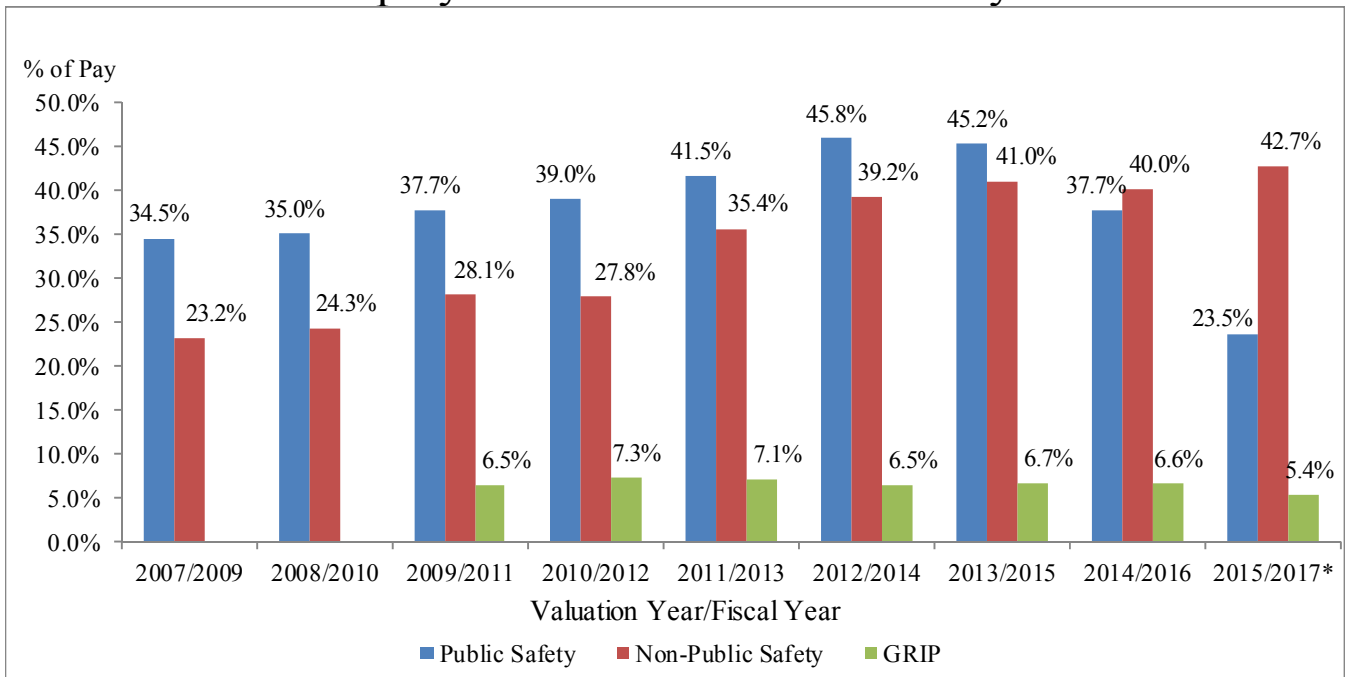
Demographic Experience and Other includes changes due to retirement, mortality, disability and termination experience that varied from the actuarial assumptions, and data changes.

HISTORICAL TRENDS OF FUNDED RATIO AND EMPLOYER CONTRIBUTIONS

Funded Ratio History



Employer Contribution Rate History



*Results beginning with the 2015 valuation (FY 2017) include changes to amortization periods used to finance the unfunded liability and changes to the actuarial assumptions used in the valuation, based on the key findings from an experience review of the System for the period from July 1, 2009, to July 1, 2014.

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%
2014	3,958,929,718	265,055,643	2,585,446,584	1,108,427,491	3,333,484,724	100%	100%	44%
2015	4,046,098,934	280,135,577	2,693,402,804	1,072,560,553	3,630,075,610	100%	100%	61%

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

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

STATEMENT OF FIDUCIARY NET POSITION

Assets	Fiscal Year Ending	
	June 30, 2014	June 30, 2015
Equity in County's pooled cash and investments	\$ 971,114	\$ 981,456
Investments :		
Government and agency obligations	359,793,807	395,527,073
Municipal/Provincial obligations	58,203,905	12,358,783
Asset-backed securities	3,345,101	3,464,339
Corporate bonds	632,632,391	656,471,268
Collateralized mortgage obligations	419,500	-
Commercial mortgage-backed securities	-	-
Common and preferred stock	1,391,796,570	1,455,833,853
Mutual and commingled funds	453,648,456	365,620,792
Short-term investments	99,565,286	119,853,979
Cash collateral received under securities lending agreements	233,431,419	273,912,882
Real estate	391,199,845	380,180,632
Private equity	257,774,913	261,364,506
Total Investments	3,881,811,193	3,924,588,107
Dividend, interest, and other receivables	3,875,781	6,640,354
Contributions receivable	7,717,664	8,443,224
Capital Assets	900,043	600,029
Total assets	3,895,275,795	3,941,253,170
Liabilities		
Payable for collateral received under securities lending agreements	233,431,419	273,912,882
Benefit payable and other liabilities	8,977,279	5,679,044
Total liabilities	242,408,698	279,591,926
Net position restricted for pensions	\$ 3,652,867,097	\$ 3,661,661,244

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

	Fiscal Year Ending	
	<u>June 30, 2014</u>	<u>June 30, 2015</u>
Additions:		
Contributions:		
Employer	\$ 144,709,675	\$ 151,301,867
Members	26,462,839	26,627,493
Total contributions	<u>171,172,514</u>	<u>177,929,360</u>
Investment income	553,599,474	88,488,213
Less investment expense	<u>20,357,819</u>	<u>22,506,400</u>
Net gain from investment activities	533,241,655	65,981,813
Income from securities lending	1,077,992	1,156,632
Less securities lending expenses	<u>(78,086)</u>	<u>68,012</u>
Net income from securities lending	<u>1,156,078</u>	<u>1,088,620</u>
Total additions	<u>705,570,247</u>	<u>244,999,793</u>
Deductions:		
Retiree benefits	172,472,289	171,784,946
Disability benefits	48,606,540	49,879,651
Survivor benefits	8,585,891	8,982,132
Refunds and distributions	4,329,834	2,874,357
Administrative expenses	<u>2,953,807</u>	<u>2,684,560</u>
Total deductions	<u>236,948,361</u>	<u>236,205,646</u>
Increase in net position	468,621,886	8,794,147
Net position restricted for pensions		
Beginning of year	<u>3,184,245,211</u>	<u>3,652,867,097</u>
End of year	<u>\$ 3,652,867,097</u>	<u>\$ 3,661,661,244</u>

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

	Fiscal Year Ending June 30, 2014	Fiscal Year Ending June 30, 2015		Total
	Total	Non-GRIP	GRIP	
Additions:				
Contributions:				
Employer	\$ 144,709,675	\$ 145,252,909	\$ 6,048,958	\$ 151,301,867
Members	26,462,839	22,997,448	3,630,045	26,627,493
Total contributions	<u>171,172,514</u>	<u>168,250,357</u>	<u>9,679,003</u>	<u>177,929,360</u>
Net Investment income	<u>534,397,733</u>	<u>65,088,921</u>	<u>1,981,512</u>	<u>67,070,433</u>
Total additions	<u>705,570,247</u>	<u>233,339,278</u>	<u>11,660,515</u>	<u>244,999,793</u>
Deductions:				
Benefit Payments and distributions	233,994,554	230,625,326	2,895,760	233,521,086
Administrative expenses	<u>2,953,807</u>	<u>2,515,427</u>	<u>169,133</u>	<u>2,684,560</u>
Total deductions	<u>236,948,361</u>	<u>233,140,753</u>	<u>3,064,893</u>	<u>236,205,646</u>
Increase in net position	468,621,886	198,525	8,595,622	8,794,147
Net position restricted for pensions				
Beginning of year	<u>3,184,245,211</u>	<u>3,549,115,629</u>	<u>103,751,468</u>	<u>3,652,867,097</u>
End of year	<u>\$3,652,867,097</u>	<u>\$3,549,314,154</u>	<u>\$ 112,347,090</u>	<u>\$3,661,661,244</u>

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS (TOTAL ERS)

Fiscal Year Ending	2015	2016	2017	2018	2019
Beginning of Year:					
(1) Market Value of Assets	\$ 3,652,867,097				
(2) Actuarial Value of Assets	3,333,484,724				
End of Year:					
(3) Market Value of Assets	3,661,661,244				
(4a) Contributions	177,929,360				
(4b) Net Disbursements	236,205,646				
(5) Total Investment Income					
=(3)-(1)-(4a)+(4b)	67,070,433				
(6) Projected Rate of Return	7.50%				
(7) Projected Investment Income					
=(1)x(6)+([1+(6)] ⁵ -1)x(4a-4b)	271,819,179				
(8) Asset Adjustment	-				
(9) Investment Income in Excess of Projected Income	(204,748,746)				
(10) Excess Investment Income Recognized					
This Year (5 year recognition)					
(10a) From This Year	\$ (40,949,749)				
(10b) From One Year Ago	59,600,269	\$ (40,949,749)			
(10c) From Two Years Ago	17,964,997	59,600,269	\$ (40,949,749)		
(10d) From Three Years Ago	(19,346,169)	17,964,997	59,600,269	\$ (40,949,749)	
(10e) From Four Years Ago	65,778,645	(19,346,169)	17,964,996	59,600,269	\$ (40,949,750)
(10f) Total Recognized Investment Gain/(Loss)	83,047,993	17,269,348	36,615,516	18,650,520	(40,949,750)
(11) Change in Actuarial Value of Assets					
=(4a)-(4b)+(7)+(8)+(10f)	296,590,886				
End of Year:					
(3) Market Value of Assets	\$ 3,661,661,244				
(12) Final Actuarial Value of Assets as of 6/30 = (2)+(11)	\$ 3,630,075,610				
(13) Difference Between Market & Actuarial Values	31,585,634				
(14) Estimated Market Value Rate of Return on Total Plan Assets	1.85%				
(15) Estimated Market Value Return on Invested Plan Assets ¹	2.82%				
(16) Actuarial Value Rate of Return	10.74%				
(17) Ratio of Actuarial Value to Market Value	99.1%				

¹ Rate calculated and provided by the County.

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

Fiscal Year Ending	2015	2016	2017	2018	2019
Beginning of Year:					
(1) Market Value of Assets	\$ 103,751,468				
(2) Actuarial Value of Assets	95,461,457				
End of Year:					
(3) Market Value of Assets	112,347,090				
(4a) Contributions	9,679,003				
(4b) Net Disbursements	3,064,893				
(5) Total Investment Income					
=(3)-(1)-(4a)+(4b)	1,981,512				
(6) Projected Rate of Return	7.50%				
(7) Projected Investment Income					
=(1)x(6)+([1+(6)] ^{.5} -1)x(4a-4b)	8,024,905				
(8) Asset Adjustment	-				
(9) Investment Income in Excess of Projected Income	(6,043,393)				
(10) Excess Investment Income Recognized					
This Year (5 year recognition)					
(10a) From This Year	\$ (1,208,679)				
(10b) From One Year Ago	1,630,977	\$ (1,208,679)			
(10c) From Two Years Ago	447,153	1,630,977	\$ (1,208,679)		
(10d) From Three Years Ago	(430,854)	447,153	1,630,977	\$ (1,208,679)	
(10e) From Four Years Ago	1,286,347	(430,853)	447,155	1,630,979	\$ (1,208,677)
(10f) Total Recognized Investment Gain/(Loss)	1,724,944	438,598	869,453	422,300	(1,208,677)
(11) Change in Actuarial Value of Assets					
=(4a)-(4b)+(7)+(8)+(10f)	16,363,959				
End of Year:					
(3) Market Value of Assets	\$ 112,347,090				
(12) Final Actuarial Value of Assets as of 6/30 = (2)+(11)	\$ 111,825,416				
(13) Difference Between Market & Actuarial Values	521,674				
(14) Estimated Market Value Rate of Return on Total Plan Assets	1.85%				
(15) Estimated Market Value Return on Invested Plan Assets ¹	2.82%				
(16) Actuarial Value Rate of Return	9.87%				
(17) Ratio of Actuarial Value to Market Value	100%				

¹ Rate calculated and provided by the County.

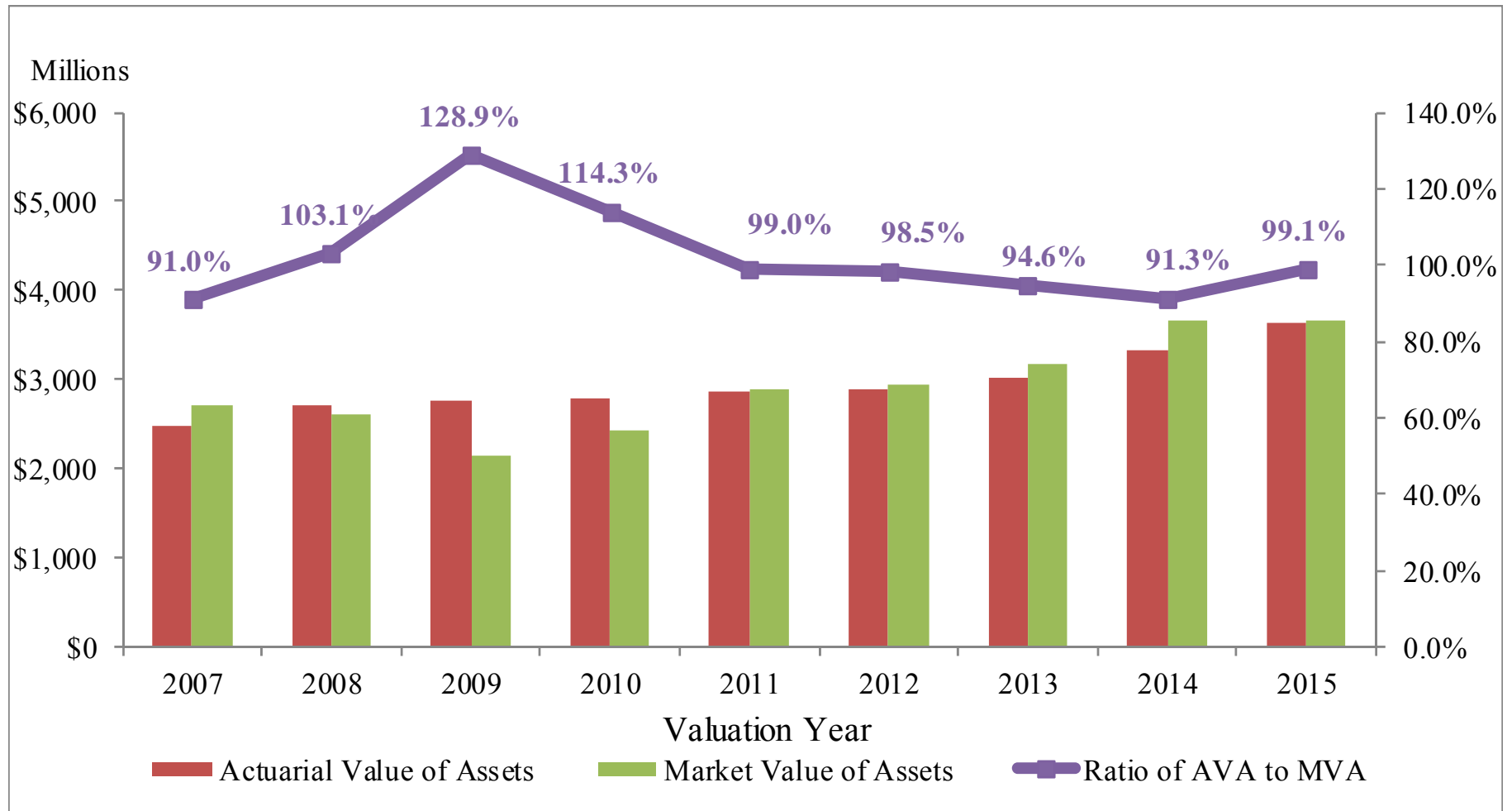
**DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
(ASSETS ALLOCATED TO ALL BENEFIT GROUPS)**

	Valuation as of July 1, 2015							Total
	Non-Public Safety		Public Safety				GRIP	
	Group A	Group H	Group E	Group F	Group G			
Beginning of Year:								
(1) Actuarial Value of Assets ¹	\$ 809,882,145	\$ 570,958,357	\$ 363,009,167	\$ 878,480,714	\$ 615,692,883	\$ 95,461,457	\$ 3,333,484,723	
End of Year:								
(2a) County Contributions	\$ 19,571,659	\$ 20,937,722	\$ 17,609,607	\$ 42,025,652	\$ 45,108,268	\$ 6,048,958	\$ 151,301,867	
(2b) Employee Contributions	2,964,863	3,223,536	3,270,447	6,807,166	6,731,437	3,630,045	26,627,493	
(2c) Total Contributions ²	\$ 22,536,522	\$ 24,161,259	\$ 20,880,054	\$ 48,832,818	\$ 51,839,704	\$ 9,679,003	\$ 177,929,360	
(3a) Benefit Payments and Refunds	\$ 69,488,821	\$ 49,342,825	\$ 24,143,800	\$ 50,231,954	\$ 37,417,926	\$ 2,895,760	\$ 233,521,086	
(3b) Administrative Expenses	413,529	397,643	316,024	748,122	640,109	169,133	2,684,560	
(3c) Total Deductions ³	\$ 69,902,350	\$ 49,740,468	\$ 24,459,824	\$ 50,980,076	\$ 38,058,035	\$ 3,064,893	\$ 236,205,646	
(4) Investment Return (AVA Basis)	\$ 84,686,631	\$ 60,112,918	\$ 38,884,275	\$ 94,441,487	\$ 66,992,013	\$ 9,749,849	\$ 354,867,173	
(5) Actuarial Value of Assets	\$ 847,202,948	\$ 605,492,066	\$ 398,313,672	\$ 970,774,943	\$ 696,466,564	\$ 111,825,416	\$ 3,630,075,610	
(6) AVA Rate of Return	10.77%	10.77%	10.76%	10.76%	10.76%	9.87%	10.74%	

¹ Actuarial value of assets by group based on the remaining unfunded liability bases and actuarial accrued liability by group from the actuarial valuation as of July 1, 2014.

² Contributions by group allocated based on fiscal year 2015 contribution rates and expected fiscal year 2015 payroll from the cost impact measured as of July 1, 2014, from the experience study report for the period July 1, 2009, through July 1, 2014.

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



SECTION B

HISTORICAL ACCOUNTING DISCLOSURES

The measurements required under GASB Statements Nos. 67 and 68 are provided in a separate report.

HISTORICAL SCHEDULE OF FUNDING PROGRESS

Prior to fiscal year ending June 30, 2014, the accounting policies of Montgomery County relative to its retirement systems were based on the terms of GASB Statements Nos. 25 and 27. Effective with fiscal year ending June 30, 2014, GASB Statement No. 67 replaced GASB Statement No. 25 for pension plan financial reporting. Effective with fiscal year ending June 30, 2015, GASB Statement No. 68 replaced GASB Statement No. 27 for employer financial reporting. A separate report containing the information required by GASB Statements Nos. 67 and 68 has been provided to the System. The following exhibits provided in this section provide historical GASB Statements Nos. 25 and 27 information. Historical information regarding GASB Statements Nos. 25 and 27 will no longer be provided in valuation reports subsequent to July 1, 2015.

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

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

Prior to the July 1, 2014, valuation, total payroll includes DRSP and DROP payroll.

HISTORICAL SCHEDULE OF EMPLOYER CONTRIBUTIONS

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

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

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

The information requested in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

<i>Valuation Date</i>	July 1, 2015
<i>Actuarial Cost Method</i>	Individual Entry Age Normal (non-GRIP and GRIP)
<i>Actuarial Value of Assets</i>	5-year smoothed market for funding purposes Market value for accounting purposes under GASB 67 and 68
<i>Amortization Method</i>	Level percentage of pay, separate closed period amortization bases for Public Safety and GRIP, single closed period amortization base for non-Public Safety
<i>Amortization Period</i>	For Public Safety and GRIP: Initial amortization period of 20 years for the base established July 1, 2015 Initial amortization period of 20 years for subsequent bases For non-Public Safety: Single closed amortization period of nine years established July 1, 2015 Average amortization period of 11.7 years for the total ERS
<i>Actuarial Assumptions:</i>	
<i>Investment Rate of Return</i>	7.50% per year
<i>Projected Salary Increases</i>	Wage inflation of 3.25 percent per year plus additional service-based increases of up to 6.25 percent. Total increases of 3.25 percent to 9.50 percent.
<i>Cost of Living Increases</i>	2.75 percent for the portion of the benefit attributable to pre July 1, 2011, service 2.3 percent for the portion of the benefit attributable to service on or after July 1, 2011, where the increase is capped at 2.5 percent 1.65 percent for members that receive a COLA equal to 60 percent of the change in CPI

SECTION C
VALUATION DATA

SUMMARY OF PARTICIPANT DATA (JULY 1, 2015 AND JULY 1, 2014)

	Valuation as of July 1, 2015							
	Non-Public Safety		Public Safety				GRIP	Total
	Group A	Group H	Group E	Group F	Group G			
Total All Plans								
Active Members								
Number	483	719	630	1,232	1,125	1,352	5,541	
Average Age	57.1	57.2	43.6	38.1	37.9	49.5	45.6	
Average Service	26.5	24.8	12.2	12.3	11.6	8.4	14.0	
Total Base Payroll	\$ 49,347,557	\$ 52,217,370	\$ 44,963,880	\$ 94,711,068	\$ 84,799,795	\$ 92,688,914	\$ 418,728,584	
Contribution Basis Payroll:								
For Normal Cost	\$ 46,199,907	\$ 48,913,390	\$ 42,488,047	\$ 91,504,350	\$ 81,984,821	\$ 88,754,341	\$ 399,844,856	
For Amortization of Unfunded Liability*	38,579,217	44,095,246	44,963,880	94,711,068	84,799,795	92,688,914	399,838,119	
DRSP/DROP Members								
Number				39	56		95	
Total Base Payroll				3,932,109	5,863,262		\$ 9,795,371	
Total Benefits				2,506,780	3,543,896		6,050,676	
Terminated Vested Members								
Number	64	81	28	33	19	177	402	
Total Benefits	\$ 685,941	\$ 641,753	\$ 355,828	\$ 384,579	\$ 126,296		\$ 2,194,397	
Retired Members and Beneficiaries								
Number						1	6,285	
Total Benefits						\$ 5,024	\$ 229,562,199	
Total Membership							12,323	

	Valuation as of July 1, 2014							
	Non-Public Safety		Public Safety				GRIP	Total
	Group A	Group H	Group E	Group F	Group G			
Total All Plans								
Active Members								
Number	527	799	626	1,190	1,130	1,263	5,535	
Average Age	56.7	56.8	43.5	38.1	37.5	49.5	45.7	
Average Service	26.7	24.6	12.4	12.9	11.7	8.3	14.5	
Total Base Payroll	\$ 50,976,638	\$ 55,866,352	\$ 42,951,126	\$ 89,215,131	\$ 80,663,980	\$ 83,225,868	\$ 402,899,096	
Contribution Basis Payroll:								
For Normal Cost	\$ 43,189,541	\$ 47,460,110	\$ 37,611,162	\$ 82,124,733	\$ 75,043,449	\$ 75,396,078	\$ 360,825,073	
For Amortization of Unfunded Liability	38,979,842	42,994,102	42,951,126	89,215,131	80,663,980	83,225,868	378,030,049	
DRSP/DROP Members								
Number				39	60		99	
Total Base Payroll				\$ 3,740,247	\$ 5,944,122		\$ 9,684,369	
Total Benefits				2,523,134	3,626,704		6,149,838	
Terminated Vested Members								
Number	68	88	26	35	19	167	403	
Total Benefits	\$ 751,726	\$ 740,739	\$ 334,743	\$ 411,385	\$ 121,662		\$ 2,360,255	
Retired Members and Beneficiaries								
Number						1	6,143	
Total Benefits						5,024	\$ 223,419,018	
Total Membership							12,180	

*Excludes Non-GRIP UAL Payroll from Outside Agencies. As of July 1, 2015, this amount is \$2,810,590.

AGE/SERVICE BY GROUP AS OF JULY 1, 2015

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	66,964
35-39	-	2	2	-	-	-	-	-	-	4	279,154
40-44	-	-	2	3	5	2	-	-	-	12	813,956
45-49	-	-	2	2	29	21	2	-	-	56	4,921,809
50-54	-	-	-	5	31	54	14	-	-	104	10,380,696
55-59	-	3	-	3	26	80	20	9	2	143	15,360,051
60-64	1	-	2	3	25	43	21	12	4	111	11,977,324
65-69	-	-	1	1	9	14	9	5	2	41	4,277,498
70-74	-	-	-	1	3	1	2	-	1	8	1,011,526
75 and Over	-	-	-	-	-	2	1	-	-	3	258,579
Total	1	6	9	18	128	217	69	26	9	483	\$ 49,347,557

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:	57.1	Average Age:	56.7
Average Service:	26.5	Average Service:	26.7
Average Annual Pay:	\$ 102,169	Average Annual Pay:	\$ 96,730
Vested Participants	482	Vested Participants	527
Nonvested Participants	1	Nonvested Participants	-

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	-	1	-	-	-	-	-	-	-	1	57,739
30-34	2	2	1	-	-	-	-	-	-	5	283,967
35-39	-	2	3	-	-	-	-	-	-	5	326,387
40-44	-	2	2	5	7	-	-	-	-	16	1,165,076
45-49	-	1	6	16	36	32	1	-	-	92	6,617,734
50-54	-	2	7	14	52	60	9	4	-	148	10,889,195
55-59	-	3	3	10	63	88	18	7	1	193	14,205,553
60-64	-	1	8	10	45	63	25	16	3	171	12,397,465
65-69	-	-	1	6	19	20	9	6	1	62	4,583,935
70-74	-	1	1	-	6	4	2	2	2	18	1,179,878
75 and Over	-	-	-	-	2	4	1	-	1	8	510,441
Total	2	15	32	61	230	271	65	35	8	719	\$ 52,217,370

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:	57.2	Average Age:	56.8
Average Service:	24.8	Average Service:	24.6
Average Annual Pay:	\$ 72,625	Average Annual Pay:	\$ 69,920
Vested Participants	717	Vested Participants	799
Nonvested Participants	2	Nonvested Participants	-

AGE/SERVICE BY GROUP AS OF JULY 1, 2015

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	20	-	-	-	-	-	-	-	-	20	\$ 908,498
25-29	44	9	-	-	-	-	-	-	-	53	2,638,706
30-34	33	29	6	-	-	-	-	-	-	68	3,806,139
35-39	20	21	37	7	-	-	-	-	-	85	5,599,918
40-44	12	20	35	37	7	-	-	-	-	111	8,064,886
45-49	7	19	29	26	16	13	-	-	-	110	8,934,033
50-54	7	6	38	19	14	17	4	-	-	105	8,503,309
55-59	2	4	12	5	7	14	2	2	-	48	4,144,997
60-64	2	2	8	5	2	4	2	-	-	25	2,003,196
65-69	2	-	2	-	-	-	-	-	-	4	264,683
70-74	-	-	1	-	-	-	-	-	-	1	95,515
75 and Over	-	-	-	-	-	-	-	-	-	0	-
Total	149	110	168	99	46	48	8	2	-	630	\$ 44,963,880

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:	43.6	Average Age:	43.5
Average Service:	12.2	Average Service:	12.4
Average Annual Pay:	\$ 71,371	Average Annual Pay:	\$ 68,612
Vested Participants	481	Vested Participants	513
Nonvested Participants	149	Nonvested Participants	113

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	78	-	-	-	-	-	-	-	-	78	\$ 3,934,831
25-29	171	24	-	-	-	-	-	-	-	195	10,649,345
30-34	51	146	28	-	-	-	-	-	-	225	14,867,598
35-39	16	47	122	15	-	-	-	-	-	200	15,551,316
40-44	9	13	59	92	34	-	-	-	-	207	18,194,681
45-49	-	11	22	64	112	12	-	-	-	221	21,066,151
50-54	-	2	3	10	27	29	4	-	-	75	7,428,462
55-59	2	2	1	1	1	9	10	-	-	26	2,557,213
60-64	-	-	-	-	3	-	-	1	-	4	370,985
65-69	-	-	-	-	-	-	1	-	-	1	90,485
70-74	-	-	-	-	-	-	-	-	-	0	-
75 and Over	-	-	-	-	-	-	-	-	-	0	-
Total	327	245	235	182	177	50	15	1	-	1,232	\$ 94,711,067

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:	38.1	Average Age:	38.1
Average Service:	12.3	Average Service:	12.9
Average Annual Pay:	\$ 76,876	Average Annual Pay:	\$ 74,971
Vested Participants	905	Vested Participants	924
Nonvested Participants	327	Nonvested Participants	266

AGE/SERVICE BY GROUP AS OF JULY 1, 2015

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	71	-	-	-	-	-	-	-	-	71	\$ 3,474,931
25-29	133	55	2	-	-	-	-	-	-	190	10,194,713
30-34	52	103	54	2	-	-	-	-	-	211	13,664,143
35-39	22	59	82	26	2	-	-	-	-	191	14,565,714
40-44	9	27	53	60	33	2	-	-	-	184	16,448,730
45-49	4	16	20	32	55	54	-	-	-	181	17,362,666
50-54	2	7	4	8	11	31	4	-	-	67	6,314,616
55-59	-	2	2	3	1	12	3	2	-	25	2,288,234
60-64	-	2	-	-	-	-	-	1	1	4	367,354
65-69	-	-	-	-	-	1	-	-	-	1	118,694
70-74	-	-	-	-	-	-	-	-	-	0	-
75 and Over	-	-	-	-	-	-	-	-	-	0	-
Total	293	271	217	131	102	100	7	3	1	1,125	\$ 84,799,795

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

Current Valuation		Previous Valuation	
Average Age:	37.9	Average Age:	37.5
Average Service:	11.6	Average Service:	11.7
Average Annual Pay:	\$ 75,378	Average Annual Pay:	\$ 71,384
Vested Participants	832	Vested Participants	870
Nonvested Participants	293	Nonvested Participants	260

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	6	-	-	-	-	-	-	-	-	6	\$ 237,544
25-29	72	6	-	-	-	-	-	-	-	78	3,729,042
30-34	82	18	5	-	-	-	-	-	-	105	5,694,047
35-39	57	30	19	2	-	-	-	-	-	108	6,952,934
40-44	68	38	30	19	-	-	-	-	-	155	11,074,435
45-49	64	51	46	22	5	-	-	-	-	188	12,678,525
50-54	70	58	51	44	2	-	-	-	-	225	15,372,603
55-59	60	55	60	43	9	-	-	-	-	227	16,737,010
60-64	42	46	34	39	10	1	1	-	-	173	13,334,729
65-69	7	17	23	17	4	-	-	-	-	68	5,492,518
70-74	1	-	6	6	2	-	-	-	-	15	1,093,600
75 and Over	2	1	-	1	-	-	-	-	-	4	291,927
Total	531	320	274	193	32	1	1	-	-	1,352	\$ 92,688,914

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:	49.5	Average Age:	49.5
Average Service:	8.4	Average Service:	8.3
Average Annual Pay:	\$ 68,557	Average Annual Pay:	\$ 65,895
Vested Participants	1,050	Vested Participants	961
Nonvested Participants	302	Nonvested Participants	302

AGE/SERVICE BY GROUP AS OF JULY 1, 2015

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	175	-	-	-	-	-	-	-	-	175	\$ 8,555,804
25-29	420	95	2	-	-	-	-	-	-	517	27,269,545
30-34	220	299	94	2	-	-	-	-	-	615	38,382,858
35-39	115	161	265	50	2	-	-	-	-	593	43,275,423
40-44	98	100	181	216	86	4	-	-	-	685	55,761,764
45-49	75	98	125	162	253	132	3	-	-	848	71,580,919
50-54	79	75	103	100	137	191	35	4	-	724	58,888,881
55-59	64	69	78	65	107	203	53	20	3	662	55,293,058
60-64	45	51	52	57	85	111	49	30	8	488	40,451,053
65-69	9	17	27	24	32	35	19	11	3	177	14,827,813
70-74	1	1	8	7	11	5	4	2	3	42	3,380,519
75 and Over	2	1	-	1	2	6	2	-	1	15	1,060,947
Total	1,303	967	935	684	715	687	165	67	18	5,541	\$ 418,728,584

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:	45.6	Average Age:	45.7
Average Service:	14.0	Average Service:	14.5
Average Annual Pay:	\$ 75,569	Average Annual Pay:	\$ 72,791
Vested Participants	4,467	Vested Participants	4,594
Nonvested Participants	1,074	Nonvested Participants	941

SCHEDULE OF ACTIVE MEMBER DATA AS OF JULY 1, 2015

Valuation Date 7/1	Number	Annual Payroll	Average Annual Pay	% Increase in Avg Pay
2002	5,983	\$333,449,862	\$55,733	5.33%
2003	5,876	336,019,788	57,185	2.61%
2004	5,670	341,629,327	60,252	5.36%
2005	5,628	355,105,993	63,096	4.72%
2006	5,362	357,361,131	66,647	5.63%
2007	5,294	374,792,608	70,796	6.23%
2008	5,060	376,002,333	74,309	4.96%
2009	5,012	376,014,994	75,023	0.96%
2010	5,786	431,226,155	74,529	-0.66%
2011	5,515	405,336,529	73,497	-1.38%
2012	5,554	398,460,248	71,743	-2.39%
2013	5,606	395,988,026	70,636	-1.54%
2014	5,535	402,899,096	72,791	3.05%
2015	5,541	418,728,584	75,569	3.82%

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

SCHEDULE OF MEMBERS IN PAY STATUS AS OF JULY 1, 2015

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
2014	4,669	452	1,121	6,242	229,568,856	36,778
2015	4,807	448	1,125	6,380	235,612,875	36,930

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

RECONCILIATION OF PARTICIPANT DATA AS OF JULY 1, 2015

Non-Public Safety

	Actives	Deferred Vested	Retirees and Beneficiaries*	Total
Participants at 07/01/2014	1,326	156	-	1,482
New Entrants and Rehires	1	-	-	1
Transfers To DROP/DRSP	-	-	-	-
Non-Vested Terminations/ Refund of Contributions	(1)	(3)	-	(4)
Vested Terminations	-	-	-	-
Transfers to GRIP	-	-	-	-
Transfer to E, F, G	(3)	-	-	(3)
Transfer from E, F, G	6	-	-	6
Retirements	(125)	(9)	-	(134)
New Beneficiaries	-	-	-	-
Deaths	(2)	-	-	(2)
Benefit Terminations	-	-	-	-
Status Adjustments	-	1	-	1
Participants at 07/01/2015	1,202	145	-	1,347

Public Safety

	Actives	Deferred Vested	Retirees and Beneficiaries*	DRSP/DROP Members	Total
Participants at 07/01/2014	2,946	80	-	99	3,125
New Entrants and Rehires	175	-	-	-	175
Transfers To DROP/DRSP	(41)	-	-	41	-
Non-Vested Terminations/ Refund of Contributions	(38)	(2)	-	-	(40)
Vested Terminations	(6)	6	-	-	-
Transfers to GRIP	(2)	-	-	-	(2)
Transfer to A, H	(6)	-	-	-	(6)
Transfer from A, H	3	-	-	-	3
Retirements	(44)	(4)	-	(45)	(93)
New Beneficiaries	-	-	-	-	-
Deaths	(1)	-	-	-	(1)
Benefit Terminations	-	-	-	-	-
Status Adjustments	1	-	-	-	1
Participants at 07/01/2015	2,987	80	-	95	3,162

*Reconciliation of non-GRIP retirees and beneficiaries shown in total only.

RECONCILIATION OF PARTICIPANT DATA AS OF JULY 1, 2015

GRIP

	Actives	Deferred Vested	Retirees and Beneficiaries	Total
Participants at 07/01/2014	1,263	167	1	1,431
New Entrants and Rehires	179	(4)	-	175
Transfers To DROP/DRSP	-	-	-	-
Non-Vested Terminations/ Refund of Contributions	(32)	(50)	-	(82)
Vested Terminations	(56)	56	-	-
Transfers	(1)	-	-	(1)
Retirement	-	-	-	-
Lump Sum Retirement	-	-	-	-
Deaths	(1)	-	-	(1)
Benefit Terminations	-	-	-	-
Status Adjustments	-	8	-	8
Participants at 07/01/2015	1,352	177	1	1,530

Total

	Actives	Deferred Vested	Retirees and Beneficiaries	DRSP/DROP Members	Total
Participants at 07/01/2014	5,535	403	6,143	99	12,180
New Entrants and Rehires	352	(4)	-	-	348
Transfers To DROP/DRSP	(41)	-	-	41	-
Non-Vested Terminations/ Refund of Contributions	(71)	(55)	-	-	(126)
Vested Terminations	(62)	62	-	-	-
Transfers	-	-	-	-	-
Retirements	(169)	(13)	227	(45)	-
New Beneficiaries	-	-	39	-	39
Deaths	(4)	-	(112)	-	(116)
Benefit Terminations	-	-	(14)	-	(14)
Adjustments	1	9	2	-	12
Participants at 07/01/2015	5,541	402	6,285	95	12,323

SECTION D
VALUATION PROCEDURES

ACTUARIAL COST METHOD

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

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

Financing of Unfunded Actuarial Accrued Liabilities. The unfunded actuarial accrued liability is amortized using a level-percentage of pay amortization of a closed period amortization base. The amortization method was changed from an 18-year closed period amortization of the base established on July 1, 2010, and 20-year closed period amortization of the bases established thereafter, to recombining all amortization bases established prior to July 1, 2015, into a single amortization base equal to the unfunded actuarial liability as of July 1, 2015. The single amortization base as of July 1, 2015, and subsequent unfunded liability arising in future valuations are amortized over a single nine-year closed period for non-public safety groups and separate 20-year closed periods for public safety groups and GRIP beginning July 1, 2015.

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

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

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

Contribution Basis Payroll for Amortization of Unfunded Liability is equal to the total base payroll for the open groups (groups that are enrolling new members) and projected payroll for the period July 1, 2016, through June 30, 2017, for the closed groups (groups that are closed to new members). The projected payroll for the closed groups reflects that a percentage of members will exit the active population due to retirement, termination, death or disability and no additional employees will be hired into those groups. The objective of using this payroll basis is to have the actual County contribution made in fiscal year 2017 for the amortization of the unfunded liability (which is based on a contribution rate and actual payroll during the year) be as close as possible to the dollar amount calculated in the 2015 valuation report.

Groups A and H are closed and the remaining groups are open.

ACTUARIAL ASSUMPTIONS IN THE VALUATION PROCESS

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

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

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

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

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

From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations). Thus, an experience review of the Montgomery County Employees' Retirement System for the period July 1, 2009, to July 1, 2014, was performed to compare the demographic and economic experience against the actuarial assumptions used in the valuations. The actuarial assumptions described in this section were adopted by the Directors for use beginning with the July 1, 2015, valuation. Additional information regarding the rationale for the assumptions may be found in the 2015 experience review report. All actuarial assumptions are expectations of future experience, not current market measures.

VALUATION ASSUMPTIONS

The assumed rate of price inflation is 2.75 percent.

The assumed COLA is as follows:

	Assumed COLA
100% of CPI, benefit attributable to pre 7/1/2011 service	2.75%
60% of CPI, benefit attributable to pre 7/1/2011 service	1.65%
100% of CPI*, benefit attributable to service on or after 7/1/2011	2.30%

**Capped at 2.5 percent.*

The following groups have a COLA equal to 60 percent 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.

VALUATION ASSUMPTIONS

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.

Service At Assumed Pay Increase	Group A, H and GRIP	Group E	Group F	Group G
1	6.00%	9.50%	8.00%	9.50%
2	5.50%	9.00%	8.00%	9.00%
3	5.00%	7.00%	8.00%	7.00%
4	4.50%	6.50%	6.50%	6.50%
5	4.00%	6.00%	6.00%	6.00%
6	4.00%	5.50%	5.50%	6.00%
7	4.00%	5.00%	5.00%	6.00%
8	4.00%	4.50%	4.50%	6.00%
9	4.00%	4.00%	4.00%	6.00%
10	4.00%	4.00%	4.00%	6.00%
11	3.25%	4.00%	4.00%	4.50%
12	3.25%	4.00%	4.00%	4.50%
13	3.25%	4.00%	4.00%	4.50%
14	3.25%	4.00%	4.00%	4.50%
15	3.25%	4.00%	4.00%	4.50%
16	3.25%	4.00%	4.00%	4.00%
17	3.25%	4.00%	4.00%	4.00%
18	3.25%	4.00%	4.00%	4.00%
19	3.25%	4.00%	4.00%	4.00%
20	3.25%	4.00%	4.00%	4.00%
21+	3.25%	3.25%	3.25%	3.25%

The assumed rate of total payroll growth used in amortizing the unfunded liability as a level percentage of pay is 3.25 percent.

The assumed increase in the Social Security Taxable Wage Base is 3.25 percent.

**VALUATION ASSUMPTIONS
(CONTINUED)**

The mortality assumptions are as follows:

	Male Set Forward	Female Set Forward
RP-2014 Employee, sex distinct (pre-retirement, non-service connected)*	None	None
RP-2014 Healthy Annuitant, sex distinct (non-disabled post-retirement)	None	None
RP-2014 Healthy Annuitant, sex distinct (disabled post retirement)	6 years	8 years

*Rates multiplied by 15 percent were used for pre-retirement service connected mortality for Groups F and G.

To provide a margin for future mortality improvements, generational mortality improvements from 2014 using projection scale MP-2014 was used.

Age	Healthy Mortality				Disabled Mortality	
	Pre-Retirement		Post-Retirement		Future Life	
	Future Life		Future Life		Future Life	
	Expectancy (years) in 2015		Expectancy (years) in 2015		Expectancy (years) in 2015	
	Men	Women	Men	Women	Men	Women
20	69.11	73.41	66.75	69.71	60.55	61.48
25	63.79	68.08	61.34	64.28	55.16	56.08
30	58.45	62.75	55.98	58.89	49.84	50.78
35	53.12	57.44	50.68	53.59	44.62	45.58
40	47.79	52.14	45.47	48.38	39.53	40.48
45	42.48	46.86	40.37	43.26	34.59	35.45
50	37.25	41.64	35.42	38.23	29.83	30.51
55	32.15	36.51	30.67	33.28	25.25	25.74
60	27.21	31.47	26.10	28.46	20.88	21.22
65	22.53	26.52	21.72	23.83	16.78	17.03
70	18.15	21.72	17.56	19.45	13.03	13.21
75	14.09	17.11	13.69	15.37	9.67	9.79
80	10.43	12.74	10.23	11.68	6.85	6.94
85	7.29	8.82	7.30	8.47	4.71	4.79
90	5.00	5.95	5.02	5.90	3.29	3.33
95	3.48	4.06	3.48	4.06	2.37	2.39
100	2.49	2.84	2.49	2.84	1.82	1.82
105	1.88	2.09	1.88	2.09	1.57	1.56

Life expectancy based on non-service connected mortality rates only.

**VALUATION ASSUMPTIONS
(CONTINUED)**

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

Service Beginning of Year	Group A, H and GRIP		Group E		Group F and G	
	Male	Female	Male	Female	Male	Female
0	11.50%	12.50%	12.00%	15.00%	6.00%	9.00%
1	9.50%	10.50%	10.00%	12.00%	5.00%	7.00%
2	8.00%	9.50%	6.00%	7.00%	4.00%	5.00%
3	6.00%	6.50%	5.00%	6.50%	3.00%	4.50%
4	4.50%	4.50%	4.00%	4.00%	2.50%	3.50%
5	4.00%	4.25%	3.90%	3.90%	2.25%	3.00%
6	4.00%	4.25%	3.80%	3.80%	2.00%	2.75%
7	4.00%	4.25%	3.70%	3.70%	1.75%	2.50%
8	4.00%	4.25%	3.60%	3.60%	1.50%	2.00%
9	4.00%	4.25%	3.50%	3.50%	1.25%	1.75%
10	3.25%	2.75%	2.00%	2.00%	1.00%	1.50%
11	3.25%	2.75%	1.50%	1.50%	0.75%	1.25%
12	3.25%	2.75%	1.00%	1.00%	0.50%	1.00%
13	3.25%	2.75%	1.00%	1.00%	0.50%	0.75%
14	3.25%	2.75%	1.00%	1.00%	0.50%	0.50%
15	2.00%	2.50%	1.00%	1.00%	0.50%	0.50%
16	2.00%	2.50%	1.00%	1.00%	0.50%	0.50%
17	2.00%	2.50%	1.00%	1.00%	0.50%	0.50%
18	2.00%	2.50%	1.00%	1.00%	0.50%	0.50%
19	2.00%	2.50%	1.00%	1.00%	0.50%	0.50%
20+	2.00%	2.50%	1.00%	1.00%	0.50%	0.50%

Vested participants that terminate are assumed to elect the option with the greater present value:

- 1) *A refund of their accumulated contributions with interest or*
- 2) *A deferred benefit.*

**VALUATION ASSUMPTIONS
(CONTINUED)**

Rates of disability were as follows:

Age	Non-Public Safety		Public Safety					
	Groups A and H		Group E		Group F		Group G	
	Male	Female	Male	Female	Male	Female	Male	Female
20	0.0257%	0.0068%	0.0515%	0.0315%	0.1029%	0.1125%	0.1029%	0.1125%
25	0.0527%	0.0180%	0.1054%	0.0840%	0.2107%	0.3000%	0.2107%	0.3000%
30	0.1078%	0.0480%	0.2156%	0.2240%	0.4312%	0.8000%	0.4312%	0.8000%
35	0.1323%	0.0705%	0.2646%	0.3290%	0.5292%	1.1750%	0.5292%	1.1750%
40	0.1752%	0.0983%	0.3504%	0.4585%	0.7007%	1.6375%	0.9109%	1.6375%
45	0.3332%	0.2631%	0.6664%	1.2278%	1.3328%	4.3850%	1.5994%	4.3850%
50	0.5537%	0.3537%	1.1074%	1.6506%	2.2148%	5.8950%	2.5692%	5.8950%
55	0.6762%	0.3717%	1.3524%	1.7346%	2.7048%	6.1950%	3.5162%	6.1950%
60	0.7987%	0.3789%	1.3524%	1.7346%	2.7048%	6.1950%	3.5162%	6.1950%

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

Group	Total	Total	Service Connected Disability	
	Non-Service	Service	Total Incapacity	Partial Incapacity
	Connected	Connected	70% Benefit	52.5% Benefit
A and H	65%	35%	17.5%	17.5%
E	40%	60%	20.0%	40.0%
F	5%	95%	30.0%	65.0%
G	5%	95%	30.0%	65.0%

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	
	Under 30 Years of Service	30 Years of Service and Over	Under 25 Years of Service	25 Years of Service	26 Years of Service and Over	Under 25 Years of Service	25 Years of Service	26 Years of Service and Over	Under 20 or 21 - 24 Years of Service	20 Years of Service	25 Years of Service and Over	Under 15 Years of Service	15 Years of Service and Over
Under 42			3.50%	3.50%	3.50%	2.50%	20.00%	2.50%	2.50%	10.00%	5.00%		
42			3.50%	3.50%	3.50%	2.50%	20.00%	2.50%	5.00%	10.00%	5.00%		
43			3.50%	3.50%	3.50%	2.50%	20.00%	2.50%	5.00%	10.00%	5.00%		
44			3.50%	3.50%	3.50%	2.50%	20.00%	2.50%	5.00%	10.00%	5.00%		
45	2.00%	2.00%	3.50%	8.00%	8.00%	2.50%	20.00%	2.50%	7.50%	10.00%	10.00%		
46	2.00%	2.00%	3.50%	8.00%	8.00%	3.50%	20.00%	3.50%	7.50%	10.00%	10.00%		
47	2.00%	2.00%	3.50%	8.00%	8.00%	4.50%	20.00%	4.50%	7.50%	10.00%	10.00%		
48	2.00%	2.00%	3.50%	8.00%	8.00%	5.50%	20.00%	5.50%	7.50%	10.00%	10.00%		
49	2.00%	2.00%	3.50%	8.00%	8.00%	6.50%	20.00%	6.50%	7.50%	10.00%	10.00%		
50	3.00%	15.00%	10.00%	10.00%	10.00%	10.00%	20.00%	20.00%	10.00%	15.00%	17.50%		
51	3.00%	15.00%	10.00%	10.00%	10.00%	10.00%	20.00%	20.00%	10.00%	15.00%	17.50%		
52	3.00%	15.00%	10.00%	12.00%	12.00%	10.00%	20.00%	20.00%	12.50%	20.00%	25.00%		
53	3.00%	15.00%	10.00%	12.00%	12.00%	15.00%	25.00%	25.00%	12.50%	20.00%	25.00%		
54	3.00%	15.00%	10.00%	12.00%	12.00%	15.00%	25.00%	25.00%	12.50%	20.00%	25.00%		
55	6.00%	15.00%	15.00%	30.00%	30.00%	15.00%	40.00%	40.00%	20.00%	40.00%	35.00%	3.00%	3.00%
56	6.00%	15.00%	15.00%	30.00%	30.00%	15.00%	40.00%	40.00%	20.00%	40.00%	35.00%	3.00%	3.00%
57	6.00%	15.00%	15.00%	30.00%	30.00%	15.00%	40.00%	40.00%	20.00%	40.00%	35.00%	6.00%	6.00%
58	8.00%	15.00%	15.00%	30.00%	30.00%	15.00%	40.00%	40.00%	20.00%	40.00%	35.00%	6.00%	6.00%
59	8.00%	15.00%	15.00%	30.00%	30.00%	15.00%	40.00%	40.00%	20.00%	40.00%	35.00%	6.00%	6.00%
60	13.00%	18.00%	25.00%	50.00%	50.00%	25.00%	70.00%	70.00%	40.00%	40.00%	40.00%	6.00%	10.00%
61	13.00%	18.00%	25.00%	50.00%	50.00%	25.00%	70.00%	70.00%	40.00%	40.00%	40.00%	6.00%	10.00%
62	13.00%	18.00%	25.00%	50.00%	50.00%	25.00%	70.00%	70.00%	40.00%	40.00%	40.00%	8.00%	25.00%
63	13.00%	18.00%	25.00%	50.00%	50.00%	25.00%	70.00%	70.00%	40.00%	40.00%	40.00%	8.00%	25.00%
64	13.00%	18.00%	25.00%	50.00%	50.00%	25.00%	70.00%	70.00%	40.00%	40.00%	40.00%	8.00%	25.00%
65	20.00%	25.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	20.00%	30.00%
66	20.00%	25.00%										20.00%	30.00%
67	20.00%	25.00%										20.00%	30.00%
68	20.00%	25.00%										20.00%	30.00%
69	20.00%	25.00%										20.00%	30.00%
70	40.00%	40.00%										50.00%	50.00%
71	40.00%	40.00%										50.00%	50.00%
72	40.00%	40.00%										50.00%	50.00%
73	40.00%	40.00%										50.00%	50.00%
74	40.00%	40.00%										50.00%	50.00%
75	100.00%	100.00%										100.00%	100.00%

Assumption for DRSP and DROP eligible members are as follows:

	Group E (DROP)	Group F (DRSP)	Group G (DROP)
Percent Assumed to Participate	75%	75%	75%
Average Years of Participation	3 years	3 years	3 years

VALUATION ASSUMPTIONS (CONTINUED)

Assumed Additional Sick Leave Credit:

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

Group	Years of Sick Leave Per Year of Credited Service
A	0.022
E	0.025
F	0.040
G	0.031
H	0.016

Marital Status:

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

Form of Payment:

Plan	Normal Form	Assumed in Valuation
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 middle 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.

VALUATION ASSUMPTIONS (CONTINUED)

Pay Increase Timing: End of (fiscal) year.

Expenses: Assumed administrative expenses were added to the Normal Cost and are based on 105 percent of the average of the administrative expenses over the past 3 years. The assumed amount added to the Normal Cost is:

Valuation Year	Actual Administrative Expenses				Assumed Expenses Added to Normal Cost
	3 Years Prior	2 Years Prior	1 Year Prior	3 Year Average	
2013	\$ 3,079,377	\$ 3,545,654	\$ 2,400,996	\$ 3,008,676	\$ 3,008,700
2014	3,545,654	2,400,996	2,953,807	2,966,819	2,966,800
2015	2,400,996	2,953,807	2,684,560	2,679,788	2,813,800

**Assumptions for
Missing or
Incomplete Data:**

Active members:

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

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

Retired members:

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

SECTION E
BENEFIT PROVISIONS

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015

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, 2015
(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 percent annual rate.

A. Optional non-integrated plan:

	Prior to 7/1/2001	Effective 7/1/2001	Effective 7/1/2011	Effective 7/1/2012 and After
Group A	6%	6%	7%	8%
Group B*	7%	n/a	n/a	n/a
Group D**	n/a	n/a	n/a	n/a
Group E	7½%	8½%	9½%	10½%
Group F	7½%	8½%	9½%	10½%
Group G	7½%	8½%	9½%	10½%
Group H	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
Group A	3%	6%	4%	6%	5%	7%	6%	8%
Group B**	3½%	7%	4½%	7%	n/a	n/a	n/a	n/a
Group D	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Group E	3¾%	7½%	4¾%	8½%	5¾%	9½%	6¾%	10½%
Group F	4%	8%	4¾%	8½%	5¾%	9½%	6¾%	10½%
Group G with less than 25 years of service								
	4¾%	8½%	5½%	9¼%	6½%	10¼%	7½%	11¼%
Group G with at least 25 years of service								
	4¾%	8½%	4¾%	8½%	5¾%	9½%	6¾%	10½%
Group H	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, 2015
(CONTINUED)

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
Group A	3%	6%	4%	6%	5%	7%	6%	8%
Group B	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Group D	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Group E	3 ³ / ₄ %	7 ¹ / ₂ %	4 ³ / ₄ %	8 ¹ / ₂ %	5 ³ / ₄ %	9 ¹ / ₂ %	6 ³ / ₄ %	10 ¹ / ₂ %
Group F	4%	8%	4 ³ / ₄ %	8 ¹ / ₂ %	5 ³ / ₄ %	9 ¹ / ₂ %	6 ³ / ₄ %	10 ¹ / ₂ %
Group G with less than 25 years of service								
	4 ³ / ₄ %	8 ¹ / ₂ %	5 ¹ / ₂ %	9 ¹ / ₄ %	6 ¹ / ₂ %	10 ¹ / ₄ %	7 ¹ / ₂ %	11 ¹ / ₄ %
Group G with at least 25 years of service								
	4 ³ / ₄ %	8 ¹ / ₂ %	4 ³ / ₄ %	8 ¹ / ₂ %	5 ³ / ₄ %	9 ¹ / ₂ %	6 ³ / ₄ %	10 ¹ / ₂ %
Group H	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, 2015 (CONTINUED)

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

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

7. Social Security Wage Base

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

Year	Social Security Taxable Wage Base
2011	\$106,800
2012	\$110,100
2013	\$113,700
2014	\$117,000
2015	\$118,500

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.

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015 (CONTINUED)

- 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 percent in the member's gross pay as of July 1, 2009, except for the purpose of calculating a member's contribution.
- Regular earnings for a Group G member who is employed on July 1, 2009, includes amounts as if the member had received an increase of 4.00 percent 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 percent of average final earnings multiplied by years of credited service, up to a maximum of 36 years, plus sick leave credits.

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015 (CONTINUED)

- Group E: 2.4 percent of average final earnings for each of the first 25 years of credited service, plus 2 percent 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 percent of average final earnings.
- Group F: 2.4 percent 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 percent of average final earnings for each of the first 20 years of credited service, plus 2 percent 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 percent of average final earnings for each of the first 20 years of credited service, plus 3 percent of average final earnings for each year of credited service from 21st year through 24th year, plus 8 percent of average final earnings for the 25th year of credited service, plus 2 percent 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 percent 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 percent of average final earnings for each of the first 25 years of credited service, plus 2 percent 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 percent 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 percent 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 percent of average final earnings).
- Group G: 2.5 percent of average final earnings for each of the first 20 years of credited service, plus 2 percent 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 percent of average final earnings for each of the first 20 years of credited service, plus 3 percent of average final earnings for each year of credited service from 21st year through 24th year, plus 8 percent of average final earnings for the 25th year of credited service, plus 2

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015 (CONTINUED)

percent 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 percent of average final earnings up to Social Security maximum covered compensation plus 2 percent of average final earnings above Social Security maximum covered compensation, multiplied by years of credited service up to 36 years, plus sick leave credits.
- Group D: 1 percent of average final earnings up to Social Security maximum covered compensation plus 2 percent 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 percent (effective 7/1/2009: 1.65 percent) 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 percent of average final earnings above Social Security maximum covered compensation for each of the first 25 years, and 2 percent 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 percent of average final earnings above Social Security maximum covered compensation.
- Group F: 1.65 percent 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 percent 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 percent 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 percent 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 percent 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 percent of average final earnings above Social Security maximum covered compensation).
- Group G: 1.71875 percent of average final earnings for each of the first 20 years of credited service, plus 1.375 percent of average final earnings for each year of credited service after 20 years up to a maximum of 31 years, plus sick leave credits.

**BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015
(CONTINUED)**

12. Early Pension

A. Age and service requirements:

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

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

		YEARS EARLY										
		0	1	2	3	4	5	6	7	8	9	10
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 percent of final earnings.

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015 (CONTINUED)

B. Service-connected disability retirement:

Age and service requirement: None

Benefit amount:

1. For total incapacity: The greater of the accrued benefit under 11(B) or $66\frac{2}{3}$ percent of final earnings.
2. For Group G members: Benefits described in (1.) above are modified as follows:
 - The minimum benefit is 70 percent of final earnings if the member meets the definition of Social Security disability.
 - The minimum benefit is $52\frac{1}{2}$ percent of final earnings if the member is disabled but does not qualify for the 70 percent minimum benefit above. The Chief Administrative Officer of the County may offer a disabled member an alternative position with the County with a 5 percent 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 percent 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 $52\frac{1}{2}$ percent of final earnings if the member is disabled but does not qualify for the 70 percent 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 percent pay increase in lieu of this disability benefit. This does not apply to Group F.

14. Termination of Employment

A. Vesting provision:

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

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015 (CONTINUED)

Benefit amount: The monthly vested pension payable at normal retirement date is the benefit determined according to the normal retirement pension provisions based on credited service to the date of termination.

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

B. Return of employee contributions:

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

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

15. Discontinued Service Pension

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

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

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

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

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

- Substitute final earnings for average final earnings
 - Add 5 percent 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.

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015 (CONTINUED)

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 percent of final earnings

3. Mandatory Integrated plan:

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

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

B. Elected and appointed members:

On or before September 26, 1983

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

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

After September 26, 1983

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

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

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

16. Death Benefits

A. Non service-connected:

Eligibility: None.

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015
(CONTINUED)

Benefit amount:

1. Return of member contributions with interest;
plus
2. 50 percent of average final earnings if the member was a member of the Employees' Retirement System on or before December 31, 1966, and was a Maryland State plan member on August 15, 1965.
or
3. Alternate death benefits listed under (C.) below.

B. Service-connected:

Eligibility requirement: None

Benefit amount:

1. The spouse* will receive a benefit equal to 25 percent of the member's final earnings, with a minimum of \$250.00 per month. The child will receive a benefit equal to 5 percent of the member's final earnings with a minimum of \$50.00 per month to age 21 or life if disabled;
plus
2. 50 percent 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 percent minimum benefit level at the time of death and had elected the 100 percent 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 percent joint and survivor pension; plus
2. 50 percent 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.*

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015
(CONTINUED)

17. Forms of Payment

A. Normal form:

1. Optional non-integrated plan: Lifetime benefit, with first 120 monthly payments guaranteed.
2. Optional integrated plan: Lifetime benefit, with first 120 monthly payments guaranteed.
3. Mandatory integrated plan: Lifetime benefit with refund of remaining contributions and interest.

B. Optional forms: A member may elect an optional form of pension actuarially equivalent to the normal form of retirement, otherwise payable, excluding members who qualified for a non-service-connected disability retirement before reaching early retirement date.

Available forms of payment are:

<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 percent. 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 percent. 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 percent.
<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 percent. 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.

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015 (CONTINUED)

18. Post-Retirement Increases

Optional non-integrated plan: Annual adjustment to the benefit equal to 100 percent 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 percent.

Optional integrated plan: Annual adjustment to the benefit equal to 100 percent 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 percent.

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 percent of CPI increase, limited to 5 percent. However, if over age 65 or disabled, then the maximum limit of 5 percent 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 percent of the change in Consumer Price Index for the Washington Metro Area up to 3 percent, plus 60 percent of any change in Consumer Price Index greater than 3 percent, not to exceed a total of 7.5 percent for years and months of credited service before July 1, 2011. The maximum 7.5 percent 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 percent.

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 percent.

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 percent 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 percent post-retirement adjustment limit.

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015 (CONTINUED)

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 percent 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 percent on the transferred service.

Purchased Service:

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

19. Deferred Retirement Option Plan (DROP) for Group E (effective 7/1/2015)

A. Eligibility for DROP entry:

Any group E uniformed correctional officers or sworn deputy sheriffs who are at least 55 years old and have at least 15 years of credited service or have attained age 46 and 25 years of credited service may participate in the DROP plan.

B. Exit from DROP:

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

C. The DROP 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 DROP entry.

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.

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015
(CONTINUED)

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 exited DROP and their DROP account.

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

F. Death while in DROP:

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

G. Member Contributions:

Members do not contribute while in DROP.

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

H. 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.

I. Exit from DRSP:

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

J. 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.

K. Post-DRSP monthly benefit:

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

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015
(CONTINUED)

L. 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.

M. Death while in DRSP:

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

N. Member Contributions:

Members do not contribute while in DRSP.

21. 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 percent 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.

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015 (CONTINUED)

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

F. Death while in DROP:

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

22. Guaranteed Retirement Income Plan (*effective 7/1/2009*)

A. Eligibility for GRIP entry:

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

B. The GRIP account collects:

- Member contributions (pre-tax unless noted otherwise)
 - a. Non-public safety employees: 4 percent of regular base earnings up to the maximum Social Security wage base plus 8 percent of the excess.
 - b. Public safety employees: 3 percent of regular base earnings up to the maximum Social Security wage base plus 6 percent of the excess.
 - c. Effective July 1, 2011, members had the option to contribute an additional 2 percent 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 percent of regular base earnings. Effective July 1, 2011, the employer contribution was 6 percent of regular base earnings for service between June 30, 2011, and July 1, 2012.
 - b. Public safety employees: 10 percent of regular base earnings. Effective July 1, 2011, the employer contribution was 8 percent of regular base earnings for service between June 30, 2011, and July 1, 2012.
- 7.25 percent interest credited from the date of contribution.

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015 (CONTINUED)

C. Vesting Schedule:

- Employees are 100 percent vested in employee contributions at all times.
- County contributions are 0 percent vested from 0-3 years of credited service and 100 percent vested at 3 or more years of credited service.
- Participants become 100 percent vested at death or disability.

D. Normal Form of Payment – Lump sum

E. Optional Forms of Payment:

- Direct rollover
- Life annuity purchased from MCERP

F. Eligible Agencies:

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

23. Retirement Incentive Program (*effective 6/1/2010 for one time election*)

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

24. 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.

BRIEF SUMMARY OF PLAN PROVISIONS AS OF JULY 1, 2015 (CONTINUED)

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

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

C. EOP Contributions:

- Employee contributions: 4 percent 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 percent of bi-weekly gross pay.
- Employer contributions: 8 percent of pay (regular earnings before taxes).

25. Changes in plan provisions

With the exception of the DROP implementation for Group E eligible uniformed correctional officers and sworn deputy sheriffs, there were no additional changes in plan provisions since the last actuarial valuation as of July 1, 2014.

SECTION F
GLOSSARY OF TERMS

GLOSSARY OF TERMS

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

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

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

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

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

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

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

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

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

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

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

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