

MARYLAND STATE RETIREMENT AND PENSION SYSTEM
ANNUAL ACTUARIAL VALUATION REPORT FOR
MARYLAND MUNICIPAL CORPORATIONS
AS OF JULY 1, 2009

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October 9, 2009

Board of Trustees for the
Maryland State Retirement and Pension System
120 East Baltimore Street
Baltimore, Maryland 21202

Dear Members of the Board:

This summary report presents the results of the July 1, 2009, actuarial valuation of the Maryland State Retirement and Pension System for participating Municipal Corporations, Correctional Officers' Retirement System (CORS) and the Municipal Law Enforcement Officers Pension System (LEOPS). Consistent with the prior valuations, participating Municipal Corporations which are the responsibility of the State for funding purposes have been excluded, and certain previously withdrawn municipal corporations have been valued as part of the State valuation instead of in this municipal valuation. With respect to the latter, this is because the State acts as guarantor to the extent the present value of their future payments are in excess of or less than the present value of their future liabilities. Municipal employers who withdraw on or after June 30, 1997 will have their employees' benefits guaranteed by this plan.

This is the first year in which GRS has prepared the municipal actuarial valuation for the Maryland State Retirement and Pension System. The numbers displayed in the 2008 column headings are those produced by the prior actuary as contained in their report dated December 23, 2008.

The principal results are as follows:

1. The single contribution rate that is applied to the active member payroll of each Municipal Corporation is calculated to be up from the 4.05% calculated in last year's report to 7.30% in FY 2011.
2. The additional contribution on all current Retirement System payroll is 5%.
3. The additional contribution for those municipalities who elected to provide the Contributory Pension Benefit (CPB) is 2.42% of total Retirement and Pension System payroll.
4. The additional contribution for those municipalities who formerly elected the CPB and who have now elected the Alternate Contributory Pension Selection (ACPS) is 1.11% of Pension System payroll only. This contribution is made in addition to the CPB contribution of 2.42%.

5. The additional contribution for those municipalities who did not initially elect the CPB but who subsequently entered the ACPS is 7.44% of Pension System payroll only.
6. In addition to (1) - (5), some municipalities may have a charge or credit applied to the calculation of the FY 2011 contribution. These amounts are identified in Section 3 beginning on page 14 of this report.

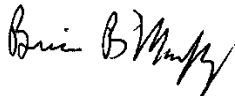
The contribution rate for LEOPS increased from 30.03% to 32.74%.

The contribution rate for Correctional Officers' Retirement System increased from 8.41% to 9.69%.

In preparing our report we relied, without audit, on information (some oral and some written) supplied by the Retirement Agency. This information includes, but is not limited to, plan provisions, employee data and financial information. We found the data and financial information to be reasonably consistent and comparable with data used in the prior valuation. The results contained in this report are only applicable to the 2011 fiscal year. Future years' results may differ significantly.

We hereby certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board, and that as Members of the American Academy of Actuaries, we meet the Qualification Standards to render the actuarial opinions contained in this report.

Sincerely,
Gabriel Roeder Smith & Company,



Brian B. Murphy, FSA, EA, MAAA



Brad L. Armstrong, ASA, EA, MAAA



Norman L. Jones, FSA, EA, MAAA

SECTION I
BOARD SUMMARY

BOARD SUMMARY

During the 1996 legislative session, legislation was passed which changes the contribution calculations for participating employers in the Municipal Pension Plan. Commencing with the June 30, 1996 actuarial valuation, the ongoing funding requirements for all Municipal Corporations consist of four components. The first two components are the same for all Corporations. The last two components, which vary by individual Corporation, are based on some characteristics unique to those Corporations.

The shared components are:

- (1) **Normal Cost Rate** based upon Pension System provisions
- (2) **Unfunded Liability Rate** based upon all plan provisions

The varying components are:

- (3) Various **surcharges** on normal cost and unfunded liability, based on plan elections.
- (4) **Special Adjustments** to the final rate reflecting:
 - credits for "over-funded" Corporations as of 6/30/95,
 - charges for "under-funded" Corporations as of 6/30/95,
 - certain "special payments" called for under prior and future entry into the System,
 - any withdrawal liability payments owed to the System for withdrawals after 6/30/96.

The normal cost rate is a single rate determined by the actuary, based upon the valuation year demographics of the participants.

The unfunded liability rate is determined annually by the actuary and is the rate that, when applied to current and future expected payrolls is sufficient to pay for all future benefits of current and prior plan participants not funded by:

- current actuarial value of assets,
- the present value of all future normal costs (employer and employee),
- the present value of all future surcharge contributions,
- the net present value of all future "special adjustment" contributions, and
- the present value of all future withdrawal liability payments on behalf of withdrawn Corporations.

The special adjustments include a dollar amount credit subtracted from, or charge added to, the above three pieces. In no event can the total credits exceed the sum of the otherwise called for contribution.

A charge applies to each Municipal Corporation who as of 6/30/95 was determined to be under-funded on the basis of having less assets in the Retirement System than would be needed to fund the present value of benefits **accrued** as of 6/30/95 for prior and current participants in the Retirement System. Once this "deficit" was determined as of 6/30/95, the actuary determined a series of charges

BOARD SUMMARY

increasing by 5% per year to the year 2020 with present value equal to the amount of the deficit. For a few Municipal Corporations, the deficit payment was calculated to be greater than 2% of payroll when using a 25 year amortization payment. These Corporations are amortizing their charges to the year 2036. Individual deficit amounts and December 2010 charges are displayed in Table III-2 (page 14).

A credit applies to each Municipal Corporation who as of 6/30/95 was determined to be over-funded on the basis of having assets which exceed the present value of all future benefits expected to be paid to current and prior participants of that employer. Once this "**surplus**" was determined as of 6/30/95, the actuary determined a series of credits increasing by 5% per year to the year 2020 with present value equal to the amount of the surplus. Individual surplus amounts and December 2010 credits are displayed in Table III-3 (page 15).

BOARD SUMMARY

Table I-1		
Summary of Principal Results		
Employees' Combined System		
	2009	2008
1. Participant Data		
Number of:		
Active Members	25,524	25,664
Retired Members and Beneficiaries	12,816	12,512
Vested Deferred Members	6,494	6,452
Annual Salaries of Active Members	\$ 1,054,165,613	\$ 1,050,920,493
Annual Retirement Allowance for Retired Members and Beneficiaries	\$ 140,618,650	\$ 131,123,655
2. Assets and Liabilities		
a. Total Actuarial Accrued Liability	\$ 3,436,703,262	\$ 3,264,427,133
b. Actuarial Value of Assets	<u>2,608,734,324</u>	<u>2,888,084,075</u>
c. Unfunded Actuarial Accrued Liability (a—b)	\$ 827,968,938	\$ 376,343,058
d. Assigned Liabilities	<u>352,456,203</u>	<u>364,148,408</u>
e. Pooled Unfunded Actuarial Accrued Liability (c—d)	\$ 475,512,735	\$ 12,194,650
3. Basic Contribution Rate*		
Total Normal Cost Contribution	9.43%	
Employee Normal Cost Contribution	<u>4.02%</u>	
Employer Normal Cost Contribution	5.41%	4.98%
Unfunded Actuarial Liability	<u>1.89%</u>	<u>(0.93%)</u>
Total Basic Contribution Rate	7.30%	4.05%

* This rate excludes various surcharges.

BOARD SUMMARY

Table I-2		
Summary of Principal Results		
LEOPS		
	2009	2008
1. Participant Data		
Number of:		
Active Members	929	874
Retired Members and Beneficiaries	126	96
Vested Deferred Members	18	38
Annual Salaries of Active Members	\$ 52,027,915	\$ 50,212,862
Annual Retirement Allowance for Retired Members and Beneficiaries	\$ 4,121,828	\$ 3,003,107
2. Asset and Liabilities		
a. Total Actuarial Accrued Liability	\$ 210,675,996	\$ 187,524,781
b. Actuarial Value of Assets	<u>87,119,389</u>	<u>81,037,263</u>
c. Unfunded Actuarial Accrued Liability (a—b)	\$ 123,556,607	\$ 106,487,518
d. Assigned Liabilities	<u>(15,095,327)</u>	<u>(15,359,127)</u>
e. Pooled Unfunded Actuarial Accrued Liability (c—d)	\$ 138,651,934	\$ 121,846,645
3. Basic Contribution Rate		
Total Normal Cost Contribution	21.44%	
Employee Normal Cost Contribution	<u>4.00%</u>	
Employer Normal Cost Contribution	17.44%	16.09%
Unfunded Actuarial Liability	<u>15.30%</u>	<u>13.94%</u>
Total Basic Contribution Rate	32.74%	30.03%

BOARD SUMMARY

Table I-3		
Summary of Principal Results		
Correctional Officers' Retirement System		
	2009	2008
1. Participant Data		
Number of:		
Active Members	68	68
Retired Members and Beneficiaries	0	0
Vested Deferred Members	0	0
Annual Salaries of Active Members	\$ 4,047,633	\$ 4,184,736
Annual Requirement Allowance for Retired Members and Beneficiaries	\$ 0	\$ 0
2. Asset and Liabilities		
a. Total Actuarial Accrued Liability	\$ 12,272,976	\$ 11,803,238
b. Actuarial Value of Assets	7,373,048	7,136,007
c. Unfunded Actuarial Accrued Liability (a-b)	\$ 4,899,928	\$ 4,667,231
d. Assigned Liabilities	4,601,016	\$ 4,667,231
e. Pooled Unfunded Actuarial Accrued Liability (c-d)	\$ 298,912	\$ 0
3. Basic Contribution Rate		
Total Normal Cost Contribution	14.29%	
Employee Normal Cost Contribution	<u>5.00%</u>	
Employer Normal Cost Contribution	9.29%	8.41%
Unfunded Actuarial Liability	<u>0.40%</u>	<u>0.00%</u>
Total Basic Contribution Rate	9.69%	8.41%

SECTION II
ASSETS

ASSETS

The System uses and discloses two different asset measurements which are presented in this Section of the report: market value and actuarial value of assets. The market value represents, as of the valuation date, the value of the assets if they were liquidated on that date. The actuarial value of assets is a value that attempts to smooth annual investment return performance over five years to reduce annual investment volatility, and is used in determining contribution rates for the three participating employer plans.

On the following pages we present detailed information on System assets:

- Disclosure of assets at June 30, 2009.
- Statement of cash flows during the year.
- Development of the actuarial value of assets.
- Disclosure of investment performance for the year.

ASSETS

Table II-1					
Market Value and Cash Flow					
	Employees (Municipal)	LEOPS (Municipal)	Local Fire & Police (Municipal)	Corrections (Municipal)	Total Municipal
Market Value of Assets as of 6/30/2008	\$ 2,682,852,362	\$ 75,273,304	\$ 4,666,245	\$ 6,628,912	\$ 2,769,420,823
Employer Contributions	91,430,779	13,906,011	0	752,332	106,089,122
Member Contributions	42,284,128	1,941,696	0	202,531	44,428,355
Investment Returns	(542,615,522)	(15,348,194)	0	(1,427,050)	(559,390,766)
Disbursements from the Trust	(100,006,477)	(3,173,326)	0	(12,518)	(103,192,321)
Net Transfers	<u>0</u>	<u>0</u>	<u>(4,666,245)</u>	<u>0</u>	<u>(4,666,245)</u>
Market Value of Assets as of 6/30/2009	\$ 2,173,945,270	\$ 72,599,491	\$ 0	\$ 6,144,207	\$ 2,252,688,968

ASSETS

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS						
Total Municipal						
	2008	2009	2010	2011	2012	2013
Beginning of Year:						
(1) Market Value of Assets	\$2,877,736,589	\$2,769,420,823				
(2) Actuarial Value of Assets	2,758,121,299	2,980,744,940				
End of Year:						
(3) Market Value of Assets	2,769,070,010	2,252,688,968				
(4) Net of Contributions and Disbursements	\$43,391,775	42,658,911				
(5) Total Investment Income						
=(3)-(1)-(4)	(152,058,354)	(559,390,766)				
(6) Projected Rate of Return	7.75%	7.75%				
(7) Projected Investment Income						
=(1)x(6)+[(1+(6))^5-1]x(4)	224,674,644	216,252,303				
(8) Beginning of Year Asset Adjustment		(13,995)				
(9) Investment Income in Excess of Projected Income	(376,732,998)	(775,643,069)				
(10) Excess Investment Income Recognized						
This Year (5 year recognition)						
(10a) From This Year	(75,346,600)	(155,128,614)				
(10b) From One Year Ago	29,903,822	(75,237,906)	\$ (71,116,494)			
(10c) From Two Years Ago	0	29,820,952	(75,237,906)	\$ (71,116,494)		
(10d) From Three Years Ago	0	0	29,820,952	(75,237,906)	\$ (71,116,494)	
(10e) From Four Years Ago	0	0	0	29,820,946	(75,237,904)	\$ (71,116,493)
(10f) Total Recognized Investment Gain	(45,442,778)	(200,545,568)	(116,533,448)	(116,533,454)	(146,354,398)	(71,116,493)
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	222,623,641	58,351,651				
End of Year:						
(3) Market Value of Assets	2,769,070,010	2,252,688,968				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	2,980,744,940	3,039,096,591				
(12a) Upper Collar Limit 120% x (3)	3,322,884,012	2,703,226,761				
(12b) Lower Collar Limit 80% x (3)	2,215,256,008	1,802,151,175				
(13) Adjustment to Remain within 20% Corridor	0	(335,869,830)				
(14) Final Actuarial Value of Assets as of 6/30	2,980,744,940	2,703,226,761				
(15) Actuarial Value Rate of Return	6.45%	(10.66)%				
(16) Market Value Rate of Return	(5.24)%	(20.04)%				
(17) Transfers on an Actuarial Value Basis	0	0				
(18) Actuarial Value of Assets as of 7/1	2,980,744,940	2,703,226,761				
(19) Transfers on a Market Value Basis	0	0				
(20) Market Value of Assets as of 7/1	2,769,070,010	2,252,688,968				
(21) Difference Between Market & Actuarial Values	(211,674,930)	(450,537,793)				
(22) Ratio of Actuarial Value to Market Value	108%	120%				

* 2009 reflects an adjustment to the excess investment income recognized from previous years due to the dissolution of the Local Fire and Police System

ASSETS

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS						
Employees (Municipal)						
	2008	2009	2010	2011	2012	2013
Beginning of Year:						
(1) Market Value of Assets	\$2,811,102,968	\$2,682,852,362				
(2) Actuarial Value of Assets	2,693,982,402	2,888,084,075				
End of Year:						
(3) Market Value of Assets	2,694,199,049	2,173,945,270				
(4) Net of Contributions and Disbursements	31,464,273	33,708,430				
(5) Total Investment Income						
=(3)-(1)-(4)	(148,368,192)	(542,615,522)				
(6) Projected Rate of Return	7.75%	7.75%				
(7) Projected Investment Income						
=(1)×(6)+[(1+(6)) ⁿ -1]×(4)	219,056,971	209,202,888				
(8) Beginning of Year Asset Adjustment		867,993				
(9) Investment Income in Excess of Projected Income	(367,425,163)	(751,818,410)				
(10) Excess Investment Income Recognized						
This Year (5 year recognition)						
(10a) From This Year	(73,485,033)	(150,363,682)				
(10b) From One Year Ago	29,280,142	(73,485,033)	\$ (68,223,560)			
(10c) From Two Years Ago	0	29,280,142	(73,485,033)	\$ (68,223,560)		
(10d) From Three Years Ago	0	0	29,280,142	(73,485,033)	\$ (68,223,560)	
(10e) From Four Years Ago	0	0	0	29,280,140	(73,485,031)	\$ (68,223,559)
(10f) Total Recognized Investment Gain	(44,204,891)	(194,568,573)	(112,428,451)	(112,428,453)	(141,708,591)	(68,223,559)
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	206,316,353	49,210,738				
End of Year:						
(3) Market Value of Assets	2,694,199,049	2,173,945,270				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	2,900,298,755	2,937,294,813				
(12a) Upper Collar Limit 120% x (3)	3,233,038,859	2,608,734,324				
(12b) Lower Collar Limit 80% x (3)	2,155,359,239	1,739,156,216				
(13) Adjustment to Remain within 20% Corridor	0	(328,560,489)				
(14) Final Actuarial Value of Assets as of 6/30	2,900,298,755	2,608,734,324				
(15) Actuarial Value Rate of Return	6.45%	(10.81)%				
(16) Market Value Rate of Return	(5.25)%	(20.10)%				
(17) Transfers on an Actuarial Value Basis	(12,214,680)	0				
(18) Actuarial Value of Assets as of 7/1	2,888,084,075	2,608,734,324				
(19) Transfers on a Market Value Basis	(11,346,687)	0				
(20) Market Value of Assets as of 7/1	2,682,852,362	2,173,945,270				
(21) Difference Between Market & Actuarial Values	(205,231,713)	(434,789,054)				
(22) Ratio of Actuarial Value to Market Value	108%	120%				

ASSETS

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS						
LEOPS (Municipal)						
	2008	2009	2010	2011	2012	2013
Beginning of Year:						
(1) Market Value of Assets	\$62,026,594	\$75,273,304				
(2) Actuarial Value of Assets	59,863,358	81,037,263				
End of Year:						
(3) Market Value of Assets	70,204,716	72,599,491				
(4) Net of Contributions and Disbursements	11,690,858	12,674,381				
(5) Total Investment Income						
=(3)-(1)-(4)	(3,512,736)	(15,348,194)				
(6) Projected Rate of Return	7.75%	7.75%				
(7) Projected Investment Income						
=(1)x(6)+([1+(6)] ^{.5-1})x(4)	5,251,629	6,315,649				
(8) Beginning of Year Asset Adjustment		(374,893)				
(9) Investment Income in Excess of Projected Income	(8,764,365)	(21,663,843)				
(10) Excess Investment Income Recognized						
This Year (5 year recognition)						
(10a) From This Year	(1,752,873)	(4,332,769)				
(10b) From One Year Ago	540,810	(1,752,873)	\$ (2,585,724)			
(10c) From Two Years Ago	0	540,810	(1,752,873)	\$ (2,585,724)		
(10d) From Three Years Ago	0	0	540,810	(1,752,873)	\$ (2,585,724)	
(10e) From Four Years Ago	0	0	0	540,806	(1,752,873)	\$ (2,585,723)
(10f) Total Recognized Investment Gain	(1,212,063)	(5,544,832)	(3,797,787)	(3,797,791)	(4,338,597)	(2,585,723)
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)	15,730,424	13,070,305				
End of Year:						
(3) Market Value of Assets	70,204,716	72,599,491				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	75,593,782	94,107,568				
(12a) Upper Collar Limit 120% x(3)	84,245,659	87,119,389				
(12b) Lower Collar Limit 80% x(3)	56,163,773	58,079,593				
(13) Adjustment to Remain within 20% Corridor	0	(6,988,179)				
(14) Final Actuarial Value of Assets as of 6/30	75,593,782	87,119,389				
(15) Actuarial Value Rate of Return	6.15%	(7.13)%				
(16) Market Value Rate of Return	(5.18)%	(18.81)%				
(17) Transfers on an Actuarial Value Basis	5,443,481	0				
(18) Actuarial Value of Assets as of 7/1	81,037,263	87,119,389				
(19) Transfers on a Market Value Basis	5,068,588	0				
(20) Market Value of Assets as of 7/1	75,273,304	72,599,491				
(21) Difference Between Market & Actuarial Values	(5,763,959)	(14,519,898)				
(22) Ratio of Actuarial Value to Market Value	108%	120%				

ASSETS

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS						
Corrections (Municipal)						
	2008	2009	2010	2011	2012	2013
Beginning of Year:						
(1) Market Value of Assets		\$6,628,912				
(2) Actuarial Value of Assets		7,136,007				
End of Year:						
(3) Market Value of Assets		6,144,207				
(4) Net of Contributions and Disbursements		942,345				
(5) Total Investment Income						
=(3)-(1)-(4)		(1,427,050)				
(6) Projected Rate of Return		7.75%				
(7) Projected Investment Income						
=(1)x(6)+([1+(6)]^5-1)x(4)		549,575				
(8) Beginning of Year Asset Adjustment		(507,095)				
(9) Investment Income in Excess of Projected Income		(1,976,625)				
(10) Excess Investment Income Recognized						
This Year (5 year recognition)						
(10a) From This Year		(395,325)				
(10b) From One Year Ago		0	\$ (307,210)			
(10c) From Two Years Ago		0	0	\$ (307,210)		
(10d) From Three Years Ago		0	0	0	\$ (307,210)	
(10e) From Four Years Ago		0	0	0	0	\$ (307,211)
(10f) Total Recognized Investment Gain		(395,325)	(307,210)	(307,210)	(307,210)	(307,211)
(11) Change in Actuarial Value of Assets						
=(4)+(7)+(8)+(10f)		589,500				
End of Year:						
(3) Market Value of Assets	\$ 0	6,144,207				
(12) Preliminary Actuarial Value of Assets = (2)+(11)	0	7,725,507				
(12a) Upper Collar Limit 120% x (3)	0	7,373,048				
(12b) Lower Collar Limit 80% x (3)	0	4,915,366				
(13) Adjustment to Remain within 20% Corridor	0	(352,459)				
(14) Final Actuarial Value of Assets as of 6/30	0	7,373,048				
(15) Actuarial Value Rate of Return		(2.70)%				
(16) Market Value Rate of Return		(20.10)%				
(17) Transfers on an Actuarial Value Basis	7,136,007	0				
(18) Actuarial Value of Assets as of 7/1	7,136,007	7,373,048				
(19) Transfers on a Market Value Basis	6,628,912	0				
(20) Market Value of Assets as of 7/1	6,628,912	6,144,207				
(21) Difference Between Market & Actuarial Values	(507,095)	(1,228,841)				
(22) Ratio of Actuarial Value to Market Value	108%	120%				

SECTION III
LIABILITIES

LIABILITIES

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. There are several methods currently used in making such a determination.

The method used for this valuation is referred to as the "individual" entry age normal actuarial cost method." Under this method, a level-percent-of-pay employer cost is determined which, along with member contributions, will pay for projected retirement benefits for a new entrant to the plan. The level percent developed is called the "normal cost" rate and the product of that rate and payroll is the "normal cost".

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and funds accumulated as of the same date is referred to as the unfunded actuarial liability. If the employer's contributions exceed the employer's normal cost for the year, after allowing for interest earned on the previous balance of the unfunded actuarial liability, this liability will be reduced. Benefit improvements, actuarial gains and losses, and changes in actuarial procedures will also have an effect on the total liability and on the portion of it that is unfunded.

After the amount of the unfunded actuarial liability has been determined, a schedule of contributions is established to amortize that amount over a given period. Maryland's laws specify a 40 year level-percent-of-pay amortization schedule starting June 30, 1980 for the pre-2001 ECS liability, then individual 25 year layers for each portion of the UAL arising thereafter. The LEOPS 40 years started June 30, 1999. Thus, for the July 1, 2009 valuation, the remaining period of amortization is 30 years for the LEOPS. The CORS 40 years started June 30, 2006. Thus for the July 1, 2009 valuation, the remaining period of amortization is 37 years for CORS.

The following table (Table III-1) displays by System the Individual Entry Age Normal actuarial liabilities and unfunded actuarial liability. Table III-2 shows the portion of unfunded liability (i.e. Deficit Amount) assigned to each of 19 individual participating municipalities. The table also shows the additional charge which will be billed to exhaust this liability starting with the December 2010 billing.

Table III-3 shows 14 municipalities who have credits in this plan. These municipalities may use up to the amount shown to offset their basic December 2010 billing amount. Any unused credit will revert to the pooled plan on an annual basis.

LIABILITIES

Table III-1				
Liabilities				
	Employees Combined System	LEOPS	Corrections Officers'	Total Municipal
Present Value Benefits for:				
a. Active Members	\$ 2,584,839,796	\$ 231,658,662	\$ 16,169,231	\$ 2,832,667,689
b. Retired Member and Beneficiaries	1,542,667,877	64,253,440	0	1,606,921,317
c. Terminated Vested Members and Inactives	<u>113,948,143</u>	<u>3,066,564</u>	<u>0</u>	<u>117,014,707</u>
d. Total	\$ 4,241,455,816	\$ 298,978,666	\$ 16,169,231	\$ 4,556,603,713
Individual Entry Age Actuarial Accrued Liability for:				
a. Active Members	\$ 1,780,087,242	\$ 143,355,992	\$ 12,272,976	\$ 1,935,716,210
b. Retired Member and Beneficiaries	1,542,667,877	64,253,440	0	1,606,921,317
c. Terminated Vested Members and Inactives	<u>113,948,143</u>	<u>3,066,564</u>	<u>0</u>	<u>117,014,707</u>
d. Total	\$ 3,436,703,262	\$ 210,675,996	\$ 12,272,976	\$ 3,659,652,234
Actuarial Value of Assets	\$ 2,608,734,324	\$ 87,119,389	\$ 7,373,048	\$ 2,703,226,761
Unfunded Actuarial Liability	\$ 827,968,938	\$ 123,556,607	\$ 4,899,928	\$ 956,425,473
Funded Percent	75.9%	41.4%	60.1%	73.9%
Present Value of Accrued Benefits				
a. Active Members	\$ 1,338,142,264	\$ 123,953,818	\$ 9,175,244	\$1,471,271,326
b. Retired Member and Beneficiaries	1,542,667,877	64,253,440	0	1,606,921,317
c. Terminated Vested Members and Inactives	<u>113,948,143</u>	<u>3,066,564</u>	<u>0</u>	<u>117,014,707</u>
d. Total	\$ 2,994,758,284	\$ 191,273,822	\$ 9,175,244	\$3,195,207,350

LIABILITIES

Table III-2				
Schedule of Deficit Amounts as of July 1, 2009 and Deficit Payments for December 2010 Billing				
Initial PLD Number	PLD Name	Deficit Amount at 07/01/2009	December 2010 Payment	Year of Last Payment
6504	Allegheny Co. Community College	\$ 94,054	\$ 9,809	2020
7402	Dorchester Co. Bd. of Education	309,032	32,229	2020
7412	Dorchester Co. Roads Board	655,365	36,284 **	2035
7425	Cambridge, City of	532,298	55,513	2020
7602/8	Garrett Co. Bd. of Ed & Bd of Ed Cafe	290,572	30,304	2020
7711	Harford Co. Government	6,088,038	634,921	2020
8030	Takoma Park, City of	1,490,570	82,524 **	2035
8102	Prince Georges Co. Bd of Education	11,441,008	1,193,182	2020
8111	Prince Georges Co. Government	28,705,927	2,993,739	2020
8125	Greenbelt, City of	1,694,950	93,839 *	2035
8134	Cheverly, City of	338,104	35,261	2020
8135	Prince Georges Co. Crossing Guards	17,819	1,858	2020
8502	Talbot Co. Bd. of Education	504,572	27,934 **	2035
8604	Hagerstown Junior College	156,288	16,299	2020
8625	Hagerstown, City of	5,281,163	292,387 **	2035
8725	Salisbury, City of	497,115	51,844	2020
8811	Worcester Co. Commission	71,392	7,445	2020
8816	Worcester Co. Liquor Bd.	9,253	965	2020
8827	Berlin, Town of	205,021	21,382	2020
TOTAL		\$ 58,382,541	\$ 5,617,719	

* Denotes 40 year amortization, payments increasing 5% per year.

** Denotes 40 year amortization, payments increase 15% per year for the first 5 years and 5% per year thereafter. All others are amortized over a 25 year period with increasing 5% per year.

LIABILITIES

Table III-3				
Schedule of Surplus Amounts as of July 1, 2009				
& Maximum Credits to December 2010 Billing				
Initial PLD Number	PLD Name	Surplus Amount at 07/01/2009	December 2010 Credit	Year of Last Credit
6534	Tri-County Council of Western Maryland	\$ (256,348)	\$ (26,734)	2020
6533	Allegany Co. Housing Authority	(690)	(72)	2020
6731	Md. Health & Higher Educ. Fac. Auth	(130,117)	(13,570)	2020
7525	Brunswick, Town of	(505,504)	(52,719)	2020
7702	Harford Co. Bd. of Education	(236,446)	(24,659)	2020
7804	Howard Community College	(225,985)	(23,568)	2020
8004	Montgomery College	(233,797)	(24,383)	2020
8129	New Carrollton, City of	(346,904)	(36,179)	2020
8131	Upper Marlboro, Town of	(5,043)	(526)	2020
8202	Queen Anne Co. Bd. of Education	(59,177)	(6,172)	2020
8402	Somerset Co. Bd. of Education	(190,089)	(19,824)	2020
8426	Crisfield, City of	(26,970)	(2,813)	2020
8610	Washington Co. Library	(388,685)	(40,536)	2020
8825	Pocomoke City	(179,533)	(18,723)	2020
TOTAL		\$ (2,785,288)	\$ (290,478)	

Amortized over a 25 year period with payments increasing 5% per year.

LIABILITIES

Table III-4				
Employees Combined System (Municipal)				
Schedule of New Entrant Payments and Credits as of July 1, 2009 for December 2010 Billing				
(Unless noted, amounts are amortized over 25 years with payments increasing 5% per year)				
LOC Number	Municipal Corporation	Outstanding Balance as of 7/1/2009*	December 2010 Payment	Last Payment Year
6533	Allegany Co Housing Authority	\$ 12,729	\$ 1,430	2019
6628	AAC Econ Opp Com	283,322	31,840	2019
7025	Town of Preston	47,850	5,378	2019
7026	Town of Denton	675,541	75,918	2019
7027	Town of Ridgely	258,279	24,365 **	2029
7028	Town of Federalsburg	393,526	36,433 **	2030
7029	Town of Greensboro	193,847	17,642 **	2031
7127	Carroll Soil Conservation District	2,551	287	2019
7129	Town of Mt. Airy	170,478	94,105	2010
7206	Cecil County Library	11,590	1,303	2019
7380	So MD Tri-County Comm Action	771,375	86,688	2019
7528	Catoctin & Frederick Soil Conservation	1,091	123	2019
7529	Town of Thurmont	2,320,279	223,449 **	2028
7625	Town of Oakland	253,364	94,285 **	2011
7706	Harford Co Library	7,643	859	2019
TOTAL		\$ 5,403,465	\$ 694,105	

* The outstanding balance is based on the 7.75% valuation interest rate. Actual payoff amounts will be based on the interest rate in effect when the balance was first established.

** Level dollar payments or credits.

LIABILITIES

Table III-4, cont.				
Employees Combined System (Municipal)				
Schedule of New Entrant Payments and Credits as of July 1, 2009 for December 2010 Billing				
(Unless noted, amounts are amortized over 25 years with payments increasing 5% per year)				
LOC Number	Municipal Corporation	Outstanding Balance as of 7/1/2009*	December 2010 Payment	Last Payment Year
7880	Howard Co Comm Action Comm	\$ 166,572	\$ 18,719	2019
7902	Kent Co Brd of Education	775,421	87,143	2019
7926	Town of Rock Hall	11,256	1,084 **	2028
8426	City of Crisfield	133,671	17,820 **	2019
8428	Town of Princess Anne	1,039	117	2019
8525	Commissioner of St. Michaels	242,563	27,259	2019
8528	Town of Oxford	97,052	10,907	2019
8618	Washington County Bd of Licenses	108,673	12,842	2019
8780	Shore Up	564,614	63,452	2019
8834	Tri-County Council for the Lower Eastern Shore	(38,434)	(4,319)	2019
8141	Town of University Park	1,061,692	93,777	2033
	TOTAL	3,124,119	328,801	
	GRAND TOTAL	\$ 8,527,584	\$ 1,022,906	

* The outstanding balance is based on the 7.75% valuation interest rate. Actual payoff amounts will be based on the interest rate in effect when the balance was first established.

** Level dollar payments or credits.

LIABILITIES

Table III-5
LEOPS (Municipal)
Schedule of New Entrant Payments and Credits as of July 1, 2009 for December 2010 Billing
(Amounts are amortized over 25 years with level annual payments)

LOC Number	Municipal Corporation	Outstanding Balance as of 7/1/2009*	December 2010 Payment	Last Payment Year
7125	Town of Westminster	\$ (577,548)	\$ (167,052)	2012
7128	City of Taneytown	(345,048)	(33,229)	2028
7130	Town of Hampstead	(553,456)	(50,370)	2031
7411	Dorchester County	(412,766)	(68,541) **	2016
7425	City of Cambridge	(370,441)	(39,676)	2024
7625	City of Oakland	(19,615)	(1,816)	2030
7711	Harford County Sheriffs	(4,795,054)	(879,686)	2015
7925A	Town of Chestertown	(556,064)	(51,481)	2030
8125	City of Greenbelt	1,084,558	109,559	2026
8126	City of Hyattsville	(584,178)	(59,012)	2026
8211	Queen Anne Public Safety EEs	(1,925,451)	(185,426)	2028
8428	Town of Princess Anne	(654,555)	(61,748)	2029
8628	Town of Hancock	(71,450)	(7,039)	2027
8725A	Salisbury Police	(943,301)	(92,930)	2027
8725B	Salisbury Fire	(1,522,939)	(146,663)	2028
8811	Worcester County	(2,835,466)	(254,054)	2032
7427	City of Hurlock	(541,102)	(48,482)	2032
6531	Town of Cumberland	625,187	64,931	2019
7427	Town of Hurlock	(66,526)	(7,476)	2025
7030	Caroline County Sheriffs	(30,112)	(2,660)	2033
TOTAL		\$ (15,095,327)	\$ (1,982,851)	

* The outstanding balance is based on the 7.75% valuation interest rate. Actual payoff amounts will be based on the interest rate in effect when the balance was first established.

** Denotes 10-year amortization.

LIABILITIES

Table III-6
Correctional Officers' Retirement System (Municipal)
Schedule of New Entrant Payments and Credits as of July 1, 2009 for December 2010 Billing
(Amounts are amortized over 25 years with level annual payments)

LOC Number	Municipal Corporation	Outstanding Balance as of 7/1/2009*	December 2010 Payment	Last Payment Year
8811	Worcester County	\$ 4,601,016	\$ 412,245	2032
TOTAL		\$ 4,601,016	\$ 412,245	

SECTION IV
CONTRIBUTIONS

CONTRIBUTIONS

A. Contribution Results for December 2010 Billings (FY 2011)

Each Municipal Corporation's basic appropriation to the Systems in Fiscal Year 2011 may be determined by applying the contribution rates set forth in this report to the expected FY 2011 active member payrolls for each Municipal Corporation.

The Individual Entry Age Normal method was used to develop the contribution rates. Under this funding method, as with most other actuarial funding methods, a total contribution rate is determined which consists of two elements: the normal cost rate and the unfunded actuarial liability rate. In addition each employer with current active participants in the Retirement System must pay 5% on the Retirement System payroll. Municipal Corporations who elected to provide CPB have a 2.42% surcharge applied to total Retirement and Pension System payroll. The surcharge consists of a 1.00% normal cost rate surcharge and a 1.42% UAL rate surcharge. Municipal Corporations who elected to provide CPB and who later elected to participate in the ACPS pay a 1.11% surcharge applied to Pension System payroll. The surcharge is the net result of a -0.40% normal cost rate surcharge and a 1.51% UAL rate surcharge. This is paid in addition to the 2.42% CPB surcharge. Municipalities who did not elect the CPB but did elect the ACPS pay a surcharge of 7.44% applied to Pension System payroll. The surcharge consists of 0.60% normal cost rate surcharge and a 6.84% UAL rate surcharge.

The 1.42% UAL surcharge for CPB participation will be paid through 2020, while the other two ACPS UAL surcharges will be paid through 2031.

Certain participating employers will have to pay special liability amounts calculated at their entry to the System or deficit payments based on the 1996 legislation, and other participating employers will be able to apply credits also based on the 1996 legislation.

CONTRIBUTIONS

TABLE IV-1		
Develop Contribution Rate by System		
as of June 30, 2009		
Employees' Combined System		
	2009	2008
1. Entry Age Actuarial Accrued Liability	\$ 3,436,703,262	\$ 3,264,427,133
2. Actuarial Value of Assets	<u>2,608,734,324</u>	<u>2,888,084,075</u>
3. Unfunded Actuarial Accrued Liability (1-2)	\$ 827,968,938	\$ 376,343,058
4. Assigned Liability		
a. Deficit Balances (Table III-2)	\$ 58,382,541	\$ 62,123,790
b. Surplus Balances (Table III-3)	(\$2,785,288)	(2,838,774)
c. New Entrant Liability Balances (Table III-4)	8,527,584	10,315,258
d. UAL Portion of CPB surcharge (Table IV-2)	102,247,930	107,226,306
e. UAL Portion of CPB to ACPS surcharge (Table IV-2)	177,819,877	179,000,503
f. UAL Portion of noncontributory to ACPS surcharge (Table IV-2)	<u>8,263,560</u>	<u>8,321,325</u>
g. Total assigned Liability Balances	\$ 352,456,203	\$ 364,148,408
5. Pooled Unfunded Actuarial Accrued Liability (3-4g)	\$ 475,512,735	12,194,650
6. Outstanding Balance of Previously Amortized Bases	<u>23,304,680</u>	<u>(26,750,980)</u>
7. Current Year Amortization Base (5-6)	\$ 452,208,055	\$ 38,945,630
8. Sum of Pooled Unfunded Amortization Payments	20,231,842	\$ (9,792,564)
9. Total Projected Payroll	\$ 1,072,454,856	\$ 1,050,920,493
10. UAL Amortization Rate	1.89%	(0.93%)
11. Employer Normal Cost		
a. Pension System Employer Normal Cost	\$ 63,039,104	\$ 56,413,797
b. Retirement System Normal Cost (Table IV-2)	966,306	1,078,936
c. CPB normal cost surcharge (Table IV-2)	8,242,444	8,072,000
d. CPB to ACPS normal cost surcharge (Table IV-2)	(3,283,178)	(3,215,887)
e. Noncontributory to ACPS normal cost surcharge (Table IV-2)	<u>50,524</u>	<u>49,505</u>
f. Employer Normal Cost After Adjustment (a-b-c-d-e)	\$ 57,063,009	\$ 50,429,243
12. Employer Normal Cost Adjusted for Timing	\$ 58,053,023	\$ 52,346,915
13. Employer Normal Cost Rate	5.41%	4.98%
14. Basic Employer Cost Rate (10 + 13)	7.30%	4.05%

CONTRIBUTIONS

Table IV-2			
Surcharges			
as of June 30, 2009			
Employees' Combined System			
	2009		2008
Normal Cost Surcharges			
1. Retirement System Payroll	\$ 19,326,113	\$	21,578,717
2. Retirement System Normal Cost Surcharge Rate	5.00%		5.00%
3. Retirement System Normal Cost Surcharge Amount	\$ 966,306	\$	1,078,936
4. Payroll for Municipals Under CPB	\$ 824,244,402	\$	807,199,951
5. CPB Normal Cost Surcharge Rate	1.00%		1.00%
6. CPB Normal Cost Surcharge Amount	\$ 8,242,444	\$	8,072,000
7. Payroll for Municipals Going From CPB to ACPS	\$ 820,794,601	\$	803,971,631
8. CPB to ACPS Normal Cost Surcharge Rate	(0.40%)		(0.40%)
9. CPB to ACPS Normal Cost Surcharge Amount	\$ (3,283,178)	\$	(3,215,887)
10. Payroll for Noncontributory ACPS	\$ 8,420,584	\$	8,250,871
11. CPB to ACPS Normal Cost Surcharge Rate	0.60%		0.60%
12. CPB to ACPS Normal Cost Surcharge Amount	\$ 50,524	\$	49,505
Unfunded Liability Surcharges			
1. Payroll for Municipals Under CPB	\$ 824,244,402	\$	807,199,951
2. CPB UAL Surcharge Rate	1.42%		1.42%
3. Amortization Factor	8.73595065		9.35474329
4. CPB UAL Surcharge Amount	\$ 102,247,930	\$	107,226,306
5. Payroll for Municipals Going From CPB to ACPS	\$ 820,794,601	\$	803,971,631
6. CPB to ACPS UAL Surcharge Rate	1.51%		1.51%
7. Amortization Factor	14.34725664		14.74472167
8. CPB to ACPS Normal Cost Surcharge Amount	\$ 177,819,877	\$	179,000,503
9. Payroll for Noncontributory ACPS	\$ 8,420,584	\$	8,250,871
10. CPB to ACPS UAL Surcharge Rate	6.84%		6.84%
11. Amortization Factor	14.34725664		14.74472167
12. CPB to ACPS UAL Surcharge Amount	\$ 8,263,560	\$	8,321,325

CONTRIBUTIONS

TABLE IV-3
Develop Contribution Rate by System
as of June 30, 2009
LEOPS

	2009	2008
1. Entry Age Actuarial Accrued Liability	\$ 210,675,996	\$ 187,524,781
2. Actuarial Value of Assets	<u>87,119,389</u>	<u>81,037,263</u>
3. Unfunded Actuarial Accrued Liability (1-2)	\$ 123,556,607	\$ 106,487,518
4. New Entrant Liability Balances (Table III-5)	<u>(15,095,327)</u>	<u>(15,359,127)</u>
5. Pooled Unfunded Actuarial Accrued Liability (3-4)	\$ 138,651,934	\$ 121,846,645
6. Amortization Factors	17.12098691	17.40904726
7. Unfunded Amortization Payment	\$ 8,098,361	\$ 6,999,042
8. Total Projected Payroll	\$ 52,930,573	\$ 50,212,862
9. UAL Amortization Rate	15.30%	13.94%
10. Employer Normal Cost	\$ 9,073,668	\$ 7,783,100
11. Employer Normal Cost Adjusted for Timing	\$ 9,231,092	\$ 8,079,068
12. Employer Normal Cost Rate	17.44%	16.09%
13. Basic Employer Cost Rate (9 + 12)	32.74%	30.03%

CONTRIBUTIONS

TABLE IV-4		
Develop Contribution Rate by System		
as of June 30, 2009		
Correctional Officers' Retirement System		
	2009	2008
1. Entry Age Actuarial Accrued Liability	\$ 12,272,976	\$ 11,803,238.00
2. Actuarial Value of Assets	<u>7,373,048</u>	<u>7,136,007</u>
3. Unfunded Actuarial Accrued Liability (1-2)	\$ 4,899,928	\$ 4,667,231.00
4. New Entrant Liability Balances (Table III-6)	<u>4,601,016</u>	<u>4,667,231</u>
5. Pooled Unfunded Actuarial Accrued Liability (3-4)	\$ 298,912	\$ -
6. Amortization Factors	18.91388833	15.49323826
7. Unfunded Amortization Payment Adjusted for Timing	\$ 16,357	\$ -
8. Total Projected Payroll	\$ 4,117,857	\$ 4,184,736.00
9. UAL Amortization Rate	0.40%	0.00%
10. Employer Normal Cost	\$ 376,025	\$ 338,844.00
11. Employer Normal Cost Adjusted for Timing	\$ 382,549	\$ 351,729.00
12. Employer Normal Cost Rate	9.29%	8.41%
13. Basic Employer Cost Rate (9 + 12)	9.69%	8.41%

APPENDIX A
MEMBERSHIP INFORMATION

MEMBERSHIP INFORMATION

The State Retirement Agency provided the actuary with all necessary membership data. This information was gathered as of June 30, 2009.

In this section we present a thorough review of the current membership statistics. First, we summarize the membership count, payroll and benefits by status and system. Following this summary, active membership distributions are examined by age and service.

MEMBERSHIP INFORMATION

State Retirement and Pension System

Table A-1

Summary of Membership Data June 30, 2009 Municipal Corporations

	<u>Active Members</u>		<u>Retirees & Beneficiaries</u>		<u>Vested Former</u>	<u>Vested Inactive</u>	<u>Total Counts</u>
	<u>Count</u>	<u>Salary</u>	<u>Count</u>	<u>Benefits</u>	<u>Count</u>	<u>Count</u>	
Employees' Retirement	329	\$ 19,326,113	4,264	\$ 63,841,485	82	1	4,676
Employees' Pension	25,195	1,034,839,500	8,552	76,777,165	4,915	1,496	40,158
LEOPS	929	52,027,915	126	4,121,828	18	28	1,101
Corrections	<u>68</u>	<u>4,047,633</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>68</u>
Total Municipal Corporations	26,521	\$ 1,110,241,161	12,942	\$ 144,740,478	5,015	1,525	46,003

MEMBERSHIP INFORMATION

Active Membership Statistics		
	Average Age	Average Service
Employees' Retirement	58.6	33.4
Employees' Pension	48.0	10.9
LEOPS	38.5	10.3
Corrections	44.2	12.2

APPENDIX B

ACTUARIAL ASSUMPTIONS AND METHODS

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

	1. Valuation Interest Rate	2. Annual Rate of Increase in Cost of Living	3. Aggregate Payroll Growth
Employees' Retirement	7.75%	2.75% *	3.50%
Employees' Pension	7.75%	2.75% **	3.50%
LEOPS	7.75%	2.75% **#	3.50%
Correctional Officers' Retirement	7.75%	3.00%	3.50%

* A rate of 2.75% is applicable for members with a COLA cap of 3%, a rate of 2.95% is applicable for members with a COLA cap of 5%, and a 3% COLA is applicable for members with no COLA cap.

** A 2.75% simple rate is applicable for municipal members of these Systems, who do not elect to be covered under the improved plan.

For groups whose COLA is capped at 5% a 2.95% COLA was assumed. A 3.00% COLA was assumed for groups with an unlimited COLA.

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions, cont.

3. Annual Rates of Salary Increases for First 10 Years of Service				
Years of Service	Employees' Retirement	Employees' Pension	LEOPS	Correctional Officers
0	5.50%	5.50%	8.00%	8.25%
1	5.50	5.50	8.00	7.25
2	5.50	5.50	6.50	5.75
3	5.50	5.50	6.50	5.75
4	5.50	5.50	5.75	5.75
5	5.00	5.00	5.50	5.00
6	4.50	4.50	5.50	5.00
7	4.50	4.50	5.00	5.00
8	4.50	4.50	5.00	5.00
9	4.50	4.50	4.50	4.50

3. Annual Rates of Salary Increases for Sample Ages with 10 or More Years of Service				
Years of Service	Employees' Retirement	Employees' Pension	LEOPS	Correctional Officers
25	5.00%	5.00%	5.00%	5.75%
30	5.00	5.00	5.00	5.75
35	4.50	4.50	4.75	4.75
40	4.25	4.25	4.75	4.75
45	4.00	4.00	4.25	4.75
50	3.75	3.75	3.50	4.75
55	3.75	3.75	3.50	4.50
60	3.50	3.50	3.50	4.50
65	3.50	3.50	3.50	3.50

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions, cont.

Sample Ages	Years of Service	4. Annual Rates of Withdrawal							
		Employees' Retirement		Employees' Pension		LEOPS		Correctional Officers	
		Male	Female	Male	Female	Male	Female	Male	Female
All	0	20.00%	20.00%	20.00%	20.00%	12.00%	16.00%	18.00%	17.00%
	1	15.00	13.00	15.00	13.00	10.00	15.00	18.00	17.00
	2	12.00	10.00	12.00	10.00	9.00	13.00	14.00	11.00
	3	9.00	8.00	9.00	8.00	8.00	11.00	12.00	11.00
	4	8.00	6.00	8.00	6.00	7.50	9.00	8.00	10.00
	5	7.00	6.00	7.00	6.00	7.00	8.00	8.00	10.00
	6	6.00	6.00	6.00	6.00	6.00	7.00	7.00	10.00
	7	6.00	5.50	6.00	5.50	5.00	6.00	7.00	10.00
	8	5.00	5.00	5.00	5.00	4.00	5.00	7.00	10.00
	9	5.00	4.50	5.00	4.50	2.00	3.00	4.00	10.00
25	10 & Over	5.00	4.50	5.00	4.50	1.50	3.00	4.00	5.00
30		4.00	3.00	4.00	3.00	1.50	3.00	4.00	5.00
35		4.00	3.00	4.00	3.00	1.50	3.00	4.00	5.00
40		3.00	2.50	3.00	2.50	1.50	3.00	4.00	5.00
45		2.50	2.50	2.50	2.50	1.50	3.00	3.00	5.00
50		2.50	2.00	2.50	2.00	1.50	3.00	3.00	5.00
55		2.00	1.50	2.00	1.50	1.50	3.00	2.50	2.50
60		2.00	1.50	2.00	1.50	1.50	3.00	2.50	2.50
65		2.00	1.50	2.00	1.50	1.50	3.00	2.50	2.50

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions, cont.

5. Actuarial Present Value of \$1 Monthly for Life (Without COLA) - Healthy Members								
Sample Ages	Employees' Retirement		Employees' Pension		LEOPS		Correctional Officers	
	Male	Female	Male	Female	Male	Female	Male	Female
50	\$139.21	\$144.83	\$139.21	\$144.83	\$141.78	\$142.63	\$139.21	\$144.83
55	131.36	138.80	131.36	138.80	134.76	135.85	131.36	138.80
60	121.36	130.83	121.36	130.83	125.62	127.08	121.36	130.83
65	109.36	120.89	109.36	120.89	114.36	116.46	109.36	120.89
70	95.75	109.32	95.75	109.32	101.39	104.20	95.75	109.32
75	80.72	96.13	80.72	96.13	86.87	90.52	80.72	96.13
80	65.13	81.78	65.13	81.78	71.38	75.75	65.13	81.78

5. Actuarial Present Value of \$1 Monthly for Life (Without COLA) - Disabled Members								
Sample Ages	Employees' Retirement		Employees' Pension		LEOPS		Correctional Officers	
	Male	Female	Male	Female	Male	Female	Male	Female
50	\$109.40	\$123.44	\$109.40	\$123.44	\$104.19	\$123.44	\$109.40	\$123.44
55	102.91	115.98	102.91	115.98	97.74	115.98	102.91	115.98
60	96.42	108.08	96.42	108.08	90.90	108.08	96.42	108.08
65	89.43	99.17	89.43	99.17	83.10	99.17	89.43	99.17
70	81.40	89.04	81.40	89.04	74.16	89.04	81.40	89.04
75	72.27	78.27	72.27	78.27	64.61	78.27	72.27	78.27
80	62.71	67.40	62.71	67.40	55.40	67.40	62.71	67.40

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions, cont.

Sample Ages	5. Future Life Expectancy (Years) - Healthy Members							
	Employees' Retirement		Employees' Pension		LEOPS		Correctional Officers	
	Male	Female	Male	Female	Male	Female	Male	Female
50	\$30.84	\$35.53	\$30.84	\$35.53	\$32.72	\$33.64	\$30.84	\$35.53
55	26.22	30.81	26.22	30.81	28.05	28.95	26.22	30.81
60	21.78	26.21	21.78	26.21	23.53	24.42	21.78	26.21
65	17.65	21.82	17.65	21.82	19.26	20.16	17.65	21.82
70	13.92	17.79	13.92	17.79	15.36	16.27	13.92	17.79
75	10.61	14.12	10.61	14.12	11.88	12.78	10.61	14.12
80	7.79	10.89	7.79	10.89	8.86	9.72	7.79	10.89

Sample Ages	5. Future Life Expectancy (Years) - Disabled Members							
	Employees' Retirement		Employees' Pension		LEOPS		Correctional Officers	
	Male	Female	Male	Female	Male	Female	Male	Female
50	\$20.25	\$25.15	\$20.25	\$25.15	\$18.25	\$25.15	\$20.25	\$25.15
55	17.78	21.73	17.78	21.73	15.98	21.73	17.78	21.73
60	15.55	18.62	15.55	18.62	13.86	18.62	15.55	18.62
65	13.44	15.70	13.44	15.70	11.80	15.70	13.44	15.70
70	11.39	12.98	11.39	12.98	9.81	12.98	11.39	12.98
75	9.43	10.53	9.43	10.53	7.99	10.53	9.43	10.53
80	7.65	8.42	7.65	8.42	6.43	8.42	7.65	8.42

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions, cont.

Sample Ages	6. Annual Rates of Disability															
	Employees' Retirement				Employees' Pension				LEOPS				Correctional Officers			
	Ordinary		Accidental		Ordinary		Accidental		Ordinary		Accidental		Ordinary		Accidental	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
25	0.041%	0.038%	0.010%	0.009%	0.123%	0.087%	0.029%	0.020%	0.286%	0.469%	0.190%	0.313%	0.298%	0.459%	0.053%	0.081%
30	0.040	0.037	0.010	0.009	0.122	0.086	0.030	0.021	0.366	0.503	0.203	0.279	0.357	0.459	0.063	0.081
35	0.070	0.065	0.014	0.013	0.211	0.148	0.042	0.030	0.458	0.507	0.248	0.275	0.451	0.459	0.080	0.081
40	0.133	0.120	0.018	0.017	0.400	0.274	0.055	0.038	0.606	0.595	0.286	0.281	0.569	0.510	0.101	0.090
45	0.168	0.178	0.016	0.017	0.507	0.406	0.049	0.039	0.813	0.721	0.318	0.282	0.714	0.587	0.126	0.104
50	0.203	0.255	0.014	0.018	0.613	0.581	0.044	0.041	1.163	0.947	0.444	0.362	1.012	0.765	0.179	0.135
55	0.271	0.353	0.014	0.018	0.818	0.805	0.041	0.041	1.495	1.446	0.579	0.560	1.309	1.173	0.231	0.207
60	0.354	0.488	0.014	0.019	1.069	1.113	0.042	0.044	1.834	2.537	0.716	0.991	1.606	2.066	0.284	0.365

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions, cont.

Ages	7. Annual Rates of Normal Retirement															
	Employees' Retirement				Employees' Pension				LEOPS				Correctional Officers			
	First Year Eligible		Subsequent Years		First Year Eligible		Subsequent Years		First Year Eligible		Subsequent Years		First Year Eligible		Subsequent Years	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
45	17%	21%	5%	12%	14%	16%	7%	10%	53%	53%	15%	15%	24%	24%	12%	12%
46	17	21	5	12	14	16	7	10	53	53	15	15	24	24	12	12
47	17	21	5	12	14	16	7	10	53	53	15	15	24	24	12	12
48	17	21	5	12	14	16	7	10	53	53	15	15	24	24	12	12
49	17	21	11	12	14	16	7	10	53	53	15	15	24	24	12	12
50	17	21	11	12	14	16	7	10	53	53	15	15	24	24	12	12
51	17	21	11	12	14	17	7	10	53	53	15	15	24	24	12	12
52	17	21	11	12	14	17	7	10	53	53	15	15	24	24	12	12
53	17	21	11	12	14	17	7	10	53	53	15	15	24	24	12	12
54	17	21	11	15	14	17	7	10	53	53	15	15	24	24	12	12
55	17	21	11	15	14	17	7	10	23	23	15	15	24	24	12	12
56	17	21	11	15	14	17	7	10	23	23	15	15	24	24	12	12
57	17	21	11	15	14	17	7	10	23	23	15	15	24	24	12	12
58	17	21	11	15	14	26	7	11	23	23	15	15	24	24	12	12
59	17	21	11	15	14	26	11	11	23	23	15	15	24	24	12	12
60	17	21	11	15	14	26	11	16	23	23	20	20	24	24	12	12
61	17	21	20	15	14	26	18	16	23	23	20	20	24	24	12	12
62	17	21	40	30	22	26	34	35	23	23	20	20	24	24	12	12
63	17	21	20	22	25	6	14	16	23	23	20	20	24	24	12	12
64	17	21	20	22	5	6	14	16	23	23	20	20	24	24	12	12
65	17	21	20	30	5	6	20	23	23	23	30	30	30	30	12	12
66	17	21	20	22	5	6	15	16	23	23	30	30	30	30	12	12
67	17	21	20	22	5	6	15	16	100	100	40	40	30	30	31	31
68	17	21	20	22	5	6	15	16	100	100	40	40	30	30	21	21
69	17	21	20	22	5	6	15	16	100	100	40	40	30	30	21	21
70	17	21	20	22	5	6	15	16	100	100	100	100	99	99	21	21
71	17	21	20	22	5	6	15	16	100	100	100	100	99	99	21	21
72	17	21	20	22	5	6	15	16	100	100	100	100	99	99	21	21
73	17	21	20	22	5	6	15	16	100	100	100	100	99	99	21	21
74	17	21	20	22	5	6	15	16	100	100	100	100	99	99	21	21
75 & Over	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions, cont.

Ages	7. Annual Rates of Early Retirement							
	Employees' Retirement				Employees' Pension			
	First Year Eligible		Subsequent Years		First Year Eligible		Subsequent Years	
	Male	Female	Male	Female	Male	Female	Male	Female
40	2.5%	2.0%	2.0%	2.0%				
41	2.5	2.0	2.0	2.0				
42	2.5	2.0	2.0	2.0				
43	2.5	2.0	2.0	2.0				
44	2.5	2.0	2.0	2.0				
45	2.5	2.0	2.0	2.0				
46	2.5	2.0	2.0	2.0				
47	2.5	2.0	2.0	2.0				
48	2.5	2.0	2.0	2.0				
49	2.5	2.0	2.0	2.0				
50	2.5	2.0	2.0	2.0				
51	2.5	2.0	4.0	3.0				
52	2.5	2.0	4.0	3.0				
53	2.5	2.0	4.0	3.0				
54	2.5	2.0	4.0	3.0				
55	8.0	9.0	6.0	2.0	3.0%	3.5%	7.0%	10.0%
56	8.0	9.0	6.0	2.0	3.0	3.5	2.5	3.5
57	8.0	9.0	6.0	2.0	3.0	3.5	2.5	3.5
58	8.0	9.0	7.0	6.0	3.0	3.5	2.5	3.5
59	8.0	9.0	7.0	6.0	3.0	3.5	4.5	5.5
60					8.0	8.0	4.5	5.5
61					8.0	8.0	13.0	13.0
62								

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions, cont.

8. Social Security Covered Compensation

Employees' Retirement Not applicable

Employees' Pension Future covered compensation levels, used to estimate member contributions and retirement allowances, were calculated using a 3.5% per annum compounded increase in the 2009 Social Security Maximum Taxable Wage Base.

LEOPS Future covered compensation levels, used to estimate member contributions and retirement allowances, were calculated using a 3.5% per annum compounded increase in the 2009 Social Security Maximum Taxable Wage Base.

Correctional Officers' Retirement Not applicable

9. Retirement Age for Inactive Vested Participants

Employees' Retirement Age 60

Employees' Pension Age 55 if at least 15 years of eligibility service.
Age 62 if less than 15 years of eligibility service.

LEOPS Age 50

Correctional Officers' Retirement Age 55

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions, cont.

10. Probability of Leaving Contributions in the Plan Upon Withdrawal (number leaving their contributions per 1,000 members)					
	20	25	30	35	40
Employees' Retirement and Pension					
Male	875	768	706	682	1,000
Female	944	869	872	846	1,000
LEOPS	1,000	1,000	1,000	1,000	1,000
Correctional Officers' Retirement	1,000	1,000	1,000	1,000	1,000

ACTUARIAL ASSUMPTIONS AND METHODS

Marriage Assumption:	75% of males and females are assumed to be married for purposes of death-in-service benefits.
Pay Increase Timing:	Middle of (Fiscal) year. This is equivalent to assuming that reported pays represent the annualized rate of pay at the beginning of the (Fiscal) year.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and rounded integer service on the date the decrement is assumed to occur.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Decrement Operation:	Disability operates during retirement eligibility.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.
Unused Sick Leave:	Each member is assumed to have an additional 5 months of service at retirement attributable to sick leave.
Unknown Data for Participants:	Average characteristics of the group as a whole are used to fill in the unknown data.
Age of Spouse:	In the absence of complete data, females are assumed to be 4 years younger than males.
Liability Adjustments Optional Forms of Payment:	A factor was used to adjust for optional forms of payment elected by actives decrementing under age and service retirement or vesting conditions and by vested terminated upon commencement as follows: Teachers' Retirement & Pension: 0.975 Employees' Retirement & Pension: 0.9775

ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Methods

1. Asset Valuation Method

All Systems use a method based on the principle that the difference between actual and expected investment returns should be subject to partial recognition to smooth out fluctuations in the total return achieved by the fund from year to year. Under this method, the actuarial value of the assets reflects annually one-fifth of the market value gains for the five prior years. The resulting value is restricted to be not less than 80% of market value nor greater than 120% of market value. As of June 30, 2007, the calculation of market gains included the difference between market and actuarial assets as of June 30, 2006.

For the Employees' Retirement & Pension System and for LEOPS, assets must be allocated between State and Municipal Corporation members. Beginning July 1, 1984, this allocation is based upon actual cash flows and shared investment results.

2. Funding Method

All Systems use the individual entry age normal method to determine costs. Under this funding method, a total contribution rate is determined which consists of two elements, the normal cost rate and the unfunded actuarial liability (UAL) rate.

The Individual Entry Age Normal cost rate is determined as the value, as of age at entry into the plan, of the member's projected future benefits, and divided by the value, also as of the member's entry age, of his expected future salary.

In addition to contributions required to meet the System's normal cost, contributions will be required to fund the System's unfunded actuarial liability. Actuarial liability is defined as the present value of future benefits less the present value of future normal costs. The unfunded actuarial liability is the total of the actuarial liability for all members less the actuarial value of the System's assets.

If the Employees' Combined System's UAL is increased by plan changes or actuarial losses or decreased by plan changes or actuarial gains, these amounts will be included as part of the UAL and amortized over closed 25-year periods.

The UAL for LEOPS is being amortized over a closed 30 year period.

The UAL for CORS is being amortized over a closed 37 year period.

APPENDIX C

SUMMARY OF PLAN PROVISIONS

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

1. Membership

Membership ended for employees employed on or after January 1, 1980. Members on December 31, 1979 continue to be members unless they elected to transfer into the Employees' Pension System (established January 1, 1980) prior to January 1, 2005.

Membership includes employees of the State and approximately 115 participating employers.

2. Member Contributions

- Plan A: Generally 7% of earnable compensation to maintain all benefits, including unlimited cost of living adjustments.
- Plan B: Generally 5% of earnable compensation to maintain all benefits, except the cost of living adjustments which are capped at 5%.
- Plan C: (Plan C provides a two-part benefit based on benefits of the Employees' Retirement System and the Employees' Pension System). Employee contributions, if any are based on participation of the employer in one of the three plans under the Employees' Pension System (refer to summary of Employees' Pension System).

Interest earned on all employee contributions is 4% per year.

3. Service Retirement Allowance

Eligibility: 30 years of eligibility service or attainment of age 60.

Allowance: $1/55^{\text{th}}$ of average final compensation for the three highest years as a member for each year of creditable service.

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Employees' Retirement System; for creditable service after election date, the amount determined by the service retirement formula for the Employees' Pension System under which the employer participates.

4. Early Retirement Allowance

Eligibility: 25 years of eligibility service.

Allowance: Service retirement allowance reduced by .005 for each month that date of retirement precedes the earlier of age 60 or the date the member would have completed 30 years of eligibility service. The maximum reduction is 30%.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Employees' Retirement System with a maximum reduction of 30%; for creditable service after election date, the amount determined by the service retirement formula for the Employees' Pension System under which the employer participates with a .005 reduction for each month retirement occurs prior to age 62 (maximum reduction of 42%).

5. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is permanent.

Allowance: The benefit is 1/55th of average final compensation for the three highest years as a member for each year of creditable service. The minimum benefit is 25% of average final compensation; the maximum benefit can be no greater than 1/55th of average final compensation for each year of creditable service the member would have accrued if employment continued to age 60.

Plan C: The benefit is the greater of the Employees' Retirement System allowance noted above, or the ordinary disability benefit of the Employees' Pension System.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty.

Allowance: The benefit is 66 2/3% of average final compensation for the three highest years as a member, plus the annuity provided by accumulated contributions. The maximum benefit cannot be greater than the average final compensation.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

6. Death Benefits

Ordinary

Eligibility: one year of eligibility service.

Benefit: one time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions. If member dies prior to accruing one year of service, payment is only the return of accumulated contributions.

Spouse Law

Eligibility: surviving spouse designated as the sole primary beneficiary and the deceased member was eligible to retire or was at least age 55 with at least 15 years of eligibility service.

Benefit: surviving spouse may elect a one time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions, or a monthly allowance under Option 2 (100% survivor benefit).

Special Death Benefit

Eligibility: killed in line of duty.

Benefit: 66 2/3% of average final compensation for the three highest years as a member payable to a surviving spouse, dependent children or dependent parents. Accumulated contributions are paid to the designated beneficiary(ies).

Note: Death benefits outlined above are payable upon death of an active member. If member is not active, only member accumulated contributions and interest are payable at time of death.

7. Vested Retirement Allowance

Eligibility: five years of eligibility service.

Allowance: accrued retirement allowance payable at age 60, provided member does not withdraw accumulated contributions.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

8. Cost-of-Living Adjustments (COLA)

All retirement allowances are adjusted based on the Consumer Price Index. The adjustments are effective July 1 for all benefits which have been in payment for one year.

- Plan A: Unlimited and compounded.
- Plan B: Capped at 5% and compounded.
- Plan C: Combination of COLA for either Plan A or Plan B (depending on member election prior to electing Plan C) - for benefit calculated under the Employees' Retirement System, plus capped at a maximum of 3% compounded COLA on benefit calculated under the Employees' Pension System under which the employer participates.

9. Optional Forms of Payment

Normal service allowance is a single life annuity.

Option 1: Cash refund equal to excess of present value of retirement allowance at date of retirement over total amount of payments made to date of death.

Option 2: 100% joint and survivor annuity.

Option 3: 50% joint and survivor annuity.

Option 4: This option guarantees a return of accumulated member contributions remaining at date of death.

Option 5: 100% "pop-up" joint and survivor annuity with adjustment to maximum benefit if beneficiary predeceases retiree.

Option 6: 50% "pop-up" joint and survivor annuity with adjustment to maximum benefit if beneficiary predeceases retiree.

Retirees who are to receive a service retirement, early service retirement, disability benefit, or vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

10. Reduction for Benefits Payable Under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits payable after retirement from injury occurring during employment by the State, if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid for the same period of time for which the retirement benefits are paid.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

11. Miscellaneous Provisions

For Members of the General Assembly

The retirement allowance is equal to 3.00% of current legislative salary for each year of creditable service (maximum 22 years 3 months) upon attainment of age 60 and at least eight years of eligibility service. Reduced benefits are payable upon attainment of age 50 and completion of 8 years of eligibility service. The benefit is reduced by .005 for each month between ages 50 and 60 that the early retirement date precedes age 60.

A member with eight years of eligibility service who has not attained age 60 may leave contributions in the system and receive a retirement allowance at age 60, or a reduced benefit on or after age 50. If termination occurs before the completion of eight years of eligibility service, the member may make contributions equal to the member's and the State's required contributions until the member would have completed eight years of eligibility service.

A member who is certified as disabled after completing at least 8 years of eligibility service may resign from the General Assembly and immediately receive a retirement allowance based on their eligibility service.

The **member's surviving spouse receives 50% of the member's retirement allowance** if the member i) is retired, ii) is eligible for a deferred vested benefit, or iii) is active and has eight years of eligibility service. The surviving spouse of a member who had accrued less than eight years of eligibility service and dies in office shall receive a lump sum death benefit of accumulated contribution plus an amount equal to the deceased's annual earnable compensation at the time of death.

Members contribute 5% of their earnable compensation during their first 22 years 3 months of service with contributions earning interest at 4% per year.

All retirement allowances are recalculated each time the salary for current members of the General Assembly are increased.

For Correctional Officers

Correctional officers serving in the first six job classifications, maximum security attendants at Clifton T. Perkins Hospital Center, a Correctional Dietary, Maintenance or Supply Officer, Maryland Correctional Enterprise Officers and Trainees, Plant Supervisors, Plant Managers, and Regional Managers; and Laundry Officers participate under this System. In addition, effective July 1, 2006, Maryland counties may elect to participate on behalf of their detention center officers.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

An immediate service retirement allowance is payable to a correctional officer if, on or before the retirement, the officer has completed 20 years of eligibility service and served at least five years in one of the positions noted above immediately preceding retirement. The vested retirement allowance of a correctional officer who was in the first six job classifications for at least five years preceding retirement commences at age 55; for the security attendant it commences at age 60.

12. Change in Benefits

Effective June 1, 2008, the Special Death Benefit was added (excluding members of the General Assembly).

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
EMPLOYEES' PENSION SYSTEM
SUMMARY OF PLAN PROVISIONS

1. Membership

Membership is a condition of employment for all classified and unclassified regular employees of the State of Maryland hired on or after January 1, 1980, excluding those eligible for the Teachers' Retirement System, Teachers' Pension System, State Police Pension Fund, certain judges, correctional officers, and members of the General Assembly. Certain governmental units also have elected to participate in the System.

There are three plans under the Employees' Pension System.

- Noncontributory Pension System (NCPS) - the original pension system established on January 1, 1980 that only applies to certain participating governmental units that did not elect to participate in the Contributory Pension System or the Alternate Contributory Pension Selection.
- Employees' Contributory Pension System (ECPS)–The ECPS established July 1, 1998 that only applies to certain participating governmental units that elected the ECPS but did not elect to participate in the Alternate Contributory Pension Selection.
- Alternate Contributory Pension Selection (ACPS) - applies to all State employees and those participating governmental units that elected the ACPS effective July 1, 2006.

2. Member Contributions

NCPS: Members are only required to make contributions of 5% on earnable compensation that exceeds the Social Security Taxable Wage Base.

ECPS: Members are required to make contributions of 2% of earnable compensation.

ACPS: Effective for the period July 1, 2007 –June 30, 2008, members were required to make contributions of 4% of earnable compensation.

Effective July 1, 2008, ACPS members are required to make contributions of 5% of earnable compensation.

Contributions earn interest at 5% per year.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
EMPLOYEES' PENSION SYSTEM
SUMMARY OF PLAN PROVISIONS

3. Service Retirement Allowance

Eligibility - 30 years of eligibility service or attainment of one of the following:

- Age 62 with 5 years of eligibility service
- Age 63 with 4 years of eligibility service
- Age 64 with 3 years of eligibility service
- Age 65 or older with 2 years of eligibility service

NCPS Allowance:

0.8% of average final compensation up to the SSIL for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service;

ECPS Allowance: The greater of (i) or (ii), plus (iii), as described below:

- (i) 1.2% of average final compensation for the three highest consecutive years as an employee for each year of creditable service on or before June 30, 1998;
- (ii) 0.8% of average final compensation up to the SSIL for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service on or before June 30, 1998;
- (iii) 1.4% of average final compensation for the three highest consecutive years as an employee for each year of creditable service after June 30, 1998.

ACPS Allowance: The greater of (i) or (ii), plus (iii), as described below:

- (i) 1.2% of average final compensation for the three highest consecutive years as an employee for each year of creditable service on or before June 30, 1998;
- (ii) 0.8% of average final compensation up to the SSIL for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service on or before June 30, 1998;
- (iii) 1.8% of average final compensation for the three highest consecutive years as an employee for each year of creditable service after June 30, 1998.

The SSIL is the average annual earnings for which Social Security benefits are provided to an employee attaining age 65 in the year of termination of employment, who earned the maximum Social Security covered earnings in each year.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
EMPLOYEES' PENSION SYSTEM
SUMMARY OF PLAN PROVISIONS

Note: Members who transferred into the Employees' Pension System, on or after April 1, 1998, receive benefits based on the provisions of the NCPS as in effect of January 1, 1980 except for COLA benefits. The COLAs are capped at a maximum of 3% compounded annually.

4. Early Retirement Allowance

Eligibility: Attainment of age 55 and at least 15 years of eligibility service.

Allowance: Service retirement allowance computed as of early retirement date, reduced by .005 for each month that early retirement date precedes age 62 (maximum reduction is 42%).

5. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is permanent.

Allowance: The benefit is the service retirement allowance computed on the basis that service continues until age 62 without any change in the rate of earnable compensation. If disability occurs on or after age 62, the benefit is based on creditable service at time of retirement.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty.

Allowance: The benefit is $66 \frac{2}{3}\%$ of average final compensation for the three highest consecutive years as a member, plus the annuity provided by accumulated contributions. The maximum benefit cannot be greater than the average final compensation.

6. Death Benefits

Ordinary

Eligibility: one year of eligibility service.

Benefit: one time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions. If member dies prior to accruing one year of service, payment is only the return of accumulated contributions.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
EMPLOYEES' PENSION SYSTEM
SUMMARY OF PLAN PROVISIONS

Spouse Law

Eligibility: surviving spouse designated as the sole primary beneficiary and the deceased member was eligible to retire or was at least age 55 with at least 15 years of eligibility service.

Benefit: surviving spouse may elect one time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions or a monthly allowance under Option 2 (100% survivor benefit).

Special Death Benefit

Eligibility: killed in line of duty.

Benefit: 66 2/3% of average final compensation for the three highest consecutive years as a member payable to a surviving spouse, dependent children or dependent parents. Accumulated contributions are paid to the designated beneficiary(ies).

Note: Death benefits outlined above are payable upon death of an active member. If member is not active, only member accumulated contributions and interest are payable at time of death.

7. Vested Retirement Allowance

Eligibility: Five years of eligibility service.

Allowance: Accrued retirement allowance payable at age 62. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 55, reduced by .005 for each month that benefit commencement date precedes age 62.

If member does not commence to receive benefit payments, and dies before attaining age 62, only accumulated contributions are returned.

8. Cost-of-Living Adjustments (COLA)

All retirement allowances are adjusted each year based on the Consumer Price Index. Effective July 1, 1998, the annual adjustment is capped at a maximum of 3% compounded COLA, and is applied to all benefits which have been in payment for one year. All increases are effective July 1.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
EMPLOYEES' PENSION SYSTEM
SUMMARY OF PLAN PROVISIONS

However, retirement allowances of NCPS retirees (retirees of participating employers who did not elect the ECPS or ACPS) have an annual COLA that is capped at a maximum of 3% of the initial benefit. The COLA is applied to all benefits which have been in payment for one year. All increases are effective July 1.

9. Optional Forms of Payment

Normal service allowance is in a single life annuity.

Option 1: Cash refund equal to excess of present value of retirement allowance at date of retirement over total amount of payments made to date of death.

Option 2: 100% joint and survivor annuity.

Option 3: 50% joint and survivor annuity.

Option 4: This option guarantees a return of accumulated member contributions remaining at date of death.

Option 5: 100% "pop-up" joint and survivor annuity with adjustment to maximum benefit if beneficiary predeceases retiree.

Option 6: 50% "pop-up" joint and survivor annuity with adjustment to maximum benefit if beneficiary predeceases retiree.

Retirees who are to receive a service retirement, early service retirement, disability benefit, or vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

10. Reduction for Benefits Payable Under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits payable after retirement from injury occurring during employment by the State, if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid for the same period of time for which the retirement benefits are paid.

11. Change in Benefits

Effective June 1, 2008, the Special Death Benefit was added.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
LAW ENFORCEMENT OFFICERS PENSION SYSTEM
(RETIREMENT PLAN)
SUMMARY OF PLAN PROVISIONS

A. Retirement System Provisions

1. Membership

The retirement tier was closed to new participants effective January 1, 2005.

2. Member Contributions

Members who transferred from Employees' Retirement System (Plan A) are required to contribute 7% of earnable compensation. Members who transferred from the Employees' Retirement System (Plan B) contribute 5% of earnable compensation.

Contributions earn interest at 4% per year.

3. Service Retirement Allowance

Eligibility: 25 years of eligibility service or attainment of age 50.

Allowance: 2.3% of average final compensation for the three highest years as a member for each of the first 30 years of creditable service, plus 1.0% of average final compensation for each additional year.

4. Early Retirement Allowance

Not applicable to this System.

5. Disability Retirement Allowance

Ordinary

Eligibility: Certification of the medical board designated by the Board of Trustees that member is incapacitated for the performance of duty, and that incapacity is permanent.

Allowance: Service retirement allowance with a minimum of 25% of average final compensation.

Accidental

Eligibility: Total and permanent disability as certified by the medical board arising out of or in the course of the actual performance of duty.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
LAW ENFORCEMENT OFFICERS PENSION SYSTEM
(RETIREMENT PLAN)
SUMMARY OF PLAN PROVISIONS

Allowance: The benefit is 66 2/3% of average final compensation plus an annuity provided by accumulated contributions with a maximum of average final compensation.

6. Death Benefits

Ordinary

Eligibility: 1 through 2 years of eligibility service and not eligible for special death benefit.

Benefit: Member's annual earnable compensation at time of death plus accumulated contributions.

Regardless of length of service, members' accumulated contributions are paid.

Special Benefit

Eligibility: Two or more years of eligibility service.

Benefit: Accumulated contributions paid to designated beneficiary plus an allowance of 50% of the ordinary disability benefit. Payment is made to the surviving spouse; however if there is no surviving spouse or spouse dies before youngest child reaches age 18, one-half of average final compensation continues until the youngest child reaches age 18. If none of the above conditions are met, the ordinary death benefit is paid to the designated beneficiary(ies).

Eligibility: Death arises out of or in the course of the actual performance of duty.

Benefit: Accumulated contributions paid to designated beneficiary plus an allowance of 66 2/3% of the member's average final compensation. Payment is made to the surviving spouse; however if there is no surviving spouse or spouse dies before youngest child reaches age 18, one-half of average final compensation continues until the youngest child reaches age 18. If none of the above conditions are met, the ordinary death benefit is paid to the designated beneficiary(ies).

Note: Death benefits outlined above are payable upon death of an active member. If member is not active, only member accumulated contributions and interest are payable at time of death, unless benefit payment has commenced.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
LAW ENFORCEMENT OFFICERS PENSION SYSTEM
(RETIREMENT PLAN)
SUMMARY OF PLAN PROVISIONS

7. Vested Retirement Allowance

Eligibility: Five years of eligibility service.

Allowance: Accrued retirement allowance payable at age 50 if the member does not withdraw the member's accumulated contributions.

8. Cost-of-Living Adjustments (COLA)

All retirement allowances are adjusted each year based on the Consumer Price Index. COLAs are effective July 1 and are applied to all benefits which have been in payment for one year. For members contributing 7% of earnable compensation, unlimited COLA is compounded annually. For members contributing 5% of earnable compensation, the cost-of-living adjustment is capped at a maximum 5% compounded annually.

9. Optional Forms of Payment

The normal service allowance is a 50% joint and survivor annuity with spouse, if any; or if there is no surviving spouse or upon the death of the surviving spouse, to any children of the deceased under the age of 18 years, until every child dies or becomes 18 years.

Other forms of payment may be elected if there is no spouse at time of retirement.

Option 1: Cash refund equal to excess of present value of retirement allowance at date of retirement over total amount of payments made to date of death.

Option 2: 100% joint and survivor annuity.

Option 3: 50% joint and survivor annuity.

Option 4: This option guarantees a return of accumulated member contributions remaining at date of death.

Option 5: 100% "pop-up" joint and survivor annuity with adjustment to maximum benefit if beneficiary predeceases retiree.

Option 6: 50% "pop-up" joint and survivor annuity with adjustment to maximum benefit if beneficiary predeceases retiree.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
LAW ENFORCEMENT OFFICERS PENSION SYSTEM
(RETIREMENT PLAN)
SUMMARY OF PLAN PROVISIONS

10. Reduction for Benefits Payable under Workers' Compensation

Disability retirement allowances, excluding the annuity reserves, are reduced for workers' compensation benefits payable after retirement from injury occurring during employment with the State, if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid for the same period of time for which the retirement benefits are paid.

11. Deferred Retirement Option Program (DROP)

Members with 25 years of eligibility service, but less than 30 years of eligibility service, may elect to enter the DROP program for no more than five years. Members who enter DROP are retired and cease making member contributions, and cease accruing service credit and additional benefits. The service retirement allowance, with annual COLA adjustments, is credited to an account earning interest at the rate of 6% per year, compounded monthly. When the DROP period ends, members terminate employment and begin receiving their monthly allowance plus the lump sum payment from their DROP account. During the DROP period, members remain eligible for Accidental Disability benefits if incapacitated while in DROP.

12. Change in Benefit

Effective July 1, 2008, members entering DROP may only be considered for Accidental Disability based on incapacity that occurs on or after participation in DROP.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
LAW ENFORCEMENT OFFICERS PENSION SYSTEM
SUMMARY OF PLAN PROVISIONS

B. Pension System Provisions

1. Membership

Membership is a condition of employment for all law enforcement officers who are employees of the State as provided in the Annotated Code of Maryland, State Personnel and Pensions Article, Title 26, Section 26-201. This includes participating governmental units who elect to have their law enforcement officers or firefighters/paramedics participate in the System.

2. Member Contributions

Members are required to contribute 4% of earnable compensation.

Contributions earn interest at 5% per year.

3. Service Retirement Allowance

Eligibility: 25 years of eligibility service or attainment of age 50.

Allowance: 2.0% of average final compensation for the three highest consecutive years as an employee for each of the first 30 years of creditable service. Maximum benefit is 60% of average final compensation.

4. Early Retirement Allowance

Not applicable to this System.

5. Disability Retirement Allowance

Ordinary

Eligibility: Certification of the medical board designated by the Board of Trustees that member is incapacitated for the performance of duty, and that incapacity is permanent.

Allowance: Service retirement allowance computed on the basis that service continues until age 50 without any change in rate of earnable compensation. If disability occurs after age 50, the benefit is based on creditable service at time of retirement.

Accidental

Eligibility: Total and permanent disability as certified by the medical board arising out of or in the course of the actual performance of duty.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
LAW ENFORCEMENT OFFICERS PENSION SYSTEM
SUMMARY OF PLAN PROVISIONS

Allowance: The benefit is 66 2/3% of average final compensation plus an annuity provided by accumulated contributions with a maximum of average final compensation.

6. Death Benefits

Ordinary

Eligibility: 1 through 2 years of eligibility service and not eligible for special death benefit as noted below.

Benefit: Member's annual earnable compensation at time of death plus accumulated contributions.

Regardless of length of service, members' accumulated contributions are paid.

Accidental

Eligibility: Two or more years of eligibility service.

Benefit: Accumulated contributions paid to designated beneficiary plus an allowance of 50% of the ordinary disability benefit. Payment is made to the surviving spouse; however if there is no surviving spouse or spouse dies before youngest child reaches age 18, one-half of average final compensation continues until the youngest child reaches age 18. If none of the above conditions are met, the ordinary death benefit is paid to the designated beneficiary(ies).

Eligibility: Death arises out of or in the course of the actual performance of duty.

Benefit: Accumulated contributions paid to designated beneficiary plus an allowance of 66 2/3% of the member's average final compensation. Payment is made to the surviving spouse; however if there is no surviving spouse or spouse dies before youngest child reaches age 18, one-half of average final compensation continues until the youngest child reaches age 18. If none of the above conditions are met, the ordinary death benefit is paid to the designated beneficiary(ies).

Note: Death benefits outlined above are payable upon death of an active member. If member is not active, only member accumulated contributions and interest are payable at time of death, unless benefit payment has commenced.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
LAW ENFORCEMENT OFFICERS PENSION SYSTEM
SUMMARY OF PLAN PROVISIONS

7. Vested Retirement Allowance

Eligibility: Five years of eligibility service.

Allowance: Accrued retirement allowance payable at age 50 if the member does not withdraw the member's accumulated contributions.

8. Cost-of-Living Adjustments (COLA)

All retirement allowances are adjusted each year based on the Consumer Price Index. Effective July 1, 2000, the annual adjustment is capped at a maximum 3% compounded and is applied to all benefits which have been in payment for one year. All increases are effective July 1.

9. Optional Forms of Payment

The normal service allowance is a 50% joint and survivor annuity with spouse, if any; or if there is no surviving spouse or upon the death of the surviving spouse, to any children of the deceased under the age of 18 years, until every child attains 18 years of age .

Other forms of payment may be elected if there is no spouse at time of retirement.

Option 1: Cash refund equal to excess of present value of retirement allowance at date of retirement over total amount of payments made to date of death.

Option 2: 100% joint and survivor annuity.

Option 3: 50% joint and survivor annuity.

Option 4: This option guarantees a return of accumulated member contributions remaining at date of death.

Option 5: 100% "pop-up" joint and survivor annuity with adjustment to maximum benefit if beneficiary predeceases retiree.

Option 6: 50% "pop-up" joint and survivor annuity with adjustment to maximum benefit if beneficiary predeceases retiree.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
LAW ENFORCEMENT OFFICERS PENSION SYSTEM
SUMMARY OF PLAN PROVISIONS

10. Reduction for Benefits Payable under Workers' Compensation

Disability retirement allowances, excluding the annuity reserves, are reduced for workers' compensation benefits payable after retirement from injury occurring during employment with the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid for the same period of time for which the retirement benefits are paid.

11. Deferred Retirement Option Plan (DROP)

Members with 25 years of eligibility service, but less than 30 years of eligibility service, may elect to enter the DROP program for no more than five years. Members who enter DROP are retired and cease making member contributions, and cease accruing service credit and additional benefits. The service retirement allowance, with annual COLA adjustments, is credited to an account earning interest at the rate of 6% per year, compounded monthly. When the DROP period ends, members terminate employment and begin receiving their monthly allowance plus the lump sum payment from their DROP account. During the DROP period, members remain eligible for Accidental Disability benefits if incapacitated while in DROP.

12. Changes in Benefits

Effective July 1, 2008, members entering DROP may only be considered for Accidental Disability based on incapacity that occurs on or after participation in DROP.

Effective July 2008, police officers of the Baltimore City Community College participate in the Pension Plan portion of this System.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
CORRECTIONAL OFFICERS' RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

1. Membership

Membership in the Correctional Officers' Retirement System (CORS) includes correctional officers serving in the first six job classifications; maximum security attendants at Clifton T. Perkins Hospital Center; a Correctional Dietary, Maintenance, or Supply Officer; Maryland Correctional Enterprise Officers and Trainees, Plant Supervisors, Plant Managers and Regional Managers; and Laundry Officers. In addition, effective July 1, 2006 Maryland Counties may elect to participate in CORS on behalf of their detention center officers.

2. Member Contributions

Members are required to contribute 5% of earnable compensation. Contributions earn interest at 4% per year.

3. Service Retirement Allowance

Eligibility: 20 years of eligibility service, with at least the last five years served in any of the positions noted above under Membership.

Allowance: $1/55^{\text{th}}$ of average final compensation for the three highest years as a member for each year of creditable service.

Note: Members are eligible to receive a deferred vested benefit at age 55 (age 60 for maximum security attendants). Therefore, most members may receive an immediate retirement allowance at age 55 if they have accrued at least five years of eligibility service.

4. Early Retirement Allowance

Not applicable to this System

Note: Baltimore City Jail employees who were employed by the Baltimore City Jail on or before June 30, 1991 and who became members of the Correctional Officers Retirement System on or after June 30, 2006 may retire early with a minimum of ten years of eligibility service and receive a service retirement allowance.

5. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is permanent.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
CORRECTIONAL OFFICERS' RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

Allowance: The benefit is 1/55th of average final compensation for the three highest years as a member for each year of creditable service. The minimum benefit is 25% of average final compensation; the maximum benefit can be no greater than 1/55th of average final compensation for each year of creditable service the member would have accrued if employment continued to age 60.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty.

Allowance: The benefit is 66 2/3% of average final compensation for the three highest years as a member, plus the annuity provided by accumulated contributions. The maximum benefit cannot be greater than the average final compensation.

6. Death Benefits

Ordinary

Eligibility: one year of eligibility service.

Benefit: one time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions. If member dies prior to accruing one year of service, payment is only the return of accumulated contributions.

Spouse Law

Eligibility: surviving spouse designated as the sole primary beneficiary and the deceased member was eligible to retire or was at least age 55 with at least 15 years of eligibility service.

Benefit: surviving spouse may elect a one time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions or a monthly allowance under Option 2 (100% survivor benefit).

Special Death Benefit

Eligibility: death in line of duty.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
CORRECTIONAL OFFICERS' RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

Benefit: 66 2/3% of average final compensation for the three highest years as a member payable to a surviving spouse or if no surviving spouse to dependent children until age 18 . Accumulated contributions are paid to the designated beneficiary (ies).

Note: Death benefits outlined above are payable upon death of an active member. If member is not active, only member accumulated contributions and interest are payable at time of death.

7. Vested Retirement Allowance

Eligibility: five years of eligibility service

Allowance: deferred vested benefit payable at age 55 (age 60 for maximum security attendants) provided member does not withdraw contributions.

8. Cost-of-Living Allowance (COLA)

All retirement allowances are adjusted based on the Consumer Price Index. The unlimited compounded COLAs are effective July 1 for all benefits which have been in payment for one year.

9. Optional Forms of Payment

Normal service allowance is a single life annuity.

Option 1: Cash refund equal to excess of present value of retirement allowance at date of retirement over total amount of payments made to date of death.

Option 2: 100% joint and survivor annuity.

Option 3: 50% joint and survivor annuity.

Option 4: This option guarantees a return of accumulated member contributions remaining at date of death.

Option 5: 100% "pop-up" joint and survivor annuity with adjustment to maximum benefit if beneficiary predeceases retiree.

Option 6: 50% "pop-up" joint and survivor annuity with adjustment to maximum benefit if beneficiary predeceases retiree.

MARYLAND STATE RETIREMENT AND PENSION SYSTEMS
CORRECTIONAL OFFICERS' RETIREMENT SYSTEM
SUMMARY OF PLAN PROVISIONS

10. Reduction for Benefits Payable Under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits payable after retirement from injury occurring during employment by the State, if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid for the same period of time for which the retirement benefits are paid.

11. Change in Benefits

Effective July 1, 2008, the coverage of the Correctional Officers provisions was expanded to include Maryland Correctional Enterprise Officers and Trainees, Plant Supervisors, Plant Managers and Regional Managers, and Laundry Officers.

Effective July 1, 2006 CORS was opened to Counties that elect to participate in the System on behalf of their detention center officers.

October 9, 2009

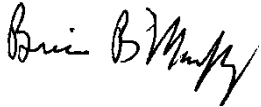
Maryland State Retirement and Pension System
120 East Baltimore Street
Baltimore, Maryland 21202
Attention: Melody Countess

**Re: Maryland State Retirement and Pension System Annual Valuation Report for Maryland
Municipal Corporations**

Dear Melody:

Enclosed are **xx** copies of our report of the actuarial valuation of the Maryland State Retirement and Pension System.

Respectfully submitted,

A handwritten signature in black ink that reads "Brian B. Murphy". The signature is written in a cursive style with a large, stylized "B" and "M".

Brian B. Murphy, FSA, EA, MAAA

BBM:sac
Enclosures