

Clayton County, Georgia Public Employee Retirement System

Information Required Under
Governmental Accounting Standards
Board Statement No. 67 and 68 as of
June 30, 2017

Based on Measurement Period Ending June 30, 2017

November 2017

November 17, 2017

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

Members of the Board:

This valuation provides information concerning the Clayton County, Georgia Public Employee Retirement System (the Fund) in accordance with the Governmental Accounting Standards Board Statement No. 67 (GASB 67) and No. 68 (GASB 68). The Board, Clayton County staff and Clayton County employers may use this report for the review of the operation of the plan. The report may also be used in preparation of audited financial statements of Clayton County employers. Use of this report for any other purpose may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies, or inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, you should ask Conduent to review any statement you wish to make on the results contained in this report. Conduent will not accept any liability for any such statement made without prior review.

In preparing the actuarial results, we have relied upon information provided by Clayton County's administrative staff regarding plan provisions, plan participants, plan assets, contribution rates and other matters used in the actuarial valuation. Although we did not audit the data, we reviewed the data for reasonableness and consistency with the prior year's information. The accuracy of the results presented herein is dependent on the accuracy of the data.

We certify that the information contained in this report has been prepared in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information fairly presents the actuarial position of the plan in accordance with the requirements of GASB 67 and GASB 68 as of June 30, 2017, based on a measurement date of June 30, 2017.

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. An analysis of the potential range of such future differences is beyond the scope of this valuation.

The information in this report was prepared using a measurement date of June 30, 2017 and the actuarial assumptions and methods used in the June 30, 2017 actuarial valuation of the plan, except as noted herein.

In our opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are reasonably related to the experience of the Fund and to reasonable long-term expectations. The actuarial assumptions and methods are summarized in Section IV.

This report was prepared under the supervision of Timothy G. Bowen, a Member of the American Academy of Actuaries who meets the Academy's qualification Standards to issue this Statement of Actuarial Opinion. This report has been prepared in accordance with all applicable Actuarial Standards of Practice and we are available to answer questions about it.

Conduent HR Services



Timothy G. Bowen, EA, MAAA, FCA
Principal, Retirement Consulting Actuary

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Section I – GASB 67 Information

Notes to the Financial Statements for the Year Ending June 30, 2017

A. Summary of Significant Accounting Policies

Methods used to value investments. Investments are reported at fair value.

B. Plan Description

Plan administration. This is a cost-sharing multiple employer defined benefit pension plan administered by a public employee retirement system funded by participants and the plan sponsors (Clayton County and the Clayton County Water Authority). Clayton County has a June 30 fiscal year end. Clayton County Water Authority has an April 30 fiscal year end.

Plan membership. At June 30, 2017, pension plan membership consisted of the following:

Membership Status	Count
Inactive plan members or beneficiaries currently receiving	1,289
Inactive plan members entitled to but not yet receiving	287
Active plan members	2,422
Total	3,998

Benefits provided. Please see Section V of the report for a summary of plan provisions.

Contributions. The actuarially determined contribution is the estimated amount necessary to finance the costs of benefits earned by plan members during the year, with an additional amount to finance any unfunded accrued liability over a 30 year period. The plan is funded by participant and plan sponsor contributions. For the year ended June 30, 2017, the revenue to the Fund totaled \$23,622,900, which includes \$6,508,620 of member contributions.

C. Investments

Rate of return. For the year ended June 30, 2017, the estimated annual money-weighted rate of return on the Fund's investments, net of pension plan investment expense, was 13.83%.

D. Receivables

None.

Section I – GASB 67 Information

E. Net Pension Liability

The components of the net pension liability at June 30, 2017, were as follows:

Components of Net Pension Liability	
Total pension liability	\$ 624,200,519
Plan fiduciary net position	<u>(413,138,790)</u>
Fund's net pension liability	\$ 211,061,729
Plan fiduciary net position as a percentage of the total pension liability	66.19%

F. Actuarial Assumptions

The total pension liability as of June 30, 2017 was determined based on June 30, 2017 data, plan provisions, and assumptions, as summarized below:

Actuarial Assumptions	
Investment rate of return	8.00%, net of pension plan investment expenses.
Salary increases	Fiscal 2017 – 2019 2%
	Fiscal 2020 – 2024 3%
	Fiscal 2025 and beyond 4%
Mortality Rates	<p>Annuitants: RP-2014 blue collar base rates with a load of 7.75% with fully generational mortality improvements based on the Conduent Modified MP-2017 projection scale</p> <p>Non-Annuitants: RP-2014 blue collar base rates with fully generation mortality improvements based on the Conduent Modified MP-2017 projection scale.</p> <p>Disabled Participants: RP-2014 disabled base rates with Conduent Modified MP-2017 projection scale.</p>
Rates of Retirement and Withdrawal	Rates based on age and as provided in Section IV
Other	See Section IV

Discount rate. The discount rate used to measure the total pension liability was 8.00%. The projection of cash flows used to determine the discount rate is based on a projection of the Clayton County's current membership based on actuarial assumptions as specified in Section IV. Contributions are assumed to be made in accordance with Clayton County ordinance with additional contributions being made, if necessary, to meet the minimum funding statutes under Georgia state law. Contributions expected to be made by future new members are included to the extent contributions under Clayton County's ordinance are expected to exceed the normal cost for new members. Based on those assumptions, the pension plan's fiduciary net position was projected to be sufficient to cover future benefit payments for current members. Therefore, the long-term expected rate of return of 8.0% on pension plan investments was applied to all projected benefit payments.

Section I – GASB 67 Information

The Retirement System administrator, in consultation with the Retirement System’s investment manager believes 8.00% to be a reasonable assumption for the long-term rate of return on plan assets based on the Retirement System’s investment policy and current asset allocation. Under GASB 67, the audited financial statements of the Retirement System will require documentation supporting the long-term rate of return, which is not contained in this report.

Changes of assumptions used to determine the net pension liability.

Mortality for Healthy Annuitants was updated from the RP2014 blue collar base rates rolled back to 2010, with a load of 7.75%, and projected with fully generational mortality improvements based on the Modified Buck MP2014 projections sale to the RP2014 Blue Collar morality table rolled back to 2010, with a load of 7.75%, and projected with fully generational mortality improvements based on the Conduent Modified MP2017 projection scale.

Mortality for Healthy Non-Annuitants was updated from the RP2014 blue collar base rates rolled back to 2010 and projected with fully generational mortality improvements based on the Modified Buck MP2014 projections sale to the RP2014 Blue Collar morality table rolled back to 2010 and projected with fully generational mortality improvements based on the Conduent Modified MP2017 projection scale.

Mortality for Disabled Participants was updated from the RP2014 disabled rates projected with mortality improvements based on the Modified Buck MP2014 projections sale to the RP2014 Disabled morality table rolled back to 2010 and projected with fully generational mortality improvements based on the Conduent Modified MP2017 projection scale.

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability, calculated using the discount rate of 8.00%, as well as what the Fund's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.00%) or 1-percentage-point higher (9.00%) than the current rate:

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Net Pension Liability	\$ 286,273,047	\$ 211,061,729	\$ 148,250,167

Section I – GASB 67 Information

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios

	FYE June 30, 2017	FYE June 30, 2016
Total pension liability		
Service cost	\$ 11,614,800	\$ 13,839,836
Interest	47,951,731	44,691,850
Difference between expected and actual experience	4,414,331	10,407,206
Changes in benefit terms	-	0
Changes in assumptions	(10,344,601)	(88,695,154)
Benefit payments	<u>(34,435,158)</u>	<u>(31,501,495)</u>
Net change in total pension liability	\$ 19,201,103	\$ (51,257,757)
Total pension liability-beginning	604,999,416	656,257,173
Total pension liability-ending (a)	\$ 624,200,519	\$ 604,999,416
Plan fiduciary net position		
Contributions-employer	\$ 17,114,280	\$ 16,723,493
Contributions-member	6,508,620	6,198,563
Net investment income	50,077,523	(4,474,061)
Benefit payments, including refunds of employee contributions	(34,435,158)	(31,501,495)
Administrative expense	(423,419)	(410,779)
Other	<u>0</u>	<u>0</u>
Net change in plan fiduciary net position	\$ 38,841,846	\$ (13,464,279)
Plan fiduciary net position-beginning	374,296,944	387,761,223
Plan fiduciary net position-ending (b)	413,138,790	374,296,944
Plan's net pension liability-ending (a)-(b)	\$ 211,061,729	\$ 230,702,472
Plan fiduciary net position as a % of the total pension liability	66.19%	61.87%
Covered-employee payroll	\$115,215,822	\$115,329,415
Net pension liability as a percentage of covered-employee payroll	183.19%	200.04%

Section I – GASB 67 Information

Schedule of Contributions

	FYE June 30, 2017	FYE June 30, 2016
Actuarially determined contribution	\$17,114,280	\$16,723,493
Contributions related to the actuarially determined contribution	<u>(17,114,280)</u>	<u>(16,723,493)</u>
Contribution deficiency (excess)	\$ 0	\$ 0

Notes to Schedule:

Valuation date. Actuarially determined contributions are calculated as of the beginning of the fiscal year in which contributions are made. The actuarially determined contribution for the fiscal year ending June 30, 2017 is based on the July 1, 2016 Actuarial Valuation.

Changes of assumptions used to determine the actuarially determined contribution:

For new members hired after January 1, 2016, assumed rates of retirement and termination were implemented to correspond with the new vesting and retirement eligibility requirements.

Methods and assumptions used to determine the actuarially determined contribution:

Actuarial cost method:	Projected Unit Credit Cost Method
Amortization method	Level percentage of payroll, open
Amortization period	30 years
Asset valuation method	Actuarial value as specified in the Actuarial Valuation Report for Clayton County, Georgia Public Employee Retirement System for the plan year July 1, 2016 - June 30, 2017
Administrative Expenses	0.325% of Payroll
Inflation (used for amortization of Unfunded Liability)	3.00% per annum
Salary increases	2% for 4 years, 3% for the next 5 years, and 4% thereafter for all employees.
Investment rate of return	8.00%, net of pension plan investment expenses.
Retirement and Termination Rates	As specified in the Actuarial Valuation Report for Clayton County, Georgia Public Employee Retirement System for the plan year July 1, 2016 - June 30, 2017
Mortality	<p>Healthy participants: The RP-2014 blue collar base rates increased by 7.75% to reflect actual plan experience, generationally projected using Conduent Modified MP 2014 for annuitants and the RP-2014 blue collar base rates, generationally projected using Conduent Modified MP2014 for non-annuitants.</p> <p>Disabled participants: The RP-2014 disabled mortality table generationally projected using Conduent Modified MP2014.</p>

Section I – GASB 67 Information

Other information

Please see the Actuarial Valuation Report for Clayton County, Georgia Public Employee Retirement System for the plan year July 1, 2016 - June 30, 2017

Schedule of Investment Returns

	Annual money-weighted rate of return, net of investment expenses
FYE June 30, 2017	13.83%
FYE June 30, 2016	-1.33%
FYE June 30, 2015	3.30%

Section I – GASB 67 Information

Table 1 – Projection of Fiduciary Net Position (000's omitted)

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Member Contributions	Employer Contributions	Benefit Payments	Administrative Expenses	Investment Earnings	Ending Fiduciary Net Position
2018	\$413,139	\$8,564	\$15,986	\$38,085	\$436	\$32,506	\$431,674
2019	431,674	7,962	16,174	39,675	445	33,903	449,593
2020	449,593	7,435	16,399	41,817	454	35,234	466,390
2021	466,390	7,020	16,673	43,768	463	36,490	482,343
2022	482,343	6,640	16,973	45,602	472	37,684	497,566
2023	497,566	6,306	17,301	47,458	482	38,822	512,055
2024	512,055	5,927	17,627	49,673	491	39,885	525,329
2025	525,329	5,592	17,981	52,001	501	40,848	537,249
2026	537,249	5,273	18,355	54,332	511	41,705	547,739
2027	547,739	4,963	18,747	56,188	521	42,466	557,206
2028	557,206	4,672	19,159	58,168	532	43,143	565,480
2029	565,480	4,369	19,584	60,119	542	43,724	572,496
2030	572,496	4,102	20,036	61,977	553	44,212	578,316
2031	578,316	3,845	20,507	63,961	564	44,598	582,741
2032	582,741	3,569	20,990	65,798	575	44,880	585,806
2033	585,806	3,307	21,494	67,333	587	45,064	587,751
2034	587,751	3,071	22,025	69,071	599	45,154	588,330
2035	588,330	2,821	22,569	70,352	611	45,151	587,908
2036	587,908	2,604	23,144	71,623	623	45,071	586,481
2037	586,481	2,393	23,740	72,606	635	44,922	584,295
2038	584,295	2,196	24,361	73,561	648	44,716	581,358
2039	581,358	1,994	25,000	74,424	661	44,454	577,721

Section I – GASB 67 Information

Table 1 – Projection of Fiduciary Net Position (000's omitted)

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Member Contributions	Employer Contributions	Benefit Payments	Administrative Expenses	Investment Earnings	Ending Fiduciary Net Position
2040	\$577,721	\$1,791	\$25,661	\$75,271	\$674	\$44,135	\$573,363
2041	573,363	1,583	26,342	76,072	688	43,761	568,290
2042	568,290	1,367	27,043	76,760	701	43,336	562,574
2043	562,574	1,162	27,770	77,067	716	42,874	556,598
2044	556,598	976	28,528	77,069	730	42,405	550,709
2045	550,709	822	29,322	76,901	744	41,952	545,159
2046	545,159	681	30,145	76,375	759	41,543	540,393
2047	540,393	554	30,999	75,590	774	41,206	536,789
2048	536,789	450	31,888	74,533	790	40,977	534,781
2049	534,781	362	32,810	73,266	806	40,883	534,765
2050	534,765	287	33,766	71,821	822	40,959	537,134
2051	537,134	230	34,756	70,088	838	41,237	542,431
2052	542,431	181	35,780	68,228	855	41,756	551,065
2053	551,065	141	36,838	66,214	872	42,549	563,506
2054	563,506	109	37,930	64,078	890	43,653	580,230
2055	580,230	83	39,058	61,906	907	45,100	601,659
2056	601,659	59	40,221	59,603	926	46,932	628,343
2057	628,343	42	41,422	57,233	944	49,186	660,815
2058	660,815	31	42,660	54,873	963	51,904	699,574
2059	699,574	19	43,935	52,480	982	55,128	745,194
2060	745,194	12	45,251	50,069	1,002	58,901	798,288
2061	798,288	8	46,607	47,680	1,022	63,272	859,473

Section I – GASB 67 Information

Table 1 – Projection of Fiduciary Net Position (000's omitted)

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Member Contributions	Employer Contributions	Benefit Payments	Administrative Expenses	Investment Earnings	Ending Fiduciary Net Position
2062	\$859,473	\$5	\$48,004	\$45,317	\$1,042	\$68,291	\$929,413
2063	929,413	3	49,443	42,992	1,063	74,009	1,008,812
2064	1,008,812	1	50,926	40,709	1,084	80,483	1,098,429
2065	1,098,429	1	52,454	38,475	1,106	87,773	1,199,075

Section I – GASB 67 Information

Table 2 – Actuarial Present Value of Projected Benefits (000's omitted)

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Benefit Payments	Benefit Payments		Present Value of Benefits		
			Funded Portion	Unfunded Portion	Funded Portion at 8.0%	Unfunded Portion at 3.13%	Using Single Discount Rate of 8.00%
2018	\$413,139	\$38,085	\$38,085	\$ -	\$36,647	\$ -	\$36,647
2019	431,674	39,675	39,675	-	35,349	-	35,349
2020	449,593	41,817	41,817	-	34,498	-	34,498
2021	466,390	43,768	43,768	-	33,433	-	33,433
2022	482,343	45,602	45,602	-	32,254	-	32,254
2023	497,566	47,458	47,458	-	31,080	-	31,080
2024	512,055	49,673	49,673	-	30,121	-	30,121
2025	525,329	52,001	52,001	-	29,197	-	29,197
2026	537,249	54,332	54,332	-	28,246	-	28,246
2027	547,739	56,188	56,188	-	27,047	-	27,047
2028	557,206	58,168	58,168	-	25,926	-	25,926
2029	565,480	60,119	60,119	-	24,811	-	24,811
2030	572,496	61,977	61,977	-	23,683	-	23,683
2031	578,316	63,961	63,961	-	22,631	-	22,631
2032	582,741	65,798	65,798	-	21,556	-	21,556
2033	585,806	67,333	67,333	-	20,425	-	20,425
2034	587,751	69,071	69,071	-	19,400	-	19,400
2035	588,330	70,352	70,352	-	18,296	-	18,296
2036	587,908	71,623	71,623	-	17,247	-	17,247
2037	586,481	72,606	72,606	-	16,189	-	16,189
2038	584,295	73,561	73,561	-	15,187	-	15,187
2039	581,358	74,424	74,424	-	14,227	-	14,227

Section I – GASB 67 Information

Table 2 – Actuarial Present Value of Projected Benefits (000's omitted)

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Benefit Payments	Benefit Payments		Present Value of Benefits		
			Funded Portion	Unfunded Portion	Funded Portion at 8.0%	Unfunded Portion at 3.13%	Using a Single Discount Rate of 8.00%
2040	\$577,721	\$75,271	\$75,271	\$ -	\$13,323	\$ -	\$13,323
2041	573,363	76,072	76,072	-	12,467	-	12,467
2042	568,290	76,760	76,760	-	11,648	-	11,648
2043	562,574	77,067	77,067	-	10,828	-	10,828
2044	556,598	77,069	77,069	-	10,027	-	10,027
2045	550,709	76,901	76,901	-	9,264	-	9,264
2046	545,159	76,375	76,375	-	8,519	-	8,519
2047	540,393	75,590	75,590	-	7,807	-	7,807
2048	536,789	74,533	74,533	-	7,127	-	7,127
2049	534,781	73,266	73,266	-	6,487	-	6,487
2050	534,765	71,821	71,821	-	5,888	-	5,888
2051	537,134	70,088	70,088	-	5,320	-	5,320
2052	542,431	68,228	68,228	-	4,796	-	4,796
2053	551,065	66,214	66,214	-	4,309	-	4,309
2054	563,506	64,078	64,078	-	3,861	-	3,861
2055	580,230	61,906	61,906	-	3,454	-	3,454
2056	601,659	59,603	59,603	-	3,079	-	3,079
2057	628,343	57,233	57,233	-	2,738	-	2,738
2058	660,815	54,873	54,873	-	2,431	-	2,431
2059	699,574	52,480	52,480	-	2,152	-	2,152
2060	745,194	50,069	50,069	-	1,901	-	1,901
2061	798,288	47,680	47,680	-	1,676	-	1,676

Section I – GASB 67 Information

Table 2 – Actuarial Present Value of Projected Benefits (000's omitted)

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Benefit Payments	Benefit Payments		Present Value of Benefits		
			Funded Portion	Unfunded Portion	Funded Portion at 8.0%	Unfunded Portion at 3.13%	Using a Single Discount Rate of 8.00%
2062	\$859,473	\$45,317	\$45,317	\$ -	\$1,475	\$ -	\$1,475
2063	929,413	42,992	42,992	-	1,296	-	1,296
2064	1,008,812	40,709	40,709	-	1,136	-	1,136
2065	1,098,429	38,475	38,475	-	994	-	994

Section II – GASB 68 Information

(See Section I for information common to GASB 67 and 68)

Pension Expense

The components of pension expense to be reported for the fiscal year ended June 30, 2017, based on a measurement date of June 30, 2017 is as follows:

	FYE June 30, 2017
Service cost	\$ 11,614,800
Interest cost	47,951,731
Expected return on assets	(29,494,328)
Current period effect of benefit changes	-
Current period difference between expected and actual experience	735,722
Current period effect of changes in assumptions	(1,724,100)
Current period difference between projected and actual investment earnings	(4,116,639)
Member contributions	(6,508,620)
Administrative expenses	423,419
Current period recognition of prior years' deferred outflow of resources	16,036,555
Current period recognition of prior years' deferred inflow of resources	<u>(14,782,526)</u>
Total pension expense	\$ 20,136,014

The employers' allocation of pension expense to be reported for the fiscal year ended June 30, 2017 is shown in Schedule B in the Appendix.

The pension expense reported for the fiscal year end is based on the June 30, 2016 and June 30, 2017 actuarial valuation.

The effect of difference between expected and actual experience, changes in assumptions and the change in employers' proportion are recognized over the average expected remaining service lives of active and inactive members as of June 30, 2016 (6.0 years).

The difference between projected and actual investment earnings is recognized over 5 years.

Section II – GASB 68 Information

(See Section I for information common to GASB 67 and 68)

Determination of Average Remaining Expected Service Lives

Remaining Service Lives as of June 30, 2016			
Group	Number	Service	Average
Active Members	2,470	23,343.54	
Inactive Members	1,522	0.00	
Total	3,992	23,343.54	6.0

Allocation of Net Pension Liability

The allocation of net pension liability between the County and the Water Authority as of June 30, 2016 and June 30, 2017 is shown in Schedule A of the Appendix.

Allocation of Deferred Outflows/Inflows of Resources

The allocation of deferred outflows/inflows of resources is shown in Schedule B in the Appendix. Schedule B also includes the FYE June 30, 2017 recognition of the change in proportion of the June 30, 2016 amounts in accordance with paragraph 54 of GASB 68.

Allocation of Future Years' Recognition of Deferred Outflows/Inflows

The employers' allocation of June 30, 2017 deferred outflows/inflows recognition for each of the next five fiscal years and thereafter is shown in Schedule C in the Appendix.

10-Year Contribution History

The 10-year history of employer contributions is shown in Schedule D in the Appendix. Amounts are only shown for 2014 - 2017.

Allocation Methodology

The allocation schedules in the Appendix show the proportionate share allocations for each employer. The allocations are based on a five year average of actual contributions made by the County and Water Authority as of the end of the fiscal year.

Section III – Plan Member Data

June 30, 2017

Active members	
Number	2,422
Average age	42.26 years
Average service	8.58 years
Terminated vested members (including deferred beneficiaries)	
Number	287
Average age	51.31 years
Average annual retirement benefits	\$ 12,455
Retired members	
Number	1,096
Average age	67.86 years
Average annual retirement benefits	\$ 29,772
Disabled members (including deferred disabled members)	
Number	66
Average age	62.42
Average annual retirement benefits	\$ 18,325
Survivors and beneficiaries of members	
Number	127
Average age	66.73 years
Average annual retirement benefits	\$ 14,441
Total Number of Members	3,998

Section IV – Actuarial Methods & Assumptions

Methods used to determine the Net Pension Liability

Valuation Date: June 30, 2017

Asset Valuation Method: Market Value

Valuation Funding Method: Entry Age Normal Actuarial Cost Method

Assumptions used to determine the Net Pension Liability

Discount Rate: 8.00% per annum, compounded annually, net of investment expenses.

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

Separations before Retirement – Hired Before 1/1/2016

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

Safety

Age	Annual Rate of Withdrawal					Annual Rate of Disability
	Years 0-1	Years 1-2	Years 2-3	Years 3-9	Years 10+	
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					Annual Rate of Disability
	Years 0-1	Years 1-2	Years 2-3	Years 3-9	Years 10+	
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

Section IV – Actuarial Methods & Assumptions

Separations before Retirement – Hired On or After 1/1/2016

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

Safety

Age	Annual Rate of Withdrawal					Annual Rate of Disability
	Years 0-1	Years 1-2	Years 2-3	Years 3-9	Years 10+	
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					Annual Rate of Disability
	Years 0-1	Years 1-2	Years 2-3	Years 3-9	Years 10+	
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

Section IV – Actuarial Methods & Assumptions

Rates of Retirement – Hired Before 1/1/2016

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

Age	Non-Safety		Safety	
	Early	Normal*	Early	Normal*
50	.040		.100	
51	.080		.100	
52	.120		.150	
53	.180		.250	
54	.250		.350	
55	.085	.100	.550	.250
56	.085	.100	.160	.100
57	.085	.100	.160	.100
58	.085	.100	.160	.150
59	.085	.100	.160	.200
60		.250		.550
61		.150		.650
62		.220		.650
63		.160		.650
64		.110		.650
65		.600		1.000
66		.400		
67		.400		
68		.400		
69		.400		
70		1.000		

* 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 2 years, 3.00% per annum for the following 5 years, and 4.00% per annum thereafter.

Mortality

Healthy Annuitants

RP2014 Blue Collar mortality table rolled back to 2010, with a load of 7.75% and projected with fully generational mortality improvements based on the Conduent Modified MP2017 projection scale.

Healthy Non-annuitants

RP2014 Blue Collar mortality table rolled back to 2010 and projected with fully generational mortality improvements based on the Conduent Modified MP2017 projection scale.

Section IV – Actuarial Methods & Assumptions

Disabled Participants

RP2014 Blue Collar mortality table rolled back to 2010 and projected with fully generational mortality improvements based on the Conduent Modified MP2017 projection scale.

Future Administrative Expenses

Expenses assumed to be 0.325% 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, 2017.

Section V – Summary of Plan 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

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.

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.

Effective July 1, 2012, State Court Law Clerks are now eligible to participate in the Plan.

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 – Hired Before 1/1/2016

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.

Eligibility – Hired On or After 1/1/2016

General Members

- Normal retirement at age 62 with 10 years of service

Public Safety Members

- Normal retirement at age 60 with 10 years of service or 55 with 25 years of service

Section V – Summary of Plan Provisions

Basic Monthly Benefit

2.5% of average monthly salary multiplied by years of credited service up to 32.

For members hired before January 1, 2016, average monthly compensation is based on the 36 highest consecutive months of service during the last 60 months of service. For members hired on or after January 1, 2016, average monthly compensation is based on the last 60 months of service

Cost of Living Adjustments

Annual 2.0% cost of living increase effective beginning July 1, 2009 for those who have received their 84th monthly benefit payment prior to July 1.

For new employees hired after 1/1/2016, COLA is discretionary and provided on an ad-hoc basis.

Early Retirement Benefit

Eligibility – Hired Before 1/1/2016

The earlier of age 50 and 25 years of credited service or age 55 and 15 years of credited service.

Eligibility – Hired On or After 1/1/2016

General Members

- Early retirement at age 60 with 15 years of service or age 55 with 25 years of service

Public Safety Members

- Early retirement at age 55 with 15 years of service or age 50 with 25 years of service

Benefit

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.

Disability Retirement

Eligibility

3 years of credited service for in line-of-duty; 7 years of credited service for other than in line-of-duty.

Benefit

30% of participants' monthly rate of compensation as of the date of disability.

Late Retirement Benefit

Eligibility

Retirement after eligibility for normal retirement.

Benefit

Normal retirement benefit based on average monthly salary and service at actual date of retirement.

Section V – Summary of Plan Provisions

Deferred Vested Benefit

Eligibility – Hired Before 1/1/2016

7 years of credited service.

Eligibility – Hired On or After 1/1/2016

10 years of credited service.

Benefit

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.

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

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

Section V – Summary of Plan Provisions

Participant Contributions

Each participant contributes 7.5% of compensation beginning July 1, 2015. Contribution rate from July 1, 2006 through June 30, 2014 was 5.5% of compensation. 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).

Appendix A – Net Pension Liability Allocations by Employer

	County	Water Authority	Plan Total
FYE Ending June 30, 2017:			
Total Pension Liability	\$524,515,696	\$99,684,823	\$624,200,519
Plan Fiduciary Net Position	\$347,160,525	\$65,978,265	\$413,138,790
Net Pension Liability	\$177,355,171	\$33,706,558	\$211,061,729
Portion of Net Pension Liability	84.03%	15.97%	100.00%
Plan Fiduciary Net Position as % of Total Pension Liability	66.19%	66.19%	66.19%
Covered Payroll	\$95,143,209	\$20,072,613	\$115,215,822
Net Pension Liability as % of Covered Payroll	186.41%	167.92%	183.19%
Employer Contributions	\$14,173,625	\$2,940,655	\$17,114,280
FYE Ending June 30, 2016:			
Total Pension Liability	\$511,164,007	\$93,835,409	\$604,999,416
Plan Fiduciary Net Position	\$316,243,488	\$58,053,456	\$374,296,944
Net Pension Liability	\$194,920,519	\$35,781,953	\$230,702,472
Portion of Net Pension Liability	84.49%	15.51%	100.00%
Plan Fiduciary Net Position as % of Total Pension Liability	61.87%	61.87%	61.87%
Covered Payroll	\$95,665,364	\$19,663,781	\$115,329,415
Net Pension Liability as % of Covered Payroll	203.75%	181.97%	200.04%
Employer Contributions	\$13,966,694	\$2,756,799	\$16,723,493

Appendix B – Pension Amounts Allocated by Employer

	County	Water Authority	Plan Total
Net Pension Liability as of June 30, 2017:			
	\$177,355,171	\$33,706,558	\$211,061,729
Deferred Outflows of Resources:			
Difference between expected and actual experience	\$10,313,875	\$1,960,164	\$12,274,039
Changes in assumptions	\$7,731,421	\$1,469,366	\$9,200,787
Difference between projected and actual investment earnings	\$23,858,125	\$4,534,265	\$28,392,390
Change in proportion	\$0	\$884,359	\$884,359
Contributions made subsequent to the measurement date ¹	\$0	TBD	TBD
Deferred Inflows of Resources:			
Difference between expected and actual experience	\$0	\$0	\$0
Changes in assumptions	(\$56,930,832)	(\$10,819,771)	(\$67,750,603)
Difference between projected and actual investment earnings	(\$13,836,847)	(\$2,629,709)	(\$16,466,556)
Change in proportion	(\$884,359)	\$0	(\$884,359)
Pension Expense Recognized:			
Proportionate share of current year's expense	\$16,920,293	\$3,215,721	\$20,136,014
Change in proportion	(\$176,872)	\$176,872	\$0
Total	\$16,743,421	\$3,392,593	\$20,136,014

¹ Contributions made subsequent to the measurement of June 30, 2017 to the end of the fiscal year of April 30, 2018 for Clayton County Water Authority will be reported as deferred outflows.

Appendix C – Employers’ Share of June 30, 2016 Deferred Outflows/(Inflows)

	County	Water Authority	Plan Total
FY2018¹	(\$3,235,985)	(\$615,003)	(\$3,850,988)
FY2019	(\$3,235,987)	(\$615,003)	(\$3,850,990)
FY2020	(\$6,307,779)	(\$1,198,801)	(\$7,506,580)
FY2021	(\$15,253,970)	(\$2,899,035)	(\$18,153,005)
FY2022	(\$830,536)	(\$157,844)	(\$988,380)
Thereafter	\$0	\$0	\$0

¹ Contributions made subsequent to the measurement of June 30, 2017 to the end of the fiscal year of April 30, 2018 for Clayton County Water Authority will be reported as deferred outflows.

Appendix D – Contribution History

	County	Water Authority	Plan Total
FY2017	\$14,173,625	\$2,940,655	\$17,114,280
FY2016	\$13,966,694	\$2,756,799	\$16,723,493
FY2015	\$13,805,519	\$2,700,229	\$16,505,748
FY2014	\$12,709,050	\$2,220,531	\$14,929,581