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**Report of the Actuary on the
Annual Valuation of the
Retirement System for Employees of
the City of Cincinnati**

Retiree Health Benefits Report

**Prepared as of December 31, 2012
and Approved by the Board of
Trustees on May 2, 2013**





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

May 24, 2013

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

Members of the Board:

We are pleased to submit the results of the retiree health benefits actuarial valuation of the Retirement System for Employees of the City of Cincinnati prepared as of December 31, 2012. The purpose of this report is to provide a summary of the funded status of the System as of December 31, 2012, to recommend rates of contribution, and to provide accounting information under Governmental Accounting Standards Board Statements No. 43 and No. 45 (GASB 43 and 45).

On the basis of the valuation, it is recommended that employer contributions to the System be set at a rate of 4.60% of payroll (approximately \$7,363,000) for the fiscal year ending December 31, 2014. The retiree health benefits of the System are included in the calculated contribution rate which is developed using the entry age cost method. Five-year smoothed market value of plan assets is used for the actuarial value of assets. Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions within a 30-year period.

Since the previous valuation, the initial per capita health care costs have been updated to reflect the System's recent experience and a change in the methodology for the coordination of benefits of those participants who are eligible for Medicare. Similarly, retiree contributions for the Blue Access 80/20 PPO plan have been updated for all retirees hired prior to January 1, 1997, and those retirees hired on or after January 1, 1997 with 90 or more points (age at retirement + service).

The valuation has been prepared in accordance with the parameters set forth in Statements No. 43 and No. 45 of the Governmental Accounting Standards Board. The annual required contribution (ARC) for the City under GASB for the fiscal year ending December 31, 2014 is 4.60% of payroll, based on a 30-year period for amortization of the unfunded accrued liability.

This is to certify that the independent consulting actuary is a Member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the System and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System. While not verifying the data at source, the actuary performed tests for consistency and reasonability.

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May 24, 2013
Board of Trustees
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Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic 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 plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

We trust that the report will meet the approval of the Board and will furnish the desired information concerning the financial condition of the System.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Eric H. Gary'.

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

A handwritten signature in blue ink, appearing to read 'Edward J. Koebel'.

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

EG/EK:bw



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**RETIREMENT SYSTEM FOR EMPLOYEES OF THE CITY OF CINCINNATI
 REPORT OF THE ACTUARY
 ON THE VALUATION
 PREPARED AS OF DECEMBER 31, 2012**

RETIREE HEALTH BENEFITS REPORT

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the current and preceding valuations are summarized below.

Valuation Date	December 31, 2012	December 31, 2011
Active members:		
Number*	3,017	2,948
Annualized compensation	\$ 160,078,187	\$ 157,813,151
Retired members and surviving spouses in health care plans:	4,122	4,150
Number of spouses in health care plans:	<u>1,580</u>	<u>1,602</u>
Total	5,702	5,752
Number of terminated vested members**	151	80
Assets:		
Market Value	\$ 652,864,000	\$ 616,464,000
Actuarial Value	634,173,128	668,392,457
Unfunded actuarial accrued liability	\$ 7,702,640	\$ (14,988,156)
Amortization Period	30 years	30 years
Funded Ratio		
Market Value	101.7%	94.3%
Actuarial Value	98.8%	102.3%
Fiscal Year Ending	December 31, 2014	December 31, 2013
City annual required contribution rate (ARC):		
Normal	4.19%	4.41%
Accrued liability	<u>0.41%</u>	<u>(0.80%)</u>
Total	4.60%	3.61%
City annual required contribution in dollars (ARC):		
Normal	\$ 6,707,000	\$ 6,960,000
Accrued liability	<u>656,000</u>	<u>(1,263,000)</u>
Total	\$ 7,363,000	\$ 5,697,000

* In addition, there are 1,196 part-time employees at December 31, 2012, compared to 1,170 part-time employees at December 31, 2011.

**Of the 151 terminated vested members, 54 are assumed eligible to receive retiree health benefits.



2. The major benefit and contribution provisions of the System, as reflected in the valuation, are summarized in Schedule G. Since the previous valuation, the methodology of coordination of benefits for those who are eligible for Medicare has been changed from the “Traditional Coordination of Benefits” method to the “Exclusion” method
3. Schedule E of this report outlines the full set of actuarial assumptions and methods used in the valuation. The following changes were made to the assumptions and methods since the previous valuation:
 - The assumed initial per capita health care costs have been updated to reflect the System’s recent experience and change in the methodology for the coordination of benefits for those who are eligible for Medicare.
 - As the contribution rates for those retirees participating in the Blue Access 80/20 PPO plan are based upon retiree health care cost experience, retiree contribution rates were updated to reflect the System’s recent experience and change in the methodology for the coordination of benefits for those who are eligible for Medicare.
4. The results of this valuation do not include a reduction for future payments estimated to be made by the Centers for Medicare & Medicaid Services (CMS) under the Retiree Drug Subsidy Program (RDS). Under GASB 43 and 45, the subsidy is not recognized as a direct offset, as it is viewed to be a transfer of funds between governmental levels.
5. Schedule C shows the development of the actuarial value of assets. The entry age actuarial cost method was used to prepare the valuation. Schedule F contains a brief description of the actuarial cost method.
6. Comments on the valuation results as of December 31, 2012 are given in Section IV, comments on the experience and actuarial gains and losses during the valuation year are given in Section VII and further discussion of the contributions is set out in Section V.



SECTION II – MEMBERSHIP DATA

1. Data regarding the membership of the System for use as a basis of the valuation were furnished by the System. The valuation included 3,017 active members with annualized compensation totaling \$160,078,187. In addition, there are 1,196 part-time employees. The majority of these part-time employees are seasonal employees that have a de minimis impact on the liabilities of the System.
2. The following table shows the number of retired members and spouses in receipt of retiree health benefits, and those members with deferred retiree health benefits as of December 31, 2012.

THE NUMBER OF RETIRED MEMBERS AND BENEFICIARIES AS OF DECEMBER 31, 2012

Group	Number
Retired members and surviving spouses currently receiving retiree health benefits	4,122
Spouses currently receiving retiree health benefits	<u>1,580</u>
Total	5,702
Terminated vested members eligible for retiree health benefits	54
Terminated vested members not eligible for retiree health benefits	<u>97</u>
Total	151

*In addition, there are 6,112 inactive participants who are former employees with an employee account balance in the pension plan, but are assumed to not be vested. As such, no retiree health benefit liability is assumed for these individuals.

3. Table 1 in Schedule H shows the distribution by age and years of membership service of the number of active members included in the valuation, while Table 2 shows the number of retired members, beneficiaries, and spouses included in the valuation, distributed by age. Table 3 provides a distribution of members, beneficiaries, and spouses included in the valuation, by health care plan.



SECTION III – ASSETS

As of December 31, 2012, the total market value of assets amounted to \$2,061,896,000, as reported by the auditor, of which \$652,864,000 has been allocated for the purpose of providing retiree health benefits. The actuarial value of assets used for the current retiree health benefits valuation was \$634,173,128. Schedule C shows the development of the actuarial value of assets as of December 31, 2012. Schedule D shows a reconciliation of the market value of asset balances from December 31, 2011 to December 31, 2012.



SECTION IV – COMMENTS ON VALUATION

1. Schedule B of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the System as of December 31, 2012. The valuation was prepared in accordance with the actuarial assumptions set forth in Schedule E and the actuarial cost method which is described in Schedule F.
2. The valuation balance sheet shows that the System has total prospective liabilities of \$698,889,043, of which \$453,720,142 is for the prospective retiree health benefits payable on account of present retired members, beneficiaries of deceased members, and terminated members entitled to deferred retiree health benefits, and \$245,168,901 is for the prospective retiree health benefits payable on account of present active members. Against these liabilities, the System has a total present actuarial value of assets of \$634,173,128 as of December 31, 2012. The difference of \$64,715,915 between the total liabilities and the total present assets represents the present value of future contributions.
3. The contributions to the System consist of normal contributions and accrued liability contributions. The valuation indicates that normal contributions at the rate of 4.19% of payroll are required under the entry age method. As active employees do not contribute to retiree health benefits, the full amount of 4.19% is payable by the City.
4. Prospective normal contributions at the rate of 4.19% have a present value of \$57,013,275. When this amount is subtracted from \$64,715,915, which is the present value of the total future contributions to be made, there remains \$7,702,640 as the amount of unfunded accrued liability contributions. The development of the unfunded accrued liability is shown in Schedule A.
5. Changes to the assumed per capita health care costs (and resulting retiree contributions, where applicable) to reflect the System's recent experience and change in the methodology for the coordination of benefits for those who are eligible for Medicare resulted in a \$38.0 million decrease in accrued liabilities.
6. As can be seen from Schedule I of our report, the System had an actuarial loss for the year. Gains resulting from the reduction to assumed health care costs were offset by losses on the actuarial value of assets. Although the System had a positive investment return for 2012 of



11.95%, the System still had a loss of \$47.9 million due to the continued recognition of asset gains and losses for the past five years. This is mainly due to the 2008 economic downturn and the loss generated from the 2011 fiscal year which saw the market value of assets return only 0.87%. Please see Schedule D of our report for a historical table of Market Value of Assets, Actuarial Value of Assets and the rates of return for each. The other components of the loss came from data adjustments, changing demographics of the retired membership, and withdrawals from the System.



SECTION V – CONTRIBUTIONS PAYABLE

1. The contributions consist of a normal contribution and an accrued liability contribution as determined by actuarial valuation.
2. The normal contribution rate is calculated as the level percentage of payroll which, if applied for the average new member during the entire period of his anticipated covered service, would be required to meet the cost of all retiree health benefits payable on his or her behalf. On the basis of the valuation, the normal contribution rate was determined to be 4.19%. As active employees do not contribute to retiree health benefits, the full amount of 4.19% is payable by the City.
3. A contribution of 0.41% of payroll will liquidate the unfunded accrued liability within a 30-year period.
4. The total City contribution rate required for the fiscal year ending December 31, 2014 is, therefore, 4.60% of payroll.
5. The following table summarizes the employer contributions which were determined by the December 31, 2012 valuation and are recommended for use.

**SYSTEM ANNUAL REQUIRED CONTRIBUTIONS (ARC)
FOR FISCAL YEAR ENDING DECEMBER 31, 2014**

Contribution	Percentage of Active Members' Compensation	Dollar Amount
Normal	4.19%	\$ 6,707,000
Accrued Liability	<u>0.41</u>	<u>656,000</u>
Total	4.60%	\$ 7,363,000



SECTION VI – ACCOUNTING INFORMATION

1. Governmental Accounting Standards Board Statements No. 43 and No. 45 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of participants by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED PARTICIPANTS
AS OF DECEMBER 31, 2012**

Group	Total
Retired members and surviving spouses currently receiving retiree health benefits	4,122
Spouses currently receiving retiree health benefits	1,580
Terminated vested members eligible for retiree health benefits	54
Active Participants	
Full-Time	3,017
Part-Time	<u>1,196</u>
Total	9,969

2. Another such item is the schedule of funding progress as shown below.

**SCHEDULE OF FUNDING PROGRESS
Dollar Amounts in Thousands**

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b – a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b – a) / c)
12/31/2007	835,486	921,985	86,499	90.6	182,396	47.4
12/31/2008	688,870	998,491	309,621	69.0	164,640	188.1
12/31/2009	746,029	877,399	131,370	85.0	170,416	77.1
12/31/2010	726,412	657,045	(69,368)	110.6	167,589	(41.4)
12/31/2011	668,392	653,404	(14,988)	102.3	165,029	(9.1)
12/31/2012	634,173	641,876	7,703	98.8	167,148*	4.6

All figures prior to December 31, 2008 were reported in the City's financial statements.

*Includes \$7,069,702 in part-time active employee compensation.



3. Following is the calculation of the annual OPEB cost and net OPEB obligation for the fiscal year ending December 31, 2012.

Annual OPEB Cost and Net OPEB Obligation for Fiscal Year Ending December 31, 2012		
(a)	Employer annual required contribution*	\$ 453,000
(b)	Interest on net OPEB obligation	6,944,000
(c)	Adjustment to annual required contribution	<u>7,710,000</u>
(d)	Annual OPEB cost (a) + (b) – (c)	\$ (313,000)
(e)	Employer contributions made for fiscal year ending December 31, 2012**	<u>2,000,000</u>
(f)	Increase (decrease) in net OPEB obligation (d) – (e)	\$ (2,313,000)
(g)	Net OPEB obligation beginning of fiscal year	<u>86,800,221</u>
(h)	Net OPEB obligation end of fiscal year (f) + (g)	\$ 84,487,221

* Developed from the December 31, 2010 valuation.

** All employer contributions are the result of payments received from the Centers for Medicare & Medicaid Services (CMS) under the Retiree Drug Subsidy Program (RDS).

TREND INFORMATION

Fiscal Year Ending	Annual OPEB Cost (AOC)	Percentage of AOC Contributed	Net OPEB Obligation (NOO)
December 31, 2007*	13,218,000	40	7,219,000
December 31, 2008	22,502,221	19	25,446,221
December 31, 2009	10,565,000	53	30,414,221
December 31, 2010	43,569,000	10	69,614,221
December 31, 2011	19,328,000	11**	86,800,221
December 31, 2012	(313,000)	(639)**	84,487,221

* As reported in the City's financial statements.

** All employer contributions are the result of payments received from the Centers for Medicare & Medicaid Services (CMS) under the Retiree Drug Subsidy Program (RDS).



4. The annual required contribution (ARC), stated as a percentage of payroll and in dollars, determined in accordance with the parameters of GASB 43 and 45, is shown below.

Employer Annual Required Contribution (ARC) Fiscal Year Ending December 31, 2014		
Contribution	Percentage of Active Members' Compensation	Dollar Amount
Normal	4.19%	\$6,707,000
Accrued liability	<u>0.41</u>	<u>656,000</u>
Total	4.60%	\$7,363,000

5. Additional information as of December 31, 2012 follows:

Valuation date	12/31/2012
Actuarial cost method	Entry age
Amortization period	Level dollar open
Remaining amortization period	30 years
Asset valuation method	Five-year smoothed market value
Actuarial assumptions:	
Investment rate of return (includes inflation)	7.50%
Projected salary increases (includes inflation)*	3.00% - 7.50%
Health care trend rate (includes inflation)	8.50%/6.25% initial (varies by age) 5.00% ultimate
Inflation	3.00%

*Select salary increases for 5-year period beginning December 31, 2011.



SECTION VII – EXPERIENCE

Actual experience will never (except by coincidence) follow exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain/(loss) for the year ended December 31, 2012 is shown below.

	<u>\$ Thousands</u>
(1) UAAL as of December 31, 2011	\$ (14,988)
(2) Normal cost from December 31, 2011 valuation	6,960
(3) Actual employer contributions*	2,000
(4) Interest accrual: $[(1) \times .075] + \{[(2) - (3)] \times .075 \times 0.50\}$	<u>(938)</u>
(5) Expected UAAL before changes: (1) + (2) – (3) + (4)	\$ (10,966)
(6) Change due to plan amendments	0
(7) Change due to actuarial assumptions or methods	<u>(38,002)</u>
(8) Expected UAAL after changes: (5) + (6) + (7)	\$ (48,968)
(9) Actual UAAL as of December 31, 2012	<u>7,703</u>
(10) Gain/(loss): (8) – (9)	\$ (56,671)
(11) Gain/(loss) as a percent of the December 31, 2011 actuarial accrued liabilities (\$653,404)	(8.67)%

* All employer contributions are the result of payments received from the Centers for Medicare & Medicaid Services (CMS) under the Retiree Drug Subsidy Program (RDS)

Valuation Date December 31	Actuarial Gain/(Loss) as a % of Beginning Accrued Liabilities
2010	(0.1)%
2011	(4.0)%
2012	(8.7)%



SCHEDULE A

**DEVELOPMENT OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY
AS OF DECEMBER 31, 2012**

	Before Assumption Changes	After Assumption Changes*
(1) Present value of prospective benefits:		
(a) Present active members	\$ 258,284,751	\$ 245,168,901
(b) Present retired members, beneficiaries and former members entitled to deferred vested retiree health benefits	<u>481,502,646</u>	<u>453,720,142</u>
(c) Total	\$ 739,787,397	\$ 698,889,043
(2) Present value of future normal contributions	<u>59,909,214</u>	<u>57,013,275</u>
(3) Actuarial accrued liabilities: 1(c) – (2)	\$ 679,878,183	\$ 641,875,768
(4) Actuarial value of assets	<u>634,173,128</u>	<u>634,173,128</u>
(5) Unfunded actuarial accrued liability (UAAL): (3) – (4)	\$ 45,705,055	\$ 7,702,640
(6) Contribution Rate as a % of Payroll		
(a) Normal Cost	4.40%	4.19%
(b) UAAL	<u>2.42%</u>	<u>0.41%</u>
(c) Total	6.82%	4.60%
(7) Contribution in Dollars		
(a) Normal Cost	\$ 7,043,000	\$ 6,707,000
(b) UAAL	<u>3,874,000</u>	<u>656,000</u>
(c) Total	\$ 10,917,000	\$ 7,363,000

* Reflects changes to the retiree contribution requirements and the initial per capita health care costs to reflect the System's recent experience and a change in the methodology for the coordination of benefits of those participants who are eligible for Medicare.



SCHEDULE B
VALUATION BALANCE SHEET

Present and prospective assets and liabilities as of December 31, 2012:

<u>ACTUARIAL LIABILITIES</u>	
Present value of prospective retiree health benefits payable on account of present retired members, beneficiaries of deceased members, and terminated members entitled to deferred benefits	\$ 453,720,142
Present value of prospective retiree health benefits payable on account of present active members	<u>245,168,901</u>
Total liabilities	<u>\$ 698,889,043</u>
<u>PRESENT AND PROSPECTIVE ASSETS</u>	
Actuarial value of assets	\$ 634,173,128
Present value of future contributions	
City normal contributions	\$ 57,013,275
Unfunded accrued liability contributions	<u>7,702,640</u>
Total prospective contributions	<u>\$ 64,715,915</u>
Total assets	<u>\$ 698,889,043</u>



SCHEDULE C

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

(1)	Actuarial Value of Assets as of December 31, 2011	\$ 668,392,457
(2)	Market Value of Assets as of December 31, 2012	\$ 652,864,000
(3)	Market Value of Assets as of December 31, 2011	\$ 616,464,000
(4)	Net Cash Flow During Plan Year	
	(a) Contributions	\$ 2,000,000
	(b) Net Benefit Payments and Net Transfers	37,172,000
	(c) Administrative Expenses	591,000
	(d) Investment Expenses	<u>2,791,000</u>
	(e) Net Cash Flow: (a) – (b) – (c) – (d)	\$ (38,554,000)
(5)	Investment Income	
	(a) Market Total: (2) – (3) – (4)(e)	\$ 74,954,000
	(b) Assumed Rate	7.50%
	(c) Amount for Immediate Recognition [(3) x (5)(b)] + {[4(a) - (4)(b)] x (5)(b) x 0.5} + 4(c) + (4)(d)	\$ 48,297,850
	(d) Amount for Phased-In Recognition: (5)(a) – (5)(c)	\$ 26,656,150
(6)	Recognized Amounts for Plan Year	
	(a) Current Year: 0.20 x (5)(d)	\$ 5,331,230
	(b) First Prior Year	(9,038,984)
	(c) Second Prior Year	6,118,592
	(d) Third Prior Year	12,245,720
	(e) Fourth Prior Year	<u>(58,619,737)</u>
	(f) Total Recognized Investment Gain/(Loss)	\$ (43,963,179)
(7)	Actuarial Value of Assets as of December 31, 2012	
	(1) + (4)(e) + (5)(c) + (6)(f)	\$ 634,173,128
	80% of Market Value EOY	522,291,200
	120% of Market Value EOY	783,436,800
(8)	Final Actuarial Value of Assets as of December 31, 2012	\$ 634,173,128
(9)	Rate of Return on Actuarial Value	0.15%



SCHEDULE D
CURRENT ASSET INFORMATION

<i>Receipts</i>			
(1) Contributions			
• City Contributions	\$	0	
• Medicare Retiree Drug Subsidy Receipts		<u>2,000,000</u>	
Total Contributions			\$ 2,000,000
(2) Investment Income			
• Interest and Dividends	\$	14,670,000	
• Net Appreciation (Depreciation) in Fair Value of Investments		60,132,000	
• Other Investment Earnings		152,000	
• Investment Expenses		<u>(2,791,000)</u>	
Total Investment Income			<u>\$ 72,163,000</u>
(3) Total Receipts			\$ 74,163,000
<i>Disbursements</i>			
(4) Net Benefits Paid	\$	37,172,000	
(5) Administrative Expenses		<u>591,000</u>	
(6) Total Disbursements			\$ 37,763,000
(7) Excess of Receipts Over Disbursements: (3) - (6)			\$ 36,400,000
<i>Reconciliation of Asset Balances</i>			
(8) Market Value at December 31, 2011			\$616,464,000
(9) Excess of Receipts Over Disbursements			<u>36,400,000</u>
(10) Market Value at December 31, 2012			\$652,864,000
(11) Estimated Rate of Return on Market Value of Assets			11.95%

HISTORICAL ASSET INFORMATION
(\$ in thousands)

Valuation Date	Actuarial Value of Assets		Market Value of Assets	
	Amount	Rate of Return	Amount	Rate of Return
12/31/2007	835,486	9.07%	851,732	7.54%
12/31/2008	688,870	1.94	574,058	(27.52)
12/31/2009	746,029	0.40	621,691	19.13
12/31/2010	726,412	2.43	657,319	13.10
12/31/2011	668,392	(1.65)	616,464	0.87
12/31/2012	634,173	0.15	652,864	11.95

Figures prior to December 31, 2008 are based upon amounts reported in the City's financial statements.



SCHEDULE E

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

VALUATION DATE: December 31, 2012

DISCOUNT RATE: 7.50% per year, net of expenses

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.

Fiscal Year	Payment Age <65	Payment Age 65+
2013	8.50%	6.25%
2014	7.50	6.00
2015	6.50	5.75
2016	6.00	5.25
2017	5.50	5.00
2018+	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



SCHEDULE E
(continued)

RETIREE HEALTH CARE PLAN INITIAL PER CAPITA COSTS: Paid claims and cost data were provided by the System, Anthem, and Medco for the period of January 1, 2012 through December 31, 2012. 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 plan changes and large claims, if appropriate. As some participants elect to cover dependents, the assumed adult costs include the additional costs of coverage for 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
Blue Access 80/20 PPO	\$13,028	\$7,818	\$3,545
Blue Access Carve-Out PPO	17,118	9,724	4,655

* Under GASB 43 and 45, cost reductions for the amount of the Medicare Part D Retiree Drug Subsidy cannot be taken into account in the gross cost calculations

RETIREE HEALTH CARE PLAN CONTRIBUTIONS: Assumed adult per capita health care contribution rates were developed for those participants in the Blue Access 80/20 PPO 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 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.

Blue Access 80/20 PPO			
Payment Age <65	Payment Age 65+		
	Not Enrolled in Medicare Part A	Enrolled in Medicare Part A	Current Average
\$10,511	\$9,791	\$4,568	\$5,160



SCHEDULE E
(continued)

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 Blue Access Carve-Out plan, are assumed to re-qualify in all future years. All current participants not qualifying for the Blue Access Carve-Out plan are covered by the Blue Access 80/20 PPO plan. Current participants are assumed to maintain their retiree health benefits coverage until they are no longer eligible.

All eligible future retirees electing retiree health benefits are assumed to be covered by the Blue Access 80/20 PPO 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 2 members are as follows:

Points	Retiree Contribution of Cost (%)	Assumed Rate of Participation (%)
90+	5	90
80 – 89	25	80
70 – 79	50	60
60 – 69	75	40

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 not available). It is assumed 0% of these eligible future retirees will elect retiree health benefits.

As no experience for Group 2 participation is available, the rates of participation are estimates and actual results may be materially different. As such, this assumption will need to be revised as experience evolves.

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

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 E
(continued)

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, 2012 valuation. Representative rates are as follows:

Service	Annual Increase	
	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:

Age	Annual Rate of Withdrawal				Annual Rate of Disability
	<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%	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



SCHEDULE E
(continued)

Annual Rate of Retirement					
Group	Age	Early Retirement	Less than 30		
			Years of Service	30 Years of Service	31+ Years of Service
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
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 and elect a joint & survivor payment form. Males are assumed to be three years older than their spouse.

ASSETS: Actuarial value, as developed in Schedule C. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value. In addition, the actuarial value of assets cannot be less than 80% or more than 120% of the market value of assets.

WITHDRAWAL ASSUMPTION: It was assumed that 50% of the 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.

VALUATION METHOD: Entry age actuarial cost method. See Schedule F for a brief description of this method.

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 F

ACTUARIAL COST METHOD

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 7.50%), of each member's expected retiree health benefits at retirement or death is determined, based on age, service and sex. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a retiree health benefit, as well as the possibility of his terminating with a service, disability or survivor's benefit. The present value of the expected retiree health benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected retiree health benefits payable from the System on account of the present group of members and beneficiaries.
2. The employer contributions required to support the retiree health benefits of the System are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the entry age actuarial cost method. Under this method, a calculation is made to determine the level percentage of payroll which, if applied for 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.
4. The unfunded accrued liability is determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets held, from the present value of expected retiree health benefits to be paid from the System.



SCHEDULE G

**SUMMARY OF MAIN SYSTEM PROVISIONS
AS INTERPRETED FOR VALUATION PURPOSES**

Pension Benefit 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 was 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.

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

Normal Retirement

Groups AB, C, D, pension benefits accrued prior to January 1, 2014 for group E, and pension benefits accrued prior to July 1, 2011 for group F:

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

Pension benefits accrued on or after January 1, 2014 for group E, and pension benefits accrued on or after July 1, 2011 for group F:

Age 65 with 5 years of service or age 60 with 30 years of service.



SCHEDULE G
(continued)

Group G, all accrued pension benefits:

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

Early Retirement

Members retiring before July 1, 2011:

Age 55 with 25 years of service

Effective July 1, 2011, members hired before January 1, 2010:

If retired prior to January 1, 2014: Age 55 with 25 years of service, or age 57 with 15 years of service.

If retired on or after January 1, 2014: Age 57 with 15 years of service.

Effective July 1, 2011, members hired on or after January 1, 2010:

Age 57 with 15 years of service

Disability Retirement Eligibility: 5 years of service

Deferred Vested Retirement Eligibility: 5 years of service

Retiree Health Benefits Eligibility

Group 1: Those members hired before January 9, 1997 and retire under the System with a minimum of 15 years of service, including their survivors receiving pension benefits. Additionally, a surviving spouse, eligible dependent child, and orphan receiving survivor pension benefits as a result of death during employment, if the employee has at least 18 months of service at the time of death.

Group 2: Those participants hired on or after January 9, 1997 and retire under the System with a minimum of 15 years of service, including their survivors receiving pension benefits. Group 2 participants entitled to a deferred retirement allowance are eligible for health benefits upon attainment of the Medicare eligibility age.

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



SCHEDULE G
(continued)

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 Blue Access Carve-Out PPO plan. Those members who retired prior to September 1, 2007 who do not qualify for coverage under the Blue Access Carve-Out PPO plan may elect medical and prescription drug coverage through the Blue Access 80/20 PPO plan.

Those members who retired on or after September 1, 2007 (including those employees who retired under a special incentive plan in 2007) may elect medical and prescription drug coverage through the Blue Access 80/20 PPO plan.

Retiree Contributions

Group 1 participants covered by the Blue Access Carve-Out PPO plan do not contribute towards the cost of medical and prescription drug coverage. Group 1 participants covered by the Blue Access 80/20 PPO 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 2 participants will pay the portion of the full cost of medical and prescription drug benefits of the retiree group as determined by the point system.

Points	Retiree Contribution of Cost (%)
90+	5
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)



SCHEDULE G
(continued)

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.

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 H

TABLE 1

**SCHEDULE OF ACTIVE MEMBERS BY AGE AND SERVICE
AS OF DECEMBER 31, 2012**

Age	Completed Years of Service							Total
	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30+	
Under 20	5							5
Avg Pay	17,483							17,483
20 - 24	34	2						36
Avg Pay	26,330	40,361						27,109
25 - 29	143	36	1					180
Avg Pay	39,278	45,444	38,995					40,510
30 - 34	135	71	39	2				247
Avg Pay	43,850	45,922	47,737	61,115				45,199
35 - 39	83	75	68	23	1			250
Avg Pay	46,439	48,626	53,894	56,825	43,037			50,065
40 - 44	91	92	91	54	48	4		380
Avg Pay	50,950	54,527	50,531	52,202	61,071	49,044		53,152
45 - 49	65	61	90	80	189	67		552
Avg Pay	50,052	50,250	53,221	60,187	58,740	60,311		56,279
50 - 54	49	59	72	70	188	143	30	611
Avg Pay	48,411	46,766	49,241	52,816	57,338	62,049	66,685	55,690
55 - 59	38	41	52	51	129	118	34	463
Avg Pay	45,989	63,569	52,111	53,863	56,067	61,736	67,659	57,513
60 - 64	18	20	33	31	51	35	13	201
Avg Pay	57,977	41,772	53,250	49,497	54,717	55,935	73,861	54,125
65 - 69	11	8	8	11	14	14	5	71
Avg Pay	37,692	101,180	50,903	53,389	57,271	52,307	68,060	57,647
70 & Over	2		2	3	5	3	6	21
Avg Pay	10,072		41,166	54,696	45,903	106,397	55,952	54,809
Total	674	465	456	325	625	384	88	3,017
Avg Pay	44,305	51,003	51,438	54,748	57,457	60,948	67,467	53,059

Average Age 47.00

Average Service

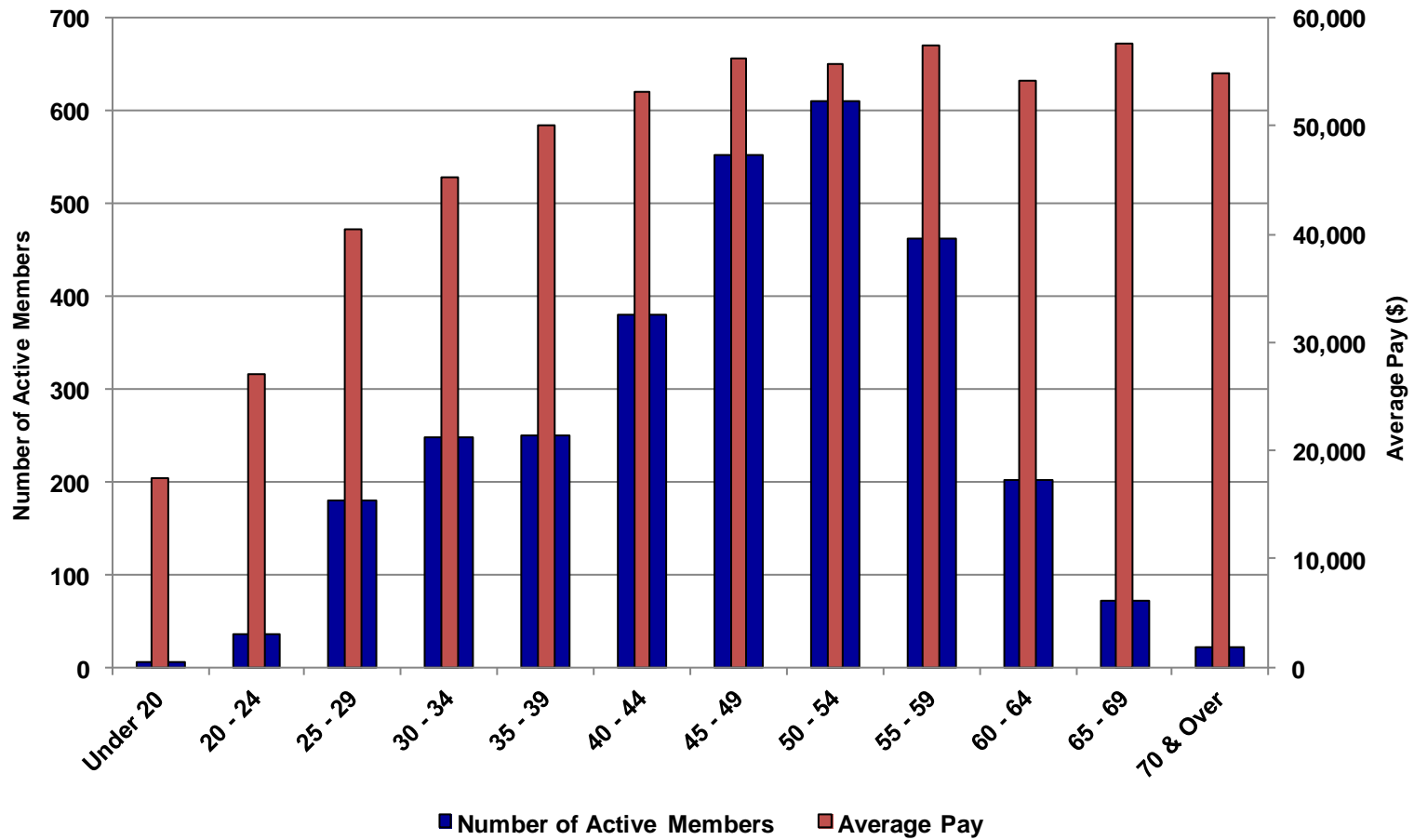
14.17



SCHEDULE H
(Continued)

CHART 1

DISTRIBUTION OF ACTIVE MEMBERS BY AGE
AS OF DECEMBER 31, 2012





**SCHEDULE H
(Continued)**

TABLE 2

**SCHEDULE OF PARTICIPATING RETIREES AND SPOUSES BY AGE
AS OF DECEMBER 31, 2012**

<u>Attained Age</u>	<u>Number of Members</u>	<u>Number of Spouses</u>	<u>Total</u>
39 & Under	2	3	5
40 - 44	2	5	7
45 - 49	16	39	55
50 - 54	92	98	190
55 - 59	412	238	650
60 - 64	776	372	1,148
65 - 69	704	316	1,020
70 - 74	544	206	750
75 - 79	532	172	704
80 - 84	448	75	523
85 - 89	374	44	418
90 - 94	168	11	179
95 - 99	40	1	41
100 & Over	12	0	12
Total	4,122	1,580	5,702

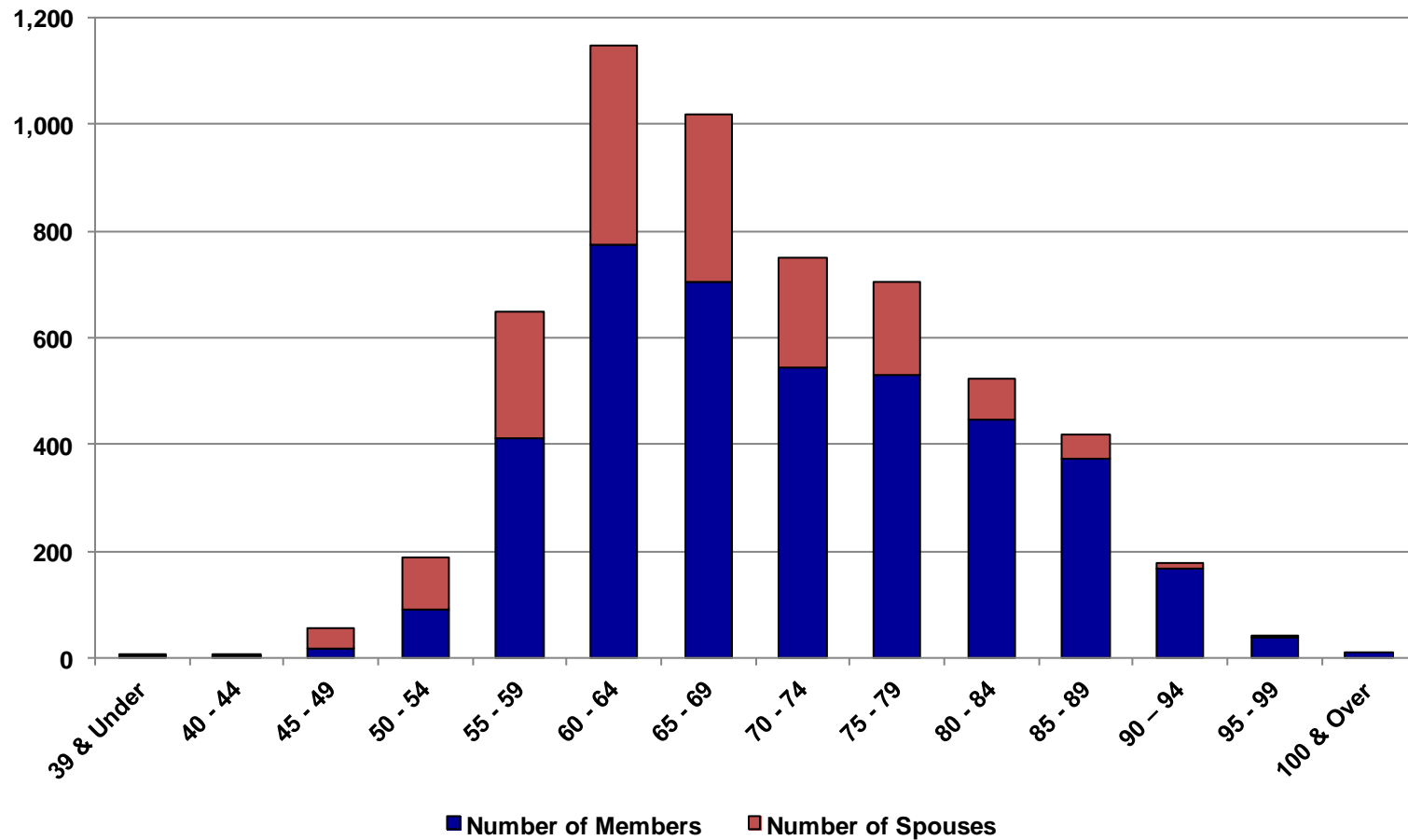
In addition, there are 54 terminated vested members assumed to be entitled to deferred retiree health benefits.



SCHEDULE H
(Continued)

CHART 2

SCHEDULE OF PARTICIPATING RETIREES AND SPOUSES BY AGE
AS OF DECEMBER 31, 2012





SCHEDULE H
(Continued)

TABLE 3

**SCHEDULE OF PARTICIPATING RETIREES AND SPOUSES BY HEALTH CARE PLAN
AS OF DECEMBER 31, 2012**

<u>Health Care Plan</u>	<u>Age < 65</u>	<u>Age 65+</u>	<u>Total</u>
Blue Access Carve-Out PPO	49	313	362
Blue Access 80/20 PPO	2,006	3,334	5,340
Total	2,055	3,647	5,702



SCHEDULE I

ANALYSIS OF FINANCIAL EXPERIENCE

**Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
(\$ Thousands)**

Type of Activity	\$ Gain (or Loss) For Year Ending 12/31/2012	\$ Gain (or Loss) For Year Ending 12/31/2011
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (280)	\$ (6,018)
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	35	(358)
Death-in-Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(19)	(912)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(487)	569
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. Applies to salary-based benefits.	0	0
New Members. Additional unfunded accrued liability will produce a loss.	(928)	(233)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(47,858)	(67,887)
Death After Retirement. If retirees live longer than assumed, there is a loss. If not as long, a gain.	1,793	958
Other. Miscellaneous gains and losses resulting from changing demographics of the retired membership, changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>(8,927)</u>	<u>47,817</u>
Gain (or Loss) During Year From Experience	<u>\$ (56,671)</u>	<u>\$ (26,064)</u>
Non-Recurring Items. Adjustments for plan amendments, assumption changes, or method changes.	<u>38,002</u>	<u>(29,212)</u>
Composite Gain (or Loss) During Year	<u>\$ (18,669)</u>	<u>\$ (55,276)</u>