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City of Cincinnati

**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, 2010





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

May 24, 2011

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, 2010. The purpose of this report is to provide a summary of the funded status of the System as of December 31, 2010, to recommend rates of contribution and to provide accounting information under Governmental Accounting Standards Board Statements No. 43 and 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 0.28% of payroll (approximately \$453,000) for the fiscal year ending December 31, 2012. 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, several changes were made to the assumptions, methods, and plan provisions used to determine the liability. The valuation includes the plan provisions from Ordinances 84-2011 and 85-2011, as passed by the City Council on March 16, 2011 and adopted by the Board. The initial per capita health care costs have been updated to reflect the System's recent experience, along with the assumed rates of inflation for health care costs. Additionally, the assumption of eligibility for premium-free Medicare Part A coverage for those members hired prior to April 1, 1986 has been updated.

The valuation has been prepared in accordance with the parameters set forth in Statement Nos. 43 and 45 of the Governmental Accounting Standards Board. The annual required contribution (ARC) for the City under GASB for the fiscal year ending December 31, 2012 is 0.28% 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, 2011
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
Senior 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, 2010**

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, 2010	December 31, 2009
Active members:		
Number*	3,024	3,148
Annualized compensation	\$ 161,756,277	\$ 161,874,415
Retired members and surviving spouses in health care plans:	4,170	4,185
Number of spouses in health care plans:	<u>1,912</u>	<u>1,940</u>
Total	6,082	6,125
Number of terminated vested members**	82	115
Assets:		
Market Value	\$ 657,319,000	\$ 621,691,000
Actuarial Value	726,412,276	746,029,200
Unfunded actuarial accrued liability	\$ (69,367,730)	\$ 131,370,293
Amortization Period	30 years	30 years
Funded Ratio		
Market Value	100.0%	70.9%
Actuarial Value	110.6%	85.0%
Fiscal Year Ending	December 31, 2012	December 31, 2011
City annual required contribution rate (ARC):		
Normal	4.09%	5.11%
Accrued liability	<u>(3.81%)</u>	<u>7.21</u>
Total	0.28%	12.32%
City annual required contribution in dollars (ARC):		
Normal	\$ 6,616,000	\$ 8,272,000
Accrued liability	<u>(6,163,000)</u>	<u>11,671,000</u>
Total	\$ 453,000	\$ 19,943,000

* In addition, there are 507 part-time employees at December 31, 2010, compared to 1,288 part-time employees at December 31, 2009.

**Of the 82 terminated vested members, 59 are assumed eligible to receive health benefits.



2. The major benefit and contribution provisions of the System, as reflected in the valuation, are summarized in Schedule G. The following changes were made since the previous valuation:
 - All plan provisions passed by the City Council from Ordinances 84-2011 and 85-2011 on March 16, 2011 were used in this valuation. These changes are enumerated in Schedule G, the Summary of Main System Provisions as Interpreted for Valuation Purposes.
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 or methods since the previous valuation:
 - To coincide with the plan changes made from Ordinance 84-2011, adjustments were made to the assumed rates of retirement.
 - To coincide with the plan changes made from Ordinance 85-2011, adjustments were made to health care plan participation and the benefits provided.
 - The initial per capita health care costs have been updated to reflect the System's recent experience, along with the assumed rates of inflation for health care costs.
 - The assumption of eligibility for premium-free Medicare Part A coverage for those members hired prior to April 1, 1986 has been updated.

These changes are enumerated in Schedule E, Outline of Actuarial Assumptions and Methods.

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, 2010 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 3,024 active members with annualized compensation totaling \$161,756,277. In addition, there are 507 part-time employees.
2. The following table shows the number of retired members and spouses in receipt of a retiree health benefit, and those members with a deferred retiree health benefit as of December 31, 2010.

THE NUMBER OF RETIRED MEMBERS AND BENEFICIARIES AS OF DECEMBER 31, 2010

Group	Number
Retired members and surviving spouses currently participating in retiree health care plans	4,170
Spouses currently participating in retiree health care plans	<u>1,912</u>
Total	6,082
Terminated vested members eligible for health benefits	59
Terminated vested members not eligible for health benefits	<u>23</u>
Total	82

*In addition, there are 6,749 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 health benefit plan 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, 2010, the total market value of assets amounted to \$2,102,475,000, as reported by the auditor, of which \$657,319,000 has been allocated for the purpose of providing retiree health benefits. The actuarial value of assets used for the current valuation was \$726,412,276. Schedule C shows the development of the actuarial value of assets as of December 31, 2010. Schedule D shows a reconciliation of the market value of asset balances from December 31, 2009 to December 31, 2010.



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, 2010. 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 \$712,602,794 of which \$474,631,462 is for the prospective retiree health benefits payable on account of present retired members, beneficiaries of deceased members, and terminated members entitled to deferred benefits, and \$237,971,332 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 \$726,412,276 as of December 31, 2010. The difference of \$13,809,482 between the total liabilities and the total present assets represents a surplus over 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 4.09% of payroll are required under the entry age method. As active employees do not contribute to retiree health benefits, the full amount of 4.09% is payable by the City.
4. Prospective normal contributions at the rate of 4.09% have a present value of \$55,558,248. When this amount is added to \$13,809,482, which is the excess of the total present actuarial value of assets over the total prospective liabilities, a surplus of \$69,367,730 results. The development of the unfunded accrued liability is shown in Schedule A
5. Ordinances 84-2011 and 85-2011, which was passed by the City Council on March 16, 2011, had a significant effect on liabilities. Due to the plan changes, the total prospective liabilities were lower by \$247,359,510 and the present value of prospective normal contributions was lower by \$16,538,287. Therefore, the unfunded accrued liability was reduced by \$230,821,223. Due to the assumption changes, the total prospective liabilities were higher by \$23,404,104 and the present value of prospective normal contributions was higher by \$2,594,569. Therefore the unfunded accrued liability was increased by \$20,809,535. As a result of the plan changes and



the assumption changes combined, the total prospective liabilities were lower by \$223,955,406 and the present value of prospective normal contributions was lower by \$13,943,718. Therefore the unfunded accrued liability was decreased by \$210,011,688. Schedule A of the report shows a side-by-side comparison of each change.

6. As can be seen from Schedule I of the report, the System had actuarial gains for the year which offset the loss from the actuarial value of assets for the year. The System had a loss due to the continued recognition of asset gains and losses of \$40,678,078 (mainly due to the 2008 economic downturn). 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 recognition of asset losses was offset by the decrease in the vested terminated membership and the changing demographics of the retired membership. The net impact of total actuarial gains and losses was a gain of \$209,227,708.



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 4.09%. As active employees do not contribute to retiree health benefits, the full amount of 4.09% is payable by the City.
3. A surplus of 3.81% is available to reduce the normal contribution for the fiscal year ending December 31, 2012, assuming the surplus is amortized over a 30-year period.
5. The total City contribution rate required for the fiscal year ending December 31, 2012 is, therefore, 0.28% of payroll.
6. The following table summarizes the employer contributions which were determined by the December 31, 2010 valuation and are recommended for use.

**SYSTEM ANNUAL REQUIRED CONTRIBUTIONS (ARC)
FOR FISCAL YEAR ENDING DECEMBER 31, 2012**

Contribution	Percentage of Active Members' Compensation	Employer Annual Required Contribution (ARC)
Normal	4.09%	\$ 6,616,000
Accrued Liability	<u>(3.81)</u>	<u>(6,163,000)</u>
Total	0.28%	\$ 453,000



SECTION VI – ACCOUNTING INFORMATION

1. Governmental Accounting Standards Board Statements 43 and 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, 2010**

Group	Total
Retired members and surviving spouses currently participating in the retiree health benefit plan	4,170
Spouses currently participating in the retiree health benefit plans	1,912
Terminated vested members eligible for the retiree health benefit plan	59
Active Participants	
Full-Time	3,024
Part-Time	<u>507</u>
Total	9,672



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)
12/31/2003	\$724,049	\$782,698	\$58,649	92.5%	\$184,407	31.8%
12/31/2004	753,105	822,938	69,833	91.5	182,575	38.2
12/31/2005	775,248	789,740	14,492	98.2	175,335	8.3
12/31/2006	805,695	966,726	161,031	83.3	175,369	91.8
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)

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

*Includes \$5,832,892 in part-time compensation.

3. Following is the calculation of the annual OPEB cost and net OPEB obligation for the fiscal year ending December 31, 2010.

Annual OPEB Cost and Net OPEB Obligation for Fiscal Year Ending December 31, 2010		
(a)	Employer annual required contribution	\$ 44,689,000
(b)	Interest on net OPEB obligation	2,433,000
(c)	Adjustment to annual required contribution	<u>3,553,000</u>
(d)	Annual OPEB cost (a) + (b) - (c)	\$ 43,569,000
(e)	Employer contributions made for fiscal year ending December 31, 2010	<u>4,369,000</u>
(f)	Increase (decrease) in net OPEB obligation (d) - (e)	\$ 39,200,000
(g)	Net OPEB obligation beginning of fiscal year	<u>30,414,221</u>
(h)	Net OPEB obligation end of fiscal year (f) + (g)	\$ 69,614,221



TREND INFORMATION
Dollar Amounts in Thousands

Fiscal Year Ending	Annual OPEB Cost (AOC)	Percentage of AOC Contributed	Net OPEB Obligation (NOO)
December 31, 2006*	\$15,025,000	25%	\$ 7,325,000
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

*Reported in the City's financial statements.

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

Fiscal Year Ending December 31, 2012	Percentage of Active Members' Compensation	Employer Annual Required Contribution (ARC)
Normal	4.09%	\$6,616,000
Accrued liability	<u>(3.81)</u>	<u>(6,163,000)</u>
Total	0.28%	\$ 453,000

5. Additional information as of December 31, 2010 follows:

Valuation date	12/31/2010
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)	8.00%
Projected salary increases (includes inflation)	3.75% - 7.50%
Health care trend rate (includes inflation)	Varies by benefit (Schedule E)
Inflation	3.00%



SECTION VII – EXPERIENCE

Actual experience will never (except by coincidence) coincide 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, 2010 is shown below.

	<u>\$ Thousands</u>
(1) UAAL* as of December 31, 2009	\$ 125,742
(2) Normal cost from December 31, 2009 valuation	8,272
(3) Actual employer contributions	4,369
(4) Interest accrual: $[(1) \times .08] + \{[(2) - (3)] \times .08 \times 0.50\}$	<u>10,215</u>
(5) Expected UAAL before changes: (1) + (2) – (3) + (4)	\$ 139,860
(6) Change due to plan amendments	(230,821)
(7) Change due to actuarial assumptions or methods	<u>20,810</u>
(8) Expected UAAL after changes: (5) + (6) + (7)	\$ (70,151)
(9) Actual UAAL as of December 31, 2010	\$ (69,368)
(10) Gain/(loss): (8) – (9)	\$ (783)
(11) Gain/(loss) as a percent of the December 31, 2009 actuarial accrued liabilities (\$877,399)	(0.09)%

*Unfunded actuarial accrued liability, before corridor constraints, if applicable.



SCHEDULE A

**DEVELOPMENT OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY
AS OF DECEMBER 31, 2010**

	Before Plan Changes	After Plan Changes	After Assumption Changes
(1) Present value of prospective benefits:			
(a) Present active members	\$ 290,010,111	\$ 228,115,849	\$ 237,971,332
(b) Present retired members, beneficiaries and former members entitled to deferred vested retiree health benefits	<u>646,548,089</u>	<u>461,082,841</u>	<u>474,631,462</u>
(c) Total	\$ 936,558,200	\$ 689,198,690	\$ 712,602,794
(2) Present value of future normal contributions	<u>69,501,966</u>	<u>52,963,679</u>	<u>55,558,248</u>
(3) Actuarial accrued liabilities: 1(c) – (2)	\$ 867,056,234	\$ 636,235,011	\$ 657,044,546
(4) Actuarial value of assets	<u>726,412,276</u>	<u>726,412,276</u>	<u>726,412,276</u>
(5) Unfunded actuarial accrued liability (UAAL): (3) – (4)	\$ 140,643,958	\$ (90,177,265)	\$ (69,367,730)
(6) Contribution Rate as a % of Payroll			
(a) Normal Cost	5.07%	3.90%	4.09%
(b) UAAL	<u>7.72%</u>	<u>(4.95)%</u>	<u>(3.81)%</u>
(c) Total	12.79%	(1.05)%	0.28%
(7) Contribution in Dollars			
(a) Normal Cost	\$ 8,201,000	\$ 6,308,000	\$ 6,616,000
(b) UAAL	<u>12,488,000</u>	<u>(8,007,000)</u>	<u>(6,163,000)</u>
(c) Total	\$ 20,689,000	\$ (1,699,000)	\$ (453,000)



SCHEDULE B
VALUATION BALANCE SHEET

Present and prospective assets and liabilities as of December 31, 2010:

<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	\$ 474,631,462
Present value of prospective retiree health benefits payable on account of present active members	<u>237,971,332</u>
Total liabilities	<u>\$ 712,602,794</u>
<u>PRESENT AND PROSPECTIVE ASSETS</u>	
Actuarial value of assets	\$ 726,412,276
Present value of future contributions	
City normal contributions	\$ 55,558,248
Unfunded accrued liability contributions	<u>(69,367,730)</u>
Total prospective contributions	<u>\$ (13,809,482)</u>
Total assets	<u>\$ 712,602,794</u>



SCHEDULE C

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

(1)	Actuarial Value of Assets as of December 31, 2009*	\$	751,657,957
(2)	Market Value of Assets as of December 31, 2010	\$	657,319,000
(3)	Market Value of Assets as of December 31, 2009	\$	621,691,000
(4)	Net Cash Flow During Plan Year		
	(a) Contributions	\$	4,369,000
	(b) Benefit Payments and Net Transfers		46,880,000
	(c) Administrative Expenses		470,000
	(d) Investment Expenses		<u>2,151,000</u>
	(e) Net Cash Flow: (a) – (b) – (c) – (d)	\$	(45,132,000)
(5)	Investment Income		
	(a) Market Total: (2) – (3) – (4)(e)	\$	80,760,000
	(b) Assumed Rate		8.00%
	(c) Amount for Immediate Recognition [(3) x (5)(b)] + [(4)(a) - (4)(b) - (4)(c)] x (5)(b) x 0.5] + (4)(d)	\$	50,167,040
	(d) Amount for Phased-In Recognition: (5)(a) – (5)(c)	\$	30,592,960
(6)	Recognized Amounts for Plan Year		
	(a) Current Year: 0.20 x (5)(d)	\$	6,118,592
	(b) First Prior Year		12,245,720
	(c) Second Prior Year		(58,619,737)
	(d) Third Prior Year		(635,011)
	(e) Fourth Prior Year		<u>10,609,715</u>
	(f) Total Recognized Investment Gain/(Loss)	\$	(30,280,721)
(7)	Actuarial Value of Assets as of December 31, 2010 (1) + (4)(e) + (5)(c) + (6)(f)	\$	726,412,276
	80% of Market Value EOY		525,855,200
	120% of Market Value EOY		788,782,800
(8)	Final Actuarial Value of Assets as of December 31, 2010	\$	726,412,276
(9)	Rate of Return on Actuarial Value		2.43%

*Before corridor constraints, if applicable.



SCHEDULE D
CURRENT ASSET INFORMATION

<i>Receipts</i>			
(1) Contributions			
• City Contributions	\$ 1,731,000		
• Medicare Retiree Drug Subsidy Receipts	<u>2,638,000</u>		
Total Contributions		\$ 4,369,000	
(2) Investment Income			
• Interest and Dividends	\$ 14,592,000		
• Net Appreciation (Depreciation) in Fair Value of Investments	65,724,000		
• Other Investment Earnings	444,000		
• Investment Expenses	<u>(2,151,000)</u>		
Total Investment Income		<u>\$ 78,609,000</u>	
(3) Total Receipts		\$ 82,978,000	
<i>Disbursements</i>			
(4) Benefits Paid	\$ 46,880,000		
(5) Administrative Expenses	<u>470,000</u>		
(6) Total Disbursements		\$ 47,350,000	
(7) Excess of Receipts Over Disbursements: (3) - (6)		\$ 35,628,000	
<i>Reconciliation of Asset Balances</i>			
(8) Market Value at December 31, 2009		\$621,691,000	
(9) Excess of Receipts Over Disbursements		<u>35,628,000</u>	
(10) Market Value at December 31, 2010		\$657,319,000	
(11) Estimated Rate of Return on Market Value of Assets			13.10%

HISTORICAL ASSET INFORMATION
(\$ in thousands)

Valuation Date	Actuarial Value of Assets		Market Value of Assets	
	Amount	Rate of Return	Amount	Rate of Return
12/31/2005	\$775,248	8.37%	\$769,683	6.49%
12/31/2006	805,695	9.15	832,005	13.47
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

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, 2010

DISCOUNT RATE: 8.00% per annum, compounded annually

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

Fiscal Year	Payment Age <65		Payment Age 65+
	Blue Access 80/20 PPO	Blue Access Carve-Out PPO	All Products
2011	10.7%	10.7%	8.3%
2012	9.7	9.7	7.5
2013	8.6	8.6	6.8
2014	7.6	7.6	6.1
2015	6.6	6.6	5.7
2016	6.0	6.0	5.4
2017	5.5	5.5	5.0
2018+	5.0	5.0	5.0

Trend rates for the Blue Access Modified PPO plan, Medicare Part B benefit, dental coverage, and vision coverage are not provided, as, after December 31, 2011, they will either no longer be a benefit of the System, or a liability associated with the benefit is assumed to no longer exist.

AGE RELATED MORBIDITY: Per capita costs are adjusted to reflect expected medical cost changes related to age. The increase to the net incurred claims was 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)

HEALTH BENEFIT PLAN PARTICIPATION: Actual census data and current plan elections provided by the System were used for current participants. Current participants are assumed to maintain their current health benefit elections in perpetuity.

All eligible retirees and dependents in Group 1 are assumed to elect health care coverage. 90% of the Group 1 members who retired prior to September 1, 2007 and qualified under an income limit, as of December 31, 2010, for the Blue Access Modified Carve-Out plan, are assumed to requalify on January 1, 2012, and in all future years. 61% of Group 1 members who qualified under a pension benefit limit, as of December 31, 2010, for the Blue Access Modified Carve-Out plan, are assumed to requalify on January 1, 2012, and in all future years. As the true percentage of those who will continue to be eligible for the Blue Access Modified Carve-Out plan is uncertain, actual results may be materially different. This assumption will need to be revised as experience evolves. As of January 1, 2012, all participants not qualifying for the Blue Access Modified Carve-Out plan are assumed to be covered by the Blue Access 80/20 PPO plan.

All eligible retirees and dependents in Group 2 are assumed to be covered by the Blue Access 80/20 PPO plan. Group 2 participants are required to pay the higher of the active employee contribution, or the portion of their cost as determined by the point system. The point system is based upon the number of the member's full years of service and the member's age at separation from service. Representative values of the assumed annual rates of participation are as follows:

Points	Retiree Contribution of Cost (%)	Assumed Rate of Participation
90+	0	100%
80 – 89	25	80%
70 – 79	50	60%
60 – 69	75	40%

The System will pay 25% of the active employee premium for those with less than 60 points. It is assumed 0% of these retirees and dependents will participate in a health care plan.

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

SPOUSE COVERAGE IN RETIREE HEALTH BENEFIT PLANS: Used actual census data and current plan elections for spouses of current retirees. For spouses of future retirees, 75% of male members and 25% of female members are assumed to be married with the male three years older than his spouse. Of the retirees electing to cover a spouse, it is assumed 85% will elect an optional pension benefit allowance.

MEDICARE COVERAGE AND ELIGIBILITY: For a portion of those current beneficiaries who are age 65 and older, 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 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 participants age 65 and older are assumed to participate in Medicare Part B.



SCHEDULE E
(continued)

SALARY INCREASES: Salary increases are assumed to vary by service. Representative rates, based on 2006 experience study prepared by previous actuary, 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, the Uninsured Pensioner 1994 Mortality Table projected to 2009 was used. Representative values of the assumed annual rates of separation from active service are as follows:

Age	Annual Rate of					
	<u>Withdrawal*</u>	<u>Disability</u>	<u>Death</u>		<u>Retirement</u>	
			Male	Female	Before 1/1/2014**	On or After 1/1/2014
20	6.50%	0.05%	0.041%	0.024%		
25	6.00	0.06	0.061	0.025		
30	3.75	0.07	0.080	0.032		
35	2.00	0.10	0.085	0.044		
40	1.75	0.14	0.102	0.061		
45	1.75	0.21	0.140	0.082	30.0%	30.0%
50	1.50	0.33	0.211	0.119	30.0	30.0
55	1.50	0.55	0.357	0.219	30.0	30.0
60	1.50		0.673	0.443	30.0	40.0
65	1.50		1.265	0.861	25.0	25.0
70	1.50		2.034	1.369	100.0	100.0

* The following withdrawal assumption is used during the first three years of service:

Service	Annual Rate
1	20.00%
2	6.50
3	6.50

** Of those eligible for reduced early retirement, 23% are assumed to retire each year.



SCHEDULE E
(continued)

DEATHS AFTER RETIREMENT: The Uninsured Pensioner 1994 Mortality Table projected to 2009 is used for the period after retirement and for dependent beneficiaries. The PBGC Disabled Mortality Table is used for the period after disability.

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.

WITHDRAWAL ASSUMPTION: It was assumed that 75% of the vested members who terminate elect to withdraw their contributions while the remaining 25% 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.

RETIREE HEALTH CARE PLAN INITIAL PER CAPITA COSTS: Paid claims and cost data were provided by the System and Anthem for the period of January 1, 2010 through December 31, 2010. Claims data was 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 for Medicare eligible participants of the Blue Access 80/20 PPO are based upon the claims experience of all current Medicare eligible retirees and adjusted for plan benefits by relativity factors developed by CMC. 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 for the coverage of dependent children.

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 charts detail the adult per capita assumptions. These amounts include medical, drug, administrative, dental, vision, and Medicare Part B Premium costs and represent the amount the System pays as 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, medical costs for all prospective participants and those existing retirees not yet 65 who were hired prior to April 1, 1986 are adjusted to account for those participants not eligible for premium-free Medicare Part A Coverage.

Annual Medical, Drug*, and Administrative Costs			
Plan	Payment Age <65	Payment Age 65+ - No Medicare Part A Coverage	Payment Age 65+ - With Medicare Part A Coverage
Blue Access 80/20 PPO	\$11,109	\$7,331	\$2,922
Blue Access Modified PPO	14,243	9,183	3,726
Blue Access Carve-Out PPO	14,881	9,577	3,966

* 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



SCHEDULE E
(continued)

Medicare Part B Premium		
Eligible for Medicare Prior to 2010	Eligible for Medicare in 2010	Eligible for Medicare in 2011
\$1,157	\$1,326	\$1,385

Dental	Vision
\$296	\$23

As of January 1, 2012 a liability for the payment of Medicare Part B premiums, dental coverage, and vision coverage is assumed to no longer exist. At that time, those beneficiaries who are Medicare eligible will be required to pay the Medicare Part B premium. Additionally, beneficiaries who elect to retain dental and/or vision coverage will pay for the cost of these benefits, in full. As no aging impact is assumed for the dental and vision coverages, no future liability to the System is assumed for these benefits.

RETIREE HEALTH CARE PLAN CONTRIBUTIONS: Assumed adult per capita health care contribution rates were developed for those participants in Group 2 who are required to contribute a portion of their cost. Contributions are based on past experience and trended based on the assumptions. The following chart details retiree per capita assumptions. These amounts include medical, drug, and administrative costs. The portion attributed to medical and drug costs were age adjusted based on the expected demographics of the group.

Plan	Payment Age <65	Payment Age 65+
Blue Access 80/20 PPO	\$8,772	\$3,787

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 8.00%), 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.
- Employees hired after June 1, 1961, who work in the building crafts.
- Elected officials.
- Employees hired after June 30, 1979 as participants in programs under CETA.

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.



SCHEDULE G
(continued)

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.

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 and 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: 5 years of service

Deferred Vested Retirement: 5 years of service

Health Benefit Eligibility

Group 1: Those participants hired before January 9, 1997 and retire under the System with a minimum of 15 years of service, including their survivors receiving 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 benefits. Group 2 participants entitled to a deferred retirement allowance are eligible for health benefits upon attainment of the Medicare eligibility age.



SCHEDULE G
(continued)

Medical Benefits

The System offers medical benefits (including outpatient prescription drug coverage) to retirees before and during Medicare eligibility. Those participants who retired on or after September 1, 2007 will receive coverage under the Blue Access 80/20 PPO plan. Retirees covered prior to September 1, 2007 may participate in the Blue Access Modified PPO plan, or, if eligible, Blue Access Carve-Out PPO plan. Those employees who retired under a special incentive plan in 2007 are covered by the Blue Access 80/20 PPO plan.

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, those members who do not qualify for coverage under the Blue Access Carve-Out PPO plan will receive coverage through the Blue Access 80/20 PPO plan, and coverage through the Blue Access Modified PPO plan will be discontinued.

Blue Access Carve-Out PPO Plan

Through December 31, 2011, members who retired prior to September 1, 2007 and meet the following requirements are eligible to receive coverage under the lower cost, Blue Access Carve-Out PPO plan.

All disabled members with an annual System pension benefit of \$30,000 or less.

Members who are 65 years of age or older with 30 or more years of service credit with the System, and an annual System pension benefit of \$30,000 or less.

Members who are 65 years of age or older with fewer than 30 years of service credit with the System, and establish that their total income is less than \$30,000.

Members with an annual total income that is less than 50% of the median household income for one individual as found on the City's CDBG Income Eligibility Form.

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, members who retired prior to September 1, 2007, and establish that their annual household income is less than \$30,000, are eligible to receive coverage under the Blue Access Carve-Out PPO plan. Those members who do not qualify for coverage under the Blue Access Carve-Out PPO plan will receive coverage through the Blue Access 80/20 PPO plan.



SCHEDULE G
(continued)

Medicare Part B Premium Reimbursement Through December 31, 2011, the System reimburses the Medicare Part B premiums for all retirees and dependents. Under the provisions of Ordinance 85-2011, beginning January 1, 2012, all Medicare eligible retirees and dependents will be responsible for the payment of required Medicare Part B premiums.

Dental Benefits One traditional dental indemnity plan is provided to all current and future retirees. The plan includes a \$1,000 annual maximum on plan benefits. Under the provisions of Ordinance 85-2011, beginning January 1, 2012, all members participating in the dental plan will be required to pay the full cost of dental coverage, if elected.

Vision Benefits One indemnity design plan is provided to all current and future retirees. The plan has fixed benefits with a \$100 annual maximum benefit. Under the provisions of Ordinance 85-2011, beginning January 1, 2012, all members participating in the vision plan will be required to pay the full cost of vision coverage, if elected.

Retiree Contributions Group 1 participants covered by the Blue Access Modified PPO or Blue Access Carve-Out PPO plans do not contribute towards the cost of coverage. Group 1 participants covered by the Blue Access 80/20 PPO plan contribute an amount equal to the active employee contribution. Group 2 future retirees will pay the higher of the active employee contribution or the portion of their cost determined by the point system. For the purpose of this valuation, the cost for Group 2 retirees is assumed to be based upon the full cost of benefits of the retiree group, and these costs will be split based upon the Medicare eligibility age (age 65).

Fiscal Year 2011	Blue Access 80/20 PPO		
	Individual	Individual with Spouse	Family
Annual Active Employee Contribution	\$250.80	\$501.60	\$694.80

Points	Retiree Contribution of Cost (%)
90+	0
80 – 89	25
70 – 79	50
60 – 69	75

The System will pay 25% of the active employee premium for those with less than 60 points.



SCHEDULE H

TABLE 1

**SCHEDULE OF ACTIVE MEMBERS BY AGE AND SERVICE
AS OF DECEMBER 31, 2010**

Age	Completed Years of Service							Total
	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30+	
Under 20	1							1
Avg Pay	16,240							16,240
20 - 24	38							38
Avg Pay	38,045							38,045
25 - 29	128	43	1					172
Avg Pay	41,789	42,180	41,257					41,884
30 - 34	103	74	33	1				211
Avg Pay	44,003	46,776	52,027	38,225				46,203
35 - 39	93	97	71	23	5			289
Avg Pay	51,411	50,387	51,379	56,097	57,202			51,533
40 - 44	91	104	88	79	84	5		451
Avg Pay	50,151	48,619	54,343	54,846	57,097	52,113		52,753
45 - 49	49	70	74	122	222	49	4	590
Avg Pay	47,919	48,005	51,313	56,890	58,265	63,572	61,224	55,493
50 - 54	56	65	67	80	195	122	46	631
Avg Pay	51,483	47,525	49,804	52,274	57,535	62,208	65,256	55,945
55 - 59	27	45	39	56	114	77	38	396
Avg Pay	69,777	49,118	52,384	54,044	55,656	60,861	66,861	57,413
60 - 64	17	25	27	35	47	21	15	187
Avg Pay	64,395	55,357	47,884	54,490	55,817	59,172	62,009	56,015
65 - 69		5	6	7	15	3	8	44
Avg Pay		70,617	59,288	56,032	57,870	81,946	57,972	60,880
70 & Over			2	3	3	1	5	14
Avg Pay			52,768	51,918	37,466	45,084	61,333	51,817
Total	603	528	408	406	685	278	116	3,024
Avg Pay	47,924	48,515	51,763	54,841	57,204	61,816	64,551	53,491

Average Age 46.99

Average Service 14.67



**SCHEDULE H
(Continued)**

TABLE 2

**SCHEDULE OF PARTICIPATING RETIREES AND SPOUSES BY AGE
AS OF DECEMBER 31, 2010**

<u>Attained Age</u>	<u>Number of Members</u>	<u>Number of Spouses</u>	<u>Total</u>
39 & Under	5	6	11
40 - 44	6	11	17
45 - 49	25	69	94
50 - 54	148	169	317
55 - 59	460	341	801
60 - 64	767	408	1,175
65 - 69	606	302	908
70 - 74	555	250	805
75 - 79	556	175	731
80 - 84	473	97	570
85 - 89	363	67	430
90 - 94	151	13	164
95 - 99	47	4	51
100 & Over	<u>8</u>	<u>0</u>	<u>8</u>
Total	4,170	1,912	6,082

In addition, there are 59 deferred vested employees and beneficiaries entitled to deferred retiree health benefits.



SCHEDULE H
(Continued)

TABLE 3

**SCHEDULE OF PARTICIPATING RETIREES AND SPOUSES BY HEALTH CARE PLAN
AS OF DECEMBER 31, 2010**

<u>Health Care Plan</u>	<u>Age <65</u>	<u>Age 65+</u>	<u>Total</u>
Blue Access 80/20 PPO	680	104	784
Blue Access Modified PPO	1,449	2,348	3,797
Blue Access Modified Carve-Out PPO	286	1,215	1,501
Total	2,415	3,667	6,082



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 12/31/2010
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (2,092)
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(400)
Death-in-Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(242)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	10,557
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
New Members. Additional unfunded accrued liability will produce a loss.	(633)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(40,678)
Death After Retirement. If retirees live longer than assumed, there is a loss. If not as long, a gain.	5,130
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>27,575</u>
Gain (or Loss) During Year From Financial Experience	<u>\$ (783)</u>
Non-Recurring Items. Adjustments for plan amendments, assumption changes, or method changes.	<u>210,012</u>
Composite Gain (or Loss) During Year	<u>\$ 209,229</u>