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GASB STATEMENT NO. 67 REPORT

FOR THE

RETIREMENT SYSTEM FOR EMPLOYEES

OF THE CITY OF CINCINNATI

PREPARED AS OF JUNE 30, 2014

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The experience and dedication you deserve

November 13, 2014

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

Dear 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) Statements No. 67. This report has been prepared as of June 30, 2014 (the Measurement Date) to assist the System in better understanding the requirements of GASB 67 and to identify the information to be provided by the System's actuary, Cavanaugh Macdonald Consulting (CMC).

The annual actuarial valuation used as a basis for much of the information presented in this report was performed as of December 31, 2013. The valuation was based upon data, furnished by the System, concerning active, inactive and retired members along with pertinent financial information.

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

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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 67 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

Respectfully submitted,

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

Eric H. Gary, FSA, FCA, MAAA
Chief Healthcare Actuary

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REPORT OF THE ANNUAL GASB STATEMENT NO. 67
REQUIRED INFORMATION FOR THE
RETIREMENT SYSTEM FOR THE EMPLOYEES
OF THE CITY OF CINCINNATI

PREPARED AS OF JUNE 30, 2014

SECTION I – INTRODUCTION

The Governmental Accounting Standards Board issued Statement No. 67 (GASB 67), *"Financial Reporting for Pension Plans"*, in June 2012. The effective date is for plan years beginning after June 15, 2013 which will be fiscal year end June 30, 2014 for the Retirement System for Employees of the City of Cincinnati. This report has been prepared as of June 30, 2014. Much of the material provided in this report is based on the data, assumptions and results of the annual actuarial valuation of the System as of December 31, 2013. The results of that valuation were detailed in a report dated May 1, 2014.

GASB 67 replaces GASB 25, and represents a significant departure from the requirements of that older statement. GASB 25 was issued as a "funding friendly" statement that required pension plans to report items consistent with the results of the plan's actuarial valuations, as long as those valuations met certain parameters. GASB 67 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 System.

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

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

If, however, at a future measurement date, the FNP is projected to be depleted, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate. The rate used, if necessary, for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index published monthly by the Board of Governors of the Federal Reserve System. We have determined that the FNP is projected to be depleted during the projection period and a blended discount rate of 5.59% as of June 30, 2014 will meet the requirements of GASB 67. Since the Plan must disclose the change in the Net Pension Liability from 2013 to 2014, a blended discount rate is also needed as of June 30, 2013. We have calculated this rate to be 5.53%.

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

SECTION II – FINANCIAL STATEMENT NOTES

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

Paragraph 30.a. (4): The data required regarding the membership of the Retirement System for Employees of the City of Cincinnati were furnished by the System. The following table summarizes the membership of the System as of December 31, 2013, the Valuation Date.

Membership

	Number
Retired participants and beneficiaries currently receiving benefits	4,409
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	158
Inactive participants*	6,362
Active participants	
Full-Time	2,957
Part-Time	1,117
Total	15,003

* Participants who are former employees who have an employee account balance in the plan but are not otherwise vested in an employer provided benefit.

Paragraph 31.a. (1)-(4): As stated earlier, the NPL is equal to the TPL minus the FNP. That result as of June 30, 2014 is presented in the following table ($ thousands).

	Fiscal Year Ending June 30, 2014
Total Pension Liability	$ 2,747,109
Fiduciary Net Position	1,578,749
Net Pension Liability	$ 1,168,360
Ratio of Fiduciary Net Position to Total Pension Liability	57.47%

Paragraph 31.b.: This paragraph requires information regarding the actuarial assumptions used to measure the TPL. The set of actuarial assumptions utilized in developing the TPL are outlined in Appendix C. The total pension liability was determined based on an actuarial valuation as of December 31, 2013, using the following actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2014:

Inflation	3.0 percent
Salary increases	3.0 to 7.0 percent, including inflation for five-year select period beginning December 31, 2011; 4.0 to 7.5 percent, including inflation thereafter
Investment rate of return	5.59 percent, net of pension plan investment expense, and including inflation

Mortality

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 actuarial assumptions used in the December 31, 2013 valuation were based on the results of the last actuarial experience study, dated October 28, 2011.

Paragraph 31.b.(1)

(a) Discount rate. The discount rate used to measure the total pension liability was 5.53% as of June 30, 2013 and 5.59% as June 30, 2014.

(b) Projected cash flows: The projection of cash flows used to determine the discount rate assumed that plan member contributions and Employer contributions will be made at the current contribution rates as set out in City Council ordinance. These rates are shown in the following table:

Fiscal Year End	Employee Contribution Rate	Employer Contribution Rate
2014	9.0%	22.0%
2015 and thereafter	9.0%	14.0%

(c) Long term rate of return: The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

(d) Municipal bond rate: the discount rate determination used a municipal bond rate of 4.27% as of June 30, 2013 and 4.35% as of June 30, 2014.

(e) Periods of projected benefit payments: Projected future benefit payments for all current plan members were projected through 2115.

(f) Assumed asset allocation: The target asset allocation and best estimates of arithmetic real rates of return for each major asset class as listed in the last actuarial experience study, dated October 28, 2011 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*
Broad Fixed Income	14.00%	1.10%
High Yield	3.00%	5.60%
Broad US Equity	19.50%	6.60%
US Mid-Cap Growth	5.00%	7.80%
US Small-Cap Value	5.00%	10.60%
Developed Large-Cap	11.00%	7.80%
Non-US Small-Cap	5.00%	11.90%
Emerging Market	5.00%	11.30%
Hedge Fund – Hedged Equity	15.00%	4.70%
Real Estate - Core	7.50%	5.10%
Infrastructure	5.00%	8.30%
Private Equity - FOF	5.00%	13.20%
Total	100.00%	

*Arithmetic mean

(g): **Sensitivity analysis**: disclosure of the sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability of the System, calculated using the discount rate of 5.59 percent, as well as what the System's net pension liability calculated using a discount rate that is 1-percentage-point lower (4.59 percent) or 1-percentage-point higher (6.59 percent) than the current rate:

	1% Decrease (4.59%)	Current Discount Rate (5.59%)	1% Increase (6.59%)
System's Net Pension Liability	$1,491,447	$1,168,360	$896,572

Paragraph 31.c.: The date of the actuarial valuation upon which the TPL is based is December 31, 2013. An expected TPL is determined as of June 30, 2014 using standard roll forward techniques. The roll forward calculation adds the normal cost for the first half of 2014 (also called the service cost), subtracts the actual benefit payments and refunds for the six months, and then applies the expected SEIR (5.59%) for the period. This procedure was used to determine the TPL as of June 30, 2014, as shown in the following table:

TPL Roll-Forward ($ thousands)	
(a) TPL as of December 31, 2013	$2,739,593
(b) Entry Age Normal Cost for the period January 1, 2014 – June 30, 2014	13,141
(c) Actual Benefit Payments and Refunds for the period January 1, 2014 – June 30, 2014	80,059
(d) TPL as of June 30, 2014 $= [(a) \times (1 + SEIR)^{1/2}] + (b)$ $- [(c) \times (1 + SEIR)^{1/4}]$	$2,747,109

SECTION III – REQUIRED SUPPLEMENTARY INFORMATION

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

Paragraphs 32.a.-c.: The required tables of schedules are provided in Appendix A.

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

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

None.

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

None.

Method and assumptions used in calculations of actuarially determined contributions.

The actuarially determined contribution rates in the schedule of employer contributions are calculated as of the December 31, eighteen months prior to the fiscal year end in which contributions are reported. The following actuarial methods and assumptions were used to determine actuarial contribution rates reported in that schedule:

Actuarial cost method	Entry age
Amortization method	Level dollar, open
Remaining amortization period	30 years
Asset valuation method	5-year smoothed market
Inflation	3.0 percent
Salary increase	3.0 to 7.0 percent, including inflation for five-year select period beginning December 31, 2011; 4.0 to 7.5 percent, including inflation thereafter
Investment rate of return	7.5 percent, net of pension plan investment expense, and including inflation

APPENDIX A

REQUIRED SUPPLEMENTARY INFORMATION

(EXHIBIT A AND B FOLLOW)

Exhibit A

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

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total pension liability										
Service Cost	$ 25,937									
Interest	148,408									
Benefit changes	0									
Difference between expected										
and actual experience	0									
Changes of assumptions	(17,827)									
Benefit payments	(156,149)									
Refunds of contributions	(1,785)									
Net change in total pension liability	$ (1,416)									
Total pension liability - beginning	$2,748,525									
Total pension liability - ending (a)	$2,747,109									
Plan net position										
Contributions – employer	$37,739									
Contributions – member	15,059									
Net investment income	258,382									
Benefit payments	(156,149)									
Administrative expense	(1,385)									
Refunds of contributions	(1,785)									
Other	0									
Net change in plan net position	$ 151,861									
Plan net position – beginning	$1,426,888									
Plan net position - ending (b)	$1,578,749									
Net pension liability - ending (a) - (b)	$1,168,360									

Exhibit A (Continued)

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

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Total pension liability	$2,747,109									
Plan net position	1,578,749									
Net pension liability	$1,168,360									
Ratio of plan net position to total pension liability	57.47%									
Covered-employee payroll	163,477									
Net pension liability as a percentage of covered-employee payroll	714.69%									

Exhibit B

GASB 67 Paragraph 32.c.
SCHEDULE OF EMPLOYER CONTRIBUTIONS
($ in Thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Actuarially determined employer contribution	78,101	66,999	49,952	54,875	80,882	43,065	38,767	38,571	23,227	34,148
Actual employer contributions	37,739	37,192	33,608	31,160	30,029	26,650	23,969	31,763	24,946	15,923
Annual contribution deficiency/(excess)	40,362	29,807	16,344	23,715	50,853	16,415	14,798	6,808	(1,719)	18,225
Covered-employee payroll	163,477	167,148	167,148	165,029	167,589	170,416	164,640	182,396	175,369	175,335
Actual contributions as a percentage of covered-employee payroll	23.09%	22.25%	20.11%	18.88%	17.92%	15.64%	14.56%	17.41%	14.22%	9.08%

Notes:

Fiscal year changed in 2013 from December 31 to June 30.

APPENDIX B

SUMMARY OF BENEFIT PROVISIONS VALUED

Eligibility

All active employees of the City except for the following:

- Members of the State Police and Fireman's Disability and Pension Fund.
- Employees who are members of PERS, STRS, or the Public School Employees Retirement System.
- Elected officials.

As part of the plan provisions from Ordinance 84-2011 that were passed by the City Council on March 16, 2011 and adopted by the Board, participants in the System were divided into the following groups:

Group	Criteria
AB	Retirees as of 7/1/2011.
C	Active members who attain 30 years of service or age 60 with 5 years of service before 7/1/2011.
D	Active members who first attain 30 years of service or age 60 with 5 years of service on or after 7/1/2011 but before 1/1/2014 and retire before 1/1/2014.
E	Active members who first attain 30 years of service or age 60 with 5 years of service on or after 7/1/2011 but before 1/1/2014 and retire on or after 1/1/2014.
F	Active members hired before 1/1/2010 and not in groups C, D, or E.
G	Active members hired on or after 1/1/2010.

Service Retirement Benefit

Groups AB, C and D:

Normal Retirement Eligibility: Age 60 with 5 years of service or 30 years of service.

Early Retirement Eligibility: Age 55 with 25 years of service.

Benefit Formula Multiplier: Members hired prior to July 12, 1998 were given a one-time irrevocable option to choose either the benefit formula using a 2.22% multiplier or the benefit formula

	using a 2.50% multiplier. For members hired on or after July 12, 1998, benefits are calculated using a 2.50% multiplier.
Average Highest Compensation	Average of the highest three consecutive years of compensation.
Years of Service	Years or fractional years of full-time service rendered to the plan sponsor.
Benefit	a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement. b) A pension which together with the annuity produces a total annual retirement allowance equal to the product of the applicable benefit formula multiplier, the member's average highest compensation, and the number of years of service. Early Retirement Benefit is actuarially reduced from normal retirement age.

<u>Group E:</u>

Normal Retirement Eligibility	Age 65 with 5 years of service or age 60 with 30 years of service.
Reduced Normal Retirement Eligibility	Age 60 with 5 years of service or 30 years of service.

Retirement benefit is composed of as many as three components:

<u>Part A Benefit:</u> for service earned through December 31, 2013

<u>Part B Benefit:</u> for service earned on and after January 1, 2014 up to a combined 30 years of service

<u>Part C Benefit</u>: for service earned on or after January 1, 2014 in excess of a combined 30 years of service.

Benefit Formula Multiplier	**<u>Part A Benefit:</u>** Members hired prior to July 12, 1998 were given a one-time irrevocable option to choose either the benefit formula using a 2.22% multiplier or the benefit formula using a 2.50% multiplier. For members

	hired on or after July 12, 1998, benefits are calculated using a 2.50% multiplier.
	<u>Part B Benefit:</u> 2.20% multiplier
	<u>Part C Benefit:</u> 2.00% multiplier
Average Highest Compensation	**<u>Part A Benefit:</u>** Average of the highest three consecutive years of compensation
	<u>Part B Benefit:</u> Average of the highest five consecutive years of compensation
	<u>Part C Benefit:</u> Average of the highest five consecutive years of compensation
Years of Service	Years or fractional years of full-time service rendered to the plan sponsor.
Benefit	a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement. b) A pension which together with the annuity produces a total annual retirement allowance equal to the sum of Part A, Part B, and Part C benefits each of which is the product of the applicable benefit formula multiplier, the applicable average highest compensation, and the applicable number of years of service. Reduced Normal Retirement Part A benefits will not be actuarially reduced. Reduced Normal Retirement Part B and C benefits are actuarially reduced from normal retirement age.

<u>Group F:</u>

Normal Retirement Eligibility	Age 65 with 5 years of service or age 60 with 30 years of service.
Reduced Normal Retirement Eligibility	Age 60 with 5 years of service or 30 years of service.
Early Retirement Eligibility	Prior to January 1, 2014, age 55 with 25 years of service or age 57 with 15 years of service.

On or after January 1, 2014, age 57 with 15 years of service.

Retirement benefit is composed of as many as three components:

Part A Benefit: for service earned through June 30, 2011

Part B Benefit: for service earned on and after July 1, 2011 up to a combined 30 years of service

Part C Benefit: for service earned on or after July 1, 2011 in excess of a combined 30 years of service.

Benefit Formula Multiplier	**Part A Benefit:** Members hired prior to July 12, 1998 were given a one-time irrevocable option to choose either the benefit formula using a 2.22% multiplier or the benefit formula using a 2.50% multiplier. For members hired on or after July 12, 1998, benefits are calculated using a 2.50% multiplier. **Part B Benefit:** 2.20% multiplier **Part C Benefit:** 2.00% multiplier
Average Highest Compensation	**Part A Benefit:** Average of the highest three consecutive years of compensation **Part B Benefit:** Average of the highest five consecutive years of compensation **Part C Benefit:** Average of the highest five consecutive years of compensation
Years of Service	Years or fractional years of full-time service rendered to the plan sponsor.
Benefit	a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement. b) A pension which together with the annuity produces a total annual retirement allowance equal to the sum of Part A, Part B, and Part C benefits each of which is the product of the applicable benefit formula multiplier, the applicable average highest compensation, and the applicable number of years of service.

Reduced Normal Retirement Part A benefits will not be actuarially reduced.

Reduced Normal Retirement Part B and C benefits are actuarially reduced from normal retirement age.

Early Retirement Part A, B, and C benefits are actuarially reduced from normal retirement age.

Group G

Normal Retirement Eligibility	Age 67 with 5 years of service or age 62 with 30 years of service.
Early Retirement Eligibility	Age 57 with 15 years of service.
Benefit Formula Multiplier	Benefit is calculated using a 2.20% multiplier for all years of service up to 30 years and a 2.00% multiplier for all service in excess of 30 years.
Average Highest Compensation	Average of the highest five consecutive years of compensation.
Years of Service	Years or fractional years of full-time service rendered to the plan sponsor.
Benefit	a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement. b) A pension which together with the annuity produces a total annual retirement allowance equal to the product of the applicable benefit formula multiplier, the member's average highest compensation, and the number of years of service. Early Retirement Benefit is actuarially reduced from normal retirement age.

In no event shall the retirement allowance be greater than 90% of a member's average highest compensation.

In no event shall the retirement allowance be greater than that permitted by Section 415 of the Internal Revenue Code.

The average highest compensation used in the calculation of benefits depends on which benefit formula applies to the member. The formula that uses the 2.22% multiplier includes overtime compensation and the lump sum payment for unused vacation, unused sick-pay, etc. The formulas that use all other multipliers do not include overtime or the lump sum payment.

Disability Retirement Benefit

Eligibility	5 years of service.
Benefit	90% of normal retirement benefit at disability date but not less than the smaller of: (1) 25% of average highest compensation (2) 90% of the retirement benefit member would have become entitled to had he continued in service to normal retirement age without further change in average highest compensation.

Deferred Vested Retirement Benefit

Eligibility	5 years of service.
Benefit	Normal retirement benefit beginning at normal retirement age.

Preretirement Death Benefit

(1) Refund of contributions with interest.

(2) Survivor Benefits according to type of survivors if member has at least 18 months of service.

Postretirement Death Benefit

(1) Lump sum $5,000 for group AB only.

(2) If no Joint and Survivor Option is selected, balance of member contributions not received back in retirement benefit payments prior to death.

Optional Forms of Benefit

(1) Joint and 100% Survivor Payment

(2) Joint and 50% Survivor Payment

(3) 66 2/3% Joint and Survivor Payment

(4) 80% Joint and Survivor Payment

Postretirement Increases	3% compounded annually commencing one year after retirement for groups AB and C. For all other groups, increases will be indexed to the CPI-U with a maximum of 2% per year and will be based on simple interest.

Contributions

By Members:	Each member, commencing January 1, 1978, contributes at a rate of 7% of the salary used to compute retirement benefits until his retirement. Beginning January 1, 2010, the employee contribution rate will be increased ½% per year over 4 years to reach 9% of pay.
By Employers:	The sponsoring employer makes annual contributions based on members' salaries so that, when members become eligible for benefits, reserves will have been accumulated adequate to provide the pension and other benefits payable by the plan on account of creditable service.
2007 Early Retirement Window	City employees who have 28 years or more of service credit prior to January 1, 2008 were eligible. Those electing to retire prior to January 1, 2008 were credited with two more years of service.

APPENDIX C

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

INVESTMENT RATE OF RETURN: 5.59% per year, net of investment expenses (5.53% at beginning of fiscal year).

INFLATION ASSUMPTION: 3.00% per annum.

SALARY INCREASES: Salary increases are assumed to vary by service. In addition, salary increases are assumed to be lower for a five-year select period beginning with the December 31, 2011 valuation. Representative rates are as follows:

	Annual Increase	
Service	Select Period	Ultimate Period
0	7.0%	7.5%
5	4.5	5.0
10	3.0	4.5
20	3.0	4.5
30	3.0	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:

	Annual Rate of Withdrawal				Annual Rate of Disability
Age	Less than One Year of Service	Between One and Three Years of Service	Between Three and Five Years of Service	Five or More Years of Service	
20	25.0%	10.0%	7.5%	5.0%	0.01%
25	25.0	10.0	7.5	5.0	0.02
30	25.0	10.0	7.5	3.5	0.03
35	25.0	10.0	4.0	2.8	0.05
40	25.0	10.0	4.0	2.3	0.09
45	25.0	10.0	4.0	1.5	0.15
50	25.0	10.0	4.0	1.5	0.27
55	25.0	10.0	4.0	1.5	0.42
60	25.0	10.0	4.0	1.5	0.00
65	25.0	10.0	4.0	1.5	0.00
70	25.0	10.0	4.0	1.5	0.00

Age	Annual Rate of Retirement Early Retirement	Less than 30 Years of Service	30 Years of Service	31+ Years of Service
		Groups C, D, E, and F		
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
		Group G		
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

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 with the male three years older than his spouse.

ASSETS: Market Value of Assets.

WITHDRAWAL ASSUMPTION: It is assumed that 100% of vested members who terminate with less than 15 years of service elect to withdraw their contributions and that 50% of vested members who terminate with 15 or more years of service 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.

VALUATION METHOD: Entry age actuarial cost method.