City of Lansing
Police and Fire Retirement System

Actuarial Valuation of Retiree Healthcare Benefits
as of December 31, 2012

December 21, 2012

EFI ACTUARIES | EFI ASSET/LIABILITY MANAGEMENT SERVICES, INC.

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Contents

Executive Summary

This report presents the results of an actuarial review and analysis of the City of Lansing Police and Fire Retiree Healthcare Plan (the Plan) as of December 31, 2011. The actuarial liabilities and costs have been determined using actual demographic and healthcare information as of December 31, 2011, as supplied by City staff. The last valuation was conducted as of December 31, 2009 by the Plan's prior actuary.

Purpose of the Report

The purposes of this Report are:

- To review experience over the past two years and discuss reasons for changes in Plan cost;
- To compute annual contributions required to fund the Plan in accordance with actuarial principles;
- To discuss issues associated with the determination of Plan costs and future cost implications; and
- To present those items required for disclosure under Statement No. 45 of the Governmental Accounting Standards Board (GASB).

A summary of the current status of the Plan is as follows:

Table 1: Summary of Valuation	December 31, 2009 (Prior Actuary)	December 31, 2011 (EFI)
Plan Membership		
Active	458	362
Retirees/Beneficiaries and Inactive	611	686
Total	1,069	1,048
Actuarial Accrued Liability ($ millions)		
AAL – Active	$ 71.7	$ 88.1
AAL – Retirees and Beneficiaries	143.2	164.1
AAL – Total*	$ 214.9	$ 252.2
AAL under pay-as-you-go funding		*$ 436.9*
Plan Assets ($ millions)	$ 17.5	$ 18.7
Unfunded AAL*	197.4	233.5
Funding Progress (Assets / AAL)	8.1%	7.4%
Annual Required Contribution (ARC, $ millions)		
Employer Normal Cost	$ 4.6	$ 4.4
Amortization of Unfunded AAL	10.8	13.5
Total ARC (% of Payroll)*	$ 15.4 (49.5%)	$ 17.9 (71.4%)
ARC under pay-as-you-go funding		*$ 28.3 (112.5%)*

* Funding policy to be established, full pre-funding illustrated above. Other scenarios are shown in Section 3

Actuarial Certification

In this study, we conducted an examination of all participant data for reasonableness and consistency. Actuarial funding is based on the Entry Age Normal Cost Method. Under this method, the employer contribution provides for current cost (normal cost) plus an amount to amortize the unfunded actuarial accrued liability (UAAL). As of the valuation date, the remaining amortization period is 30 years.

The plan provisions are the same as those used in the prior valuation, except for updates in premium amounts. Actuarial assumptions have changed based on the recent experience study completed by EFI.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. In particular, the assumptions and methods used for funding purposes meet the parameters of the Governmental Accounting Standards Board Statement No. 45 and applicable Actuarial Standards of Practice.

The signing actuaries are members of the American Academy of Actuaries and are qualified to provide the actuarial opinions provided in this Report.

Respectfully Submitted,

Gregory M. Stump, FSA, MAAA

Karen T. Earley, FSA, MAAA

Section 1: Summary of Plan Provisions

1.1: Brief Outline of Plan Provisions - Fire

Participation

Retirees of the Lansing Local No. 421 of the International Association of Firefighters (AFL-CIO) are eligible to receive retiree health care benefits.

HEALTH CARE - NORMAL RETIREMENT

Eligibility

25 or more years of service or, if hired before or on July 1, 2010, age 55 and 10 years of service.

Benefit

Retiree Coverage: City pays 100% of retiree health care base coverage for the life of the retiree.

Spouse Coverage: City pays 100% of retiree health care coverage for the life of the spouse if Joint and Survivor Pension option is elected. If Straight Life Pension option is chosen, spousal health care benefit will cease upon death of the retiree.

HEALTH CARE - DEFERRED RETIREMENT BENEFITS

Eligibility

Any age with 10 years of service (25 years, with up to 2 years military service credit, if hired on or after July 2, 2010). Benefit commences when retiree reaches eligible retirement age.

Benefit

Retiree Coverage: City pays 100% of retiree health care base coverage for the life of the retiree.

Spouse Coverage: City pays 100% of retiree health care coverage for the life of the spouse if Joint and Survivor Pension option is elected. If Straight Life Pension option is chosen, spousal health care benefit will cease upon death of the retiree.

HEALTH CARE - DISABILITY AND DEATH RETIREMENT (DUTY RELATED)

Eligibility

No age or service requirements. Benefit payable when member begins to receive duty- disability retirement benefits. Surviving spouse benefits begin immediately.

Benefit

Retiree Coverage: City pays 100% of retiree health care base coverage for the life of the retiree.

Spouse Coverage: City pays 100% of retiree health care coverage for the life of the spouse if Joint and Survivor Pension option is elected. If Straight Life Pension option is chosen, spousal health care benefit will cease upon death of the retiree.

HEALTH CARE - DISABILITY AND DEATH RETIREMENT (NON-DUTY RELATED)

Eligibility

Any age with 10 years of service. Disability benefits payable when member begins to receive disability retirement benefits. Surviving spouse benefits begin immediately.

Benefit

Retiree Coverage: City pays 100% of retiree health care base coverage for the life of the retiree.

Spouse Coverage: City pays 100% of retiree health care coverage for the life of the spouse if Joint and Survivor Pension option is elected. If Straight Life Pension option is chosen spousal health care benefit will cease upon death of the retiree.

DENTAL COVERAGE

Eligibility and Benefits

City pays 100% of dental coverage and dental eligibility conditions are the same as health care eligibility conditions.

VISION COVERAGE

Eligibility and Benefits

City pays 100% of vision coverage and vision eligibility conditions are the same as health care eligibility conditions.

MEDICARE – ELIGIBILITY

City of Lansing Police and Fire provides Medicare complementary retiree health care benefits at age 65 when retiree becomes Medicare eligible.

RETIREE GROUP LIFE

Employees who retire on or after July 1, 1983 shall be covered by a life insurance policy in the sum of $3,000, all costs of this policy shall be borne by the City.

HEALTH CARE - RETIREE OPT OUT

Retirees who decide to opt out of health care plan will be eligible to receive $1,800 in any year in which they receive coverage from another source.

CHANGES IN PLAN PROVISIONS

The benefit provisions relating to members hired on or after July 2, 2010 are the only changes in Plan provisions since the prior valuation.

1.2: Brief Outline of Plan Provisions - Police

Participation

Retirees of the Lansing Capitol City Lodge No. 141 Fraternal Order of Police Non-Supervisory and Supervisory Police Divisions are eligible to receive retiree health care benefits.

HEALTH CARE - NORMAL RETIREMENT

Eligibility

25 or more years of service or, if hired before or on July 1, 2010, age 55 and 15 years of service.

Members of FOP Supervisors hired on or after July 2, 2010 are eligible with 23 years of service, plus 2 years of military service, or at 15 years of service at mandatory retirement age.

Benefit

Retiree Coverage: City pays 100% of retiree health care base coverage for the life of the retiree.

Members of FOP Supervisors hired on or after July 2, 2010: Retirees pay $250, Single/550 2-Party/650 Family annual premium sharing for first 5 years of retirement.

Spouse Coverage: City pays 100% of retiree health care coverage for the life of the spouse if Joint and Survivor Pension option is elected. If Straight Life Pension option is chosen, spousal health care benefit will cease upon death of the retiree.

HEALTH CARE - DEFERRED RETIREMENT BENEFITS

Eligibility

Any age with 15 years of service (25 years, with up to 2 years military service credit, if hired on or after July 2, 2010). Benefit commences when retiree reaches eligible retirement age.

Benefit

Retiree Coverage: City pays 100% of retiree health care base coverage for the life of the retiree.

Members of FOP Supervisors hired on or after July 2, 2010: Retirees pay $250, Single/550 2-Party/650 Family annual premium sharing for first 5 years of retirement.

Spouse Coverage: City pays 100% of retiree health care coverage for the life of the spouse if Joint and Survivor Pension option is elected. If Straight Life Pension option is chosen, spousal health care benefit will cease upon death of the retiree.

HEALTH CARE - DISABILITY AND DEATH RETIREMENT (DUTY RELATED)

Eligibility

No age or service requirements. Disability benefits payable when member begins to receive duty-disability retirement benefits. Surviving spouse benefits begin immediately.

Benefit

Retiree Coverage: City pays 100% of retiree health care base coverage for the life of the retiree.

Spouse Coverage: City pays 100% of retiree health care coverage for the life of the spouse if Joint and Survivor Pension option is elected. If Straight Life Pension option is chosen, spousal health care benefit will cease upon death of the retiree.

HEALTH CARE - DISABILITY AND DEATH RETIREMENT (NON-DUTY RELATED)

Eligibility

Any age with 15 years of service (25 years if hired on or after July 1, 2010). Disability benefits payable when member begins to receive disability retirement benefits. Surviving spouse benefits begin immediately.

Benefit

Retiree Coverage: City pays 100% of retiree health care base coverage for the life of the retiree.

Spouse Coverage: City pays 100% of retiree health care coverage for the life of the spouse if Joint and Survivor Pension option is elected. If Straight Life Pension option is chosen, spousal health care benefit will cease upon death of the retiree.

DENTAL COVERAGE

Eligibility

City pays 100% of dental coverage and dental eligibility conditions are the same as health care eligibility conditions.

VISION COVERAGE

Eligibility

City pays 100% of vision coverage and vision eligibility conditions are the same as health care eligibility conditions.

Benefit

Retiree Coverage: City pays 100% of retiree health care base coverage for the life of the retiree.

Spouse Coverage: City pays 100% of retiree health care coverage for the life of the spouse if Joint and Survivor Pension option is elected. If Straight Life Pension option is chosen, spousal health care benefit will cease upon death of the retiree.

MEDICARE – ELIGIBILITY

City of Lansing Police and Fire provides Medicare complementary retiree health care benefits at age 65 when retiree becomes Medicare eligible.

RETIREE GROUP LIFE

Employees who retire on or after July 1, 1982 shall be covered by a life insurance policy in the sum of $3,000, all costs of this policy shall be borne by the City.

HEALTH CARE - RETIREE OPT-OUT

City does not provide Opt-Out Coverage for Non-Supervisory Police.

CHANGES IN PLAN PROVISIONS

The benefit provisions relating to members hired on or after July 2, 2010 are the only changes in Plan provisions since the prior valuation.

Section 2: Actuarial Methods and Assumptions

2.1: Actuarial Methods

Actuarial Cost Method

The annual cost of the Plan is computed under the Entry Age Normal Actuarial Cost Method. Under this Cost Method, the Normal Cost for each member is calculated as the amount necessary to fund their projected benefits as a level dollar amount over their expected working lifetime.

At each valuation date, the Actuarial Accrued Liability for each member is equal to the difference between the liability for the member's total projected benefit and the present value of future Normal Cost contributions.

The excess of the Actuarial Accrued Liability (AAL) over Plan assets is the Unfunded Actuarial Accrued Liability (UAAL). The UAAL is amortized, as a level percentage of payroll, over 30 years.

Plan Assets

The Lansing Police and Fire retiree healthcare plan is currently financed on a pay-as-you-go basis; however, Plan assets are available in a separate reserve of the Police and Fire Retirement System trust.

Changes in Actuarial Methods since Prior Valuation

There have been no changes in actuarial methods since the prior valuation, except that the work was performed by a different actuarial firm under a different valuation system.

2.2: Actuarial Assumptions

Valuation Date — All assets and liabilities are computed as of January 1, 2012.

Rate of Return — The annual rate of return on all Plan assets is assumed to be 4.30% for City funded benefits, representing the long-term expected return on the City's general fund assets.

For fully prefunded calculations, the expected return is 7.80%.

Inflation — The rate of general inflation, as measured by the Consumer Price Index (CPI), is assumed to increase at the rate of 3.00% per year.

Basis for Demographic Assumptions — An Experience Study was conducted by EFI in 2012. This Study serves as the basis for the demographic assumptions below.

Increases in Pay — Increases in salary are assumed to include a wage inflation component of 3.3% per year, plus 7% for those with less than 5 years of service, or 0.75% for all others.

Member Mortality — Rates of mortality for Plan members are specified by the Retired Pensioners (RP) 2000 Mortality Tables for males and females, with Blue Collar adjustments. For Disabled members, the disabled versions of these tables are assumed, with a 5 year age setback for males. Each of these tables is projected to 2008 with Scale BB

Projected improvements in mortality for non-disabled members have been accounted for by applying 50% of Scale BB to the year 2023.

Service Retirement — Retirement is assumed to occur among eligible members in accordance with the table below.

Years of Service	Fire	Police
10-24	5%	5%
25	80%	80%
26-29	60%	25%
30+	100%	100%

Disability

Rates of disability vary based on the age of the member as shown below. 95% of disabilities are assumed to be duty-related.

Representative Assumed Rates of Disability

Age	Rate
20	0.080%
30	0.400%
40	0.625%
50	0.750%
60+	0.00%

Termination

Rates of termination vary based on the age and service of the member as shown below.

Representative Assumed Rates of Termination

Service	Fire	Police
0	4.0%	5.0%
1	3.2%	4.3%
5	1.3%	2.2%
10	0.4%	1.0%
15	0.1%	0.4%
20	0.0%	0.0%

Participation and Coverage Elections

100% of Plan members are assumed to elect coverage upon retirement. 90% are assumed to have a covered spouse. Male spouses are assumed to be three years older than their wives.

Healthcare Claims

The following represents expected medical and pharmacy claims for 2012.

	Retiree		Spouse	
Age	Male	Female	Male	Female
50	7,047	8,766	7,047	8,905
55	9,472	10,570	9,472	10,643
60	13,107	12,238	13,107	12,269
65	5,520	5,244	5,332	5,078
70	5,947	5,649	5,744	5,471
75	6,406	6,086	6,188	5,894
80	6,901	6,556	6,667	6,349
85	7,435	7,063	7,182	6,840

Dental and vision claims for 2012 are assumed to be $30 and $4 per person, respectively, with no assumed aging. Family coverage is assumed to result in 50% higher dependent claims.

Projected Post-Retirement Benefit Cost Increases:

Annual increases in the premium equivalents and expected claims for post-retirement benefits are assumed to be as follows (representative rates):

Year	Medical/Rx, Pre-65	Medical/Rx, Post-65
2012	8.5%	6.5%
2013	7.0%	6.0%
2014	9.0%	6.0%
2015	8.0%	6.0%
2020	6.6%	6.0%
2025	5.6%	5.0%
2030+	5.0%	5.0%

The prior medical trend assumption was 8% in 2012, grading down to a 4% ultimate rate.

Vision and Dental trend are each assumed to be 4% per year.

Change in Actuarial Assumptions since Prior Valuation

Actuarial assumptions were updated based on an experience study conducted in 2012, covering January 1, 2005 through December 31, 2010. Medical and pharmacy claims were updated based on analysis of recent claim experience. Future medical inflation assumptions were updated based on the Getzen Model and higher expected near-term (2014 – 2015) costs due to the recent national healthcare legislation.

Section 3:

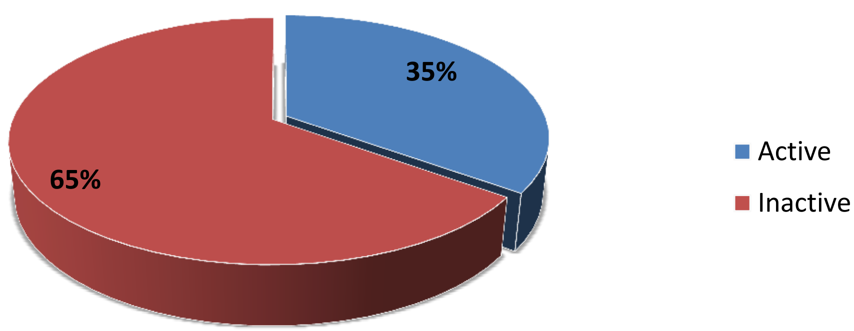
Actuarial Computations

3.1: Summary of Actuarial Accrued Liability (AAL) and Normal Cost

	December 31, 2009	December 31, 2011
	(from prior report)	
Active Members AAL		
Fire	33,109,258	40,393,517
Police	38,612,837	47,663,653
Total Active AAL	71,722,095	88,057,170
Retired Members/Beneficiaries and Inactive AAL		
Fire	71,246,546	74,018,300
Police	71,930,717	90,144,976
Total Inactive AAL	143,177,263	164,163,276
Employer Normal Cost		
Fire	2,185,622	2,214,982
Police	2,393,045	2,215,300
Total Normal Cost	4,578,667	4,430,282

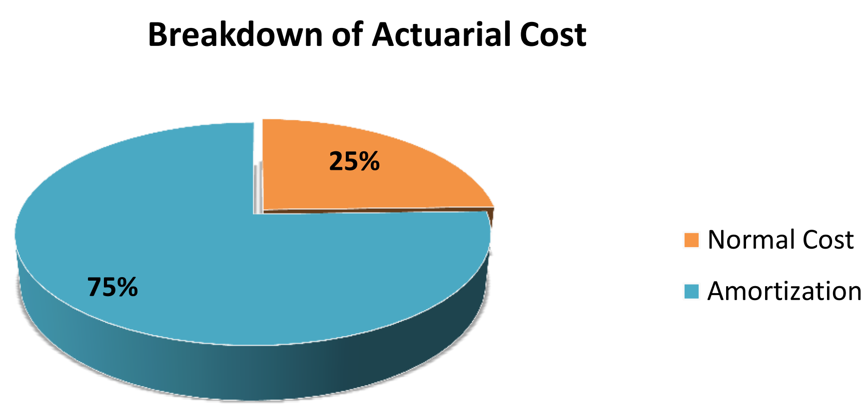
(full pre-funding assumed for comparative purposes)

Breakdown of Actuarial Accrued Liability



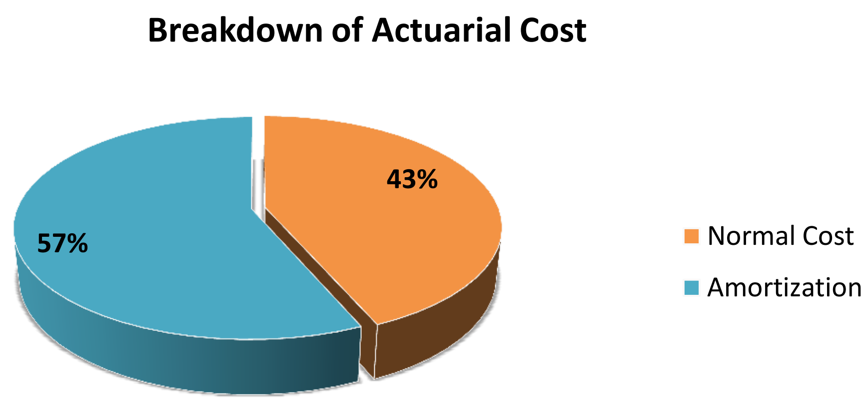
3.2: Computation of Annual Required Contribution (ARC) – Full Funding

		December 31, 2009	December 31, 2011
(1)	Total Actuarial Accrued Liability	$ 214,899,358	$ 252,220,445
(2)	Actuarial Value of Plan Assets	17,477,208	18,678,699
(3)	Unfunded Actuarial Accrued Liability (UAAL): (1) – (2)	197,422,150	233,541,746
(4)	Amortization of UAAL: (3) ÷ Amort Factor	10,789,419	13,507,531
(5)	Employer Normal Cost	4,578,667	4,430,282
(6)	**Total Annual Required Contribution: (4) + (5)**	**$ 15,368,086**	**$ 17,937,813**
	Percent of Payroll	**49.50%**	**71.38%**
	Following Fiscal Year Cost	**$ 15,982,810**	**$ 18,501,061**
	Funding Policy Contribution (including benefit payments)		**$ 18,501,061**



3.3: Computation of Annual Required Contribution (ARC) – Pay-as-you-go

		December 31, 2011
(1)	Total Actuarial Accrued Liability	$ 436,872,255
(2)	Actuarial Value of Plan Assets	18,678,699
(3)	Unfunded Actuarial Accrued Liability (UAAL): (1) – (2)	418,193,556
(4)	Amortization of UAAL: (3) ÷ Amort Factor	15,974,051
(5)	Employer Normal Cost	12,302,162
(6)	**Total Annual Required Contribution: (4) + (5)**	**$ 28,276,213**
	Percent of Payroll	**112.52%**
	Fiscal Year 2013 Cost	**$ 29,164,086**
	Funding Policy Contribution (including benefit payments)	**$ 10,765,768**



3.4: Computation of Annual Required Contribution (ARC) – Partial Funding

		50% Pre-Funding	Statutory Pre-Funding
	Discount Rate	*6.05%*	*4.50%*
(1)	Total Actuarial Accrued Liability	325,097,913	421,352,941
(2)	Actuarial Value of Plan Assets	18,678,699	18,678,699
(3)	Unfunded Actuarial Accrued Liability (UAAL): (1) – (2)	306,419,214	$402,674,242
(4)	Amortization of UAAL: (3) ÷ Amort Factor	14,570,449	15,790,513
(5)	Employer Normal Cost	7,248,973	11,556,048
(6)	**Total Annual Required Contribution: (4) + (5)**	**$ 21,819,421**	**$ 27,346,561**
	Percent of Payroll	**86.83%**	**108.83%**
	Fiscal Year 2013 Cost	**$ 22,504,551**	**$ 28,205,243**
	Funding Policy Contribution (including benefit payments)	**$ 14,633,415**	**$ 11,408,531**

<u>50% pre-funding:</u> Benefit payments + 50% of difference between pay-as-you-go cost and full pre-funding cost

<u>Statutory Prefunding:</u> 2.48% of pay contributions (in addition to benefit payments), per City ordinance

Section 4:

Disclosure Information

4.1: GASB Schedules

GASB Statement No. 45 requires preparation of schedules of funding status and employer contributions, as well as the disclosure of plan provisions, actuarial assumptions, and other information. The required schedules are shown below. In each case, we have relied upon information from our files and contained in the reports of other actuaries employed by the employer in completing the schedules.

Schedule of Funding Status

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percent of Payroll
12/31/2009	$ 17,477,208	$214,899,358	$197,422,150	8.2%	$31,045,528	636%
12/31/2011 Prefunded	$ 18,678,699	$252,220,445	$233,541,746	7.3%	$25,128,835	949%
12/31/2011 Partial Funding (statutory)	$ 18,678,699	$421,352,941	$402,674,242	4.4%	$25,128,835	1,602%

Net OPEB Obligation

	Fiscal 2011	Fiscal 2012
Annual Required Contribution (ARC)~	16,201,842	17,937,813
Interest on Net OPEB Obligation	1,035,062	1,526,320
Adjustment to ARC	(762,751)	(1,131,781)
Annual OPEB cost	16,474,153	18,332,352
Contributions Made*	(9,844,226)	(9,922,367)
Increase in Net OPEB Obligation	6,629,927	8,409,985
Net OPEB Obligation – Beginning of Year	12,938,273	19,568,200
Net OPEB Obligation –End of Year	**19,568,200**	**27,978,185**

~ This is based on a full pre-funding scenario. Pay-as-you-go or partial pre-funding will entail a higher ARC and Net OPEB Obligation. The City will need to finalize the above based on their specific funding policy.

* Amounts should be based on actual contributions = Total claims paid on behalf of retirees, less retiree contributions. The amounts above are based on the actuary's estimates of such payments. Any changes in these amounts will also impact the total Net OPEB Obligation.

4.2: Summary of Valuation Information

The table below summarizes certain information about this actuarial report.

Valuation date	December 31, 2011
Actuarial cost method	Entry Age Normal, Level percent of pay
Amortization method	Level percentage of payroll
Remaining amortization period	30 years
Asset valuation method	N/A
Actuarial assumptions:	
Investment rate of return*	4.30% for pay-as-you-go; 7.80% for prefunded scenarios
*Includes inflation at	3.00%

Projected Post-Retirement Benefit Cost Increases:

Annual increases in the premium equivalents and expected claims for post-retirement benefits are assumed to be as follows (representative rates):

Year	Medical/Rx, Pre-65	Medical/Rx, Post-65
2012	8.5%	6.5%
2013	7.0%	6.0%
2014	9.0%	6.0%
2015	8.0%	6.0%
2020	6.6%	6.0%
2025	5.6%	5.0%
2030+	5.0%	5.0%

Vision and Dental trend are each assumed to be 4% per year.

Section 5:

Summary of Participant Data

Data Summary

Data on active and inactive employees and their beneficiaries as of December 31, 2011 was supplied by the City on electronic media. Participant data was reviewed for reasonableness and consistency but was neither verified nor audited.

A summary of data for the prior and current valuations is shown below.

	December 31, 2009			December 31, 2011		
Active Participants	**Fire**	**Police**	**Total**	**Fire**	**Police**	**Total**
Number of Active Members	214	244	458	177	185	362
Average Age	39.9	38.4	39.2	41.2	40.6	40.9
Average Service	12.4	12.7	12.5	13.8	15.1	14.5
Inactive Participants	**Fire**	**Police**	**Total**	**Fire**	**Police**	**Total**
Number of Retired Participants	320	284	604	202	276	478
Average Age		Not shown		65.4	64.8	65.0
Number of Disabled Participants		(included above)		35	22	57
Average Age		Not shown		55.0	53.5	54.4
Number of Surviving/EDRO Beneficiaries		(included above)		74	62	136
Average Age		Not shown		75.3	69.8	72.8
Number of Terminated Vested	2	5	7	16	0	16
Average Age		Not shown		47.3	N/A	47.3

The following table is a summary of the current healthcare coverage for the above inactive participants who have elected retiree healthcare benefits from the City.

Retired Members and Beneficiaries as of December 31, 2011

Healthcare Coverage	Fire	Police	Total
Single Coverage	118	139	257
Dual Coverage	140	161	301
Family Coverage	44	58	102
No Coverage or Opt Out	9	2	11
Total Retirees/Beneficiaries	311	360	671

Appendix:

Additional Information and Sensitivity Analysis

Background

In 2004, the Governmental Accounting Standards Board (GASB) issued a new set of accounting rules, referred to as Statements 43 and 45, for how public sector employers must measure and report the cost of retiree benefit obligations on their financial statements. These statements cover what are known as "Other Post-Employment Benefits" (OPEB) and include such non-pension benefits as life insurance, dental care coverage and long-term care, as well as retiree health benefits.

The accounting statements require the use of using accrual-basis accounting methods, which will generally result in a higher current annual cost being reported on the employers' financial statements. The new statements do not require that these benefits be paid for on a similar basis (i.e. using pre-funding methods). However, governments that elect to pre-fund these benefits will generally be able to report a smaller annual cost for these benefits on their financial statements than if they did not pre-fund.

Funding Policy and Implications

To demonstrate the effects of pre-funding benefits, we have determined Plan cost based on two scenarios:

1. Full pre-funding of benefits – This implies that the City will consistently contribute an amount equal to the Annual Required Contribution (ARC) as defined by GASB 45.
2. Pay-as-you-go funding (current financing method) – This entails no intended pre-funding, and that all future benefits will be paid from the City's general assets.

Partial prefunding is another option, which would entail a consistent contribution greater than the pay-as-you-go cost, but less than the full pre-funding ARC.

GASB Statement 43 has particular requirements pertaining to the legal structure of a trust fund when determining whether assets can be considered to be accumulated for the purposes of pre-funding the OPEB benefits, specifically:

- Contributions to the plan are irrevocable
- Plan assets are dedicated to providing benefits to their retirees and their beneficiaries in accordance with the terms of the plan
- Plan assets are legally protected from creditors of the employer or plan administrator

Pay-as-you-Go Funding:
A method for funding benefits whereby the employer pays the current year's benefits from the operating funds of the employer

Accrual-basis Accounting:
A method that recognizes costs when an employee earns a benefit, not when the benefit is actually paid

Pre-Funding:
A method for funding whereby the employer sets aside (and generally invests) assets to pay for future benefits

The Plan must satisfy these requirements if it wishes to use dedicated assets to offset the retiree healthcare liabilities for GASB purposes.

The valuation of the plan must take into account the funding policy. The key difference between the funding strategies described above is in the selection of the discount rate (or investment return assumption) used to determine liabilities and costs. As required by GASB Statements 43 and 45, the return assumption must correspond with the assets used to support the benefits. For a plan with a full pre-funding policy, the expected return on plan assets may be used. For an unfunded plan (i.e. pay-as-you-go), the expected rate of return on general funds will be required.

Discount Rate:
The interest rate used to calculate the value today of money that will be needed in the future.

Unfunded Actuarial Accrued Liability:
The value in today's dollars of future benefits that workers have earned based on the service to the current date.

For a plan with a partial-funding policy, those liabilities which are being pre-funded can be discounted at the expected return on plan assets, while those liabilities which are not being pre-funded must be discounted at the expected rate of return on the general fund.

The discount rate is a key economic assumption, and has a substantial impact on the determination of liabilities and costs. A lower discount rate leads to a higher present value of future benefits, and subsequently higher calculated liabilities and actuarial costs.

Annual Required Contribution (ARC): The amount of money that should be set aside during the year to cover both the value of benefits accrued by active workers during the year (Normal Cost) and the portion of the unfunded actuarial liability that is being paid that year.

Sections 3.2 through 3.4 show the determination of actuarial liabilities and the ARC under various funding policies. All other actuarial assumptions and methods are consistent between the two scenarios. Table A-1 below demonstrates the impact of various investment returns.

Table A-1: Summary of Liabilities and Cost (ARC) Under Various Return Scenarios

($ millions)	**Expected Basis**	**Lower Return**	**Higher Return**
		Pre-funded	
Annual rate of return (discount rate)	7.80%	6.80%	8.80%
Actuarial Accrued Liability	$ 252.2	$ 290.2	$ 221.6
Employer Normal Cost	4.4	5.8	3.4
Annual Required Contribution (ARC)	**$ 17.9**	**$ 19.9**	**$ 16.4**

Uncertainties in OPEB Projections: Healthcare Inflation

As shown above, the decision to pre-fund post-retirement benefits has a large impact on the determination of the OPEB liabilities and costs.

Also, unlike pension plans, which have a relatively predictable pattern of benefits, post-retirement healthcare benefits are much more difficult – if not impossible – to forecast accurately. Pension benefits are based on service and salary, which can be reasonably anticipated. Post-retirement medical benefits are much more variable, as they depend heavily on medical inflation.

In order to calculate future medical benefits, it is common to use relatively high expected medical inflation rates for the next few years, which gradually decrease over time. One explanation for the downward trend in medical inflation rates is that if medical inflation is not controlled, then expenditures in the health-related sectors will constitute an unacceptably large portion of the overall national economy.

Even if medical inflation decreases to the level of general inflation, long-term rates of medical premium rate increases may still exceed the general inflation rate. Medical care premiums often increase faster than medical inflation due to the particulars of the medical coverage, such as the leveraging effect of employee cost-sharing (co-pays, deductibles, etc.) on premium rates. For this reason, a long-term medical inflation assumption is set at a level higher than assumed general inflation.

Table A-2 below demonstrates the impact of medical inflation on costs, showing liabilities and costs under three scenarios. The baseline scenario applies the valuation assumption of initial annual medical inflation. The alternate scenarios assume medical costs increase at rates 1% higher and 1% lower each year versus valuation assumptions. All other valuation methods and assumptions are maintained for these scenarios.

Table A-2: Summary of Liabilities and Cost (ARC) Under Various Medical Inflation Scenarios

($ millions)	**Valuation Assumptions**	**Increased Medical Inflation**	**Decreased Medical Inflation**
		Pre-funded Scenario Only	
Initial Medical/Rx Inflation (first three years)	8.5% - 9.0%	9.5% - 10.0%	7.5% - 8.0%
Ultimate Medical/Rx Inflation (Dental/Vision Inflation – all years)	5.0% (4.0%)	6.0% (5.0%)	4.0% (3.0%)
Actuarial Accrued Liability	$ 252.2	$ 292.5	$ 220.0
Employer Normal Cost	4.4	5.6	3.5
Annual Required Contribution (ARC)	**$ 17.9**	**$ 21.4**	**$ 15.2**