

## Clayton County, Georgia

# Clayton County, Georgia Public Employee Retirement System

### *Actuarial Valuation Report*

*Plan Year* July 1, 2014 - June 30, 2015

*Fiscal Year* July 1, 2014 - June 30, 2015

*November 2014*





**Timothy G. Bowen**  
*Director, Retirement*

Buck Consultants, LLC.  
Suite 1900  
200 Galleria Pkwy SE  
Atlanta, GA 30339

Timothy.Bowen@xerox.com  
tel 770-916-4196  
fax 770-933-8336

November 2014

Pension Board  
Clayton County, Georgia  
Public Employee Retirement System  
112 Smith Street  
Jonesboro, GA 30236

Members of the Board:

We are pleased to submit the results of the actuarial valuation of the Clayton County, Georgia Public Employee Retirement System as of July 1, 2014. We trust that this report will meet the approval of the Board and will furnish the desired information concerning the financial condition of the Retirement Fund. We look forward to meeting with you in person to discuss these results.

There are several purposes of this valuation. One purpose is to confirm whether contributions to the Retirement System meet the minimum funding requirements under Title 47, Chapter 20 of the Official Code of Georgia. It is the Board's funding policy to keep the Retirement System in compliance with these minimum funding requirements.

This valuation's results confirm that if contributions to the Retirement System continue at 18.40% (12.90% from the County and Water Authority and 5.50% from Participants) of Eligible Employee payroll as defined under the plan and if the County makes a special budgeted contribution of 1.50% of Eligible Employee payroll, then the minimum funding requirements will be met.

These contributions are projected to fund the unfunded liability over a 30-year period. This period is within the acceptable period (30 years) for amortization under the minimum funding requirements. This result is dependent upon the valuation assumptions related to investment returns, payroll growth, rates of salary increase, retirement, turnover, and death.

Another purpose is to prepare the information needed for the Retirement System's and the County's and Water Authority's financial reports as required by GASB Statements Nos. 25 and 27. The valuation has been prepared in accordance with the parameters set for disclosure under GASB Statements Nos. 25 and 27. The annual required employer contribution rate (ARC) is 14.40%. Disclosure under GASB Nos. 67 is required starting with the fiscal year ending June 30, 2014 and will be provided in a supplementary report.

Finally, this valuation assesses the security of benefits already earned. The Retirement System has assets of \$385,744,668 at market value (after an adjustment of \$580,821 for pending refunds). The actuarial value of assets is \$364,702,111. The Retirement System's actuarial accrued liability for inactive participants and for active participants based on the service they have already performed is \$519,309,712. This liability has been computed in accordance with the plan provisions listed in Schedule F and the actuarial assumptions listed in Schedule E.

The experience for the plan year produced an overall loss of \$3,574,648. Below is a summary of the change sources of (gains) and losses.

Due to investment performance	\$(8,403,403)
Due to retirement experience	\$5,198,228
Due to new entrants	424,926
Due to mortality experience	1,333,995
Due to salary increases	5,449,530
Due to other	(428,628)

Demographic assumptions were revised to reflect a review of actual plan experience for the period July 1, 2008 – June 30, 2013. Future salary increase assumptions were revised to reflect the County’s expectation for short term pay increases. Changes in assumptions resulted in an increase in the unfunded liability by \$18,180,376. Following is a summary of the change in the unfunded liability due to assumption changes:

Updated mortality assumptions	\$19,590,177
Updated retirement and termination rates	2,759,766
Updates to salary increase assumptions	(4,169,567)

The Actuarial Value of Assets was changed to be based on a 5-year smoothing of market value gains and losses starting with the gains and losses for the period July 1, 2013 – June 30, 2014. The Actuarial Value of Assets is limited to an 80% to 120% market value corridor.

The results of this valuation are dependent upon the employee census information provided by Clayton County and the Water Authority and asset values provided by the County, and the actuarial assumptions as summarized herein. As summarized above and detailed below, there have been changes in actuarial assumptions since last year.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. Because of limited scope, Buck performed no analysis of the potential range of such future differences.

Buck Consultants, LLC. was retained by the Pension Board for the Clayton County, Georgia Public Employees Retirement System to prepare this report. This report is intended for the sole use of the addressee and is intended only to supply sufficient information for the addressee to comply with the stated purposes of the report and may not be appropriate for other business purposes. Reliance on information contained in this report by anyone for other than the intended purpose puts the relying entity at risk of being misled because of confusion or failure to understand applicable assumptions, methodologies, or limitations of the report’s conclusions. Accordingly, no person or entity, including the addressee, should base any representations or warranties in any business agreement on any statement or conclusions contained in this report without the written consent of Buck Consultants, LLC.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,



Timothy G. Bowen, EA, MAAA, FCA  
Director, Retirement Consulting Actuary  
Enrolled Actuary Number 14-07204



Joseph L. Griffin, EA, ASA, MAAA, FCA  
Principal, Retirement Consulting Actuary  
Enrolled Actuary Number 14-06938

TGB/JLG:cj

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**REPORT ON AN ACTUARIAL VALUATION  
OF THE CLAYTON COUNTY, GEORGIA  
PUBLIC EMPLOYEE RETIREMENT SYSTEM  
PREPARED AS OF JULY 1, 2014**

**SECTION I - SUMMARY OF PRINCIPAL RESULTS**

1. For convenience of reference, the principal results of the valuation and a comparison with the results of the preceding valuation are summarized below:

<b>Valuation Date</b>	<b>7/1/2014</b>	<b>7/1/2013</b>
Number of active participants	2,447	2,475
Annual compensation for year beginning on valuation date	\$ 108,583,036	\$ 107,100,128
Number of retired participants and beneficiaries	1,124	1,066
Annual retirement benefits as of July 1	\$ 29,865,687	\$ 28,002,356
Number of former participants with deferred benefits	290	279
Present value of accrued benefits	\$ 501,012,760	\$ 448,477,583
Total actuarial accrued liability	\$ 519,309,712	\$ 469,845,321
Assets:		
Market value	\$ 385,744,668	\$ 343,412,055
Actuarial value of assets	\$ 364,702,111	\$ 340,269,292
Total unfunded actuarial accrued liability	\$ 154,607,601	\$ 129,576,029
Amortization period for unfunded actuarial accrued liability	30 years	29 years
Recommended annual contribution rates:*		
Participants	5.50%	5.50%
County/Water Authority (normal)	12.90	12.90
County/Water Authority (special budgeted)	<u>1.50</u>	<u>0.00</u>
Total	19.90%	18.40%
County/Water Authority annual required contribution rate (ARC):		
Normal cost	5.69%	5.84%
Unfunded actuarial accrued liability	7.21	7.06
Special budgeted contribution	<u>1.50</u>	<u>0.00</u>
Total	14.40%	12.90%

\*\* Contribution rates are applied to pay through the plan year

2. Comments on the valuation results as of July 1, 2014 are given in Section IV and further discussion of the contributions is set out in Section V.
3. Schedule E of this report outlines the full set of actuarial assumptions and methods employed.
4. Schedule F of this report summarizes the provisions of the System as interpreted for valuation purposes.

**SECTION II - PARTICIPANT DATA**

1. All full time employees and elected officials of Clayton County and the Clayton County Water Authority are covered under the Plan. The valuation included 2,447 active participants as of July 1, 2014 with expected annual compensation for the year beginning July 1, 2014 totaling \$108,583,036.
2. The following table shows the number of retired participants and beneficiaries of deceased participants and their annual retirement benefits as of the valuation date.

**THE NUMBER AND ANNUAL RETIREMENT BENEFITS  
OF RETIRED PARTICIPANTS AND  
BENEFICIARIES OF DECEASED PARTICIPANTS  
AS OF JULY 1, 2014**

GROUP	NUMBER	BENEFITS
Normal and Early Retirements	952	\$ 27,215,574
Beneficiaries of Deceased Participants	109	1,605,977
Disability Retirements	<u>63</u>	<u>1,044,136</u>
Total	1,124	\$29,865,687

In addition, there are 290 former participants entitled to deferred annual benefits totaling \$3,436,283.

### **SECTION III - ASSETS**

1. The amount of assets taken into account in this valuation is based on the unaudited financial statements provided by Clayton County.
2. The market value of assets as of July 1, 2014 was \$385,744,668. This represented a return of approximately 15.78%. The actuarial value of assets used for the current valuation was \$364,702,111. Schedule B shows the development of the actuarial value of assets as of July 1, 2014.
3. Schedule C shows the reconciliation of the market value of asset balances from July 1, 2013 to July 1, 2014.

### **SECTION IV - COMMENTS ON VALUATION**

1. Schedule A outlines the results of the valuation. The valuation shows that the Retirement System has total actuarial accrued liabilities of \$519,309,712. Of this amount, \$349,187,936 is on account of benefits payable to retired participants, beneficiaries and former participants entitled to deferred vested benefits, and \$170,121,776 is for benefits expected to be paid based on service to the valuation date on account of the present active participants. Against these liabilities, the System has present actuarial value of assets of \$364,702,111 as of July 1, 2014. The difference of \$154,607,601 between the total liabilities and the present assets represents the present value of future accrued liability contributions to be made by the County and Water Authority.

2. The regular contributions to the System consist of normal cost contributions and unfunded accrued liability amortization contributions. The normal cost contribution covers the cost of benefits accruing and Retirement System expenses during the upcoming year. The normal cost contribution rate for the County and Water Authority participants combined is determined to be 11.19% (5.69% County/Water Authority and 5.50% participants) of payroll. This compares to the 11.34% rate last year.
3. Another measure of the funding is the present value of the benefits accrued as of the valuation date. This value does not include any allowance for future salary increases affecting the benefits earned to date. This amount is \$501,012,760. When compared to the market value of assets of \$385,744,668, the plan has insufficient assets to cover its accrued benefits.
4. For the year, the Plan experienced an overall loss of \$3,574,648. This loss is due to the net effect of a gain on the actuarial value of assets of \$8,403,403 and a liability loss of \$11,978,051. Schedule D shows the development of this loss.
5. Assumption changes increased the unfunded liability by \$18,180,376. The assumption changes include a \$19,590,177 liability increase due to a change in mortality, a \$2,759,766 liability increase due to changes in assumed rate of retirement and termination, and a \$4,169,567 decrease in liability due to a change in the salary scale.

#### **SECTION V - CONTRIBUTIONS PAYABLE UNDER THE RETIREMENT SYSTEM**

1. The Retirement System has established a total contribution rate of 18.40% of active participants' compensation. Of this amount, the participants pay 5.50% and 12.90% is to be paid by the County/Water Authority. Additionally the County/Water Authority has established a special budgeted contribution of 1.50% to meet minimum funding standards for the current year.

2. On the basis of the present valuation, a total normal cost contribution rate of 11.19% is payable. Participants contribute 5.50% of payroll, leaving a balance of 5.69% normal cost rate to be paid by the County/Water Authority.
3. The excess of the County's and Water Authority's 12.90% contribution over the 5.69% normal cost is 7.21%. In addition, the County and Water Authority will make a special budgeted contribution of 1.50% of payroll. These amounts are applied toward the liquidation of the unfunded accrued liability. The 8.71% of active participants' compensation will liquidate the unfunded accrued liability within a 30-year period. This assumes that the funds to liquidate the unfunded liability increase 3.00% per year.
4. The following table summarizes the contribution rates.

**CONTRIBUTION RATES  
BASED ON JULY 1, 2014 VALUATION**

CONTRIBUTION	PERCENTAGE OF COMPENSATION
Payable by:	
Participants	5.50%
County and Water Authority	12.90
County and Water Authority (special budgeted)	<u>1.50</u>
Total	19.90%
Rate Applied To:	
Total Normal Cost	11.19%
Unfunded Actuarial Accrued Liability	<u>8.71</u>
Total	19.90%

**SECTION VI - ACCOUNTING INFORMATION**

1. Governmental Accounting Standards Board Statement No. 25 sets forth certain items of required supplementary information to be disclosed in the financial statements of the System and Statement No. 27 sets forth information for financial statements of the employer. One such item under GASB Statement No. 25 is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED MEMBERS  
AS OF JULY 1, 2014**

GROUP	NUMBER
Retirees and beneficiaries currently Receiving benefits	1,124
Terminated employees entitled to benefits but not yet receiving benefits	290
Active Members	<u>2,447</u>
Total	3,861

2. Another such item is the schedule of funding progress for the most recent six years as shown below.

**SCHEDULE OF FUNDING PROGRESS  
(In 000's)  
(See paragraph 7 below)**

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Projected Unit Credit (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
7/1/2009	281,523.4	392,472.8	110,949.4	71.7	110,028.3	100.8
7/1/2010	293,128.4	407,571.1	114,442.7	72.0	105,317.0	108.7
7/1/2011	308,154.1	425,921.5	117,767.4	72.3	102,330.7	115.1
7/1/2012	322,142.6	448,252.3	126,109.7	71.9	107,391.7	117.4
7/1/2013	340,269.3	469,845.3	129,576.0	72.4	107,100.1	121.0
7/1/2014	364,702.1	519,309.7	154,607.6	70.2	108,583.0	142.4

See Schedules E and F for changes in assumptions or plan provisions affecting the comparability of numbers from year to year.

3. Another disclosure item under GASB Statement No. 25 is the Schedule of Employer Contributions as shown below. The annual required contributions for the six most recent plan years are to be shown.

**SCHEDULE OF EMPLOYER CONTRIBUTIONS**

<b>Plan Year Ended June 30</b>	<b>Annual Required Contribution</b>	<b>Percentage Contributed</b>
2009	\$14,545,179	100%
2010	14,516,566	100
2011	14,269,403	100
2012	14,469,894	100
2013	14,717,065	100
2014	14,677,561	100

4. The annual required contribution (ARC) as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below.

**2014/2015 FISCAL YEAR  
EMPLOYER ANNUAL REQUIRED CONTRIBUTION (ARC)  
BASED ON THE VALUATION AS OF JULY 1, 2014  
(See paragraph 7 below)**

<b>EMPLOYER ANNUAL REQUIRED CONTRIBUTION (ARC)</b>	
Normal	5.69%
Accrued Liability	7.21%
Special Budgeted	<u>1.50%</u>
Total	14.40%

5. Three-year trend information as required under GASB 27 is as follows:

**THREE-YEAR TREND INFORMATION  
(See paragraph 7 below)**

<b>Fiscal Year Ended June 30</b>	<b>Annual Pension Cost</b>	<b>Percentage of Annual Pension Cost Contributed</b>	<b>Net Pension Obligation</b>
2012	\$14,469,894	100%	\$0
2013	14,717,065	100	0
2014	14,677,561	100	0

6. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at July 1, 2014. Additional information as of the latest actuarial valuation follows.

Valuation date	7/1/2014
Actuarial cost method	Projected unit credit
Amortization method	Level percent open
Remaining amortization period	30 years
Asset valuation method	5 year smoothed market value
Actuarial assumptions:	
Investment rate of return*	8.00%
Projected salary increases*	2.00% for 4 years / 3.00% for next 5 years / 4.00% thereafter.
Cost-of-living adjustments	2.0% after the 84 <sup>th</sup> payment effective 7/1/2009 (see plan summary)

7. It is likely that this plan can be viewed as a cost-sharing multiple-employer plan since Clayton County and the Clayton County Water Authority are separate employers. All costs of the plan are shared and one valuation covers all plan participants. Under GASB 27, cost-sharing employers recognize their required contributions as expense and the excess, if any, of required contributions over actual contributions as a liability. Cost-sharing employers are not required for GASB 27 to disclose the information in paragraphs 2 and 5 above.

## **SECTION VII – ENROLLED ACTUARY’S STATEMENT**

The actuarial assumptions used to value the Plan for funding purposes were selected by the plan sponsor or us. The interest assumption, funding method, salary scale and asset method were selected by the plan sponsor. All other assumptions were selected by us. All assumptions (other than the salary scale which was selected by the plan sponsor) individually and in the aggregate represent my best estimate of anticipated experience under the plan. There is not sufficient information to evaluate the appropriateness of the salary scale as a long term assumption. The plan sponsor has indicated that the financial stress it is under will limit its ability for a considerable period to make salary increases in line with historical increases. Based on the foregoing, the cost results and actuarial exhibits for funding presented in this report were determined on a consistent and objective basis in accordance with applicable Actuarial Standards of Practice and generally accepted actuarial procedures.

To the best of my knowledge, the information in this report is complete and accurate and meets the requirements and intent of Georgia Public Retirement System Law, Code Title 47, Chapter 20. As is demonstrated earlier in this report, the Clayton County, Georgia Public Employees Retirement System is in compliance with the Minimum Funding Standards specified in Code Section 47-20-10 and meets the funding policy of the Fund’s Board, which is to keep the Fund in compliance with such standards. These assumptions and actuarial cost methods also meet the required parameters under GASB Statements Number 25 and 27. See the cover letter to this report for limitations due to reliance upon information furnished by others.

The report was prepared under the supervision of Timothy G. Bowen, the plan's Enrolled Actuary, an Associate of the Society of Actuaries, and a Member of the American Academy of Actuaries, who has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

BUCK CONSULTANTS, LLC.



Timothy G. Bowen, EA, MAAA, FCA  
Director, Retirement Consulting Actuary  
Enrolled Actuary Number 14-07204

**SCHEDULE A**

**RESULTS OF THE VALUATION  
PREPARED AS OF JULY 1, 2014**

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1. Actuarial Accrued Liabilities	
Present Value of Prospective Benefits Payable in Respect of:	
(a) Present active participants	\$170,121,776
(b) Present retired participants, beneficiaries, and former participants entitled to deferred vested benefits	<u>349,187,936</u>
(c) Total accrued actuarial liabilities	519,309,712
2. Actuarial Value of Assets for Valuation Purposes	364,702,111
3. Unfunded Actuarial Accrued Liability [1(c) minus 2]	154,607,601

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**SCHEDULE B**

**DEVELOPMENT OF JULY 1, 2014 ACTUARIAL VALUE OF ASSETS**

(1)	Market Value of Assets on July 1, 2013 including Contributions Receivable		\$ 343,412,055
(2)	2013/2014 Net Cash Flow		
	a. Contributions from Employer and Participants plus increase/(decrease) in Contributions Receivable		18,741,080
	b. Benefits + Administrative Expense Only		<u>29,744,492</u>
	c. Net Cash Flow		
	(2)a - (2)b		(11,003,412)
(3)	Expected Investment Return, Net of Investment Expenses [(1) x .08] + [(2)c x .04]		27,032,828
(4)	Expected Market Value of Assets on July 1, 2014 including Contributions Receivable (1) + (2)c + (3)		359,441,471
(5)	Market Value of Assets on July 1, 2014, including Contributions Receivable		385,744,668
(6)	Gain/(Loss) on Market Value of Assets (5) - (4)		26,303,197
(7)	Deferred Gains/(Losses) on Market Value of Assets		
		Total Gain/(Loss)	Amount Deferred
	2013	\$26,303,197	<u>\$21,042,557</u>
			21,042,557
(8)	Preliminary Actuarial Value of Assets on July 1, 2014 (5) - (7)		364,702,111
(9)	80% of Market Value .80 x (5)		308,595,734
(10)	120% of Market Value 1.20 x (5)		462,893,602
(11)	Actuarial Value of Assets on July 1, 2014 Smaller of (10) and maximum of (8) and (9)		\$ 364,702,111

**SCHEDULE C**

**ASSETS OF THE RETIREMENT SYSTEM**

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<b><u>Reconciliation of Market Value of Assets</u></b>		
<b><u>Receipts</u></b>		
Employer and Participant Contributions		\$ 18,741,080
Investment Income		
Interest and Dividends	\$ 6,871,895	
Net Appreciation (Depreciation) in Fair Value of Investments	<u>46,978,640</u>	
Total Investment Income		<u>53,850,535</u>
Total Receipts		\$ 72,591,615
<b><u>Disbursements</u></b>		
Benefits Paid		\$ 29,230,610
Increase in Pending Refunds <sup>1</sup>		111,000
Administrative and Investment Expenses		<u>917,392</u>
Total Disbursements		\$ 30,259,002
<b><u>Excess of Receipts Over Disbursements</u></b>		<b>\$ 42,332,613</b>
 <b><u>Reconciliation of Asset Balances</u></b>		
Market Value at July 1, 2013, including contributions receivable		\$ 343,412,055
Excess of Receipts Over Disbursements		42,332,613
Market Value at July 1, 2014, including contributions receivable		<u>\$ 385,744,668</u>

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<sup>1</sup> Unpaid Pending Refunds of \$469,821 were subtracted from the July 1, 2013 Market Value of Assets, and \$580,821 was subtracted from the July 1, 2014 Market Value of Assets. The difference of \$111,000 was added to the annual disbursements during the year.

**SCHEDULE D**

**DEVELOPMENT OF EXPERIENCE GAIN/(LOSS)**

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1. Actual Unfunded Accrued Liability as of July 1, 2013 (before adjustment for window plan):		\$ 129,576,029
2. Expected Change in Unfunded Liability During 2013/2014 Plan Year		
a. Due to Total Normal Cost (beginning of year)	\$ 11,482,583	
b. Mortality Change (increase projection year by 1)	19,590,177	
c. Change to Salary Scale	(4,169,567)	
d. Change to retirement/termination decrements	2,759,766	
e. Due to Plan Changes	0	
f. Due to Interest on Normal Cost and Unfunded Liability	11,284,689	
g. Due to Actual Employer and Participant Contributions with Interest	<u>(19,490,724)</u>	
h. Total Expected Change, a. + b. + c. + d. + e. + f. + g.	\$ 21,456,924	
3. Expected Unfunded Accrued Liability as of July 1, 2014:		\$ 151,032,953
4. Actual Unfunded Accrued Liability as of July 1, 2014 (before adjustment for window plan):		\$ 154,607,601
5. Experience Gain/(Loss) for the 2013/2014 Plan Year* (3) – (4)		\$ (3,574,648)

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* Liability related portion of experience Gain/(Loss):	\$ (11,978,051)
Asset related portion of experience Gain/(Loss):	\$ 8,403,403

**SCHEDULE E**

**OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

INTEREST RATE: 8% per annum, compounded annually, net of investment expenses.

SEPARATIONS BEFORE RETIREMENT: Representative values of the assumed annual rates of withdrawal, disability, and death are as follows:

**Safety**

Age	Annual Rate of					
	Withdrawal					Disability
	Years 0-1	Years 1-2	Years 2-3	Years 3-6	Years 7+	
25	15.00%	12.00%	10.00%	8.00%	6.75%	.07%
30	15.00	12.00	10.00	8.00	6.50	.08
35	15.00	12.00	10.00	8.00	5.75	.09
40	15.00	12.00	10.00	8.00	4.00	.11
45	15.00	12.00	10.00	8.00	3.25	.16
50	15.00	12.00	10.00	8.00	3.25	.24
55	-	-	-	-	-	.40
60	-	-	-	-	-	.84
64	-	-	-	-	-	1.49

**Non-Safety**

Age	Annual Rate of					
	Withdrawal					Disability
	Years 0-1	Years 1-2	Years 2-3	Years 3-6	Years 7+	
25	15.00%	12.00%	10.50%	6.75%	6.75%	.07%
30	15.00	12.00	10.50	6.75	6.25	.08
35	15.00	12.00	10.50	6.75	6.00	.09
40	15.00	12.00	10.50	6.75	4.50	.11
45	15.00	12.00	10.50	6.75	3.00	.16
50	15.00	12.00	10.50	6.75	2.25	.24
55	15.00	12.00	10.50	6.75	2.00	.40
60	15.00	12.00	10.50	6.75	2.00	.84
64	15.00	12.00	10.50	6.75	2.00	1.49

**OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS (continued)**

RATES OF RETIREMENT: Representative values of the assumed annual rates of early and normal retirement are as follows:

Age	Non-Safety		Safety	
	Annual Rate of Retirement			
	Early	Normal*	Early	Normal*
50	.100		.040	
51	.100		.080	
52	.150		.120	
53	.250		.180	
54	.250		.250	
55	.350	.25	.085	.10
56	.160	.10	.085	.10
57	.160	.10	.085	.10
58	.160	.15	.085	.10
59	.160	.20	.085	.10
60		.55		.25
61		.65		.15
62		.65		.22
63		.65		.16
64		.65		.11
65		1.00		.60
66				.40
67				.40
68				.40
69				.40
70				1.00

\* An additional 30% are assumed to retire upon attainment of 25 years of service.

Note: Employees who terminate with a vested benefit and greater than 15 years of service are assumed to commence at age 55 with a subsidized early retirement pension. Other deferred vested employees are assumed to commence at normal retirement age.

**SALARY INCREASES:** 2.00% per annum for 4 years, 3.00% per annum for the following 5 years, and 4.00% per annum thereafter.

**MORTALITY:**

Annuitants: RP-2000 Mortality Table with a blue collar adjustment and a 7.5% load, fully generational based on scale BB

Non-Annuitants: RP-2000 Mortality Table with a blue collar adjustment, fully generational based on scale BB

Disabled Participants: RP-2000

**SCHEDULE E**

## **OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS (continued)**

**FUTURE ADMINISTRATIVE EXPENSES:** Expenses assumed to be 0.20% of payroll.

**LOADING OR CONTINGENCY RESERVES:** A 0.10% load on active liabilities is held to reflect potential use of accumulated sick leave upon retirement.

**SPOUSES:** The husband is assumed to be three years older than the wife, and it is assumed that 85% of the participants are married.

**CONTINGENT ASSETS & LIABILITIES:** There were none as of July 1, 2014.

**VALUATION ASSETS:** Actuarial Value, as developed in Schedule B. The actuarial value of assets is based on a 5-year smoothing of market value gains and losses starting with the asset gains and losses for the period July 1, 2013 – June 30, 2014.. The actuarial value of assets is limited to a range between 80% and 120% of market value.

**VALUATION FUNDING METHOD:** Projected unit credit cost method. Gains and losses are reflected in the unfunded accrued liability.

**INFLATION:** 3.00% per annum (used for the amortization of unfunded liability).

**CONTRIBUTION TIMING:** Employee contributions are assumed to occur bi-weekly and County contributions quarterly.

### **HISTORICAL ASSUMPTION CHANGES:**

Effective 7/1/2014: The assumed rates of salary increase were adjusted to 2.00% for 4 years, 3.00% for the next 5 years, and 4.00% thereafter. The mortality table for healthy participants was changed to the RP-2000 blue collar base rates increased by 7.5% to reflect actual plan experience, generationally projected using Scale BB for annuitants and the RP-2000 blue collar base rates, generationally projected using Scale BB for non-annuitants. The mortality table for disabled participants was changed to the RP-2000 disabled mortality table. The assumed rates of retirement and termination were changed to better reflect anticipated experience. The asset valuation method was changed to reflect a 5-year smoothing of market value gains and losses beginning with gains and losses for the period July 1, 2013 – June 30, 2014. The Actuarial Value of Assets is limited to an 80% - 120% market value corridor.

Effective 7/1/2013: The assumed rates of salary increase were adjusted from 3% for the next 9 years and 4% thereafter to 0% for the upcoming year for County employees, 2% for the upcoming year for Water Authority employees, 3% for the next 9 years for all employees and 4% thereafter for all employees. The mortality table was changed to the RP 2000 Mortality Table with a 10% load projected to the year 2019 with Blue Collar adjustment.

Effective 7/1/2012: The assumed rates of salary increase were adjusted from 3% for the next 10 years and 4% for the following 20 years to 0% for the upcoming year for County employees, 1% for the upcoming year for Water Authority employees, 3% for the next 9 years for all employees and 4% thereafter for all employees. The mortality table was changed to the RP 2000 Mortality Table with a 10% load projected to the year 2018 with Blue Collar adjustment.

## **SCHEDULE E**

### **OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS (continued)**

Effective 7/1/2011: The mortality table was changed from the RP 2000 Mortality Table with Blue Collar adjustments to the RP 2000 Mortality Table with a 10% load projected to the year 2017 with Blue Collar adjustment; the assumed rates of salary increase was adjusted from a flat 4% to 0% for the upcoming year, 3% for the next 10 years and 4% thereafter; and the assumed rate of inflation used as an amortization adjustment was changed from a flat 4% to 3% for the next 11 years and 4% thereafter.

Effective 7/1/2009: The salary scale assumption decreased from 5.3% annually to 4.0% annually.

Effective 7/1/2008: The mortality table for employees (both before and after retirement) changed from the 1983 Group Annuity Mortality Table to the RP-2000 Mortality Table with Blue Collar Adjustment.

Effective 7/1/2004: The expense assumption has been lowered to .20% of payroll to reflect true level of administrative expense. The retirement table has been changed to produce expected results that more closely match recent experience. The salary scale has increased from 5.0% to 5.3%.

Effective 7/1/2003: The mortality table for employees (both before and after retirement) changed from the 1971 Group Annuity Mortality Table set back 1 year to the 1983 Group Annuity Mortality Table. The withdrawal table for employees changed to a 3-year select-and-ultimate table to reflect recent plan experience.

Effective 7/1/2001: The mortality table has been set back one year.

CHANGES IN METHODS: None.

**SCHEDULE F**

**SUMMARY OF THE MAIN BENEFIT AND CONTRIBUTION PROVISIONS**

Effective Date	July 1, 1971.
Plan Year and Fiscal Year	Each July 1 to June 30.
Type of Plan	A cost-sharing multiple-employer defined benefit pension plan administered by a public employee retirement system funded by the Plan Sponsors (Clayton County and the Clayton County Water Authority) and Participant contributions.
Employees Covered	<p>Full-time employees, including Commissioners, persons appointed by Commissioners, judicial secretaries, Probate Court Judge, magistrate, Court Clerks, Sheriff and Chief Deputy, Tax Commissioner and Deputy, and Water Authority employees and appointees.</p> <p>Effective November 1, 2010, any employee who is enrolled or becomes an active participant or member in the Employees Retirement System of Georgia or the Georgia State Employees Pension and Savings Plan (or any successor plan) will not be covered under this Plan. This amendment was not reflected in the July 1, 2010 valuation.</p> <p>Effective July 1, 2012, State Court Law Clerks are now eligible to participate in the Plan.</p>
Credited Service	Service from employment. Effective January 1, 1999, each Participant's sick leave in excess of the allowable amount, as of the last pay period of each calendar year, shall be placed in reserve status to be used in determining Credited Service at the Participant's termination of employment. Certain employees' service with The City of Forest Park Water and Sewer Department is included as Credited Service.
Normal Retirement Benefit Eligibility	The earlier of age 60 and 7 years of participation (5 years of participation for sworn safety personnel hired prior to June 1, 2001), or age 55 and 25 years of credited service. Effective January 1, 1999, a Participant may elect to apply sick leave reserve as an age credit in determining the attainment of Normal Retirement Age.

**SCHEDULE F**

**SUMMARY OF THE MAIN BENEFIT  
AND CONTRIBUTION PROVISIONS (continued)**

Basic Monthly Benefit	<p>2.5% of average monthly salary multiplied by years of credited service up to 32.</p> <p>Average monthly compensation is based on the 36 highest consecutive months of service during the last 60 months of service.</p>
Cost of Living Adjustments	<p>Annual 2.0% cost of living increase effective beginning July 1, 2009 for those who have received their 84<sup>th</sup> monthly benefit payment prior to July 1.</p>
<p>Early Retirement Benefit Eligibility</p> <p style="padding-left: 40px;">Benefit</p>	<p>The earlier of age 50 and 25 years of credited service or age 55 and 15 years of credited service.</p> <p>If the participant has 25 years of credited service, the benefit is reduced 1/2% for each month age is less than 55. If the participant has less than 25 years of credited service, the benefit is reduced 1/2% for each month age is less than 60.</p>
<p>Disability Retirement Eligibility</p> <p style="padding-left: 40px;">Benefit</p>	<p>3 years of credited service for in line-of-duty; 7 years of credited service for other than in line-of-duty.</p> <p>30% of participants' monthly rate of compensation as of the date of disability.</p>
<p>Late Retirement Benefit Eligibility</p> <p style="padding-left: 40px;">Benefit</p>	<p>Retirement after eligibility for normal retirement.</p> <p>Normal retirement benefit based on average monthly salary and service at actual date of retirement.</p>
<p>Deferred Vested Benefit Eligibility</p> <p style="padding-left: 40px;">Benefit</p>	<p>7 years of credited service.</p> <p>100% of accrued benefit commencing at normal retirement age. If the member has 15 years of credited service, he may receive a reduced benefit commencing at early retirement age.</p>

**SCHEDULE F**

**SUMMARY OF THE MAIN BENEFIT  
AND CONTRIBUTION PROVISIONS (continued)**

Pre-Retirement Death Benefit

In Line-of-Duty

Eligibility	Participation in the Plan.
Benefit	Survivor portion of the 50% Joint and Survivor benefit payable immediately (unreduced for early commencement) if married. If not married, payments are unreduced and paid for 60 months.

Other Than Line-of-Duty

Eligibility	7 years of service.
Benefit	Same as in line-of-duty benefit if greater than age 50. If under age 50, 50% of the deferred vested benefit reduced for early retirement payable at early retirement date if married. If not married, the benefit reduced for early retirement is paid for 60 months starting at early retirement age.

Excess Benefits for Water Authority Participants Only

Benefits in excess of the Internal Revenue Code 415 (m) limits are funded by the Water Authority as the benefits become payable but are not included in the valuation.

Normal Form of Payment

5 years certain and life annuity.

Optional Forms of Payment

- (1) 100%, 75%, or 50% joint and survivor annuity.
- (2) Life annuity with 120 months certain

## SCHEDULE F

### **SUMMARY OF THE MAIN BENEFIT AND CONTRIBUTION PROVISIONS (continued)**

#### Participant Contributions

Each participant contributes 5.5% of compensation beginning July 1, 2006. Contribution rate from August 8, 1998 through June 30, 2006 was 3.5% of compensation and for July 1, 1995 through August 7, 1998 was 2.0% of compensation. If a participant terminates employment before meeting the requirements for any of the above benefits, he is entitled to receive a return of his contributions with 5% interest.

Any participant or beneficiary may elect to receive a refund of contributions with interest in lieu of any other benefit payable under the Plan.

Participant contributions are “picked-up” by the County (i.e., taken out of pre-tax income).

#### Historical Provision Changes

**Effective 7/1/2012:** State Court Law Clerks are now eligible to participate in the Plan.

**Effective 7/1/2008:** Eliminated the 60 month certain and 114 month certain optional forms of payment for annuity starting dates after December 31, 2008.

**Effective 7/1/2007:** Adjusted accrued benefits of three people as of their normal retirement age.

**Effective 7/1/2006:** Added an annual 2.0% cost of living increase effective beginning July 1, 2009 for those who have received their 84<sup>th</sup> monthly benefit payment prior to July 1.

Increased participant contributions from 3.5% to 5.5%.

Granted a one-time 4.0% benefit increase to current participants, spouses and beneficiaries who were receiving benefits as of January 1, 2001.

Added a minimum monthly allowance of \$300 (after the above benefit increases) to any participant, spouse or beneficiary receiving benefits as of July 1, 2006.

Added an Excess Benefit Arrangement providing benefits in excess of IRS Code Sec. 415 for Water Authority employees funded entirely and separately by the Water Authority.

## SCHEDULE F

### **SUMMARY OF THE MAIN BENEFIT AND CONTRIBUTION PROVISIONS (continued)**

Historical Provision Changes  
(continued)

**Effective 7/1/2005:** Added the 60 month certain and 114 month certain optional forms of payment.

**Effective 7/1/2003:** The County and Water Authority contribution rate was increased to 12.9% from 12.4% and it is now applied to compensation under the plan rather than total compensation.

The definition of compensation excludes certain forms of premium pay.

The compensation limit has been increased to \$200,000.

The mortality table used to convert benefits to optional forms of payment has been changed to the table prescribed under Revenue Ruling 2001-62.

The Social Security Leveling Option has been removed as an optional form of payment.

The normal form of payment for persons receiving disability payments has been changed from a life annuity to a life annuity with 60 months guaranteed. Upon death, payments to beneficiaries will continue according to the election chosen for the disability payments.

The method for computing final average earnings was clarified.

The basis for actuarial equivalence for maximum benefit limit purposes has been changed.

**Effective 7/1/2001:** Normal Retirement Age for non-Safety Personnel was amended from age 65 with 5 years of credited service to age 60 with 7 years of credited service.

For Safety Personnel hired after 6/1/2001, 7 years of credited service is required for Normal Retirement.

Funding rate increased from 12.15% to 12.40%.

The pre-Retirement Death Benefit was changed from 50% of the Normal Fund Payment as if employment continued to normal retirement to the survivor portion of the 50% Joint and Survivor benefit (unreduced for early commencement). If the participant is single, the Normal Fund Payment is paid as a 5-year certain only benefit.

**SCHEDULE G**  
**Member Statistics**

June 30, 2014	
<b>Active members</b>	
Number	2,447
Average age	42.16
Average service	8.57
<b>Terminated vested members</b>	
Number	290
Average age	52.38
Average annual retirement benefits	\$11,849
<b>Retired members</b>	
Number	952
Average age	67.06
Average annual retirement benefits	\$ 28,588
<b>Disabled members</b>	
Number	63
Average age	61.95
Average annual retirement benefits	\$ 16,574
<b>Survivors and beneficiaries of members</b>	
Number	109
Average age	66.53
Average annual retirement benefits	\$ 14,734
<b>Total Number of Members</b>	<b>3,861</b>

**SCHEDULE G**

**AGE-SERVICE TABLE**

**(All Active Participants)**

Attained Age / Annual Pay	Completed Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up		
<b>Under 25</b>	<b>54</b>	<b>64</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>118</b>
Avg. Pay	33,637	35,824	0	0	0	0	0	0	0	0	0	34,823
<b>25 to 29</b>	<b>80</b>	<b>142</b>	<b>86</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>309</b>
Avg. Pay	34,542	37,222	41,536	*	0	0	0	0	0	0	0	37,760
<b>30 to 34</b>	<b>45</b>	<b>129</b>	<b>116</b>	<b>49</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>339</b>
Avg. Pay	38,845	38,502	41,526	44,821	0	0	0	0	0	0	0	40,496
<b>35 to 39</b>	<b>30</b>	<b>94</b>	<b>84</b>	<b>57</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>287</b>
Avg. Pay	40,728	40,199	44,105	48,616	55,493	0	0	0	0	0	0	44,242
<b>40 to 44</b>	<b>28</b>	<b>94</b>	<b>129</b>	<b>54</b>	<b>65</b>	<b>17</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>392</b>
Avg. Pay	36,285	39,136	43,425	46,141	59,481	*	*	0	0	0	0	46,018
<b>45 to 49</b>	<b>18</b>	<b>63</b>	<b>78</b>	<b>39</b>	<b>44</b>	<b>59</b>	<b>51</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>352</b>
Avg. Pay	*	40,706	41,294	46,104	56,006	64,797	67,568	0	0	0	0	50,891
<b>50 to 54</b>	<b>18</b>	<b>47</b>	<b>66</b>	<b>43</b>	<b>39</b>	<b>29</b>	<b>51</b>	<b>17</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>311</b>
Avg. Pay	*	35,253	40,608	40,367	54,965	68,906	69,387	*	*	0	0	50,312
<b>55 to 59</b>	<b>15</b>	<b>34</b>	<b>51</b>	<b>44</b>	<b>20</b>	<b>19</b>	<b>12</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>198</b>
Avg. Pay	*	42,708	35,947	45,059	54,051	*	*	*	*	0	0	44,939
<b>60 to 64</b>	<b>1</b>	<b>18</b>	<b>30</b>	<b>23</b>	<b>20</b>	<b>7</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>106</b>
Avg. Pay	*	*	40,445	36,775	51,457	*	*	0	0	0	0	42,675
<b>65 to 69</b>	<b>2</b>	<b>4</b>	<b>10</b>	<b>7</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>29</b>
Avg. Pay	*	*	*	*	*	0	*	0	0	0	*	36,985
<b>70 &amp; up</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>
Avg. Pay	0	0	*	*	*	0	0	0	0	0	0	*
<b>Total</b>	<b>291</b>	<b>689</b>	<b>652</b>	<b>318</b>	<b>217</b>	<b>131</b>	<b>127</b>	<b>19</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>2,447</b>
Avg. Annual Pay	36,161	38,389	41,448	44,542	55,996	63,088	67,132	*	*	*	*	44,374

\*pay information for cells with less than 20 employees have not been disclosed.