
CITY OF JOLIET
RETIREE HEALTHCARE AND LIFE INSURANCE BENEFIT
PROGRAMS
ACTUARIAL VALUATION AS OF
JANUARY 1, 2006

GRS

Gabriel Roeder Smith & Company

October 18, 2006

Mr. Robert Fraser
Director of Management and Budget
City of Joliet
150 W. Jefferson Street
Joliet, IL 60432-4158

Dear Bob:

We have performed an actuarial valuation as of January 1, 2006, of the Retiree Healthcare and Life Insurance Benefit Programs sponsored by the City of Joliet. The actuarial valuation was performed in order to:

- Measure the actuarial liability as of January 1, 2006, and
- Develop pro forma retiree healthcare accounting expense information for fiscal year 2006 as defined under the GASB Statement Nos. 43 and 45.

In addition, we have performed ten-year actuarial projections of the GASB expense and funding requirements.

The valuation was based on the following:

- Census data as of January 1, 2006, as provided by the City of Joliet, and claims data for calendar years ending 2003, 2004 and 2005, and enrollment data as of October 1, 2005, as provided by BlueCross BlueShield;
- Plan provisions and funding policy in effect as of January 1, 2006, as provided by the City of Joliet and BlueCross BlueShield as summarized in Section D;
- Our understanding of the substantive plan in effect as currently being administered. That is, dependent premiums have not increased since 1988, and will continue to remain level in the future, and retirees do not pay for their healthcare coverage; and
- Actuarial assumptions and methods shown in Section E as used for Police and Fire in the actuarial valuations performed for the City of Joliet and as used for the non-public-safety non-state employees in the actuarial valuation for the Illinois Municipal Retirement Fund.

The calculations reported herein have been made on a basis consistent with GASB Statements Nos. 43 (*Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*) and 45 (*Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pension*). The undersigned is a member of the American Academy of Actuaries and meets the Qualification Standards of the Academy of Actuaries to render the actuarial opinion herein.

If you have any questions or comments, please call us at 312-368-6613.

Sincerely,



Alex Rivera, F.S.A.
Senior Consultant

AR: ar
Enclosures

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Section A



Executive Summary

EXECUTIVE SUMMARY

This report presents the results of our actuarial valuation as of January 1, 2006, for the Retiree Healthcare and Life Insurance Benefit Programs sponsored by the City of Joliet. The valuation was based on GASB statement Nos. 43 and 45. Our valuation was based on a discount rate assumption of 5.0 percent and an ultimate healthcare trend assumption of 5.0 percent, as approved by the City of Joliet. The discount rate reflects the employer's pay-as-you-go funding policy. The key valuation results are summarized below:

Retiree Healthcare and Life Insurance Benefit Programs				
5.0% Discount Rate and 5.0% Ultimate Trend				
(\$ in thousands)				
	General Fund	Water/Sewer	Parking	Total
Actuarial Liability as of January 1, 2006	\$167,011,493	\$18,592,697	\$880,238	\$186,484,428
Normal Cost for FY 2006	\$7,748,869	\$467,556	\$40,436	\$8,256,861
GASB FY 2006 Expense	\$14,122,660	\$1,177,124	\$74,029	\$15,373,813
(% of Payroll)	26.7%	20.0%	29.7%	26.1%
FY 2006 Benefit Payments	\$3,393,309	\$368,106	\$10,703	\$3,772,117
(% of Payroll)	6.4%	6.3%	4.3%	6.4%

The details of the preceding valuation results by Fund are included in Section B of the report.

According to GASB Statement No. 45, the City of Joliet will need to accrue a GASB expense or Annual OPEB Cost beginning in fiscal years after December 15, 2007 (Phase 2 Governments). However, earlier application of the statement is encouraged. The Net OPEB Obligation or balance sheet liability represents the sum of excess Annual OPEB Costs over actual employer contributions.

Our pro forma calculations assume an opening transition liability of zero as of January 1, 2006.

Based on our pro forma calculations, if the City of Joliet continues to fund retire healthcare benefits on a pay-as-you-go basis, the Net OPEB Obligation is expected to grow to approximately \$134.6 million after 10 years. The details of the projections are shown in Section B.

Section B

**Valuation Results at 5.0% Discount
and 5.0% Trend**

VALUATION RESULTS AT 5.0% DISCOUNT AND 5.0% TREND

The following tables show the results of our valuation assuming a discount rate of 5.0 percent, salary increases comprised of a wage inflation component of 4.0 percent and a seniority and merit component that varies by service and an ultimate healthcare trend rate of 5.0 percent. We believe these assumptions are consistent with the requirements of GASB Statement Nos. 43 and 45. According to paragraph 34(c) of GASB Statement No. 43 and paragraph 13(c) of GASB Statement No. 45, plans should use a discount rate consistent with the return on assets backing retiree healthcare benefits, which for pay-as-you-go plans will usually be the return earned by the employer's general assets.

The following tables are included in this section:

- GASB Valuation as of January 1, 2006, by Fund
- Ten-year GASB Projection for All Funds

The ten-year GASB projections show an annual OPEB expense increasing from \$15.4 million in FY 2006 to \$32.3 million in FY 2015. When expressed as a percentage of payroll, OPEB expense is expected to increase from 26.1 percent to 38.5 percent of payroll. Expected retiree healthcare benefits are projected to increase from \$3.8 million in FY 2006 to about \$11.5 million in FY 2015. This represents a significant increase when expressed as a percentage of payroll, from 6.4 percent in FY 2006 to 13.7 percent in FY 2015. The primary reason for the increase is due to the relationship between salary increases and healthcare trend increase. That is, salaries are expected to grow at 4.0 percent whereas healthcare benefits are expected to grow at 11.0 percent in 2006, 10.0 percent in 2007, etc., until the ultimate trend rate of 5.0 percent is reached in the year 2013.

The balance sheet liability or Net OPEB Obligation is expected to grow from \$0 at FYE 2005 to \$134.6 million at FYE 2014. Our calculations assume an initial transition liability of \$0 as of January 1, 2006, and a pay-as-you-go funding policy; that is, employer contributions equal benefit payments for the current retiree group. Our projections also assume that the select and ultimate trend rates will be fresh started in each subsequent valuation year.

City of Joliet, Illinois
Retiree Healthcare and Life Insurance Benefit Programs
GASB 45 Actuarial Valuation as of January 1, 2006

<i>Discount Rate</i>	5.00%
<i>Salary Scale¹</i>	5.50%
<i>Ultimate Trend</i>	5.00%
<i>Wage Inflation</i>	4.00%
<i>Amortization: 30-year open, level percentage of payroll</i>	

	General Fund	Water/Sewer Fund	Parking System	Total
<i>Retiree Healthcare Program</i>				
I) Actuarial Liability				
A) Health Insurance				
i) Active Employees ²	\$ 106,407,148	\$ 12,065,038	\$ 746,548	\$ 119,218,734
ii) Retired and Disabled Participants	58,476,727	6,239,712	122,041	64,838,480
iii) Total	\$ 164,883,875	\$ 18,304,750	\$ 868,589	\$ 184,057,214
B) Life Insurance				
i) Active Employees ²	\$ 672,470	\$ 86,408	\$ 4,706	\$ 763,584
ii) Retired and Disabled Participants	1,455,148	201,539	6,943	1,663,630
iii) Total	\$ 2,127,618	\$ 287,947	\$ 11,649	\$ 2,427,214
C) Total Liabilities	\$ 167,011,493	\$ 18,592,697	\$ 880,238	\$ 186,484,428
II) Assets	-	-	-	-
III) Unfunded Actuarial Liability (UAL)	167,011,493	18,592,697	880,238	186,484,428
IV) Net OPEB Obligation (boy)	-	-	-	-
V) Normal Cost				
A) Health Insurance	\$ 7,711,337	\$ 465,206	\$ 40,161	\$ 8,216,704
B) Life Insurance	37,532	2,350	275	40,157
C) Total	\$ 7,748,869	\$ 467,556	\$ 40,436	\$ 8,256,861
VI) Annual Required Contribution (ARC)				
A) Normal Cost	\$ 7,748,869	\$ 467,556	\$ 40,436	\$ 8,256,861
B) Amortization of UAL	6,373,791	709,568	33,593	7,116,952
C) Total	\$ 14,122,660	\$ 1,177,124	\$ 74,029	\$ 15,373,813
VI) Annual OPEB Cost				
i) ARC	\$ 14,122,660	\$ 1,177,124	\$ 74,029	\$ 15,373,813
ii) Interest on Net OPEB Obligation	-	-	-	-
iii) Adjustment to ARC	-	-	-	-
iv) Total	\$ 14,122,660	\$ 1,177,124	\$ 74,029	\$ 15,373,813
v) Percentage of Payroll	26.7%	20.0%	29.7%	26.1%
VII) Expected Employer Contributions ³				
i) Percentage of Payroll	3,393,309 6.4%	368,106 6.3%	10,703 4.3%	3,772,117 6.4%
VIII) Payroll	\$ 52,883,946	\$ 5,871,196	\$ 248,913	\$ 59,004,055

¹ Base increase plus age or service based component.

² Active employees eligible for future retiree healthcare benefits

³ Expected employer contributions to finance current retiree healthcare claims assuming pay-as-you-go funding.

City of Joliet, Illinois
Retiree Healthcare and Life Insurance Benefit Programs
GASB 45 Actuarial Valuation as of January 1, 2006

Discount Rate 5.00%
*Salary Scale*¹ 5.50%
Ultimate Trend 5.00%
Wage Inflation 4.00%

Ten-year GASB Projection for All Funds
(\$ in Thousands)

Amortization: 30-year open, level percentage of payroll

	<u>01/01/2006</u>	<u>01/01/2007</u>	<u>01/01/2008</u>	<u>01/01/2009</u>	<u>01/01/2010</u>	<u>01/01/2011</u>	<u>01/01/2012</u>	<u>01/01/2013</u>	<u>01/01/2014</u>	<u>01/01/2015</u>
<i>Retiree Healthcare and Life Insurance Programs</i>										
A) Actuarial Liability	\$ 186,484	\$ 201,403	\$ 217,515	\$ 234,917	\$ 253,710	\$ 274,007	\$ 295,927	\$ 319,602	\$ 345,170	\$ 372,783
B) Assets	-	-	-	-	-	-	-	-	-	-
C) Unfunded Actuarial Liability (UAL)	186,484	201,403	217,515	234,917	253,710	274,007	295,927	319,602	345,170	372,783
D) Net OPEB Obligation (boy)	-	11,602	23,861	36,828	50,548	65,062	80,542	97,229	115,259	134,618
E) Annual Required Contribution (ARC)										
i) Normal Cost	\$ 8,257	\$ 8,917	\$ 9,631	\$ 10,401	\$ 11,233	\$ 12,132	\$ 13,103	\$ 14,151	\$ 15,283	\$ 16,506
ii) Amortization of UAL	7,117	7,686	8,301	8,965	9,683	10,457	11,294	12,197	13,173	14,227
iii) Total	\$ 15,374	\$ 16,603	\$ 17,932	\$ 19,366	\$ 20,916	\$ 22,589	\$ 24,397	\$ 26,348	\$ 28,456	\$ 30,733
F) Annual OPEB Cost										
i) ARC	\$ 15,374	\$ 16,603	\$ 17,932	\$ 19,366	\$ 20,916	\$ 22,589	\$ 24,397	\$ 26,348	\$ 28,456	\$ 30,733
ii) Interest on Net OPEB Obligation	-	580	1,193	1,841	2,527	3,253	4,027	4,861	5,763	6,731
iii) Adjustment to ARC	-	(443)	(911)	(1,405)	(1,929)	(2,483)	(3,074)	(3,711)	(4,399)	(5,138)
iv) Total	\$ 15,374	\$ 16,741	\$ 18,214	\$ 19,802	\$ 21,515	\$ 23,359	\$ 25,350	\$ 27,499	\$ 29,820	\$ 32,326
v) Percentage of Payroll	26.1%	27.3%	28.5%	29.8%	31.2%	32.5%	34.0%	35.4%	36.9%	38.5%
G) Expected Employer Contributions	\$ 3,772	\$ 4,481	\$ 5,248	\$ 6,082	\$ 7,001	\$ 7,878	\$ 8,663	\$ 9,469	\$ 10,461	\$ 11,476
i) Percentage of Payroll	6.4%	7.3%	8.2%	9.2%	10.1%	11.0%	11.6%	12.2%	13.0%	13.7%
H) Payroll	\$ 59,004	\$ 61,364	\$ 63,819	\$ 66,372	\$ 69,026	\$ 71,787	\$ 74,659	\$ 77,645	\$ 80,751	\$ 83,981

¹ Base increase plus age or service based component.

Section C

Sensitivity Projections

SENSITIVITY PROJECTIONS

One of the key objectives of GASB 45 is to accrue an expense, for the value of future retiree healthcare benefits, during the working lifetime of an active employee. This objective requires a systematic means of spreading the present value of benefits over the person's working career. Actuarial cost methods are specifically designed to meet this objective.

It is important to note that GASB 45 does not require that a plan sponsor pre-fund retiree healthcare benefits during an employees working career. GASB 45 only requires accruing an expense for retiree healthcare benefits and reporting a balance sheet liability representing the cumulative difference between annual expense and employer contributions. However, sponsors that pre-fund retiree healthcare benefits will experience a significant reduction in the annual expense and balance sheet liability.

We have reviewed three of the most commonly used cost methods in the public sector. A brief description of each method follows:

- **Entry Age Normal (EAN)** – The EAN method is the most widely use method in the public sector because it produces, by definition, costs that are level as a percentage of pay. This feature produces equity among different generations of tax payers. This method is currently being used for three pension plans sponsored by the City of Joliet.

The EAN method produces an explicit normal cost and actuarial accrued liability. The normal cost represents the annual contributions needed from hire date to retirement date to finance the value of future expected benefits. The annual contributions are assumed to increase by the member's pay increases. The actuarial liability represents the accumulated value of the annual normal costs, adjusted for interest, from the employee's hire age to the valuation date.

- **Projected Unit Credit (PUC)** – The PUC method is the second most widely use method in the public sector. It also produces an explicit normal cost and actuarial accrued liability. The normal cost and actuarial accrued liability are directly proportional to the employee's service. That is the normal cost equals the present value of future benefits divided by projected service at retirement, and the actuarial accrued liability equals the present value of benefits multiplied by the ratio of service at valuation date to projected service at retirement. Depending on the characteristics of the current group and new entrants in the future, this method could produce stable annual costs, in the aggregate, when expressed as a percentage of pay.
- **Frozen Initial Liability (FIL)** – The FIL is not as common in the public sector but is still considered a reasonable method for GASB 45 reporting purposes. This method produces an explicit normal cost and the actuarial liability is defined in the first year only and amortized. Sponsors using this method will need to disclose an actuarial liability using the EAN method. This method falls under the class of "aggregate" cost methods, because one normal cost is developed in the aggregate for all participating members. This method produces the most volatile costs because gains and losses, including investment losses are recognized as a component of the normal cost, and are effectively amortized over a shorter period of time when compared to the EAN or PUC method.

According to the GASB No. 45 standard, the unfunded actuarial liability under all methods is amortized over a period not to exceed 30 years.

SENSITIVITY PROJECTIONS

Exhibit III includes a comparison of the annual expense (Annual OPEB Cost) and the balance sheet liability (Net OPEB Obligation) under each of the three cost methods described above, assuming the employer finances benefits on a pay-as-you-go basis and benefits are discounted at 5.0 percent. The key results are outlined below (\$ in millions):

Pay-as-you-go Funding 5.0% discount	Entry Age Normal		Projected Unit Credit		Frozen Initial Liability	
	FYE	2006	2015	2006	2015	2006
Annual OPEB Cost	\$15.4	\$32.3	\$15.5	\$32.6	\$15.6	\$43.4
Annual OPEB Cost (% Pay)	26%	38%	26%	39%	26%	52%
Employer Contributions	\$3.8	\$11.5	\$3.8	\$11.5	\$3.8	\$11.5
Net OPEB Obligation	\$11.6	\$155.5	\$11.7	\$157.5	\$11.8	\$204.7

The EAN and PUC produce results that are similar. However, these two methods produce an increasing expense as a percentage of pay due to the spread between healthcare inflation and wage inflation. That is, benefits are increasing by healthcare inflation, approximately 10.0 percent to 5.0 percent per year, and pay is increasing by wage inflation, approximately 4.0 percent per year.

In the first few years, the FIL methods produces expense that is not significantly differently from the EAN or PUC methods. However, because the FIL method accelerates the amortization of gains and losses, including investment losses, and the method “expects” contributions to be made, the pay-as-you-funding policy results in rapid escalation of the Annual OPEB Costs.

After ten years, the projected expense is approximately \$32 million under the EAN and PUC methods and \$43 million under the FIL method. Based on these patterns, the EAN and PUC methods appear to produce results that are more stable as a percentage of payroll. We recommend the EAN method because it produces, by definition, costs that are level as a percentage of pay.

Exhibit IV includes a comparison of the annual expense and balance sheet liability assuming the retiree healthcare programs are fully funded, i.e. the employer contributes the actuarially determined contribution, and the retiree healthcare trusts earns 7.5 percent. The key results are outlined below (\$ in millions):

Full Funding 7.5% discount	Entry Age Normal		Projected Unit Credit		Frozen Initial Liability	
	FYE	2006	2015	2006	2015	2006
Annual OPEB Cost	\$11.2	\$17.7	\$11.3	\$17.8	\$11.4	\$20.0
Annual OPEB Cost (% Pay)	19%	21%	19%	21%	19%	24%
Employer Contributions	\$11.2	\$17.7	\$11.3	\$17.8	\$11.4	\$20.0
Net OPEB Obligation	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

SENSITIVITY PROJECTIONS

The pay-as-you-go funding policy produces initial expense that is much lower than the full-funding policy; however, the projected costs are considerably higher. For example, based on the EAN funding method, the annual expense is projected to increase from \$15.4 million to \$32.3 million under the pay-as-you-go funding policy and from \$11.2 million to \$17.7 million under the full funding policy. The annual employer's contribution is projected to increase from \$3.8 million to \$11.5 million under the pay-as-you-go policy and from \$11.2 million to \$17.7 million under the full funding policy.

Key Observations

The Entry Age Normal produces stable cost because by definition, costs are spread as a level percentage of pay. The Entry Age Normal method is also the most widely used method in the public sector. We recommend the use of the Entry Age Normal method. The Frozen Initial Liability tends to produce more volatile expense especially when benefits are not pre-funded.

Pre-funding benefits has several key advantages including the use of a higher discount which produces lower expense, and more stable costs. However, pre-funding would require additional near-term financing sources.

SENSITIVITY PROJECTIONS, PAY-AS-YOU-GO FUNDING

City of Joliet, Illinois
Retiree Healthcare and Life Insurance Benefit Programs
GASB 45 Actuarial Valuation as of January 1, 2006

Discount Rate 5.00%
Salary Scale ¹ 5.50%
Ultimate Trend 5.00%
Wage Inflation 4.00%

Ten-year GASB Projection for All Funds
(\$ in Thousands)

Amortization: 30-year open, level percentage of payroll

	<u>01/01/2006</u>	<u>01/01/2007</u>	<u>01/01/2008</u>	<u>01/01/2009</u>	<u>01/01/2010</u>	<u>01/01/2011</u>	<u>01/01/2012</u>	<u>01/01/2013</u>	<u>01/01/2014</u>	<u>01/01/2015</u>
Entry Age Normal										
A) Actuarial Liability	\$ 186,484	\$ 201,403	\$ 217,515	\$ 234,917	\$ 253,710	\$ 274,007	\$ 295,927	\$ 319,602	\$ 345,170	\$ 372,783
B) Assets	-	-	-	-	-	-	-	-	-	-
C) Unfunded Actuarial Liability (UAL)	\$ 186,484	\$ 201,403	\$ 217,515	\$ 234,917	\$ 253,710	\$ 274,007	\$ 295,927	\$ 319,602	\$ 345,170	\$ 372,783
D) Annual OPEB Cost	\$ 15,374	\$ 16,741	\$ 18,214	\$ 19,802	\$ 21,515	\$ 23,359	\$ 25,350	\$ 27,499	\$ 29,820	\$ 32,326
E) Annual OPEB Cost % of Pay	26.1%	27.3%	28.5%	29.8%	31.2%	32.5%	34.0%	35.4%	36.9%	38.5%
F) Expected Employer Contributions	\$ 3,772	\$ 4,481	\$ 5,248	\$ 6,082	\$ 7,001	\$ 7,878	\$ 8,663	\$ 9,469	\$ 10,461	\$ 11,476
G) Net OPEB Obligation (eoy)	\$ 11,602	\$ 23,861	\$ 36,828	\$ 50,548	\$ 65,062	\$ 80,542	\$ 97,229	\$ 115,259	\$ 134,618	\$ 155,468
Projected Unit Credit										
A) Actuarial Liability	\$ 182,254	\$ 196,834	\$ 212,581	\$ 229,587	\$ 247,954	\$ 267,791	\$ 289,214	\$ 312,351	\$ 337,339	\$ 364,326
B) Assets	-	-	-	-	-	-	-	-	-	-
C) Unfunded Actuarial Liability (UAL)	\$ 182,254	\$ 196,834	\$ 212,581	\$ 229,587	\$ 247,954	\$ 267,791	\$ 289,214	\$ 312,351	\$ 337,339	\$ 364,326
D) Annual OPEB Cost	\$ 15,509	\$ 16,889	\$ 18,376	\$ 19,979	\$ 21,707	\$ 23,569	\$ 25,578	\$ 27,747	\$ 30,089	\$ 32,618
E) Annual OPEB Cost % of Pay	26.3%	27.5%	28.8%	30.1%	31.4%	32.8%	34.3%	35.7%	37.3%	38.8%
F) Expected Employer Contributions	\$ 3,772	\$ 4,481	\$ 5,248	\$ 6,082	\$ 7,001	\$ 7,878	\$ 8,663	\$ 9,469	\$ 10,461	\$ 11,476
G) Net OPEB Obligation (eoy)	\$ 11,737	\$ 24,145	\$ 37,274	\$ 51,171	\$ 65,876	\$ 81,567	\$ 98,482	\$ 116,760	\$ 136,388	\$ 157,530
Frozen Initial Liability										
A) Actuarial Liability	\$ 186,484	\$ 201,403	\$ 217,515	\$ 234,917	\$ 253,710	\$ 274,007	\$ 295,927	\$ 319,602	\$ 345,170	\$ 372,783
B) Assets	-	-	-	-	-	-	-	-	-	-
C) Unfunded Actuarial Liability (UAL)	\$ 186,484	\$ 201,403	\$ 217,515	\$ 234,917	\$ 253,710	\$ 274,007	\$ 295,927	\$ 319,602	\$ 345,170	\$ 372,783
D) Annual OPEB Cost	\$ 15,571	\$ 17,716	\$ 20,055	\$ 22,604	\$ 25,381	\$ 28,403	\$ 31,691	\$ 35,269	\$ 39,161	\$ 43,390
E) Annual OPEB Cost % of Pay	26.4%	28.9%	31.4%	34.1%	36.8%	39.6%	42.4%	45.4%	48.5%	51.7%
F) Expected Employer Contributions	\$ 3,772	\$ 4,481	\$ 5,248	\$ 6,082	\$ 7,001	\$ 7,878	\$ 8,663	\$ 9,469	\$ 10,461	\$ 11,476
G) Net OPEB Obligation (eoy)	\$ 11,799	\$ 25,034	\$ 39,841	\$ 56,364	\$ 74,744	\$ 95,268	\$ 118,296	\$ 144,096	\$ 172,796	\$ 204,710

SENSITIVITY PROJECTIONS, FULL FUNDING

City of Joliet, Illinois
Retiree Healthcare and Life Insurance Benefit Programs
GASB 45 Actuarial Valuation as of January 1, 2006

Discount Rate 7.50%
Salary Scale ¹ 5.50%
Ultimate Trend 5.00%
Wage Inflation 4.00%

Ten-year GASB Projection for All Funds
(\$ in Thousands)

Amortization: 30-year open, level percentage of payroll

	<u>01/01/2006</u>	<u>01/01/2007</u>	<u>01/01/2008</u>	<u>01/01/2009</u>	<u>01/01/2010</u>	<u>01/01/2011</u>	<u>01/01/2012</u>	<u>01/01/2013</u>	<u>01/01/2014</u>	<u>01/01/2015</u>
Entry Age Normal										
A) Actuarial Liability	\$ 131,885	\$ 142,436	\$ 153,831	\$ 166,137	\$ 179,428	\$ 193,782	\$ 209,285	\$ 226,028	\$ 244,110	\$ 263,639
B) Assets	-	8,154	16,695	25,647	35,033	44,863	55,284	66,510	78,648	91,642
C) Unfunded Actuarial Liability (UAL)	\$ 131,885	\$ 134,282	\$ 137,136	\$ 140,490	\$ 144,395	\$ 148,920	\$ 154,001	\$ 159,518	\$ 165,462	\$ 171,996
D) Annual OPEB Cost	\$ 11,222	\$ 11,698	\$ 12,225	\$ 12,810	\$ 13,455	\$ 14,168	\$ 14,949	\$ 15,792	\$ 16,703	\$ 17,692
E) Annual OPEB Cost % of Pay	19.0%	19.1%	19.2%	19.3%	19.5%	19.7%	20.0%	20.3%	20.7%	21.1%
F) Expected Employer Contributions	\$ 11,222	\$ 11,698	\$ 12,225	\$ 12,810	\$ 13,455	\$ 14,168	\$ 14,949	\$ 15,792	\$ 16,703	\$ 17,692
G) Net OPEB Obligation (eoy)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Projected Unit Credit										
A) Actuarial Liability	\$ 123,289	\$ 133,152	\$ 143,804	\$ 155,309	\$ 167,733	\$ 181,152	\$ 195,644	\$ 211,296	\$ 228,199	\$ 246,455
B) Assets	-	8,275	16,948	26,047	35,593	45,598	56,212	67,647	80,015	93,260
C) Unfunded Actuarial Liability (UAL)	\$ 123,289	\$ 124,877	\$ 126,856	\$ 129,261	\$ 132,140	\$ 135,554	\$ 139,432	\$ 143,648	\$ 148,185	\$ 153,195
D) Annual OPEB Cost	\$ 11,334	\$ 11,813	\$ 12,344	\$ 12,931	\$ 13,579	\$ 14,296	\$ 15,079	\$ 15,926	\$ 16,841	\$ 17,834
E) Annual OPEB Cost % of Pay	19.2%	19.3%	19.3%	19.5%	19.7%	19.9%	20.2%	20.5%	20.9%	21.2%
F) Expected Employer Contributions	\$ 11,334	\$ 11,813	\$ 12,344	\$ 12,931	\$ 13,579	\$ 14,296	\$ 15,079	\$ 15,926	\$ 16,841	\$ 17,834
G) Net OPEB Obligation (eoy)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Frozen Initial Liability										
A) Actuarial Liability	\$ 131,885	\$ 142,436	\$ 153,831	\$ 166,137	\$ 179,428	\$ 193,782	\$ 209,285	\$ 226,028	\$ 244,110	\$ 263,639
B) Assets	-	8,310	17,157	26,609	36,731	47,583	59,366	72,347	86,680	102,362
C) Unfunded Actuarial Liability (UAL)	\$ 131,885	\$ 134,126	\$ 136,673	\$ 139,528	\$ 142,697	\$ 146,200	\$ 149,919	\$ 153,681	\$ 157,430	\$ 161,276
D) Annual OPEB Cost	\$ 11,367	\$ 11,972	\$ 12,658	\$ 13,428	\$ 14,288	\$ 15,246	\$ 16,296	\$ 17,428	\$ 18,642	\$ 19,959
E) Annual OPEB Cost % of Pay	19.3%	19.5%	19.8%	20.2%	20.7%	21.2%	21.8%	22.4%	23.1%	23.8%
F) Expected Employer Contributions	\$ 11,367	\$ 11,972	\$ 12,658	\$ 13,428	\$ 14,288	\$ 15,246	\$ 16,296	\$ 17,428	\$ 18,642	\$ 19,959
G) Net OPEB Obligation (eoy)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Section D



Plan Provisions

PLAN PROVISIONS

Following are the plan provisions reflected in our valuation of the City of Joliet retiree healthcare and life insurance benefits as of January 1, 2006.

Medical Insurance Benefits:

Benefits Provided for Plan Year beginning January 1, 2006

City of Joliet provides pre and post-Medicare health care benefits to retired employees and their dependents provided they satisfy one of the following requirements:

- 1) General, Water/Sewer and Parking Employees: Age 55 with 8 or more years of service and retired under the IMRF Pension Plan.
- 2) Police Officers and Firefighters: Age 50 (or more) and has 20 years (or more) of Creditable Service, is no longer in service as a Police Officer or Firefighter and retired under the City of Joliet Police or Fire Pension Plan.
- 3) Medically disabled and totally and permanently unable to work.

The City of Joliet also provides healthcare benefits to the survivors of deceased employees and retired members. Coverage for spouses of deceased plan members will terminate if they remarry.¹

Coordination with Medicare

Benefits for members eligible for Medicare modified as follows:

The amount payable under the City's health plan will be reduced by the amount payable under Medicare for those expenses that are covered by both. Prescription drug benefits for post-Medicare retirees and dependents do not reflect a plan change or federal subsidy as available under the Medicare Prescription Drug, Improvement and Modernization Act, beginning in 2006. We understand the City of Joliet has applied for a Medicare Part D Subsidy.

Funding Policy. Retiree health care benefits are funded on a pay as you go basis. Benefits are self-insured up to certain stop loss limits.

Eligible Benefit Programs:

We have assumed retirees opting out of the retiree health program cannot reenter into the program. A brief description of the medical healthcare plan offered by the City of Joliet and the required retiree contributions are shown on the following pages:

¹ Currently the City is only charging survivors and dependents of deceased employees and retired members the 1988 blended premium

PLAN PROVISIONS (CONTINUED)

BlueCross BlueShield

Plan Feature	BCBS Providers	Non-BCBS Providers												
Annual Deductible	None	\$ 150 per person \$ 450 per family												
Out of Pocket Maximum	\$ 1,000 per person \$ 3,000 per family	\$ 3,000 per person \$ 9,000 per family												
<u>Covered Services</u>	<u>Coinsurance</u>	<u>Coinsurance</u>												
-Physicians Visits	80%	70%												
-Emergency Care	80%	80%												
-Inpatient Services	100%	80%												
-Outpatient Services	100%	80%												
Prescription Drug Copays	<table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>Retail</u></th> <th style="text-align: center;"><u>Mail Order</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Generic</td> <td style="text-align: center;">\$5</td> <td style="text-align: center;">\$3</td> </tr> <tr> <td style="text-align: center;">Brand if no generic available</td> <td style="text-align: center;">\$10</td> <td style="text-align: center;">\$8</td> </tr> <tr> <td style="text-align: center;">Brand if generic available</td> <td style="text-align: center;">\$15</td> <td style="text-align: center;">\$33</td> </tr> </tbody> </table>		<u>Retail</u>	<u>Mail Order</u>	Generic	\$5	\$3	Brand if no generic available	\$10	\$8	Brand if generic available	\$15	\$33	75% of eligible charge less the applicable co-pay
	<u>Retail</u>	<u>Mail Order</u>												
Generic	\$5	\$3												
Brand if no generic available	\$10	\$8												
Brand if generic available	\$15	\$33												
Maximum Lifetime Benefit	\$3 Million	\$3 Million												

Medical benefits are coordinated with Medicare.

PLAN PROVISIONS (CONTINUED)

Retiree Healthcare Benefits City's Share of Blended Premium

	<u>Employee</u>	<u>Eligible Dependent</u> ¹
Retired	100%	The City pays the difference between the current blended premium and the 1988 blended premium.
Disabled	100%	
Surviving Spouse or Dependents	—	

Sample 1988 Blended Premium Rates

Single	\$118.20
Family	\$217.68
Medicare	\$59.10
Child Only	\$99.60

100% Healthcare Blended Premium rates as of July 1, 2006

	Coverage Type		
	Single	2 Person	Family
Medicare Eligible	260.85	547.75	1,248.40
1 Person Medicare Eligible	260.85	821.65	1,248.40
No Members Medicare Eligible	521.66	1,095.50	1,509.17

Life Insurance Benefits:

1. Police Officers: Group term life insurance of \$12,500 at City's expense

2. Firefighters, Water/Sewer, Parking and General Employees: Group term life insurance of \$10,000 at City's expense

¹ Currently the City is only charging survivors and dependents of deceased employees and retired members the 1988 blended premium

Section E

Actuarial Methods and Assumptions

ACTUARIAL METHODS AND ASSUMPTIONS

Development of Per Capita Claim Costs

Per capita claims costs were developed using paid claim experience adjusted to incurred claims, estimated administrative expense, and enrollment information for calendar years 2003 through 2005 for all members enrolled in the BlueCross BlueShield program. Retiree costs were developed using standard morbidity assumptions. Finally, average retiree costs were increased by trend to plan year 2006. Separate costs were developed for pre-Medicare and post-Medicare medical coverage prescription drug coverage.

Prescription drug per capita claims costs and liabilities for post-Medicare retirees and dependents do not reflect future federal subsidies or plan changes due to the introduction of Medicare Part D.

Cost Method and Expense Calculations for Retiree Healthcare Benefits

The retiree healthcare valuation was based on the entry age normal cost method. Under this method, each participant's projected benefits are assumed to be funded by annual installments, equal to a level percentage of compensation, payable from date of participation to assumed date of retirement. The total normal cost is the sum of the current year's annual installment determined for all active participants. The actuarial accrued liability is the excess value of the present value of future benefits for all participants (both active and retired) over the present value of future normal costs.

Under GASB Statement Nos. 43 and 45, the entry age normal method is an acceptable cost method. The Annual Required Contribution (ARC) equals the normal cost plus the amortization of the unfunded actuarial accrued liability. The amortization cannot exceed 30 years. Our calculations assume a level-percentage-of-pay 30-year open amortization period. The Annual Expense or Annual OPEB Cost equals the ARC plus interest on the Net OPEB Obligation less an adjustment to ARC.

The Net OPEB Obligation or balance sheet liability is equal to the cumulative difference between the Annual OPEB Costs and employer contributions. The OPEB liability at transition date, October 1, 2006, is set to zero.

Actuarial Assumptions

The actuarial assumptions used in our valuation are outlined on the following pages.

ACTUARIAL METHODS AND ASSUMPTIONS (CONTINUED)

Date	January 1, 2006
Discount Rate	5.00%
Wage Inflation	4.00%
Price Inflation	3.50%

Salary Scale

Wage inflation, plus service or age based increase of:

	Police/Fire	General, Parking and Water/Sewer
Age		
25	1.50%	2.00%
30	1.50%	1.70%
35	1.50%	1.20%
40	1.50%	0.90%
45	1.50%	0.70%
50	1.50%	0.60%
55	1.50%	0.50%
60	1.50%	0.40%

Healthcare Trend

<u>Fiscal Year End</u>	<u>Medical Trend</u> ¹	<u>Rx Trend</u>
2006	10.00%	12.00%
2007	9.00%	11.00%
2008	8.00%	10.00%
2009	7.00%	9.00%
2010	6.00%	8.00%
2011	5.00%	7.00%
2012	5.00%	6.00%
2013	5.00%	5.00%
2014+	5.00%	5.00%

Per Capita Claim Costs for Plan Year 2006

<u>Age</u>	<u>Medical Costs</u>	<u>Rx Costs</u> ²
50	\$6,357	\$1,538
54	\$7,155	\$1,732
58	\$8,171	\$1,977
62	\$9,377	\$2,269
64	\$10,044	\$2,431
65	\$1,844	\$2,479
69	\$1,996	\$2,684
73	\$2,161	\$2,905
77	\$2,271	\$3,053

¹Applies to medical claims only. Retiree contributions assumed to remain level based on the current substantive plan.

²Rx claims costs for post-Medicare retirees and dependents do not reflect a plan change or federal subsidy as available under the Medicare Prescription Drug, Improvement and Modernization Act.

ACTUARIAL METHODS AND ASSUMPTIONS (CONTINUED)

Demographic Assumptions

Healthy Life Mortality¹

Police and Fire 1983 Group Annuity Mortality Table using sex distinct rates

General, Water/Sewer and Parking Employees 1994 Group Annuity Mortality Table using sex distinct rates

Disabled Mortality¹

Police and Fire 1965 Railroad Retirement Board Total Disabled Annuitants mortality table

General, Water/Sewer and Parking Employees 1994 Group Annuity Mortality Table using sex distinct rates, 10 year set forward

Disability

% Separating Within Next Year

Age	General, Parking, and Water/Sewer		Police		Fire	
	Male	Female	Male	Female	Male	Female
20	0.01%	0.01%	0.07%	0.07%	0.17%	0.17%
25	0.01%	0.01%	0.08%	0.08%	0.19%	0.18%
30	0.02%	0.01%	0.10%	0.09%	0.20%	0.19%
35	0.03%	0.02%	0.14%	0.11%	0.24%	0.21%
40	0.05%	0.03%	0.20%	0.16%	0.30%	0.26%
45	0.09%	0.04%	0.31%	0.24%	0.41%	0.34%
50	0.13%	0.06%	0.52%	0.38%	0.62%	0.48%
55	0.20%	0.10%	0.99%	0.66%	1.09%	0.76%
60	0.26%	0.17%	1.74%	1.28%	1.84%	1.38%
65	0.28%	0.20%	2.85%	2.11%	2.95%	2.21%
70	0.24%	0.17%	4.31%	3.43%	4.41%	3.53%
75	0.17%	0.12%	0.00%	0.00%	0.00%	0.00%
80	0.14%	0.10%	0.00%	0.00%	0.00%	0.00%

¹Assumptions for General, Water/Sewer and Parking employees are based on the assumptions used in the IMRF pension valuation for regular employees and the assumptions for Police and Fire are based on the City of Joliet pension valuations for the Police and Fire pension plans.

ACTUARIAL METHODS AND ASSUMPTIONS (CONTINUED)

Turnover						
% Separating Within Next Year (Age-Based) ²						
Age	General, Parking, and Water/Sewer ¹		Police		Fire	
	Male	Female	Male	Female	Male	Female
20	Service Based	Service Based	8.50%	8.50%	4.02%	4.02%
25	Service Based	Service Based	8.50%	8.50%	3.45%	3.90%
30	5.50%	6.50%	6.97%	8.50%	2.56%	3.09%
35	4.40%	6.80%	4.53%	5.90%	1.79%	2.24%
40	3.40%	4.80%	2.85%	3.77%	1.14%	1.52%
45	2.80%	4.30%	1.74%	2.36%	0.62%	0.92%
50	2.50%	3.70%	0.85%	1.37%	0.30%	0.47%
55	0.00%	0.00%	0.00%	0.54%	0.00%	0.18%
60	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

¹ For employees with 8 or more years of service

² Assumptions for General, Water/Sewer and Parking employees are based on the assumptions used in the IMRF pension valuation for regular employees and the assumptions for Police and Fire are based on the City of Joliet pension valuations for the Police and Fire pension plans.

%Separating Within Next Year (Service-Based)		
General, Parking and Water/Sewer		
Service	Male	Female
0	25.00%	28.00%
1	18.00%	20.00%
2	13.00%	15.00%
3	10.50%	11.50%
4	8.50%	9.50%
5	7.00%	8.00%
6	6.00%	7.00%
7	5.50%	6.50%

ACTUARIAL METHODS AND ASSUMPTIONS (CONTINUED)

Spouse Coverage

Percent married 80%

Percent married electing spouse healthcare coverage 80%

Percent of surviving spouses continuing coverage after death of retiree 60%

Females are assumed to be three years younger than their spouse

Normal Retirement

% Separating Within Next Year (Age-Based) ¹

Age	General, Parking, and Water/Sewer		Police	Fire
	Male	Female		
50	0.00%	0.00%	28.00%	16.40%
51	0.00%	0.00%	26.00%	13.50%
52	0.00%	0.00%	21.70%	11.40%
53	0.00%	0.00%	18.90%	9.90%
54	0.00%	0.00%	16.50%	9.30%
55	35.00%	35.00%	15.30%	9.30%
56	30.00%	30.00%	14.80%	9.70%
57	30.00%	30.00%	15.40%	11.10%
58	30.00%	30.00%	16.10%	13.10%
59	30.00%	30.00%	18.80%	15.60%
60	10.00%	10.00%	21.80%	18.90%
61	10.00%	10.00%	25.90%	22.80%
62	25.00%	20.00%	30.80%	27.50%
63	20.00%	20.00%	36.40%	32.70%
64	20.00%	20.00%	43.30%	38.70%
65	35.00%	35.00%	51.00%	45.30%
66	30.00%	20.00%	68.70%	66.40%
67	25.00%	25.00%	100.00%	100.00%
68-79	18.00%	18.00%	100.00%	100.00%
80	100.00%	100.00%	100.00%	100.00%

¹Assumptions for General, Water/Sewer and Parking employees are based on the assumptions used in the IMRF pension valuation for regular employees and the assumptions for Police and Fire are based on the City of Joliet pension valuations for the Police and Fire pension plans.

ACTUARIAL METHODS AND ASSUMPTIONS (CONTINUED)

Reduced Early Retirement		
% Separating Within Next Year (Age-Based) ¹		
Age	General, Parking, and Water/Sewer	
	Male	Female
55	6.50%	6.50%
56	6.50%	6.50%
57	6.50%	6.50%
58	6.50%	6.50%
59	6.50%	6.50%

¹Assumptions are based on the assumptions for regular employees used in the IMRF pension valuation for General, Water/Sewer and Parking employees

Section F



Participant Data

PARTICIPANT DATA

City of Joliet, Illinois
Retiree Healthcare and Life Insurance Benefit Programs
Actuarial Valuation as of January 1, 2006
Population Breakout by Fund

Counts by Fund

	Actives	Retirees and Beneficiaries	Total
General Fund	775	286	1,061
Water/Sewer	69	38	107
Parking	<u>4</u>	<u>1</u>	<u>5</u>
	848	325	1,173

Retiree and Beneficiary Healthcare Coverage Type by Fund

	1 Person	2 Person	Family	Total
General Fund	129	145	12	286
Water/Sewer	24	12	2	38
Parking	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>
	153	158	14	325

Note: Coverage Type by Fund for actives not provided because assumption is made on coverage type at the time of retirement.

City of Joliet, Illinois
Retiree Healthcare and Life Insurance Benefit Programs
Actuarial Valuation as of January 1, 2006
Age Service Distribution for Total Active Population

Attained Age	Years of Service to Valuation Date									Total	Total Valuation Payroll
	0-1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 35		
Under 20										-	\$ -
20-24	2	2	1							5	380,905
25-29	2	48	19							69	3,654,841
30-34	2	37	68	10						117	7,074,859
35-39	1	20	53	61	16					151	10,025,052
40-44	1	14	29	44	43	6	1			138	9,577,772
45-49		4	10	24	48	16	21	1		124	9,368,430
50-54		10	9	12	16	15	37	31	3	133	10,198,087
55-59		4	4	4	4	4	12	33	8	73	6,103,562
60-64		1	2	3	5	2	3	7	5	28	2,079,946
65-69			1	1	2			1	1	6	265,808
Over 70		1			1			1	1	4	274,793
Total	8	141	196	159	135	43	74	74	18	848	\$ 59,004,055

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 42.9 years
Service: 14.0 years
Annual Pay: \$69,580