



**GASB STATEMENT NO. 74 REPORT**

**FOR THE**

**RETIREMENT SYSTEM FOR EMPLOYEES**

**OF THE CITY OF CINCINNATI**

**RETIREE HEALTH BENEFITS PLAN**

**PREPARED AS OF JUNE 30, 2017**

November 9, 2017

Board of Trustees  
Retirement System for Employees of the City of Cincinnati  
801 Plum Street  
Cincinnati, OH 45202

Members of the Board:

Presented in this report is information to assist the Retirement System for Employees of the City of Cincinnati (System) in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statement No. 74 for the Retiree Health Benefits Plan (Plan). GASB Statement No. 74 (GASB 74) is the accounting standard that applies to the financial reports issued by other postemployment benefits (OPEB) plans. This report has been prepared by the System's actuary, Cavanaugh Macdonald Consulting (CMC), as of June 30, 2017 (Measurement Date).

The annual actuarial valuation used as a basis for much of the information presented in this report was performed as of December 31, 2016 (Valuation Date). The valuation was based on data, provided by the System's staff for active, inactive and retired members along with pertinent financial information. This information was reviewed for completeness and internal consistency, but was not audited by us. The valuation results depend on the integrity of the data. If any of the information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial principles and practices, as well as in conformity with the Actuarial Standards of Practice issued by the Actuarial Standards Board. The calculations are based on the current provisions of the Plan, and on actuarial assumptions that are internally consistent and individually reasonable 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 74. 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 opinion contained herein.

Board of Trustees  
November 9, 2017  
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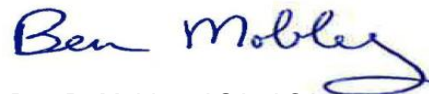
These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 74 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

If you have any questions, please call us at 678-388-1700.

Respectfully submitted,



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



Ben D. Mobley, ASA, ACA, MAAA  
Actuary



Beth Wright  
Managing Director

EJK/BDM

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**Section I – Summary of Principal Results**

**REPORT OF THE ANNUAL GASB STATEMENT NO. 74  
REQUIRED INFORMATION FOR THE  
RETIREMENT SYSTEM FOR EMPLOYEES OF THE CITY OF CINCINNATI  
RETIREE HEALTH BENEFITS PLAN**

**PREPARED AS OF JUNE 30, 2017**

<b>Valuation Date (VD):</b>	December 31, 2016
<b>Prior Measurement Date:</b>	June 30, 2016
<b>Measurement Date (MD):</b>	June 30, 2017
<b>Membership Data as of Valuation Date:</b>	
Inactive Members Currently Receiving Benefits	3,792
Spouses Currently Receiving Benefits	1,461
Inactive Members Entitled to But Not Yet Receiving Benefits	23
Active Members	<u>2,769</u>
Total Membership	8,045
<b>Discount Rate:</b>	
Long-Term Expected Rate of Return	7.50%
Municipal Bond Index Rate at Prior Measurement Date	3.01%
Municipal Bond Index Rate at Measurement Date	3.56%
Year in which Fiduciary Net Position is Projected to be Depleted	2050
Single Equivalent Interest Rate (SEIR) at Prior Measurement Date	4.57%
Single Equivalent Interest Rate (SEIR) at Measurement Date	6.31%
<b>Net OPEB Liability as of Measurement Date (\$ thousands):</b>	
Total OPEB Liability (TOL)	\$ 510,105
Fiduciary Net Position (FNP)	<u>486,594</u>
Net OPEB Liability (NOL = TOL – FNP)	\$ 23,511
FNP as a percentage of TOL	95.39%

## ***Section II – Introduction***

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The Governmental Accounting Standards Board issued Statement No. 74 (GASB 74), “*Financial Reporting for Postemployment Benefit Plans other than Pension Plans*” in June 2015. GASB 74’s effective date is for a plan’s fiscal year beginning after June 15, 2016. If an OPEB plan does not issue a stand-alone financial report, the employer should make the note disclosures required by Statement 74 for an OPEB plan within the employer’s financial report. For the purposes of reporting under GASB 74, the Plan is assumed to be a single-employer, defined benefit OPEB plan where assets are accumulated in a trust that meets the criteria in paragraph 3 of GASB 74.

This report, prepared as of June 30, 2017 (Measurement Date or MD), presents information to assist the Plan in meeting the requirements of GASB 74. Much of the material provided in this report is based on the data, assumptions and results of the biennial actuarial valuation of the Plan, as of December 31, 2016 (Valuation Date or VD).

GASB 74 replaced GASB 43, which was more closely tied to funding efforts in that it required OPEB plans to report items consistent with the results of a plan’s actuarial valuations, as long as those valuations met certain parameters. GASB 74 basically separates accounting from funding by creating disclosure and reporting requirements that may or may not be consistent with the basis used for funding the plan.

GASB 74 requires the determination of the Total OPEB Liability (TOL) utilizing the Entry Age Normal (EAN) actuarial cost method. If the valuation date at which the TOL is determined is before the measurement date, as is the case here, the TOL must be rolled forward to the measurement date. The Net OPEB Liability (NOL) is then set equal to the rolled forward TOL minus the plan’s Fiduciary Net Position (FNP) (basically the market value of assets as of the Measurement Date). The plan provisions recognized in the calculation of the TOL are summarized in Schedule B. The development of the roll-forward of the TOL is shown in the table on page 8.

Among the items needed for the liability calculation is the discount rate, as defined by GASB, or a Single Equivalent Interest Rate (SEIR). 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 provisions applicable to the membership and beneficiaries of the Plan on the Measurement Date. Future contributions are to be projected in accordance with a plan’s funding policy (or in the Plan’s case, the Collective Settlement Agreement) and/or the application of professional judgment to consider the recent contribution history of the employers and non-employer contributing entities. 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 (Municipal Bond Index Rate). The Municipal Bond Index Rate used for this purpose is the June average of the Bond Buyer General Obligation 20-year Municipal Bond Index published weekly by the Board of Governors of the Federal Reserve System. Our calculations indicated the FNP is projected to be depleted in 2050, so the Municipal Bond Index Rate is used in the determination of the SEIR. Please see Paragraph 35(b) in the GASB 74 section for more explanation into the development of the SEIR.

## ***Section II – Introduction***

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The FNP projections are based upon the Plan's financial status on the Valuation Date, the indicated set of methods and assumptions, and the requirements of GASB 74. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing plan basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the Plan, or the Plan's ability to make benefit payments in future years.

While a funding policy has not been officially adopted by the Plan's Board of Directors, the Collective Settlement Agreement is used in the determination of an Actuarially Determined Contribution (ADC) to be used as a benchmark against which to gauge the employer contribution rates is shown in Schedule E of this report.

The sections that follow provide the results of all the necessary calculations, presented in the order laid out in GASB 74, for note disclosure and Required Supplementary Information (RSI).

### **Section III – Financial Statement Notes**

The material presented herein will follow the order presented in GASB 74. There are non-actuarial items required which are not included in this report. Paragraph numbers are provided for ease of reference.

**Paragraphs 34(a)(1)-(3):** CMC was not expected to supply this information.

**Paragraph 34(a)(4):** The data required regarding the membership of the Plan was furnished by the System. The following table summarizes the membership of the Plan as of December 31, 2016, the Valuation Date.

#### **Membership**

<b>Group</b>	<b>Total</b>
Retired members and surviving spouses currently receiving retiree health benefits	3,792
Spouses currently receiving retiree health benefits	1,461
Terminated vested members eligible for retiree health benefits	23
Active Participants	
Full-Time	2,720
DROP	<u>49</u>
Total	8,045

**Paragraphs 34(a)(5)-(6) and 34(b)-(e):** CMC was not expected to supply this information.

**Paragraph 35(a)(1)-(4):** The information is provided in the following table. As stated previously, the NPL is equal to the TOL minus the FNP. That result as of June 30, 2017, the Measurement Date, is presented in the table below (\$ thousands).

<b>Measurement Date of June 30, 2017</b>	
TOL	\$ 510,105
FNP	<u>486,594</u>
NOL	\$ 23,511
Ratio of FNP to TOL	95.39%



### **Section III – Financial Statement Notes**

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**Paragraph 35(b):** Listed below is the information to be disclosed regarding the actuarial assumptions and other inputs used to measure the TOL. The complete set of actuarial assumptions and other inputs utilized in developing the TOL are outlined in Schedule C. The TOL was determined by an actuarial valuation as of December 31, 2016, using the following key actuarial assumptions and other inputs:

Inflation	3.00%
Salary increases, including wage inflation	4.00% - 7.50%
Long-term Investment Rate of Return, net of OPEB plan investment expense, including inflation	7.50%
Municipal Bond Index Rate	
Measurement Date	3.56%
Prior Measurement Date	3.01%
Year FNP is projected to be depleted	
Measurement Date	2050
Prior Measurement Date	2038
Single Equivalent Interest Rate, net of OPEB plan investment expense, including price inflation	
Measurement Date	6.31%
Prior Measurement Date	4.57%
Health Care Cost Trends	
Medicare Supplement Claims	
Pre-Medicare	7.75% for 2017 decreasing to an ultimate rate of 5.00% by 2023
Post-Medicare	5.75% for 2017 decreasing to an ultimate rate of 5.00% by 2020

Both pre-retirement and post-retirement mortality rates were based on the RP 2000 combined mortality table, male rates set forward 2 years and female rates set forward 1 year and using a Scale AA projection to 2020. Post-disability mortality rates were based on the RP 2000 disabled retiree mortality table, female rates set back 5 years.

The demographic actuarial assumptions used in the December 31, 2016 valuation were based on the results of the last actuarial experience study, dated October 28, 2011.

The remaining actuarial assumptions (e.g., initial per capita costs, health care cost trends, rate of plan participation, rates of plan election, etc.) used in the December 31, 2016 valuation were based on a review of recent plan experience done concurrently with the December 31, 2016 valuation.

**Section III – Financial Statement Notes**

The long-term expected return on plan assets is reviewed as part of the GASB 74 valuation process. Several factors are considered in evaluating the long-term rate of return assumption, including the Plan’s current asset allocations and a log-normal distribution analysis using the best-estimate ranges of expected future real rates of return (expected return, net of investment expense and inflation) for each major asset class compiled by Horizon Actuarial Services, LLC in its “*Survey of Capital Market Assumptions, 2016 Edition*”. The long-term expected rate of return was determined by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The assumption is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.

The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*
Core Bonds	14.00%	2.80%
High Yield Bonds	3.00%	4.90%
Large-Cap Value Equity	7.00%	7.20%
Large-Cap Growth Equity	5.00%	7.10%
Mid-Cap Value Equity	4.00%	7.50%
Mid-Cap Core Equity	4.00%	7.50%
Small-Cap Value Equity	7.50%	8.00%
Non-U.S. Developed Large Cap	10.00%	7.40%
Non-U.S. Small Cap	5.00%	8.10%
Emerging Markets All-Cap	5.00%	8.50%
EM Small-Cap	3.00%	8.50%
Real Estate Core Equity	10.00%	7.40%
Infrastructure	7.50%	7.80%
Risk Parity	5.00%	4.10%
Private Equity	10.00%	11.10%
Total	100.00%	

\*Geometric mean

*Discount rate (SEIR).* The discount rate used to measure the TOL as of the Measurement Date was 6.31%. The projection of cash flows used to determine the discount rate was performed in accordance with GASB 74. The projection’s basis was an actuarial valuation performed as of December 31, 2016. In addition to the actuarial methods and assumptions of the December 31, 2016 actuarial valuation, the following actuarial methods and assumptions were used in the projection of cash flows:

- No future employee contributions were assumed to be made.
- No future employer contributions were assumed to be made.

**Section III – Financial Statement Notes**

Based on these assumptions, the Plan’s FNP was projected to be depleted in 2050 and, as a result, the Municipal Bond Index Rate was used in the determination of the SEIR. Here, the long-term expected rate of return of 7.50% on Plan investments was applied to periods through 2050 and the Municipal Bond Index Rate at the Measurement Date (3.56%) was applied to periods on and after 2050, resulting in an SEIR at the Measurement Date (6.31%).

The FNP projections are based upon the Plan’s financial status on the Valuation Date, the indicated set of methods and assumptions, and the requirements of GASB 74. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing plan basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the Plan, or the Plan’s ability to make benefit payments in future years.

**Paragraphs 35(b)(1) and 35(b)(2)(g):** These paragraph require disclosure of the sensitivity of the NOL to changes in the health care cost trend rates and the discount rate. The following exhibit presents the NOL of the Plan, calculated using the health care cost trend rates, as well as what the Plan’s NOL would be if it were calculated using a health care cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate. Similarly, the exhibit presents the NOL of the Plan, calculated using the discount rate of 6.31%, as well as what the Plan’s NOL would be if it were calculated using a Discount Rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate (\$ thousands):

Net OPEB Liability			
Discount Rate	Health Care Cost Trend Rates		
	1% Decrease	Current	1% Increase
1% Increase (7.31%)		\$ (25,681)	
Current (6.31%)	\$ (29,350)	\$ 23,511	\$ 86,949
1% Decrease (5.31%)		\$ 82,259	

### Section III – Financial Statement Notes

**Paragraph 35(c):** The date of the actuarial valuation upon which the TPL is based is December 31, 2016. The TPL as of June 30, 2017 is determined using standard roll forward techniques. The roll forward calculation adds the normal cost for the first half of 2017 (also called the service cost), subtracts the actual benefit payments and refunds for the six months, and then applies the expected SEIR for the period. This procedure was used to determine the TPL as of June 30, 2017, as shown in the following table. In addition, an expected TPL as of June 30, 2017 is determined by rolling forward the June 30, 2016 TPL using similar techniques. The difference between this expected TPL and the actual TPL as of June 30, 2017 is the experience gain or loss for the period. The impact of measuring the liabilities using a discount rate of 6.31% as opposed to the 4.57% used at the beginning of period is shown as an assumption gain.

TPL Roll-Forward (\$ thousands)	(1)	Assumption Change (2)
(a) Interest Rate (SEIR)	6.31%	4.57%
(b) TPL as of December 31, 2016	\$507,754	\$617,885
(c) Entry Age Normal Cost for the period January 1, 2017 – June 30, 2017	2,388	3,835
(d) Actual Benefit Payments for the period January 1, 2017 – June 30, 2017	\$15,572	\$15,572
(e) TPL as of June 30, 2017 = [(b) x (1 + (a)) <sup>1/2</sup> ] + (c) – [(d) x (1 + (a)) <sup>1/4</sup> ]	\$510,105	\$619,935
(f) Final TPL as of June 30, 2017	\$510,105	
(g) Experience (Gain)/Loss: (1e) – (1f)	\$0	
(h) Assumption Change (Gain)/Loss: (2e) – (1e)		\$(109,830)

## ***Section IV – Required Supplementary Information***

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The material presented herein will follow the order presented in GASB 74. Paragraph numbers are provided for ease of reference.

**Paragraphs 36(a)-(c):** The required tables of schedules are provided in Appendix A.

**Paragraph 36(d):** The required schedule presenting the annual money-weighted rates of return is to be supplied by the System.

**Paragraph 38:** Information regarding changes to benefit terms and changes to assumptions or other inputs should be noted regarding the RSI. The information should be listed by the date for which the indicated change was first reflected in reported amounts.

***Changes to benefit terms:*** None.

***Changes in actuarial assumptions and methods:*** None.

#### ***Section IV – Required Supplementary Information (continued)***

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***Methods and assumptions used in calculations of Actuarially Determined Contributions.*** The Actuarially Determined Contribution rates, as a percentage of payroll, used to determine the Actuarially Determined Contribution amounts in the Schedule of Employer Contributions (Schedule A) are calculated as of the most recent Valuation Date. The following actuarial methods and assumptions (from the December 31, 2015 actuarial valuation) were used to determine contribution rates reported in that schedule for the year ending June 30, 2017:

Actuarial cost method	Entry age
Amortization method	Level dollar
Amortization period	30 years, open
Asset valuation method	Five-year smoothed market value
Price inflation	3.00%
Salary increases, including wage inflation	3.00% to 7.50%
Initial health care cost trend rates	
Medicare Supplement Claims – Pre Medicare	7.75%
Medicare Supplement Claims – Post-Medicare	5.75%
Ultimate health care cost trend rates	
Medicare Supplement Claims – Pre Medicare	5.00%
Medicare Supplement Claims – Post-Medicare	5.00%
Year of ultimate trend rates	
Medicare Supplement Claims – Pre Medicare	2022
Medicare Supplement Claims – Post-Medicare	2019
Long-term investment rate of return, net of pension plan investment expense, including price inflation	7.50%

**Schedule A – Required Supplementary Information**

**SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY  
GASB 74 Paragraph 36(a)  
(\$ thousands)**

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Total OPEB Liability</b>										
Service Cost at end of year	\$7,669									
Interest	27,446									
Changes of benefit terms	0									
Difference between expected and actual experience	0									
Changes of assumptions or other inputs	(109,830)									
Benefit payments	(31,144)									
<b>Net change in Total OPEB Liability</b>	<b>\$(105,859)</b>									
<b>Total OPEB Liability – beginning</b>	<b>\$615,964</b>									
<b>Total OPEB Liability – ending (a)</b>	<b>\$510,105</b>									
<b>Plan Fiduciary Net Position</b>										
Contributions – employer	\$0									
Contributions – active member	0									
Net investment income	58,398									
Benefit payments	(31,144)									
Administrative expense	(440)									
Other	0									
<b>Net change in Plan Fiduciary Net Position</b>	<b>\$26,814</b>									
<b>Plan Fiduciary Net Position – beginning</b>	<b>\$459,780</b>									
<b>Plan Fiduciary Net Position – ending (b)</b>	<b>\$486,594</b>									
<b>Net OPEB Liability – ending (a) – (b)</b>	<b>\$23,511</b>									

**Schedule A – Required Supplementary Information**

**SCHEDULE OF THE NET OPEB LIABILITY  
GASB 74 Paragraph 36(b)  
(\$ thousands)**

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Total OPEB Liability	\$510,105									
Plan Fiduciary Net Position	<u>486,594</u>									
Net OPEB Liability	\$23,511									
Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	95.39%									
Covered payroll	\$179,887									
Net OPEB Liability as a percentage of covered payroll	13.07%									



**Schedule A – Required Supplementary Information**

**SCHEDULE OF THE NET OPEB LIABILITY  
GASB 74 Paragraph 36(c)  
(\$ thousands)**

	2017	2016	2015	2014	2013*	2012	2011	2010	2009	2008
Actuarially Determined Employer Contribution	\$6,188	\$0	\$1,404	\$7,363	\$5,697	\$453	\$19,943	\$44,689	\$53,382	\$22,767
Contributions in relation to the Actuarially Determined Contribution	0	552	1,905	2,048	928	2,000	2,142	4,369	5,597	4,275
Annual contribution deficiency (excess)	\$6,188	\$(522)	\$(501)	\$5,315	\$4,769	\$(1,547)	\$17,801	\$40,320	\$47,785	\$18,492
Covered Payroll	\$179,887	\$174,963	\$164,575	\$163,477	\$167,148	\$167,148	\$165,029	\$167,589	\$170,416	\$164,640
Actual contributions as a percentage of covered payroll	0.00%	0.32%	1.16%	1.25%	0.56%	1.20%	1.30%	2.61%	3.28%	2.60%

\* Fiscal year changed in 2013 from December 31 to June 30

## **Schedule B – Summary of Main Plan Provisions**

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### Pension Benefit Eligibility

All active employees of the City except for the following:

- Members of the Police and Fireman’s Disability and Pension Fund of Ohio.
- Elected City officials.
- Employees for whom the City contributes to PERS.
- Members of the faculties, teaching staffs, research staffs, and administrative staff of the University of Cincinnati appointed to positions covered by the Teachers Insurance and Annuity Association Social Security Plan.
- Persons becoming employees after June 1, 1961, who are employed in any of the following employment classifications: bricklayer, carpenter, carpenter foreman, cement finisher, electrician, electrician foreman, painter, painter foreman, plasterer, plumber, sign painter, steamfitter and pipefitter, tinsmith, or composition roofer.
- Persons hired as police recruits who are not currently enrolled as a member of the System prior to their date of hire.
- Current contributing members of the School Employees Retirement System (SERS) or the State Teachers Retirement System (STRS) who are hired by the City on a seasonal, temporary, or part-time basis.

Members of the System are divided into the following groups:

Group	Criteria
A, B	Any member who has retired prior to 7/1/2011.
C	Any member who, as of June 30, 2011, was an active or deferred vested member and had either: <ul style="list-style-type: none"> <li>a) Completed at least 30 years of service, or</li> <li>b) Reached age 60 and completed at least 5 years of service.</li> </ul>

## **Schedule B – Summary of Main Plan Provisions**

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### Pension Benefit Eligibility (continued)

Group	Criteria
D	<p>Any active member who, between July 1, 2011 and December 31, 2013:</p> <ol style="list-style-type: none"> <li>1) Either               <ol style="list-style-type: none"> <li>a) Completed at least 30 years of service, or</li> <li>b) Reached age 60 and completed at least 5 years of service; and</li> </ol> </li> <li>2) Retired prior to January 1, 2014.</li> </ol>
E	<p>Any active member who:</p> <ol style="list-style-type: none"> <li>1) Between July 1, 2011 and December 31, 2013 either:               <ol style="list-style-type: none"> <li>a) Completed at least 30 years of service, or</li> <li>b) Reached age 60 and completed at least 5 years of service; and</li> </ol> </li> <li>2) Retires on or after January 1, 2014.</li> </ol>
F	<p>Any active member whose most recent membership enrollment date was prior to January 1, 2010 and who is not in groups A through E.</p> <p>Any deferred vested member whose most recent membership enrollment date was prior to January 1, 2010, is not in groups A through E, and has at least five years of service prior to the date they separate from employment.</p>
G	<p>Any member whose most recent membership enrollment date is on or after January 1, 2010, or</p> <p>Any member rehired on or after January 1, 2010, who has fewer than 5 years of service as of June 30, 2011, or</p> <p>Any retiree of the System who is receiving a service retirement allowance and is re-employed on or after April 1, 2013.</p>

## **Schedule B – Summary of Main Plan Provisions**

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Pension Benefit Eligibility (continued)

Members in the System are further classified as follows:

Class	Criteria
CSA Retiree (CSA participants corresponding to Retirees Class)	Group A and B members and their designated optionees.
CSA Employee (CSA participants corresponding to Current Employees Class)	Group C, D, E, and F members (and their designated optionees) that were vested and employed on 7/1/2011.
CMC Employee (Non-CSA participants.)	Group E and F members (and their designated optionees) that were either vested or employed on 7/1/2011 and no break in employment service since 1/1/2010 and prior to becoming vested.
Non-CSA (Non-CSA participants.)	Group G members and their designated optionees; or  Inactive members not assigned to a group because they were neither employed nor vested on 7/1/2011.

Years of Service: Years or fractional years of full-time service rendered to the plan sponsor.

### Normal Retirement

*Groups A, B, C, D, E, and F:*

Age 60 with 5 years of service or 30 years of service.

*Group G:*

Age 67 with 5 years of service or age 62 with 30 years of service.

## **Schedule B – Summary of Main Plan Provisions**

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Pension Benefit Eligibility (continued)

### Early Retirement

*Groups A, B, C, D, E, and F:*  
Age 55 with 25 years of service.

*Group G:*  
Age 57 with 15 years of service.

Deferred Retirement Option Plan (DROP): Current Employees Class members with at least 30 years of service may participate in the DROP.

Disability Retirement Eligibility: 5 years of service.

Deferred Vested Retirement Eligibility: 5 years of service.

Retiree Health Benefits Eligibility

Per Ordinance 336-2016 adopted by the City Council on October 26, 2016, employees hired after December 31, 2015 are not eligible to receive retiree health benefits.

Group 1: Those members of Group C or those members hired before January 9, 1997. For those members of Group C or those members who retire under the System prior to January 1, 2016 (including their survivors receiving pension benefits), a minimum of 15 years of service is required. For those members who retire under the System after December 31, 2016 (including their survivors receiving pension benefits), a minimum attained age of 60 with 20 years of service or 30 years of service regardless of age is required.

Group 2: Those participants hired on or after January 9, 1997. For those members who retire under the System prior to January 1, 2016 (including their survivors receiving pension benefits), a minimum of 15 years of service is required. For those members who retire under the System after December 31, 2016 (including their survivors receiving pension benefits), a minimum attained age of 60 with 20 years of service or 30 years of service regardless of age is required. Group 2 participants entitled to a deferred retirement allowance are eligible for health benefits upon attainment of the Medicare eligibility age.

## **Schedule B – Summary of Main Plan Provisions**

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Deferred Retirement Option Plan (DROP): Eligible Current Employees Class members may effectively retire and freeze their accrual of years of service with the System and defer receipt of retirement benefits, including retiree health benefits, for a period not to exceed five years while continuing City employment. For valuation purposes, current DROP participants are assumed to be active members, receiving health care benefits as an active employee. Service does not accrue while participating in the DROP and retiree health benefits are assumed to begin upon exit from active employment.

Members and Beneficiaries Assumed to be Eligible for Deferred Retiree Health Benefits as of December 31, 2016: Per Ordinance 336-2016 adopted by the City Council on October 26, 2016, members of Group C and their associated beneficiaries are eligible for retiree health benefits under the Select Plan based upon a minimum of 15 years of service. All other eligible members and their associated beneficiaries are eligible for retiree health benefits under the Model Plan based upon a minimum attained age of 60 with 20 years of service or 30 years of service regardless of age.

Dependents: A retiree may elect to cover an eligible spouse and/or eligible dependent children by paying the applicable retiree contribution rate for the specified enrollment tier.

### Retiree Health Benefits

The System offers health care benefits (medical, prescription drugs, dental, and vision coverage) to eligible retirees, beneficiaries, and their dependents before and during Medicare eligibility.

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, members who retired prior to September 1, 2007, and who establish their annual household income to be less than \$30,000, are eligible to receive medical and prescription drug coverage under the Secure Plan. Those members who retired prior to September 1, 2007 who do not qualify for coverage under the Secure Plan may elect medical and prescription drug coverage through either the Select Plan or Model Plan based upon eligibility.

Those members of Group C or those members who retired on or after September 1, 2007 (including those employees who retired under a special incentive plan in 2007) but prior to January 1, 2016 may elect medical and prescription drug coverage through the Select Plan. Those members not eligible for the Secure Plan or the Select Plan may elect coverage under the Model Plan.

**Schedule B – Summary of Main Plan Provisions**

**Retiree Contributions**

Participants covered by the Secure Plan do not contribute towards the cost of medical and prescription drug coverage. Group 1 participants covered by the Select Plan contribute an amount equal to five percent of the full cost of medical and prescription drug benefits of the retiree group with costs adjusted based upon the Medicare eligibility age (age 65). Group 1 participants covered by the Model Plan contribute an amount equal to ten percent of the full cost of medical and prescription drug benefits of the retiree group with costs adjusted based upon the Medicare eligibility age (age 65). Group 2 participants will pay the portion of the full cost of medical and prescription drug benefits of the coverage option for which they are eligible as determined by the point system.

Points	Retiree Contribution of Cost (%)	
	Select Plan	Model Plan
90+	5	10
80 – 89	25	
70 – 79	50	
60 – 69	75	
Less than 60	75% of full premium for retiree only (spouse or dependent coverage is not available)	

**Active Service Death Benefits**

A surviving spouse, eligible dependent child, and orphan receiving survivor pension benefits as a result of death during employment of an eligible active member is eligible to receive retiree health benefits based upon the eligibility and terms applicable to the associated member.

**Medicare Part B Premium Reimbursement**

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, the System no longer reimburses the Medicare Part B premiums for retirees and spouses. As such, it is assumed the System has no liability under GASB 43 and 45 for Medicare Part B premium reimbursements.

All Medicare eligible retirees and dependents are responsible for the payment of the required Medicare Part B premiums. Retiree health benefits participants who are eligible for but do not enroll or maintain their enrollment in Medicare Part B will be responsible for the medical expenses Medicare Part B otherwise would have paid. As such, it is assumed the System is the secondary payer for Medicare Part B benefits.

**Schedule B – Summary of Main Plan Provisions**

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Dental Benefits

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, all members electing to participate in the dental plan will be required to pay the full cost of dental coverage. As such, it is assumed the System has no liability under GASB 43 and 45 for dental benefits.

Vision Benefits

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, all members electing to participate in the vision plan will be required to pay the full cost of vision coverage. As such, it is assumed the System has no liability under GASB 43 and 45 for vision benefits.



## **Schedule C – Statement of Actuarial Assumptions and Methods**

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DISCOUNT RATE: 7.50% per year, net of investment expenses

INFLATION ASSUMPTION: 3.00% per year

HEALTH CARE COST TREND RATES: The initial per capita health care costs and contributions are expected to increase each year with inflation (trend). The following chart details the trend assumption by year and payment age.

Calendar Year	Payment Age <65	Payment Age 65+
2017	7.75%	5.75%
2018	7.00	5.50
2019	6.50	5.25
2020	6.00	5.00
2021	5.50	5.00
2022	5.25	5.00
2023+	5.00	5.00

AGE RELATED MORBIDITY: Per capita health care costs are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims is assumed to be:

Payment Age	Annual Increase
<30	0.0%
30 – 34	1.0
35 – 39	1.5
40 – 44	2.0
45 – 49	2.6
50 – 54	3.3
55 – 59	3.6
60 – 64	4.2
65 – 69	3.0
70 – 74	2.5
75 – 79	2.0
80 – 84	1.0
85 - 89	0.5
90+	0.0

SPOUSE COVERAGE IN RETIREE HEALTH BENEFIT PLANS: Actual census data, payment form elections, and current health care plan elections for spouses of current retirees were used. For spouses of eligible future retirees, a 100% spouse coverage election rate is assumed for those members choosing a joint & survivor payment form, and a 15% spouse coverage election rate is assumed for those members selecting a single life annuity payment form. Under a joint & survivor payment form, retiree health benefits are available until the death of the last annuitant.

**Schedule C – Statement of Actuarial Assumptions and Methods**

RETIREE HEALTH CARE PLAN INITIAL PER CAPITA COSTS: Paid claims and cost data were provided by the System, Anthem, and OptumRx for the period of January 1, 2015 through December 31, 2016. Claims data were provided separately for medical and prescription drug benefits. CMC accepted this information without audit and has relied upon the sources for the accuracy of the data; however, CMC did review the information for reasonableness. On the basis of this review, CMC believes the data and information provided to be sufficiently complete and reliable, and that it is appropriate for the purposes intended.

Assumed adult per capita health care costs were based on past experience and trended forward to the valuation period. Costs were adjusted to account for any changes in administration, plan changes, and large claims, if appropriate. Additionally, the per capita health care costs have been adjusted based upon information provided by the System to reflect the anticipated cost reductions associated with providing prescription drug benefits through a new pharmacy benefit manager, CVS/caremark. As some participants elect to cover dependents, the assumed adult costs include the additional costs of coverage for non-spouse dependents.

Future experience may differ significantly from the cost estimates presented in this report due to unforeseen and random events. As such, the valuation’s results should be viewed as having a likely range of variability.

The following chart details the initial adult per capita health care cost assumptions. These amounts include medical, drug, and administrative costs and represent the full cost of providing benefits. The average medical, drug, and administrative costs shown are normalized to age 65 and then age adjusted in calculating liabilities. Additionally, health care costs for all prospective health care plan participants and existing retirees not yet age 65 who were hired prior to April 1, 1986 are adjusted to account for their potential ineligibility for premium-free Medicare Part A.

Annual Medical, Drug, and Administrative Costs			
Plan	Payment Age <65	Payment Age 65+	
		Not Enrolled in Medicare Part A	Enrolled in Medicare Part A
Secure Plan	\$21,152	\$6,751	\$3,509
Select Plan	\$15,991	\$6,346	\$2,964
Model Plan	\$15,718	\$5,988	\$2,925

## ***Schedule C – Statement of Actuarial Assumptions and Methods***

RETIREE HEALTH CARE PLAN CONTRIBUTIONS: Assumed adult per capita health care contribution rates were developed for those participants in the 2016 Select Plan who are required to contribute a portion of retiree health benefit costs as defined in Schedule C. Contributions were determined to fully-fund retiree health benefit costs in 2017 based upon Medicare eligibility status. Rates are based on retiree cost experience, enrollment, and trended based on the assumptions. The following chart details the full (100%) adult per capita contribution assumptions. These amounts include medical, drug, and third party administrative costs.

Plan	Payment Age <65	Payment Age 65+		
		Not Enrolled in Medicare Part A	Enrolled in Medicare Part A	Current Average
Select Plan	\$13,409	\$7,855	\$3,763	\$4,091
Model Plan	\$12,163	\$5,988	\$3,007	\$3,052

As members hired after December 31, 2015 are ineligible to receive retiree health benefits, the contributions assumed for years beyond 2017 are based upon the projected retiree health care costs associated with each projection year's closed group of participants, reflecting the impact of aging and health care inflation.

HEALTH BENEFIT PLAN PARTICIPATION: Actual census data and current plan elections provided by the System were used for those currently receiving retiree health benefits. Group 1 members who retired prior to September 1, 2007 and currently qualify for the Secure Plan, are assumed to re-qualify in all future years. All current participants not qualifying for the Secure Plan are covered either by the Select Plan or the Model Plan. Current participants are assumed to maintain their current retiree health benefits coverage until they are no longer eligible.

The active members of Group C with at least 15 years of creditable service shall be entitled to retiree health benefits under the Select Plan as Group 1 members. All other eligible future retirees electing retiree health benefits are assumed to be covered by the Model Plan. 90% of eligible future retirees in Group 1 are assumed to elect retiree health benefits. Eligible future retirees in Group 2 are required to pay the portion of their cost as determined by the point system, so retiree health benefit election rates are assumed to reduce as the level of cost sharing increases. The point system is based upon the sum of the member's full years of service and the member's age at separation from service. The assumed contribution rates and rates of participation for Group 1 and Group 2 members are as follows:

Group	Assumed Rate of Participation (%)	Retiree Contribution of Cost (%)	
		Select Plan	Model Plan
Group 1 / Group 2 with 90+ Points	90	5	10
Group 2 with 80 – 89 Points	80	25	25
Group 2 with 70 – 79 Points	60	50	50
Group 2 with 60 – 69 Points	40	75	75

For those eligible future retirees of Group 2 with less than 60 points, the System will pay 25% of the full premium for retiree coverage only (spouse or dependent coverage are not available). It is assumed 0% of these eligible future retirees will elect retiree health benefits.

As credible experience for Group 2 participation is not yet available, the rates of participation are estimates and actual results may be materially different. As such, this assumption will need to be revised as credible experience evolves.

## ***Schedule C – Statement of Actuarial Assumptions and Methods***

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MEDICARE COVERAGE AND ELIGIBILITY: Retiree health benefit participants age 65 and older who are eligible for premium-free Medicare Part A benefits are assumed to be enrolled in Medicare Part A. For those retiree health benefit participants who are not eligible for premium-free Medicare Part A coverage, the System is assumed to remain the primary payer. For a portion of the Medicare eligible group, the premium-free Medicare Part A eligibility status is provided by the System. As the premium-free Medicare Part A eligibility status is determined from a wide range of sources with varying and, at times, limited content, the premium-free Medicare Part A eligibility status data is incomplete. Adjustments have been made to account for this incompleteness. As the true status of those who are, or will be eligible for premium-free Medicare Part A is uncertain, actual results may be materially different. For all unidentified current retirees, hired prior to April 1, 1986, and not assumed eligible for premium-free Medicare Part A coverage through their spouse, as well as those active employees hired prior to April 1, 1986, 15% are assumed to not qualify for premium-free Medicare Part A coverage. The assumption of 15% is based upon estimates from the current retiree population. 100% of deferred vested members receiving health care benefits are assumed to obtain the 40 or more quarters of Medicare-covered employment required for premium-free Medicare Part A coverage as a result of their subsequent employment.

All retiree health benefit participants age 65 and older are assumed to be enrolled in Medicare Part B.

**Schedule C – Statement of Actuarial Assumptions and Methods**

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SALARY INCREASES: Salary increases are assumed to vary by service. Representative rates are as follows:

Service	Annual Increase
0	7.5%
5	5.0
10	4.5
20	4.5
30	4.0

SEPARATIONS FROM ACTIVE SERVICE: For death rates, RP-2000 Combined Mortality Table set forward two years for males and set forward one year for females and using a Scale AA projection to 2020 was used. Representative values of the assumed annual rates of separation from active service are as follows:

Age	Annual Rate of Withdrawal			
	<u>Less than One Year of Service</u>	<u>Between One and Three Years of Service</u>	<u>Between Three and Five Years of Service</u>	<u>Five or More Years of Service</u>
20	25.0%	10.0%	7.5%	5.0%
25	25.0	10.0	7.5	5.0
30	25.0	10.0	7.5	3.5
35	25.0	10.0	4.0	2.8
40	25.0	10.0	4.0	2.3
45	25.0	10.0	4.0	1.5
50	25.0	10.0	4.0	1.5
55	25.0	10.0	4.0	1.5
60	25.0	10.0	4.0	1.5
65	25.0	10.0	4.0	1.5
70	25.0	10.0	4.0	1.5

**Schedule C – Statement of Actuarial Assumptions and Methods**

<u>Age</u>	<u>Annual Rate of Retirement</u>			
	<u>Early Retirement</u>	<u>Less than 30 Years of Service</u>	<u>30 Years of Service</u>	<u>31+ Years of Service</u>
<b>Groups C, D, E, and F*</b>				
50			45.0	30.0
55	10.0%		45.0	30.0
59	10.0		45.0	30.0
60		25.0%	30.0	25.0
61		20.0	20.0	20.0
65		20.0	20.0	20.0
70		100.0	100.0	100.0
<b>Group G</b>				
57	10.0%			
60	20.0			
62	20.0		25.0%	20.0%
65	20.0		25.0	20.0
67		25.0%	25.0	20.0
69		20.0	20.0	20.0
70		100.0	100.0	100.0

\* For purposes of valuing CSA Employee members eligible for DROP benefits, the rates listed for 30 or more years of service are adjusted as follows:

- 30% of members who are expected to retire with 31, 32, 33, 34, or 35 years of service are assumed to enter the DROP upon attaining 30 year of service.
- 10% of members who are expected to retire with 30 years of service are assumed to enter the DROP upon attaining 30 years of service.

**Schedule C – Statement of Actuarial Assumptions and Methods**

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Age	Annual Rate of Disability	
	Groups C, D, E, and F	Group G
20	0.01%	0.01%
25	0.02	0.02
30	0.03	0.03
35	0.05	0.05
40	0.09	0.09
45	0.15	0.15
50	0.27	0.27
55	0.42	0.42
60	0.00	0.50
67	0.00	0.00

**DEATHS AFTER RETIREMENT:** The RP-2000 Combined Mortality Table set forward two years for males and set forward one year for females and using a Scale AA projection to 2020 is used for the period after retirement and for dependent beneficiaries. The RP-2000 Disabled Mortality Table (set back 5 years for females) is used for the period after disability.

**EXPENSES:** Estimated budgeted administrative expenses of 0.38% of payroll are added to the normal cost rate.

**PERCENT MARRIED:** 70% of male members and 30% of female members are assumed to be married and elect a joint & survivor payment form. Males are assumed to be three years older than their spouse.

**ASSETS:** Market Value of Assets.

**WITHDRAWAL ASSUMPTION:** It was assumed that 50% of the eligible vested members who terminate elect to withdraw their contributions while the remaining 50% elect to leave their contributions in the plan in order to be eligible for a benefit at their retirement date.

**PERCENT ELECTING MEDICAL EXPENSE REIMBURSEMENT PROGRAM (MERP):** Based upon current participation in the MERP, 0% of current and future retiree health benefits participants are assumed to elect the MERP. As credible experience for MERP participation is not yet available, the assumed rate of participation is an estimate and actual results may be materially different. As such, this assumption will need to be reviewed as credible experience evolves.

**PART-TIME EMPLOYEES:** On July 1, 1991, the plan was amended to include part-time employees. As these employees do not exhibit the same decremental patterns as full-time employees, and the liability is deemed to be de minimis, the results of this valuation are based upon full-time employees only.

## ***Schedule D – Actuarial Cost Method***

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The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future investment rate of return. The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of the Plan are determined following a level funding approach, and consist of a normal contribution and an actuarial accrued liability contribution.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for OPEB benefits to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.





**GASB STATEMENT NO. 75 REPORT**

**FOR THE**

**RETIREE HEALTH BENEFITS PLAN**

**OF THE RETIREMENT SYSTEM**

**FOR EMPLOYEES OF THE CITY OF CINCINNATI**

**PREPARED AS OF JUNE 30, 2017**

**FOR FINANCIAL REPORTING AS OF JUNE 30, 2017**

May 11, 2018

Board of Trustees  
Retirement System for Employees of the City of Cincinnati  
801 Plum Street  
Cincinnati, OH 45202

Members of the Board:

Presented in this report is the information that the Retirement System for Employees of the City of Cincinnati (the System) should use to satisfy the requirements described in Governmental Accounting Standards Board (GASB) Statement No. 75 as of June 30, 2017 for the System's Retiree Health Benefits Plan (the Plan). This report has been prepared by the System's actuary, Cavanaugh Macdonald Consulting (CMC) as of June 30, 2017 (Measurement Date).

GASB Statement No. 75 (GASB 75) establishes accounting and financial reporting requirements for governmental employers who sponsor or participate in other postemployment benefits (OPEB) plans. In general, the GASB 75 rules that apply to postretirement benefit plans are designed to help plan sponsors adequately and systematically account for plan costs, facilitate comparisons of plan sponsor financial information by standardizing certain aspects of postretirement benefit plan asset and liability measurement, and improve the utility of financial statement information by requiring that plan sponsors provide certain information about their postretirement benefit plans.

**Additional Information and Disclosures**

The information contained in this report is intended to be used by the System for financial accounting purposes for the fiscal year ending on June 30, 2017 and its use for other purposes may not be appropriate. Calculations for purposes other than satisfying the requirements of GASB 75 may produce significantly different results. This report supersedes all June 30, 2017 financial reporting results issued prior to the date of this report. The System should rely only on the June 30, 2017 (FYE 2017) financial accounting information provided herein.

The results contained in this report were prepared by qualified actuaries according to generally accepted actuarial principles and practices, and in compliance with Actuarial Standards of Practice issued by the Actuarial Standards Board. The financial accounting information provided in this report reflects our current understanding of GASB Statement No. 75 (GASB accounting rules), including any applicable guidance provided by the System or its audit partners as of the date of this report.

The annual actuarial valuation used as a basis for much of the information presented in this report was performed as of December 31, 2016 (Valuation Date) based on a projection of Plan membership, expected claim, and contribution data from the Valuation Date to June 30, 2017 using generally accepted actuarial practices assuming no differences between actual outcomes and expected demographic experience (no demographic gains or losses).

The census data for active and retired members as of the Valuation Date, changes in plan provisions since the Valuation Date, the net contribution amount for the fiscal year beginning on July 1, 2016 and ending on June 30, 2017, and pertinent financial information was provided by the System for financial reporting purposes. We did not audit the supplied information, but it was reviewed for reasonableness and consistency. In certain situations, the supplied information was adjusted to account for normal differences in collection dates and/or methods. As a result, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it is reliable for the purposes stated herein. The results and conclusions contained in this report depend on the integrity of this information, and if any of the supplied information or analyses change, our results and conclusions may be different and this report may need to be revised. Likewise, this information may need to be revised to reflect any significant event that affects the Plan subsequent to the Valuation Date.

All assumptions used for GASB 75 purposes—including, but not limited to, discount rates, expected rates of return on assets, expected annual per capita claims, long-term health care cost trend rates, and expected retiree and spouse health care coverage election assumptions—have been selected by the System and should reflect best estimates of anticipated Plan experience. Other than the discount rate required under GASB 75, we believe that those assumptions selected by the System for financial accounting and reporting purposes as of June 30, 2017 are internally consistent and individually reasonable for their intended purposes. Additionally, the actuarial cost method, the asset valuation method, and the amortization method are prescribed under GASB accounting rules.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: retiree group benefits program experience differing from that anticipated by the assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. Since the potential impact of such factors is outside the scope of financial reporting requirements, an analysis of the range of results is not presented herein. **This report does not consider all possible scenarios.**

The funded status measurements included in this report are based on the assumptions and methods used to determine the Plan's obligations and asset values as of the Valuation Date and/or Measurement Date under GASB accounting rules. Funded status measurements for financial accounting purposes may not be appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations. Likewise, funded status measurements for financial accounting purposes may not be appropriate for assessing the need for or the amount of future actuarially determined contributions.

Board of Trustees  
May 11, 2018  
Page 3

CMC does not provide legal, investment, or accounting advice. Thus, the information in this report is not intended to supersede or supplant the advice and interpretations of the System, or its affiliated legal, investing, or accounting partners.

The undersigned are familiar with the near-term and long-term aspects of other postemployment benefit plan valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained in this report. All sections of this report, including any appendices and attachments, are considered an integral part of the actuarial opinions.

Please call us at 678-388-1700 if you have any questions.

Respectfully submitted,



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



Ben D. Mobley, ASA, ACA, MAAA  
Actuary



Jeffrey Gann, FSA, MAAA, EA  
Senior Actuary



ElizaBeth Wright  
Managing Director

EJK/BDM/JG

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**Section I — Summary of Principal Results**

**REPORT OF THE ANNUAL GASB STATEMENT NO. 75  
REQUIRED INFORMATION FOR THE  
RETIREMENT SYSTEM FOR EMPLOYEES OF THE CITY OF CINCINNATI  
RETIREE HEALTH BENEFITS PLAN**

**PREPARED AS OF JUNE 30, 2017**

(\$ Thousands)	
<b>Valuation Date (VD):</b>	December 31, 2016
<b>Prior Measurement Date:</b>	June 30, 2016
<b>Measurement Date (MD):</b>	June 30, 2017
<b>Employer Reporting Date (RD):</b>	June 30, 2017
<b>Membership Data as of the VD:</b>	
Inactive Members Currently Receiving Benefits	3,792
Spouses Currently Receiving Benefits	1,461
Inactive Members Entitled to But Not Yet Receiving Benefits	23
Active Members	<u>2,769</u>
Total Membership	8,045
<b>Discount Rate:</b>	
Long-Term Expected Rate of Return	7.50%
Municipal Bond Index Rate at Prior Measurement Date	3.01%
Municipal Bond Index Rate at Measurement Date	3.56%
Year in which Fiduciary Net Position is Projected to be Depleted	2050
Single Equivalent Interest Rate (SEIR) at Prior Measurement Date	4.57%
Single Equivalent Interest Rate (SEIR) at Measurement Date	6.31%
<b>Net OPEB Liability as of the MD:</b>	
Total OPEB Liability (TOL)	\$ 510,105
Fiduciary Net Position (FNP)	<u>486,594</u>
Net OPEB Liability (NOL = TOL – FNP)	\$ 23,511
FNP as a percentage of TOL	95.39%
<b>OPEB Expense / (Income) for the Measurement Period:</b>	\$ (28,502)
<b>Deferred (Inflow) / Outflow Balances as of the MD:</b>	
Total Deferred Inflow of Resources	\$ (104,171)
Total Deferred Outflow of Resources	\$ 0

## ***Section II — Introduction***

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The Governmental Accounting Standards Board issued Statement No. 75 (GASB 75), “*Accounting and Financial Reporting for Postemployment Benefit Plans Other Than Pensions*” in June 2015. GASB 75 is effective for employer fiscal years beginning after June 15, 2017. For the purposes of reporting under GASB 75, the Plan is assumed to be a single-employer defined benefit OPEB plan without a special funding situation where assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB 75. Additionally, we have assumed that the System will not restate results for any prior period based on the guidance in paragraph 244 of GASB 75.

This report, prepared as of June 30, 2017 (Measurement Date or MD), presents information to assist the System in meeting the requirements of GASB 75. Much of the material provided in this report is based on the data, assumptions, plan provisions, and results of the annual actuarial valuation of the Plan, as of December 31, 2016 (Valuation Date or VD).

GASB 75 establishes accounting and financial reporting requirements for governmental employers who sponsor or participate in other postemployment benefits (OPEB) plans. In general, the GASB 75 rules that apply to postretirement benefit plans are designed to help plan sponsors adequately and systematically account for plan costs, facilitate comparisons of plan sponsor financial information by standardizing certain aspects of postretirement benefit plan asset and liability measurement, and improve the utility of financial statement information by requiring that plan sponsors provide certain information about their postretirement benefit plans. GASB 75 replaces GASB 45 and also represents a significant departure from the requirements of the prior statement. GASB 45 required employers providing benefits through OPEB plans to report items consistent with the results of the plan’s actuarial valuations, as long as those valuations met certain parameters. GASB 75 create disclosures and reporting requirements that may or may not be consistent with the basis used for funding the Plan. In fact, GASB 75 paragraph B10 states:

“The Board concluded that it is not within the scope of its activities to set standards that establish a specific method of financing OPEB (that being a policy decision for government officials or other responsible authorities to make) or to regulate a government’s compliance with the financing policy or method it adopts. Accordingly, the Board established standards in this Statement within the context of accounting and financial reporting, not within the context of the funding of OPEB.”

GASB 75 requires the determination of the Total OPEB Liability (TOL) utilizing the Entry Age Normal (EAN) actuarial cost method. If the valuation date at which the TOL is determined is before the measurement date, as is the case here, the TOL must be rolled forward to the measurement date. The Net OPEB Liability (NOL) is then set equal to the rolled forward TOL minus the plan’s Fiduciary Net Position (FNP) (basically the market value of assets as of the Measurement Date). The plan provisions recognized in the calculation of the TOL are summarized in Schedule B. The development of the roll-forward of the TOL is shown in the table on page 8.

## ***Section II — Introduction***

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Among the items needed for the liability calculation is the discount rate, as defined by GASB, or a Single Equivalent Interest Rate (SEIR). 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 provisions applicable to the membership and beneficiaries of the Plan on the Measurement Date. Future contributions are to be projected in accordance with a plan's funding policy (or in the Plan's case, the Collective Settlement Agreement) and/or the application of professional judgment to consider the recent contribution history of the employers and non-employer contributing entities. 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 (Municipal Bond Index Rate). The Municipal Bond Index Rates used for this purpose are the average of the Bond Buyer General Obligation 20-year Municipal Bond Rates during the month of June published at the end of each week by The Bond Buyer ([www.bondbuyer.com](http://www.bondbuyer.com)). Our calculations indicated the FNP is projected to be depleted in 2050, so the Municipal Bond Index Rate is used in the determination of the SEIR. On the Prior Measurement Date (PMD), the Municipal Bond Index Rate was 3.01%. Since the index rate changed during the Measurement Period, a 3.56% Municipal Bond Index Rate was used as of the MD.

Another major change in GASB 75 is the requirement to determine and disclose an OPEB Expense (OE) in the Notes to Financial Statements. The OE includes amounts for Service Cost (the Normal Cost under EAN for the year), interest on the TOL, benefit payments, administrative expenses, recognition of increases/decreases in the TOL due to changes in benefit structure, actuarial experience, and actuarial assumption changes, and increases/decreases in the FNP due to investment experience. Changes in benefit terms, including any assumption changes that might be needed to reflect those amendments, are recognized immediately. Differences resulting from actuarial experience and changes of assumptions and other inputs are recognized over the average expected remaining service life of the plan membership at the beginning of the measurement period, and investment gains/losses are recognized over five years. The development of the OE is shown in Section IV.

The unrecognized portions of each year's experience and assumption changes are used to develop the Deferred Outflows of Resources and Deferred Inflows of Resources that must be included on the Statement of Net Position.

The sections that follow provide the results of all the necessary calculations, presented in the order laid out in GASB 75, for note disclosure and Required Supplementary Information (RSI) of the reporting entity's financial reports.



### **Section III — Financial Statement Notes**

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As stated previously, the Plan is assumed to be a single-employer defined benefit OPEB plan without a special funding situation where assets are accumulated in a trust that meets the criteria in paragraph 4 of GASB 75. Additionally, we have assumed that the System will not restate results for any prior period based on the guidance in paragraph 244 of GASB 75. The material presented herein will follow the order presented in GASB 75. This report does not include any non-actuarial items that may need to be reported or disclosed. Relevant paragraph numbers are provided for the convenience of the reader.

**Paragraphs 50(a)-(b):** CMC was not expected to supply this information.

**Paragraph 50(c):** The data required regarding the membership of the Plan was furnished by the System. The following table summarizes the membership of the Plan as of the December 31, 2016, Valuation Date.

<b>Membership Group</b>	<b>Total</b>
Retired members and surviving spouses currently receiving retiree health benefits	3,792
Spouses currently receiving retiree health benefits	1,461
Terminated vested members eligible for retiree health benefits	23
Active Participants	
Full-Time	2,720
DROP	<u>49</u>
Total	8,045

**Paragraphs 50(d) – (e):** CMC was not expected to supply this information.

### **Section III — Financial Statement Notes**

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**Paragraph 51:** Listed below is the information to be disclosed regarding the actuarial assumptions and other inputs used to measure the TOL. The complete set of actuarial assumptions and other inputs utilized in developing the TOL are outlined in Schedule C. The TOL was determined by an actuarial valuation as of December 31, 2016, using the following key actuarial assumptions and other inputs:

Inflation	3.00%
Salary increases, including wage inflation	4.00% - 7.50%
Long-term Investment Rate of Return, net of OPEB plan investment expense, including inflation	7.50%
Municipal Bond Index Rate	
Measurement Date	3.56%
Prior Measurement Date	3.01%
Year FNP is projected to be depleted	
Measurement Date	2050
Prior Measurement Date	2038
Single Equivalent Interest Rate, net of OPEB plan investment expense, including price inflation	
Measurement Date	6.31%
Prior Measurement Date	4.57%
Health Care Cost Trend Rates	
Pre-Medicare	7.75% for 2017 decreasing to an ultimate rate of 5.00% by 2023
Medicare	5.75% for 2017 decreasing to an ultimate rate of 5.00% by 2020

Both pre-retirement and post-retirement mortality rates were based on the RP 2000 combined mortality table, male rates set forward 2 years and female rates set forward 1 year and using a Scale AA projection to 2020. Post-disability mortality rates were based on the RP 2000 disabled retiree mortality table, female rates set back 5 years.

The demographic actuarial assumptions used in the December 31, 2016 valuation were based on the results of the last actuarial experience study, dated October 28, 2011.

The remaining actuarial assumptions (e.g., initial per capita costs, health care cost trends, rate of plan participation, rates of plan election, etc.) used in the December 31, 2016 valuation were based on a review of recent plan experience done concurrently with the December 31, 2016 valuation.

**Section III — Financial Statement Notes**

The long-term expected return on plan assets is reviewed as part of the GASB 75 valuation process. Several factors are considered in evaluating the long-term rate of return assumption, including the Plan’s current asset allocations and a log-normal distribution analysis using the best-estimate ranges of expected future real rates of return (expected return, net of investment expense and inflation) for each major asset class compiled by Horizon Actuarial Services, LLC in its “*Survey of Capital Market Assumptions, 2016 Edition*”. The long-term expected rate of return was determined by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The assumption is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.

The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*
Core Bonds	14.00%	2.80%
High Yield Bonds	3.00%	4.90%
Large-Cap Value Equity	7.00%	7.20%
Large-Cap Growth Equity	5.00%	7.10%
Mid-Cap Value Equity	4.00%	7.50%
Mid-Cap Core Equity	4.00%	7.50%
Small-Cap Value Equity	7.50%	8.00%
Non-U.S. Developed Large Cap	10.00%	7.40%
Non-U.S. Small Cap	5.00%	8.10%
Emerging Markets All-Cap	5.00%	8.50%
EM Small-Cap	3.00%	8.50%
Real Estate Core Equity	10.00%	7.40%
Infrastructure	7.50%	7.80%
Risk Parity	5.00%	4.10%
Private Equity	10.00%	11.10%
Total	100.00%	

\*Geometric mean

*Discount rate (SEIR).* The discount rate used to measure the TOL as of the Measurement Date was 6.31%. The projection of cash flows used to determine the discount rate was performed in accordance with GASB 75. The projection’s basis was an actuarial valuation performed as of December 31, 2016. In addition to the actuarial methods and assumptions of the December 31, 2016 actuarial valuation, the following actuarial methods and assumptions were used in the projection of cash flows:

- No future employee contributions were assumed to be made.
- No future employer contributions were assumed to be made.

**Section III — Financial Statement Notes**

Based on these assumptions, the Plan’s FNP was projected to be depleted in 2050 and, as a result, the Municipal Bond Index Rate was used in the determination of the SEIR. Here, the long-term expected rate of return of 7.50% on Plan investments was applied to periods through 2050 and the Municipal Bond Index Rate at the Measurement Date (3.56%) was applied to periods on and after 2050, resulting in an SEIR at the Measurement Date (6.31%).

The FNP projections are based upon the Plan’s financial status on the Valuation Date, the indicated set of methods and assumptions, and the requirements described in GASB 75. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing plan basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the Plan, or the Plan’s ability to make benefit payments in future years.

**Paragraph 52(e) and Paragraph 53(g):** These paragraph require disclosure of the sensitivity of the NOL to changes in the health care cost trend rates and the discount rate. The following exhibit presents the NOL of the Plan, calculated using current health care cost trend rates, as well as what the Plan’s NOL would be if it were calculated using health care cost trend rates that are 1-percentage-point lower and 1-percentage-point higher than current rates. Similarly, the exhibit presents the NOL of the Plan, calculated using the current discount rate of 6.31%, as well as what the Plan’s NOL would be if it were calculated using a discount rate that is 1-percentage-point lower and 1-percentage-point higher than the current rate:

Sensitivity of the Net OPEB Liability (\$ Thousands)				
Discount Rates		Health Care Cost Trend Rates		
		1% Decrease	Current	1% Increase
1% Increase	(7.31%)		\$ (25,681)	
Current	(6.31%)	\$ (29,350)	\$ 23,511	\$ 86,949
1% Decrease	(5.31%)		\$ 82,259	

Please keep in mind that the estimates provided in the table above were prepared using streamlined calculation techniques, and are intended to provide an “order of magnitude” indication of the NOL’s sensitivity to changes in these assumptions. We note that a portion of Plan assets are allocated to fixed income investments, and similar changes in bond yields could affect the valuations of some securities. However, we have not made any attempt to adjust the Plan’s FNP to reflect a potentially related change in fixed income asset pricing. Results based on more refined calculations may yield findings and conclusions different than those suggested by this streamlined methodology.

### Section III — Financial Statement Notes

**Paragraph 55:** This paragraph requires a schedule of changes in Net OPEB Liability. The following table provides the Plan information that must be disclosed:

#### CHANGES IN THE NET OPEB LIABILITY (\$ Thousands)

	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) – (b)
Balances at June 30, 2016	\$ 615,964	\$ 459,780	\$ 156,184
Changes for the year:			
Service cost	7,669		7,669
Interest	27,446		27,446
Benefit changes	0		0
Difference between expected and actual experience	0		0
Changes of assumptions	(109,830)		(109,830)
Contributions - employer		0	0
Contributions - employee		0	0
Net investment income		58,398	58,398
Benefit payments, including refunds of employee contributions	(31,144)	(31,144)	0
Administrative expense		(440)	440
Other changes	<u>0</u>	<u>0</u>	<u>0</u>
Net changes	(105,859)	26,814	(132,673)
Balances at June 30, 2017	<u>\$ 510,105</u>	<u>\$ 486,594</u>	<u>\$ 23,511</u>

### Section III — Financial Statement Notes

**Paragraphs 55(a)-(c) and 56(a):** The date of the actuarial valuation upon which the TOL is based is December 31, 2016. The TOL as of June 30, 2017 is determined using standard roll forward techniques. The roll forward calculation adds the normal cost for the first half of 2017 (also called the service cost), subtracts the actual benefit payments and refunds for the six months, and then applies the expected SEIR for the period. This procedure was used to determine the TOL as of June 30, 2017, as shown in the following table. In addition, an expected TOL as of June 30, 2017 is determined by rolling forward the June 30, 2016 TOL using similar techniques. The difference between this expected TOL and the actual TOL as of June 30, 2017 is the experience gain or loss for the period. The impact of measuring the liabilities using a discount rate of 6.31% as opposed to the 4.57% used at the beginning of period is shown as an assumption gain.

TOL Roll-Forward (\$ Thousands)	Discount Rate at June 30, 2017 (1)	Discount Rate at June 30, 2016 (2)
(a) Discount Rate (SEIR)	6.31%	4.57%
(b) TOL as of December 31, 2016	\$507,754	\$617,885
(c) Entry Age Normal Cost for the period* January 1, 2017 – June 30, 2017	2,388	3,835
(d) Actual Benefit Payments for the period January 1, 2017 – June 30, 2017	\$15,572	\$15,572
(e) TOL as of June 30, 2017 = [(b) x (1 + (a)) <sup>1/2</sup> ] + (c) – [(d) x (1 + (a)) <sup>1/4</sup> ]	\$510,105	\$619,935
(f) Final TOL as of June 30, 2017	\$510,105	
(g) Experience (Gain)/Loss: (1f) – (1e)	\$0	
(h) Assumption Change (Gain)/Loss: (1e) – (2e)		\$(109,830)

\* The Entry Age Normal Cost shown above includes interest during the projection period.

**Section III – Financial Statement Notes**

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**Paragraph 56(b):** Our understanding is that the employer does not have a special funding situation.

**Paragraph 56(c):** Since the Prior Measurement Date, the Discount Rate has changed from 4.57% to 6.31%.

**Paragraph 56(d):** There are no changes in benefit terms since the Prior Measurement Date.

**Paragraph 56(e):** No benefit payments are attributable to the purchase of allocated insurance contracts.

**Paragraph 56(f):** CMC was not expected to supply this information.

**Paragraph 56(g):** Please see Section IV for the development of the OPEB Expense (OE).

**Paragraphs 56(h)(1)-(2):** Since certain expense items are recognized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts will increase OPEB Expense they are labeled Deferred Outflows of Resources. If they serve to reduce OPEB Expense they are labeled Deferred Inflows of Resources. The recognition of these amounts is accomplished on a level dollar basis, with no interest included in the deferred amounts. Experience gains/losses and the impact of changes in actuarial assumptions or other inputs, if any, are recognized over the average expected remaining service life of the active and inactive Plan members at the beginning of the measurement period. Investment gains and losses are recognized over a fixed five year period.

The following table provides a summary of the Deferred Outflows of Resources and Deferred Inflows of Resources as of June 30, 2017:

(\$ Thousands)	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 0	\$ 0
Changes of assumptions or other inputs	0	(84,109)
Net difference between projected and actual earnings on plan investments	<u>0</u>	<u>(20,062)</u>
Total	\$ 0	\$ (104,171)

### **Section III – Financial Statement Notes**

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**Paragraph 56(h)(4):** Our understanding is that the employer does not have a special funding situation.

**Paragraph 56(h)(5):** CMC was not expected to supply this information.

**Paragraphs 56(i)(1)-(2):** Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to OPEB benefits will be recognized in OPEB Expense as follows:

<b>Measurement Period Ending:</b>	<b>(\$ Thousands)</b>
June 30, 2018	\$ (30,736)
June 30, 2019	\$ (30,736)
June 30, 2020	\$ (30,736)
June 30, 2021	\$ (11,963)
June 30, 2022	\$ 0
Thereafter	\$ 0

**Paragraph 56(i)(3):** Our understanding is that the employer does not have a special funding situation.

**Paragraph 56(j):** CMC was not expected to supply this information.



## ***Section IV — OPEB Expense***

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The OPEB Expense (OE) consists of a number of different items. GASB 75 refers to the first item as Service Cost, which is the Normal Cost using the Entry Age Normal actuarial funding method. The second item is interest on the TOL at 4.57%, the Discount Rate in effect as of the Prior Measurement Date.

The next three items refer to any changes that occurred in the TOL due to:

- benefit changes, or
- actual versus expected experience, or
- changes in assumptions or other inputs.

Changes in benefit terms, including any assumption changes that might be needed to reflect those amendments, are recognized immediately. Benefit improvements for existing Plan members will increase OE, or decrease OE if the change reduces Plan benefits. For the fiscal year ending on June 30, 2017, there is no benefit change to be recognized.

The next item to be recognized is the portion of current year changes in TOL due to actual versus expected Plan experience for the year. The portion to recognize in the current year is determined by spreading the total change over the average expected remaining service life of the entire Plan membership at the beginning of the measurement period. The average expected remaining service life of active members is the average number of years the active members are expected to remain in covered employment. The average expected remaining service life of the inactive members is zero. The recognition period is the weighted average of these two amounts, or 4.27 years.

The last item under changes in TOL is changes in assumptions or other inputs. There was a change in the TOL arising from the change in the Discount Rate from 4.57% on the Prior Measurement Date to 6.31% on the Measurement Date. Therefore, the change in TOL resulting from the change in the Discount Rate is to be recognized in the OPEB Expense (OE), beginning in the current measurement period, over a closed period equal to 4.27 years, using the same approach applied to Plan experience as described in the prior paragraph.

Active member contributions for the year and projected earnings on FNP at the expected rate of return on assets serve to reduce the OE.

## Section IV — OPEB Expense

One-fifth of current-period difference between actual and projected earnings on the FNP is recognized in the OE. The determination of the investment gain or loss is shown in the following table:

Investment Earnings (Gain) Loss For Year Ending June 30, 2017 (\$ Thousands)	
a) Expected rate of return on assets	7.50%
b) Beginning of year market value of assets	\$ 459,780
c) End of year market value of assets	\$ 486,594
d) Expected return on beginning assets for plan year	\$ 34,484
e) External cash flow (mid-year payments assumed):	
Contributions—employer	\$ 0
Contributions—active members	0
Refunds of contributions	0
Benefit payments	(31,144)
Administrative expenses	(440)
Other	0
Total external cash flow	\$ (31,584)
f) Expected return on external cash flow	(1,163)
g) Projected earnings for plan year (d + f)	\$ 33,321
h) Net investment income (c – b – e)	58,398
<b>i). Investment earnings (gain) loss (g – h)</b>	<b>\$ (25,077)</b>

The current year portions of previously determined experience and assumption amounts, recognized as Deferred Outflows of Resources and Deferred Inflows of Resources (see Section III) are included on the following page. Deferred Outflows of Resources are added to the OE while Deferred Inflows of Resources are subtracted from the OE. Finally, other miscellaneous items are included.

## Section IV — OPEB Expense

The development of the OE for the year ended June 30, 2017 is shown in the following table:

<b>OPEB Expense For Year Ending June 30, 2017 (\$ Thousands)</b>	
Service Cost at end of year*	\$ 7,669
Interest on the Total OPEB Liability and Cash Flow	27,446
Current-period benefit changes	0
Expensed portion of current-period difference between expected and actual experience in the Total OPEB Liability	0
Expensed portion of current-period changes of assumptions or other inputs	(25,721)
Active member contributions	0
Projected earnings on plan investments	(33,321)
Expensed portion of current-period differences between actual and projected earnings on plan investments	(5,015)
Administrative Costs**	440
Other	0
Recognition of beginning Deferred Outflows of Resources as OPEB Expense	0
Recognition of beginning Deferred Inflows of Resources as OPEB Expense	<u>0</u>
<b>OPEB Expense / (Income)</b>	<b>\$ (28,502)</b>

\* The service cost includes interest for the year.

\*\* Administrative costs are based on the fees paid from the Plan's trust.

## ***Section V — Required Supplementary Information***

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

**Paragraphs 57 (a) and (b):** The required tables are provided in Schedule A and the information is as of the Measurement Dates. We have assumed that the System will not restate results for any period prior to the adoption of GASB 75 in accordance with paragraph 244, so only the initial year is displayed. Additional years will be added in the future.

**Paragraph 57 (c):** The required table is provided in Schedule A and the information is as of the Employer's Fiscal Year Ends.

**Paragraph 58:** In addition the following should be noted regarding the RSI:

### ***Changes of benefit terms:***

- 2017
  - The plan changes included in Ordinance 336-2016 adopted by the City Council on October 26, 2016. In addition to incorporating many of the changes mandated by the Collaborative Settlement Agreement (CSA), the Ordinance also:
    - Excluded members hired after December 31, 2015 from eligibility to receive retiree health benefits.
    - Established benefit and eligibility provisions for Group E and F members not covered under the CSA similar to employees who are covered under the CSA.
    - Specified eligibility and postemployment contribution requirements for the retiree health benefits payable to members and beneficiaries entitled to deferred benefits.
    - Modified eligibility and postemployment contribution requirements for retiree health benefits paid as the result of an in-service death.
- 2016
  - There were several changes in benefit provisions as a result of the Collaborative Settlement Agreement (CSA) between the City and various plaintiff groups representing certain active and retired members of CRS as approved by the Court on October 5, 2015 and generally effective January 1, 2016.

### ***Changes in actuarial assumptions and methods:***

- 2017
  - Future contribution rates for retiree health benefit recipients are now based upon the projected retiree health care costs associated with each projection year's closed group of participants.
- 2016
  - None.

## **Section V— Required Supplementary Information**

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**Methods and assumptions used in calculations of Actuarially Determined Contributions.** The Actuarially Determined Contribution rates, as a percentage of payroll, used to determine the Actuarially Determined Contribution amounts in the Schedule of Employer Contributions (Schedule A) are calculated as of the most recent Valuation Date. The following actuarial methods and assumptions (from the December 31, 2015 actuarial valuation) were used to determine contribution rates reported in that schedule for the year ending June 30, 2017:

Actuarial cost method	Entry age
Amortization method	Level dollar
Amortization period	30 years, open
Asset valuation method	Five-year smoothed market value
Price inflation	3.00%
Salary increases, including wage inflation	3.00% to 7.50%
Initial health care cost trend rates	
Medicare Supplement Claims – Pre Medicare	7.75%
Medicare Supplement Claims – Post-Medicare	5.75%
Ultimate health care cost trend rates	
Medicare Supplement Claims – Pre Medicare	5.00%
Medicare Supplement Claims – Post-Medicare	5.00%
Year of ultimate trend rates	
Medicare Supplement Claims – Pre Medicare	2022
Medicare Supplement Claims – Post-Medicare	2019
Long-term investment rate of return, net of pension plan investment expense, including price inflation	7.50%

**Schedule A — Required Supplementary Information**

**SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY  
GASB 75 Paragraph 57(a)  
(\$ Thousands)**

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<b>Total OPEB Liability</b>										
Service Cost at end of year	\$7,669									
Interest	27,446									
Changes of benefit terms	0									
Difference between expected and actual experience	0									
Changes of assumptions or other inputs	(109,830)									
Benefit payments	(31,144)									
<b>Net change in Total OPEB Liability</b>	<b>\$(105,859)</b>									
<b>Total OPEB Liability – beginning</b>	<b>\$615,964</b>									
<b>Total OPEB Liability – ending (a)</b>	<b>\$510,105</b>									
<b>Plan Fiduciary Net Position</b>										
Contributions – employer	\$0									
Contributions – active member	0									
Net investment income	58,398									
Benefit payments	(31,144)									
Administrative expense	(440)									
Other	0									
<b>Net change in Plan Fiduciary Net Position</b>	<b>\$26,814</b>									
<b>Plan Fiduciary Net Position – beginning</b>	<b>\$459,780</b>									
<b>Plan Fiduciary Net Position – ending (b)</b>	<b>\$486,594</b>									
<b>Net OPEB Liability – ending (a) – (b)</b>	<b>\$23,511</b>									

**Schedule A — Required Supplementary Information**

**SCHEDULE OF THE NET OPEB LIABILITY  
GASB 75 Paragraph 57(b)(1)  
(\$ Thousands)**

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Total OPEB Liability	\$510,105									
Plan Fiduciary Net Position	<u>486,594</u>									
Net OPEB Liability	\$23,511									
Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	95.39%									
Covered payroll	\$179,887									
Net OPEB Liability as a percentage of covered payroll	13.07%									

**Paragraph 57(b)(2):** Our understanding is that the employer does not have a special funding situation.

**Schedule A — Required Supplementary Information**

**SCHEDULE OF THE NET OPEB LIABILITY  
GASB 75 Paragraph 57(c)  
(\$ Thousands)**

	2017	2016	2015	2014	2013*	2012	2011	2010	2009	2008
Actuarially Determined Employer Contribution	\$6,188	\$0	\$1,404	\$7,363	\$5,697	\$453	\$19,943	\$44,689	\$53,382	\$22,767
Contributions in relation to the Actuarially Determined Contribution	0	552	1,905	2,048	928	2,000	2,142	4,369	5,597	4,275
Annual contribution deficiency (excess)	\$6,188	\$(522)	\$(501)	\$5,315	\$4,769	\$(1,547)	\$17,801	\$40,320	\$47,785	\$18,492
Covered Payroll	\$179,887	\$174,963	\$164,575	\$163,477	\$167,148	\$167,148	\$165,029	\$167,589	\$170,416	\$164,640
Actual contributions as a percentage of covered payroll	0.00%	0.32%	1.16%	1.25%	0.56%	1.20%	1.30%	2.61%	3.28%	2.60%

\* Fiscal year changed in 2013 from December 31 to June 30

**Paragraph 58:** CMC was not expected to supply this information.



**Schedule B — Summary of Main Plan Provisions**

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Pension Benefit Eligibility

- All active employees of the City except for the following:
- Members of the Police and Fireman’s Disability and Pension Fund of Ohio.
  - Elected City officials.
  - Employees for whom the City contributes to PERS.
  - Members of the faculties, teaching staffs, research staffs, and administrative staff of the University of Cincinnati appointed to positions covered by the Teachers Insurance and Annuity Association Social Security Plan.
  - Persons becoming employees after June 1, 1961, who are employed in any of the following employment classifications: bricklayer, carpenter, carpenter foreman, cement finisher, electrician, electrician foreman, painter, painter foreman, plasterer, plumber, sign painter, steamfitter and pipefitter, tinsmith, or composition roofer.
  - Persons hired as police recruits who are not currently enrolled as a member of the System prior to their date of hire.
  - Current contributing members of the School Employees Retirement System (SERS) or the State Teachers Retirement System (STRS) who are hired by the City on a seasonal, temporary, or part-time basis.

Members of the System are divided into the following groups:

Group	Criteria
A, B	Any member who has retired prior to 7/1/2011.
C	Any member who, as of June 30, 2011, was an active or deferred vested member and had either: <ul style="list-style-type: none"> <li>a) Completed at least 30 years of service, or</li> <li>b) Reached age 60 and completed at least 5 years of service.</li> </ul>

**Schedule B — Summary of Main Plan Provisions**

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Pension Benefit Eligibility (continued)

Group	Criteria
D	<p>Any active member who, between July 1, 2011 and December 31, 2013:</p> <ol style="list-style-type: none"> <li>1) Either               <ol style="list-style-type: none"> <li>a) Completed at least 30 years of service, or</li> <li>b) Reached age 60 and completed at least 5 years of service; and</li> </ol> </li> <li>2) Retired prior to January 1, 2014.</li> </ol>
E	<p>Any active member who:</p> <ol style="list-style-type: none"> <li>1) Between July 1, 2011 and December 31, 2013 either:               <ol style="list-style-type: none"> <li>a) Completed at least 30 years of service, or</li> <li>b) Reached age 60 and completed at least 5 years of service; and</li> </ol> </li> <li>2) Retires on or after January 1, 2014.</li> </ol>
F	<p>Any active member whose most recent membership enrollment date was prior to January 1, 2010 and who is not in groups A through E.</p> <p>Any deferred vested member whose most recent membership enrollment date was prior to January 1, 2010, is not in groups A through E, and has at least five years of service prior to the date they separate from employment.</p>
G	<p>Any member whose most recent membership enrollment date is on or after January 1, 2010, or</p> <p>Any member rehired on or after January 1, 2010, who has fewer than 5 years of service as of June 30, 2011, or</p> <p>Any retiree of the System who is receiving a service retirement allowance and is re-employed on or after April 1, 2013.</p>

## Schedule B — Summary of Main Plan Provisions

Pension Benefit Eligibility (continued)

Members in the System are further classified as follows:

Class	Criteria
CSA Retiree (CSA participants corresponding to Retirees Class)	Group A and B members and their designated optionees.
CSA Employee (CSA participants corresponding to Current Employees Class)	Group C, D, E, and F members (and their designated optionees) that were vested and employed on 7/1/2011.
CMC Employee (Non-CSA participants.)	Group E and F members (and their designated optionees) that were either vested or employed on 7/1/2011 and no break in employment service since 1/1/2010 and prior to becoming vested.
Non-CSA (Non-CSA participants.)	Group G members and their designated optionees; or Inactive members not assigned to a group because they were neither employed nor vested on 7/1/2011.

Years of Service: Years or fractional years of full-time service rendered to the plan sponsor.

### Normal Retirement

*Groups A, B, C, D, E, and F:*

Age 60 with 5 years of service or 30 years of service.

*Group G:*

Age 67 with 5 years of service or age 62 with 30 years of service.

## **Schedule B — Summary of Main Plan Provisions**

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Pension Benefit Eligibility (continued)

### Early Retirement

*Groups A, B, C, D, E, and F:*  
Age 55 with 25 years of service.

*Group G:*  
Age 57 with 15 years of service.

Deferred Retirement Option Plan (DROP): Current Employees Class members with at least 30 years of service may participate in the DROP.

Disability Retirement Eligibility: 5 years of service.

Deferred Vested Retirement Eligibility: 5 years of service.

Retiree Health Benefits Eligibility

Per Ordinance 336-2016 adopted by the City Council on October 26, 2016, employees hired after December 31, 2015 are not eligible to receive retiree health benefits.

Group 1: Those members of Group C or those members hired before January 9, 1997. For those members of Group C or those members who retire under the System prior to January 1, 2016 (including their survivors receiving pension benefits), a minimum of 15 years of service is required. For those members who retire under the System after December 31, 2016 (including their survivors receiving pension benefits), a minimum attained age of 60 with 20 years of service or 30 years of service regardless of age is required.

Group 2: Those participants hired on or after January 9, 1997. For those members who retire under the System prior to January 1, 2016 (including their survivors receiving pension benefits), a minimum of 15 years of service is required. For those members who retire under the System after December 31, 2016 (including their survivors receiving pension benefits), a minimum attained age of 60 with 20 years of service or 30 years of service regardless of age is required. Group 2 participants entitled to a deferred retirement allowance are eligible for health benefits upon attainment of the Medicare eligibility age.

## **Schedule B — Summary of Main Plan Provisions**

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Deferred Retirement Option Plan (DROP): Eligible Current Employees Class members may effectively retire and freeze their accrual of years of service with the System and defer receipt of retirement benefits, including retiree health benefits, for a period not to exceed five years while continuing City employment. For valuation purposes, current DROP participants are assumed to be active members, receiving health care benefits as an active employee. Service does not accrue while participating in the DROP and retiree health benefits are assumed to begin upon exit from active employment.

Members and Beneficiaries Assumed to be Eligible for Deferred Retiree Health Benefits as of December 31, 2016: Per Ordinance 336-2016 adopted by the City Council on October 26, 2016, members of Group C and their associated beneficiaries are eligible for retiree health benefits under the Select Plan based upon a minimum of 15 years of service. All other eligible members and their associated beneficiaries are eligible for retiree health benefits under the Model Plan based upon a minimum attained age of 60 with 20 years of service or 30 years of service regardless of age.

Dependents: A retiree may elect to cover an eligible spouse and/or eligible dependent children by paying the applicable retiree contribution rate for the specified enrollment tier.

### Retiree Health Benefits

The System offers health care benefits (medical, prescription drugs, dental, and vision coverage) to eligible retirees, beneficiaries, and their dependents before and during Medicare eligibility.

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, members who retired prior to September 1, 2007, and who establish their annual household income to be less than \$30,000, are eligible to receive medical and prescription drug coverage under the Secure Plan. Those members who retired prior to September 1, 2007 who do not qualify for coverage under the Secure Plan may elect medical and prescription drug coverage through either the Select Plan or Model Plan based upon eligibility.

Those members of Group C or those members who retired on or after September 1, 2007 (including those employees who retired under a special incentive plan in 2007) but prior to January 1, 2016 may elect medical and prescription drug coverage through the Select Plan. Those members not eligible for the Secure Plan or the Select Plan may elect coverage under the Model Plan.

**Schedule B — Summary of Main Plan Provisions**

**Retiree Contributions**

Participants covered by the Secure Plan do not contribute towards the cost of medical and prescription drug coverage. Group 1 participants covered by the Select Plan contribute an amount equal to five percent of the full cost of medical and prescription drug benefits of the retiree group with costs adjusted based upon the Medicare eligibility age (age 65). Group 1 participants covered by the Model Plan contribute an amount equal to ten percent of the full cost of medical and prescription drug benefits of the retiree group with costs adjusted based upon the Medicare eligibility age (age 65). Group 2 participants will pay the portion of the full cost of medical and prescription drug benefits of the coverage option for which they are eligible as determined by the point system.

Points	Retiree Contribution of Cost (%)	
	Select Plan	Model Plan
90+	5	10
80 – 89	25	
70 – 79	50	
60 – 69	75	
Less than 60	75% of full premium for retiree only (spouse or dependent coverage is not available)	

**Active Service Death Benefits**

A surviving spouse, eligible dependent child, and orphan receiving survivor pension benefits as a result of death during employment of an eligible active member is eligible to receive retiree health benefits based upon the eligibility and terms applicable to the associated member.

**Medicare Part B Premium Reimbursement**

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, the System no longer reimburses the Medicare Part B premiums for retirees and spouses. As such, it is assumed the System has no liability under GASB 74 and 75 for Medicare Part B premium reimbursements.

All Medicare eligible retirees and dependents are responsible for the payment of the required Medicare Part B premiums. Retiree health benefits participants who are eligible for but do not enroll or maintain their enrollment in Medicare Part B will be responsible for the medical expenses Medicare Part B otherwise would have paid. As such, it is assumed the System is the secondary payer for Medicare Part B benefits.

**Schedule B — Summary of Main Plan Provisions**

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Dental Benefits

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, all members electing to participate in the dental plan will be required to pay the full cost of dental coverage. As such, it is assumed the System has no liability under GASB 74 and 75 for dental benefits.

Vision Benefits

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, all members electing to participate in the vision plan will be required to pay the full cost of vision coverage. As such, it is assumed the System has no liability under GASB 74 and 75 for vision benefits.

## **Schedule C — Statement of Actuarial Assumptions and Methods**

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DISCOUNT RATE: 6.31% per year

EXPECTED RATE OF RETURN ON ASSETS: 7.50% per year, net of investment expenses

INFLATION ASSUMPTION: 3.00% per year

HEALTH CARE COST TREND RATES: The initial per capita health care costs and contributions are expected to increase each year with inflation (trend). The following chart details the trend assumption by year and payment age.

Calendar Year	Payment Age <65	Payment Age 65+
2017	7.75%	5.75%
2018	7.00	5.50
2019	6.50	5.25
2020	6.00	5.00
2021	5.50	5.00
2022	5.25	5.00
2023+	5.00	5.00

AGE RELATED MORBIDITY: Per capita health care costs are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims is assumed to be:

Payment Age	Annual Increase
<30	0.0%
30 – 34	1.0
35 – 39	1.5
40 – 44	2.0
45 – 49	2.6
50 – 54	3.3
55 – 59	3.6
60 – 64	4.2
65 – 69	3.0
70 – 74	2.5
75 – 79	2.0
80 – 84	1.0
85 - 89	0.5
90+	0.0

SPOUSE COVERAGE IN RETIREE HEALTH BENEFIT PLANS: Actual census data, payment form elections, and current health care plan elections for spouses of current retirees were used. For spouses of eligible future retirees, a 100% spouse coverage election rate is assumed for those members choosing a joint & survivor payment form, and a 15% spouse coverage election rate is assumed for those members selecting a single life annuity payment form. Under a joint & survivor payment form, retiree health benefits are available until the death of the last annuitant.



**Schedule C — Statement of Actuarial Assumptions and Methods**

RETIREE HEALTH CARE PLAN INITIAL PER CAPITA COSTS: Paid claims and cost data were provided by the System, Anthem, and OptumRx for the period of January 1, 2015 through December 31, 2016. Claims data were provided separately for medical and prescription drug benefits. CMC accepted this information without audit and has relied upon the sources for the accuracy of the data; however, CMC did review the information for reasonableness. On the basis of this review, CMC believes the data and information provided to be sufficiently complete and reliable, and that it is appropriate for the purposes intended.

Assumed adult per capita health care costs were based on past experience and trended forward to the valuation period. Costs were adjusted to account for any changes in administration, plan changes, and large claims, if appropriate. Additionally, the per capita health care costs have been adjusted based upon information provided by the System to reflect the anticipated cost reductions associated with providing prescription drug benefits through a new pharmacy benefit manager, CVS/caremark. As some participants elect to cover dependents, the assumed adult costs include the additional costs of coverage for non-spouse dependents.

Future experience may differ significantly from the cost estimates presented in this report due to unforeseen and random events. As such, the valuation’s results should be viewed as having a likely range of variability.

The following chart details the initial adult per capita health care cost assumptions. These amounts include medical, drug, and administrative costs and represent the full cost of providing benefits. The average medical, drug, and administrative costs shown are normalized to age 65 and then age adjusted in calculating liabilities. Additionally, health care costs for all prospective health care plan participants and existing retirees not yet age 65 who were hired prior to April 1, 1986 are adjusted to account for their potential ineligibility for premium-free Medicare Part A.

Annual Medical, Drug, and Administrative Costs			
Plan	Payment Age <65	Payment Age 65+	
		Not Enrolled in Medicare Part A	Enrolled in Medicare Part A
Secure Plan	\$21,152	\$6,751	\$3,509
Select Plan	\$15,991	\$6,346	\$2,964
Model Plan	\$15,718	\$5,988	\$2,925

## **Schedule C — Statement of Actuarial Assumptions and Methods**

RETIREE HEALTH CARE PLAN CONTRIBUTIONS: Assumed adult per capita health care contribution rates were developed for those participants in the 2016 Select Plan who are required to contribute a portion of retiree health benefit costs as defined in Schedule C. Contributions were determined to fully-fund retiree health benefit costs in 2017 based upon Medicare eligibility status. Rates are based on retiree cost experience, enrollment, and trended based on the assumptions. The following chart details the full (100%) adult per capita contribution assumptions. These amounts include medical, drug, and third party administrative costs.

Plan	Payment Age <65	Payment Age 65+		Current Average
		Not Enrolled in Medicare Part A	Enrolled in Medicare Part A	
Select Plan	\$13,409	\$7,855	\$3,763	\$4,091
Model Plan	\$12,163	\$5,988	\$3,007	\$3,052

As members hired after December 31, 2015 are ineligible to receive retiree health benefits, the contributions assumed for years beyond 2017 are based upon the projected retiree health care costs associated with each projection year's closed group of participants, reflecting the impact of aging and health care inflation.

HEALTH BENEFIT PLAN PARTICIPATION: Actual census data and current plan elections provided by the System were used for those currently receiving retiree health benefits. Group 1 members who retired prior to September 1, 2007 and currently qualify for the Secure Plan, are assumed to re-qualify in all future years. All current participants not qualifying for the Secure Plan are covered either by the Select Plan or the Model Plan. Current participants are assumed to maintain their current retiree health benefits coverage until they are no longer eligible.

The active members of Group C with at least 15 years of creditable service shall be entitled to retiree health benefits under the Select Plan as Group 1 members. All other eligible future retirees electing retiree health benefits are assumed to be covered by the Model Plan. 90% of eligible future retirees in Group 1 are assumed to elect retiree health benefits. Eligible future retirees in Group 2 are required to pay the portion of their cost as determined by the point system, so retiree health benefit election rates are assumed to reduce as the level of cost sharing increases. The point system is based upon the sum of the member's full years of service and the member's age at separation from service. The assumed contribution rates and rates of participation for Group 1 and Group 2 members are as follows:

Group	Assumed Rate of Participation (%)	Retiree Contribution of Cost (%)	
		Select Plan	Model Plan
Group 1 / Group 2 with 90+ Points	90	5	10
Group 2 with 80 – 89 Points	80	25	25
Group 2 with 70 – 79 Points	60	50	50
Group 2 with 60 – 69 Points	40	75	75

For those eligible future retirees of Group 2 with less than 60 points, the System will pay 25% of the full premium for retiree coverage only (spouse or dependent coverage are not available). It is assumed 0% of these eligible future retirees will elect retiree health benefits.

As credible experience for Group 2 participation is not yet available, the rates of participation are estimates and actual results may be materially different. As such, this assumption will need to be revised as credible experience evolves.

## ***Schedule C — Statement of Actuarial Assumptions and Methods***

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MEDICARE COVERAGE AND ELIGIBILITY: Retiree health benefit participants age 65 and older who are eligible for premium-free Medicare Part A benefits are assumed to be enrolled in Medicare Part A. For those retiree health benefit participants who are not eligible for premium-free Medicare Part A coverage, the System is assumed to remain the primary payer. For a portion of the Medicare eligible group, the premium-free Medicare Part A eligibility status is provided by the System. As the premium-free Medicare Part A eligibility status is determined from a wide range of sources with varying and, at times, limited content, the premium-free Medicare Part A eligibility status data is incomplete. Adjustments have been made to account for this incompleteness. As the true status of those who are, or will be eligible for premium-free Medicare Part A is uncertain, actual results may be materially different. For all unidentified current retirees, hired prior to April 1, 1986, and not assumed eligible for premium-free Medicare Part A coverage through their spouse, as well as those active employees hired prior to April 1, 1986, 15% are assumed to not qualify for premium-free Medicare Part A coverage. The assumption of 15% is based upon estimates from the current retiree population. 100% of deferred vested members receiving health care benefits are assumed to obtain the 40 or more quarters of Medicare-covered employment required for premium-free Medicare Part A coverage as a result of their subsequent employment.

All retiree health benefit participants age 65 and older are assumed to be enrolled in Medicare Part B.

**Schedule C — Statement of Actuarial Assumptions and Methods**

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SALARY INCREASES: Salary increases are assumed to vary by service. Representative rates are as follows:

Service	Annual Increase
0	7.5%
5	5.0
10	4.5
20	4.5
30	4.0

SEPARATIONS FROM ACTIVE SERVICE: For death rates, RP-2000 Combined Mortality Table set forward two years for males and set forward one year for females and using a Scale AA projection to 2020 was used. Representative values of the assumed annual rates of separation from active service are as follows:

Age	Annual Rate of Withdrawal			
	<u>Less than One Year of Service</u>	<u>Between One and Three Years of Service</u>	<u>Between Three and Five Years of Service</u>	<u>Five or More Years of Service</u>
20	25.0%	10.0%	7.5%	5.0%
25	25.0	10.0	7.5	5.0
30	25.0	10.0	7.5	3.5
35	25.0	10.0	4.0	2.8
40	25.0	10.0	4.0	2.3
45	25.0	10.0	4.0	1.5
50	25.0	10.0	4.0	1.5
55	25.0	10.0	4.0	1.5
60	25.0	10.0	4.0	1.5
65	25.0	10.0	4.0	1.5
70	25.0	10.0	4.0	1.5

**Schedule C — Statement of Actuarial Assumptions and Methods**

<u>Age</u>	<b>Annual Rate of Retirement</b>			
	<u>Early Retirement</u>	<u>Less than 30 Years of Service</u>	<u>30 Years of Service</u>	<u>31+ Years of Service</u>
<b>Groups C, D, E, and F*</b>				
50			45.0	30.0
55	10.0%		45.0	30.0
59	10.0		45.0	30.0
60		25.0%	30.0	25.0
61		20.0	20.0	20.0
65		20.0	20.0	20.0
70		100.0	100.0	100.0
<b>Group G</b>				
57	10.0%			
60	20.0			
62	20.0		25.0%	20.0%
65	20.0		25.0	20.0
67		25.0%	25.0	20.0
69		20.0	20.0	20.0
70		100.0	100.0	100.0

\* For purposes of valuing CSA Employee members eligible for DROP benefits, the rates listed for 30 or more years of service are adjusted as follows:

- 30% of members who are expected to retire with 31, 32, 33, 34, or 35 years of service are assumed to enter the DROP upon attaining 30 year of service.
- 10% of members who are expected to retire with 30 years of service are assumed to enter the DROP upon attaining 30 years of service.

**Schedule C — Statement of Actuarial Assumptions and Methods**

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<u>Age</u>	<u>Annual Rate of Disability</u>	
	<u>Groups C, D, E, and F</u>	<u>Group G</u>
20	0.01%	0.01%
25	0.02	0.02
30	0.03	0.03
35	0.05	0.05
40	0.09	0.09
45	0.15	0.15
50	0.27	0.27
55	0.42	0.42
60	0.00	0.50
67	0.00	0.00

DEATHS AFTER RETIREMENT: The RP-2000 Combined Mortality Table set forward two years for males and set forward one year for females and using a Scale AA projection to 2020 is used for the period after retirement and for dependent beneficiaries. The RP-2000 Disabled Mortality Table (set back 5 years for females) is used for the period after disability.

PERCENT MARRIED: 70% of male members and 30% of female members are assumed to be married and elect a joint & survivor payment form. Males are assumed to be three years older than their spouse.

ASSETS: Market Value of Assets.

WITHDRAWAL ASSUMPTION: It was assumed that 50% of the eligible vested members who terminate elect to withdraw their contributions while the remaining 50% elect to leave their contributions in the plan in order to be eligible for a benefit at their retirement date.

PERCENT ELECTING MEDICAL EXPENSE REIMBURSEMENT PROGRAM (MERP): Based upon current participation in the MERP, 0% of current and future retiree health benefits participants are assumed to elect the MERP. As credible experience for MERP participation is not yet available, the assumed rate of participation is an estimate and actual results may be materially different. As such, this assumption will need to be reviewed as credible experience evolves.

PART-TIME EMPLOYEES: On July 1, 1991, the plan was amended to include part-time employees. As these employees do not exhibit the same decremental patterns as full-time employees, and the liability is deemed to be de minimis, the results of this valuation are based upon full-time employees only.

## ***Schedule D — Actuarial Cost Method***

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The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future investment rate of return. The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of the Plan are determined following a level funding approach, and consist of a normal contribution and an actuarial accrued liability contribution.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for OPEB benefits to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.

## **Schedule E — Balances of Deferred Outflows and Deferred Inflows of Resources**

The following schedules provide the balances of Deferred Outflows of Resources and Deferred Inflows of Resources that are reported for differences between expected and actual experience and changes of assumptions or other inputs. For the following exhibits:

- There are no differences between expected and actual experience to be recognized from periods prior to June 30, 2017. Experience losses are presented as positive amounts. Experience gains are presented as negative amounts.
- Positive amounts increase the OPEB Expense and increase the Deferred Outflows of Resources balances. Negative amounts decrease the OPEB Expense and decrease the Deferred Inflows of Resources balances.
- Deferred Outflows of Resources are presented as positive amounts. Deferred Inflows of Resources are presented as negative amounts.



**Schedule E — Balances of Deferred Outflows and Deferred Inflows of Resources**

(\$ Thousands)					Amounts	Balances as of June 30, 2017	
Measurement	Experience	Experience	Recognition	Period	Recognized in	Deferred Outflows	Deferred Inflows of
Period Ending	Losses	Gains	Period	(Years)	OPEB Expense	of Resources	Resources
	(a)	(b)	(c)		through June 30,	(a) – (d)	(b) – (d)
					2017	(d)	
<b>Deferred Outflows and Inflows of Resources Arising from Differences Between Expected and Actual Experience:</b>							
2017	\$ 0	\$ 0	4.27	\$ 0	\$ 0	\$ 0	\$ 0
						\$ 0	\$ 0
<b>Deferred Outflows and Inflows of Resources Arising from Changes in Assumptions:</b>							
2017	\$ 0	\$ (109,830)	4.27	\$ (25,721)	\$ (25,721)	\$ 0	\$ (84,109)
						\$ 0	\$ (84,109)
<b>Deferred Outflows and Inflows of Resources Arising from Differences Between Projected and Actual Earnings on Plan Investments:</b>							
2017	\$ 0	\$ (25,077)	5.0	\$ (5,015)	\$ (5,015)	\$ 0	\$ (20,062)
						\$ 0	\$ (20,062)