



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve



GASB STATEMENT NO. 67 REPORT

FOR THE

CONSOLIDATED RETIREMENT PLAN FOR THE

EMPLOYEES OF THE CITY OF MARIETTA

PREPARED AS OF JUNE 30, 2017





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

October 24, 2017

Board of Trustees
Consolidated Retirement Plan for the
Employees of the City of Marietta, Georgia
205 Lawrence Street
Marietta, GA 30060

Dear Members of the Board:

Presented in this report is information to assist the Consolidated Retirement Plan for the Employees of the City of Marietta (Fund), in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statements No. 67. This report has been prepared as of June 30, 2017 (the Measurement Date) to assist the Plan in better understanding the requirements of GASB 67 and to identify the information to be provided by the Plan's actuary, Cavanaugh Macdonald Consulting (CMC).

The annual actuarial valuation used as a basis for much of the information presented in this report was performed as of June 30, 2017. The valuation was based upon data, furnished by the Human Resource Office, concerning active, inactive and retired members along with pertinent financial information.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the Plan, and on actuarial assumptions that are, individually and in the aggregate, internally consistent and reasonably based on the actual experience of the Plan. In addition, the calculations were completed in compliance with the laws governing the Plan and, in our opinion, meet the requirements of GASB 67. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144

Phone (678) 388-1700 • Fax (678) 388-1730

www.CavMacConsulting.com

Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE



Board of Trustees

October 24, 2017

Page 2

These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 67 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Edward J. Koebel'.

Edward J. Koebel, EA, FCA, MAAA
Principal and Consulting Actuary

A handwritten signature in blue ink that reads 'John J. Garrett'.

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

EJK/JJG



TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page No.</u>
I	Introduction	1
II	Financial Statement Notes	3
III	Required Supplementary Information	8
 <u>Schedule</u>		
A	Required Supplementary Information Tables	9
B	Summary of Benefit Provisions Valued	13
C	Statement of Actuarial Assumptions and Methods	17



**REPORT OF THE ANNUAL GASB STATEMENT NO. 67
REQUIRED INFORMATION FOR THE
CONSOLIDATED RETIREMENT PLAN FOR THE
EMPLOYEES' OF THE CITY OF MARIETTA**

PREPARED AS OF JUNE 30, 2017

SECTION I – INTRODUCTION

The Governmental Accounting Standards Board issued Statement No. 67 (GASB 67), “*Financial Reporting for Pension Plans*”, in June 2012. This report has been prepared as of June 30, 2017. Much of the material provided in this report is based on the data, assumptions and results of the annual actuarial valuation of the Plan as of June 30, 2017.

GASB 67 requires a measurement of the Total Pension Liability (TPL) utilizing the Entry Age Normal actuarial funding method. [If the valuation date at which the TPL is determined is before the measurement date, as is the case here, the TPL must be rolled forward to the measurement date.] The Net Pension Liability (NPL) is then set equal to the TPL minus the Plan’s Fiduciary Net Position (FNP) (basically the market values of assets) as of the measurement date. The benefit provisions recognized in the calculation of the TPL are summarized in Schedule B. The development of the roll-forward of the TPL is shown in the table on page 7.

Among the assumptions needed for the liability calculation is a Single Equivalent Interest Rate (SEIR), as described by GASB 67. To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefits payable under the plan’s provision applicable to the members and beneficiaries of the Plan on the Measurement Date. Future contributions were projected to be made in accordance with the Funding Policy adopted by the Board. The Funding Policy is shown in Schedule D of this report. If the FNP is not projected to be depleted at any point in the future, the long term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, at a future measurement date, the FNP is projected to be depleted, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate. The rate used, if necessary, for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index published monthly by the Board of Governors of the Federal Reserve System. We have determined that a discount rate of 7.50 percent meets the requirements of GASB 67.



The sections that follow provide the results of all the necessary calculations, presented in the order laid out in GASB 67 for note disclosure and Required Supplementary Information (RSI).



SECTION II – FINANCIAL STATEMENT NOTES

The actuarial related information presented herein will follow the order presented in GASB 67. There are other non-actuarial items required which are not included in this report. Paragraph numbers are provided for ease of reference.

Paragraph 30.a. (4): The data required regarding the membership of the Consolidated Retirement Plan for the Employees of the City of Marietta were furnished by the Plan. The following table summarizes the membership of the Plan as of June 30, 2017, the Valuation Date.

Membership

	Number
Retired participants and beneficiaries currently receiving benefits	574
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	308
Active participants	696
Total	1,578



Paragraph 31.a. (1)-(4): As stated earlier, the NPL is equal to the TPL minus the FNP. That result as of June 30, 2017 is presented in the following table (\$ in thousands).

	Fiscal Year Ending June 30, 2017
Total Pension Liability	\$ 176,133
Fiduciary Net Position	<u>102,909</u>
Net Pension Liability	\$ 73,224
Ratio of Fiduciary Net Position to Total Pension Liability	58.43%

Paragraph 31.b.: This paragraph requires information regarding the actuarial assumptions used to measure the TPL. The set of actuarial assumptions utilized in developing the TPL are outlined in Schedule C. The total pension liability was determined based on an actuarial valuation as of June 30, 2017, using the following actuarial assumptions, applied to all periods included in the measurement date of June 30, 2017:

Inflation	3.50 percent
Salary increases	3.50 – 12.62 percent
Investment rate of return	7.50 percent, net of pension plan investment expense, and including inflation
Mortality	Pre-retirement and post-retirement mortality rates were based on the RP 2000 Combined Healthy Retiree Mortality Table set forward four years. Post-disability mortality rates were based on the RP 2000 Disabled Retiree Mortality Table multiplied by 75%.

The actuarial assumptions used in the June 30, 2017 valuation were based on the results of the last actuarial experience study for the period July 1, 2004 to July 1, 2009.



Paragraph 31.b.(1)

- (a) Discount rate.** The discount rate used to measure the total pension liability was 7.5 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate of 4% and that Employer contributions will continue to be made based on the actuarially determined contributions as determined by the actuary. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.
- (b) Projected cash flows:** The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate of 4% and that Employer contributions will continue to be made based on the actuarially determined contributions as determined by the actuary.
- (c) Long term rate of return:** The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.
- (d) Municipal bond rate:** the discount rate determination does not use a municipal bond rate.
- (e) Periods of projected benefit payments:** Projected future benefit payments for all current plan members were projected through 2112.



(g): Sensitivity analysis: This paragraph requires disclosure of the sensitivity of the NPL to changes in the discount rate. The following presents the NPL of the Plan, calculated using the discount rate of 7.5 percent, as well as what the Plan’s NPL calculated using a discount rate that is 1-percentage-point lower (6.5 percent) or 1-percentage-point higher (8.5 percent) than the current rate (\$ in thousands):

	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
Plan’s Net Pension Liability	\$91,292	\$73,224	\$57,759



Paragraph 31.c.: The date of the actuarial valuation upon which the TPL is based is June 30, 2017. An expected TPL is determined as of June 30, 2017 using standard roll forward techniques. The roll forward calculation adds the annual normal cost (also called the service cost), subtracts the actual benefit payments and refunds for the plan year and then applies the expected investment rate of return for the year. The difference between the expected TPL and the actual TPL as of June 30, 2017 is reflected as an experience gain or loss for the year. This procedure is shown in the following table:

TPL Roll-Forward (\$ in thousands)	
(a) TPL as of June 30, 2016 (from roll forward)	\$165,904
(b) Entry Age Normal Cost for the period June 30, 2016 – June 30, 2017	2,782
(c) Actual Benefit Payments and Refunds for the period June 30, 2016 – June 30, 2017	10,870
(d) Expected TPL as of June 30, 2017 = [(a) x (1.075)] + (b) – [(c) x 1.0375]	\$169,851
(e) Actual TPL as of June 30, 2017 (from valuation)	\$176,133
(f) Difference between Expected and Actual Experience (Gain)/Loss	\$6,282



SECTION III – REQUIRED SUPPLEMENTARY INFORMATION

There are several tables of Required Supplementary Information (RSI) that need to be included in the Plan’s financial statements:

Paragraphs 32.a.-c.: The required tables of schedules are provided in Schedule B.

Paragraph 34: The following information should be noted regarding the RSI:

Changes of benefit terms: The following changes to the plan provisions were made as identified:

None

Changes in actuarial assumptions and methods: The following changes to the actuarial assumptions were made as identified:

None

Method and assumptions used in calculations of actuarially determined contributions.

The actuarially determined contribution rates in the schedule of Employer contributions are calculated as of the June 30th prior to the fiscal year end in which contributions are reported. The following actuarial methods and assumptions were used to determine the most recent actuarial contribution rates reported in that schedule:

Actuarial cost method	Entry age normal
Amortization method	Level Percent of Pay, closed
Remaining amortization period	27 years
Asset valuation method	10-year smoothed market
Inflation	3.5 percent
Salary increase	3.5 – 12.62 percent
Investment rate of return	7.5 percent, net of pension plan investment expense, and including inflation



SCHEDULE A

REQUIRED SUPPLEMENTARY INFORMATION TABLES

(EXHIBIT A AND B TO FOLLOW)



Exhibit A

**GASB 67 Paragraph 32.a.
SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY
(\$ in thousands)**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total pension liability										
Service Cost	\$2,652	\$2,851	\$2,696	\$2,782						
Interest	11,415	11,766	11,747	12,035						
Benefit changes	0	0	0	0						
Difference between expected and actual experience	0	(4,887)	0	6,282						
Changes of assumptions	0	0	0	0						
Benefit payments	(9,118)	(9,655)	(10,321)	(10,870)						
Refunds of contributions	0	0	0	0						
Net change in total pension liability	\$4,949	\$75	\$4,122	\$10,229						
Total pension liability - beginning	\$156,758	\$161,707	\$161,782	\$165,904						
Total pension liability - ending (a)	\$161,707	\$161,782	\$165,904	\$176,133						
Plan net position										
Contributions - employer	\$5,669	\$5,731	\$5,583	\$6,858						
Contributions – member	1,260	1,280	1,318	1,343						
Net investment income	14,663	2,746	(2,395)	14,633						
Benefit payments	(9,118)	(9,655)	(10,321)	(10,870)						
Administrative expense	(144)	(111)	(162)	(393)						
Refunds of contributions	0	0	0	0						
Other	0	0	0	0						
Net change in plan net position	\$12,330	\$(9)	\$(5,977)	\$11,571						
Plan net position – beginning	\$84,994	\$97,324	\$97,315	\$91,338						
Plan net position - ending (b)	\$97,324	\$97,315	\$91,338	\$102,909						
Net pension liability - ending (a) - (b)	\$64,383	\$64,467	\$74,566	\$73,224						



Exhibit A (Continued)

**GASB 67 Paragraph 32.b.
SCHEDULE OF THE NET PENSION LIABILITY
(\$ in thousands)**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total pension liability	\$161,707	\$161,782	\$165,904	\$176,133						
Plan net position	<u>97,324</u>	<u>97,315</u>	<u>91,338</u>	<u>102,909</u>						
Net pension liability	\$64,383	\$64,467	\$74,566	\$73,224						
Ratio of plan net position to total pension liability	60.19%	60.15%	55.05%	58.43%						
Covered payroll	\$32,997	\$32,481	\$32,996	\$34,093						
Net pension liability as a percentage of covered payroll	195.12%	198.48%	225.98%	214.78%						



Exhibit B

**GASB 67 Paragraph 32.c.
SCHEDULE OF EMPLOYER CONTRIBUTIONS
(\$ in thousands)**

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially determined employer contribution	\$5,398	\$5,583	\$5,394	\$5,154	\$5,560	\$5,472	\$5,364	\$4,749	\$6,209	\$5,842
Actual employer contributions	<u>6,858</u>	<u>5,583</u>	<u>5,731</u>	<u>5,669</u>	<u>5,585</u>	<u>5,447</u>	<u>5,269</u>	<u>5,243</u>	<u>5,010</u>	<u>4,624</u>
Annual contribution deficiency (excess)	<u>\$(1,460)</u>	<u>\$0</u>	<u>\$(337)</u>	<u>\$(515)</u>	<u>\$(25)</u>	<u>\$25</u>	<u>\$95</u>	<u>\$(494)</u>	<u>\$1,199</u>	<u>\$1,218</u>
Covered payroll	\$34,093	\$32,996	\$32,481	\$32,997	\$31,882	\$32,890	\$33,654	\$33,281	\$33,079	\$31,580
Actual contributions as a percentage of covered payroll	20.12%	16.92%	17.64%	17.18%	17.52%	16.56%	15.66%	15.75%	15.15%	14.64%

Notes to Schedule:

For 2017 Contributions

Valuation Date: June 30, 2015

Methods and Assumptions used to determine contribution rates:

Actuarial cost method	Entry age
Amortization method	Level percent of pay, closed
Remaining amortization period	27 years
Asset valuation method	10-year smoothed market
Inflation	3.5 percent
Salary increases	3.5 – 12.62 percent
Investment rate of return	7.5 percent, net of pension plan investment expense, and including inflation



SCHEDULE B

SUMMARY OF MAIN PLAN PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES

Member	An employee of the City of Marietta, hired after March 1, 1987.
Membership Service Credit	Full-time service for all periods of employment with the City of Marietta subject to the break in service rules of the plan.
Final Average Earnings	A member's average monthly compensation for the highest 3 consecutive years if hired before January 1, 2009, and highest 5 consecutive years if hired on or after January 1, 2009. For elected officials, amount is based on the average salary for all participants in the Consolidated Plan.
Accrued Benefit	The monthly amount of retirement benefits earned by a member as of any date computed from his Final Average Earnings and Membership Service Credit at that date.
Service Retirement Benefit	
Eligibility	If hired prior to March 18, 2008, age 65 with at least 5 years of service. If hired between March 18, 2008 and December 31, 2008, age 65 with at least 7 years of service. If hired on or after January 1, 2009, age 65 with at least 10 years of service.
Benefit	Monthly benefit is 2.1% of final average earnings multiplied by years of membership service credit. Maximum benefit amount limited to 35 years of service.
Early Retirement Benefit	
Eligibility	If hired prior to March 18, 2008, age 55 with at least 5 years of service.



If hired between March 18, 2008 and December 31, 2008, age 55 with at least 7 years of service.

If hired on or after January 1, 2009, age 55 with at least 10 years of service.

Benefit

Accrued benefit reduced by 3% per year before age 65 for members hired before January 1, 2009. Accrued benefit reduced by 5.004% per year before age 65 for members hired on or after January 1, 2009.

Unreduced early retirement is granted to members whose age plus service is at least 80. Members hired after March 18, 2008 must also be at least age 55.

Plan 4022 Level 1
Retirement Benefit

Eligibility

Normal Retirement at age 55 with 5 years of service.

Benefit

1.33% of final average earnings times years of service, not less than 1.1% of the highest consecutive 36 months of average earnings, up to the Covered Compensation Limit. Plus 2.1% of the highest consecutive 36 months of average earnings greater than this limit times years of service. Covered Compensation is determined as if the participant were 10 years older.

Early retirement available starting at age 45. Accrued benefit is reduced by 2.004% per year before age 55.

Plan 4022 members can choose an unreduced early retirement benefit under the Consolidated Plan when the sum of their age plus service is at least 80. Under this alternate retirement option, members will have their benefit calculated using the 2.1% multiplier for all years of service, up to the maximum 35 years, but will forfeit their cost of living increase and their beneficiary's death benefit under the 4022 Plan. Members can purchase the death benefit, by choosing one of the optional forms of payment.



Disability Retirement Benefit

Eligibility 1 year of service for a non-work related injury or 1 day of service for a work related injury.

Benefit The larger of the normal pension accrued, no less than 50% of average monthly earnings in the year preceding disability. This amount is offset by the benefits received from Workers' Compensation.

Deferred Vested Retirement Benefit

Eligibility If hired prior to March 18, 2008, 5 years of service.

If hired between March 18, 2008 and December 31, 2008, 7 years of service.

If hired on or after January 1, 2009, 10 years of service.

Benefit Accrued benefit payable at earliest retirement age, with the appropriate reduction for early retirement. The assumption is made that members will defer payment until age 65.

Death Benefit

If a member dies in service, his beneficiary is entitled to receive a lump sum equal to the return of the member's accumulated contributions with zero interest.

Plan 4022 Death Benefit

If member dies while in active service, his beneficiary is entitled to the monthly benefit accrued at member's death.

Upon the death of a retiree, a monthly benefit shall be paid to his beneficiary in accordance with tables set forth in Plan 4022.

Optional Forms of Benefit

(1) 100%, 75%, or 50% joint and survivor annuity.

(2) Joint and survivor annuity with a pop-up provision.

(3) Social Security option.



Contributions

Each member contributes 4.00% of pay. Upon termination, these contributions may be refunded to member with no interest.



SCHEDULE C

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation were selected by the Actuary and adopted by the Board following the most recent Experience Study from July 1, 2004 to July 1, 2009.

INVESTMENT RATE OF RETURN: 7.5% per year, compounded annually, net of investment expenses.

WAGE BASE GROWTH: The National Wage Base used to calculate Covered Compensation is expected to grow 3.5% per year.

SALARY INCREASES: Representative values of the assumed annual rates of salary increases are as follows:

Age	General Employees*	Uniformed Officers*
20	12.62%	6.50%
25	8.62	5.25
30	7.27	4.75
35	6.44	4.50
40	5.83	4.27
45	5.35	4.10
50	4.96	4.00
55	4.63	3.50
60	4.34	3.50

*Includes inflation of 3.50%



SEPARATIONS FROM ACTIVE SERVICE: For death rates, the RP 2000 Combined Healthy Mortality Table was used. Representative values of the assumed annual rates of separation from active service are as follows:

Annual Rates of			
Age	Disability	Death - Males	Death - Females
20	0.05%	0.04%	0.02%
25	0.05	0.04	0.02
30	0.05	0.07	0.04
35	0.07	0.10	0.06
40	0.14	0.14	0.10
45	0.23	0.20	0.16
50	0.37	0.32	0.24
55	0.60	0.59	0.44
60	0.90	1.13	0.86

Annual Rates of Withdrawal						
Service	General Employees With Less Than Seven Years Service		Age	General Employees With Seven or More Years Service		Uniformed Officers*
	Male	Female		Male	Female	
0	21.00%	18.00%	20	8.00%	1.00%	16.67%
1	19.00	15.50	25	7.12	1.00	13.31
2	17.00	13.00	30	6.24	1.00	9.95
3	15.00	10.50	35	5.35	1.00	7.51
4	13.00	8.00	40	4.47	1.00	5.36
5	11.00	5.50	45	3.59	1.00	3.00
6	9.00	3.00	50	2.70	1.00	0.00
			55	0.00	0.00	0.00
			60	0.00	0.00	0.00

*For Uniformed Officers in the 4022 Plan, withdrawal rates are 1.00% for each year under age 50.



Annual Rates of Retirement*			
Age	4022 Plan Uniformed Officers	General Employees	Uniformed Officers
45-49	5%	0%	0%
50	12	0	0
51-53	20	0	0
54	60	0	0
55	60	10	20
56-59	60	3	10
60	100	3	100
61		12	
62-66		22	
67-69		10	
70		100	

*For Employees not yet eligible for Rule of 80

Annual Rate of Retirement for Rule of 80		
Age Plus Service	General Employees	Uniformed Officers
80	50%	40%
81	50	30
82-90	20	30

DEATHS AFTER RETIREMENT: The RP-2000 Combined Healthy Retiree Mortality Table set forward four years is used for the period after retirement and for dependent beneficiaries. The RP-2000 Disabled Retiree Mortality Table multiplied by 75% is used for the period after disability retirement.

ADMINISTRATIVE EXPENSES: \$125,000 payable monthly.

PERCENT MARRIED: 100% of active members are assumed to be married with the male three years older than his spouse.



COST OF LIVING: An automatic 3.00% cost of living adjustment is assumed for all Plan 4022 Level 1 members. No increases are assumed for the Consolidated Plan members.

ASSETS: Market Value of Assets.

VALUATION METHOD: Entry age actuarial cost method.