December 2010

City of Portland
Fire and Police Disability and Retirement (FPDR) Fund

Direct Subsidy OPEB Actuarial Valuation Report Under GASB 43 & 45 as of July 1, 2010

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Section I: Report Highlights

Mercer has prepared this report for the City of Portland Fire and Police Disability and Retirement Fund ("FPDR") to:

- Present Mercer's estimates of the Plan's liabilities and expenses as of July 1, 2010 for FPDR to incorporate, as FPDR deems appropriate, in its financial statements, and
- Provide the Annual Required Contribution (ARC) for the plan and fiscal years ending June 30, 2011 and June 30, 2012.

Our understanding is that a valuation as of July 1, 2009 of the indirect (or implicit) subsidy OPEB benefits for FPDR members was conducted as a part of Aon's indirect subsidy actuarial valuation for the City of Portland. We understand that the Annual Required Contribution (ARC) information developed in this direct subsidy valuation will be combined with the indirect subsidy ARC calculated by Aon to develop an overall ARC for GASB 43/45 purposes for FPDR and the City of Portland. As a result, this valuation presents actuarial and accounting results for the AAL, ARC and Net OPEB Obligation associated with the direct subsidy only.

Summary of Principal Results

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

	July 1, 2008	July 1, 2010
Cost Method	Attained Age	Entry Age
Discount Rate	4.50%	4.00%
Actuarial Accrued Liability (AAL)	$20,308,278	$5,118,095
Unfunded Actuarial Accrued Liability (UAAL)	$20,308,278	$5,118,095
Normal Cost as a % of Base Pay	0.59%	n/a[1]
Projected Base Pay for Next Year	$112,200,110	n/a[1]
Normal Cost	$661,981	$185,305
30-Year Level Dollar Amortization of UAAL	$1,193,068	$284,596
Annual Required Contribution (ARC)	**$1,855,049**	**$469,901**

FPDR is funded on a pay-as-you-go basis via a property tax levy, but still FPDR must report an expense in accordance with the requirements of GASB 43 and 45 like other governmental entities that sponsor OPEB programs.

This valuation is intended to provide the information necessary to assist the City and FPDR in completing disclosures for the fiscal year ending June 30, 2011 and June 30, 2012. GASB 43 and GASB 45 permit the use of a valuation that is up to 24 months prior to the beginning of the first fiscal year for which the valuation provides the ARC. Historically, full actuarial valuations have been conducted each even-numbered year, and results from that valuation are used to develop the ARC for the fiscal year coincident with the valuation year and the fiscal year subsequent to that. Following this procedure and generally accepted financial reporting practices for

[1] *Not applicable in calculation of Normal Cost under Entry Age method*

Section I: Report Highlights *(continued)*

governmental entities, this report can be used to provide the OPEB direct subsidy ARC for the fiscal years ending in 2011 and 2012.

We understand that the only direct subsidy OPEB benefits paid by FPDR are for ongoing medical treatment related to FPDR approved service-connected disabilities. It is our understanding that all other indirect subsidy OPEB for FPDR members is recognized via the OPEB valuation for the City that was conducted by Aon as of July 1, 2009, including the value of any "implicit subsidy" for current or future service retirees. We understand the Aon valuation also includes the value of any disability-connected reimbursements for regular (i.e., non-disability) retirements that occurred prior to 2007, since we understand that pre-2007 regular retirements were not eligible for FPDR reimbursement due to the structure of the City Charter at the time of those retirements.

We understand that there are no qualified assets to be considered for purposes of developing the ARC in this GASB valuation.

Assumptions and Methods

The claims cost development was updated to include experience since the prior valuation and also to incorporate historical information back to 1988. In addition, the assumed healthcare inflation on these types of claims was revised to reflect current expectations. Finally, the pattern of expected reimbursements was significantly adjusted since the previous valuation. The expected pattern in this valuation is based on duration from disability, where the prior valuation used a pattern based on age. This adjustment was made in an attempt to better model the anticipated future pattern of reimbursement payments in a plan where claims are related solely to incidences of disability. In the modified model, a large proportion of the reimbursements are assumed to be made in the first few years after disability. This leads to lower expected future costs compared to the prior valuation for most disabled participants and eligible retirees whose disabilities occurred many years ago. Also, for active employees with an eligible disability who have returned to work or had no time-loss, a smaller amount is now assumed to be paid after termination of employment; any payments that are made prior to termination of employment are not OPEB and therefore not subject to GASB 43/45. In combination, these changes in healthcare assumptions caused the AAL to decrease by approximately $16.6 million.

Most demographic and economic assumptions were reviewed and updated for the July 2008 valuation. 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 and as such, the demographic assumptions were not reviewed or updated for this valuation, with the exception of the discount rate.

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 should be 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 4.00 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 caused the AAL to increase by about $275,000.

The actuarial cost method was changed from Attained Age Normal to Entry Age Normal for consistency with the OPEB valuation conducted by Aon as of July 1, 2009. The change in cost method increased AAL by approximately $100,000.

Unless otherwise noted, the methods and assumptions used in this valuation are the same as those used in our July 1, 2010 Pension Actuarial Valuation Report. The Unfunded Actuarial

Section I: Report Highlights *(continued)*

Accrued Liability (UAAL) developed by the Entry Age Normal method is amortized over a period of 30 years as a level dollar amount for purposes of developing the Annual Required Contribution (ARC).

All actuarial assumptions and plan provisions valued are summarized in the Actuarial Basis section of this report.

Annual Required Contribution

The basic annual expense recognized under GASB 43 & 45 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). For FPDR, the ARC is expressed as a level dollar amount.

As noted earlier, the GASB financial reporting uses an open (or rolling) 30-year amortization period for the UAAL. Because the unfunded actuarial liability (UAAL) is being amortized by an open or rolling amortization period (with re-amortization of the UAAL in each valuation), the amortization amounts will never fully eliminate the UAAL.

The difference between the ARC and the amounts contributed (in the case of FPDR, pay-as-you-go direct subsidy benefit payments) is accumulated as the Net OPEB Obligation. The annual pension cost reported as an expense in the employer's financial statements is equal to the ARC plus an adjustment related to any outstanding Net OPEB Obligation.

Section II: Important Notices

Mercer has prepared this report exclusively for the Fire and Police Disability and Retirement Fund (FPDR) and the City of Portland; Mercer is not responsible for reliance upon this report by any other party. Subject to this limitation, FPDR may direct that this report be provided to its auditors.

The only purposes of this report are to present Mercer's actuarial estimates of the Plan's liabilities and expenses as of July 1, 2010 for FPDR to incorporate, as FPDR deems appropriate, in its financial statements, and to provide the Annual Required Contribution (ARC) for the plan and fiscal years ending June 30, 2011 and June 30, 2012. This report may not be used for any other purpose; Mercer is not responsible for the consequences of any unauthorized use.

Decisions about benefit changes, granting new benefits, investment policy, funding policy, benefit security and/or benefit-related issues should not be made on the basis of this valuation, but only after careful consideration of alternative economic, financial, demographic and societal factors, including financial scenarios that assume future sustained investment losses.

FPDR and the City are solely responsible for selecting the plan's investment policies, asset allocations and individual investments. Mercer's actuaries have not provided any investment advice to FPDR or the City.

A valuation report is only a snapshot of a Plan's estimated financial condition at a particular point in time; it does not predict the Plan's future financial condition or its ability to pay benefits in the future and does not provide any guarantee of future financial soundness of the Plan. Over time, a plan's total cost will depend on a number of factors, including the amount of benefits the plan pays, the number of people paid benefits, the period of time over which benefits are paid, plan expenses and the amount earned on any assets invested to pay benefits. These amounts and other variables are uncertain and unknowable at the valuation date.

Because modeling all aspects of a situation is not possible or practical, we may use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events in an efficient and cost-effective manner. We may also exclude factors or data that are immaterial in our judgment. Use of such simplifying techniques does not, in our judgment, affect the reasonableness of valuation results for the plan.

To prepare the valuation report, actuarial assumptions, as described in Section VI, are used in a forward looking financial and demographic model to present a single scenario from a wide range of possibilities; the results based on that single scenario are included in the valuation. The future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material because these results are very sensitive to the assumptions made and, in some cases, to the interaction between the assumptions.

Different assumptions or scenarios within the range of possibilities may also be reasonable and results based on those assumptions would be different. As a result of the uncertainty inherent in a forward looking projection over a very long period of time, no one projection is uniquely "correct" and many alternative projections of the future could also be regarded as reasonable. Two different actuaries could, quite reasonably, arrive at different results based on the same data and different views of the future. A "sensitivity analysis" shows the degree to which results would be different if you substitute alternative assumptions within the range of possibilities for those utilized in this report. We have not been engaged to perform such a sensitivity analysis and thus the results of such an analysis are not included in this report. At FPDR's request, Mercer is available to perform such a sensitivity analysis.

Section II: Important Notices *(continued)*

Actuarial assumptions may also be changed from one valuation to the next because of changes in mandated requirements, plan experience, changes in expectations about the future and other factors. A change in assumptions is not an indication that prior assumptions were unreasonable when made.

Because valuations are a snapshot in time and are based on estimates and assumptions that are not precise and will differ from actual experience, contribution calculations are inherently imprecise. There is no uniquely "correct" level of contributions for the coming plan year.

Valuations do not affect the ultimate cost of the Plan, only the timing of contributions into the Plan. Plan funding occurs over time. Contributions not made this year, for whatever reason, including errors, remain the responsibility of the Plan sponsor and can be made in later years. If the contribution levels over a period of years are lower or higher than necessary, it is normal and expected practice for adjustments to be made to future contribution levels to take account of this with a view to funding the plan over time.

Data, computer coding and mathematical errors are possible in the preparation of a valuation involving complex computer programming and thousands of calculations and data inputs. Errors in a valuation discovered after its preparation may be corrected by amendment to the valuation or in a subsequent year's valuation.

With the exception of the discount rate, the assumptions used are based on the last experience study, as approved by the Board. FPDR and the City of Portland are responsible for selecting the plan's funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in Section VI. FPDR and the City of Portland are solely responsible for communicating to Mercer any changes required thereto.

To prepare this report Mercer has used and relied on financial data and participant data supplied by FPDR and summarized in the valuation report in Sections IV and V. 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, 2010, that is sufficiently comprehensive and accurate for the purposes of this report. Although Mercer has reviewed the data in accordance with Actuarial Standards of Practice No. 23, Mercer has not verified or audited any of the data or information provided.

Mercer has also used and relied on the plan documents, including amendments, and interpretations of plan provisions, supplied by FPDR as summarized in the valuation report in Section VII and on plan provisions stipulated by the City Charter. We have assumed for purposes of this valuation that copies of any official plan document including all amendments and collective bargaining agreements as well as any interpretations of any such document have been provided to Mercer along with a written summary of any other substantive commitments. FPDR is solely responsible for the validity, accuracy and comprehensiveness of this information. If any data or plan provisions supplied are not accurate and complete, the valuation results may differ significantly from the results that would be obtained with accurate and complete information; this may require a later revision of this report. Moreover, plan documents may be susceptible to different interpretations, each of which could be reasonable, and that the different interpretations could lead to different valuation results.

FPDR should notify Mercer promptly after receipt of the valuation report if FPDR disagrees with anything contained in the valuation report or is aware of any information that would affect the results of the valuation report that has not been communicated to Mercer or incorporated therein.

Section II: Important Notices *(continued)*

The valuation report will be deemed final and acceptable to FPDR unless FPDR promptly provides such notice to Mercer.

Professional Qualifications

We are available to answer any questions on the material in this report or to provide explanations or further details as appropriate. Collectively, the undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report. We are not aware of any direct or material indirect financial interest or relationship, including investments or other services that could create a conflict of interest that would impair the objectivity of our work.

Matthew R. Larrabee, FSA, EA, MAAA	December 8, 2010 **Date**
Angela D. Schiebout, EA, MAAA	December 8, 2010 **Date**

The undersigned actuary is responsible solely for all assumptions related to the health care claims costs and trend rates, and hereby affirms his qualification to render opinions in such matters, in accordance with the qualification standards of the American Academy of Actuaries.

Scott J. Lefkowitz, FCAS, MAAA, FCA	December 8, 2010 **Date**

Mercer (US) Inc.
111 SW Columbia Street, Suite 500
Portland, OR 97201

503 273 5900

The information contained in this document (including any attachments) is not intended by Mercer 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.

Section III: Valuation Results

Calculation of Annual Required Contribution (ARC) for Direct Subsidy OPEB Benefits

			July 1, 2008		July 1, 2010
	Cost Method		Attained Age		Entry Age
Benefit Obligations and Amortization Payment					
1.	Discount Rate		4.50%		4.00%
2.	Total Projected Liability (includes projected future service)	$	28,343,421	$	6,850,834
3.	Total Actuarial Accrued Liability		20,308,278		5,118,095
4.	Present Value of Future Normal Costs *(2. – 3.)*	$	8,035,143	$	n/a[2]
5.	Present Value of Future Base Pay	$	1,372,406,467	$	n/a[2]
6.	Normal Cost as a Percentage of Base Pay *(4. ÷ 5.)*		0.59%		n/a[2]
7.	Projected Next Year's Base Pay	$	112,200,110	$	n/a[2]
8.	Normal Cost in Dollars – Attained Age *(6. x 7.)*	$	661,981		n/a
9.	Normal Cost in Dollars – Entry Age		n/a	$	185,305
10.	Assets	$	0	$	0
11.	Unfunded Actuarial Accrued Liability (UAAL) *(3. – 10.)*	$	20,308,278	$	5,118,095
12.	Amortization Factor (30-Year Level-Dollar)		17.0218885		17.9837146
13.	Amortization Payment *(11. ÷ 12.)*	$	1,193,068	$	284,596
Calculation of ARC					
1.	Amortization Payment	$	1,193,068	$	284,596
2.	Normal Cost	$	661,981	$	185,305
3.	Annual Required Contribution *(1. + 2.)*	$	1,855,049	$	469,901
4.	Projected Next Year's Base Pay	$	112,200,110	$	125,885,272
5.	ARC as a Percent of Base Pay *(3. / 4.)*		1.65%		0.37%

[2] *Not applicable in calculation of Normal Cost under Entry Age method*

Section III: Valuation Results *(continued)*

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. The payment projections include only amounts assumed to be paid after termination of employment, that is, amounts that are considered other postemployment benefits (OPEB) under GASB 43/45. The projected payments subject to GASB 43/45 have significantly decreased since the prior valuation due to changes in assumptions, as discussed on page 2. In particular, a large proportion of payments are now assumed to be made in the first few years after a disability, resulting in lower future expected payments compared to the prior valuation for most disabled participants and retirees whose disabilities occurred many years ago. Also, for active employees with an eligible disability who have returned to work or had no time-loss, a smaller amount is now assumed to be paid after termination of employment; any payments that are made prior to termination of employment are not OPEB and therefore not subject to GASB 43/45.

Fiscal Year	Projected Direct Subsidy OPEB Benefit Payments
2010-11	$238,000
2011-12	266,000
2012-13	281,000
2013-14	297,000
2014-15	315,000
2015-16	334,000
2016-17	355,000
2017-18	380,000
2018-19	396,000
2019-20	410,000
2020-21	419,000
2021-22	424,000
2022-23	425,000
2023-24	427,000
2024-25	431,000
2025-26	431,000
2026-27	432,000
2027-28	428,000
2028-29	422,000
2029-30	413,000
2030-31	403,000
2031-32	391,000
2032-33	379,000
2033-34	363,000

Section III: Valuation Results *(continued)*

Fiscal Year	Projected Direct Subsidy OPEB Benefit Payments
2034-35	346,000
2035-36	327,000
2036-37	308,000
2037-38	288,000
2038-39	269,000
2039-40	250,000

Section III: Valuation Results *(continued)*

Schedule of Funding Progress

The table below shows the Schedule of Funding Progress. This schedule is required to be disclosed (on the appropriate basis) as a part of the Required Supplementary Information in the notes to the City's and FPDR's financial statements. Because this is the second formal direct subsidy OPEB valuation conducted by Mercer, only the entries for the July 1, 2008 and July 1, 2010 valuations conducted by Mercer is shown in this Schedule. In the future, information from at least the three most recent valuations will be presented.

Actuarial Valuation Date	Actuarial Value of Assets *(a)*	Actuarial Accrued Liability (AAL)[3] *(b)*	Unfunded AAL *(b – a)*	Funded Ratio *(a ÷ b)*	Covered Payroll *(c)*	Unfunded AAL as a Percentage of Covered Payroll *((b – a) ÷ c)*
7/1/2008	$0	$20,308,278	$20,308,278	0.00%	$116,960,994[4]	17.36%
7/1/2010	0	5,118,095	5,118,095	0.00%	121,080,178	4.23%

Schedule of Annual OPEB Cost

Fiscal Year Ended	Annual OPEB Cost	Contribution	Percent of Annual OPEB Cost Contributed	Net OPEB Obligation
6/30/2008	$3,131,519	$290,589	9.28%	$2,840,930
6/30/2009	1,815,992	328,656	18.10%	4,328,266
6/30/2010	1,795,545	767,366	42.74%	5,356,445

Schedule of Employer Contributions

Fiscal Year Ended	Annual Required Contribution	Actual Contribution	Percentage Contributed
6/30/2008	$3,131,519	$290,589	9.28%
6/30/2009	1,855,049	328,656	17.72%
6/30/2010	1,855,049	767,366	41.37%

[3] *AAL was calculated under Attained Age cost method at 7/1/2008 and Entry Age cost method at 7/1/2010*

[4] *Revised, as reported by FPDR*

Section III: Valuation Results *(continued)*

Net OPEB Obligation

	Fiscal Year Ended June 30, 2009	Fiscal Year Ended June 30, 2010
Net OPEB Asset (Obligation), beginning of year	$(2,840,930)	$(4,328,266)
Annual Required Contribution	(1,855,049)	(1,855,049)
Interest on Net OPEB Asset (Obligation)	(127,842)	(194,772)
Adjustment to Annual Required Contribution	166,899	254,276
Annual OPEB Cost	$(1,815,992)	$(1,795,545)
Contributions Made	328,656	767,366
Change in Net OPEB Asset (Obligation)	$(1,487,336)	$(1,028,179)
Net OPEB Asset (Obligation), end of year	$(4,328,266)	$(5,356,445)

Section IV: Plan Assets

Summary of Assets

None considered for GASB 43/45 purposes.

Section V: Participant Data

Distribution of FPDR Two Active Participants as of July 1, 2010

Police

Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	**Total**
Under 20										**0**
20-24										**0**
25-29	11	12								**23**
30-34	19	73	13							**105**
35-39	12	53	106	18						**189**
40-44	4	37	55	92	5					**193**
45-49	3	11	25	68	46	5				**158**
50-54	1	7	3	30	41	17				**99**
55-59		1		13	14	5	1			**34**
60-64		1	1	3	5	1				**11**
65-69									1	**1**
70-74										**0**
75+										**0**
Total	**50**	**195**	**203**	**224**	**111**	**28**	**1**	**0**	**1**	**813**

Fire

Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	**Total**
Under 20										**0**
20-24										**0**
25-29	16	15								**31**
30-34	19	63	18							**100**
35-39	19	46	53	2						**120**
40-44	6	25	45	7	10					**93**
45-49		4	16	16	35	9				**80**
50-54			4	7	22	40	10			**83**
55-59		1	2	1	8	16	14			**42**
60-64						1	1	1		**3**
65-69									1	**1**
70-74										**0**
75+										**0**
Total	**60**	**154**	**138**	**33**	**75**	**66**	**25**	**1**	**1**	**553**

Total

Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	**Total**
Under 20										**0**
20-24										**0**
25-29	27	27								**54**
30-34	38	136	31							**205**
35-39	31	99	159	20						**309**
40-44	10	62	100	99	15					**286**
45-49	3	15	41	84	81	14				**238**
50-54	1	7	7	37	63	57	10			**182**
55-59		2	2	14	22	21	15			**76**
60-64		1	1	3	5	2	1	1		**14**
65-69									2	**2**
70-74										**0**
75+										**0**
Total	**110**	**349**	**341**	**257**	**186**	**94**	**26**	**1**	**2**	**1,366**

Section V: Participant Data *(continued)*

Distribution of FPDR Three Active Police Participants as of July 1, 2010

Police

Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	**Total**
Under 20										**0**
20-24	13									**13**
25-29	47									**47**
30-34	43									**43**
35-39	31									**31**
40-44	9									**9**
45-49	6									**6**
50-54	2									**2**
55-59										**0**
60-64										**0**
65-69										**0**
70-74										**0**
75+										**0**
Total	**151**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**151**

Fire

Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	**Total**
Under 20										**0**
20-24	4									**4**
25-29	42									**42**
30-34	49									**49**
35-39	26									**26**
40-44	7									**7**
45-49										**0**
50-54										**0**
55-59										**0**
60-64										**0**
65-69										**0**
70-74										**0**
75+										**0**
Total	**128**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**128**

Total

Age	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	**Total**
Under 20										**0**
20-24	17									**17**
25-29	89									**89**
30-34	92									**92**
35-39	57									**57**
40-44	16									**16**
45-49	6									**6**
50-54	2									**2**
55-59										**0**
60-64										**0**
65-69										**0**
70-74										**0**
75+										**0**
Total	**279**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**279**

Section V: Participant Data *(continued)*

Statistics for Participants as of July 1, 2010

	FPDR One		FPDR Two		FPDR Three	
	Police	Fire	Police	Fire	Police	Fire
Actives (total)						
Headcount	0	0	813	553	151	128
Average Age	n/a	n/a	42.2	41.8	31.9	31.6
Average Service	n/a	n/a	13.4	14.0	1.3	1.4
Actives (with prior disability claims)						
Headcount	0	0	726	466	50	21
Average Age	n/a	n/a	42.5	42.9	31.5	31.8
Average Service	n/a	n/a	14.0	15.3	1.6	1.5
Average Time since Disability	n/a	n/a	4.0	3.6	0.7	1.0
Current Retirees (with prior disability claims)						
Headcount	59	63	116	129	0	0
Average Age	75.3	76.7	57.4	58.2	n/a	n/a
Disabled Participants						
Headcount	19	14	35	9	0	0
Average Age	60.3	59.2	48.9	49.6	n/a	n/a

Section VI: Actuarial Basis

Accounting Actuarial Cost Method and Policies

Actuarial cost method: Liabilities shown in this report are computed using the Entry Age Normal cost method. The objective under this method is to fund each participant's benefits under the plan as payments which are level annual payments, starting at original participation date (or employment date), and continuing until the assumed retirement, termination, disability or death. A detailed description of the calculation follows:

- The **normal cost** for each active participant under the assumed retirement age is determined as a level annual amount assuming the current plan formula had always been in effect and which, if contributed each year from date of entry into the plan until the assumed retirement (termination, disability or death) date, is sufficient to provide the full value of the benefits expected to be payable.
- The **present value of future normal costs** is the total of the discounted values of all active participants' normal costs, assuming these to be paid in each case from the valuation date until retirement (termination, disability or death) date.
- The **present value of projected benefits** is calculated as the value of all benefit payments expected to be paid to the plan's current participants, including active and retired members.
- The **actuarial accrued liability** is the excess of the present value of projected benefits over the present value of future normal costs.

Unfunded Actuarial Accrued Liability amortization method: UAAL is amortized as a level dollar amount over a rolling period of 30 years for purposes of developing the ARC.

Census data: To prepare this report Mercer has used and relied on participant data supplied by FPDR and summarized in the valuation report in Section V. 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, 2010, that is sufficiently comprehensive and accurate for the purposes of this report. Although Mercer has reviewed the data in accordance with Actuarial Standards of Practice No. 23, Mercer has not verified or audited any of the data or information provided. Assumptions and estimates were made for incomplete or missing data. For members flagged as eligible for medical and hospital reimbursements related to service-connected or occupational injury, if disability date was not provided in the census data, the most recent injury date from the claims data was used if one was available. If injury date was unknown, it was assumed to equal the retirement date for retirees or the valuation date for actives.

Participants included: The plan sponsor provides us with data on all employees as of the valuation date, but only those employees who have completed the plan's eligibility requirements are included in the valuation of liabilities. We have not included a liability for vested terminated members who may be eligible for reimbursement upon retirement. Due to the limited number of vested terminated members who may be eligible, we do not believe excluding this liability significantly affects the valuation.

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. No assets have been segregated and restricted to provide plan benefits.

Changes Since Prior Valuation: The actuarial cost method was changed from Attained Age Normal to Entry Age Normal for consistency with the OPEB valuation conducted by Aon as of July 1, 2009.

Section VI: Actuarial Basis

Claims Cost Development

FPDR provided a file with medical reimbursements by member identifier, claim identifier, and source of payment (FPDR-paid or AP-paid). Payments by claim were arranged by fiscal year of payment, to the extent that data was available. In general, FPDR payment data was available beginning with fiscal year ending 1988, and AP payment data was available beginning with fiscal year ending 2007. However, the date of loss of claims with payments in the data extended back to 1956.

Adjustments were made to account for AP data that was not included. Ratios relative to the FPDR data, by fiscal year, were calculated for fiscal years where AP data was available. These ratios were used to increase FPDR data for years where AP data was not available.

There were a number of payment data elements for which a claim identifier was not available. We increased all payments for which claim identifiers were available, by fiscal year, using a ratio of unknown payments to known payments.

Payments for individual claims prior to fiscal year 1988 were estimated using the relationship between aggregate payments in adjacent fiscal years. In this sense, claim payment histories were estimated for all claims, and the database was completed.

The database was adjusted to a constant 2010 real dollar value using an average medical trend of 5% per year. This trend is reasonable as a long-term average factor, and is supported by the analysis of moderate to somewhat severe workers compensation injury data in Oregon.

The resulting database was used to create factors that forecast the timing and amount of future payments for all claims, by year of payment.

The final step was selecting an average payment pattern from this completed database. Payment pattern data based on the analysis of moderate to somewhat severe workers compensation injury data in Oregon was used to test the results for reasonableness and to supplement payment data for the analysis of payments near the end of claim life.

As a final test of reasonableness, the selected payment data indicated that, after inflating data by year of payment using a 5% annual medical trend, the average nominal cost of claims with dates of loss in 2010 could be expected to be between $20,000 and $25,000. This is consistent with the average cost of permanent partial workers compensation injuries in Oregon.

Section VI: Actuarial Basis *(continued)*

Summary of Actuarial Assumptions

The following assumptions were used in valuing the liabilities and benefits under the plan.

Discount rate	4.00% per annum	
Inflation	Not applicable	
Real wage growth	Not applicable	
Payroll growth	Not applicable	
Salary merit increase	Not applicable	
Mortality, healthy lives	Mortality rates for healthy lives are based on the rates for Police & Fire members in the December 31, 2007 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	RP2000 Male, Combined Active/Healthy Retired, No Collar, set back 12 months
	Female Retiree	RP2000 Female, Combined Active/Healthy Retired, No Collar, set back 18 months
	Male Beneficiary	RP2000 Male, Combined Active/Healthy Retiree, No Collar, set back 24 months
	Female Beneficiary	RP2000 Female, Combined Active/Healthy Retiree, No Collar, set back 18 months
	Male Active	70% of rates for Male Retiree
	Female Active	55% of rates for Female Retiree
Disabled mortality	Disabled Male Retiree	RP2000 Male, Combined Active/Healthy Retired, No Collar, set forward 36 months
	Disabled Female Retiree	RP2000 Female, Combined Active/Healthy Retired, No Collar, set forward 30 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 or occupational, 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%

Section VI: Actuarial Basis *(continued)*

Summary of Actuarial Assumptions *(continued)*

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

Employment of disabled members	Disabled members are assumed not to return to active service.
Medical Trend (Healthcare Cost Inflation)	5.00% per year

Section VI: Actuarial Basis *(continued)*

Summary of Actuarial Assumptions *(continued)*

Claims Cost based on duration from disability

Amounts are average expected reimbursement of medical and hospital expenses related to service-connected and occupational disabilities, shown in 2010 dollars, prior to adjustment for future medical trend.

Dur.	Amount	Dur.	Amount	Dur.	Amount	Dur.	Amount
0	$2,666	17	$221	34	$37	51	$11
1	$1,842	18	$198	35	$28	52	$10
2	$635	19	$178	36	$23	53	$8
3	$499	20	$159	37	$24	54	$7
4	$439	21	$142	38	$21	55	$6
5	$305	22	$126	39	$28	56	$5
6	$266	23	$112	40	$27	57	$4
7	$278	24	$100	41	$26	58	$3
8	$191	25	$89	42	$25	59	$3
9	$291	26	$79	43	$24	60	$2
10	$668	27	$70	44	$22	61	$2
11	$609	28	$62	45	$21	62	$1
12	$673	29	$55	46	$19	63	$1
13	$388	30	$48	47	$18	64	$1
14	$358	31	$43	48	$16	65+	$0
15	$199	32	$44	49	$14		
16	$245	33	$32	50	$13		

These costs apply for current disableds, current retirees, and future disableds. For future retirees that already have a recorded disability incident eligible for these payments, software limitations did not allow the direct programming of these costs beyond the first year of retirement; to estimate the pattern above for those members, a ten percent reduction in claims cost each year after the first year of retirement was assumed.

Changes from Prior Valuation

- Discount rate was updated from 4.50% to 4.00%.
- Claims cost development was updated to include claims history back to 1988, and the assumed payment pattern was revised to be based on duration from disability rather than age. As such, aging factors are no longer required.
- Medical trend was revised to 5% in all future years.

Section VI: Actuarial Basis *(continued)*

Plan Provisions

Disability and Retirement Fund

Plan Eligibility	A sworn employee of the Bureau of Fire or Bureau of Police will become a Member of the Fund at the time of permanent appointment. **FPDR One:** Retired on or before January 1, 1990 **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 OPSRP, and OPSRP benefits are not payable from the fund.
Plan Type	Other post-employment direct subsidy benefits
Benefits Valued	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. **For Members retired on or before January 1, 2007:** For FPDR One/Two Members, reimbursement is for expenses incurred: a) while serving as an active Member, b) while the disability benefits under Section 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. For FPDR Three Members, reimbursement is for expenses incurred: a) while serving as an active Member, b) while the disability benefits under Section 5-306 continue, and c) while retirement benefits continue under PERS, assuming the member received disability benefits through Normal Retirement Age under PERS **For Members retiring after January 1, 2007:** Reimbursement for expenses incurred at any time, regardless of whether the member continued to receive disability benefits through Disability Retirement Age (FPDR Two) or PERS Normal Retirement Age (FPDR Three) or retired with a regular (i.e. non-disability) retirement benefit under Section 5-304 (FPDR Two) or under PERS (FPDR Three).
Changes from Prior Valuation	None.

Section VII: 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. Assumptions 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 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 OPEB Cost. A measure of the periodic cost of an employer's participation in an OPEB plan.

Annual Required Contribution (ARC). The employer's periodic required contributions to an OPEB plan, calculated in accordance with the parameters of GASB 45.

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.

Section VII: Glossary *(continued)*

Net OPEB Obligation. The cumulative difference since the effective date of GASB 43 between annual pension cost and the employer's contributions to the plan, including the OPEB liability (asset) at transition (if any), and excluding (a) short-term differences and (b) unpaid contributions that have been converted to OPEB-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. 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.

MERCER

Mercer (US) Inc.
111 SW Columbia Street, Suite 500
Portland, OR 97201
503 273 5900

Consulting. Outsourcing. Investments.