CITY OF PORTLAND FIRE & POLICE DISABILITY & RETIREMENT (FPDR) FUND

Pension Actuarial Valuation Report under GASB 25 & 27 as of June 30, 2012

Prepared by:

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December 20, 2012

Ms. Nancy Hartline
FPDR Financial Manager
Bureau of Fire & Police Disability & Retirement

Dear Nancy,

As part of our engagement with the Bureau of Fire & Police Disability & Retirement and the City of Portland, we performed an actuarial valuation of the Fire & Police Disability & Retirement Fund ("FPDR" or "the System") sponsored by the City as of June 30, 2012. Our findings are set forth in this actuarial valuation report. This report reflects the benefit provisions in effect as of June 30, 2012, as modified by ballot measure #26-145 passed in November 2012.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by City Charter, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

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

This valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions or cost recognition. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System 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 System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report under GASB Statements No. 25 and 27 are for purposes of assisting FPDR and the City of Portland in fulfilling their financial reporting requirements. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions as summarized in this report, and of GASB Statements No. 25 and 27. 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.

Milliman's work is prepared solely for the use and benefit of FPDR and the City of Portland.

Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. No third party recipient of Milliman's work product should rely upon this report. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

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.

Sincerely,

Matthew R. Larrabee, FSA, EA, MAAA
Consulting Actuary

Scott D. Preppernau, FSA, EA, MAAA
Consulting Actuary

The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.

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Section I – Summary of the Findings

Summary of the Findings

Milliman has prepared this report for the City of Portland and its Fire & Police Disability & Retirement Fund ("FPDR" or "the Plan") to:

- Estimate the Plan's actuarial liabilities as of June 30, 2012 for FPDR and the City of Portland to incorporate, as they deem appropriate, in their financial statements, and
- Provide the Annual Required Contribution (ARC) for the plan and fiscal years ending June 30, 2013 and June 30, 2014 under GASB Statements Nos. 25 & 27.

Summary of Principal Results

The following table summarizes the primary results of the valuation which are discussed further below.

	July 1, 2010	June 30, 2012
Discount Rate	4.00%	3.50%
Actuarial Cost Method	Attained Age Normal	Entry Age Normal
Actuarial Accrued Liability (AAL)	2,549,479,088	2,899,238,902
Assets	750,000	20,287,803
Unfunded Actuarial Accrued Liability (UAAL)	2,548,729,088	2,878,951,099
Projected Base Bay for Next Year	125,885,272	137,536,257
Normal Cost	57,164,502	82,791,813
UAAL Amortization	141,724,284	188,705,756
Annual Required Contribution (ARC)	**198,888,786**	**271,497,569**

FPDR is essentially funded on a pay-as-you-go basis via a property tax levy, but still FPDR must report an annual financial reporting expense for the plan in accordance with the requirements of GASB 25 and 27 like other governmental entities that sponsor defined benefit pension programs. The Annual Required Contribution, or ARC, is the key expense calculation. The ARC has two components, normal cost and UAAL (i.e., shortfall) amortization.

The normal cost is the economic value of projected benefits for current active members allocated to the upcoming year based on the actuarial cost allocation method used in the valuation. The cost allocation method was changed for this valuation to the entry age normal method, which is the required method under new GASB standards that were approved this year and will be effective for subsequent valuations. The effects of this change on normal cost and shortfall are detailed later in the report.

The shortfall amortization calculation is required by the current GASB standard. It provides guidance to sponsors that are pre-funding their plans to the contribution that would be needed to eliminate shortfalls allocated to service already completed by members over a specified amortization period if all assumptions were met in the future. Looking at the table above, a contribution of approximately $188.7 million for the current year, with shortfall contributions increasing with payroll growth in later years, would be needed to amortize the shortfall over 15 years if the contributions were invested in assets earning 3.50% annually.

This valuation is intended to provide the information necessary to assist the City and FPDR in completing disclosures for the fiscal years ending June 30, 2013 and June 30, 2014. GASB 25 and GASB 27 permit the use of a valuation date that is up to 24 months prior to the beginning of the first fiscal year for which the valuation provides the ARC. Actuarial valuations are conducted each even-numbered year, and results from that valuation are used to develop the ARC for the fiscal year which immediately follows the valuation date and the fiscal year subsequent to that. Following this procedure and generally accepted financial reporting practices for governmental entities, this report is intended to provide the ARC for the fiscal years ending in 2013 and 2014.

In this valuation, there are two categories of plan assets considered in developing the ARC for FPDR: a $750,000 Reserve Fund established by the governing City Charter, and the FPDR Fund, which held $19,537,803 in trust for pension benefits as of June 30, 2012. Assets are reported by FPDR and are measured on a fair market value basis. We understand these funds are invested in short-term fixed income securities, in a similar manner to the general assets of the City of Portland. The FPDR Fund is included as an asset in this valuation based upon consultation with FPDR, the City of Portland, and the City’s external auditor.

The City of Portland also provides an “indirect subsidy” retiree healthcare benefit for FPDR members via providing access to the medical plans offered to active FPDR members. We understand the indirect (or implicit) subsidy for these benefits is valued in a separate actuarial valuation conducted by Aon Hewitt.

In addition to the indirect subsidy noted above, FPDR also provides a direct subsidy benefit that reimburses medical expenses associated with service-connected injuries and illness. In the past, an additional valuation for the post-retirement portion of this direct subsidy benefit has been performed to estimate the present value of those projected future benefits. The prior valuations have indicated that the associated present values are a small fraction (less than 1%) of the pension liabilities. In consultation with FPDR and the City’s external auditor, it was decided that beginning with the June 30, 2012 valuation this liability could be estimated by applying a fixed percentage load to the pension liabilities. For this valuation, the percentage load was 0.5%. This percentage is consistent with observed experience since the prior valuation, where direct subsidy post-retirement benefits were between 0.4% and 0.5% of pension payments.

Assumptions and Methods

Most demographic and economic assumptions were reviewed and updated for the July 2008 valuation, while the discount rate assumption was updated in the July 2010 valuation, as well. For a plan the size of FPDR, a typical interval for reviewing these assumptions is every four to six years. More frequent reviews may not yield statistically credible new data. As such, only two assumptions were reviewed this valuation: the discount rate and member mortality.

The discount rate is to be selected as the estimated long-term investment return on the investments that are expected to be used to finance the payment of benefits. For unfunded plans, the discount rate is determined with reference to the employer's general assets. Since unrestricted general assets are invested in short-term fixed income securities, the City and FPDR have adopted an assumption of 3.50 percent for this valuation. This is a decrease of 50 basis points from the prior valuation, and reflects lowered market expectations for long-term returns. The discount rate change increased Actuarial Accrued Liability (AAL) by $225 million.

The mortality assumptions used for all members and beneficiaries were also updated in the June 30, 2012 valuation. When the previous mortality assumption was selected in 2008, it was set to be the same assumption as was then used by the Oregon Public Employees Retirement System (PERS) for police and fire members. The PERS assumption is used because the much larger size of the PERS system generates more statistically credible mortality experience for Oregon safety personnel than would result from examining FPDR experience in isolation. Since the FPDR assumption was adopted in 2008, PERS has updated their mortality assumptions for police and fire members, most recently in a 2010 experience study.

In this valuation, we have updated the assumed mortality for FPDR to correspond to the current PERS assumptions. The new assumptions include the use of "generational" mortality projections for healthy members, which make an explicit allowance for anticipated future mortality improvement. Changing this assumption increased AAL by $112 million in the current valuation.

The actuarial cost method was also changed since the last valuation, from the Attained Age Normal (AAN) method to the Entry Age Normal (EAN) method. Additional detail on this method is provided in Appendix B of this report. The new cost method lowered AAL by $144 million as of the valuation date, while increasing the Normal Cost by $22 million.

The Unfunded Actuarial Accrued Liability (UAAL) developed by the EAN method is amortized over a period of 15 years as a level percentage of pay for purposes of developing the Annual Required Contribution (ARC). This amortization method is also a change from the method used in the previous valuation, and is described more fully in Appendix B. The effect of this change, which shortened the amortization period, was to increase the calculated UAAL amortization and the ARC by approximately $37 million.

All actuarial assumptions, methods, and plan provisions valued are summarized in the appendixes of this report.

Annual Required Contribution

The basic annual financial reporting expense for the Plan recognized under GASB 25 & 27 is called the Annual Required Contribution (ARC), even though there is no requirement to fund this amount. The ARC depends on the actuarial cost method selected and typically consists of the normal cost plus amortization of the Unfunded Actuarial Accrued Liability (UAAL).

The difference between the ARC and the amounts contributed (in the case of FPDR, pay-as-you-go benefit payments) is accumulated as the Net Pension Obligation (NPO). The Annual Pension Cost (APC) reported as an expense in the employer's financial statements is equal to the ARC plus an adjustment related to any outstanding NPO. This valuation calculates the ARC to be used in financial reporting for the fiscal years ending in 2013 and 2014. The prior valuation, conducted as of a July 1, 2010 valuation date, was used for the financial reporting in the fiscal years ending in 2011 and 2012.

Section II – Valuation Results

Valuation Results

Calculation of Annual Required Contribution (ARC)

	Benefit Obligations and Amortization Payment	July 1, 2010	June 30, 2012
	Actuarial Cost Method	Attained Age Normal	Entry Age Normal
1	Discount Rate	4.00%	3.50%
2	Total Present Value of Benefits (includes future accruals)	3,259,416,260	3,864,944,401
3	Actuarial Accrued Liability		
	a. Retirees	1,275,156,131	1,529,557,229
	b. Pre-retirement disableds	113,058,292	81,710,702
	c. Surviving spouses and alternate payees	130,675,902	144,729,140
	d. Inactive participants with deferred benefits	20,465,862	26,807,518
	e. Active employees	1,010,122,901	1,116,434,313
	f. **Total**	**2,549,479,088**	**2,899,238,902**
4	Present value of future normal costs *(2.-3.f.)*	709,937,172	965,705,499
5	Present value of future base pay	1,563,498,886	N/A
6	Normal cost as a percentage of base pay	45.41%	N/A
7	Projected next year's base pay	125,885,272	137,536,257
8	Normal cost	57,164,502	82,791,813
9	Assets	750,000	20,287,803
10	Unfunded Actuarial Accrued Liability (UAAL) *(3.f. -9.)*	2,548,729,088	2,878,951,099
11	Amortization Factor	17.9837146	15.2562972
12	UAAL Amortization *(10. ÷ 11.)*	141,724,284	188,705,756

	Calculation of ARC		
1	UAAL Amortization	141,724,284	188,705,756
2	Normal Cost	57,164,502	82,791,813
3	Annual Required Contribution *(1. + 2.)*	198,888,786	271,497,569
4	Projected next year's base pay	125,885,272	137,536,257
5	ARC as a percent of base pay *(3. ÷ 4.)*	157.99%	197.40%

The actuarial cost method changed with this valuation. The normal cost calculation methodology for the prior valuation is shown above. This year's valuation uses a different methodology; the results of that methodology are shown on page 6, and a discussion of the methodology is included in Appendix B.

Projected Benefit Payments

The table below shows the projected benefit payments assuming no new entrants and all valuation assumptions realized. The payment projections shown include the effect of assumed future service and salary increases for current actives, as well as the assumed load for direct subsidy OPEB benefits. The amounts shown do not include any projected benefit payments to members from the Oregon Public Employees Retirement System (OPERS) in which FPDR Three members also participate. The amounts shown also do not include any employer contributions to OPERS for service by FPDR Three members.

Fiscal Year	Projected Benefit Payments
2012-2013	$105,396,000
2013-2014	108,941,000
2014-2015	112,452,000
2015-2016	116,344,000
2016-2017	120,180,000
2017-2018	124,147,000
2018-2019	128,458,000
2019-2020	133,165,000
2020-2021	137,710,000
2021-2022	142,508,000
2022-2023	146,970,000
2023-2024	151,844,000
2024-2025	157,868,000
2025-2026	164,039,000
2026-2027	170,357,000
2027-2028	176,565,000
2028-2029	182,616,000
2029-2030	187,986,000
2030-2031	193,421,000
2031-2032	198,625,000
2032-2033	203,006,000
2033-2034	206,121,000
2034-2035	208,201,000
2035-2036	209,189,000
2036-2037	209,236,000
2037-2038	208,498,000
2038-2039	206,904,000
2039-2040	204,856,000
2040-2041	202,250,000
2041-2042	199,245,000

Actuarial Liabilities by Tier

	June 30, 2012						
	FPDR One Police	FPDR One Fire	FPDR Two Police	FPDR Two Fire	FPDR Three Police	FPDR Three Fire	Total
Total Present Value of Benefits							
Active	-	-	1,152,094,071	915,554,020	6,742,542	7,749,179	**2,082,139,812**
Inactive	134,256,831	125,818,894	896,117,335	626,611,529	-	-	**1,782,804,589**
Total	134,256,831	125,818,894	2,048,211,406	1,542,165,549	6,742,542	7,749,179	**3,864,944,401**
Actuarial Accrued Liability							
Active	-	-	658,059,608	457,673,423	348,439	352,843	**1,116,434,313**
Inactive	134,256,831	125,818,894	896,117,335	626,611,529	-	-	**1,782,804,589**
Total	134,256,831	125,818,894	1,554,176,943	1,084,284,952	348,439	352,843	**2,899,238,902**
Normal Cost	-	-	46,796,105	35,426,999	289,653	279,056	**82,791,813**
Projected next year's base pay	-	-	64,196,843	47,049,110	13,397,605	12,892,699	**137,536,257**
Normal Cost as % of base pay	N/A	N/A	72.9%	75.3%	2.2%	2.2%	**60.2%**

Analysis of Gains and Losses

The table below shows Actuarial Accrued Liability (AAL) as of the previous valuation date of July 1, 2010, the expected AAL at the current valuation date if all assumptions were met, and the actual AAL calculated in this valuation before any changes were made to methods or assumptions. As detailed in the table, actual experience since the last valuation led to a $27 million loss, or increase in liability, compared to the expected liability. The main reason for this loss was due to our estimates of projected final salary at retirement for continuing active members. Compared to the previous valuation, in aggregate this valuation had higher projected final salary estimates, leading to higher projected retirement benefits and an increase in liability. This loss was partially offset by actual COLAs for FPDR One retirees during the prior two years being at levels below the long-term annual assumption of 3.75%.

Actuarial Accrued Liability Gain/(Loss) Analysis	
	Actuarial Accrued Liability
July 1, 2010 AAL	2,549,479,088
Expected June 30, 2012 AAL before changes	2,677,952,135
Actual June 30, 2012 AAL before changes	2,705,059,535
Gain/(Loss)	(27,107,400)
Gain/(Loss) as % of expected AAL	-1.0%
Sources of Gain/(Loss)	
Salary experience	(27,400,298)
FPDR One COLA experience	4,930,023
New actives	(1,447,172)
Total	(23,917,447)
Remaining Gain/(Loss)	(3,189,953)
Remaining Gain/(Loss) as % of expected AAL	-0.1%

Effect of Assumption and Method Changes

The table below shows the changes in plan AAL and Normal Cost that occurred as a result of changing the discount rate, actuarial cost method, and mortality assumption at the current valuation date.

Effect of Assumption and Method Changes		
	Actuarial Accrued Liability (AAL)	Normal Cost
July 1, 2010 Valuation	2,549,479,088	57,164,502
June 30, 2012 before changes	2,705,059,535	51,330,445
Assumption/method changes		
Discount rate assumption	225,949,452	5,490,211
Cost method	(144,084,717)	21,735,218
Mortality assumption	112,314,632	4,235,939
Total change	194,179,367	31,461,368
June 30, 2012 Final Valuation Results	2,899,238,902	82,791,813

In addition to the changes shown above, the UAAL amortization method was changed from the prior valuation, as described in Appendix B. The effect of this change was to increase the calculated UAAL amortization and the ARC by approximately $37 million.

Section III – Plan Assets

Plan Assets

The FPDR Board of Trustees administers both the FPDR Fund and a Reserve Fund.

The FPDR Fund is invested primarily in cash and short-term investments, while a small portion is invested in capital assets. We understand that only the portion of the fund not invested in capital assets is considered to be held in trust for pension benefits. As of June 30, 2012, the Fund had a total of $19,692,102 in net assets, of which $19,537,803 were considered held in trust for pension benefits.

The Reserve Fund is authorized under provisions of Chapter 5 (Section 5-104) of the City of Portland's Charter; and its purpose is to provide a reserve from which advances can be made to the FPDR Fund in the event the Fund is depleted to the extent that it cannot meet its current obligations. Under provisions of the City Charter, the Reserve Fund maximum is established at $750,000 and is fully funded as of July 1, 2012.

Based on input from FPDR, the City of Portland and its external auditor, we understand both the portion of the FPDR Fund held in trust for pension benefits and the Reserve Fund are considered to meet the requirements of GASB 25 and are used for plan actuarial valuation purposes in developing the ARC. This is a change from the previous actuarial valuation, prepared by Mercer, when only the Reserve Fund was considered a Plan asset when calculating the UAAL amortization component of the ARC.

The amounts shown below are provided to us by FPDR and the City of Portland and are reported on a fair market value basis.

	Asset Summary		
Valuation Date	FPDR Fund - Held in Trust for Pension	Reserve Fund	Total Pension Assets
June 30, 2012	$19,537,803	$750,000	$20,287,803

Appendix A

Participant Data

Statistics for FPDR Participants as of June 30, 2012

	FPDR One		FPDR Two		FPDR Three		Total		Grand
	Police	Fire	Police	Fire	Police	Fire	Police	Fire	Total
Actives									
Headcount	0	0	750	504	188	173	938	677	1,615
Average Age	N/A	N/A	43.4	42.7	32.3	32.6	41.2	40.1	40.8
Average Service	N/A	N/A	15.3	15.1	3.2	3.2	12.9	12.0	12.5
Average Salary[1]	N/A	N/A	85,596	94,321	71,264	74,524	82,723	89,262	85,464
Current Retiree & Beneficiaries[2]									
Headcount	312	328	685	468	0	0	997	796	1,793
Average Age	80.7	83.0	63.1	63.6	N/A	N/A	68.6	71.6	69.9
Average Monthly Benefit	3,087	3,179	5,076	5,614	N/A	N/A	4,453	4,611	4,523
Current Disabled Participants									
Headcount	11	10	29	5	0	0	40	15	55
Average Age	60.5	59.7	49.0	50.4	N/A	N/A	52.2	56.6	53.4
Average Monthly Benefit	3,830	4,003	4,133	3,481	N/A	N/A	4,050	3,829	3,990
Inactive Deferred Participants									
Headcount	0	0	59	6	0	0	59	6	65
Average Age	N/A	N/A	43.7	42.0	N/A	N/A	43.7	42.0	43.5
Average Monthly Benefit	N/A	N/A	1,455	2,859	N/A	N/A	1,455	2,859	1,585

1.) Average Salary is projected 2012-2013 basic annualized earnings.

2.) Headcount does not include 82 Alternate Payees receiving benefits via a Domestic Relations Order (DRO). The average monthly benefit for that group is $1,407.

Distribution of FPDR Two Active Participants as of June 30, 2012

FPDR Two Police

	Years of Service								
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35+**	**Total**
0-20	0	0	0	0	0	0	0	0	**0**
20-24	0	0	0	0	0	0	0	0	**0**
25-29	0	5	0	0	0	0	0	0	**5**
30-34	1	51	20	0	0	0	0	0	**72**
35-39	0	38	94	12	0	0	0	0	**144**
40-44	0	26	89	97	9	0	0	0	**221**
45-49	0	9	34	56	54	3	0	0	**156**
50-54	0	5	9	26	49	15	1	0	**105**
55-59	0	2	2	5	16	11	0	0	**36**
60-64	0	1	1	2	4	1	2	0	**11**
65-69	0	0	0	0	0	0	0	0	**0**
70-74	0	0	0	0	0	0	0	0	**0**
75+	0	0	0	0	0	0	0	0	**0**
Total	**1**	**137**	**249**	**198**	**132**	**30**	**3**	**-**	**750**

FPDR Two Fire

	Years of Service								
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35+**	**Total**
0-20	0	0	0	0	0	0	0	0	**0**
20-24	0	0	0	0	0	0	0	0	**0**
25-29	0	8	0	0	0	0	0	0	**8**
30-34	0	49	20	0	0	0	0	0	**69**
35-39	0	60	68	9	0	0	0	0	**137**
40-44	0	24	46	24	3	0	0	0	**97**
45-49	0	6	20	18	26	6	0	0	**76**
50-54	0	0	5	9	25	18	10	0	**67**
55-59	0	0	2	2	9	10	22	0	**45**
60-64	0	0	0	0	1	1	1	0	**3**
65-69	0	0	0	0	0	0	1	0	**1**
70-74	0	0	0	0	0	0	1	0	**1**
75+	0	0	0	0	0	0	0	0	**0**
Total	**-**	**147**	**161**	**62**	**64**	**35**	**35**	**-**	**504**

FPDR Two Total

	Years of Service								
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35+**	**Total**
0-20	0	0	0	0	0	0	0	0	**0**
20-24	0	0	0	0	0	0	0	0	**0**
25-29	0	13	0	0	0	0	0	0	**13**
30-34	1	100	40	0	0	0	0	0	**141**
35-39	0	98	162	21	0	0	0	0	**281**
40-44	0	50	135	121	12	0	0	0	**318**
45-49	0	15	54	74	80	9	0	0	**232**
50-54	0	5	14	35	74	33	11	0	**172**
55-59	0	2	4	7	25	21	22	0	**81**
60-64	0	1	1	2	5	2	3	0	**14**
65-69	0	0	0	0	0	0	1	0	**1**
70-74	0	0	0	0	0	0	1	0	**1**
75+	0	0	0	0	0	0	0	0	**0**
Total	**1**	**284**	**410**	**260**	**196**	**65**	**38**	**-**	**1,254**

Distribution of FPDR Three Active Participants as of June 30, 2012

FPDR Three Police

				Years of Service					
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35+**	**Total**
0-20	0	0	0	0	0	0	0	0	**0**
20-24	9	0	0	0	0	0	0	0	**9**
25-29	59	7	0	0	0	0	0	0	**66**
30-34	43	14	0	0	0	0	0	0	**57**
35-39	26	4	0	0	0	0	0	0	**30**
40-44	16	2	0	0	0	0	0	0	**18**
45-49	5	1	0	0	0	0	0	0	**6**
50-54	0	0	0	0	0	0	0	0	**0**
55-59	2	0	0	0	0	0	0	0	**2**
60-64	0	0	0	0	0	0	0	0	**0**
65-69	0	0	0	0	0	0	0	0	**0**
70-74	0	0	0	0	0	0	0	0	**0**
75+	0	0	0	0	0	0	0	0	**0**
Total	**160**	**28**	**-**	**-**	**-**	**-**	**-**	**-**	**188**

FPDR Three Fire

				Years of Service					
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35+**	**Total**
0-20	0	0	0	0	0	0	0	0	**0**
20-24	6	0	0	0	0	0	0	0	**6**
25-29	37	3	0	0	0	0	0	0	**40**
30-34	60	11	0	0	0	0	0	0	**71**
35-39	33	5	0	0	0	0	0	0	**38**
40-44	14	1	0	0	0	0	0	0	**15**
45-49	3	0	0	0	0	0	0	0	**3**
50-54	0	0	0	0	0	0	0	0	**0**
55-59	0	0	0	0	0	0	0	0	**0**
60-64	0	0	0	0	0	0	0	0	**0**
65-69	0	0	0	0	0	0	0	0	**0**
70-74	0	0	0	0	0	0	0	0	**0**
75+	0	0	0	0	0	0	0	0	**0**
Total	**153**	**20**	**-**	**-**	**-**	**-**	**-**	**-**	**173**

FPDR Three Total

				Years of Service					
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35+**	**Total**
0-20	0	0	0	0	0	0	0	0	**0**
20-24	15	0	0	0	0	0	0	0	**15**
25-29	96	10	0	0	0	0	0	0	**106**
30-34	103	25	0	0	0	0	0	0	**128**
35-39	59	9	0	0	0	0	0	0	**68**
40-44	30	3	0	0	0	0	0	0	**33**
45-49	8	1	0	0	0	0	0	0	**9**
50-54	0	0	0	0	0	0	0	0	**0**
55-59	2	0	0	0	0	0	0	0	**2**
60-64	0	0	0	0	0	0	0	0	**0**
65-69	0	0	0	0	0	0	0	0	**0**
70-74	0	0	0	0	0	0	0	0	**0**
75+	0	0	0	0	0	0	0	0	**0**
Total	**313**	**48**	**-**	**-**	**-**	**-**	**-**	**-**	**361**

Distribution of All Active Participants as of June 30, 2012

Police Total

	Years of Service								
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35+**	**Total**
0-20	0	0	0	0	0	0	0	0	**0**
20-24	9	0	0	0	0	0	0	0	**9**
25-29	59	12	0	0	0	0	0	0	**71**
30-34	44	65	20	0	0	0	0	0	**129**
35-39	26	42	94	12	0	0	0	0	**174**
40-44	16	28	89	97	9	0	0	0	**239**
45-49	5	10	34	56	54	3	0	0	**162**
50-54	0	5	9	26	49	15	1	0	**105**
55-59	2	2	2	5	16	11	0	0	**38**
60-64	0	1	1	2	4	1	2	0	**11**
65-69	0	0	0	0	0	0	0	0	**0**
70-74	0	0	0	0	0	0	0	0	**0**
75+	0	0	0	0	0	0	0	0	**0**
Total	**161**	**165**	**249**	**198**	**132**	**30**	**3**	**-**	**938**

Fire Total

	Years of Service								
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35+**	**Total**
0-20	0	0	0	0	0	0	0	0	**0**
20-24	6	0	0	0	0	0	0	0	**6**
25-29	37	11	0	0	0	0	0	0	**48**
30-34	60	60	20	0	0	0	0	0	**140**
35-39	33	65	68	9	0	0	0	0	**175**
40-44	14	25	46	24	3	0	0	0	**112**
45-49	3	6	20	18	26	6	0	0	**79**
50-54	0	0	5	9	25	18	10	0	**67**
55-59	0	0	2	2	9	10	22	0	**45**
60-64	0	0	0	0	1	1	1	0	**3**
65-69	0	0	0	0	0	0	1	0	**1**
70-74	0	0	0	0	0	0	1	0	**1**
75+	0	0	0	0	0	0	0	0	**0**
Total	**153**	**167**	**161**	**62**	**64**	**35**	**35**	**-**	**677**

Grand Total

	Years of Service								
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30-34**	**35+**	**Total**
0-20	0	0	0	0	0	0	0	0	**0**
20-24	15	0	0	0	0	0	0	0	**15**
25-29	96	23	0	0	0	0	0	0	**119**
30-34	104	125	40	0	0	0	0	0	**269**
35-39	59	107	162	21	0	0	0	0	**349**
40-44	30	53	135	121	12	0	0	0	**351**
45-49	8	16	54	74	80	9	0	0	**241**
50-54	0	5	14	35	74	33	11	0	**172**
55-59	2	2	4	7	25	21	22	0	**83**
60-64	0	1	1	2	5	2	3	0	**14**
65-69	0	0	0	0	0	0	1	0	**1**
70-74	0	0	0	0	0	0	1	0	**1**
75+	0	0	0	0	0	0	0	0	**0**
Total	**314**	**332**	**410**	**260**	**196**	**65**	**38**	**-**	**1,615**

Distribution of Current Retirees and Beneficiaries as of June 30, 2012*

	FPDR One				FPDR Two			
	Police		Fire		Police		Fire	
Age	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit
<40	0	-	0	-	7	17,466	0	-
40-44	1	1,604	0	-	2	8,623	0	-
45-49	0	-	0	-	0	-	2	9,847
50-54	1	1,608	1	1,320	42	254,084	23	151,120
55-59	2	4,173	2	3,784	141	788,594	135	835,838
60-64	10	23,648	2	5,747	205	1,011,520	123	683,461
65-69	30	99,530	17	53,360	173	845,783	80	429,013
70-74	34	88,413	19	60,049	86	403,812	68	331,967
75-79	38	108,192	46	143,803	18	91,779	29	146,073
80-84	73	240,886	76	245,900	9	43,907	8	40,260
85-89	84	274,624	112	371,315	2	11,321	0	-
90-94	31	97,562	41	124,157	0	-	0	-
95+	8	22,867	12	33,117	0	-	0	-
Total	**312**	**963,107**	**328**	**1,042,551**	**685**	**3,476,887**	**468**	**2,627,578**

*Headcount does not include 82 Alternate Payees receiving benefits via a Domestic Relations Order (DRO). Total monthly benefits for that group was $115,346.

Distribution of Disabled Participants as of June 30, 2012

	FPDR One				FPDR Two			
	Police		Fire		Police		Fire	
Age	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit
<40	0	-	0	-	1	2,440	1	1,523
40-44	0	-	0	-	7	24,582	0	-
45-49	0	-	0	-	9	36,200	0	-
50-54	0	-	2	8,006	4	15,731	2	5,293
55-59	3	12,193	2	8,006	7	35,064	1	3,777
60-64	8	29,939	6	24,019	1	5,842	1	6,812
65-69	0	-	0	-	0	-	0	-
70-74	0	-	0	-	0	-	0	-
75-79	0	-	0	-	0	-	0	-
80-84	0	-	0	-	0	-	0	-
85-89	0	-	0	-	0	-	0	-
90-94	0	-	0	-	0	-	0	-
95+	0	-	0	-	0	-	0	-
Total	**11**	**42,132**	**10**	**40,032**	**29**	**119,859**	**5**	**17,405**

Distribution of Inactive Deferred Participants as of June 30, 2012

	FPDR One				FPDR Two			
	Police		Fire		Police		Fire	
Age	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit
<40	0	-	0	-	13	16,418	2	2,046
40-44	0	-	0	-	22	27,356	1	768
45-49	0	-	0	-	18	31,710	2	8,504
50-54	0	-	0	-	6	10,353	1	5,839
55-59	0	-	0	-	0	-	0	-
60-64	0	-	0	-	0	-	0	-
65-69	0	-	0	-	0	-	0	-
70-74	0	-	0	-	0	-	0	-
75-79	0	-	0	-	0	-	0	-
80-84	0	-	0	-	0	-	0	-
85-89	0	-	0	-	0	-	0	-
90-94	0	-	0	-	0	-	0	-
95+	0	-	0	-	0	-	0	-
Total	**0**	**-**	**-**	**-**	**59**	**85,836**	**6**	**17,157**

Appendix B

Actuarial Cost Method and Policies

Actuarial Cost Method and Policies

Actuarial cost method: Liabilities shown in this report are computed using the Individual Entry Age Normal cost method allocated as a level percent of pay from the date of entry to decrement age. Under this method, the total Actuarial Present Value of Benefits allocated over the service for each active member from their date of entry into the Plan until their assumed date of exit from the Plan, as a level percent of pay. This level amount is referred to as the Normal Cost, and is calculated for each active member. It is calculated by dividing the total Actuarial Present Value of Projected Benefits at entry age by the Actuarial Present Value of Projected Service at entry age. The Normal Cost equals $0 for non-active members. The sum of the individual Normal Costs is the Normal Cost for the Plan. The previous valuation used the Attained Age Normal cost method.

Actuarial Value of Assets: Assets are provided by FPDR and the City of Portland and are reported on a fair market value basis. The considered assets have two components: the portion of the FPDR Fund that is not invested in capital assets and the Reserve Fund.

Unfunded Actuarial Accrued Liability amortization method: UAAL is amortized as a level percent of payroll over a closed period of 15 years for purposes of developing the ARC. The previous valuation amortized UAAL as a level dollar amount over a period of 30 years.

Census data: To prepare this report Milliman has used and relied on participant data supplied by FPDR and summarized in the valuation report in Appendix A. FPDR is responsible for ensuring that such participant data provides an accurate description of all persons who are participants under the terms of the plan or otherwise entitled to benefits as of July 1, 2012, that is sufficiently comprehensive and accurate for the purposes of this report. Although we have reviewed the data in accordance with Actuarial Standards of Practice No. 23, we have not verified or audited any of the data or information provided. Assumptions and estimates were made for incomplete or missing data in consultation with FPDR.

Funding policy: The plan's benefits are currently funded on a pay-as-you-go basis. FPDR funds on a cash basis as benefits are paid. The only assets that have been segregated and restricted to provide plan benefits are the amounts noted in the assets section of this report.

The valuation is based on the premise that the plan is ongoing.

Appendix C

Actuarial Assumptions

Actuarial Assumptions

The following assumptions were used in valuing the liabilities and benefits under the plan. Note that for any given individual Member, the anticipated pay increase in a given year is the combined effect of inflation, real wage growth and salary merit increase.

Discount Rate

3.50% per annum

Inflation

2.75% per annum

Real Wage Growth

1.00% per annum

Payroll Growth

3.75% per annum (combination of above two factors)

Salary Merit Increase

Years of Service	Police	Fire
0	10.25%	10.25%
1	10.25%	10.25%
2	10.25%	10.25%
3	4.25%	8.25%
4	4.25%	8.25%
5	4.25%	6.25%
6	1.25%	3.75%
7 + Over	0.00%	0.50%

Mortality, Healthy Lives

Mortality rates for healthy lives are based on the rates for Police & Fire members in the December 31, 2011 valuation of Oregon PERS. For active members, 50% of deaths are assumed to be service related, and 50% are assumed to be non-service related.

Male Retiree	RP-2000 Male, Generational per Scale AA, Combined Active/Healthy Retired, Blended 33% Blue Collar
Female Retiree	RP-2000 Female, Generational per Scale AA, Combined Active/Healthy Retired, White Collar
Male Beneficiary	RP-2000 Male, Generational per Scale AA, Combined Active/Healthy Retired, Blended 25% Blue Collar, set back 12 months
Female Beneficiary	RP-2000 Female, Generational per Scale AA, Combined Active/Healthy Retired, White Collar
Male Active	70% of rates for Male Retiree
Female Active	50% of rates for Female Retiree

Disabled Mortality

Disabled Male Retiree	RP-2000 Male, Static, Combined Active/Healthy Retired, No Collar, set forward 60 months
Disabled Female Retire	RP-2000 Female, Static, Combined Active/Healthy Retired, No Collar, set forward 48 months

Withdrawal

Rates of withdrawal from causes other than death, disability, and retirement are shown in the following select and ultimate table:

	Service		
Attained Age	**0 Years**	**1 Year**	**2+ Years**
Any	25.00%	25.00%	0.75%

Disability incidence

90 percent of disabilities are assumed to be service related, while the other 10 percent are assumed to be non-service related. Rates are shown below:

Age	Rate Per Year
Under 40	0.25%
40-49	0.60%
50+	0.90%

Retirement

Active members are assumed to retire at the rates shown below. Vested terminated members are assumed to retire at the earliest age they would have been eligible to retire had they remained in active employment. i.e. the earlier of a) age 55 or b) age 50 with 25 years of service from date of hire.

Age	Fire	Police
50	25%	60%
51	20	40
52	20	40
53	20	40
54	20	40
55	25	40
56	25	40
57	25	40
58	33	40
59	50	40
60	100	40
61	100	40
62	100	60
63	100	60
64	100	60
65+	100	100

Percentage Married

Males: 88%

Females: 88%

When available, actual marital status is used for retirees.

Age Difference of Spouses

Females are assumed to be 4 years younger than males. When available, actual spouse ages are used for retirees.

Form of Payment for Future Retirees from Active Status

Benefit Formula Elected	Percent Electing
2.8%	80%
2.6%	20%

Form of Payment for Future Retirees from Vested Terminated Status

Benefit Formula Elected	Percent Electing
2.8%	100%

Form of Payment for Future Retirees from Disability Status

FPDR One: Marital status at Disability Retirement Age is assumed to be the same as currently reported. Married participants are valued including a survivor benefit percentage as specified in City Charter based on the age difference between a Member and spouse.

FPDR Two: Currently disabled members reported as non-married are assumed to elect the 2.8% benefit formula. Those reported as married are assumed to have an 80% likelihood of selecting the 2.8% benefit formula and a 20% likelihood of selecting the 2.6% benefit formula.

Cost of living increase for retiree benefits

FPDR One: 3.75% per annum, representing the assumed annual increase in pay for a First Class Officer or Firefighter

FPDR Two: 2.00% per annum

Employment of Disabled Members

Disabled members are assumed not to return to active service. One-third of those disabled are assumed to become gainfully employed with earnings equal to 9% of their base pay prior to disability.

Disability Retirement Age

FPDR One: Age 64
FPDR Two: Age 55
FPDR Three: Age 60

FPDR One and Two members current receiving disability benefits prior to their Disability Retirement Age are assumed to be credited with 30 years of service for the calculation of their benefit at Disability Retirement Age.

Offset for OPSRP Benefits

Benefits payable to FPDR Three members upon disability or pre-retirement death are offset by benefits paid from the OPSRP program. For valuation purposes, we have assumed OPSRP benefits offset FPDR benefits as follows:

FPDR Three Disability Benefits: OPSRP benefits are assumed to replace 45% of final salary, and are assumed to increase at 2% per year. After age 60, the OPSRP benefit is assumed to exceed the benefit provided by the FPDR program.

FPDR Three Death Benefits: OPSRP benefits are assumed to begin at age 50. At that time, they are assumed to be equal to 50% of the benefit calculated using a 1.8% multiplier, times Years of Service, times Final Salary, times an OPSRP early retirement reduction factor of 0.35. OPSRP benefits are assumed to increase at 2% per year.

Liability Load for Direct Subsidy Post-Retirement Medical Reimbursements

To estimate the value to medical reimbursement payments, projected pension payments are increased by 0.5%. In previous valuations, this liability was estimated using a separate valuation report.

Changes Since Prior Valuation

The discount rate was updated from 4.00% to 3.50%.

Healthy and disabled mortality assumptions were updated for all groups.

OPSRP offset benefits were refined to more closely estimate benefits expected to be paid from that program.

The value of post-retirement medical reimbursement payments was incorporated into this valuation via the use of a 0.5% benefit load assumption.

Appendix D

Plan Provisions

Plan Provisions

Disability and Retirement Fund

Plan Eligibility

Prior to January 1, 2013, a sworn employee of the Bureau of Fire or Bureau of Police became a Member of the Fund at the time of permanent appointment. Effective January 1, 2013, a new sworn employee will become a Member of the Fund after completing six months of service.

FPDR One: Retired on or before January 1, 1990. Includes benefits provided by the Supplementary Retirement Program.

FPDR Two: Not FPDR One, and permanently appointed as sworn employees of the Bureau of Fire or Bureau of Police prior to January 1, 2007.

FPDR Three: All other employees of the Bureau of Fire and Bureau of Police first sworn on or after January 1, 2007. FPDR Three members are also enrolled in the Oregon Public Service Retirement Plan (OPSRP), and OPSRP benefits are not payable from this Fund.

Member Contributions

No Member contributions are required after July 1, 1990. Prior to that date, Member contributions of 7% of First Class Pay were required; accumulated Member contributions prior to July 1, 1990, remain on deposit in the Fund.

Normal Retirement- FPDR Two and FPDR Three

Eligibility – A Member is eligible for service retirement upon attaining the age of 50 and earning 25 or more Years of Service, or upon reaching age 55 with no service requirement.

Benefit – FPDR Two – The annual service retirement benefit is a percentage of the Member's Final Pay for each Year of Service up to 30 years. The percentage is based on the Member's choice of a survivor benefit when the Member applies for a retirement benefit, according to the table below:

Percentage of Benefit Continuing to Surviving Spouse or Minor Children	Percentage of Final Pay Per Year of Service
100%	2.2%
75%	2.4%
50%	2.6%
25% (no survivors)	2.8%

Benefit – FPDR Three – None.

Benefit Form – The benefit begins at retirement and continues for the Member's life, with the selected percentage continuing to the Member's surviving spouse or minor children after the Member's death.

Cost of Living Increases – FPDR One

Benefits for FPDR One retirees will increase annually in line with increases with the Base Pay of a First Class Officer or Firefighter as appropriate. The increase is not subject to the 2 percent cap currently in place for FPDR Two cost of living increases. Benefits provided by the Supplementary Retirement Program do not receive cost of living increases.

Cost of Living Increases – FPDR Two and FPDR Three

Benefits will be increased at the discretion of the Board of Trustees up to the PERS Statutory Maximum of 2 percent per year.

Service-Connected or Occupational Disability Benefit

Eligibility – A Member is eligible for a service disability benefit upon sustaining an injury or illness in the performance of duty that prevents the Member from engaging in the duties of a firefighter or police officer.

A Member is eligible for an occupational disability benefit if the Member is unable to perform the duties of a firefighter or police officer due to certain illnesses or injuries as specified in City Charter.

Benefit- FPDR One – The benefit payable prior to Disability Retirement Date for a FPDR One member is 60% of the Base Pay of a First Class Officer or Firefighter, as appropriate. Upon reaching Disability Retirement Age, the member will receive his or her maximum earned pension.

Benefit-FPDR Two – During the first year of disability, the benefit is 75% of the Member's Base Pay, reduced by 50% of any wages earned in other employment while disabled.

If the Member is capable of Substantial Gainful Employment, then after one year of disability and after the Member becomes Medically Stationary, but before four years of disability have elapsed, the Member's benefit will change to 50% of Base Pay minus 25% of wages earned in other employment.

Under any circumstances, a minimum benefit of 25% of Base Pay for member's position at disability will continue as long as the disability continues.

At Disability Retirement Age the above benefits stop; the Member is then entitled to a disability retirement benefit computed using his Base Pay and Years of Service at his Disability Retirement Age.

Benefit-FPDR Three – The same as the benefit for FPDR Two, but offset by any disability benefits received from OPSRP.

Benefit Form – The disability benefit begins at disability and continues until the Member's recovery, death, or Disability Retirement Age, whichever occurs first. Disability benefits will be increased in step with the Base Pay of the position held by the Member at disability.

The disability retirement benefit begins at Disability Retirement Age and continues for the Member's life, with the selected percentage (or for FPDR One, determined percentage) continuing to the Member's surviving spouse or minor children after the Member's death.

Disability retirement benefits will be increased in the same manner as Normal Retirement Benefits.

Nonservice-Connected Disability Benefit

Eligibility – A Member is eligible for a nonservice disability benefit if the Member has ten Years of Service and sustains an injury or illness other than in the performance of duty that prevents the Member from engaging in duties as a firefighter or police officer.

Benefit- FPDR One – The benefit payable prior to Disability Retirement Date for a FPDR One member is the maximum earned pension, but not less than 20% of the salary of a First Class Officer or Firefighter, as appropriate. Upon reaching Disability Retirement Age, the member will receive his or her maximum earned pension.

Benefit – FPDR Two – The benefit is 50% of the Member's Base Pay, reduced by 50% of any wages earned in other employment while disabled, less any non-service disability benefits paid.

At Disability Retirement Age the above benefits stop; the Member is then entitled to a service retirement benefit computed using his Base Pay and Years of Service at his Disability Retirement Age.

Benefit – FPDR Three – The same as the benefit for FPDR Two, but offset by any disability benefits received from OPSRP.

Benefit Form – The disability benefit begins at disability and continues until the Member's recovery, death, or Disability Retirement Age, whichever occurs first. Disability benefits will be increased in step with the Base Pay of the position held by the Member at disability.

The disability retirement benefit begins at Disability Retirement Age and continues for the Member's life, with the selected percentage continuing to the Member's surviving spouse or minor children after the Member's death.

Disability retirement benefits will be increased in the same manner as Normal Retirement benefits.

Preretirement Service-Connected or Occupational Death Benefit

Eligibility – A Member's surviving spouse or dependent minor children are eligible for *a* service death benefit if the Member dies as a result of an injury or illness sustained in the performance of duty.

A Member's surviving spouse or dependent minor children are eligible for an occupational death benefit if the Member dies as a result of certain illnesses or injuries as specified in City Charter.

Benefit – FPDR Two – Prior to the date the Member would have reached the earliest retirement age, the surviving spouse or dependent minor children will receive an annual benefit equal to 75% of the Member's Base Pay.

After the date the Member would have reached the Member's earliest retirement age, the surviving spouse or dependent minor children will receive an annual benefit equal to 50% of the Member's Final Pay.

Benefit – FPDR Three – The same as the benefit for FPDR Two, but offset by any death benefits received from OPSRP.

Benefit Form – The death benefit begins when the Member dies and continues until the Member's beneficiaries cease to be eligible, which occurs at the death of the surviving spouse (or the majority of the dependent minor children).

Death benefits will be increased in the same manner as Normal Retirement benefits.

Preretirement Nonservice Death Benefit

Eligibility – A Member's surviving spouse or dependent minor children are eligible for a nonservice death benefit if a Member has earned one or more Years of Service and dies as a result of an injury or illness not sustained in the performance of duty.

Benefit – FPDR Two – If the Member has earned fewer than five Years of Service, the Member's beneficiaries will receive a refund of the Member's contributions accumulated to July 1, 1990.

If the Member has earned five or more Years of Service, the surviving spouse or dependent minor children will receive a benefit equal to 50% of the Member's service retirement pension earned to the date of death, assuming an accrual rate of 2.6% of Final Pay for each Year of Service.

Benefit – FPDR Three – The same as the benefit for FPDR Two, but offset by any death benefits received from OPSRP.

Benefit Form – If the Member had five or more Years of Service, the death benefit to the surviving spouse begins when the spouse reaches age 55 and continues until the death of the surviving spouse.

If the Member had five or more Years of Service, a death benefit is payable to the dependent minor children if there is no surviving spouse or if the spouse is under age 55; the benefit to the dependent minor children begins when the Member dies and continues until the majority of the minor children.

Death benefits will be increased in the same manner as Normal Retirement benefits.

Vested Termination Benefit

Eligibility – A Member is eligible for a vested termination benefit after earning five years of service.

Benefit – FPDR Two – If the Member terminates after earning five or more Years of Service, the termination benefit is the Member's service retirement pension earned to the date of termination payable at the age the Member would have been eligible for retirement had he or she continued employment.

Benefit – FPDR Three – None.

Benefit Form – If the Member had earned five or more Years of Service at termination, the benefit begins when the Member would first have been eligible for retirement and continues for the Member's life, with the selected percentage continuing to the Member's surviving spouse or minor children after the Member's death.

Benefits will be increased in the same manner as Normal Retirement benefits.

Oregon State Income Tax Adjustment

For all Members hired prior to July 14, 1995 and rehired on or after January 1, 1991, all benefits will be eligible for an adjustment to compensate the Member for the taxes paid. There are two adjustments, and the Member or beneficiary will receive the greater of the two.

SB656: The amount of the adjustment is determined by the Member's Years of Service at termination, in accordance with the table below.

Years of Service	Adjustment
10 – 19	1.0%
20 – 24	2.5%
25 and over	4.0%

$$\textbf{HB 3349 Increase}\left(\frac{1}{\begin{array}{c}1-\text{maximum Oregon personal}\\ \text{income tax rate (limited to 9\%)}\end{array}}-1\right)\times\frac{\begin{array}{c}\text{Service prior to}\\ \text{October 1, 1991}\end{array}}{\text{All Service}}$$

Supplemental Retirement Benefits – A specified group of FPDR One retirees receive additional monthly supplemental benefits provided by special ordinance. These benefits do not receive a COLA.

Direct Subsidy Medical Reimbursement

FPDR reimburses reasonable medical and hospital expenses arising from a service-connected or occupational injury or illness. The Fund Administrator may limit reimbursement to particular medical and hospital service providers with which it has made fee arrangements and may join in the purchase of services and administration of claims for other employees of the City of Portland.

<u>For Members retired on or before January 1, 2007:</u>

For FPDR One/Two Members, reimbursement is for expenses incurred:

a) While serving as an active Member,

b) While disability benefits under 5-306 continue, and

c) While the retirement benefits under Section 5-304 are paid, assuming the member receives disability benefits through Disability Retirement Age

<u>For Members retiring after January 1, 2007:</u>

Reimbursement for expenses incurred at any time, regardless of whether the Member continued to receive disability benefits through Disability Retirement Age (FPDR One or FPDR Two) or Oregon PERS Normal Retirement Age (FPDR Three) or retired with a service retirement benefit under Section 5-304 (FPDR Two) or under Oregon PERS (FPDR Three).

Changes Since Prior Valuation

The passage of Measure 26-145 included the following provisions that were reflected in this valuation:

Clarified that the final pay calculation for new retirements will be based on no more than 26 biweekly pay periods. The liability impact of this change was estimated in the ballot measure description as a decrease of $46.6 million.

Lowered the eligibility for the preretirement nonservice death benefit from ten to five years of service. The impact of this provision was viewed as not material and was not calculated separately in this valuation or the ballot measure.

Definitions

Base Pay

A Member's Base Pay is the base pay in the Member's position, including premium pay, but excluding overtime and excluding any payments for unused vacation or sick leave, limited by 401(a)(17).

Disability Retirement Age

FPDR One: Age 64

FPDR Two: A Member's Disability Retirement Age is the earlier of Social Security normal retirement age and the age at which the Member has earned 30 Years of Service.

FPDR Three: Normal Retirement Age under Oregon PERS.

Final Pay

A Member's Final Pay is the Member's highest Base Pay during any one of the three consecutive one-year periods preceding the month in which the Member retires, dies, becomes disabled, or terminates employment. For this purpose, a one-year period is defined to include 365 days of pay (366 in a leap year).

If the Member's benefit is deferred due to disability or employment covered by the Oregon Public Employees' Retirement System (PERS), the Member's Final Pay will be increased during the deferral period with increases in the Base Pay of the Member's position at termination if the termination occurred prior to 2013.

Medically Stationary

A disabled Member is judged to be Medically Stationary when the Member's prognosis is clear and the Member's medical condition has stabilized and is unlikely to change.

Spouse

A Member's spouse must have been designated by marriage or by a registered same-sex domestic partnership for at least twelve months.

Substantial Gainful Activity

A disabled Member is capable of Substantial Gainful Activity if the Board determines that the Member is capable of being employed with earnings of at least one-third of the Member's Base Pay.

Year of Service

A Member will be credited with one twelfth of a Year of Service for each completed month of active employment as a City firefighter or police officer. (Max of 30 years)

In addition, a disabled Member will earn a portion of a Year of Service for each year during which the Member receives disability benefits. The portion of a Year of Service earned will equal the Member's disability pension during the year divided by 75% of current base pay for position held at disablement (the maximum disability benefit).

Excluded Benefits

The benefits described below were excluded from the valuation. We do not believe valuing these benefits would materially change the results of this valuation.

Preretirement Service-Connected or Occupational Death Benefit

A lump sum funeral benefit equal to 50% of one month of First Class Pay will be paid to the beneficiaries of Members who die while active, disabled, or retired.

Preretirement Nonservice Death Benefit

A lump sum funeral benefit equal to 50% of one month of First Class Pay will be paid to the beneficiaries of Members who die while active, disabled, or retired.

Nonvested Termination Benefit

If the Member terminates after earning six months of Service but before earning five or more Years of Service, the Member's contributions accumulated to July 1, 1990, will be paid. In addition, an amount equal to 7% of the Member's cumulative Base Pay from the later of July 1, 1990, and six months after the Member's hire is payable.

Minimum Total Payments for Normal Retirement, Disability, Death, and Termination Benefits

The total of all payments to the Member and the Member's survivors will at least equal the Member's contributions accumulated to July 1, 1990.

FPDR One Funeral Benefit

Upon the death of an active or retired member, the Board shall pay a sum not to exceed $200 to be used for funeral expenses.

Appendix E

Glossary

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

Actuarial Asset Value. The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

Actuarial Assumptions. **A**ssumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

Actuarial Cost Method. Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual required contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Actuarial Gain or (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

Agent Multiple-Employer Plan (Agent Plan). An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

Annual Pension Cost. A measure of the periodic cost of an employer's participation in a defined benefit pension plan.

Annual Required Contributions (ARC). The employer's periodic required contributions to a defined benefit pension plan, calculated in accordance with the parameters of GASB 27.

Contribution Deficiencies (excess contributions). The difference between the annual required contributions of the employer(s) (ARC) and the employer's actual contributions in relation to the ARC.

Cost Sharing Multiple-Employer Plan. A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers. A single actuarial valuation covers all plan members and the same contribution rate(s) applies for each employer.

Employer's Contributions. Contributions made in relation to the annual required contributions of the employer (ARC).

Funded Ratio. The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

Net Pension Obligation (NPO). The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use.

Present Value. Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Required Supplementary Information (RSI). Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

Statement No. 25 of the Governmental Accounting Standards Board (GASB 25). The accounting standard establishing financial reporting standards for defined benefit pension plans.

Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The accounting standard governing a state or local governmental employer's accounting for pensions.

Statement No. 43 of the Governmental Accounting Standards Board (GASB 43). The accounting standard establishing financial reporting standards for post-employment benefits other than pensions.

Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). The accounting standard governing a state or local governmental employer's accounting for post- employment benefits other than pensions.

Unfunded Actuarial Accrued Liability. The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.