

Actuarial Valuation and Review as of January 1, 2015





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April 1, 2015

Board of Trustees Fulton County Employees Retirement System 141 Pryor Street, Suite 7001 Atlanta, GA 30303

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of January 1, 2015. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience and establishes the funding requirements for fiscal 2015.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement System. The census information and financial information on which our calculations were based was prepared by the staff of Fulton County. That assistance is gratefully acknowledged.

We hereby certify that the Fulton County Employees Retirement System has been funded in conformity with the minimum funding standards specified in Code Section 47-20-10 of the Official Code of Georgia Annotated, known as the Public Retirement Systems Standards Law. This certification covers the 2014 fiscal year of the Plan.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

The actuarial calculations were directed under the supervision of Deborah K. Brigham, FCA, ASA, MAAA, Enrolled Actuary. Ms. Brigham is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

we to	ok forward to reviewing this report at your next m	eeting and to answering any questions.
Sincer	rely,	
Segal	Consulting, a Member of The Segal Group, Inc.	
By:	Eric J. Atwater, FSA, FCA, MAAA, EA	Deborah K. Brigham, FCA, ASA, MAAA, EA

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#### **Purpose**

This report has been prepared by Segal Consulting to present a valuation of the Fulton County Employees Retirement System as of January 1, 2015. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- > The benefit provisions of the Pension Plan, as administered by the Board;
- > The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of January 1, 2015, provided by the County;
- > The assets of the Plan as of December 31, 2014, provided by the County;
- > Economic assumptions regarding future salary increases and investment earnings; and
- > Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

#### **Significant Issues in Valuation Year**

- 1. The recommended contribution has decreased about \$6.7 million, from \$55.3 million as of January 1, 2014 to \$48.6 million as of January 1, 2015. The primary reasons for the decrease include (1) a fresh start of the amortization of the unfunded actuarial accrued liability (UAAL) over a single 15-year period, (2) actuarial investment gains, and (3) an assumption change related to the timing of contributions. Chart 14 on page 13 in Section 2 of this report shows a reconciliation of the recommended contribution amounts from 2014 to 2015.
- 2. The recommended contribution includes the System's normal cost plus a payment on the UAAL. Prior to this valuation, the payment on the UAAL was based on amortization bases that had been established each year since 2002. As noted above, effective as of January 1, 2015 the Board approved resetting all prior bases to a single 15-year closed level-dollar amortization base. New bases will be established in future years, to account for future gains and losses and changes in assumptions, methods or plan provisions.
- 3. Georgia Code Section 47-20-10(b) allows a Plan to be in compliance the minimum funding standards under Georgia law if the sponsor makes contributions equal to or greater than the annual required contribution (ARC) under Governmental Accounting Standards Board (GASB) Statements No. 25 and No. 27 as in effect on June 15, 2013. The lowest ARC

- allowable is based on a 30-year level percent-of-pay amortization of the Plan's unfunded actuarial liability. The County is making annual contributions in excess of this amount, and therefore the Plan is in compliance with Georgia law.
- 4. Additionally, the Georgia law allows sponsors to offset future required contributions with accumulated contributions in excess of the minimum (i.e., credit balance). In conjunction with the amortization change, a \$5.0 million credit balance has been maintained for the future, pending final approval by the County and the Pension Board.
- 5. The Pension Board Finance Committee lowered the assumed rate of return from 7.80% to 7.70% with this valuation. The actuarial liability increased about \$15.4 million and the recommended contribution increased about \$1.1 million as a result of lowering the assumed rate of return to 7.70%. Also, the administrative expense assumption increased from \$600,000 to \$700,000, based on the actual prior year expenses rounded to the nearest \$100,000.
- 6. The investment rate of return on an actuarial basis for the year ended December 31, 2014 was 10.92%. Since the rate of return was greater than the assumed rate of return of 7.80% per year, there was an actuarial investment gain amounting to \$35.7 million. The return on a market value basis was 5.05%. The smoothed actuarial value of assets is 95.0% of the market value of assets as of the valuation date. Chart 10 on page 9 details the Plan's actuarial value and market value returns over the last eight years.
- 7. The funded ratio for this Plan, based on the actuarial value of assets, increased from 72.96% as of January 1, 2014 to 75.00% as of January 1, 2015. The schedule of funding progress is shown in Exhibit III of Section 4. On a market value basis, the funded ratio has decreased from 80.80% to 78.94%. If the assumed rate of return had remained at 7.80%, the funded ratio would have been 75.70% on an actuarial basis and 79.68% on a market basis.
- 8. GASB Statement 67 is effective for fiscal years beginning after June 15, 2013. This year, the valuation report includes first year financial reporting information for the Plan as specified by GASB Statement 67 for the Fiscal Year ending December 31, 2014. Employers are required to implement GASB Statement 68 for fiscal years beginning after June 15, 2014, and those required disclosures will be provided next year.
- 9. As requested by County Staff, the ARC has been allocated to various County Funds and to DFACS. The allocation schedule is provided on page iv in this section.
- 10. The audited financial information received states all results rounded to the nearest thousand. The results in this valuation are shown to the dollar. Therefore, occasionally rounded numbers are combined with unrounded ones.



	2015	2014
Contributions for plan year beginning January 1:		
Recommended contribution	\$48,586,172	\$55,255,317
Actual employer contributions		57,529,000
Georgia credit balance	5,000,000	9,130,359
Funding elements for plan year beginning January 1:		
Normal cost, including administrative expenses	\$4,115,289	\$4,580,594
Market value of assets	1,306,027,000	1,299,975,000
Actuarial value of assets	1,240,742,474	1,173,841,252
Actuarial accrued liability	1,654,412,161	1,608,975,544
Unfunded actuarial accrued liability	413,669,687	435,134,292
Funded ratio on market value basis	78.94%	80.80%
Funded ratio on actuarial value basis	75.00%	72.96%
Demographic data for plan year beginning January 1:		
Number of retired participants and beneficiaries	3,179	3,137
Number of vested former participants	27	23
Number of active participants	576	678
Total payroll	\$32,828,504	\$36,257,860
Average payroll	56,994	53,478



#### **Annual Required Contribution Allocated by Fund**

			Annual Required
Fulton County Fund	Fund Number	Total Liability	Contribution*
General	100	68.29%	\$33,294,600
Airport	200	0.14%	65,363
Water & Sewer	201 & 203	2.88%	1,450,522
Old SSD	300	7.66%	3,597,276
South Fulton District	301	8.60%	4,256,603
Emergency 911	340	0.50%	240,852
Fulton Employee Retirement	415	0.11%	58,295
Restricted Assets	441	0.09%	43,179
Grants	461	0.35%	168,571
Risk Management	725	0.04%	23,343
Grants - Health & Wellness	818	5.64%	2,709,099
Comm Dev Block Grants	865	0.04%	19,819
DFACS	DFACS	<u>5.66%</u>	<u>2,658,650</u>
Cotal		100.00%	\$48,586,172

<sup>\*</sup> Each Fund's normal cost was calculated independently. The administrative expenses and the amortization of the unfunded liability were allocated based on the actuarial accrued liability of each Fund as a percentage of the System's total, and then added to normal cost to determine an ARC. Allocating the cost in this manner ensures that the funded percentage for each Fund equals the funded percentage for the System as a whole.



#### A. PARTICIPANT DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, vested terminated participants, retired participants and beneficiaries.

This section presents a summary of significant statistical data on these participant groups. More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

The System was closed to new entrants in 1999. Therefore, the number of active participants is declining and the ratio of non-actives to actives is increasing.

A historical perspective of how the participant population has changed over the past nine valuations can be seen in this chart.

CHART 1
Participant Population: 2006 – 2014

Year Ended December 31	Active Participants	Vested Terminated Participants*	Retired Participants and Beneficiaries	Ratio of Non-Actives to Actives
2006	1,920	27	2,382	1.25
2007	1,625	46	2,562	1.60
2008	1,441	44	2,670	1.88
2009	1,264	33	2,764	2.21
2010	1,103	36	2,886	2.65
2011	937	29	2,995	3.23
2012	811	23	3,071	3.82
2013	678	23	3,137**	4.66
2014	576	27	3,179	5.57

<sup>\*</sup>Excludes terminated participants due a refund of employee contributions

<sup>\*\*</sup>Includes one suspended retiree



#### **Active Participants**

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 576 active participants with an average age of 52.6, average years of service of 22.0 years and average payroll of \$56,994. The 678 active participants in the prior valuation had an average age of 52.2, average service of 21.2 years and average payroll of \$53,478.

#### **Inactive Participants**

of December 31, 2014

In this year's valuation, there were 27 participants with a vested right to a deferred or immediate vested benefit. In addition, there were 214 participants entitled to a return of their employee contributions.

These graphs show a distribution of active participants by age and by years of service.

CHART 2
Distribution of Active Participants by Age as of December 31, 2014

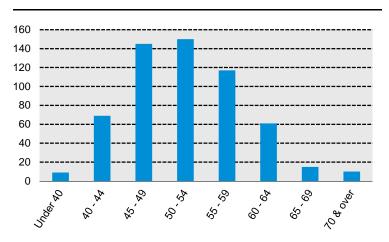
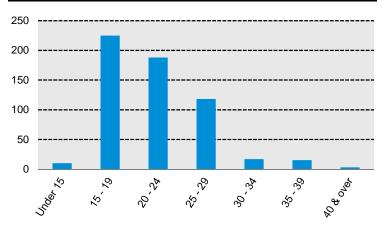


CHART 3

Distribution of Active Participants by Years of Service as





#### **Retired Participants and Beneficiaries**

As of December 31, 2014, 2,784 retired participants and 395 beneficiaries were receiving total monthly benefits of \$9,878,339. For comparison, in the previous valuation, there were 2,746 retired participants and 390 beneficiaries receiving monthly benefits of \$9,400,280. There were no retired participants in suspended status this year and one in the prior valuation.

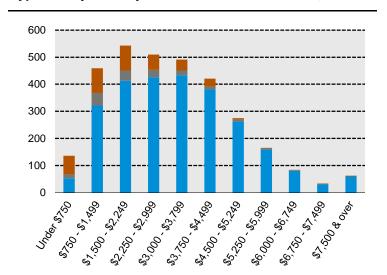
These graphs show a distribution of the current retired participants and beneficiaries based on their monthly amount and age, by type of pension.



■ Disability

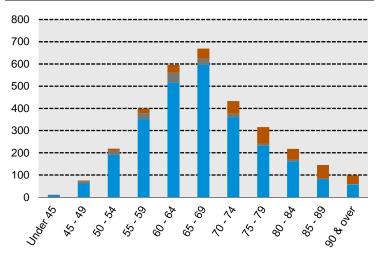
■ Normal/Early

# CHART 4 Distribution of Retired Participants and Beneficiaries by Type and by Monthly Amount as of December 31, 2014



#### **CHART 5**

Distribution of Retired Participants and Beneficiaries by Type and by Age as of December 31, 2014





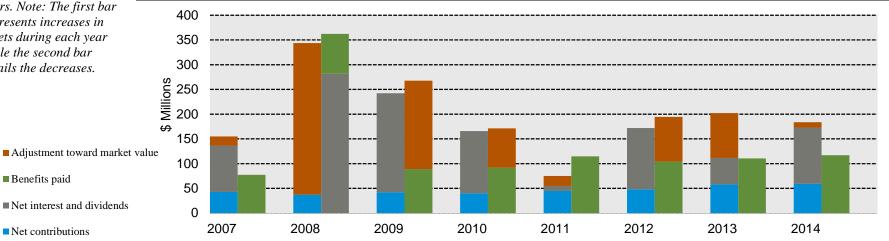
#### **B. FINANCIAL INFORMATION**

Retirement plan funding anticipates that, over the long term, both contributions (less administrative expenses) and net investment earnings (less investment fees) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D, E and F.

The chart depicts the components of changes in the actuarial value of assets over the last eight years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

### **CHART 6** Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2007 - 2014





■ Benefits paid

■ Net contributions

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 7 Determination of Actuarial Value of Assets for Year Ended December 31, 2014

1. Market value of assets, December 31, 2014			\$1,306,027,000
	Original	Unrecognized	
2. Calculation of unrecognized return	Amount*	<u>Return</u> **	
(a) Year ended December 31, 2014	-\$34,989,501	-\$27,991,601	
(b) Year ended December 31, 2013	152,013,144	91,207,886	
(c) Year ended December 31, 2012	43,110,242	17,244,097	
(d) Year ended December 31, 2011	-75,879,280	-15,175,856	
(e) Year ended December 31, 2010	45,044,000	0	
(f) Total unrecognized return			65,284,526
3. Preliminary actuarial value: (1) - (2f)			1,240,742,474
4. Adjustment to be within 20% corridor			0
5. Final actuarial value of assets as of December 31, 2014: (3) + (4)			<u>\$1,240,742,474</u>
6. Actuarial value as a percentage of market value: $(5) \div (1)$			95.0%
7. Amount deferred for future recognition: (1) - (5)			\$65,284,526

<sup>\*</sup>Total return minus expected return on a market value

- (a) Amount recognized on December 31, 2015 \$16,850,921
- (c) Amount recognized on December 31, 2017 \$23,404,729
- (b) Amount recognized on December 31, 2016 32.026.777
- (d) Amount recognized on December 31, 2018 -6,997,900



<sup>\*\*</sup>Recognition at 20% per year over five years

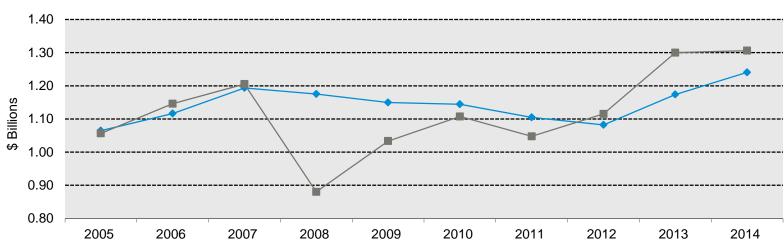
<sup>\*\*\*</sup>Deferred return as of December 31, 2014 recognized in each of the next four years:

Both the actuarial value and market value of assets are representations of the Retirement System's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Retirement System's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

This chart shows the change in the actuarial value of assets versus the market value over the past ten years.

CHART 7

Actuarial Value of Assets vs. Market Value of Assets as of December 31, 2005 – 2014





Actuarial Value

── Market Value

#### C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term

development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total gain is \$13,933,138, including \$35,698,153 from investment gains partially offset by \$21,765,015 in losses from all other sources. The net experience variation from individual sources other than investments was 1.3% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience during the past year.

# CHART 8 Actuarial Experience for Year Ended December 31, 2014

1.	Net gain from investments*	\$35,698,153
2.	Net loss from other experience**	<u>-21,765,015</u>
3.	Net experience gain: $(1) + (2) + (3)$	\$13,933,138

<sup>\*</sup> Details in Chart 9

<sup>\*\*</sup> Details in Chart 12

#### **Investment Rate of Return**

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Retirement System's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets for the 2014 plan year was 7.80%. The actual rate of return on an actuarial basis for the 2014 plan year was 10.92%.

Since the actual return for the year was greater than the assumed return, the Retirement System experienced an actuarial gain during the year ended December 31, 2014 with regard to its investments.

This chart shows the gain due to investment experience.

#### **CHART 9**

Actuarial Value Investment Experience for Year Ended December 31, 2014

1. Actual return	\$124,992,222
2. Average value of assets	1,144,795,752
3. Actual rate of return: $(1) \div (2)$	10.92%
4. Assumed rate of return	7.80%
5. Expected return: (2) x (4)	\$89,294,069
6. Actuarial gain: (1) – (5)	<u>\$35,698,153</u>



Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the market value investment return for the last eight years, including five-year and eight-year averages. The Pension Board Finance Committee decided in September 2014 to lower the assumed rate of return from 7.80% to 7.70%. This rate is a reasonable assumption, based on the System's investment policy.

CHART 10
Investment Return – Actuarial Value vs. Market Value: 2007 - 2014

	Actuarial Value Investment Return		Market Value Investment Return	
Year Ended December 31	Amount	Percent	Amount	Percent
2007	\$112,054,000	10.20%	\$93,927,000	8.32%
2008	25,070,000	2.14%	-281,583,000	-23.79%
2009	21,198,000	1.84%	200,095,000	23.35%
2010	46,207,000	4.11%	125,667,000	12.47%
2011	30,332,424	2.73%	9,935,000	0.93%
2012	33,418,150	3.10%	123,662,000	12.13%
2013	143,949,477	13.63%	236,967,000	21.76%
2014	124,992,222	10.92%	64,143,000	5.05%
Total	\$537,221,274		\$572,813,000	
	Five-year average return	6.87%		10.26%
	Eight-year average return	6.01%		6.64%

Note: Each year's yield is weighted by the average asset value in that year.

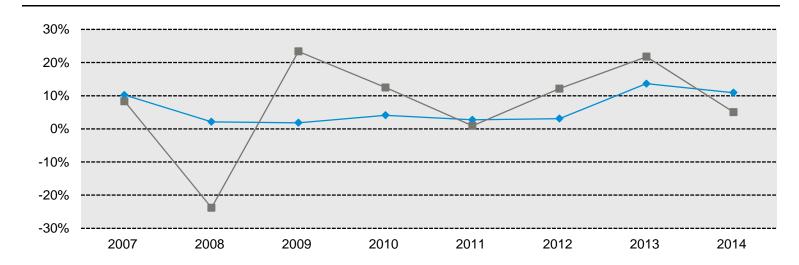


Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

This chart illustrates how this leveling effect has actually worked over the years 2007 - 2014.

CHART 11

Market and Actuarial Rates of Return for Years Ended December 31, 2007 - 2014



Actuarial Value

Market Value



#### **Other Experience**

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- > the extent of turnover among the participants,
- > retirement experience (earlier or later than expected),
- > mortality (more or fewer deaths than expected),
- > the number of disability retirements,
- > salary increases higher or lower than assumed, and
- > administrative expenses different than assumed.

The net loss from this other experience for the year ended December 31, 2014 amounted to \$21,765,015, which is 1.3% of the actuarial accrued liability.

A brief summary of the demographic loss experience of the Retirement System for the year ended December 31, 2014 is shown in the chart below.

The chart shows elements of the experience loss for the most recent year.

#### **CHART 12**

#### Experience Due to Changes in Demographics for Year Ended December 31, 2014

1.	Increases in salary greater than expected	-\$7,771,976
2.	Retirement experience different than anticipated	-4,845,680
3.	Post-retirement mortality and other experience different than expected	-4,721,668
4.	Less turnover than anticipated	-2,428,794
5.	Recognition of terminated non-vested participants due a refund of contributions	-363,739
6.	Administrative expenses more than assumed	-58,200
7.	Miscellaneous	<u>-1,574,958</u>
8.	Total	-\$21,765,015



#### D. RECOMMENDED CONTRIBUTION

The amount of annual contribution required to fund the Plan is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability.

As of January 1, 2015 the remaining outstanding bases were replaced with a single 15-year closed, level dollar amortization. In future years, new bases will be established to recognize experience gains and losses, plan and assumption changes, and method changes.

This year the assumed timing of contributions was changed from end of year to monthly, payable in the middle of the month. This timing matches the actual practice of the County, and lowers the amount of interest on the recommended contribution.

Pending approval of the Pension Board, a credit balance of \$5 million has been established. Since the County's budgeting process is completed prior to the actuarial valuation being finalized, a credit balance creates a buffer for differences between the budget and the recommended contribution.

The chart compares this valuation's recommended contribution with the prior valuation.

CHART 13
Recommended Contribution

	Year Beginning January 1		
	2015	2014	
	Amount	Amount	
1. Total normal cost	\$3,415,289	\$3,980,594	
2. Administrative expenses	700,000	600,000	
3. Expected employee contributions	<u>-1,874,944</u>	<u>-2,077,232</u>	
4. Employer normal cost: $(1) + (2) + (3)$	\$2,240,345	\$2,503,362	
5. Actuarial accrued liability	1,654,412,161	1,608,975,544	
6. Actuarial value of assets	1,240,742,474	1,173,841,252	
7. Unfunded actuarial accrued liability: (5) - (6)	\$413,669,687	\$435,134,292	
8. Payment on unfunded actuarial accrued liability	44,587,450	48,753,889	
9. Total recommended contribution: (4) + (8), adjusted for timing*	<u>\$48,586,172</u>	<u>\$55,255,317</u>	

<sup>\*</sup>Beginning in 2015, recommended contributions are assumed to be paid at the middle of every month. Prior to 2015, contributions were assumed to be paid at the end of the plan year.



The contribution requirements as of January 1, 2015 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

#### **Reconciliation of Recommended Contribution**

The chart below details the changes in the recommended contribution from the prior valuation to the current year's valuation.

The chart reconciles the contribution from the prior valuation to the amount determined in this valuation.

# CHART 14 Reconciliation of Recommended Contribution from January 1, 2014 to January 1, 2015

\$55,255,317
-3,581,990
2,183,924
1,110,904
107,700
-4,170,760
-1,847,363
<u>-471,560</u>
<u>-\$6,669,145</u>
\$48,586,172



EXHIBIT A

Table of Plan Coverage

	Year Ended	December 31	
Category	2014	2013	Change From Prior Year
Active participants in valuation:			
Number	576	678	-15.0%
Average age	52.6	52.2	N/A
Average years of service	22.0	21.2	N/A
Total payroll	\$32,828,504	\$36,257,860	-9.5%
Average payroll	56,994	53,478	6.6%
Account balances	43,286,154	47,976,640	-9.8%
Vested terminated participants	27	23	17.4%
Retired participants:			
Number in pay status	2,622	2,583	1.5%
Average age	66.7	66.4	N/A
Average monthly benefit	\$3,332	\$3,230	3.2%
Number in suspended status		1	-100.0%
Disabled participants:			
Number in pay status	162	163	-0.6%
Average age	63.0	62.8	N/A
Average monthly benefit	\$2,123	\$2,055	3.3%
Beneficiaries in pay status:			
Number in pay status	395	390	1.3%
Average age	75.7	75.6	N/A
Average monthly benefit	\$2,020	\$1,853	9.0%
Non-vested participants with employee contributions remaining with the plan	214*	0	N/A

<sup>\*</sup> These individuals were reported to Segal for the first time this year.



EXHIBIT B
Participants in Active Service as of December 31, 2014
By Age, Years of Service, and Average Payroll

	Years of Service									
Age	Total	10-14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over		
35 - 39	9	1	8							
	\$51,816	\$40,973	\$53,171							
40 - 44	69	3	52	12	2					
	54,836	54,689	54,406	\$55,535	\$62,048					
45 - 49	145	1	51	62	31					
	55,301	27,316	48,198	60,002	58,487					
50 - 54	150	3	50	57	38	2				
	57,484	34,234	49,638	59,536	65,651	\$74,876				
55 - 59	117	2	41	33	30	6	5			
	57,920	35,314	52,387	58,856	63,694	60,237	\$68,733			
60 - 64	61		18	17	10	8	7	1		
	58,939		47,954	59,011	57,675	70,817	78,243	\$37,932		
65 - 69	15		3	5	3		2	2		
	67,242		62,839	60,637	83,140		56,890	76,864		
70 & over	10		2	2	4	1	1			
	55,665		44,216	50,214	50,560	59,073	106,479			
Total	576	10	225	188	118	17	15	3		
	\$56,994	\$40,569	\$51,033	\$59,198	\$62,467	\$66,869	\$74,108	\$63,886		



EXHIBIT C
Reconciliation of Participant Data

	Active Participants	Vested Former Participants	Disableds	Retired Participants	Beneficiaries	Total
Number as of January 1, 2014	678	23	163	2,584	390	3,838
Transfers to DC Plan	0	N/A	N/A	N/A	N/A	0
Terminations	-2	2	N/A	N/A	N/A	0
Retirements	-96	-6	N/A	102	N/A	0
New disabilities	-3	-1	4	N/A	N/A	0
Deaths	-2	0	-5	-63	-23	-93
New Beneficiaries	N/A	N/A	N/A	N/A	26	26
Return to work	1	0	0	-1	N/A	0
Data adjustments	0	_9	0	0	2	<u>11</u>
Number as of January 1, 2015	576	27	162	2,622	395	3,782

EXHIBIT D
Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended Ded	ember 31, 2014	Year Ended De	cember 31, 2013
Net assets at actuarial value at the beginning of the year		\$1,173,841,252		\$1,082,179,774
Contribution income:				
Employer contributions	\$57,529,000		\$56,244,000	
Employee contributions	2,129,000		2,533,000	
Less administrative expenses	<u>-705,000</u>		<u>-617,000</u>	
Net contribution income		58,953,000		58,160,000
Investment income:				
Interest income	\$69,351,000		\$241,696,000	
Adjustment toward market value	60,849,222		-53,017,522	
Less investment fees	<u>-5,208,000</u>		<u>-4,729,000</u>	
Net investment income		124,992,222		143,949,478
Total income available for benefits		\$183,945,222		\$202,109,478
Less benefit payments:				
Benefit payments	-\$116,891,000		-\$110,128,000	
Refunds of contributions	-153,000		-113,000	
Transfers to DC Plan	0		<u>-207,000</u>	
Net benefit payments		-\$117,044,000		-\$110,448,000
Change in reserve for future benefits		\$66,901,222		\$91,661,478
Net assets at actuarial value at the end of the year		\$1,240,742,474		\$1,173,841,252



**EXHIBIT E**Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended Dec	ember 31, 2014	Year Ended Dec	cember 31, 2013
Net assets at market value at the beginning of the year		\$1,299,975,000		\$1,115,296,000
Contribution income:				
Employer contributions	\$57,529,000		\$56,244,000	
Employee contributions	2,129,000		2,533,000	
Less administrative expenses	<u>-705,000</u>		<u>-617,000</u>	
Net contribution income		58,953,000		58,160,000
Investment income:				
Investment income	\$69,351,000		\$241,696,000	
Less investment fees	<u>-5,208,000</u>		<u>-4,729,000</u>	
Net investment income		64,143,000		236,967,000
Total income available for benefits		\$123,096,000		\$295,127,000
Less benefit payments:				
Benefit payments	-\$116,891,000		-\$110,128,000	
Refunds of contributions	-153,000		-113,000	
Transfers to DC Plan	0		<u>-207,000</u>	
Net benefit payments		-\$117,044,000		-\$110,448,000
Change in reserve for future benefits		\$6,052,000		\$184,679,000
Net assets at market value at the end of the year		\$1,306,027,000		\$1,299,975,000



EXHIBIT F
Summary Statement of Plan Assets

	Year Ended Dec	ember 31, 2014	Year Ended Ded	cember 31, 2013	
Cash and cash equivalents		\$28,354,000		\$28,031,000	
Accounts receivable and funds held in escrow		7,569,000		3,811,000	
Prepaid pension benefits		10,234,000		9,630,000	
Investments:					
Corporate investments	\$716,219,000		\$746,385,000		
U.S. Treasury and agency obligations	146,974,000		193,326,000		
International mutual funds	247,425,000		198,917,000		
Commingled equity funds	132,785,000		131,556,000		
Real estate investment contracts	23,371,000		5,690,000		
Municipal bonds	<u>4,733,000</u>		<u>5,429,000</u>		
Total investments at market value		1,271,507,000		1,281,303,000	
Total assets		\$1,317,664,000		\$1,322,775,000	
Less accounts payable:					
Due to brokers for securities purchased	-\$11,624,000		-\$22,787,000		
Funds held for others	<u>-13,000</u>		<u>-13,000</u>		
Total accounts payable		-\$11,637,000		-\$22,800,000	
Net assets at market value		\$1,306,027,000		\$1,299,975,000	
Net assets at actuarial value		\$1,240,742,474		\$1,173,841,252	



EXHIBIT G

Development of the Fund Through December 31, 2014

Year Ended December 31	Employer Contributions	Employee Contributions	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2007	\$37,802,000	\$5,479,000	\$112,054,000	\$528,000	\$77,534,000	\$1,193,724,000
2008	32,750,000	4,900,000	25,070,000	501,000	80,644,000	1,175,299,000
2009	38,502,000	4,187,000	21,198,000	479,000	88,921,000	1,149,786,000
2010	37,226,000	3,602,000	46,207,000	546,000	91,904,000	1,144,371,000
2011	42,170,000	3,225,000	30,332,424	554,000	114,776,000	1,104,778,624
2012	45,936,000	2,827,000	33,418,150	578,000	104,202,000	1,082,179,774
2013	56,244,000	2,533,000	143,949,477	617,000	110,448,000	1,173,841,252
2014	57,529,000	2,129,000	124,992,222	705,000	117,044,000	1,240,742,474

<sup>\*</sup> Net of investment fees



### **EXHIBIT H** Development of Unfunded Actuarial Accrued Liability for Year Ended December 31, 2014 1. Unfunded actuarial accrued liability at beginning of year \$435,134,292 2. Normal cost at beginning of year 3. Total contributions

(a) For whole year on $(1) + (2)$	\$34,297,761
(b) For half year on (3)	-2,103,854

(c) Total interest	<u>32,193,907</u>
5. Expected unfunded actuarial accrued liability	\$412,250,793

6. Changes due to:

4. Interest

(a) Experience gains and losses	-\$13,933,138
(b) Assumptions	<u>15,352,032</u>

	(c) Total changes	<u>1,418,894</u>
7.	. Unfunded actuarial accrued liability at end of year	<u>\$413,669,687</u>



4,580,594

-59,658,000

#### **EXHIBIT I- A**

#### **Table of Amortization Bases**

Туре	Date	Initial	Initial	Annual	Years	Outstanding
	Established	Years	Amount	Payment*	Remaining	Balance
Fresh Start Total	01/01/2015	15	\$418,669,687	\$44,587,450 \$44,587,450	15	\$418,669,687 \$418,669,687

<sup>\*</sup> As of January 1, 2015, the prior amortization bases were eliminated and a new, 15-year amortization of the unfunded liability was established, with a \$5 million credit balance.

#### **EXHIBIT I- B**

#### **Development of Credit Balance**

1.	Unfunded actuarial accrued liability as of January 1, 2015	\$413,669,687
2.	Sum of outstanding bases as of January 1, 2015	418,669,687
3.	Credit balance as of January 1, 2015 [(2)-(1)]	\$5,000,000



# EXHIBIT J Benefit Payment Projection

We have determined the anticipated benefits to be paid from the Plan over the next ten years. This projection is provided to help the Pension Board assess the future liquidity needs of the Fund, and to help determine whether the Plan should plan to sell assets to pay participants' benefits or to restructure the debt and equity allocations.

This is a mature and closed fund, and thus it is expected that the contributions paid into the Plan each year will not be sufficient to pay all of the annual benefit requirements and expenses. Investment income is required to make up the difference. The Board needs to ensure that interest and dividend income, along with maturing fixed income investments and the sale of equity investments, are at a sufficient level to provide existing and emerging benefit payments to participants and beneficiaries. This matter should be considered by the investment managers in designing their strategies.

The projection is shown below. The assumptions for retirement and mortality are the same rates shown in Section 4 of the report.

#### Projected Benefit Payments, 2015 - 2024

Year Ended December 31	Number of Benefit Recipients	Benefits to Active Participants	Benefits to Non-Active Participants	Total Benefits Projected
2015	3,197	\$8,010,198	\$117,729,377	\$125,739,575
2016	3,198	9,765,767	119,264,187	129,029,954
2017	3,188	11,572,817	120,627,773	132,200,590
2018	3,169	13,230,707	121,948,693	135,179,400
2019	3,140	14,759,261	122,984,028	137,743,289
2020	3,103	16,203,375	123,807,696	140,011,071
2021	3,056	17,478,680	124,428,002	141,906,682
2022	2,999	18,605,467	124,828,152	143,433,619
2023	2,937	19,734,101	125,041,410	144,775,511
2024	2,868	20,639,829	124,955,132	145,594,961



#### **EXHIBIT K**

#### **Definitions of Pension Terms**

The following list defines certain technical terms for the convenience of the reader:

## Assumptions or Actuarial Assumptions:

The estimates on which the cost of the Plan is calculated including:

- (a) <u>Investment return</u> the rate of investment yield that the Plan will earn over the long-term future;
- (b) <u>Mortality rates</u> the death rates of employees and pensioners; life expectancy is based on these rates:
- (c) <u>Retirement rates</u> the rate or probability of retirement at a given age;
- (d) <u>Withdrawal rates</u> the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

#### **Normal Cost:**

The amount of contributions required to fund the benefit allocated to the current year of service.

### Actuarial Accrued Liability For Actives:

The value of all projected benefit payments for current members less the portion that will be paid by future normal costs.

## Actuarial Accrued Liability For Pensioners:

The single-sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

## Unfunded Actuarial Accrued Liability:

The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.



**Amortization of the Unfunded** 

Actuarial Accrued Liability: Payments made over a period of years equal in value to the Plan's unfunded actuarial

accrued liability.

**Investment Return:** The rate of earnings of the Plan from its investments, including interest, dividends and

capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one

year to the next.

### SECTION 4: Reporting Information for the Fulton County Employees Retirement System

EX	(HIBIT I		
Su	mmary of Actuarial Valuation Results		
Th	e valuation was made with respect to the following data supplied to us:		
1.	Retired participants as of the valuation date (including 395 beneficiaries in pay status)		3,179
2.	Participants inactive during year ended December 31, 2014 with vested rights		27
3.	Participants active during the year ended December 31, 2014		576
	Fully vested	575	
	Not vested	1	
4.	Terminated non-vested participants as of December 31, 2014		214
Th	e actuarial factors as of the valuation date are as follows:		
1.	Normal cost, including administrative expenses		\$4,115,289
2.	Actuarial accrued liability		1,654,412,161
	Retired participants and beneficiaries	\$1,429,982,226	
	Inactive participants with vested rights	4,224,316	
	Active participants	219,841,880	
	Terminated non-vested	363,739	
3.	Actuarial value of assets (\$1,306,027,000 at market value as reported by the County)		1,240,742,474
4.	Unfunded actuarial accrued liability		\$413,669,687
Th	e determination of the recommended contribution is as follows:		
1.	Total normal cost		\$3,415,289
2.	Administrative expenses		700,000
3.	Expected employee contributions		<u>-1,874,944</u>
4.	Employer normal cost: $(1) + (2) + (3)$		\$2,240,345
5.	Payment on unfunded actuarial accrued liability		44,587,450
6.	Total recommended contribution: $(4) + (5)$ , adjusted for timing		\$48,586,172



#### SECTION 4: Reporting Information for the Fulton County Employees Retirement System

EXHIBIT II
History of Employer Contributions

Plan Year Ended December 31	Actuarially Determined Employer Contributions (ADEC)*	Actual Contributions	Percentage Contributed
2006	\$37,081,000	\$36,011,000	97.1%
2007	38,895,000	37,802,000	97.2%
2008	33,836,000	32,750,000	96.8%
2009	43,008,000	38,502,000	89.5%
2010	36,639,000	37,226,000	101.6%
2011	45,049,000	42,170,000	93.6%
2012	51,199,000	45,936,000	89.7%
2013	52,881,747	56,244,000	106.4%
2014	55,255,317	57,529,000	104.1%
2015	48,586,172		

<sup>\*</sup>Prior to 2015, this amount was the Annual Required Contribution (ARC)



#### SECTION 4: Reporting Information for the Fulton County Employees Retirement System

EXHIBIT III
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
01/01/2006	\$1,064,825,000	\$1,277,972,000	\$213,147,000	83.32%	\$104,909,000	203.17%
01/01/2007	1,116,451,000	1,331,658,000	215,207,000	83.84%	98,882,000	217.64%
01/01/2008	1,193,724,000	1,383,842,000	190,118,000	86.26%	80,266,000	236.86%
01/01/2009	1,175,299,000	1,441,124,000	265,824,000	81.55%	78,184,000	340.00%
01/01/2010	1,149,786,000	1,478,136,000	328,350,000	77.79%	67,184,000	488.73%
01/01/2011	1,144,371,000	1,567,306,000	422,934,000	73.02%	57,888,000	730.61%
01/01/2012	1,104,779,000	1,604,463,000	499,684,000	68.86%	49,277,000	1,014.03%
01/01/2013	1,082,179,774	1,577,864,746	495,684,972	68.59%	42,622,389	1,162.97%
01/01/2014	1,173,841,252	1,608,975,544	435,134,292	72.96%	36,257,860	1,200.11%
01/01/2015	1,240,742,474	1,654,412,161	413,669,687	75.00%	32,828,504	1,260.09%



### **EXHIBIT IV**

### **Funded Ratio**

A critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the Plan as calculated. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

The chart below depicts a history of the funded ratios for this plan, on both an actuarial basis and a market basis.

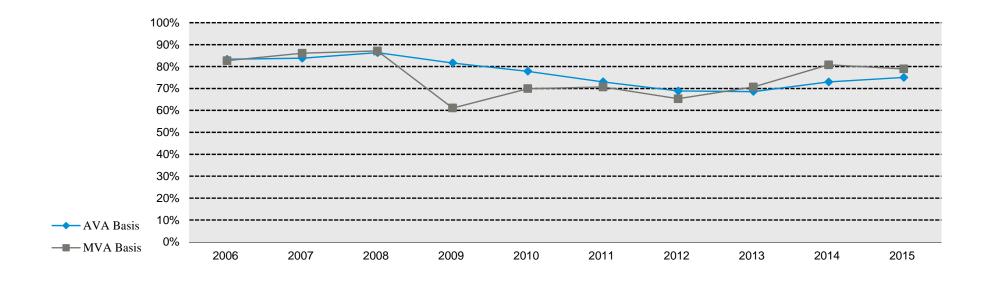




EXHIBIT V

Development of the Net Pension Obligation (NPO) and the Annual Pension Cost Pursuant to GASB 27

Plan Year Ended December 31	Employer Annual Required Contribution (a)	Employer Amount Contributed, with Interest* (b)	Interest on NPO (g) x 7.80%* (c)	ARC Adjustment** (d)	Pension Cost (a) + (c) - (d) (e)	Change in NPO (e) – (b) (f)	NPO Balance NPO + (f) (g)
2006							-\$49,933,000
2007	\$38,895,000	\$39,352,000	-\$4,095,000	-\$4,808,000	\$39,608,000	\$256,000	-49,677,000
2008	33,836,000	34,093,000	-4,074,000	-4,676,000	34,438,000	346,000	-49,331,000
2009	43,008,000	40,061,000	-3,996,000	-4,525,000	43,537,000	3,476,000	-45,855,000
2010	36,639,000	38,715,000	-3,668,000	-3,328,000	36,299,000	-2,416,000	-48,271,000
2011	45,049,000	43,857,000	-3,862,000	-3,320,000	44,507,000	650,000	-47,621,000
2012	51,199,000	47,750,472	-3,762,059	-3,883,415	51,320,356	3,569,884	-44,051,116
2013	52,881,747	58,437,516	-3,480,038	-3,762,866	53,164,575	-5,272,941	-49,324,057
2014	55,255,317	59,772,631	-3,847,276	-4,591,120	55,999,161	-3,773,470	-53,097,527

<sup>\*</sup> The interest rate used to calculate the ARC adjustment and NPO interest was 8.20% for 2008, 8.10% for 2009, 8.00% for 2010-2011, 7.90% for 2012, and 7.80% for 2013 - 2014.

Note: The results for the years ended December 31, 2011 and earlier were prepared by Buck Consultants.



<sup>\*\*</sup>Prior to 2010, the amortization period was 15 years. In 2010, the period was extended to 30 years. As of January 1, 2013, the Board approved shortening the period to 25 years, and as of January 1, 2014, the Board approved shortening the period to 20 years. As of January 1, 2015, the period is once again 15 years.

### **EXHIBIT VI**

### **Actuarial Assumptions and Actuarial Cost Method**

# Rationale for Demographic and Noneconomic Assumptions:

The information and analysis used in selecting each demographic assumption that has a significant effect on this actuarial valuation is shown in the Experience Study Report for the five-year period ended December 31, 2011. Current data is reviewed in conjunction with each annual valuation. Based on professional judgment, no assumption changes are warranted at this time.

### **Mortality Rates:**

Healthy:

RP-2000 Combined Mortality Table with Blue Collar adjustment, projected to 2019 using Scale AA, further loaded by 30% for Males and 10% for Females

Disabled:

RP-2000 Disabled Retiree Mortality Table, projected to 2019 using Scale AA

The RP-2000 mortality tables, projected to the 2015 valuation date reasonably reflect the projected mortality experience of the Plan as of the measurement date. The additional projection of four years is a provision made for future mortality improvement.

# Termination Rates before Retirement: Rate (%) Mortality Disability Withdrawal\* Age Male Female Safety Public Safety Non-Public Safety Public Safety Public Safety 35 0.13 0.05 0.08 0.20 4.00 5.50 40 0.15 0.07 0.18 0.30 4.00 6.75

Age	Male	Female	Safety	Public Safety	Safety	Public Safety
35	0.13	0.05	0.08	0.20	4.00	5.50
40	0.15	0.07	0.18	0.30	4.00	6.75
45	0.18	0.11	0.29	0.41	6.00	8.55
50	0.22	0.16	0.69	0.81	8.25	12.55
55	0.38	0.26	1.00	1.12	9.75	16.55
60	0.79	0.49	0.93	1.05	11.00	20.55

<sup>\*</sup> Withdrawal rates cut off at 50, or first eligibility for retirement if later



# **Retirement Rates:**

### **Rates for Unreduced Pension**

Non-Pu	<u>blic Safety</u>	Public Safety		
Retirement Age Probability (%)		Age	Retirement Probability (%)	
First eligibility	26.50	First eligibility	60.00	
Ages through 69	26.50	Ages through 64	40.00	
70	100.00	65	100.00	

# Rates for Reduced Pension\*

Non-Public Safety		<u>Pu</u>	Public Safety		
	Age	Retirement Probability (%)	Age	Retirement Probability (%)	
	50	8.25	50	12.55	
	51	8.60	51	13.35	
	52	9.00	52	14.15	
	53	9.25	53	14.95	
	54	9.50	54	15.75	
	55	9.75	55	16.55	
	56	10.00	56	17.35	
	57	10.25	57	18.15	
	58	10.50	58	18.95	
	59	10.75	59	19.75	
	60	11.00	60	20.55	
	61	11.25	61	21.35	
	62	11.50	62	22.15	
	63	11.75	63	22.95	
	64	12.00	64	23.75	

<sup>\*</sup> The retirement rates for reduced pensions apply only until eligibility for normal retirement occurs. From that point forward, the rates for unreduced pensions apply.



Retirement Age for Inactive Vested Participants:	Earliest unreduced retirement age
<b>Unknown Data for Participants:</b>	Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.
Percent Married:	75% of males and 50% of females
Age of Spouse:	Females four years younger than males
Benefit Election:	80% of participants who retire with reduced benefits take an annuity, and 95% of participants who retire with unreduced benefits take an annuity. The remainder are assumed to transfer to the County's defined contribution plan.
<b>Disability Retirements:</b>	60% of disability retirements are assumed to be in the line of duty
<b>Net Investment Return:</b>	7.70%
	The net investment return assumption was chosen by the Pension Board Finance Committee. The Committee received input from the actuary, including a long-term range estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the actuarial analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes as provided by Segal Rogerscasey, as well as the Plan's target asset allocation.
Salary Increases:	3.00% per year
	The salary scale assumption was set with the guidance of the Pension Board Finance Committee, with input from the County regarding future expectations.
Final Average Earnings and Years of Service Loads:	<ul> <li>The following loads were applied in the computation of final average earnings or years of service used to compute benefits:</li> <li>A 3.6% load applied to final average earnings to adjust for a 27<sup>th</sup> pay period in some years</li> <li>A 5.5% load applied to final average earnings to adjust for unused vacation time</li> <li>A 1.0% load applied to years of service to adjust for unused sick leave</li> </ul>



<b>Interest on Employee Contributions:</b>	4.0%
Administrative Expenses:	Prior year actual amount rounded to the nearest \$100,000 (\$700,000 for 2015)
Actuarial Value of Assets:	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary.
Changes in Assumptions:	The following change in assumptions is reflected in this valuation:
	> The net investment return assumption was changed from 7.80% to 7.70%.
	> The administrative expense assumption increased from \$600,000 to \$700,000 as a result of higher actual expenses in 2014.



# **EXHIBIT VII**

# **Summary of Plan Provisions**

This exhibit summarizes the major provisions of the Retirement System included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year	January 1 through December 31 Closed to new entrants as of July 1, 1999		
Plan Status			
Normal Retirement			
Age and Service Requirement	Earlier of age 65 with 10 years of Service, age 60 with 15 years of Service, age 55 with 30 years of Service, or 10 years of service and the sum of age and service equals 79 or more		
	For elected officials or department heads, if termination is the result of resignation, failure to be reelected, or abolishment of office, age 55 with 10 years of service		
Amount	1991 Plan - 2.00% of Final Average Compensation times years of Creditable Service.		
	<i>Enhanced Plan</i> - 2.25% of Final Average Compensation times years of Creditable Service for the first five years, plus 2.50% of Final Average Compensation per year of Credited Service in excess of five years.		
	The maximum benefit is 75% of Final Average Compensation. The minimum benefit is \$460 per month.		
Final Average Compensation	The average of the Participant's earnings during the three years of employment that produce the highest average. For elected officials and department heads, Final Average Compensation is not less than the average earnings during the 12 months prior to termination.		



Early Retirement:			
Age Requirement	None		
Service Requirement	15 years of Credited Service		
Amount	Normal pension accrued, reduced 0.5% for the first 60 months and 0.25% for the remaining months preceding employee's normal retirement date.		
	The benefit of a Peace Officer with 25 years will be reduced by 0.25% for each month that commencement precedes age 55.		
	The minimum benefit is \$300 per month.		
Disability:			
Age Requirement	None		
Requirement 10 years of Credited Service or disabled in the line of duty			
Amount	Normal pension accrued.		
	For Peace Officers, the benefit assumes 35 years of service.		
Vesting:			
Age Requirement	None		
Service Requirement	10 years of Credited Service		
Amount	Normal pension accrued		
Death Benefit:			
Amount	A percentage of the amount the Participant either a) was receiving at death, b) would have received had he retired with a normal retirement benefit at death, or c) would have received as a vested pension benefit had he survived to age 65.		
	75% for the Enhanced Plan, 1991 Plan, and 1982 Plan		
	50% for other Plans		

A beneficiary of a Peace Officer who dies in the line of duty receives the amount of compensation that the deceased would have received from the employer for one year from the date of death. After the first year, 75% of the greater of the participant's

salary at death or the salary paid to a six-year police officer.



Participant Contributions:	Enhanced Plan - 6% of pay 1991 and 1982 Plans – 5% of pay Other Plans – 0% to 4% of pay
<b>Interest on Contributions</b>	Employee contributions are credited with an annual interest rate of 4%.
Cost of Living Adjustments	3% per year for the Enhanced, 1991 and 1992 Plans if CPI is greater than zero
Changes in Plan Provisions:	There have been no changes in plan provisions since the last valuation.



### **EXHIBIT 1**

General Information – "Financial Statements", Note Disclosures and Required Supplementary Information for a Single Employer Pension Plan

Plan membership.

At December 31, 2013, pension plan membership consisted of the following:

Inactive employees or beneficiaries currently receiving benefits*	3,137
Inactive employees entitled to but not yet receiving benefits	23
Active employees	<u>678</u>
Total	3,838

<sup>\*</sup>Includes one suspended retiree

At December 31, 2014, pension plan membership consisted of the following:

Inactive employees or beneficiaries currently receiving benefits	3,179
Inactive employees entitled to but not yet receiving benefits*	27
Active employees	<u>576</u>
Total	3,782

<sup>\*</sup> Excludes terminated participants due a refund of employee contributions.

The System was closed to new entrants in 1999.

Benefits provided. See Section 4 Exhibit VII for a summary of plan provisions.

Contributions. The Plan is subject to minimum funding standards of the Public Retirement Systems Standards Law (Georgia Code Section 47-20-10). The System establishes an actuarially determined contribution as recommended by an independent actuary. The actuarially determined contribution is the estimated amount necessary to finance the costs of benefits earned by employees during the year, plus an additional amount to finance any unfunded accrued liability.



### **EXHIBIT 2**

### **Net Pension Liability**

The components of the net pension liability of the System at December 31, 2014 were as follows:

Total pension liability\$1,654,412,161Plan fiduciary net position1,306,027,000System's net pension liability\$348,385,161

Plan fiduciary net position as a percentage of the total pension liability 78.94%

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of December 31, 2014, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation 3.00% Salary increases 3.00%

Investment rate of return 7.70%, including inflation, net of pension plan investment expense

Mortality rates for non-disabled lives were based on the RP-2000 Healthy Annuitant Mortality Table for Males or Females, as appropriate, projected to 2019 using on Scale AA, further loaded by 30% for Males and 10% for Females. For disabled lives, mortality rates were based on the RP-2000 Disabled Retiree Mortality Table, projected to 2019 using Scale AA.

The actuarial assumptions used in the December 31, 2014 valuation were based on the results of an experience study for the period January 1, 2007 to December 31, 2011.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2014 are summarized in the following table:



Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*
Domestic equity	60.00%	6.70%
International equity	15.00%	7.40%
Core bonds	20.00%	1.60%
Global bonds	5.00%	4.45%
Total	100.00%	

<sup>\*</sup>The expected real rate of return is net of inflation.

Discount rate: The discount rate used to measure the total pension liability was 7.70%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rates (as a percentage of pay) and that County contributions will be made equal to the actuarially determined contribution. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability. For the prior year, the discount rate was 7.80%.

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability of the County, calculated using the discount rate of 7.70%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is one-percentage-point lower (6.70%) or one-percentage-point higher (8.70%) than the current rate:

	Current			
	1% Decrease (6.70%)	Discount (7.70%)	1% Increase (8.70%)	
System's net pension liability	\$516,560,623	\$348,385,161	\$205,799,483	



EXHIBIT 3
Schedules of Changes in System's Net Pension Liability – Last Ten Fiscal Years

	2014	2013	2012	2011	2010
Total pension liability					
		(Historical informa	tion prior to impler	nentation of GASB	67/68 is not
Service cost	\$4,291,080	required)			
Interest	120,935,376				
Change of benefit terms	0				
Differences between expected and actual experience	21,902,129				
Changes of assumptions	15,352,032				
Benefit payments, including refunds of employee					
contributions	-117,044,000				
Net change in total pension liability	\$45,436,617				
Total pension liability – beginning	\$1,608,975,544				
Total pension liability – ending (a)	1,654,412,161				
Plan fiduciary net position					
Contributions – employer	\$57,529,000				
Contributions – employee	2,129,000				
Net investment income	64,143,000				
Benefit payments, including refunds of employee					
contributions	-117,044,000				
Administrative expense	-705,000				
Other	0				
Net change in plan fiduciary net position	\$6,052,000				
Plan fiduciary net position – beginning	\$1,299,975,000				
Plan fiduciary net position – ending (b)	<u>1,306,027,000</u>				
System's net pension liability – ending $(a) - (b)$	<u>\$348,385,161</u>				
Plan fiduciary net position as a percentage of the total					
pension liability	78.94%				
Covered employee payroll	\$32,828,504				
System's net pension liability as percentage of covered employee payroll	1061.23%				

### **Notes to Schedule:**

*Benefit changes:* There have been no changes in benefit provisions since GASB 67 implementation. *Change of Assumptions:* The discount rate assumption was changed from 7.80% to 7.70%.



EXHIBIT 4
Schedule of System's Contribution – Last Ten Fiscal Years

Year Ended December 31	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions		Covered-Employee Payroll	Contributions as a Percentage of Covered Employee Payroll
2005		(H	listorical information prior t	to implementation of GASE	3 67/68 is not required.)
2006					
2007					
2008					
2009					
2010					
2011					
2012					
2013					
2014	\$55,255,317	\$57,529,000	-\$2,273,683	\$32,828,504	175.24%

# EXHIBIT 5

# **Notes to Required Supplementary Information**

Valuation date	Actuarial determined contribution rates are calculated as of January 1	
Methods and used assumptions to determine contribution rates:		
Actuarial cost method	Entry age normal	
Amortization method	Closed level dollar for remaining unfunded liability	
Remaining amortization period	15 years remaining as of January 1, 2015	
Asset valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognize return is equal to the difference between the actual market return and the expected return of the actuarial value, and is recognized over a five-year period, further adjusted, if necessary, be within 20% of the market value.	
Actuarial assumptions:		
Investment rate of return	7.70% The net investment return assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes, as well as the System's target asset allocation.	
Inflation rate	3.00%	
Projected salary increases	3.00%	
Cost of living adjustments	3.00%	



# **Retirement Rates:**

# **Rates for Unreduced Pension**

Non-Public Safety		<u>Public Safety</u>		
Age	Retirement Probability (%)	Age	Retirement Probability (%)	
First eligibility	26.50	First eligibility	60.00	
Ages through 69	26.50	Ages through 64	40.00	
70	100.00	65	100.00	

### Rates for Reduced Pension\*

Non-l	Public Safety	Public Safety	
Age	Retirement Probability (%)	Age	Retirement Probability (%)
50	8.25	50	12.55
51	8.60	51	13.35
52	9.00	52	14.15
53	9.25	53	14.95
54	9.50	54	15.75
55	9.75	55	16.55
56	10.00	56	17.35
57	10.25	57	18.15
58	10.50	58	18.95
59	10.75	59	19.75
60	11.00	60	20.55
61	11.25	61	21.35
62	11.50	62	22.15
63	11.75	63	22.95
64	12.00	64	23.75

<sup>\*</sup> The retirement rates for reduced pensions apply only until eligibility for normal retirement occurs. From that point forward, the rates for unreduced pensions apply.



**Mortality Rates:** 

Healthy: RP-2000 Combined Mortality Table with Blue Collar adjustment, projected to 2019

using Scale AA, further loaded by 30% for Males and 10% for Females

Disabled: RP-2000 Disabled Retiree Mortality Table, projected to 2019 using Scale AA

The RP-2000 mortality tables, projected to the 2015 valuation date reasonably reflect the projected mortality experience of the Plan as of the measurement date. The

additional projection of four years is a provision made for future mortality

improvement.

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