ACTUARIAL VALUATION
of
Seattle Police Relief and Pension Fund
and Retiree Medical and Long-Term Care Benefits
for LEOFF I and Escalator Employees
City of Seattle
January 1, 2011

Prepared by

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June 15, 2011

Mr. Dan Oliver
Executive Secretary
City of Seattle
Seattle Municipal Tower
700 Fifth Avenue, Suite 1862
Seattle, WA 98124

Re: 2011 Valuation Report

Dear Dan:

As requested, we performed an Actuarial Valuation of the City of Seattle Seattle Police Relief and Pension Fund and Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Employees as of January 1, 2011. The major findings of the valuation are contained in this report. This report reflects the benefit provisions in effect as of the valuation date.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the City. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the Fund have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Fund and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the Fund.

Future actuarial measurements may differ significantly from the current measurements 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; and changes in Plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the Fund. Actuarial computations presented in this report under GASB Statements No. 25, 27, 43, 45 and 50 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis

consistent with our understanding of the Fund's funding requirements and goals and GASB Statements No. 25, 27, 43, 45 and 50. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

The results contained in this report do not reflect potential changes in future health costs due to the passage of the Patient Protection and Affordable Care Act (P.L.111-148) signed on March 23, 2010, as amended by the Health Care and Education Reconciliation Act (H.R.4872), signed on March 30, 2010. The impact on future health costs due to this legislation will depend on a number of factors, including future regulations that are not yet known. An analysis of the impact of health care reform on future Plan costs was beyond the scope of this report.

We would like to express our appreciation to staff members of the City of Seattle, who gave substantial assistance in supplying the data on which this report is based.

We respectfully submit the following report, and we look forward to discussing it with you.

Sincerely,

Daniel Wade

Franklin N. Thoen

Daniel R. Wade, FSA, EA, MAAA
Consulting Actuary
Joint Board # 11-06417

Franklin N. Thoen, FSA, EA, MAAA
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DRW/FNT/nlo

Actuarial Valuation of Seattle Police Relief and Pension Fund and Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Employees

City of Seattle
January 1, 2011

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Actuarial Valuation of Seattle Police Relief and Pension Fund and Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Employees

City of Seattle
January 1, 2011

SUMMARY

Scope of the Report

This report presents the results of an actuarial valuation of the City's Seattle Police Relief and Pension Fund (SPRPF) and Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Employees.

When valuing the pension fund liabilities, particular attention is given to the cost of providing the "excess benefit", a benefit under SPRPF available to active members as of March 1, 1970. On that date, the Washington Law Enforcement Officers' and Firefighters' System (LEOFF) was established. Under the terms of governing law, active members of the City's SPRPF on that date are entitled to payment from the SPRPF of the excess of benefits calculated under the SPRPF law over those calculated under the LEOFF law. The City's SPRPF also pays the entire pensions of those members retired prior to March 1, 1970 and their survivors. The employer costs given in the report are those that are the responsibility of the City. They exclude pension costs payable under the LEOFF system.

This report also presents the cost of providing retiree medical benefits and long-term care benefits to members eligible for these benefits. This includes eligible police officers hired prior to the March 1, 1970 establishment of LEOFF, as well as eligible members of LEOFF hired prior to October 1, 1977.

In addition to the summary information presented in this section, you will find two complete valuation reports – one for the Pension Fund, and the second covering the retiree medical and long-term care benefits. Each separate valuation report first gives the conclusions and recommendations resulting from the valuation. Section 2 gives a brief description of the implications of the method employed in carrying out the valuation. It also contains a presentation of the computations discussed in Section 1. Section 3 gives the disclosure required by the Governmental Accounting Standards Board (GASB). Section 4 of Part I shows the projected cash payments the City will be required to pay under the pension obligations of the SPRPF and Section 4 of Part II shows the projected cash payments for retiree medical and long-term care benefits as required under both SPRPF and LEOFF.

There are appendices attached to each report. The actuarial assumptions used in the valuation are summarized in Appendix A. Appendix B gives a summary of the benefit provisions of both SPRPF and LEOFF, as interpreted for the purposes of this study. Appendix C of Part I contains tables showing the distribution of the active members and retirees with their monthly pension by age. Appendix C of Part II presents the retiree medical costs used in the valuation. Appendix D of Part II contains tables showing the distribution of the active members and retirees by age.

Actuarial Valuation of Seattle Police Relief and Pension Fund and Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Employees

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Findings

The following table presents an analysis of the actuarial present value of future pension benefits to be paid by the City's SPRPF. The entire pension benefit of members retiring before the establishment of the LEOFF System is paid by the City. The City's pension benefits for members retiring after establishment of LEOFF are only for excess pension benefits, which can be substantial. The actuarial present values of the retiree medical and long-term care benefits expected to be paid under the SPRPF and LEOFF I provisions are also shown below.

	Pension Benefits	Retiree Medical Benefits	Long-Term Care Benefits	Total
Present Value of Benefits				
Active members	$ 0	$ 12,311,000	$ 4,432,000	$ 16,743,000
Retirees and survivors	137,497,000	154,933,000	89,364,000	381,794,000
Total	$ 137,497,000	$ 167,244,000	$ 93,796,000	$ 398,537,000

Actuarial Valuation of
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Accrued Liability

The Actuarial Accrued Liability (AAL) is the portion of the present value of benefits attributed to past service only. The portion attributed to future employee service is excluded. For retirees, this is equal to the present value of benefits. For active employees, the actuarial present value of the projected benefits of each individual is allocated as a level percentage of expected salary for each year of employment between entry age (defined as age at hire) and assumed exit (until maximum retirement age). The portion attributed to service between entry age and the valuation date is the actuarial accrued liability. The Unfunded Actuarial Accrued Liability (UAAL) is the AAL offset by any assets set aside to provide benefits.

		Medical			
	Pension Benefits	Retiree Medical	Long-Term Care	Subtotal	Total
Present value of benefits	$ 137,497,000	$ 167,244,000	$ 93,796,000	$ 261,040,000	$ 398,537,000
Present value of future normal costs	0	0	0	0	0
Actuarial accrued liability	$ 137,497,000	$ 167,244,000	$ 93,796,000	$ 261,040,000	$ 398,537,000
Assets	$ 1,105,000	$ 0	$ 0	$ 0	$ 1,105,000
Unfunded actuarial accrued liability	$ 136,392,000	$ 167,244,000	$ 93,796,000	$ 261,040,000	$ 397,432,000

Actuarial Valuation of Seattle Police Relief and Pension Fund and Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Employees

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Projection of Future Excess Pension, Retiree Medical and Long-Term Care Benefits

The following table illustrates the projected excess annual pension payments for currently active and retired members eligible for retirement benefits under SPRPF. Also shown are the projected annual benefit payments for those active and retired members eligible for retiree medical and long-term care coverage. See Appendix B and Appendix C for additional information on eligible members.

The table is based on the actuarial assumptions stated in Appendix A. The page following the chart graphically illustrates the projected cash flow payments.

The cash flows for years 2011 and beyond are projected amounts. The historical figures displayed for 2010 and earlier were provided by the City.

Year	Pension	Retiree Medical	Long-Term Care*	Grand Total
1994	$ 6,369,313	$ 4,391,324	N/A	$10,760,637
1995	6,210,514	3,972,397	N/A	10,182,911
1996	6,154,908	4,393,823	N/A	10,548,731
1997	6,888,859	4,672,940	N/A	11,561,799
1998	6,591,504	4,682,582	N/A	11,274,086
1999	7,245,620	5,390,103	N/A	12,635,723
2000	7,061,279	4,809,159	N/A	11,870,438
2001	6,925,933	6,153,460	N/A	13,079,393
2002	6,443,394	7,115,013	N/A	13,558,407
2003	6,067,572	7,783,352	N/A	13,850,924
2004	6,954,588	7,613,203	N/A	14,567,791
2005	6,628,728	8,286,951	N/A	14,915,679
2006	6,345,465	9,988,634	N/A	16,334,099
2007	6,018,641	8,785,962	1,691,560	16,496,163
2008	9,691,477	9,435,832	1,842,974	20,970,283
2009	8,088,220	9,423,424	2,468,184	19,979,828
2010	9,049,203	9,604,204	2,921,262	21,574,669
2011	8,668,000	10,497,000	3,023,000	22,188,000
2012	9,052,000	10,119,000	3,146,000	22,317,000
2013	9,181,000	10,149,000	3,257,000	22,587,000

** Prior to 2007 the breakdown between medical and long-term care was not available. For those years, the medical column includes long-term care costs.*

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Year	Pension	Retiree Medical	Long-Term Care	Grand Total
2014	9,237,000	10,286,000	3,387,000	22,910,000
2015	9,270,000	10,307,000	3,554,000	23,131,000
2016	9,278,000	10,405,000	3,629,000	23,312,000
2017	9,262,000	10,462,000	3,688,000	23,412,000
2018	9,219,000	10,438,000	3,874,000	23,531,000
2019	9,148,000	10,468,000	3,988,000	23,604,000
2020	9,051,000	10,495,000	4,174,000	23,720,000
2021	8,924,000	10,524,000	4,314,000	23,762,000
2022	8,766,000	10,525,000	4,540,000	23,831,000
2023	8,572,000	10,500,000	4,749,000	23,821,000
2024	8,343,000	10,423,000	4,959,000	23,725,000
2025	8,079,000	10,286,000	5,153,000	23,518,000
2026	7,781,000	10,090,000	5,387,000	23,258,000
2027	7,453,000	9,835,000	5,602,000	22,890,000
2028	7,092,000	9,519,000	5,798,000	22,409,000
2029	6,703,000	9,147,000	6,038,000	21,888,000
2030	6,290,000	8,718,000	6,399,000	21,407,000
2031	5,858,000	8,240,000	6,585,000	20,683,000
2032	5,411,000	7,712,000	6,726,000	19,849,000
2033	4,960,000	7,149,000	6,968,000	19,077,000
2034	4,506,000	6,560,000	7,076,000	18,142,000
2035	4,053,000	5,953,000	7,109,000	17,115,000
2036	3,609,000	5,339,000	7,133,000	16,081,000
2037	3,180,000	4,730,000	7,068,000	14,978,000
2038	2,771,000	4,135,000	6,979,000	13,885,000
2039	2,388,000	3,565,000	6,594,000	12,547,000
2040	2,036,000	3,033,000	6,135,000	11,204,000
2041	1,717,000	2,544,000	5,620,000	9,881,000
2042	1,433,000	2,105,000	5,071,000	8,609,000
2043	1,182,000	1,717,000	4,507,000	7,406,000
2044	966,000	1,381,000	3,948,000	6,295,000
2045	782,000	1,094,000	3,410,000	5,286,000
2046	628,000	855,000	2,901,000	4,384,000
2047	500,000	658,000	2,431,000	3,589,000
2048	395,000	500,000	2,008,000	2,903,000

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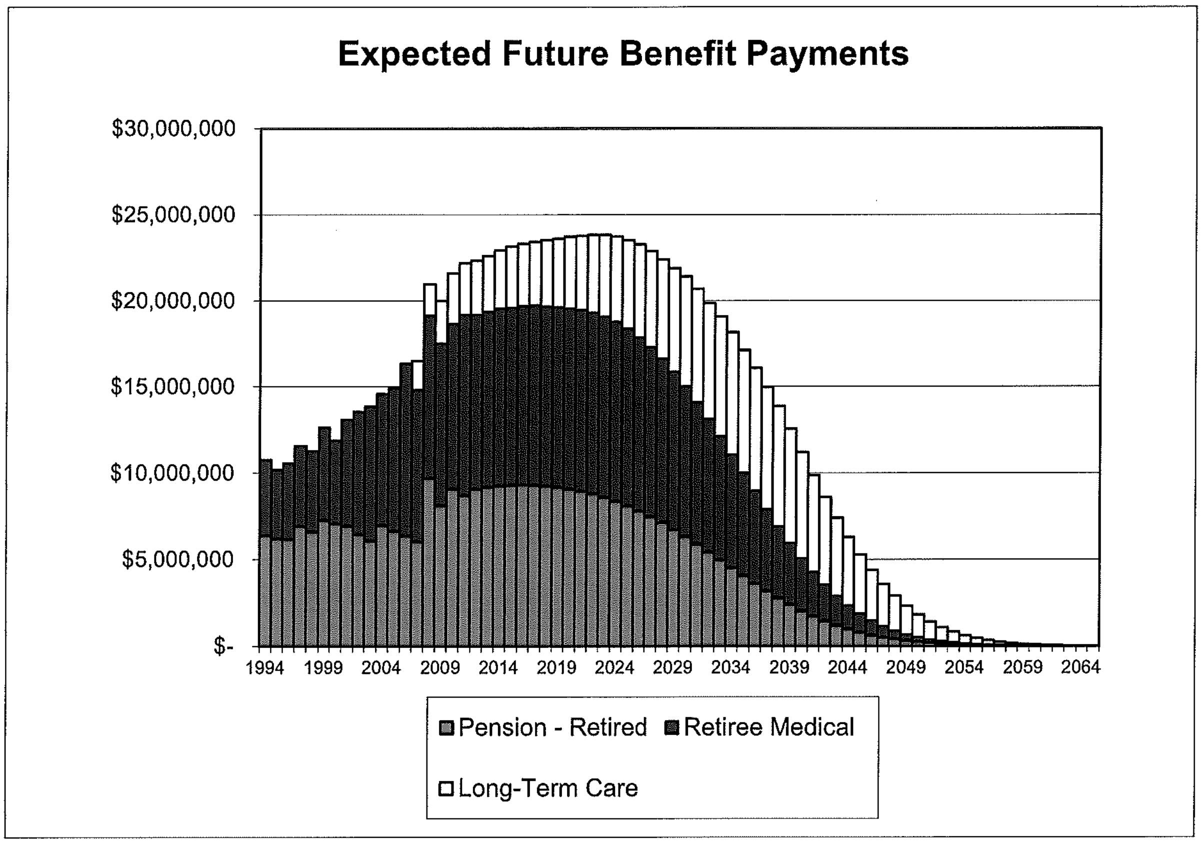

Actuarial Valuation of
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Summary of Plan Assets as of December 31, 2010

All assets are allocated to pension.

	Pension		Retiree Medical		Total	
CASH	$	3,052,427	$	0	$	3,052,427
RECEIVABLES						
Interest and dividends	$	0	$	0	$	0
Taxes		0		0		0
Other Receivables		4,342		0		4,342
Total Receivables	$	4,342	$	0	$	4,342
INVESTMENTS						
Investment Income	$	0	$	0	$	0
TOTAL ASSETS	$	3,056,769	$	0	$	3,056,769
LIABILITIES						
Accounts payable	$	0	$	0	$	0
Accrued liabilities		0		0		0
Other current liabilities		1,951,773		0		1,951,773
Total Liabilities	$	1,951,773	$	0	$	1,951,773
NET ASSETS AVAILABLE FOR PLAN BENEFITS	$	1,104,996	$	0	$	1,104,996

Actuarial Valuation of Seattle Police Relief and Pension Fund and Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Employees

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Summary of Changes in Plan Net Assets for the Year End December 31, 2010

The employer contributions for retiree medical are set equal to the disbursements for medical benefits and administration. All other contributions were considered pension contributions.

	Pension	Retiree Medical	Total
RECEIPTS			
Employer Contributions	$ 10,250,459	$ 12,051,575	$ 22,302,034
Miscellaneous revenue	113,808	0	113,808
Total receipts	$ 10,364,267	$ 12,051,575	$ 22,415,842
INVESTMENT EARNINGS			
Net appreciation (depreciation) in fair value of investments	$ 0	$ 0	$ 0
Interest income	0	0	0
Investment income	$ 0	$ 0	$ 0
DISBURSEMENTS			
Benefit payments	$ 9,017,280	$ 12,051,575	$ 21,068,855
Medical administration	0	0	0
Administrative expense	521,575	0	521,575
Investment expenses	0	0	0
Total disbursements	$ 9,538,855	$ 12,051,575	$ 21,590,430
CHANGE IN NET ASSETS	$ 825,412	$ 0	$ 825,412
Market Value of Net Assets BOY	279,584	0	279,584
Market Value of Net Assets EOY	$ 1,104,996	$ 0	$ 1,104,996

Actuarial Valuation of
Seattle Police Relief and Pension Fund

City of Seattle
January 1, 2011

Part I – PENSION FUND VALUATION REPORT

SECTION 1

Conclusions and Recommendations

The City's obligations under the SPRPF are limited to the benefits provided to police officers who retired prior to March 1, 1970, plus payments of excess retirement benefits to active members as of that date. These benefits are paid by the City, as they come due, from monies collected from licenses, fines and forfeitures. It is our understanding that the City makes annual appropriations to the Fund from its general fund to pay for most of the benefits.

The Fund is operating on a pay-as-you-go basis.

As of January 1, 2011, the actuarial present value of future excess pension benefits to be provided by the City is $137,497,000.

As of January 1, 2010 (the date of our last valuation), the present value of excess pension benefits was determined to be $129.393 million. The expected value as of January 1, 2011 based upon our 2010 valuation was $125.249 million. The total present value of $137.497 million was 10% higher than expected for reasons summarized in the following chart:

Reason	Liability Increase (Decrease) as a Percentage
Demographic experience	1%
Changes in benefit amounts compared to expectations	(5%)
Changes in the economic assumptions	14%
Total	10%

The Fund experienced a liability increase since out last valuation. This increase is mostly due to changes to the Consumer Price Index (CPI) and wage increase assumptions. The increase due to those assumptions was partially offset by SPRPF benefit amounts being less than expected.

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SECTION 2

Cost of Pension Benefits

At the time that the LEOFF System was installed, the state assumed the major portion of the obligation to provide future retirement benefits for members still in active service at the date of the inception of LEOFF, March 1, 1970. Each of the first class cities maintaining a Police Pension Fund retained the responsibility for all benefits payable to members (or to their survivors) who retired prior to that date. In addition, each city retained the responsibility for a portion of the benefits payable to members who were active on that date. These members are entitled to benefits under either the SPRPF formula or the LEOFF formula, whichever is greater. If the SPRPF benefit is greater, the City's SPRPF must meet the cost of the excess of the SPRPF benefit over the LEOFF benefit.

Upon the establishment of LEOFF, the total pension liability of each SPRPF was expected to decrease rapidly from year to year because of the closed, diminishing nature of the group of retirees and survivors. However, the excess pension benefits paid by each city's SPRPF have generally been much larger than anticipated. This is largely due to the way postretirement adjustments to benefits are calculated.

For those retired after 1970, the City must pay the excess of the SPRPF benefit over the LEOFF benefit. The LEOFF benefits increase with the CPI for Seattle, while most of the SPRPF benefits increase with wages of the current active police officers in the rank the members held at retirement. For this reason, the benefits are highly sensitive to the spread between wage increases and CPI increases. Wages have typically grown at a faster rate than CPI and are expected to continue to do so in the future.

Small changes in the assumptions for wage increases or CPI have a magnified impact on the liabilities calculated. To see why this magnification occurs, consider the following example.

Suppose that a person has an SPRPF benefit of $4,000 per month and a LEOFF benefit of $3,500 per month. The city-paid benefit is $500 per month. If wages increase at 3.75%, while CPI increases at 2.75%, the benefit increases will look like the following:

	Current Year	Increase	Following Year
SPRPF	$ 4,000.00	3.75%	$ 4,150.00
LEOFF	3,500.00	2.75%	3,596.25
City-Paid Benefit	$ 500.00	10.75%	$ 553.75

As you can see, the city-paid benefit increased 10.75% despite the fact that the total benefit paid to the member increased by only 3.75%.

Consider the same example, but with a 4.00% increase to wages.

	Current Year	Increase	Following Year
SPRPF	$ 4,000.00	4.0%	$ 4,160.00
LEOFF	3,500.00	2.75%	3,596.25
City-Paid Benefit	$ 500.00	12.75%	$ 563.75

In the second example, the wages and total benefit increased by 0.25% more (4.00% - 3.75%) than in the first example. However, the city-paid portion of the benefit increased by 2.00% more (12.75% - 10.75%) than in the first example.

Under LEOFF, the benefit is adjusted after retirement in proportion to the change in the CPI. Under SPRPF, most adjustments are based on the change in salary for the active police officers in the rank the members held at retirement. Wages have nearly always increased more rapidly than prices. The pattern is illustrated by the following table:

Geometric Average Increase in National Average CPI for Previous Period of Years

Period Ending	10 years	20 years	50 years	84 years
2010	2.3%	2.5%	4.1%	3.0%
2000	2.7%	3.6%	4.0%	
1990	4.5%	6.3%	4.6%	
1980	8.1%	5.5%	3.4%	
1970	2.9%	2.3%		
1960	1.8%	3.8%		
1950	5.9%	2.2%		

Geometric Average Increase in National Average Wages for Previous Period of Years

Period Ending	10 years	20 years	50 years	84 years
2010	3.0%	3.7%	4.9%	4.5%
2000	4.3%	4.8%	5.2%	
1990	5.3%	6.3%	6.1%	
1980	7.3%	5.9%	5.1%	
1970	4.4%	4.4%		
1960	4.4%	6.6%		
1950	8.9%	4.8%		

Geometric Average Increase in National Average Wages Minus Geometric Average Increase in National Average CPI for Previous Period of Years

Period Ending	10 years	20 years	50 years	84 years
2010	0.7%	1.2%	0.8%	1.5%
2000	1.6%	1.2%	1.2%	
1990	0.8%	0.0%	1.5%	
1980	-0.8%	0.4%	1.7%	
1970	1.5%	2.1%		
1960	2.6%	2.8%		
1950	3.0%	2.6%		

The wage information is based on statistics from the Social Security System back to 1951 and the Total Private Nonagricultural Wages prior to 1951. The CPI figures are based on the national CPI, U.S. City Average and All Urban Consumers. Over all years considered, wages have increased 1.5% faster than CPI. For the past 20 years, wages have grown at a rate of 1.2% higher than CPI.

In addition to historical data, we reviewed current economic forecasts to find an economic forecast with a time frame suited to our purposes. We looked at the expected increase in the CPI used by the Office of the Chief Actuary for the Social Security Administration. In the 2011 Trustees Report, the ultimate projected annual increase in the CPI under the intermediate cost assumptions was 2.8%. The reasonable range was stated as 1.8% to 3.8%. The ultimate projected annual growth rate in the U.S. earnings was 4.0% for the intermediate assumptions, with a range of 3.6% to 4.4%.

For this valuation, we assume wages increase 3.75% per year and CPI increases will be 2.75% in the long term, reflecting both historical data and economic forecasts. The actual April 2011 CPI adjustment of 0.78% is used for 2011 while an assumption of 2.0% is used for 2012. The actuarial assumptions are monitored for reasonableness and periodic changes are made when appropriate.

Table 1 presents an analysis of the actuarial present value of future pension benefits to be paid by the SPRPF. The entire pension benefit of members retiring before the establishment of the LEOFF System is paid by the City. The City's actuarial accrued liability for members retiring after establishment of LEOFF is only for excess pension benefits, which can be substantial.

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TABLE 1

Actuarial Present Value of All Future Pension Benefits
Not Provided by LEOFF System

Components of Liability:

Seattle Police Officers' Guild (SPOG)	$ 103,258,000
Seattle Police Management Association (SPMA)	34,239,000
Total Present Value of Future Benefits	$ 137,497,000

SECTION 3

Actuarial Information for Accounting Purposes

GASB reporting standards are required for defined benefit pension plans reporting and disclosures (Statement No. 25). The City has adopted the reporting standards. The requirements for Statement No. 25 include certain supplementary information to the financial statements. These include:

(1) A Schedule of Funding Progress, and

(2) A Schedule of Employer Contributions.

The Schedule of Funding Progress compares the amount of UAAL from year to year, and measures the progress of the employer's contributions in reducing this amount. The required Schedule of Employer Contributions compares the employer contributions required based on the actuarial required contribution, or Annual Required Contributions (ARC), with those employer contributions actually made.

GASB Statement No. 27 is required for pension accounting by state and local governmental employers. The disclosures include the measurement of an Annual Pension Cost (APC). For the first year, the APC is equal to the employer's ARC, as actuarially determined by the funding methods and assumptions for pension benefits used for GASB purposes. If the City does not make a contribution equal to the ARC, then a Net Pension Obligation (NPO) account is established and the APC would reflect adjustments made to the NPO account, as well as the ARC.

As of December 31, 2010, the City has a negative NPO as a result of the City paying more than its APC on a cumulative basis. This results in a net asset. It is our understanding that this asset should be recorded in the government-wide statement of net assets.

For GASB purposes, the ARC must be calculated based on certain parameters required for disclosure purposes. We have used the Entry Age Normal Cost Method, one of the acceptable actuarial funding methods under these parameters. Under this method, the projected benefits are allocated on a level basis as a percentage of salary over the earnings of each individual between entry age and assumed exit age. The amount allocated to each year is called the Normal Cost and the portion of the Actuarial Present Value of all benefits not provided for by future Normal Cost payments is called the Actuarial Accrued Liability. Since there is no assumed liability for active members, the amount of the Normal Cost is zero. The UAAL is the Actuarial Accrued Liability minus the actuarial value of the Fund's assets.

For GASB reporting purposes, Table 2 presents the annual Normal Cost and the ARC as of the valuation date, assuming the UAAL is amortized as a level dollar amount over a closed 30-year period beginning January 1, 2007. As of January 1, 2011, the UAAL is amortized over 26 years. Note that prior to 2007, the amortization period was adjusted to make the ARC equal the actual employer contributions. In 2007, the ARC was greater than the actual contributions even with the maximum amortization period allowable within GASB guidelines. The estimated NPO at the end of the period December 31, 2011 is based on an assumed employer contribution as described in the footnote. Actual employer contributions will be different and the determination of the NPO at the end of the year should be redetermined based on the actual amounts received by the Fund.

The UAAL and the percentage funded by assets are shown in Table 3, the Schedule of Funding Progress. Amounts shown in Table 4, the Schedule of Employer Contributions and in Table 5, the Three-Year Trend information should also be updated to reflect actual employer contributions.

After the first year, the redetermination of the NPO for future years, as shown in Table 6, Annual Development of Pension Cost will require the use of an amortization factor. We can assist the City in this determination at the end of the year. Annual redeterminations of the NPO are required by GASB Statement No. 27, but only biennial actuarial valuations are needed to determine the ARC.

GASB Statement No. 50 is effective for periods beginning after June 15, 2007. The Statement amends Statements No. 25 and 27 to require pension plans to present the following information. Notes to financial statements should disclose the funded status of the Plan as of the most recent valuation date. Pension plans should also disclose actuarial methods and significant assumptions used in the most recent actuarial valuation in the notes to the financial statements instead of the notes to the Required Supplemental Information. Please see Appendix A for a summary of the actuarial methods and assumptions used in this valuation.

Actuarial Valuation of Seattle Police Relief and Pension Fund

City of Seattle
January 1, 2011

TABLE 2

GASB Statement No. 27 Annual Pension Cost and Net Pension Obligation

	Fiscal Year Ending						
	12/31/2009		12/31/2010		12/31/2011		
Annual required contribution (ARC)							
1. Annual Normal Cost (BOY)	$	0	$	0	$	0	
2. Amortization of UAAL (BOY)		8,005,133		7,602,639		8,205,482	
3. Interest to EOY [(1)+(2)]x(*i*)*		360,231		304,106		328,219	
4. ARC at EOY [(1)+(2)+(3)]	$	8,365,364	$	7,906,745	$	8,533,701	
5. Interest on NPO	$	62,927	$	72,127	$	(6,673)	
6. Adjustment to ARC		85,002		106,176		(10,037)	
7. Annual pension cost (APC) [(4)+(5)-(6)]	$	8,343,289	$	7,872,696	$	8,537,065	
8. Employer Contributions**		7,938,513		9,842,693		8,668,000	***
9. Change in NPO [(7)-(8)]		404,776		(1,969,997)		(130,935)	***
10. NPO at BOY [(11) prior year]	$	1,398,387	$	1,803,163	$	(166,834)	
11. NPO at EOY [(9)+(10)]	$	1,803,163	$	(166,834)	$	(297,769)	***

* *'i' is the assumed interest rate that year: 4.5% in 2009, 4.0% in 2010, 4.0% in 2011. The interest rate is net of investment expenses.*

** *Beginning in 2009, administrative expenses paid by the fund are subtracted from employer contributions.*

*** *Assumed amounts will be replaced at year end with actual amounts.*

Actuarial Valuation of
Seattle Police Relief and Pension Fund

City of Seattle
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TABLE 3

GASB Statements No. 25 and No. 27 Schedule of Funding Progress
(rounded to thousands)

Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liabilities	Unfunded Actuarial Accrued Liabilities (UAAL)	Funded Ratio	Covered Payroll	UAAL As A Percentage of Covered Payroll
January 1, 2004*	$ 801	$ 65,418	$ 64,617	1 %	$ N/A	N/A %
January 1, 2005*	1,752	65,693	63,941	3	N/A	N/A
January 1, 2006*	1,967	69,935	67,968	3	N/A	N/A
January 1, 2007*	1,327	119,280	117,953	1	N/A	N/A
January 1, 2008	805	138,897	138,092	1	N/A	N/A
January 1, 2009	423	132,118	131,695	0	N/A	N/A
January 1, 2010	280	129,393	129,113	0	N/A	N/A
January 1, 2011	1,105	137,497	136,392	1	N/A	N/A

* *Results for this year were prepared by the prior actuary.*

Actuarial Valuation of
Seattle Police Relief and Pension Fund

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TABLE 4

GASB Statement No. 25 Schedule of Employer Contributions

Fiscal Year Ending	Total Employer Contributions	Annual Required Contribution (ARC)	Percentage of ARC Contributed
December 31, 2006*	$ 6,056,000	$ 6,056,000	100 %
December 31, 2007*	5,885,295	7,782,690	76
December 31, 2008	9,723,105	9,247,726	105
December 31, 2009	7,938,513	8,365,364	95
December 31, 2010	9,842,693	7,906,745	124
December 31, 2011	8,668,000 **	8,533,701	102 **

* *Results for this year were prepared by the prior actuary.*

** *Assumed amounts will be replaced at year end with actual amounts.*

Actuarial Valuation of
Seattle Police Relief and Pension Fund

City of Seattle
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TABLE 5

GASB Statement No. 27 Three-Year Trend Information

Fiscal Year Ending	Annual Pension Cost (APC)	Contribution as a Percentage of APC	Net Pension Obligation (NPO)
December 31, 2009	$ 8,343,289	95 %	$ 1,803,163
December 31, 2010	7,872,696	125	(166,834)
December 31, 2011	8,537,065	102 *	(297,769) *

** Assumed amounts will be replaced at year end with actual amounts.*

Actuarial Valuation of Seattle Police Relief and Pension Fund

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TABLE 6

GASB Statement No. 27 Annual Development of Pension Cost

Fiscal Year Ending	ARC at EOY	Interest on NPO	ARC Adjustment	Annual Pension Cost (APC)	Total Employer Contributions	Change in NPO	NPO Balance	(Gain)/Loss	Amort. Factor	Amort. of (Gain)/Loss	Ending Balance
	(1)	(2)= [prior yr (7)] x int. rate	(3)= [prior yr (7)] / (9)	(4)= (1)+(2)-(3)	(5)	(6)=(4)-(5)	(7)=(6)+ [prior yr (7)]	(8)=(1)-(5)	(9)	(10)= [prior yr (11)] / (9)	(11)=(7)
12/31/2006*	$ 6,056,000	$ 0	$ 0	$ 6,056,000	$ 6,056,000	$ 0	$ 0	$ 0	11.2232	$ 0	$ 0
12/31/2007*	7,782,690	0	0	7,782,690	5,885,295	1,897,395	1,897,395	1,897,395	15.9325 **	0	1,897,395
12/31/2008	9,247,726	97,241	120,870	9,224,097	9,723,105	(499,008)	1,398,387	(475,379)	15.6978 **	120,870	1,398,387
12/31/2009	8,365,364	62,927	85,002	8,343,289	7,938,513	404,776	1,803,163	426,851	16.4513 **	85,002	1,803,163
12/31/2010	7,906,745	72,127	106,176	7,872,696	9,842,693	(1,969,997)	(166,834)	(1,935,948)	16.9828 **	106,176	(166,834)
12/31/2011	8,533,701	(6,673)	(10,037)	8,537,065	8,668,000 ***	(130,935) ***	(297,769) ***	(134,299) ***	16.6221 **	(10,037)	(297,769) ***

* *Results for this year were prepared by the prior actuary.*
** *Based on a 30-year closed amortization as of January 1, 2007.*
*** *Assumed amounts will be replaced at year end with actual amounts.*

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SECTION 4

Supplemental Information

Cash-Flow Projections

The following table illustrates the projected excess annual pension payments for retired members eligible for retirement benefits under SPRPF.

The table is based on the actuarial assumptions stated in Appendix A.

The cash flows for years 2011 and beyond are projected amounts. The historical figures displayed for 2010 and earlier were provided by the City.

Actuarial Valuation of
Seattle Police Relief and Pension Fund

City of Seattle
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TABLE 7

Projection of Future Excess Pension Benefits

Year Ending December 31	Total Estimated Payouts
1994	$ 6,369,313
1995	6,210,514
1996	6,154,908
1997	6,888,859
1998	6,591,504
1999	7,245,620
2000	7,061,279
2001	6,925,933
2002	6,443,394
2003	6,067,572
2004	6,954,588
2005	6,628,728
2006	6,345,465
2007	6,018,641
2008	9,691,477
2009	8,088,220
2010	9,049,203
2011	8,668,000
2012	9,052,000
2013	9,181,000
2014	9,237,000
2015	9,270,000
2016	9,278,000
2017	9,262,000
2018	9,219,000
2019	9,148,000
2020	9,051,000
2021	8,924,000
2022	8,766,000
2023	8,572,000
2024	8,343,000
2025	8,079,000
2026	7,781,000
2027	7,453,000
2028	7,092,000

APPENDIX A

Actuarial Procedures and Assumptions

The actuarial procedures and assumptions used in this valuation are described in this appendix.

The actuarial assumptions are intended to estimate the future experience of the members of the City's SPRPF. The turnover assumptions were based on the 2001-2006 Experience Study for the Law Enforcement Officers' and Firefighter's Retirement System prepared by the Office of the State Actuary. Any variations in future experience from that expected under these assumptions will result in corresponding changes in the estimated costs of the System's benefits.

Since our last valuation, the economic assumptions have changed. The long-term CPI and wage increase assumptions have increased 0.25%. Also the short-term CPI and wage increase were updated to reflect known and expected amounts.

Table A-1 gives a brief summary of the assumptions.

We assume that there is no liability for active members. For these members, the LEOFF benefits are expected to be significantly higher than the SPRPF benefits. This is because the SPRPF benefits are limited to 60% of pay, while the LEOFF benefits are not.

Actuarial Cost Method

We are using the Entry Age Normal Cost Method. This funding method meets the parameters required for GASB disclosure purposes.

Records and Data

The data regarding active members, retirees, survivors and the financial information used in this valuation were supplied by the City and are accepted for valuation purposes without audit.

Replacement of Terminated Members

The City's SPRPF is a closed group. No new members are permitted.

Valuation of Assets (where applicable)

All assets are carried on a market value basis.

GASB No. 27 Amortization Period

The UAAL is amortized over a closed 30-year period as of January 1, 2007. Prior to 2007, the amortization period was adjusted to make the ARC equal the actual employer contributions.

Investment Earnings

The future investment earnings of the assets of the City's SPRPF are assumed to accrue at an annual rate of 4.0%, net of investment expenses.

Postretirement Benefit Increases

Certain benefits increase at the same rate as the salaries for active members of the same rank the retiree had attained at retirement. These salaries were assumed to increase in the long term at the rate of 3.75% per annum. The table below describes how salaries are assumed to increase in the short term.

Other benefits increase at the same rate as the CPI. The CPI was assumed to increase in the long term at the rate of 2.75% per annum. The table below describes how CPI is assumed to increase in the short term.

	SPOG Salaries	SPMA Salaries	April CPI	July CPI
2011	Included in data	Included in data	0.78%	2.00%
2012	3.75%	3.75%	2.00%	2.75%
2013+	3.75%	3.75%	2.75%	2.75%

Mortality

The mortality rates used in this valuation are illustrated in Table A-4.

Members Retired from Service and Spouses:	The mortality rates are based on the RP-2000 Mortality Table (combined healthy) projected to 2019 using 50% of Projection Scale AA, with ages set back one year for males and forward one year for females.
Disabled Members:	The mortality rates are based on the RP-2000 Mortality Table (combined healthy) projected to 2019 using 50% of Projection Scale AA, with ages set forward two years.

Family Composition

Since marital status of retirees was not supplied by the City, a marriage probability assumption of 87% was used. Wives are assumed to be three years younger than their husbands. Surviving spouses are assumed to not remarry.

Actuarial Valuation of Seattle Police Relief and Pension Fund

City of Seattle
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TABLE A-1

Summary of Valuation Assumptions

I. Economic assumptions

A. Investment return assumption (discount rate) 4.0%
B. Growth in membership 0.0%
C. Postretirement benefit increases

1. Related to salaries

	SPOG	SPMA
2011	Included in data	Included in data
2012+	3.75%	3.75%

2. Related to Consumer Price Index

	April CPI	July CPI
2011	0.78%	2.00%
2012	2.00%	2.75%
2013+	2.75%	2.75%

II. Noneconomic assumptions

A. Mortality — Table A-2

1. Service-retired members and spouses — RP-2000 Mortality Table (combined healthy) projected to 2019 using 50% of Projection Scale AA, with ages set back one year for males and set forward one year for females.

2. Disabled members — RP-2000 Mortality Table (combined healthy) projected to 2019 using 50% of Projection Scale AA, with ages set forward two years.

Actuarial Valuation of
Seattle Police Relief and Pension Fund

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TABLE A-2

Mortality

Annual Rates

	Actives, Spouses and Members Retired from Service		Disabled Members	
Age	Males	Females	Males	Females
40	0.095%	0.067%	0.113%	0.074%
45	0.123	0.105	0.153	0.114
50	0.168	0.158	0.225	0.172
55	0.267	0.286	0.391	0.322
60	0.510	0.554	0.752	0.635
65	0.987	1.045	1.407	1.160
70	1.716	1.771	2.365	1.971
75	2.966	2.870	4.105	3.160
80	5.216	4.701	7.248	5.267
85	9.335	8.158	12.728	9.099
90	16.021	14.054	20.852	15.319
95	24.597	20.151	29.421	21.119
100	33.021	24.483	37.169	25.450

Actuarial Valuation of Seattle Police Relief and Pension Fund

City of Seattle
January 1, 2011

TABLE A-3

Actuarial Assumptions Display for Notes to Financial Statements

Valuation Date	January 1, 2011
Actuarial Cost Method	Entry Age Normal
Amortization Method	30-year, closed as of January 1, 2007
Remaining Amortization Period	26 years
Asset Valuation method	Fair market value

Actuarial assumptions

Investment Return Assumption (Discount Rate): 4.0%

Projected Salary Increases

	SPOG	SPMA
2011	Included in data	Included in data
2012+	3.75%	3.75%

Inflation

	April CPI	July CPI
2011	0.78%	2.00%
2012	2.00%	2.75%
2013+	2.75%	2.75%

Cost-of-living adjustments

Based upon salary increase assumption when appropriate, for SPRPF benefits (Escalator).

Based upon inflation assumption for some SPRPF benefits and all LEOFF benefits (CPI).

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APPENDIX B

Provisions of Governing Law

All actuarial calculations are based on our understanding of Revised Code of Washington (RCW) 41.20, the statute establishing the SPRPF, and RCW 41.26, the statute establishing LEOFF.

Each police officer in service prior to March 1, 1970 receives the greater of the benefit payable under LEOFF and the benefits available under the provisions of prior law. Where benefits under the old law exceed those under the new for any police officer, the excess benefits are paid from the SPRPF of the first class city employing him on March 1, 1970.

The benefit provisions of the SPRPF are summarized briefly below for reference purposes. This summary does not attempt to cover all of the detailed provisions of the laws.

For comparative purposes, the bracketed statements describe the corresponding LEOFF law.

Definitions

Salary:	Basic salary attached to rank of police officer at time of retirement limited to salary of a captain unless the higher ranked member makes contributions on the excess. (RCW 41.20.005(4)) [Same if he had the rank for at least 12 months; otherwise, the highest 24-month average from the last 10 years of service.(RCW 41.26.030(13a))]
Spouse:	Unremarried surviving spouse who was married to a disabled police officer at time of disablement or to a retired police officer for five years prior to retirement. (RCW 41.20.085) [Same, except marriage to retired police officer for one year prior to retirement qualifies. RCW 41.26.030(6))]
Child:	Police officer's unmarried child under age 18. (RCW 41.20.085) [Police officer's unmarried child under age 18 or up to age 22 while attending an educational institution accredited or approved by the state of Washington. (RCW 41.26.030(7))]

Service Retirement Benefit

Member's Benefit:

Eligibility	25 years of service. (RCW 41.20.050) [Age 50 and five years of service. (RCW 41.26.090)]
Amount of benefit	50% of salary plus an additional 2% for each year of service in excess of 25 years. Maximum benefit of 60% of salary. (RCW 41.20.050) [2% of salary for each year of service if 20 or more years; 1½% of salary for each year of service if at least 10 but less than 20 years of service; 1% of salary for each year of service if at least five but less than 10 years of service. For those retiring prior to July 1, 2006 the maximum initial benefit was 60% of salary. That maximum does not apply for those retiring after July 1, 2006. (RCW 41.26.100)]

Survivor's Benefit:

Eligibility	Spouse or child. (RCW 41.20.085) [Same. (RCW 41.26.160)]
Amount of benefit	Percent of salary as follows: 33.3% to widow only 45.8% to widow and/or one child 47.6% to widow and/or two children 50.0% to widow and/or three children (RCW 41.20.085) [If spouse – continuation of member's basic retirement allowance plus additional 5% of salary per child. If no spouse – 30% of salary for first child, 10% for each additional child. Maximum benefit in either case - 60% of salary. (RCW 41.26.160)]

Duty Disability Retirement Benefit

Member's Benefit:

Eligibility	Disabled after six-month waiting period, during which time salary is payable from the Fund. (RCW 41.20.060) [Same, except salary is payable by city during the waiting period.(RCW 41.26.120)]
Amount of benefit	Determined same as Service Retirement Benefit. (RCW 41.20.060) [50% of salary plus an additional 5% for each child; maximum benefit of 60% of salary. (RCW 41.26.130(1))]
Recovery from disability	Restoration to service. (RCW 41.20.060) [Upon recovery before age 50, restoration to service with full credit for service while disabled. Upon recovery after age 50, benefit continues as the greater of service retirement benefit or current benefit.(RCW 41.26.130(3))]

Survivor's Benefit: See Survivor's Benefit section under Service Retirement.

Non-Duty Disability Retirement Benefit

Member's Benefit:

Eligibility	Board approval (RCW 41.20.065) [Disabled after six-month waiting period, during which time salary is payable by the City. (RCW 41.26.125)]
Amount of benefit	50% of salary or service retirement benefit, if greater. (RCW 41.20.065) [50% of salary plus an additional 5% for each child; maximum benefit of 60% of salary, or service retirement benefit, if greater. (RCW 41.26.130(1))]
Recovery from disability	See section under Duty Disability Retirement.
Limitations	No benefits payable if police officer employed elsewhere when disabled. (RCW 41.20.065) [All benefits are reduced by Workers' Compensation, Social Security, or insurance provided by another employer. Allowance cannot exceed difference between wage from current gainful employment and salary currently attached to rank held at retirement. (RCW 41.26.130(4))]

Survivor's Benefit:

Eligibility	Spouse or child. (RCW 41.20.085) [Same. (RCW 41.26.161)]
Amount of benefit	Percentage of salary, as follows: 33.3% to widow only 45.8% to widow and one child 47.6% to widow and two children 50.0% to widow and three children 33.3% to children only (RCW 41.20.085) [Determined same as under Service Retirement Survivor's Benefit. (RCW 41.26.161)]

Duty Death Benefit

Eligibility	Spouse or child. (RCW 41.20.080) [Same. (RCW 41.26.160)]
Amount of benefit	50% of salary. (RCW 41.20.080) [If spouse – 50% of salary plus an additional 5% salary per child. If no spouse – 30% of salary for first child; 10% for each additional child. Maximum benefit in either case - 60% of salary. (RCW 41.26.160)]

Non-Duty Death Benefit

Provisions same as Survivor's Benefit under Non-Duty Disability Retirement. (RCW 41.20.085)
[Provisions same as Survivor's Benefit under Duty Death Retirement. (RCW 41.26.161)]

Vesting

Eligibility	Termination after 20 years of service. (RCW 41.20.150) [Termination after five years of service. (RCW 41.26.090)]

Deferred Benefit

Commences	When police officer would have had 25 years of service. (RCW 41.20.150) [Age 50. (RCW 41.26.090(2))]
Amount of benefit	2% of salary for each year of service. (RCW 41.20.150) [Same, if at least 20 years of service; 1.5% of salary for each year of service if at least 10 but less than 20 years of service; 1% of salary for each year of service if at least five but less than 10 years of service. (RCW 41.26.090 and RCW 41.26.100)]
Death while vested prior to commencement of benefits	Same as Survivor's Benefit under Service Retirement. (RCW 41.20.150) [a. Police officer with 20 or more years of service: If spouse - police officer's deferred benefit plus an additional 5% of salary per child. If no spouse – 30% of salary for first child, 10% for each additional child. Maximum benefit in either case - 60% of salary. (RCW 41.26.161) b. Police officer with less than 20 years of service: Payment to spouse or estate of accumulated contributions less any payments made to police officer. (RCW 41.26.090)]

Withdrawal

Eligibility	Termination with no other benefit. (RCW 41.20.150) [Same. (RCW 41.26.170)]
Benefit	Return of 75% of contributions made after June 8, 1955. (RCW 41.20.150) [Return of accumulated contributions less any benefit paid. (RCW 41.26.170)]

Postretirement Increase

Type	1. Escalation by salary in proportion to current salary of rank from which police officer retired.(RCW 41.20.050) 2. Increase proportionate to the increase in the Seattle-area CPI, with change computed annually. Regardless of the increase (or decrease) in the CPI, the benefits are increased at least 2% each year. (RCW 41.20.061) [Increase or decrease proportionate to the increase or decrease in the Seattle-area CPI, with change computed annually. No benefit may decrease below original amount. (RCW 41.26.240)]
Applicability	Escalation Type 1 applies to police officers who retired from service, were disabled, or died while active after 1961 and their survivors. The second type applies to all other types of monthly benefits. (RCW 41.20.061) [All monthly benefits. (RCW 41.26.240)]

Minimum Benefit

After April 25, 1973, a minimum benefit of $300 per month to all retired police officers and their survivors. This minimum is increased by the CPI. (RCW 41.20.050)
[No provision under RCW 41.26.]

Funeral Benefit

$1000 to defray funeral expenses. (RCW 41.20.090) [No provision under RCW 41.26.]

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Actuarial Valuation of
Seattle Police Relief and Pension Fund

City of Seattle
January 1, 2011

APPENDIX C

Valuation Data

This valuation is based on the membership of the City's SPRPF as of January 1, 2011.

It is our understanding that, as of the valuation date, the only liabilities for future benefits to present or retired police officers or their survivors are those allocable to the persons included in Tables C-1 through C-4.

Tables C-1 through C-4 show the distributions of retirees and surviving spouses of retirees receiving service and disability retirement pensions and the amount of the monthly benefits received.

As of the valuation date, there are active employees hired prior to March 1, 1970. We assume that there is no liability for active members, since the LEOFF benefits are expected to be significantly higher than the SPRPF benefits. This is because the SPRPF benefits are limited to 60% of pay, while the LEOFF benefits are not.

Retired Members and Survivors

	Monthly Pensions	
Number	**Paid by City**	**Paid by LEOFF**
888	$ 751,298.66	$ 3,123,375.90

Actuarial Valuation of
Seattle Police Relief and Pension Fund

City of Seattle
January 1, 2011

TABLE C-1

Police Officers Retired for Service

Age	Number	Monthly Pension Paid by City	Monthly Pension Paid by LEOFF
55 - 59	2	$ 3,735.78	$ 8,123.34
60 - 64	32	23,829.91	143,967.64
65 - 69	115	73,236.65	530,300.93
70 - 74	78	57,664.04	319,765.56
75 - 79	74	64,276.73	308,873.56
80 - 84	61	69,928.09	250,654.40
85 - 89	24	28,750.61	96,889.59
90 - 94	5	10,853.06	10,118.83
95 - 99	5	14,287.75	5,913.10
Totals	396	$ 346,562.62	$ 1,674,606.95

TABLE C-2

Police Officers Disabled in Line of Duty

Age	Number	Monthly Pension Paid by City	Monthly Pension Paid by LEOFF
60 - 64	42	$ 43,876.05	$ 147,642.41
65 - 69	70	80,147.00	244,319.26
70 - 74	59	66,034.75	204,540.55
75 - 79	21	20,008.59	68,356.51
80 - 84	15	16,614.33	50,896.79
85 - 89	7	9,794.79	23,432.99
90 - 94	2	2,332.53	6,526.15
Totals	216	$ 238,808.04	$ 745,714.66

Actuarial Valuation of Seattle Police Relief and Pension Fund

City of Seattle
January 1, 2011

TABLE C-3

Police Officers Disabled Not in Line of Duty

Age	Number	Monthly Pension Paid by City	Monthly Pension Paid by LEOFF
60 - 64	7	$ 6,131.76	$ 21,382.24
65 - 69	7	4,352.64	21,820.86
70 - 74	11	9,006.78	35,117.78
75 - 79	5	4,160.07	14,471.11
80 - 84	6	8,837.47	14,829.53
85 - 89	3	8,582.56	2,270.82
Totals	39	$ 41,071.28	$ 109,892.34

TABLE C-4

Survivors of Police Officers

Age	Number	Monthly Pension Paid by City	Monthly Pension Paid by LEOFF
50 - 54	2	$ 0	$ 7,468.12
55 - 59	6	380.88	16,687.43
60 - 64	21	4,040.23	42,313.92
65 - 69	27	6,910.73	56,501.98
70 - 74	30	5,994.20	85,702.44
75 - 79	42	13,564.44	121,240.63
80 - 84	53	22,889.80	159,327.31
85 - 89	29	30,878.41	69,725.02
90 - 94	21	28,551.74	31,395.49
95 - 99	4	6,020.97	2,799.60
100 - 104	2	5,625.33	0
Totals	237	$ 124,856.73	$ 593,161.94

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Actuarial Valuation of
Retiree Medical and Long-Term Care Benefits
for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

Part II – RETIREE MEDICAL AND LONG-TERM CARE VALUATION

SECTION 1

Conclusions and Recommendations

Total liabilities for the retiree medical and long-term care benefits are estimated as follows:

Valuation Date	01/01/2010	01/01/2011
Total present value of expected Medical benefits (excluding Long-Term Care)	$ 174,733,000	$ 167,244,000
Total present value of expected Long-Term Care benefits	89,486,000	93,796,000
Total Benefits	$ 264,219,000	$ 261,040,000

For comparison purposes, the above table contains the liabilities from our 2010 valuation of retiree medical benefits.

Summary of Changes

As of January 1, 2010 (the date of our last valuation), the present value of retiree medical benefits was determined to be $264.219 million. The expected value as of January 1, 2011 based upon our 2010 valuation was $261.351 million. The total present value of $261.040 million was approximately the same as expected for reasons summarized in the following chart:

Reason	Liability Increase (Decrease) as a percentage
Demographic experience	0%
Changes in medical costs compared to expectations	(1%)
Changes in medical trend assumptions	0%
Change in LTC assumptions	1%
Total	0%

The Plan experienced a very small gain since the last valuation.

Retiree Medical Benefits

As of January 1, 2011, the actuarial present value of future retiree medical benefits to be provided by the City is $167,244,000.

Long-Term Care Benefits

As of January 1, 2011, the actuarial present value of future long-term care benefits to be provided by the City is $93,796,000.

Actuarial Valuation of Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Police Employees

City of Seattle January 1, 2011

SECTION 2

Benefits Liability

Introduction

Summaries of the retiree medical, retiree dental and long-term care liabilities are displayed in Table 1. Table 1 gives the breakdown of liabilities according to actives and retirees.

It is our understanding that the City is currently operating on a pay-as-you-go basis. If the City decides to fund the obligations, we can provide funding schedules in accordance with the needs of the City.

The retiree medical, retiree dental and long-term care benefits received by members are described in Appendix B. The promise is to provide full retiree medical benefits for life, without retiree cost sharing. For this study, current and future retirees are assumed to receive Medicare, with the City paying their Part B premiums.

The estimated monthly costs for retiree medical, retiree dental and long-term care benefits are shown in Appendix C.

Summaries of the members eligible for retiree medical, retiree dental and long-term care benefits are contained in Appendix D. The City provided the data to us.

Actuarial Valuation of Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

TABLE 1

Summary of Retiree Medical and Long-Term Care Liabilities
(in Thousands)

Present Value of Benefits	Medical* Benefits Under Age 65	Medical* Benefits Over Age 65	Total Medical	Long-Term Care	Total
Retirees	$ 11,409	$ 143,523	$ 154,932	$ 89,364	$ 244,296
Actives	2,457	9,855	12,312	4,432	16,744
Total	$ 13,866	$ 153,378	$ 167,244	$ 93,796	$ 261,040

Discount Rate: 4.0%

Long-Term Care Inflation Rate: 4.75%

Dental Inflation Rate: Minimum of 5.0% and Medical Inflation

Medical Inflation Rate: Based on the Getzen Model, see Appendix A

** Medical benefits include dental benefits and the reimbursement of Medicare Part B premiums.*

SECTION 3

Actuarial Information for Accounting Purposes

GASB reporting standards are required for Postemployment Benefit Plans Other than Pension Plans, or OPEB (Statement No. 43). The City has chosen to adopt the reporting standards. The requirements for Statement No. 43 include certain supplementary information to the financial statements. These include:

(1) A Schedule of Funding Progress, and

(2) A Schedule of Employer Contributions.

The Schedule of Funding Progress compares the amount of UAAL from year to year, and measures the progress of the employer's contributions in reducing this amount. In the case of a Plan that is not funded, the contributions will simply equal the benefit payments. The required Schedule of Employer Contributions compares the employer contributions based on the actuarial required contribution, or ARC, with those employer contributions actually made.

Please note that for contributions to qualify as contributions under GASB Statements Nos. 43 and 45, they must be made to a trust or equivalent arrangement in which

a. Employer contributions are irrevocable
b. Assets are dedicated to providing benefits to retirees
c. Assets are legally protected from creditors of the employer

GASB Statement No. 45 is required for OPEB accounting by state and local governmental employers. The disclosures include the measurement of an Annual OPEB Cost (AOC). For the first year, the AOC is equal to the employer's ARC, as actuarially determined by the funding methods and assumptions for OPEB benefits used for GASB purposes. If the City is required to make a contribution and does not make a contribution equal to the ARC, then a Net OPEB Obligation (NOO) amount would be established and the AOC would reflect adjustments made to the NOO, as well as the ARC.

As of December 31, 2010, the City has a positive NOO as a result of the City paying less than its APC on a cumulative basis. This results in a net obligation. It is our understanding that this obligation should be recorded in the government-wide statement of net assets.

For GASB purposes, the ARC must be calculated based on certain parameters required for disclosure purposes. We have used the Entry Age Normal Cost Method, one of the acceptable actuarial funding methods under these parameters. Under this method, the projected benefits are allocated on a level basis as a percentage of salary over the earnings of each individual between entry age and assumed exit age. The amount allocated to each year is called the Normal Cost and the portion of the Actuarial Present Value of all benefits not provided for by future Normal Cost payments is called the Actuarial Accrued Liability. Since all active members are assumed to retire at the valuation date, the amount of the Normal Cost is zero. The UAAL is the Actuarial Accrued Liability (AAL) minus the actuarial value of the Fund's assets. In the case of a plan with no assets, the UAAL is simply equal to the AAL.

For GASB reporting purposes, Table 2 presents the annual Normal Cost and the ARC as of the valuation date, assuming the UAAL is amortized as a level dollar amount over a closed 30-year period beginning January 1, 2007. As of January 1, 2010, the UAAL is amortized over 27 years. The estimated NOO at the end of the period December 31, 2011 is based on an assumed employer contribution as described in the footnote. Actual employer contributions will be different and the determination of the NOO at the end of the year should be redetermined based on the actual amounts received by the Fund.

The UAAL and the percentage funded by assets are shown in Table 3, the Schedule of Funding Progress. Amounts shown in Table 4, the Schedule of Employer Contributions and in Table 5, the Three-Year Trend information should also be updated to reflect actual employer contributions.

After the first year, the redetermination of the NOO for future years, as shown in Table 6, Annual Development of OPEB Cost will require the use of an amortization factor. We can assist the City in this determination at the end of the year. Annual redeterminations of the NOO are required by GASB No. 45, but only biennial actuarial valuations are needed to determine the ARC.

Actuarial Valuation of Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

TABLE 2

GASB Statement No. 45 Annual OPEB Cost and Net OPEB Obligation

	Fiscal Year Ending		
	12/31/2009	12/31/2010	12/31/2011
Annual required contribution (ARC)			
1. Annual Normal Cost (BOY)	$ 0	$ 0	$ 0
2. Amortization of UAAL (BOY)	14,595,410	15,558,086	15,704,416
3. Interest to EOY [(1)+(2)]x(*i*)*	656,793	622,323	628,177
4. ARC at EOY [(1)+(2)+(3)]	$ 15,252,203	$ 16,180,409	$ 16,332,593
5. Interest on Net OPEB Obligation	$ 220,489	$ 327,320	$ 486,293
6. Adjustment to ARC	297,834	481,842	731,396
7. Annual OPEB Cost [(4)+(5)-(6)]	$ 15,174,858	$ 16,025,887	$ 16,087,490
8. Employer Contributions	11,891,608	12,051,575	13,520,000 **
9. Change in Net OPEB Obligation [(7)-(8)]	3,283,250	3,974,312	2,567,490 **
10. Net OPEB Obligation at BOY [(11) prior year]	$ 4,899,757	$ 8,183,007	$ 12,157,319
11. Net OPEB Obligation at EOY [(9)+(10)]	$ 8,183,007	$ 12,157,319	$ 14,724,809 **

* *'i' is the assumed interest rate that year: 4.5% in 2009, 4.0% in 2010, 4.0% in 2011.*

** *Estimated employer contributions based upon expected benefit payments in 2011. Estimated amounts will be replaced at year end with actual amounts.*

TABLE 3

GASB Statement No. 43 and No. 45 Schedule of Funding Progress
(rounded to thousands)

Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liabilities	Unfunded Actuarial Accrued Liabilities (UAAL)	Funded Ratio	Covered Payroll	UAAL As A Percentage of Covered Payroll
January 1, 2007*	$ 0	$ 191,773	$ 191,773	0 %	N/A	N/A %
January 1, 2008	0	209,502	209,502	0	N/A	N/A
January 1, 2009	0	240,113	240,113	0	N/A	N/A
January 1, 2010	0	264,219	264,219	0	N/A	N/A
January 1, 2011	0	261,040	261,040	0	N/A	N/A

** Results for this year prepared by the prior actuary.*

Actuarial Valuation of
Retiree Medical and Long-Term Care Benefits
for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

TABLE 4

GASB Statement No. 43 Schedule of Employer Contributions

Fiscal Year Ending	Employer Contributions	Annual Required Contribution (ARC)	Percentage of ARC Contributed
December 31, 2007	$ 10,477,552	$ 12,653,428	83 %
December 31, 2008	11,278,886	14,029,863	80
December 31, 2009	11,891,608	15,252,203	78
December 31, 2010	12,051,575	16,180,409	74
December 31, 2011	13,520,000 *	16,332,593	83 *

* *Estimated employer contributions based upon expected benefit payments in 2011.*
Estimated amounts will be replaced at year end with actual amounts.

Actuarial Valuation of
Retiree Medical and Long-Term Care Benefits
for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

TABLE 5

GASB Statement No. 45 Percentage of Annual OPEB Cost Contributed

Fiscal Year Ending	Annual OPEB Cost	Contribution as a Percentage of Annual OPEB Cost	Net OPEB Obligation
December 31, 2009	$ 15,174,858	78 %	$ 8,183,007
December 31, 2010	16,025,887	75	12,157,319
December 31, 2011	16,087,490	84 *	14,724,809 *

* *Estimated employer contributions based upon expected benefit payments in 2011.*
Estimated amounts will be replaced at year end with actual amounts.

Actuarial Valuation of
Retiree Medical and Long-Term Care Benefits
for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

TABLE 6

GASB Statement No. 45 Annual Development of OPEB Cost

Fiscal Year Ending	ARC at EOY	Interest on Net OPEB Obligation	ARC Adjustment	Annual OPEB Cost	Total Employer Contributions	Change in Net OPEB Obligation	Net OPEB Obligation Balance	(Gain)/Loss	Amort. Factor*	Amort. of (Gain)/Loss	Ending Balance
	(1)	(2)= [prior yr (7)] x int. rate	(3)= [prior yr (7)] / (9)	(4)= (1)+(2)-(3)	(5)	(6)=(4)-(5)	(7)=(6)+ [prior yr (7)]	(8)=(1)-(5)	(9)	(10)= [prior yr (11)] / (9)	(11)=(7)
12/31/2007	$ 12,653,428	$ 0	$ 0	$ 12,653,428	$ 10,477,552	$ 2,175,876	$ 2,175,876	$ 2,175,876	15.9325	$ 0	$ 2,175,876
12/31/2008	14,029,863	111,514	138,610	14,002,767	11,278,886	2,723,881	4,899,757	2,750,977	15.6978	138,610	4,899,757
12/31/2009	15,252,203	220,489	297,834	15,174,858	11,891,608	3,283,250	8,183,007	3,360,595	16.4513	297,834	8,183,007
12/31/2010	16,180,409	327,320	481,842	16,025,887	12,051,575	3,974,312	12,157,319	4,128,834	16.9828	481,842	12,157,319
12/31/2011	16,332,593	486,293	731,396	16,087,490	13,520,000 **	2,567,490 **	14,724,809 **	2,812,593 **	16.6221	731,396	14,724,809 **

* *Based on a 30-year closed amortization as of January 1, 2007.*

** *Estimated employer contributions based upon expected benefit payments in 2011. Estimated amounts will be replaced at year end with actual amounts.*

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SECTION 4

Supplemental Information

Cash-Flow Projections

Table 7 illustrates the projected retiree medical and long-term care payments for currently active and retired members eligible for these benefits under RCW. Medical benefit payments include dental benefits and reimbursements for Medicare Part B premiums. See Appendix B and Appendix C for additional information on eligible members.

The cash-flow projections are based on the actuarial assumptions stated in Appendix A.

The cash flows for years 2011 and beyond are projected amounts. The historical figures displayed for 2010 and earlier were provided by the City.

Actuarial Valuation of
Retiree Medical and Long-Term Care Benefits
for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

TABLE 7

Estimated Total Pay-As-You-Go Costs
for LEOFF I Members

Year	Medical Benefits	Long-Term Care*	Total Payout
1994	4,391,324	N/A	$ 4,391,324
1995	3,972,397	N/A	3,972,397
1996	4,393,823	N/A	4,393,823
1997	4,672,940	N/A	4,672,940
1998	4,682,582	N/A	4,682,582
1999	5,390,103	N/A	5,390,103
2000	4,809,159	N/A	4,809,159
2001	6,153,460	N/A	6,153,460
2002	7,115,013	N/A	7,115,013
2003	7,783,352	N/A	7,783,352
2004	7,613,203	N/A	7,613,203
2005	8,286,951	N/A	8,286,951
2006	9,988,634	N/A	9,988,634
2007	8,785,962	1,691,560	10,477,522
2008	9,435,832	1,842,974	11,278,806
2009	9,423,424	2,468,184	11,891,608
2010	9,604,204	2,921,262	12,525,466
2011	10,497,000	3,023,000	13,520,000
2012	10,119,000	3,146,000	13,265,000
2013	10,149,000	3,257,000	13,406,000
2014	10,286,000	3,387,000	13,673,000
2015	10,307,000	3,554,000	13,861,000
2016	10,405,000	3,629,000	14,034,000
2017	10,462,000	3,688,000	14,150,000
2018	10,438,000	3,874,000	14,312,000

** Prior to 2007 the breakdown between medical and long-term care was not available. For those years, the medical column includes long-term care costs.*

Actuarial Valuation of
Retiree Medical and Long-Term Care Benefits
for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

TABLE 7 (continued)

Estimated Total Pay-As-You-Go Costs for LEOFF I Members

Year	Medical Benefits	Long-Term Care	Total Payout
2019	10,468,000	3,988,000	14,456,000
2020	10,495,000	4,174,000	14,669,000
2021	10,524,000	4,314,000	14,838,000
2022	10,525,000	4,540,000	15,065,000
2023	10,500,000	4,749,000	15,249,000
2024	10,423,000	4,959,000	15,382,000
2025	10,286,000	5,153,000	15,439,000
2026	10,090,000	5,387,000	15,477,000
2027	9,835,000	5,602,000	15,437,000
2028	9,519,000	5,798,000	15,317,000
2029	9,147,000	6,038,000	15,185,000
2030	8,718,000	6,399,000	15,117,000
2031	8,240,000	6,585,000	14,825,000
2032	7,712,000	6,726,000	14,438,000
2033	7,149,000	6,968,000	14,117,000
2034	6,560,000	7,076,000	13,636,000
2035	5,953,000	7,109,000	13,062,000
2036	5,339,000	7,133,000	12,472,000
2037	4,730,000	7,068,000	11,798,000
2038	4,135,000	6,979,000	11,114,000
2039	3,565,000	6,594,000	10,159,000
2040	3,033,000	6,135,000	9,168,000
2041	2,544,000	5,620,000	8,164,000
2042	2,105,000	5,071,000	7,176,000
2043	1,717,000	4,507,000	6,224,000
2044	1,381,000	3,948,000	5,329,000
2045	1,094,000	3,410,000	4,504,000
2046	855,000	2,901,000	3,756,000
2047	658,000	2,431,000	3,089,000
2048	500,000	2,008,000	2,508,000

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APPENDIX A

Summary of Valuation Assumptions

The actuarial procedures and assumptions used in this valuation are described in this appendix. The actuarial assumptions are intended to estimate the future experience of the members.

Since our last valuation, the medical cost assumptions and long-term care assumptions have been updated to better reflect recent experience and current expectations. The long-term care inflation rate was changed from 4.50% to 4.75%.

Medical Trends

Our assumptions for medical inflation have been updated to better reflect current expectations. As part of a recent review, we evaluated the Society of Actuaries (SOA) recently published report on long-term medical trend. That report includes detailed research performed by a committee of economists and actuaries (including a Milliman representative) and proposes the use of the "Getzen Model" named after the professor who developed the model.

We believe that the research and the model are fundamentally and technically sound and will advance the body of knowledge available to actuaries to more accurately project long-term medical trends. At this time, we believe this model is the industry standard for projecting long-term medical trends. Milliman has decided to use that model as the foundation for the trend that it recommends to our clients for OPEB valuations. These trend rates assume that over time, deductibles and out of pocket maximums will be periodically increased as medical trends increase.

Actuarial Cost Method

The liabilities are calculated according to the Entry Age Normal (level percentage of pay) funding method.

Records and Data

The data regarding active members, retirees, survivors and the financial information used in this valuation were supplied by the City and are accepted for valuation purposes without audit.

Replacement of Terminated Members

The City's SPRPF and LEOFF I are closed groups. No new members are permitted.

Valuation of Assets

As of the valuation date, there are no assets set aside to pay for these benefits.

Actuarial Valuation of Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

TABLE A-1

Summary of Valuation Assumptions

I. Economic Assumptions

A. Investment Return Assumption (Discount rate) — 4.0%

B. Medical Inflation

Year	**Medical Cost Rate**
2011	7.8%
2012	7.1%
2013	6.5%
2014-2019	5.9%
2020-2030	5.8%
2031-2036	5.7%

Grading down to an ultimate of 4.7% in 2081 and beyond.

C. Dental Inflation — 5.0% until 2076, then medical inflation thereafter

D. Long-Term Care Inflation Rate — 4.75%

II. Noneconomic Assumptions

A. Mortality — Table A-2

1. Active and service-retired members — RP-2000 Mortality Table (combined healthy) projected to 2019 using 50% of Projection Scale AA, with ages set back one year for males and forward one year for females.

2. Disabled members — RP-2000 Mortality Table (combined healthy) projected to 2019 using 50% of Projection Scale AA, with ages set forward two years.

B. Retirement of Actives — All actives are assumed to retire at the valuation date.

Actuarial Valuation of Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

TABLE A-2

Annual Rates – Mortality

	Actives and Members Retired from Service		Disabled Members	
Age	Males	Females	Males	Females
40	0.095%	0.067%	0.113%	0.074%
45	0.123	0.105	0.153	0.114
50	0.168	0.158	0.225	0.172
55	0.267	0.286	0.391	0.322
60	0.510	0.554	0.752	0.635
65	0.987	1.045	1.407	1.160
70	1.716	1.771	2.365	1.971
75	2.966	2.870	4.105	3.160
80	5.216	4.701	7.248	5.267
85	9.335	8.158	12.728	9.099
90	16.021	14.054	20.852	15.319
95	24.597	20.151	29.421	21.119
100	33.021	24.483	37.169	25.450

Actuarial Valuation of
Retiree Medical and Long-Term Care Benefits
for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

TABLE A-3

Actuarial Assumptions Display for Notes to Financial Statements

Valuation Date	January 1, 2011
Actuarial Cost Method	Entry Age Normal
Amortization Method	30-year, closed as of January 1, 2007
Remaining Amortization Period	26 years
Actuarial assumptions:	
Investment Return Assumption (Discount Rate)	4.0%
Medical Trend	

Year	Medical Cost Rate
2011	7.8%
2012	7.1%
2013	6.5%
2014-2019	5.9%
2020-2030	5.8%
2031-2036	5.7%

Grading down to an ultimate of 4.7% in 2081 and beyond.

Dental Trend	5.0% until 2076, then medical inlfation thereafter
Long-Term Care Inflation Rate	4.75%

Actuarial Valuation of Retiree Medical and Long-Term Care Benefits for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

APPENDIX B

Plan Summary

All actuarial calculations are based on our understanding of RCW 41.20, the statutes establishing the SPRPF, and RCW 41.26, the statute establishing the Washington Law Enforcement Officers' and Firefighters' Retirement System.

Retiree Medical Benefits

Under RCW law, retiree medical, hospital, and nursing care as long as a disability exists are covered for any active police officer hired prior to March 1, 1970. For any retired police officer hired prior to March 1, 1970, retiree medical, hospital, and nursing care are covered at the discretion of the Retirement Board. Members retired prior to 1961 for reasons other than duty disability are not eligible for retiree medical benefits during retirement. Under LEOFF Law, the necessary hospital, retiree medical, and nursing care expenses not payable by Workers' Compensation, Social Security, etc. are covered for any active or retired LEOFF I member. The employer may pay for such benefits for police officers from its SPRPF.

We assume that the City will pay the Medicare Part B premiums for all retirees who are over age 65.

Dental Benefits

The City reimburses dental benefits up to an annual maximum of $2,000.

Eligibility

Employees are eligible to receive lifetime retiree medical benefits upon service retirement after age 50 with at least five years of service. If they are not eligible to retire when leaving LEOFF, but have 20 years of service credit, they are eligible for retiree medical benefits when pension benefits commence. Employees also receive lifetime benefits upon disability.

Retiree Premiums

No retiree contributions toward the cost of retiree medical benefits are required.

Spouse Benefits

None.

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APPENDIX C

Retiree Medical Costs

Retiree Medical Costs

To account for the fact that per member health costs vary depending on age, we calculated Per Member Per Month (PMPM) costs that vary by age based on the age distribution of covered members and based on relative age cost factors. Health costs tend to be higher at older ages, but Medicare pays much of the cost for those over age 65. The relative age cost factors were developed from Milliman's Health Cost Guidelines database.

Based on the City's historical retiree medical cost experience from 2008 through 2010 and the relative age cost factors assumptions, we developed age adjusted monthly PMPM health costs for 2011. Here is a sample of the costs developed:

	Monthly Costs	
Age	Male	Female
45	$617.96	$803.03
50	$813.25	$950.53
55	$1,079.78	$1,134.65
60	$1,408.88	$1,354.13
64	$1,771.59	$1,628.20
65	$572.05	$574.89
70	$642.87	$639.08
75	$710.57	$698.51
80	$760.21	$740.43
85	$787.46	$760.12

The above costs include a load for administrative costs.

In addition, we assume that the City pays Medicare Part B premiums for all members over age 65. For 2011, those premiums were $115.40 PMPM, based upon the standard Medicare Part B premium.

The City is not required by Washington State law to provide retiree medical coverage to spouses of retired police officers. Spouses are not studied nor are the liabilities for them included in the figures shown in this report.

Retiree medical costs listed above are for hospital and retiree medical benefits only. Costs specifically projected to be paid for nursing care (long-term care costs) are calculated separately in this report.

Retiree Dental Costs

Based on the City's historical retiree medical cost experience from 2010, and relative age cost factors assumptions, we developed age adjusted monthly PMPM health costs for 2011. Here is a sample of the costs developed:

	Monthly Costs	
Age	Male	Female
45	$40.73	$46.61
50	$45.61	$50.02
55	$49.15	$52.22
60	$51.79	$54.37
65	$53.24	$54.51
70	$53.86	$53.33
75	$53.86	$53.33
80	$53.86	$53.33
85	$53.86	$53.33

Long-Term Care Costs

In general, assumptions related to long-term care benefits were taken from internal Milliman research. Data sources include limited insurance data and published and unpublished noninsured data. These assumptions include probability of commencement of benefits, length of stay, distribution, marriage probability and inflation. These costs are based on the results of Milliman research.

Eligibility for Paid Benefits:

Medical necessity. Treatment must be prescribed by a physician. Periodical recertification of care is required.

Probability of Commencing Long-Term Care Benefits:

Age	Institutional Care	Non-institutional Care
45	0.0009	0.0029
55	0.0019	0.0056
62	0.0027	0.0095
67	0.0049	0.0135
72	0.0098	0.0206
77	0.0210	0.0374
82	0.0388	0.0572
87	0.0767	0.0777
92	0.1388	0.0926
97	0.1815	0.0967

Average Length of Stay (in months):

Age	Institutional Care	Non-institutional Care
45	22	20
55	21	16
62	17	15
67	18	12
72	20	10
77	21	11
82	21	11
87	21	10
92	19	9
97	16	9

Covered Care - Institutional: Care provided in a nursing home or wing of a hospital designed to provide nursing care services or an assisted living facility, including:

- Skilled – includes nursing and rehabilitation services that can only be performed by skilled medical personnel: must be under orders of a physician and provided on a 24-hour basis.
- Intermediate – includes continuous treatment not meeting all the requirements for skilled care.
- Custodial – includes assistance in carrying out daily living activities.

Covered Care – Non-Institutional:

- Includes all home health and adult day-care services.

Monthly Cost Per Covered Person (2010 Levels):

- Average Monthly Cost $6,783* Institutional Care
  $4,158** Non-Institutional Care

  * Blending of the following:

  $5,943 x 20% of Institutional Care assumed to be in Assisted Living Facilities
  +
  $6,993 x 80% of Institutional Care assumed to be in Nursing Facility

  The assumed average monthly cost for care was based on Milliman research. No offsets due to Medicare or other insurance plans were assumed.

  **Includes the monthly benefit times assumed days per month utilization $4,892 x 0.85 = $4,158.

Annual Increase in Long-Term Care Costs:

- 4.75% per year

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Actuarial Valuation of
Retiree Medical and Long-Term Care Benefits
for LEOFF I and Escalator Police Employees

City of Seattle
January 1, 2011

APPENDIX D

Valuation Data

TABLE D-1

Active Police Officers Eligible for Retiree Medical and Long-Term Care Benefits

Age	Number
55 - 59	9
60 - 64	21
65 - 69	7
70 - 74	2
Totals	39

TABLE D-2

Retired Police Officers Eligible for Retiree Medical and Long-Term Care Benefits

Age	Number
50 - 54	1
55 - 59	33
60 - 64	153
65 - 69	232
70 - 74	158
75 - 79	101
80 - 84	85
85 - 89	34
90 - 94	7
95 - 99	5
Totals	809