November 2010

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

Pension Actuarial Valuation Report
Under GASB 25 & 27 as of July 1, 2010

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Contents

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 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
- Provide the Annual Required Contribution (ARC) for the plan and fiscal years ending June 30, 2011 and June 30, 2012.

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
Discount Rate	4.50%	4.00%
Actuarial Accrued Liability (AAL)	$2,217,414,215	2,549,479,088
Unfunded Actuarial Accrued Liability (UAAL)	$2,216,664,215	2,548,729,088
Normal Cost as a % of Base Pay	50.48%	45.41%
Projected Base Pay for Next Year	$112,200,110	125,885,272
Normal Cost	$56,638,616	57,164,502
30-Year Open Level Dollar Amortization of UAAL	$130,224,341	141,724,284
Annual Required Contribution (ARC)	**$186,862,957**	**198,888,786**

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 25 and 27 like other governmental entities that sponsor defined benefit pension 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 25 and GASB 27 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 governmental entities, this report is intended to provide the ARC for the fiscal years ending in 2011 and 2012.

We understand that a $750,000 Reserve Fund has been established by the governing City Charter and that fund is considered the sole plan asset for purposes of developing the ARC in this GASB valuation.

Assumptions

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

Section I: Report Highlights

as such, the 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 AAL increased by $332 million (or 15%) since 2008, with the discount rate change causing $190 million (or three-fifths) of the increase.

Unless otherwise noted, the methods and assumptions used in this valuation are the same as those used in the July 1, 2008 valuation conducted by Mercer, including use of the Attained Age Normal (AAN) actuarial cost allocation method. The Unfunded Actuarial Accrued Liability (UAAL) developed by the AAN 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 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). For FPDR, the ARC is expressed as a level dollar amount.

As noted above, 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 benefit payments) is accumulated as the Net Pension Obligation (NPO). 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 NPO.

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

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

Section II: Important Notices

therein. 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. 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	November 18, 2010 **Date**
Angela D. Schiebout, EA, MAAA	November 18, 2010 **Date**

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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)

		July 1, 2008		July 1, 2010
Benefit Obligations and Amortization Payment				
1. Discount Rate		4.50%		4.00%
2. Total Projected Liability (includes projected future service)	$	2,910,197,199	$	3,259,416,260
3. Actuarial Accrued Liability				
a. Retirees	$	1,175,804,838	$	1,275,156,131
b. Pre-retirement Disableds		106,977,971		113,058,292
c. Surviving Spouses and Alternate Payees		118,292,727		130,675,902
d. Inactive Participants with Deferred Vested Benefits		10,955,717		20,465,862
e. Active Employees		805,382,962		1,010,122,901
f. Total	**$**	**2,217,414,215**	**$**	**2,549,479,088**
4. Present Value of Future Normal Costs *(2. – 3.f.)*	$	692,782,984	$	709,937,172
5. Present Value of Future Base Pay	$	1,372,406,467	$	1,563,498,886
6. Normal Cost as a Percentage of Base Pay *(4. ÷ 5.)*		50.48%		45.41%
7. Projected Next Year's Base Pay	$	112,200,110	$	125,885,272
8. Normal Cost in Dollars *(6. x 7.)*	$	56,638,616	$	57,164,502
9. Assets	$	750,000	$	750,000
10. Unfunded Actuarial Accrued Liability (UAAL) *(3.f. – 9.)*	$	2,216,664,215	$	2,548,729,088
11. Amortization Factor (30-Year Level-Dollar)		17.0218885		17.9837146
12. Amortization Payment *(10. ÷ 11.)*	$	130,224,341	$	141,724,284
Calculation of ARC				
1. Amortization Payment	$	130,224,341	$	141,724,284
2. Normal Cost	$	56,638,616	$	57,164,502
3. Annual Required Contribution *(1. + 2.)*	$	186,862,957	$	198,888,786
4. Projected Next Year's Base Pay	$	112,200,110	$	125,885,272
5. ARC as a Percent of Base Pay *(3. / 4.)*		166.54%		157.99%

Section III: Valuation Results

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.

Fiscal Year	Projected Benefit Payments
2010-2011	$ 98,577,000
2011-2012	102,596,000
2012-2013	106,391,000
2013-2014	110,126,000
2014-2015	113,661,000
2015-2016	117,630,000
2016-2017	121,308,000
2017-2018	125,352,000
2018-2019	129,433,000
2019-2020	133,895,000
2020-2021	138,200,000
2021-2022	142,584,000
2022-2023	146,763,000
2023-2024	151,540,000
2024-2025	156,925,000
2025-2026	162,558,000
2026-2027	168,444,000
2027-2028	173,821,000
2028-2029	179,139,000
2029-2030	183,590,000
2030-2031	188,320,000
2031-2032	192,467,000
2032-2033	195,744,000
2033-2034	197,799,000
2034-2035	198,827,000
2035-2036	198,787,000
2036-2037	197,890,000
2037-2038	196,202,000

Section III: Valuation Results

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 valuation conducted by Mercer, only the entries for the July 1, 2008 and July 1, 2010 valuations conducted by Mercer are shown in the schedule. In the future, information from at least the three most recent valuations will be presented. In preparing this schedule, Mercer used the value of the Reserve Fund as the sole plan asset as of the actuarial valuation date. This is consistent with the development of the ARC in the current and prior valuations.

Actuarial Valuation Date	Actuarial Value of Assets *(a)*	Actuarial Accrued Liability (AAL) *(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	750,000	2,217,414,215	2,216,664,215	0.03%	116,960,994[1]	1,895.22%
7/1/2010	750,000	2,549,479,088	2,548,729,088	0.03%	121,080,178	2,104.99%

Schedule of Annual Pension Cost

Fiscal Year Ended	Annual Pension Cost	Contribution	Percent of Annual Pension Cost Contributed	Net Pension Obligation
6/30/2007	$176,329,866	$ 82,117,283[2]	46.57%	$796,863,583
6/30/2008	154,626,180	88,706,536[3]	57.37%	862,783,227
6/30/2009	175,001,510	100,981,612[3]	57.70%	936,803,125
6/30/2010	173,983,893	105,100,343[3]	60.41%	1,005,686,675

Schedule of Employer Contributions

Fiscal Year Ended	Annual Required Contribution	Actual Contribution	Percentage Contributed
6/30/2007	$172,617,172	$ 82,117,283[2]	47.57%
6/30/2008	182,188,795	88,706,536[3]	48.69%
6/30/2009	186,862,957	100,981,612[3]	54.04%
6/30/2010	186,862,957	105,100,343[3]	56.24%

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[1] *Revised, as reported by FPDR.*

[2] *As reported by FPDR, represents levy for both pension and other post-employment benefits (OPEB).*

[3] *As reported by FPDR, represents levy for FPDR pension benefits, excluding other post-employment benefits (OPEB) and excluding contributions made to PERS OPSRP program for FPDR Three Members. Contributions for FYE08 and FYE09 were revised.*

Section III: Valuation Results

Net Pension Obligation

	Fiscal Year Ended June 30, 2009	Fiscal Year Ended June 30, 2010
Net Pension Asset (Obligation), beginning of year	$(862,783,227)[4]	$(936,803,125)
Annual Required Contribution	(186,862,957)	(186,862,957)
Interest on Net Pension Asset (Obligation)	(38,825,245)	(42,156,141)
Adjustment to Annual Required Contribution	50,686,692	55,035,205
Annual Pension Cost	$(175,001,510)	$(173,983,893)
Contributions Made	100,981,612[5]	105,100,343[5]
Change in Net Pension Asset (Obligation)	$ (74,019,898)	$ (68,883,550)
Net Pension Asset (Obligation), end of year	$(936,803,125)	$(1,005,686,675)

[4] *Revised to reflect updated contribution reported for FYE08.*

[5] *As reported by FPDR, represents levy for FPDR pension benefits, excluding other post-employment benefits (OPEB) and excluding contributions made to PERS OPSRP program for FPDR Three Members. Contribution for FYE09 were revised.*

Section IV: Plan Assets

Summary of Assets

The FPDR Board of Trustees administers a Reserve Fund, authorized under provisions of Chapter 5 (Section 5-104) of the City of Portland's Charter. The Reserve Fund's 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, 2010. We understand that the Reserve is the sole asset of the plan that meets the requirements of GASB 25 and is the sole asset used for plan actuarial valuation purposes in developing the ARC.

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

Distribution of FPDR Three 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	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

Statistics for FPDR Participants as of July 1, 2010

	FPDR One		FPDR Two		FPDR Three	
	Police	Fire	Police	Fire	Police	Fire
Actives						
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
Average Salary [6]	n/a	n/a	78,407	83,866	58,793	56,986
Current Retirees & Beneficiaries [7]						
Headcount	349	357	622	421	0	0
Average Age	80.6	81.7	62.1	62.4	n/a	n/a
Average Monthly Benefit	2,944	3,120	4,957	5,386	n/a	n/a
Disabled Participants						
Headcount	22	15	35	9	0	0
Average Age	60.3	59.5	48.9	49.6	n/a	n/a
Average Monthly Benefit	3,498	3,794	4,012	3,922	n/a	n/a
Inactive Deferred Participants						
Headcount	0	0	58	4	0	0
Average Age	n/a	n/a	42.5	43.4	n/a	n/a
Average Monthly Benefit	n/a	n/a	1,525	2,705	n/a	n/a

[6] *Average Salary represents annualized basic monthly earnings as of July 1, 2010*
[7] *Headcount does not include 72 Alternate Payees receiving benefits via a Domestic Relations Order (DRO).*

Section V: Participant Data

Distribution of Current Retirees and Beneficiaries as of July 1, 2010[8]

	FPDR One				FPDR Two				FPDR Three			
	Police		Fire		Police		Fire		Police		Fire	
Age	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit
Under 40	0	0	1	2,156	4	11,521	1	2,702	0	0	0	0
40-44	1	1,504	0	0	2	8,288	0	0	0	0	0	0
45-49	0	0	1	1,262	1	1,800	4	16,899	0	0	0	0
50-54	1	1,508	0	0	56	285,848	46	233,857	0	0	0	0
55-59	3	5,408	3	5,135	167	813,391	128	678,774	0	0	0	0
60-64	8	20,421	1	1,313	217	1,008,759	116	575,394	0	0	0	0
65-69	29	84,132	19	57,634	144	647,688	87	419,792	0	0	0	0
70-74	34	86,183	39	111,336	42	192,695	50	228,477	0	0	0	0
75-79	57	174,788	48	145,945	17	84,237	21	106,523	0	0	0	0
80-84	88	270,525	107	339,618	6	29,309	1	5,175	0	0	0	0
85-89	83	250,654	96	321,393	0	0	0	0	0	0	0	0
90-94	36	110,131	45	122,356	0	0	0	0	0	0	0	0
95+	9	22,207	2	5,822	0	0	0	0	0	0	0	0
Total	349	1,027,463	362	1,113,968	656	3,083,537	454	2,267,592	0	0	0	0

[8] *Headcount includes 72 Alternate Payees receiving benefits via a Domestic Relations Order (DRO). Total benefits may not equal the sum of the benefits above due to rounding.*

Section V: Participant Data

Distribution of Disabled Participants as of July 1, 2010[9]

	FPDR One				FPDR Two				FPDR Three			
	Police		Fire		Police		Fire		Police		Fire	
Age	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit	Count	Total Monthly Benefit
Under 40	0	0	0	0	3	6,576	2	4,597	0	0	0	0
40-44	0	0	0	0	9	32,790	0	0	0	0	0	0
45-49	0	0	0	0	6	21,938	1	2,510	0	0	0	0
50-54	2	7,625	2	8,525	7	30,229	3	11,298	0	0	0	0
55-59	5	17,161	3	11,489	8	37,797	2	11,296	0	0	0	0
60-64	15	52,179	10	36,898	2	11,100	1	5,599	0	0	0	0
65-69	0	0	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0	0	0	0
85-89	0	0	0	0	0	0	0	0	0	0	0	0
90-94	0	0	0	0	0	0	0	0	0	0	0	0
95+	0	0	0	0	0	0	0	0	0	0	0	0
Total	22	76,965	15	56,911	35	140,430	9	35,301	0	0	0	0

[9] *Total benefits may not equal the sum of the benefits above due to rounding.*

Section VI: Actuarial Basis

Accounting Actuarial Cost Method and Policies

Actuarial cost method: Liabilities shown in this report are computed using the Attained Age Normal cost method allocated as a level percent of pay from the date of hire to decrement age. Under this method, the actuarial accrued liability is computed under the Projected Unit Credit cost method and the current year's normal cost is determined as a level percentage of future payroll. A detailed description of the calculation follows:

- 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, beneficiaries, and terminated members with vested rights.
- An individual's accrued benefit for valuation purposes related to a particular separation date is the accrued benefit described under the plan but determined using the projected salary that would be used in the calculation of the benefit on the expected separation date. An individual's benefit obligation is the present value of the accrued benefit for valuation purposes at the beginning of the plan year. If multiple decrements are used, the benefit obligation for an individual is the sum of the component benefit obligations associated with the various anticipated separation dates. Such benefit obligations reflect the accrued benefits as modified to obtain the benefits payable on those dates and the probability of the individual separating on those dates. The plan's **actuarial accrued liability** (AAL) is the sum of the benefit obligations for all participants under the plan.
- The **present value of future normal costs** is the excess of the present value of benefits over the actuarial accrued liability.
- The **normal cost** for a given year is determined by dividing the present value of future normal costs by the present value of future salaries to obtain a normal cost percentage, which is then multiplied by the current salaries of active participants under the assumed retirement age.

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. Because the 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.

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 in consultation with FPDR.

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.

Section VI: Actuarial Basis

Accounting Actuarial Cost Method and Policies

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 is the $750,000 Reserve Fund noted in the assets section of this report.

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

Section VI: Actuarial Basis

Summary of 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	4.00% 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, 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%

Section VI: Actuarial Basis

Summary of Actuarial Assumptions *(continued)*

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%

Section VI: Actuarial Basis

Summary of Actuarial Assumptions *(continued)*

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 **FPDR Two** : 2.00% per annum
Oregon Income Tax Rate	For purposes of estimating the income tax adjustments under HB3349, the highest Oregon Income Tax rate is assumed to remain at 9%.
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 Two:** Age 55 **FPDR Three:** Age 60
Changes Since Prior Valuation	The discount rate was updated from 4.50% to 4.00%.

Section VI: Actuarial Basis

Plan Provisions

Disability and Retirement Fund

<table>
<tr><td>Plan Eligibility</td><td>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. 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.</td></tr>
<tr><td>Plan Type</td><td>Defined Benefit</td></tr>
<tr><td>Member Contributions</td><td>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.</td></tr>
<tr><td>Normal Retirement – FPDR Two and FPDR Three</td><td>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:
<table>
<tr><th>Percentage of Benefit Continuing to Surviving Spouse or Minor Children</th><th>Percentage of Final Pay Per Year of Service</th></tr>
<tr><td>100%</td><td>2.2%</td></tr>
<tr><td>75%</td><td>2.4%</td></tr>
<tr><td>50%</td><td>2.6%</td></tr>
<tr><td>25% (or no survivors)</td><td>2.8%</td></tr>
</table>
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.</td></tr>
<tr><td>Cost of Living Increases – FPDR One</td><td>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.</td></tr>
<tr><td>Cost of Living Increases – FPDR Two</td><td>Benefits will be increased at the discretion of the Board of Trustees up to the PERS Statutory Maximum of 2 percent per year.</td></tr>
</table>

Section VI: Actuarial Basis

Plan Provisions *(continued)*

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 heart disease, hernia of the abdominal cavity or diaphragm, AIDS, ARC, tuberculosis, hepatitis B, or pneumonia. Five Years of Service is required to qualify for occupational disability due to heart disease. **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 continuing to the Member's surviving spouse or minor children after the Member's death. Disability retirement benefits will be increased in step with the statutory and ad hoc cost of living increases granted to PERS retired members.
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 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 step with the statutory and ad hoc cost of living increases granted to PERS retired members.

Section VI: Actuarial Basis

Plan Provisions *(continued)*

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 heart disease, hernia of the abdominal cavity or diaphragm, AIDS, ARC, tuberculosis, hepatitis B, or pneumonia (other than terminal pneumonia). Five Years of Service is required to qualify for occupational death benefits due to heart disease. **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 step with the statutory and ad hoc cost of living increases granted to PERS retired members.
Preretirement Nonservice Death Benefit	**Eligibility** — A Member's surviving spouse or dependent minor children are eligible for a non-service 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 ten 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 ten 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 ten 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 ten 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 step with the statutory and ad hoc cost of living increases granted to PERS retired members.

Section VI: Actuarial Basis

Plan Provisions *(continued)*

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 step with the statutory and ad hoc cost of living increases granted to PERS retired members.
Oregon State Income Tax Adjustment	For all Members hired prior to July 14, 1995 and retired 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. **SB 656** 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% **HB 3349 Increase** $\left(\frac{1}{1 - \text{maximum Oregon personal income tax rate (limited to 9\%)}} - 1\right) \times \frac{\text{Service prior to October 1, 1991}}{\text{All Service}}$
Changes Since Prior Valuation	None.

Section VI: Actuarial Basis

Plan Provisions *(continued)*

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	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.
Final Pay	A Member's Final Pay is the Member's highest Base Pay during anyone of the three consecutive twelve-month periods preceding the month in which the Member retires, dies, becomes disabled, or terminates employment. 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.
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).

Section VI: Actuarial Basis

Plan Provisions *(continued)*

Excluded Benefits

Additional benefits were valued separately under GASB 45. Please see our July 1, 2010 GASB 45 valuation report for a description of those benefits. The benefits described below were excluded from either 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.
Non-Vested 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.

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 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.

Section VII: Glossary

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.

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