

Clayton County, Georgia Public Employee Retirement System

Information Required Under Governmental Accounting Standards Board Statement No. 67 and 68 as of June 30, 2016

Based on Measurement Period Ending June 30, 2016

November 2016





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November 30, 2016

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 Buck to review any statement you wish to make on the results contained in this report. Buck 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, 2016, based on a measurement date of June 30, 2016.

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, 2016 and the actuarial assumptions and methods used in the June 30, 2016 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.

Buck Consultants, LLC



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, 2016

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, 2016, pension plan membership consisted of the following:

Membership Status	Count
Inactive plan members or beneficiaries currently receiving	1,235
Inactive plan members entitled to but not yet receiving	287
Active plan members	2,470
Total	3,992

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, 2016, the revenue to the Fund totaled \$22,922,056, which includes \$6,198,563 of member contributions.

C. Investments

Rate of return. For the year ended June 30, 2016, the estimated annual money-weighted rate of return on the Fund's investments, net of pension plan investment expense, was -1.33%.

D. Receivables

None.

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E. Net Pension Liability

The components of the net pension liability at June 30, 2016, were as follows:

Components of Net Pension Liability	
Total pension liability	\$ 604,999,416
Plan fiduciary net position	<u>(374,296,944)</u>
Fund's net pension liability	\$ 230,702,472
Plan fiduciary net position as a percentage of the total pension liability	61.87%

F. Actuarial Assumptions

The total pension liability as of June 30, 2016 was determined based on June 30, 2016 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	Annuitants: RP-2014 blue collar base rates with a load of 7.75% with fully generational mortality improvements based on the Modified Buck MP-2014 projection scale Non-Annuitants: RP-2014 blue collar base rates with fully generation mortality improvements based on the Modified Buck MP-2014 projection scale. Disabled Participants: RP-2014 disabled base rates with Modified Buck MP-2014 projection scale.
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.

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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. The discount rate was changed to 8.00% as described above.

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	\$ 305,256,992	\$ 230,702,472	\$ 168,619,216

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Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios

	FYE June 30, 2016	FYE June 30, 2015
Total pension liability		
Service cost	\$ 13,839,836	\$ 13,875,847
Interest	44,691,850	42,916,497
Difference between expected and actual experience	10,407,206	3,314,582
Changes in benefit terms	0	0
Changes in assumptions	(88,695,154)	18,401,577
Benefit payments	<u>(31,501,495)</u>	<u>(32,497,705)</u>
Net change in total pension liability	\$ (51,257,757)	\$ 46,010,798
Total pension liability-beginning	656,257,173	610,246,375
Total pension liability-ending (a)	\$ 609,999,416	\$ 656,257,173
Plan fiduciary net position		
Contributions-employer	\$ 16,723,493	\$ 16,505,748
Contributions-member	6,198,563	6,255,252
Net investment income	(4,474,061)	12,175,272
Benefit payments, including refunds of employee contributions	(31,501,495)	(32,497,705)
Administrative expense	(410,779)	(422,012)
Other	<u>0</u>	<u>0</u>
Net change in plan fiduciary net position	\$ (13,464,279)	\$ 2,016,555
Plan fiduciary net position-beginning	387,761,223	385,744,668
Plan fiduciary net position-ending (b)	374,296,944	387,761,223
Plan's net pension liability-ending (a)-(b)	\$ 230,702,472	\$ 268,495,950
Plan fiduciary net position as a % of the total pension liability	61.87%	59.09%
Covered-employee payroll	\$115,329,415	\$119,600,775 ¹
Net pension liability as a percentage of covered-employee payroll	200.04%	224.49%

¹ Total earnings provided by Clayton County

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Schedule of Contributions

	FYE June 30, 2016	FYE June 30, 2015
Actuarially determined contribution	\$16,723,493	\$16,505,748
Contributions related to the actuarially determined contribution	<u>(16,723,493)</u>	<u>(16,505,748)</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, 2016 is based on the July 1, 2015 Actuarial Valuation.

Changes of assumptions used to determine the actuarially determined contribution:

Effective 7/1/2015 the mortality table for healthy participants was changed to the RP2014 blue collar base rates with a load of 7.75% with fully generational mortality improvements based on the Modified Buck MP 2014 projection scale. For non-annuitants, the mortality table was changed to RP2014 blue collar base rates with fully generation mortality improvements based on the Modified Buck MP 2014 projection scale. The mortality table for disabled participants was changed RP2014 disabled base rates with Modified Buck MP 2014 projection scale. The assumption for Future Administration expenses was changed to 0.325% of payroll.

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, 2015 - June 30, 2016
Administrative Expenses	0.325% of Payroll
Inflation (used for the 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, 2015 - June 30, 2016
Mortality	Healthy participants: The RP-2014 blue collar base rates increased by 7.75% to reflect actual plan experience, generationally projected using Modified Buck MP 2014 for annuitants and the RP-2014 blue collar base rates,

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Other information	<p>generationally projected using Buck Modified MP2014 for non-annuitants.</p> <p>Disabled participants: The RP-2014 disabled mortality table generationally projected using Buck Modified MP2014.</p> <p>Please see the Actuarial Valuation Report for Clayton County, Georgia Public Employee Retirement System for the plan year July 1, 2015 - June 30, 2016</p>
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Schedule of Investment Returns

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

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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
2017	\$374,297	\$8,564	\$15,965	\$36,073	\$423	\$29,478	\$391,808
2018	391,808	7,962	16,813	37,600	432	30,823	409,375
2019	409,375	7,435	17,540	39,310	440	32,164	426,764
2020	426,764	7,020	18,544	41,355	449	33,491	444,015
2021	444,015	6,640	19,281	43,311	458	34,803	460,970
2022	460,970	6,280	19,551	45,068	467	36,080	477,346
2023	477,346	5,928	19,705	46,993	476	37,299	492,808
2024	492,808	5,564	19,809	49,249	486	38,431	506,876
2025	506,876	5,245	19,893	51,654	496	39,444	519,309
2026	519,309	4,942	19,978	53,980	506	40,330	530,074
2027	530,074	4,651	20,079	55,884	516	41,101	539,505
2028	539,505	4,373	20,182	58,082	526	41,755	547,207
2029	547,207	4,110	20,293	60,065	537	42,278	553,285
2030	553,285	3,860	20,376	61,966	547	42,673	557,681
2031	557,681	3,614	20,832	64,053	558	42,942	560,458
2032	560,458	3,348	21,330	65,978	569	43,088	561,676
2033	561,676	3,094	21,849	67,637	581	43,122	561,523
2034	561,523	2,862	22,394	69,436	592	43,042	559,793
2035	559,793	2,627	22,957	70,836	604	42,851	556,788
2036	556,788	2,421	23,549	72,258	616	42,559	552,442
2037	552,442	2,210	24,159	73,408	629	42,171	546,946
2038	546,946	2,014	24,795	74,511	641	41,695	540,296

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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
2039	\$540,296	\$1,815	\$25,450	\$75,613	\$654	\$41,126	\$532,420
2040	532,420	1,607	26,125	76,694	667	40,459	523,250
2041	523,250	1,397	26,821	77,667	681	39,694	512,814
2042	512,814	1,180	27,537	78,525	694	38,833	501,145
2043	501,145	980	28,283	78,938	708	37,891	488,653
2044	488,653	815	29,066	79,099	722	36,897	475,609
2045	475,609	663	29,878	78,987	737	35,870	462,297
2046	462,297	533	30,723	78,411	751	34,842	449,233
2047	449,233	428	31,604	77,640	766	33,844	436,703
2048	436,703	337	32,516	76,566	782	32,901	425,109
2049	425,109	261	33,463	75,266	797	32,044	414,814
2050	414,814	201	34,443	73,760	813	31,301	406,186
2051	406,186	152	35,458	71,890	830	30,706	399,783
2052	399,783	116	36,508	69,843	846	30,298	396,016
2053	396,016	87	37,592	67,608	863	30,109	395,332
2054	395,332	64	38,711	65,310	880	30,171	398,088
2055	398,088	47	39,866	62,918	898	30,511	404,696
2056	404,696	33	41,057	60,446	916	31,164	415,588
2057	415,588	23	42,285	57,974	934	32,161	431,148
2058	431,148	15	43,550	55,504	953	33,532	451,789
2059	451,789	10	44,855	53,014	972	35,311	477,979
2060	477,979	6	46,199	50,488	991	37,536	510,241

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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
2061	\$510,241	\$4	\$47,584	\$47,943	\$1,011	\$40,248	\$549,122
2062	549,122	2	49,011	45,397	1,031	43,491	595,198
2063	595,198	1	50,481	42,848	1,052	47,309	649,089
2064	649,089	1	51,995	40,342	1,073	51,753	711,423
2065	711,423	0	53,555	37,895	1,095	56,869	782,859
2066	782,859	0	55,162	35,481	1,116	62,715	864,138
2067	864,138	0	56,817	33,115	1,139	69,345	956,046
2068	956,046	0	58,521	30,785	1,162	76,825	1,059,446
2069	1,059,446	-	60,277	28,492	1,185	85,225	1,175,270
2070	1,175,270	-	62,085	26,282	1,209	94,616	1,304,481
2071	1,304,481	-	63,948	24,138	1,233	105,076	1,448,133
2072	1,448,133	-	65,866	22,115	1,257	116,687	1,607,314
2073	1,607,314	-	67,842	20,225	1,282	129,536	1,783,185
2074	1,783,185	-	69,877	18,445	1,308	143,716	1,977,026
2075	1,977,026	-	71,974	16,766	1,334	159,332	2,190,232
2076	2,190,232	-	74,133	15,167	1,361	176,494	2,424,331
2077	2,424,331	-	76,357	13,682	1,388	195,325	2,680,942
2078	2,680,942	-	78,648	12,304	1,416	215,952	2,961,822
2079	2,961,822	-	81,007	11,014	1,444	238,520	3,268,890
2080	3,268,890	-	83,437	9,813	1,473	263,179	3,604,220
2081	3,604,220	-	85,940	8,695	1,503	290,097	3,970,060
2082	3,970,060	-	88,519	7,653	1,533	319,454	4,368,847

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
2083	\$4,368,847	\$-	\$91,174	\$6,685	\$1,563	\$351,446	\$4,803,218
2084	4,803,218	-	93,909	5,791	1,595	386,281	5,276,023
2085	5,276,023	-	96,727	4,973	1,627	424,190	5,790,340
2086	5,790,340	-	99,628	4,231	1,659	465,419	6,349,497
2087	6,349,497	-	102,617	3,564	1,692	510,232	6,957,090
2088	6,957,090	-	105,696	2,971	1,726	558,918	7,617,007
2089	7,617,007	-	108,867	2,450	1,761	611,790	8,333,453
2090	8,333,453	-	112,133	1,997	1,796	669,181	9,110,974
2091	9,110,974	-	115,497	1,609	1,832	731,458	9,954,488
2092	9,954,488	-	118,961	1,280	1,868	799,014	10,869,315
2093	10,869,315	-	122,530	1,005	1,906	872,273	11,861,208
2094	11,861,208	-	126,206	779	1,944	951,697	12,936,388
2095	12,936,388	-	129,992	596	1,983	1,037,784	14,101,586
2096	14,101,586	-	133,892	450	2,022	1,131,073	15,364,079
2097	15,364,079	-	137,909	335	2,063	1,232,146	16,731,736
2098	16,731,736	-	142,046	247	2,104	1,341,633	18,213,064
2099	18,213,064	-	146,308	179	2,146	1,460,214	19,817,261
2100	19,817,261	-	150,697	128	2,189	1,588,625	21,554,266
2101	21,554,266	-	155,218	90	2,233	1,727,663	23,434,823
2102	23,434,823	-	159,874	63	2,278	1,878,186	25,470,543
2103	25,470,543	-	164,671	43	2,323	2,041,124	27,673,971
2104	27,673,971	-	169,611	29	2,370	2,217,480	30,058,663

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

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Benefit Payments			Present Value of Benefits		
		Benefit Payments	Funded Portion	Unfunded Portion	Funded Portion at 8.0%	Unfunded Portion at 2.71%	Using a Single Discount Rate of 8.00%
2017	\$374,297	\$36,073	\$36,073	\$-	\$34,711	\$-	\$34,711
2018	391,808	37,600	37,600	-	33,501	-	33,501
2019	409,375	39,310	39,310	-	32,430	-	32,430
2020	426,764	41,355	41,355	-	31,590	-	31,590
2021	444,015	43,311	43,311	-	30,633	-	30,633
2022	460,970	45,068	45,068	-	29,515	-	29,515
2023	477,346	46,993	46,993	-	28,496	-	28,496
2024	492,808	49,249	49,249	-	27,652	-	27,652
2025	506,876	51,654	51,654	-	26,854	-	26,854
2026	519,309	53,980	53,980	-	25,984	-	25,984
2027	530,074	55,884	55,884	-	24,908	-	24,908
2028	539,505	58,082	58,082	-	23,970	-	23,970
2029	547,207	60,065	60,065	-	22,952	-	22,952
2030	553,285	61,966	61,966	-	21,925	-	21,925
2031	557,681	64,053	64,053	-	20,984	-	20,984
2032	560,458	65,978	65,978	-	20,014	-	20,014
2033	561,676	67,637	67,637	-	18,997	-	18,997
2034	561,523	69,436	69,436	-	18,058	-	18,058
2035	559,793	70,836	70,836	-	17,057	-	17,057
2036	556,788	72,258	72,258	-	16,111	-	16,111
2037	552,442	73,408	73,408	-	15,155	-	15,155
2038	546,946	74,511	74,511	-	14,243	-	14,243

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

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Benefit Payments			Present Value of Benefits		
		Benefit Payments	Funded Portion	Unfunded Portion	Funded Portion at 8.0%	Unfunded Portion at 2.71%	Using a Single Discount Rate of 8.00%
2039	\$540,296	\$75,613	\$75,613	\$-	\$13,383	\$-	\$13,383
2040	532,420	76,694	76,694	-	12,569	-	12,569
2041	523,250	77,667	77,667	-	11,786	-	11,786
2042	512,814	78,525	78,525	-	11,033	-	11,033
2043	501,145	78,938	78,938	-	10,270	-	10,270
2044	488,653	79,099	79,099	-	9,528	-	9,528
2045	475,609	78,987	78,987	-	8,810	-	8,810
2046	462,297	78,411	78,411	-	8,098	-	8,098
2047	449,233	77,640	77,640	-	7,424	-	7,424
2048	436,703	76,566	76,566	-	6,779	-	6,779
2049	425,109	75,266	75,266	-	6,171	-	6,171
2050	414,814	73,760	73,760	-	5,599	-	5,599
2051	406,186	71,890	71,890	-	5,053	-	5,053
2052	399,783	69,843	69,843	-	4,545	-	4,545
2053	396,016	67,608	67,608	-	4,074	-	4,074
2054	395,332	65,310	65,310	-	3,644	-	3,644
2055	398,088	62,918	62,918	-	3,251	-	3,251
2056	404,696	60,446	60,446	-	2,892	-	2,892
2057	415,588	57,974	57,974	-	2,568	-	2,568
2058	431,148	55,504	55,504	-	2,276	-	2,276
2059	451,789	53,014	53,014	-	2,013	-	2,013
2060	477,979	50,488	50,488	-	1,775	-	1,775

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

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Benefit Payments			Present Value of Benefits		
		Benefit Payments	Funded Portion	Unfunded Portion	Funded Portion at 8.0%	Unfunded Portion at 2.71%	Using a Single Discount Rate of 8.00%
2061	\$510,241	\$47,943	\$47,943	\$-	\$1,561	\$-	\$1,561
2062	549,122	45,397	45,397	-	1,369	-	1,369
2063	595,198	42,848	42,848	-	1,196	-	1,196
2064	649,089	40,342	40,342	-	1,043	-	1,043
2065	711,423	37,895	37,895	-	907	-	907
2066	782,859	35,481	35,481	-	786	-	786
2067	864,138	33,115	33,115	-	679	-	679
2068	956,046	30,785	30,785	-	585	-	585
2069	1,059,446	28,492	28,492	-	501	-	501
2070	1,175,270	26,282	26,282	-	428	-	428
2071	1,304,481	24,138	24,138	-	364	-	364
2072	1,448,133	22,115	22,115	-	309	-	309
2073	1,607,314	20,225	20,225	-	261	-	261
2074	1,783,185	18,445	18,445	-	221	-	221
2075	1,977,026	16,766	16,766	-	186	-	186
2076	2,190,232	15,167	15,167	-	156	-	156
2077	2,424,331	13,682	13,682	-	130	-	130
2078	2,680,942	12,304	12,304	-	108	-	108
2079	2,961,822	11,014	11,014	-	90	-	90
2080	3,268,890	9,813	9,813	-	74	-	74
2081	3,604,220	8,695	8,695	-	61	-	61
2082	3,970,060	7,653	7,653	-	49	-	49

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			Present Value of Benefits		
		Benefit Payments	Funded Portion	Unfunded Portion	Funded Portion at 8.0%	Unfunded Portion at 2.71%	Using a Single Discount Rate of 8.00%
2083	\$4,368,847	\$6,685	\$6,685	\$-	\$40	\$-	\$40
2084	4,803,218	5,791	5,791	-	32	-	32
2085	5,276,023	4,973	4,973	-	26	-	26
2086	5,790,340	4,231	4,231	-	20	-	20
2087	6,349,497	3,564	3,564	-	16	-	16
2088	6,957,090	2,971	2,971	-	12	-	12
2089	7,617,007	2,450	2,450	-	9	-	9
2090	8,333,453	1,997	1,997	-	7	-	7
2091	9,110,974	1,609	1,609	-	5	-	5
2092	9,954,488	1,280	1,280	-	4	-	4
2093	10,869,315	1,005	1,005	-	3	-	3
2094	11,861,208	779	779	-	2	-	2
2095	12,936,388	596	596	-	1	-	1
2096	14,101,586	450	450	-	1	-	1
2097	15,364,079	335	335	-	1	-	1
2098	16,731,736	247	247	-	-	-	-
2099	18,213,064	179	179	-	-	-	-
2100	19,817,261	128	128	-	-	-	-
2101	21,554,266	90	90	-	-	-	-
2102	23,434,823	63	63	-	-	-	-
2103	25,470,543	43	43	-	-	-	-
2104	27,673,971	29	29	-	-	-	-

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, 2016, based on a measurement date of June 30, 2016 is as follows:

	FYE June 30, 2016
Service cost	\$ 13,839,836
Interest cost	44,691,850
Expected return on assets	(30,661,289)
Current period effect of benefit changes	0
Current period difference between expected and actual experience	1,734,534
Current period effect of changes in assumptions	(14,782,526)
Current period difference between projected and actual investment earnings	7,027,070
Member contributions	(6,198,563)
Administrative expenses	410,779
Current period recognition of prior years' deferred outflow of resources	7,274,951
Current period recognition of prior years' deferred inflow of resources	<u>0</u>
Total pension expense	\$ 23,336,642

The employers' allocation of pension expense to be reported for the fiscal year ended June 30, 2016 is shown in Schedule B in the Appendix.

The pension expense reported for the fiscal year end is based on the June 30, 2015 and June 30, 2016 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, 2015 (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, 2015			
Group	Number	Service	Average
Active Members	2,449	23,084.76	
Inactive Members	1,455	0.00	
Total	3,904	23,084.76	6.0

Allocation of Net Pension Liability

The allocation of net pension liability between the County and the Water Authority as of June 30, 2015 and June 30, 2016 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, 2016 recognition of the change in proportion of the June 30, 2015 amounts in accordance with paragraph 54 of GASB 68.

Allocation of Future Years' Recognition of Deferred Outflows/Inflows

The employers' allocation of June 30, 2016 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 - 2016.

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, 2016

Active members	
Number	2,470
Average age	42.02 years
Average service	8.47 years
Terminated vested members (including deferred beneficiaries)	
Number	287
Average age	51.90 years
Average annual retirement benefits	\$ 11,772
Retired members	
Number	1,041
Average age	67.60 years
Average annual retirement benefits	\$ 29,351
Disabled members (including deferred disabled members)	
Number	69
Average age	61.62
Average annual retirement benefits	\$ 18,172
Survivors and beneficiaries of members	
Number	125
Average age	66.52 years
Average annual retirement benefits	\$ 16,129
Total Number of Members	3,992

Section IV – Actuarial Methods & Assumptions

Methods used to determine the Net Pension Liability

VALUATION DATE: June 30, 2016

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					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

Section IV – Actuarial Methods & Assumptions

Non-Safety

Age	Annual Rate of					
	Withdrawal					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

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					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

Non-Safety

Age	Annual Rate of					
	Withdrawal					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

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**	
	Annual Rate of Retirement			
	Early	Normal	Early	Normal
50			.10	
51			.10	
52			.15	
53			.25	
54			.35	
55	.40		.16	.25
56	.10		.16	.10
57	.09		.16	.10
58	.08		.16	.15
59	.07		.16	.20
60	.06			.55
61	.05			.65
62		.25		.65
63		.16		.65
64		.11		.65
65		.60		1.00
66		.40		
67		.40		
68		.40		
69		.40		
70		1.00		

Section IV – Actuarial Methods & Assumptions

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

** An additional 30% are assumed to retire in the year when first eligible for normal retirement and 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 3 years, 3.00% per annum for the following 5 years, and 4.00% per annum thereafter.

Mortality

Healthy Annuitants

RP2014 blue collar base rates with a load of 7.75% with fully generational mortality improvements based on the Modified Buck MP2014 projection scale.

Healthy Non-annuitants

RP2014 blue collar base rates with fully generation mortality improvements based on the Modified Buck MP2014 projection scale.

Disabled Participants

RP2014 disabled base rates with Modified Buck MP 2014 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, 2016.

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, 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 ¹	\$95,665,3634	\$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
FYE Ending June 30, 2015:			
Total Pension Liability	\$556,177,954	\$100,079,219	\$656,257,173
Plan Fiduciary Net Position	\$328,627,636	\$59,133,587	\$387,761,223
Net Pension Liability	\$227,550,318	\$40,945,632	\$268,495,950
Portion of Net Pension Liability	84.75%	15.25%	100.00%
Plan Fiduciary Net Position as % of Total Pension Liability	59.09%	59.09%	59.09%
Covered Payroll ²	\$100,574,193	\$19,026,582	\$119,600,775
Net Pension Liability as % of Covered Payroll	226.25%	215.20%	224.49%
Employer Contributions	\$13,805,519	\$2,700,229	\$16,505,748

¹ Pensionable earnings

² Total earnings provided by Clayton County

Appendix B – Pension Amounts Allocated by Employer

	County	Water Authority	Plan Total
Net Pension Liability as of June 30, 2016:			
	\$194,920,519	\$35,781,953	\$230,702,472
Deferred Outflows of Resources:			
Difference between expected and actual experience	\$9,194,535	\$1,687,859	\$10,882,394
Changes in assumptions	\$10,364,994	\$1,902,723	\$12,267,717
Difference between projected and actual investment earnings	\$33,014,511	\$6,060,540	\$39,075,051
Change in proportion	\$0	\$581,742	\$581,742
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	\$(62,448,749)	\$(11,463,849)	\$(73,912,628)
Difference between projected and actual investment earnings	\$0	\$0	\$0
Change in proportion	\$(581,742)	\$0	\$(581,742)
Pension Expense Recognized:			
Proportionate share of current year's expense	\$19,717,129	\$3,619,513	\$23,336,642
Change in proportion	\$(116,348)	\$116,348	\$0
Total	\$19,600,781	\$3,735,861	\$23,336,642

¹ Contributions made subsequent to the measurement of June 30, 2016 to the end of the fiscal year of April 30, 2017 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
FY2017¹	\$1,059,529	TBD	TBD
FY2018	\$1,059,529	\$194,500	\$1,254,029
FY2019	\$1,059,527	\$194,500	\$1,254,027
FY2020	\$(2,029,081)	\$(372,482)	\$(2,401,563)
FY2021	\$(11,024,245)	\$(2,023,743)	\$(13,047,988)
Thereafter	\$0	\$0	\$0

¹ Contributions made subsequent to the measurement of June 30, 2016 to the end of the fiscal year of April 30, 2017 for Clayton County Water Authority will be reported as deferred outflows.

Appendix D – Contribution History

	County	Water Authority	Plan Total
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