November 9, 2009

# **Actuarial Valuation Report** December 31, 2008

**Oregon Public Employees Retirement System** 

Tier 1/Tier 2 and OPSRP Pension Benefits **RHIA/RHIPA** Retiree Medical Benefits





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Mercer has prepared this report for the Oregon Public Employees Retirement System to:

- Present system-wide results of the valuation of the Oregon Public Employees Retirement System, including pension benefits provided through Tier 1/Tier 2 and the Oregon Public Service Retirement Plan (OPSRP), and retiree medical benefits provided through the Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA), as of December 31, 2008,
- Provide advisory information on system-wide employer contribution rates and employer contribution rates for each rate pool as of December 31, 2008,
- Provide the funded status as of December 31, 2008, and
- Provide reporting information for financial statements, government agencies and other interested parties, pursuant to GASB requirements.

This valuation does not cover the Individual Account Program (IAP).

### **Employer Contribution Rates**

This report develops the average employer contribution rates as of December 31, 2008. These rates are advisory only. The December 31, 2009, actuarial valuation will determine the employer contribution rates that will be effective on July 1, 2011. The December 31, 2007, valuation developed the employer contribution rates that in effect from July 1, 2009 through June 30, 2011.

Employer pension contribution rates consist of a normal cost rate and an amortization of the Unfunded Accrued Liability (UAL). Normal cost rates are calculated and charged separately to the Tier 1/Tier 2, OPSRP general service and OPSRP police and fire payrolls. UAL rates are calculated separately for Tier1/Tier 2 and OPSRP, but each UAL rate is charged across all payrolls. Rates for individual employers are adjusted if the employer maintains a side account or has a pre-SLGRP liability or surplus. The table below compares the average employer contribution rates for each type of payroll calculated for this valuation compared to the rates in effect from July 1, 2009 through June 30, 2011.

|                        | Advi          | sory July 1, | 2011                | Effec         | tive July 1 | , 2009              |
|------------------------|---------------|--------------|---------------------|---------------|-------------|---------------------|
|                        |               | OPSRP        |                     |               | OPSRP       |                     |
|                        |               | General      | <b>OPSRP</b> Police |               | General     | <b>OPSRP</b> Police |
| Payroll                | Tier 1/Tier 2 | Service      | & Fire              | Tier 1/Tier 2 | Service     | & Fire              |
| Normal Cost Rate       | 7.84%         | 5.90%        | 8.61%               | 6.08%         | 5.81%       | 8.52%               |
| Tier 1/Tier 2 UAL Rate | 10.27%        | 10.27%       | 10.27%              | 6.07%         | 6.07%       | 6.07%               |
| OPSRP UAL Rate         | 0.07%         | 0.07%        | 0.07%               | (0.08%)       | (0.08%)     | (0.08%)             |
| Total Pension Rate     | 18.18%        | 16.24%       | 18.95%              | 12.07%        | 11.80%      | 14.51%              |
| Average Adjustment     | (5.23%)       | (5.23%)      | (5.23%)             | (7.69%)       | (7.69%)     | (7.69%)             |
| Net Pension Rate       | 12.95%        | 11.01%       | 13.72%              | 4.38%         | 4.11%       | 6.82%               |

#### Pension Contribution Rates

Large investment losses on the valuation assets during 2008 caused the calculated UAL rates to increase compared to the prior valuation. This increase is compounded by rising Tier 1/Tier 2 normal cost rates as members under Money Match (with no normal cost) continue to retire and Tier 1/Tier 2 active members age. In addition, asset losses on side account investments have reduced the size of the average side account rate relief adjustment. This also works to increase the net pension rate.

The Tier 1/Tier 2 pension contribution rates differ for each rate pool and each independent employer. This report calculates the specific rates for each rate pool. Specific rates for independent employers are calculated in separate reports for each independent employer. Changes in pension contribution rates for

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### **Employer Contribution Rates (continued)**

each rate pool are confined to a collar depending on funded status. The table below shows the advisory employer pension contribution rates for each Tier 1/Tier 2 rate pool calculated for this valuation compared to the rates in effect as of July 1, 2009, and the average adjustment to that rate for side accounts and pre-SLGRP Liabilities. Please note that for the purposes of this exhibit as well as most other exhibits in this system-wide report, independent employers (including State Judiciary) are treated as a single rate pool.

| Tier 1/Tier | 2 Pension | <b>Contribution Rate</b> | s |
|-------------|-----------|--------------------------|---|
|-------------|-----------|--------------------------|---|

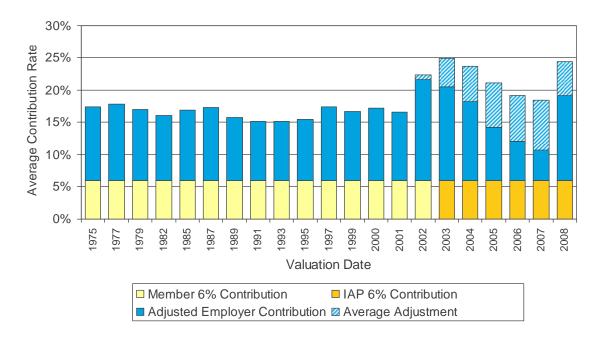
|   | Adv                      | Advisory July 1, 2011    |                          |                         | Effective July 1, 2009   |                         |  |  |
|---|--------------------------|--------------------------|--------------------------|-------------------------|--------------------------|-------------------------|--|--|
|   |                          | School                   | Independent              |                         | School                   | Independent             |  |  |
|   | SLGRP                    | Districts                | Employers                | SLGRP                   | Districts                | Employers               |  |  |
| Normal Cost Rate                              | 8.10%                    | 6.90%                    | 9.62%                    | 6.31%                   | 5.19%                    | 7.92%                   |  |  |
| Tier 1/Tier 2 UAL Rate                        | 9.05%                    | 13.11%                   | 7.24%                    | 4.84%                   | 8.82%                    | 2.57%                   |  |  |
| Total Pension Rate                            | 17.15%                   | 20.01%                   | 16.86%                   | 11.15%                  | 14.01%                   | 10.49%                  |  |  |
| Average Adjustment<br><b>Net Pension Rate</b> | (4.87%)<br><b>12.28%</b> | (7.09%)<br><b>12.92%</b> | (0.78%)<br><b>16.08%</b> | (7.09%)<br><b>4.06%</b> | (10.51%)<br><b>3.50%</b> | (1.14%)<br><b>9.35%</b> |  |  |

In addition to the pension contribution rates, employers also contribute to the Retirement Health Insurance Account (RHIA) and State Agencies and State Judiciary contribute to the Retiree Health Insurance Premium Account (RHIPA). Only Tier 1 and Tier 2 members are eligible for these benefits, so the normal cost rates are only charged to Tier 1/Tier 2 payroll, but the UAL rates are charged to all payrolls. The table below compares the advisory employer contribution rates for each type of payroll calculated for this valuation compared to the rates in effect from July 1, 2009 through June 30, 2011.

#### **Retiree Healthcare Contribution Rates**

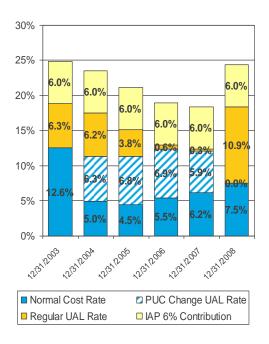
|                        | Advis         | Advisory July 1, 2011 |                     |               | tive July 1 | , 2009       |
|------------------------|---------------|-----------------------|---------------------|---------------|-------------|--------------|
|                        |               | OPSRP                 |                     |               | OPSRP       |              |
|                        |               | General               | <b>OPSRP</b> Police |               | General     | OPSRP Police |
| Payroll                | Tier 1/Tier 2 | Service               | & Fire              | Tier 1/Tier 2 | Service     | & Fire       |
| RHIA normal cost rate  | 0.09%         | 0.00%                 | 0.00%               | 0.10%         | 0.00%       | 0.00%        |
| RHIA UAL Rate          | 0.50%         | 0.50%                 | 0.50%               | 0.19%         | 0.19%       | 0.19%        |
| Total RHIA rate        | 0.59%         | 0.50%                 | 0.50%               | 0.29%         | 0.19%       | 0.19%        |
| RHIPA Normal Cost Rate | 0.05%         | 0.00%                 | 0.00%               | 0.06%         | 0.00%       | 0.00%        |
| RHIPA UAL Rate         | 0.10%         | 0.10%                 | 0.10%               | 0.02%         | 0.02%       | 0.02%        |
| Total RHIPA rate       | 0.15%         | 0.10%                 | 0.10%               | 0.08%         | 0.02%       | 0.02%        |

Combined pension and retiree healthcare employer contribution rates increased significantly due to asset losses. They now are near the level of their historical high point, as shown in the graph below.



#### **Employer Contribution Rates (continued)**

As shown below, the average normal cost rate has declined dramatically since the 2003 valuation, primarily due to the change in the cost method. The new cost method reflects the frozen nature of the Money Match formula. As more active members move from Money Match benefits to Full Formula benefits, we expect the normal cost rate to increase. However, since the Tier 1/Tier 2 benefit structure is closed to new entrants, the increasing normal cost rate will apply to a declining population.



The Unfunded Accrued Liability (UAL) rate attributable to the change in cost method was removed from the valuation this year, as the base due to this change is expected to be fully amortized by the date of the next

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### **Employer Contribution Rates (continued)**

rate change. The UAL attributable to gains and losses other than the cost method change has increased significantly since the last valuation due to asset losses that occurred in 2008, and is the primary source of the increase in contribution rates. The increase in the UAL rate is compounded by the increase in the normal cost rate this year.

For an individual employer, the rates shown above are adjusted for side accounts. Side accounts are the result of employer supplemental deposits (usually financed through a pension obligation bond). When a supplemental deposit is made, a side account is established (after any transition liabilities for joining the SLGRP have been paid) and used to offset the otherwise required contribution. As of December 31, 2008, the system has approximately \$5.1 billion in side accounts, a decrease of about \$2.5 billion in the last year. Side accounts now reduce the average employer contribution rate by about 4.82% of payroll, but there is wide variation between employers.

For individual employers in the SLGRP, the rates shown above are also adjusted for amortization payments on pre-SLGRP liabilities. The average adjustment to individual employer rates due to side accounts and pre-SLGRP liabilities is shown on a combined basis in the table on page 1.

The minimum and maximum rates that can be effective July 1, 2011 for each rate pool (prior to adjustments) are shown in the table below. The limits are calculated and applied on an individual employer basis for independent employers, but for purposes of the table below, all independent employers (including State Judiciary) are treated as a single rate pool. The contribution rates for individual employers are adjusted from the rates of the pool to reflect side accounts and pre-SLGRP liabilities. These adjustments are not limited by the rate collar.

|                         | Effe             | Effective July 1, 2011 |                          |  |  |  |  |  |
|-------------------------|------------------|------------------------|--------------------------|--|--|--|--|--|
|                         | SLGRP            | School<br>Districts    | Independent<br>Employers |  |  |  |  |  |
| Between 80% and 120%    | Funded           |                        |                          |  |  |  |  |  |
| Minimum Rate            | 8.15%            | 11.01%                 | 7.49%                    |  |  |  |  |  |
| Maximum Rate            | 14.15%           | 17.01%                 | 13.49%                   |  |  |  |  |  |
| Less than 80% or Greate | er than 120% Fun | ded                    |                          |  |  |  |  |  |
| Minimum Rate            | 5.15%            | 8.01%                  | 4.49%                    |  |  |  |  |  |
| Maximum Rate            | 17.15%           | 20.01%                 | 16.49%                   |  |  |  |  |  |

#### **Limits on Future Pension Contribution Rates**

### **Funded Status**

The table below shows the funded status of the various pension rate pools both on the basis used to calculate the contribution rate for each rate pool and after adjustment for side accounts (assuming side accounts offset Tier 1/Tier 2 liabilities). For this exhibit, all independent employers, including State Judiciary, have been grouped together.

|                                   |                |     |               | Independent   |             | Per | sion System         |
|-----------------------------------|----------------|-----|---------------|---------------|-------------|-----|---------------------|
|                                   | SLGRP          | Sch | ool Districts | Employers     | OPSRP       |     | Totals <sup>1</sup> |
| December 31, 2008                 |                |     |               |               |             |     |                     |
| Actuarial accrued liability       | \$<br>27,551.8 | \$  | 21,742.7      | \$<br>4,566.0 | \$<br>336.8 | \$  | 54,259.5            |
| Actuarial value of assets         | \$<br>19,859.0 | \$  | 14,847.1      | \$<br>3,495.7 | \$<br>270.5 | \$  | 38,386.1            |
| Funded percentage                 | 72.1%          |     | 68.3%         | 76.6%         | 80.3%       |     | 70.7%               |
| Side accounts                     | \$<br>2,442.2  | \$  | 2,611.4       | \$<br>80.9    | \$<br>-     | \$  | 5,134.5             |
| Funded percentage reflecting side |                |     |               |               |             |     |                     |
| accounts                          | 80.9%          |     | 80.3%         | 78.3%         | 80.3%       |     | 80.2%               |
| December 31, 2007                 |                |     |               |               |             |     |                     |
| Actuarial accrued liability       | \$<br>26,883.1 | \$  | 21,299.3      | \$<br>4,423.2 | \$<br>203.0 | \$  | 52,871.2            |
| Actuarial value of assets         | \$<br>26,674.2 | \$  | 20,156.5      | \$<br>4,645.0 | \$<br>275.1 | \$  | 51,669.7            |
| Funded percentage                 | 99.2%          |     | 94.6%         | 105.0%        | 135.5%      |     | 97.7%               |
| Side accounts                     | \$<br>3,640.6  | \$  | 3,897.1       | \$<br>120.5   | \$<br>-     | \$  | 7,658.1             |
| Funded percentage reflecting side |                |     |               |               |             |     |                     |
| accounts                          | 112.8%         |     | 112.9%        | 107.7%        | 135.5%      |     | 112.2%              |
| Amounts in millions               |                |     |               |               |             |     |                     |

<sup>1</sup> Includes Multnomah Fire District #10

As shown in the graph below, the funded status of the system generally improved until the market decline earlier this decade. The restatement of the December 31, 2001 actuarial valuation to reflect the impact of the 2003 reforms mitigates the impact on the reported funded status of the market downturn. Funded status was generally improving over the last few years due to better than expected investment returns until this year. Funded status has decreased significantly this year due to the recent market decline.

### Funded Status (continued)



The retiree medical benefits are funded using a 401(h) account within the pension trust. The table below shows the funded status of the retiree medical programs.

|                             | December | 31, 2008 |         |         |        |         |
|-----------------------------|----------|----------|---------|---------|--------|---------|
|                             | RHIA     | RHIPA    | Total   | RHIA    | RHIPA  | Total   |
| Actuarial accrued liability | \$494.0  | \$21.3   | \$515.3 | \$499.6 | \$23.3 | \$522.9 |
| Actuarial value of assets   | \$183.8  | \$5.7    | \$189.5 | \$250.8 | \$7.8  | \$258.6 |
| Funded Percentage           | 37.2%    | 26.7%    | 36.8%   | 50.2%   | 33.6%  | 49.5%   |

Amounts in millions

#### **Asset Changes**

Since December 31, 2007, contributions (including supplemental deposits) for pension benefits have increased assets by approximately 1.1% while benefit payments decreased assets by about 4.5%. On the whole, assets decreased by 30% due to negative investment returns of approximately 26.5%.

|   |                | Percentage of 12/31/2007 Market |
|---|----------------|---------------------------------|
| All Reserves  | Amount         | Value                           |
| Market value, December 31, 2007                     | \$<br>62,583.4 |                                 |
| Contributions                                       | 676.4          | 1.1%                            |
| Investment Income                                   | (16,583.5)     | (26.5%)                         |
| Benefit Payments                                    | (2,841.2)      | (4.5%)                          |
| Market value, December 31, 2008 Amounts in millions | \$<br>43,835.1 | 70.0%                           |

### Funded Status (continued)

The Tier 1 Rate Guarantee Reserve that is used to pay for the 8% interest crediting rate guarantee on active Tier 1 member accounts when actual investment earnings are below 8% has decreased from \$1.9 billion as of December 31, 2007 to negative \$1.0 billion as of December 31, 2008. Tier 1 member accounts that are protected by the Rate Guarantee Reserve remained relatively stable from December 31, 2007, to December 31, 2008, at a value of approximately \$7.2 billion.

The value of assets used to determine employer contribution rates has historically excluded any assets in the Tier 1 Rate Guarantee Reserve (RGR). Due to investment results in 2008 the RGR is in a deficit situation as of December 31, 2008. As part of the Board's July 16, 2009 motion approving actuarial assumptions and methods, the Board approved continued exclusion of the RGR from calculation of valuation assets. As a result, valuation assets exceed the fair value of assets as of December 31, 2008. It is our understanding that if a RGR deficit persists for five years, employers may be required to restore the RGR.

Market values are reported to Mercer by PERS. It is our understanding that select real estate and private equity investments are reported on a three-month lag basis. For those investments, the change in value between September 30, 2008 and December 31, 2008 due to the market downturn could be significant. This valuation report does not attempt to quantify any such effects.

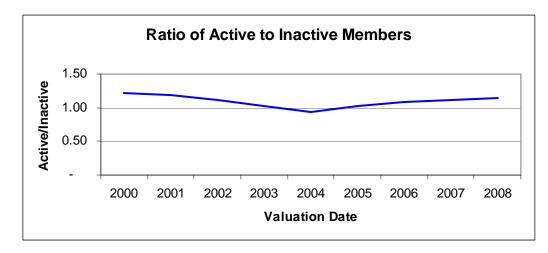
### **Liability Changes**

Since December 31, 2007, the system-wide actuarial accrued liability has increased primarily due to interest on the liability as current active members get closer to retirement. The normal cost, or the value of benefits attributable to that year of service, was about one-sixth of the value of benefits paid out during the year. Contributions during the year were almost one and a half times the normal cost. The remaining 0.8% decrease in the actuarial accrued liability was attributable to demographic experience.

|  | Amount         | Percentage of 12/31/2007 AAL |
|--|----------------|------------------------------|
| Actuarial Accrued Liability, December 31, 2007 | \$<br>53,394.1 |                              |
| Normal Cost                                    | 476.7          | 0.9%                         |
| Benefit Payments                               | (2,841.2)      | (5.3%)                       |
| Interest                                       | 4,196.0        | 7.9%                         |
| Other  | (450.8)        | (0.8%)                       |
| Actuarial Accrued Liability, December 31, 2008 | \$<br>54,774.8 | 102.6%                       |

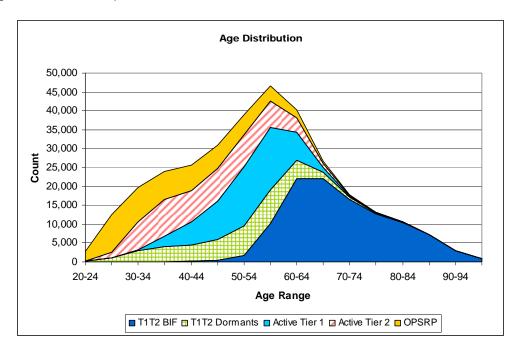
Amounts in millions

The Oregon Public Employees Retirement System is a very mature system. As shown in the chart below, there are currently 1.14 active members in the system for every inactive member. By comparison, the average ratio in NASRA's 2007 Public Fund Survey is 2.05. Since contributions to the system are based on active payroll, a lower ratio means there are fewer actives to support any gains or losses on the benefits of retirees.



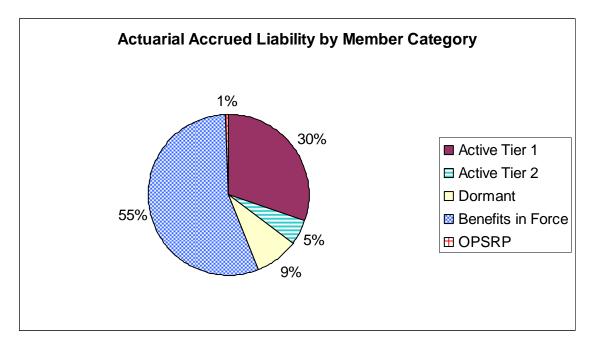
### Liability Changes (continued)

The ratio of active members to retired members is likely to decline further as a significant portion of the active members are currently eligible to retire. The graph below shows the distribution of members in the system by age and membership status.



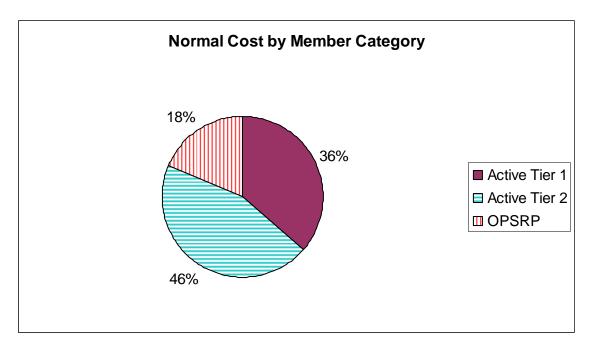
### Liability Changes (continued)

The following chart illustrates the distribution of the system's accrued liability by member age and status. While the majority of active liability is attributable to Tier 1 members, 64% of the system's total accrued liability is due to members who are no longer actively working in covered employment. Only 6% of the liability is attributable to active Tier 2 and OPSRP members. Of the accrued liability that is attributable to actives, a large portion is located at or near prime retirement ages.



### Liability Changes (continued)

As shown below, Tier 2 members account for nearly half of the system's normal cost compared to about 5% of the system's accrued liability. Tier 2 members are likely to retire under the Full Formula calculation rather than the Money Match calculation. Because no additional Member contributions are permitted, the Money Match formula is essentially frozen. Consequently, many Tier 1 Members who are expected to retire under the Money Match formula have no normal cost.



### **Principal Valuation Results**

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described after the summary. Combined valuation payroll includes Tier 1/Tier 2 payroll and OPSRP payroll.

|  |     | Actuarial Va     | lua | ation as of       | Percent     |
|--|-----|------------------|-----|-------------------|-------------|
|  | Dec | ember 31, 2008   |     | December 31, 2007 | Change      |
| Tier 1/Tier 2 Pension                          |     |                  |     |                   |             |
| Actuarial accrued liability                    | \$  | 53,922.7         | \$  | 52,668.1          | 2%          |
| Actuarial value of assets                      | \$  | 38,115.6         | \$  | 51,394.6          | (26%)       |
| Unfunded actuarial accrued liability           | \$  | 15,807.1         | \$  | 1,273.6           | 1,141%      |
| Funded status                                  |     | 71%              |     | 98%               | (28%)       |
| Combined valuation payroll                     | \$  | 8,130.1          | \$  | 7,721.8           | 5%          |
| UAL as a percentage of payroll                 |     | 194%             |     | 16%               | 1,079%      |
| Normal cost                                    | \$  | 487.8            | \$  | 380.9             | 28%         |
| Tier 1/Tier 2 valuation payroll                | \$  | 6,225.8          | \$  | 6,261.9           | (1%)        |
| Normal cost rate                               |     | 7.84%            |     | 6.08%             | 29%         |
| OPSRP Pension                                  |     |                  |     |                   |             |
| Actuarial accrued liability                    | \$  | 336.8            | \$  | 203.0             | 66%         |
| Actuarial value of assets                      | \$  | 270.5            | \$  | 275.1             | (2%)        |
| Unfunded actuarial accrued liability           | \$  | 66.3             | \$  | (72.1)            | (192%)      |
| Funded status                                  |     | 80%              |     | 135%              | (41%)       |
| Combined valuation payroll                     | \$  | 8,130.1          | \$  | 7,721.8           | 5%          |
| UAL as a percentage of payroll                 |     | 1%               |     | (1%)              | (187%)      |
| Normal cost                                    | \$  | 117.3            | \$  | 88.3              | 33%         |
| OPSRP valuation payroll                        | \$  | 1,904.3          | \$  | 1,459.9           | 30%         |
| Normal cost rate                               |     | 6.16%            |     | 6.05%             | 2%          |
| Combined Pension                               |     |                  |     |                   |             |
| Actuarial accrued liability                    | \$  | 54,259.5         | \$  | 52,871.2          | 3%          |
| Actuarial value of assets                      | \$  | 38,386.1         | \$  | 51,669.7          | (26%)       |
| Unfunded actuarial accrued liability           | \$  | 15,873.4         | \$  | 1,201.5           | 1,221%      |
| Funded status<br>Combined valuation payroll    | \$  | 71%<br>8,130.1   |     | 98%<br>7,721.8    | (28%)<br>5% |
| UAL as a percentage of payroll                 | Ψ   | 195%             | Ψ   | 16%               | 1,155%      |
| Normal cost                                    | \$  | 605.1            | \$  | 469.2             | 29%         |
| Combined valuation payroll<br>Normal cost rate | \$  | 8,130.1<br>7.44% | \$  | 7,721.8<br>6.08%  | 5%<br>23%   |
|  |     |                  |     |                   |             |

### Principal Valuation Results (continued)

|                                      |       | Actuarial Va  | luat | ion as of        | Percent<br>Change |
|--------------------------------------|-------|---------------|------|------------------|-------------------|
|                                      | Decer | nber 31, 2008 | D    | ecember 31, 2007 |                   |
| RHIA                                 |       |               |      |                  |                   |
| Actuarial accrued liability          | \$    | 494.0         | \$   | 499.6            | (1%)              |
| Actuarial asset value                | \$    | 183.8         | \$   | 250.8            | (27%)             |
| Unfunded actuarial accrued liability | \$    | 310.2         | \$   | 248.8            | 25%               |
| Funded status                        |       | 37%           |      | 50%              | (26%)             |
| Combined valuation payroll           | \$    | 8,130.2       | \$   | 7,721.8          | 5%                |
| UAL as a percentage of payroll       |       | 4%            |      | 3%               | 18%               |
| Normal cost                          | \$    | 5.6           | \$   | 6.6              | (14%)             |
| Tier 1/Tier 2 valuation payroll      | \$    | 6,225.8       | \$   | 6,261.9          | (1%)              |
| Normal cost rate                     |       | 0.09%         |      | 0.10%            | (10%)             |
| RHIPA                                |       |               |      |                  |                   |
| Actuarial accrued liability          | \$    | 21.3          | \$   | 23.3             | (9%)              |
| Actuarial asset value                | \$    | 5.7           | \$   | 7.8              | (27%)             |
| Unfunded actuarial accrued liability | \$    | 15.6          | \$   | 15.5             | 1%                |
| Funded status                        |       | 27%           |      | 34%              | (21%)             |
| Combined valuation payroll           | \$    | 2,217.9       | \$   | 2,080.2          | 7%                |
| UAL as a percentage of payroll       |       | 1%            |      | 1%               | (5%)              |
| Normal cost                          | \$    | 0.8           | \$   | 0.9              | (19%)             |
| Tier 1/Tier 2 valuation payroll      | \$    | 1,708.5       | \$   | 1,692.1          | 1%                |
| Normal cost rate                     |       | 0.05%         |      | 0.06%            | (17%)             |
| Amounts in millions                  |       |               |      |                  |                   |

### **Data Summary**

A brief summary of the data underlying the current and prior valuation follows. Additional detail can be found in the data section of this report. State Judiciary is included in the Tier 1 counts.

|  |              |              | De  | ecember 31 |              |     |          |
|--|--------------|--------------|-----|------------|--------------|-----|----------|
|  |              | 20           | 800 |            |              | -   |          |
|  | Tier 1       | Tier 2       |     | OPSRP      | Total        | 200 | 7 Totals |
| Active Members                           |              |              |     |            |              |     |          |
| Count                                    | 60,602       | 56,113       |     | 53,854     | 170,569      |     | 167,023  |
| Average age                              | 52.4         | 45.5         |     | 39.8       | 46.1         |     | 46.0     |
| Average total service                    | 19.2         | 8.2          |     | 2.7        | 10.4         |     | 10.3     |
| Average valuation payroll                | \$<br>58,998 | \$<br>48,034 | \$  | 35,093     | \$<br>47,843 | \$  | 46,232   |
| Dormant Members                          |              |              |     |            |              |     |          |
| Count                                    | 22,710       | 19,238       |     | 529        | 42,477       |     | 43,949   |
| Average age                              | 54.0         | 46.4         |     | 51.7       | 50.5         |     | 49.8     |
| Average monthly deferred benefit         | \$<br>1,734  | \$<br>388    | \$  | 137        | \$<br>1,105  | \$  | 1,103    |
| <b>Retired Members and Beneficiaries</b> |              |              |     |            |              |     |          |
| Count                                    | 105,499      | 2,144        |     | 4          | 107,647      |     | 105,336  |
| Average age                              | 70.4         | 64.0         | \$  | 64.1       | 70.2         |     | 70.1     |
| Average monthly benefit                  | \$<br>2,078  | \$<br>520    | \$  | 735        | \$<br>2,047  | \$  | 1,995    |
| Total members                            | 188,811      | 77,495       |     | 54,387     | 320,693      |     | 316,308  |

### **Effects of Changes**

Effective with the December 31, 2008 actuarial valuation the following changes were made.

#### Assumption Changes

An experience study was performed as of December 31, 2008, reviewing economic and demographic assumptions. As a result of the study, the Board revised some of the assumptions adopted in the previous study. The key revisions include assuming 0% merit salary increases for 2009 and 2010, changing healthy mortality assumptions from static to generational tables, and adjustments to assumptions for disabled mortality, retirement rates, and termination rates. Additional detail on assumption changes is available in the assumptions section of this report. These changes increased the system-wide Actuarial Accrued Liability by approximately \$263.7 million, (consisting of an increase of \$286.1 million for the pension plan and a reduction of \$22.4 million for the retiree healthcare plans) the system-wide normal cost by approximately \$29.1 million, (consisting of an increase of \$30.0 million on the pension plan and a reduction of \$0.9 for the retiree healthcare plans) and the average employer contribution rate by 0.8% of payroll.

#### **Method Changes**

As a result of the December 31, 2008 experience study, the Board revised some of the methods adopted in the previous study. The key revisions were reducing the RHIA and RHIPA amortization period to ten years and eliminating the amortization base created by changing to the Projected Unit Credit method in a prior valuation. Additional detail on method changes is available in the methods section of this report. These changes did not affect the system-wide actuarial accrued liability or normal cost, but instead affected the way in which contribution rates are determined from the system's assets and liabilities.

#### Arken and Robinson Litigation

We have made no adjustment in this valuation to reflect any interpretation of Judge Kantor's June 20, 2007 or May 27, 2008 rulings in the Arken and Robinson cases.

### Certification

Mercer has prepared this report exclusively for the Oregon Public Employees Retirement System for the following purposes:

- Present the system-wide results of a valuation of the Oregon Public Employees Retirement System, including pension benefits provided through Tier 1/Tier 2 and the Oregon Public Service Retirement Plan (OPSRP), and retiree medical benefits provided through the Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA), as of December 31, 2008.
- Review plan experience for the year(s) ended December 31, 2008.
- Provide advisory information on system-wide employer contribution rates and employer contribution rates for the School District rate pool and the State and Local Government Rate Pool for the period beginning July 1, 2011.
- Provide reporting and disclosure information for financial statements for governmental plans pursuant to GASB Statements Number 25 and 43.

This valuation report may not be relied upon for any other purpose or by any party other than the Oregon Public Employees Retirement System, any employer participating in the System or any auditor employed by the System or a participating employer solely for the purpose of completing an audit related to the matters herein. Mercer is not responsible for the consequences of any unauthorized use.

A valuation report is a snapshot of a plan's estimated financial condition at a particular point in time; it does not predict a plan's future financial condition or its ability to pay benefits in the future.

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, plan expenses and the amount earned on any assets invested to pay the benefits. These amounts and other variables are uncertain and unknowable at the valuation date, but are predicted to fall within a reasonable range of possibilities.

To prepare this report, *Actuarial Assumptions*, as described in the section of this report entitled "Actuarial Methods and Assumptions," are used to select a single scenario from a range of possibilities. The results of that single scenario are included in this report. However, the future is uncertain and the plan's actual experience will differ from those assumptions; these differences may be significant or material. In addition, different assumptions or scenarios may also be within the reasonable range and results based on those assumptions would be different. 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. Due to the limited scope of our assignment, we did not perform, nor do we present, an analysis of the potential range of future possibilities and scenarios.

Because actual plan experience will differ from the assumptions, decisions about benefit changes, investment policy, funding amounts, benefit security and/or benefit-related issues should be made only after careful consideration of alternative future financial conditions and scenarios, and not solely on the basis of a valuation report or reports.

### **Data and Plan Provisions**

To prepare this report, Mercer has used and relied on member and financial data submitted by the Oregon Public Employees Retirement System. We have reviewed the financial and member data for internal consistency and general reasonableness, but we have not verified or audited any of the data or information provided. We have also used and relied on the plan provisions described in Oregon Revised Statutes Sections 238 and 238A and legislative amendments supplied by the Oregon Public Employees Retirement System. A summary of the plan provisions valued is presented in our report. The Oregon Public Employees Retirement System is solely responsible for the accuracy. validity and comprehensiveness of this information. If the 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

### Certification

require a later revision of this report. We understand that the market values of private equity and some real estate investments are reported on a 3-month lag. We have made no adjustment to the reported market value of assets to account for this lag. A very brief discussion of this issue is provided in the Executive Summary.

### Actuarial Calculations, Methods, Assumptions and Accounting

To the best of our knowledge and belief, this report is complete and accurate and all costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures in accordance with applicable statutes, using an actuarial cost method approved by the Board. Assumptions used are based on the last experience study, as adopted by the Board on July 16, 2009. This valuation is based on assumptions, plan provisions, methods and other parameters as summarized in this report. If this information is inaccurate or incomplete or does not reflect current statutes, regulations or Board directives, the reader of this report should not rely on the valuation results and should notify Mercer promptly. In our opinion, this report fully and fairly discloses the actuarial position of the plan on an ongoing basis.

### **Professional Qualifications**

We are available to answer any questions on the material contained in the 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 Principal

Scott D. Preppernau, FSA, EA, MAAA Senior Associate

November 9, 2009 Date

November 9, 2009

Date

Mercer (US), Inc. 111 SW Columbia Avenue, Suite 500 Portland, Oregon 97201-5839 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.

# **System-Wide Assets**

The table below reconciles the market value of assets, as provided by PERS, to the asset values used in this valuation.

|   | Tier 1/<br>Tier 2 | OPSRP       | А  | Side<br>ccounts | а  | ontingency<br>nd Capital<br>reservation<br>Reserve | <br>Rate<br>Jarantee<br>Reserve | <br>HIA and<br>RHIPA | System<br>Totals |
|---|-------------------|-------------|----|-----------------|----|--|---------------------------------|----------------------|------------------|
| Amount reported by PERS<br>December 31, 2008          | \$<br>38,565.8    | \$<br>270.5 | \$ | 5,134.5         | \$ | 653.2  | \$<br>(978.5)                   | \$<br>189.5          | \$<br>43,835.1   |
| Net Pre-SLGRP Liabilities December 31, 2008 Actuarial | \$<br>(450.2)     | \$<br>-     | \$ | -               | \$ | -  | \$<br>-                         | \$<br>-              | \$<br>(450.2)    |
| Value of Assets Amounts in millions                   | \$<br>38,115.6    | \$<br>270.5 | \$ | 5,134.5         | \$ | 653.2  | \$<br>(978.5)                   | \$<br>189.5          | \$<br>43,384.9   |

PERS calculates the amount that should be transferred from side accounts to employer reserves in Tier 1/Tier 2 and OPSRP for rate relief on a monthly basis. PERS does not track net Pre-SLGRP liabilities.

Employer supplemental deposits establish individual side accounts within the pension trust. The side accounts are treated as prepaid contributions. Employer contribution rates are first determined excluding side accounts. Then, an amortized portion of the side account is used to offset the contribution otherwise required for the individual employers that have side accounts. While side accounts are excluded from valuation assets in determining contribution rates for each of the rate pools, side accounts are included in valuation assets for financial reporting purposes such as the reporting of funded status.

In addition, pension assets are held in the Contingency reserve, the Capital Preservation reserve, and the Tier 1 Rate Guarantee reserve. These three reserves are excluded from valuation assets for all purposes. Finally, assets are held in separate accounts established under Internal Revenue Code Section 401(h) (the Retirement Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA)) to provide retiree medical benefits.

### System-Wide Assets

The following table reconciles the changes in the system-wide assets from December 31, 2007 to December 31, 2008. The reconciliation of assets is provided by PERS.

|  |        |              |               |    |             |             |    | Capital     |    |              |      |             |    |             |
|--|--------|--------------|---------------|----|-------------|-------------|----|-------------|----|--------------|------|-------------|----|-------------|
| <b>Reconciliation of Pension and Retiree</b> |        |              |               |    |             | Contingency | Р  | reservation | Ra | te Guarantee |      |             |    |             |
| Healthcare Assets                            | Т      | ier 1/Tier 2 | OPSRP         | Si | de Accounts | Reserve     |    | Reserve     |    | Reserve      | RHIA | A and RHIPA | Sy | stem Totals |
| Additions                                    |        |              |               |    |             |             |    |             |    |              |      |             |    |             |
| 1. Contributions                             |        |              |               |    |             |             |    |             |    |              |      |             |    |             |
| a. Employer                                  | \$     | 525.2        | \$<br>103.5   | \$ | 10.3        | \$<br>-     | \$ | -           | \$ | -            | \$   | 29.9        | \$ | 669.0       |
| b. Transfer from side accounts <sup>1</sup>  | \$     | 560.0        | \$<br>-       | \$ | (560.0)     | \$<br>-     | \$ | -           | \$ | -            | \$   | -           | \$ | -           |
| c. Judge member contributions                | \$     | 1.5          | \$<br>-       | \$ | -           | \$<br>-     | \$ | -           | \$ | -            | \$   | -           | \$ | 1.5         |
| d. Member service purchases                  | \$     | 5.8          | \$<br>-       | \$ | -           | \$<br>-     | \$ | -           | \$ | -            | \$   | -           | \$ | 5.8         |
| e. Total                                     | \$     | 1,092.6      | \$<br>103.5   | \$ | (549.7)     | \$<br>-     | \$ | -           | \$ | -            | \$   | 29.9        | \$ | 676.4       |
| 2. Net investment income                     |        |              |               |    |             |             |    |             |    |              |      |             |    |             |
| a. Transfers                                 | \$     | -            | \$<br>-       | \$ | -           | \$<br>-     | \$ | -           | \$ | -            | \$   | -           | \$ | -           |
| b. From investments                          | \$     | (11,544.1)   | \$<br>(100.9) | \$ | (1,973.7)   | \$<br>-     | \$ | -           | \$ | (2,867.6)    | \$   | (68.1)      | \$ | (16,554.4)  |
| c. Total                                     | \$     | (11,544.1)   | \$<br>(100.9) | \$ | (1,973.7)   | \$<br>-     | \$ | -           | \$ | (2,867.6)    | \$   | (68.1)      | \$ | (16,554.4)  |
| 3. Other <sup>2</sup>                        | \$     | 1.5          | \$<br>-       | \$ | -           | \$<br>-     | \$ | -           | \$ | -            | \$   | -           | \$ | 1.5         |
| 4. Total additions                           | \$     | (10,450.0)   | \$<br>2.7     | \$ | (2,523.4)   | \$<br>-     | \$ | -           | \$ | (2,867.6)    | \$   | (38.2)      | \$ | (15,876.6)  |
| Deductions                                   |        |              |               |    |             |             |    |             |    |              |      |             |    |             |
| 5. Retirement and survivor benefits          | \$     | (2,784.6)    | \$<br>(0.3)   | \$ | -           | \$<br>-     | \$ | -           | \$ | -            | \$   | (29.9)      | \$ | (2,814.7)   |
| 6. Death Benefits                            | \$     | 0.7          | \$<br>-       | \$ | -           | \$<br>-     | \$ | -           | \$ | -            | \$   | -           | \$ | 0.7         |
| 7. Refund of contributions                   | \$     | (27.1)       | \$<br>-       | \$ | -           | \$<br>-     | \$ | -           | \$ | -            | \$   | -           | \$ | (27.1)      |
| 9. Administrative expenses                   | \$     | (22.4)       | \$<br>(6.9)   | \$ | (0.2)       | \$<br>-     | \$ | -           | \$ | -            | \$   | (1.0)       | \$ | (30.5)      |
| 10. Total deductions                         | \$     | (2,833.4)    | \$<br>(7.2)   | \$ | (0.2)       | \$<br>-     | \$ | -           | \$ | -            | \$   | (30.9)      | \$ | (2,871.7)   |
| 11. Net change                               | \$     | (13,283.4)   | \$<br>(4.5)   | \$ | (2,523.6)   | \$<br>-     | \$ | -           | \$ | (2,867.6)    | \$   | (69.1)      | \$ | (18,748.3)  |
| 12. Net assets held in trust for pension be  | nefits |              |               |    |             |             |    |             |    |              |      |             |    | -           |
| a. Beginning of year                         | \$     | 51,849.2     | \$<br>275.1   | \$ | 7,658.1     | \$<br>653.2 | \$ | -           | \$ | 1,889.2      | \$   | 258.6       | \$ | 62,583.4    |
| b. End of year                               | \$     | 38,565.8     | \$<br>270.5   | \$ | 5,134.5     | \$<br>653.2 | \$ | -           | \$ | (978.5)      | \$   | 189.5       | \$ | 43,835.1    |

<sup>1</sup> Side account transfers shown in this exhibit are all credited to Tier 1/Tier 2 assets. We understand the portion to be credited to OPSRP is credited through the employer contribution line of the exhibit.

<sup>2</sup> Includes TRFA transfer from Metlife and adjustments by PERS.

# **System-Wide Assets**

### **Reconciliation of Side Accounts**

Side accounts are established for employers who make supplemental payments (a lump sum payment in excess of the required employer contribution). For SLGRP employers, this supplemental payment is first applied toward the employer's Transition Liability, and any excess is established in a Side Account. A reconciliation of the side accounts from December 31, 2007, to December 31, 2008, is shown below on a rate pool basis. For this exhibit, all independent employers are grouped together.

|                                  | SLGRP |         | School<br>Districts | ependent<br>ployers | Sys | tem Totals |
|----------------------------------|-------|---------|---------------------|---------------------|-----|------------|
| Side Accounts, December 31, 2007 | \$    | 3,640.6 | \$<br>3,897.1       | \$<br>120.5         | \$  | 7,658.1    |
| Deposits during 2008             |       | 10.3    | -                   | -                   |     | 10.3       |
| Interest                         |       | (939.5) | (1,003.1)           | (31.1)              |     | (1,973.7)  |
| Administrative expenses          |       | (0.0)   | (0.1)               | (0.0)               |     | (0.2)      |
| Transfers to employer reserves   |       | (269.1) | (282.4)             | (8.5)               |     | (560.0)    |
| Side Accounts, December 31, 2008 | \$    | 2,442.2 | \$<br>2,611.4       | \$<br>80.9          | \$  | 5,134.5    |
|                                  |       |         |                     |                     |     |            |

Amounts in millions

### **Development of Side Account Rate Relief**

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over the period ending December 31, 2027 and expressing the result as a percentage of combined valuation payroll. The table below shows the average rate relief attributable to side accounts for each rate pool.

|                                   |    | December 31, 2008 |    |                     |    |                      |     |            |  |  |  |  |  |
|-----------------------------------|----|-------------------|----|---------------------|----|----------------------|-----|------------|--|--|--|--|--|
|                                   |    | SLGRP             | I  | School<br>Districts |    | ependent<br>nployers | Sys | tem Totals |  |  |  |  |  |
| 1. Side Account                   | \$ | 2,442.2           | \$ | 2,611.4             | \$ | 80.9                 | \$  | 5,134.5    |  |  |  |  |  |
| 2. Combined valuation payroll     | \$ | 4,521.3           | \$ | 2,815.4             | \$ | 793.4                | \$  | 8,130.1    |  |  |  |  |  |
| 3. Amortization Factor            |    | 13.091            |    | 13.091              |    | 13.091               |     | 13.091     |  |  |  |  |  |
| 4. Average Side Account Rate Reli | ef | 4.13%             |    | 7.09%               |    | 0.78%                |     | 4.82%      |  |  |  |  |  |
| A                                 |    |                   |    |                     |    |                      |     |            |  |  |  |  |  |

### **Tier 1/Tier 2 Valuation**

#### Tier 1/Tier 2 Pension Assets

#### Summary of Actuarial Value of Assets

This section summarizes the current Tier 1/Tier 2 pension valuation assets as of the current and prior actuarial valuation. For valuation purposes, pension assets are divided among the State & Local Government Rate Pool (SLGRP), the School District Pool, and various independent employers to determine employer contribution rates. For this system-wide report, all independent employers, including State Judiciary, have been grouped together as if they were a rate pool.

|   |    |                                 |    | School                         | Ind | ependent                    | Tier 1/Tier 2<br>Totals <sup>1</sup> |                                 |  |
|---|----|---------------------------------|----|--------------------------------|-----|-----------------------------|--------------------------------------|---------------------------------|--|
|   |    | SLGRP                           |    | Districts                      | Er  | mployers                    |                                      |                                 |  |
| December 31, 2008   |    |                                 |    |                                |     |                             |                                      |                                 |  |
| Member reserves   | \$ | 4,644.1                         | \$ | 2,944.4                        | \$  | 752.4                       | \$                                   | 8,341.5                         |  |
| Employer reserves   |    | 7,362.6                         |    | 4,095.9                        |     | 1,369.7                     |                                      | 12,706.1                        |  |
| Benefit in force reserves   |    | 8,302.4                         |    | 7,806.9                        |     | 1,373.6                     |                                      | 17,518.2                        |  |
| Net outstanding pre-SLGRP liabilities                             |    | (450.2)                         |    |                                |     |                             |                                      | (450.2)                         |  |
| Total actuarial value of assets                                   | \$ | 19,859.0                        | \$ | 14,847.1                       | \$  | 3,495.7                     | \$                                   | 38,115.6                        |  |
| December 31, 2007   |    |                                 |    |                                |     |                             |                                      |                                 |  |
| Member reserves<br>Employer reserves<br>Benefit in force reserves | \$ | 5,113.1<br>10,045.2<br>11,970.5 | \$ | 3,268.0<br>5,715.4<br>11,173.0 | \$  | 843.1<br>1,868.9<br>1,933.0 | \$                                   | 9,225.0<br>17,494.7<br>25,129.5 |  |
| Net outstanding pre-SLGRP<br>liabilities                          |    | (454.6)                         |    | 11,173.0                       |     | 1,933.0                     |                                      | (454.6)                         |  |
| Total actuarial value of assets                                   | \$ | 26,674.2                        | \$ | 20,156.5                       | \$  | 4,645.0                     | \$                                   | 51,394.6                        |  |

Amounts in millions

<sup>1</sup> Includes Multnomah Fire District #10.

Please note that pre-SLGRP liabilities are treated as loans from the SLGRP to the individual employer and pre-SLGRP surpluses are treated as loans from the individual employer to the SLGRP. The assets of the SLGRP used to calculate the pooled contribution rate reflect the net outstanding balance of these loans.

Side accounts are treated as pre-paid contributions. Consequently, they are not reflected in the actuarial value of assets shown above. The actuarial value of assets for each rate pool is used to develop the contribution rate for that pool. Side accounts are used to adjust the pooled contribution rate for individual employers. The net impact of side accounts is shown in a separate section of this report.

#### **Tier 1/Tier 2 Valuation** (continued)

#### Tier 1/Tier 2 Pension Assets (continued)

#### Reconciliation of Actuarial Value of Assets

The table below shows a reconciliation of the actuarial value of assets from the prior valuation to the current valuation for each of the rate pools. Again, independent employers, including State Judiciary, are treated as if they were a single rate pool for purposes of the system-wide report.

|   |    | SLGRP     | Sch | ool Districts |    | Independent<br>Employers | Tier 1/Tier 2<br>Totals <sup>1</sup> |            |  |
|---|----|-----------|-----|---------------|----|--------------------------|--------------------------------------|------------|--|
| Actuarial value of assets,<br>December 31, 2007 | \$ | 26,674.2  |     | 20,156.5      | \$ | 4,645.0                  | \$                                   | 51,394.6   |  |
| Contributions                                   | Ŧ  |           | Ŧ   | _0,10010      | Ŧ  | .,                       | Ŧ                                    | 01,00110   |  |
| Employer  | \$ | 295.6     | \$  | 186.1         | \$ | 91.1                     |                                      | 572.8      |  |
| Side account transfers                          | \$ | 269.1     | \$  | 282.4         | \$ | 8.5                      |                                      | 560.0      |  |
| Member  | \$ | 0.0       | \$  | 0.0           | \$ | 1.5                      |                                      | 1.5        |  |
| Total contributions                             | \$ | 564.7     | \$  | 468.6         | \$ | 101.1                    |                                      | 1,134.4    |  |
| Investment income                               |    | (6,016.4) |     | (4,473.8)     |    | (1,048.3)                |                                      | (11,551.9) |  |
| Benefit payments                                |    | (1,342.9) |     | (1,262.8)     |    | (222.2)                  |                                      | (2,833.6)  |  |
| Adjustments <sup>2</sup>                        |    | (20.6)    |     | (41.4)        |    | 20.1                     |                                      | (27.9)     |  |
| Actuarial value of assets,<br>December 31, 2008 | \$ | 19,859.0  | \$  | 14,847.1      | \$ | 3,495.7                  | \$                                   | 38,115.6   |  |
| A second a line second little second            |    |           |     |               |    |                          |                                      |            |  |

Amounts in millions

<sup>1</sup> Includes Multnomah Fire District #10.

<sup>2</sup> Adjustments include a reallocation of the benefits in force reserve, transfers to Multnomah Fire District #10, member service purchases and other adjustments made by PERS.

### Tier 1/Tier 2 Valuation (continued)

#### Tier 1/Tier 2 Pension Assets (continued)

#### Outstanding Balance of Pre-SLGRP Liabilities

In the valuation, pre-SLGRP liabilities are treated as assets of the SLGRP. That is, a pre-SLGRP liability is essentially a debt owed to the SLGRP by the employer. Pre-SLGRP surpluses are essentially loans by employers to the SLGRP.

Prior to the formation of the SLGRP, the State and Community Colleges were pooled together and some employers participated in the Local Government Rate Pool (LGRP). The UAL attributable to the State and Community Colleges or the LGRP at the time the SLGRP was formed is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate.

Similarly, when an independent employer joins the SLGRP, a transition liability or surplus is calculated to ensure that each employer enters the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the pre-SLGRP pooled liability attributable to the State and Community Colleges and the LGRP from the last valuation to the current valuation. It also shows the reconciliation of the total transition liability or surplus from the last valuation to the current valuation.

|   | Sta | ate and |     | Local    |    |            |         |
|---|-----|---------|-----|----------|----|------------|---------|
|   | Cor | nmunity | Gov | vernment |    |            |         |
|   | Co  | olleges | Ra  | ate Pool | Tr | ansition   | Total   |
| 1. Pre-SLGRP liability/(surplus),         |     |         |     |          |    |            |         |
| January 1, 2008                           | \$  | 639.9   | \$  | (261.6)  | \$ | (832.9) \$ | (454.6) |
| 2. Employer contributions attributable to |     |         |     |          |    |            |         |
| liability/(surplus)                       |     | (55.9)  |     | 21.2     |    | 72.6       | 37.9    |
| 3. Supplemental payments                  |     | 0.0     |     | 0.0      |    | (0.1)      | (0.1)   |
| 4. Interest                               |     | 46.7    |     | (19.2)   |    | (60.8)     | (33.3)  |
| 5. Pre-SLGRP liability/(surplus),         |     |         |     |          |    |            |         |
| December 31, 2008                         |     |         |     |          |    |            |         |
| (1. + 2. + 3. + 4.)                       | \$  | 630.8   | \$  | (259.6)  | \$ | (821.3) \$ | (450.2) |
| A ( 1 111                                 |     |         |     |          |    |            |         |

#### Tier 1/Tier 2 Valuation (continued)

### Tier 1/Tier 2 Pension Liabilities

#### Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

Because no additional Member contributions are permitted, the Money Match formula is essentially frozen. Consequently, Members who are expected to retire under the Money Match formula have no normal cost.

A summary of the normal cost by decrement is shown below on a system-wide basis for the Tier 1/Tier 2 pension benefits.

|                     |       |               |       |               | Percent |
|---------------------|-------|---------------|-------|---------------|---------|
|                     | Decen | nber 31, 2008 | Decen | nber 31, 2007 | Change  |
| Normal Cost         |       |               |       |               |         |
| Service Retirement  | \$    | 451.6         | \$    | 351.6         | 28.4%   |
| Vested Benefits     |       | 25.9          |       | 15.9          | 63.2%   |
| Duty Disability     |       | 1.3           |       | 1.6           | (18.3%) |
| Nonduty Disability  |       | 9.1           |       | 11.8          | (23.2%) |
| Death               |       | 0.0           |       | 0.0           | (1.8%)  |
| Total Normal Cost   | \$    | 487.8         | \$    | 380.9         | 28.1%   |
| Amounts in millions |       |               |       |               |         |

The increase in the normal cost since the prior valuation is primarily attributable to the expected increase in pension normal cost, assumption changes, and demographic experience. The expected increase for the pension

normal cost is due to both the aging of the Tier 1/Tier 2 membership and the expected shift from Money Match to Full Formula benefits. The table below reconciles the normal cost from the prior valuation to the current valuation.

|  | Tier 1/Tier | 2 Pension |
|--|-------------|-----------|
| Normal Cost, December 31, 2007                 | \$          | 380.9     |
| Expected increase                              |             | 34.3      |
| Assumption changes                             |             | 31.0      |
| Plan changes                                   |             | -         |
| Deviations from expected experience            |             |           |
| Age and service retirements from active status |             | 5.9       |
| Active mortality and withdrawal                |             | (2.7)     |
| Pay increases                                  |             | 11.5      |
| Interest Crediting Experience                  |             | 16.0      |
| All other sources                              |             | 10.9      |
| Total demographic (gains) and losses           |             | 41.6      |
| Normal Cost, December 31, 2008                 | \$          | 487.8     |
| Amounts in millions                            |             |           |

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### Tier 1/Tier 2 Valuation (continued)

### Tier 1/Tier 2 Pension Liabilities (continued)

A summary of the normal cost by tier and employment category for each rate pool is shown below. Again, independent employers, including State Judiciary, are treated as if they were a single rate pool for purposes of the system-wide report.

|  |    | December 31, 2008 |    |                     |    |                       |     |                        |    | December 31, 2007     |                   |
|--|----|-------------------|----|---------------------|----|-----------------------|-----|------------------------|----|-----------------------|-------------------|
|  | s  | SLGRP             |    | School<br>Districts |    | dependent<br>mployers | Tie | er 1/ Tier 2<br>Totals |    | Tier 1/ Tier 2 Totals | Percent<br>Change |
| Normal Cost                              |    |                   |    |                     |    |                       |     |                        |    |                       |                   |
| Tier 1 General Service                   | \$ | 80.8              | \$ | 62.9                | \$ | 14.9                  | \$  | 158.6                  | \$ | 114.4                 | 38.6%             |
| Tier 2 General Service                   |    | 116.0             |    | 85.1                |    | 17.5                  |     | 218.6                  |    | 166.0                 | 31.7%             |
| Tier 1 Police & Fire                     |    | 43.1              |    | 0.5                 |    | 16.0                  |     | 59.6                   |    | 55.1                  | 8.3%              |
| Tier 2 Police & Fire                     |    | 39.7              |    | 0.2                 |    | 11.1                  |     | 51.0                   |    | 45.4                  | 12.2%             |
| Total Normal Cost<br>Amounts in millions | \$ | 279.5             | \$ | 148.7               | \$ | 59.6                  | \$  | 487.8                  | \$ | 380.9                 | 28.1%             |

#### Tier 1/Tier 2 Valuation (continued)

### Tier 1/Tier 2 Pension Liabilities (continued)

### Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. A summary of the actuarial accrued liability by decrement is shown below on a system-wide basis for the Tier 1/Tier 2 pension benefits.

|                                      |       |               |       |               | Percent |
|--------------------------------------|-------|---------------|-------|---------------|---------|
|                                      | Decer | nber 31, 2008 | Decen | nber 31, 2007 | Change  |
| Active                               |       |               |       |               |         |
| Service Retirement                   | \$    | 17,373.2      | \$    | 17,236.2      | 0.8%    |
| Vested Benefits                      |       | 1,131.7       |       | 1,417.6       | (20.2%) |
| Duty Disability                      |       | 45.2          |       | 50.7          | (10.8%) |
| Nonduty Disability                   |       | 351.0         |       | 510.4         | (31.2%) |
| Death                                |       | 224.2         |       | 265.8         | (15.6%) |
| Total Actives                        | \$    | 19,125.4      | \$    | 19,480.7      | (1.8%)  |
| Dormant Members                      |       | 4,656.0       |       | 4,420.5       | 5.3%    |
| Retired Members and<br>Beneficiaries |       | 30,141.3      |       | 28,766.9      | 4.8%    |
| Total Actuarial Accrued<br>Liability | \$    | 53,922.7      | \$    | 52,668.1      | 2.4%    |
| Amounts in millions                  |       |               |       |               |         |

### Tier 1/Tier 2 Valuation (continued)

### Tier 1/Tier 2 Pension Liabilities (continued)

#### Actuarial Accrued Liability (continued)

A summary of actuarial accrued liabilities based on member status, tier and employment category is shown in the table below. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

|  |    |          | December 31, 2008 |               |    |            |    |                     |                                     | mber 31, 2007 | _       |  |
|--|----|----------|-------------------|---------------|----|------------|----|---------------------|-------------------------------------|---------------|---------|--|
|  |    |          |                   | School Indepe |    | ndependent | т  | ier 1 / Tier 2      |                                     |               | Percent |  |
|  | SL |          | SLGRP Districts   |               |    | Employers  |    | Totals <sup>1</sup> | Tier 1 / Tier 2 Totals <sup>1</sup> |               | Change  |  |
| Active Members   |    |          |                   |               |    |            |    |                     |                                     |               |         |  |
| Tier 1 General Service   | \$ | 7,520.9  | \$                | 6,066.9       | \$ | 1,078.3    | \$ | 14,666.2            | \$                                  | 15,245.8      | (3.8%)  |  |
| Tier 1 Police & Fire   |    | 1,297.2  |                   | 7.3           |    | 502.3      |    | 1,807.7             |                                     | 1,810.0       | (0.1%)  |  |
| Tier 1 Total   | \$ | 8,818.0  | \$                | 6,074.2       | \$ | 1,580.6    | \$ | 16,473.8            | \$                                  | 17,055.8      | (3.4%)  |  |
| Tier 2 General Service   |    | 1,175.0  |                   | 821.9         |    | 180.2      | \$ | 2,177.0             |                                     | 2,010.2       | 8.3%    |  |
| Tier 2 Police & Fire   |    | 373.8    |                   | 2.8           |    | 97.9       |    | 474.5               |                                     | 414.7         | 14.4%   |  |
| Tier 2 Total   | \$ | 1,548.7  | \$                | 824.7         | \$ | 278.1      | \$ | 2,651.5             | \$                                  | 2,424.9       | 9.3%    |  |
| Total Active Members   | \$ | 10,366.7 | \$                | 6,898.9       | \$ | 1,858.7    | \$ | 19,125.4            | \$                                  | 19,480.7      | (1.8%)  |  |
| Dormant Members  |    | 2,900.1  |                   | 1,411.5       |    | 343.9      |    | 4,656.0             |                                     | 4,420.5       | 5.3%    |  |
| Retired Members and Beneficiaries<br>Total Tier 1/ Tier 2 Pension Liability, |    | 14,284.9 |                   | 13,432.3      |    | 2,363.4    |    | 30,141.3            |                                     | 28,766.9      | 4.8%    |  |
| December 31, 2008  | \$ | 27,551.8 | \$                | 21,742.7      | \$ | 4,566.0    | \$ | 53,922.7            | \$                                  | 52,668.1      | 2.4%    |  |

Amounts in millions

<sup>1</sup> Includes Multnomah Fire District #10.

### Tier 1/Tier 2 Valuation (continued)

### Tier 1/Tier 2 Pension Liabilities (continued)

#### Actuarial Accrued Liability (continued)

The change in actuarial accrued liability since the last valuation reflects the experience of the system. The table below reconciles the actuarial accrued liability from the last valuation to this valuation. The actuarial accrued liability is expected to increase due to benefits earned during the year and interest, and to decrease due to benefits paid during the year.

|   | Tier 1/Ti | ier 2 Pension   |
|---|-----------|-----------------|
| Actuarial Accrued Liability December 31, 2007   | \$        | 52,668.1        |
| Expected change   |           | 1,701.4         |
| Assumption changes  |           | 284.8           |
| Plan changes  |           | -               |
| Deviations from expected experience   |           |                 |
| Retirements from active status  |           | 108.6           |
| Active mortality and withdrawal   |           | (16.4)          |
| Pay increases   |           | 80.0            |
| Interest Crediting Experience   |           | (701.2)         |
| Retirement, mortality and lump sums from dormant<br>status<br>Retiree and beneficiary mortality |           | (137.7)<br>69.7 |
| Data Corrections  |           | 09.7            |
| Other   |           | (134.6)         |
| Total demographic (gains) and losses  |           | (731.6)         |
| Actuarial Accrued Liability December 31, 2008   | \$        | 53,922.7        |

### Tier 1/Tier 2 Valuation (continued)

#### Tier 1/Tier 2 Pension Unfunded Accrued Liability (UAL)

#### Calculation of UAL

The Unfunded Accrued Liability (UAL) represents the difference between the actuarial accrued liability and the valuation assets. To determine employer contribution rates, the UAL is calculated excluding side accounts. The calculated contribution rate is later offset by an amortized portion of the side accounts for individual employers with such accounts. A summary of the UAL by rate pool is shown on the following table. All independent employers, including State Judiciary, have been grouped together.

|    |  | SLGRP          | 50 | hool Districts | Independent<br>Employers | Т  | ier 1 / Tier 2<br>Totals <sup>1</sup> |
|----|--|----------------|----|----------------|--------------------------|----|---------------------------------------|
| De | cember 31, 2008  | JLORF          | 30 | noor Districts | Linployers               |    | Totals                                |
| 1. | Actuarial accrued liability  | \$<br>27,551.8 | \$ | 21,742.7       | \$<br>4,566.0            | \$ | 53,922.7                              |
| 2. | Actuarial value of assets  | \$<br>19,859.0 | \$ | 14,847.1       | \$<br>3,495.7            | \$ | 38,115.6                              |
| 3. | Unfunded accrued liability   | \$<br>7,692.8  | \$ | 6,895.6        | \$<br>1,070.3            | \$ | 15,807.1                              |
| 4. | Funded percentage (2. ÷ 1.)  | 72.1%          |    | 68.3%          | 76.6%                    |    | 70.7%                                 |
| 5. | Combined Valuation Payroll   | \$<br>4,521.3  | \$ | 2,815.4        | \$<br>793.4              | \$ | 8,130.1                               |
| 6. | Unfunded accrued liability as % of combined valuation payroll (3. $\div$ 5.) | 170.1%         |    | 244.9%         | 134.9%                   |    | 194.4%                                |
| De | cember 31, 2007  |                |    |                |                          |    |                                       |
| 1. | Actuarial accrued liability  | \$<br>26,883.1 | \$ | 21,299.3       | \$<br>4,423.2            | \$ | 52,668.1                              |
| 2. | Actuarial value of assets  | \$<br>26,674.2 | \$ | 20,156.5       | \$<br>4,645.0            | \$ | 51,394.6                              |
| 3. | Unfunded accrued liability   | \$<br>208.9    | \$ | 1,142.8        | \$<br>(221.8)            | \$ | 1,273.6                               |
| 4. | Funded percentage (2. ÷ 1.)  | 99.2%          |    | 94.6%          | 105.0%                   |    | 97.6%                                 |
| 5. | Combined Valuation Payroll   | \$<br>4,264.2  | \$ | 2,693.3        | \$<br>764.3              | \$ | 7,721.8                               |
| 6. | Unfunded accrued liability as % of combined valuation payroll $(3. \div 5.)$ | 4.9%           |    | 42.4%          | (29.0%)                  |    | 16.5%                                 |
| Am | ounts in millions  |                |    |                |                          |    |                                       |

<sup>1</sup> Includes Multnomah Fire District #10

### Tier 1/Tier 2 Valuation (continued)

### Tier 1/Tier 2 Pension Unfunded Accrued Liability (UAL) (continued)

#### **Reconciliation of UAL Bases**

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base will be calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. The amortization base established December 31, 2007 includes only the regular UAL as of that valuation, as the UAL attributable to the change to the Projected Unit Credit cost method is anticipated to be fully amortized by the conclusion of the biennium ending on June 30, 2011. This even-year advisory valuation shows both the progress of the amortization base established on December 31, 2007, with the estimate based on experience during 2008.

The UAL bases are shown for the SLGRP and School District rate pools below. UAL bases for independent employers are developed individually for each employer, and are shown in the employer's individual valuation report.

#### SLGRP

|                   | UA       | L        |    |        |              |    | UAL               | Γ  | lext Year's |
|-------------------|----------|----------|----|--------|--------------|----|-------------------|----|-------------|
| Amortization Base | December | 31, 2007 | Pa | ayment | Interest     | D  | December 31, 2008 |    | Payment     |
| December 31, 2007 | \$       | (450.4)  | \$ | (33.3) | \$<br>(34.6) | \$ | (451.8)           | \$ | (34.5)      |
| December 31, 2008 | N/2      | 4        |    | N/A    | N/A          |    | 8,144.6           |    | 601.5       |
| Total             |          |          |    |        |              | \$ | 7,692.8           | \$ | 567.0       |

#### **School Districts**

|                   |     | UAL       |       |    |        |    |         |    | UAL              | N  | ext Year's |
|-------------------|-----|-----------|-------|----|--------|----|---------|----|------------------|----|------------|
| Amortization Base | Dec | ember 31, | 2007  | Р  | ayment | I  | nterest | D  | ecember 31, 2008 | I  | Payment    |
| December 31, 2007 | \$  |           | 601.5 | \$ | 44.4   | \$ | 46.2    | \$ | 603.3            | \$ | 46.1       |
| December 31, 2008 |     | N/A       |       |    | N/A    |    | N/A     |    | 6,292.3          |    | 464.7      |
| Total             |     |           |       |    |        |    |         | \$ | 6,895.6          | \$ | 510.8      |

#### **Tier 1/Tier 2 Valuation** (continued)

#### Tier 1/Tier 2 Pension Unfunded Accrued Liability (UAL) (continued)

#### Actuarial Gain or Loss since Prior Valuation

In every actuarial valuation, assumptions are made as to the future experience of the plan and covered group of participants. Whenever there is a difference between the actual experience and that anticipated by the actuarial assumptions, there is a gain or loss to the plan. Gains are the result of experience that is more favorable than anticipated (i.e., serves to reduce the unfunded actuarial liability or increase the surplus), while losses are the result of unfavorable experience.

The table below shows the development of the actuarial gain (or loss) for the Tier 1/Tier 2 pension benefits. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

|    |     |   |                 |    | Decemb        | er 3 | 1, 2008    |          |                     |
|----|-----|---|-----------------|----|---------------|------|------------|----------|---------------------|
|    |     |   |                 |    |               | h    | ndependent |          | Tier 1/Tier 2       |
|    |     |   | SLGRP           | Sc | hool District |      | Employers  |          | Totals <sup>1</sup> |
| 1. | Exp | pected actuarial accrued liability  |                 |    |               |      |            | \$<br>\$ |                     |
|    | a.  | Actuarial accrued liability at January 1, 2008  | \$<br>26,883.1  | \$ | 21,299.3      | \$   | 4,423.2    | \$       | 52,668.1            |
|    | b.  | Normal cost at January 1, 2008  | \$<br>217.7     | \$ | 113.4         | \$   | 49.8       | \$       | 380.9               |
|    | c.  | Benefit payments for fiscal year ending December 31, 2008                             | \$<br>(1,332.2) | \$ | (1,252.7)     | \$   | (220.4)    | \$       | (2,811.0)           |
|    | d.  | Interest  | \$<br>2,114.9   | \$ | 1,662.9       | \$   | 348.9      | \$       | 4,131.5             |
|    | e.  | Expected actuarial accrued liability before changes $(a. + b. + c. + d.)$             | \$<br>27,883.4  | \$ | 21,822.9      | \$   | 4,601.5    | \$       | 54,369.5            |
|    | f.  | Change in actuarial accrued liability at December 31, 2008, due to assumption changes | \$<br>147.6     | \$ | 108.8         | \$   | 27.9       | \$       | 284.8               |
|    | g.  | Expected actuarial accrued liability at December 31, 2008 (e. + f.)                   | \$<br>28,031.0  | \$ | 21,931.8      | \$   | 4,629.4    | \$       | 54,654.3            |
| 2. | Act | uarial accrued liability at December 31, 2008   | \$<br>27,551.8  | \$ | 21,742.7      | \$   | 4,566.0    | \$       | 53,922.7            |
| 3. | Lia | bility gain/(loss) (1.g 2)  | \$<br>479.2     | \$ | 189.1         | \$   | 63.4       | \$       | 731.6               |
| 4. | Exp | pected actuarial value of assets  |                 |    |               |      |            |          |                     |
|    | a.  | Actuarial value of assets at January 1, 2008  | \$<br>26,674.2  | \$ | 20,156.5      | \$   | 4,645.0    | \$       | 51,394.6            |
|    | b.  | Actual contributions for 2008   | \$<br>564.7     | \$ | 468.6         | \$   | 101.1      | \$       | 1,134.4             |
|    | C.  | Benefit payments and expenses for fiscal year ending December 31, 2008                | \$<br>(1,342.9) | \$ | (1,262.8)     | \$   | (222.2)    | \$       | (2,833.6)           |
|    | d.  | Interest  | \$<br>2,102.8   | \$ | 1,580.8       | \$   | 366.8      | \$       | 4,043.6             |
|    | e.  | Expected actuarial value of assets before changes $(a. + b. + c. + d.)$               | \$<br>27,998.8  | \$ | 20,943.1      | \$   | 4,890.7    | \$       | 53,739.0            |
|    | f.  | Change in actuarial value of assets at December 31, 2008, due to assumption changes   | \$<br>0.0       | \$ | 0.0           | \$   | 0.0        | \$       | 0.0                 |
|    | g.  | Expected actuarial value of assets at December 31, 2008 (e. + f.)                     | \$<br>27,998.8  | \$ | 20,943.1      | \$   | 4,890.7    | \$       | 53,739.0            |
| 5. | Act | tuarial value of assets as of December 31, 2008                                       | \$<br>19,859.0  | \$ | 14,847.1      | \$   | 3,495.7    | \$       | 38,115.6            |
| 6. | As  | set gain/(loss) (5 4.g.)  | \$<br>(8,139.8) | \$ | (6,095.9)     | \$   | (1,395.0)  | \$       | (15,623.4           |
| 7. | Net | t actuarial gain/(loss) (3. + 6.)   | \$<br>(7,660.6) | \$ | (5,906.8)     | \$   | (1,331.5)  | \$       | (14,891.8)          |
|    | Amo | ounts in millions   |                 |    |               |      |            |          |                     |

<sup>1</sup> Includes Multnomah Fire District #10

### Tier 1/Tier 2 Valuation (continued)

### Tier 1/Tier 2 Pension Unfunded Accrued Liability (UAL) (continued)

#### Reconciliation of the UAL

The UAL is no longer divided into two components to develop employer rates, since the Board eliminated the amortization base created for changing to the Projected Unit Credit funding method. The table below develops the UAL. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

|                          | SLGRP         | School<br>Districts | ependent<br>nployers | Ti | ier 1 / Tier 2<br>Totals <sup>1</sup> |
|--------------------------|---------------|---------------------|----------------------|----|---------------------------------------|
| UAL, December 31, 2007   | \$<br>208.9   | \$<br>1,142.8       | \$<br>(221.8)        | \$ | 1,273.6                               |
| Expected Increase        | 240.4         | 205.6               | 33.7                 |    | 491.4                                 |
| Contributions            | (564.7)       | (468.6)             | (101.1)              |    | (1,134.4)                             |
| Liability (gain) or loss | (479.2)       | (189.1)             | (63.4)               |    | (731.6)                               |
| Asset (gain) or loss     | 8,139.8       | 6,095.9             | 1,395.0              |    | 15,623.4                              |
| Assumption changes       | 147.6         | 108.8               | 27.9                 |    | 284.8                                 |
| UAL, December 31, 2008   | \$<br>7,692.8 | \$<br>6,895.6       | \$<br>1,070.3        | \$ | 15,807.1                              |

Amounts in millions

<sup>1</sup> Includes Multnomah Fire District #10

### Tier 1/Tier 2 Valuation (continued)

### Tier 1/Tier 2 Pension Contribution Rate Development

### Normal Cost Rates

The table below shows the development of the system-wide weighted average normal cost rate.

|                                  |       |               |       |               | Percent |
|----------------------------------|-------|---------------|-------|---------------|---------|
|                                  | Decen | nber 31, 2008 | Decer | nber 31, 2007 | Change  |
| Normal Cost                      |       |               |       |               |         |
| a. Service Retirement            | \$    | 451.6         | \$    | 351.6         | 28.4%   |
| b. Vested Benefits               |       | 25.9          |       | 15.9          | 63.2%   |
| c. Duty Disability               |       | 1.3           |       | 1.6           | (18.3%) |
| d. Nonduty Disability            |       | 9.1           |       | 11.8          | (23.2%) |
| e. Death                         |       | 0.0           |       | 0.0           | (1.8%)  |
| f. Total Normal Cost             | \$    | 487.8         | \$    | 380.9         | 28.1%   |
| Tier 1/ Tier 2 Valuation Payroll | \$    | 6,225.8       | \$    | 6,261.9       | (0.6%)  |
| Average Normal Cost Rate         |       |               |       |               |         |
| a. Service Retirement            |       | 7.25%         |       | 5.62%         |         |
| b. Vested Benefits               |       | 0.42%         |       | 0.25%         |         |
| c. Duty Disability               |       | 0.02%         |       | 0.03%         |         |
| d. Nonduty Disability            |       | 0.15%         |       | 0.19%         |         |
| e. Death                         |       | 0.00%         |       | 0.00%         |         |
| f. Average Normal Cost Rate      |       | 7.84%         |       | 6.08%         |         |
| Amounto in milliono              |       |               |       |               |         |

#### Tier 1/Tier 2 Valuation (continued)

### Tier 1/Tier 2 Pension Contribution Rate Development (continued)

### Normal Cost Rates (continued)

The table below shows the development of the normal cost rate for the various rate pools. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

|                                  |               |     | Decembe       | r 31 | 1, 2008     |    |               |
|----------------------------------|---------------|-----|---------------|------|-------------|----|---------------|
|                                  | <br>          |     |               |      | Independent | Ti | er 1 / Tier 2 |
|                                  | SLGRP         | Sch | ool Districts |      | Employers   |    | Totals        |
| Normal Cost                      |               |     |               |      |             |    |               |
| Tier 1 General Service           | \$<br>80.8    | \$  | 62.9          | \$   | 14.9        | \$ | 158.6         |
| Tier 2 General Service           | \$<br>116.0   | \$  | 85.1          | \$   | 17.5        | \$ | 218.6         |
| Tier 1 Police & Fire             | \$<br>43.1    | \$  | 0.5           | \$   | 16.0        | \$ | 59.6          |
| Tier 2 Police & Fire             | \$<br>39.7    | \$  | 0.2           | \$   | 11.1        | \$ | 51.0          |
| Total Normal Cost                | \$<br>279.5   | \$  | 148.7         | \$   | 59.6        | \$ | 487.8         |
| Tier 1/ Tier 2 Valuation Payroll |               |     |               |      |             |    |               |
| Tier 1 General Service           | \$<br>1,653.0 | \$  | 1,268.0       | \$   | 235.9       | \$ | 3,156.9       |
| Tier 2 General Service           | \$<br>1,227.1 | \$  | 881.6         | \$   | 188.6       | \$ | 2,297.3       |
| Tier 1 Police & Fire             | \$<br>295.4   | \$  | 3.0           | \$   | 109.7       | \$ | 408.2         |
| Tier 2 Police & Fire             | \$<br>277.1   | \$  | 1.2           | \$   | 85.2        | \$ | 363.5         |
| Total Valuation Payroll          | \$<br>3,452.7 | \$  | 2,153.7       | \$   | 619.4       | \$ | 6,225.8       |
| Average Normal Cost Rates        |               |     |               |      |             |    |               |
| Tier 1 General Service           | 4.89%         |     | 4.96%         |      | 6.34%       |    | 5.029         |
| Tier 2 General Service           | 9.45%         |     | 9.66%         |      | 9.27%       |    | 9.529         |
| Tier 1 Police & Fire             | 14.59%        |     | 15.95%        |      | 14.63%      |    | 14.61%        |
| Tier 2 Police & Fire             | 14.32%        |     | 16.72%        |      | 13.05%      |    | 14.039        |
| Average Rates                    |               |     |               |      |             |    |               |
| Tier 1 Average                   | 6.36%         |     | 4.98%         |      | 8.97%       |    | 6.12%         |
| Tier 2 Average                   | 10.35%        |     | 9.67%         |      | 10.45%      |    | 10.139        |
| General Service Average          | 6.83%         |     | 6.89%         |      | 7.64%       |    | 6.929         |
| Police & Fire Average            | 14.46%        |     | 16.17%        |      | 13.94%      |    | 14.349        |
| System Average                   | 8.10%         |     | 6.90%         |      | 9.62%       |    | 7.84%         |
| Member Contributions             |               |     |               |      | 0.21%       |    | 0.029         |
| Employer System Average          | 8.10%         |     | 6.90%         |      | 9.41%       |    | 7.82%         |

#### Tier 1/Tier 2 Valuation (continued)

## Tier 1/Tier 2 Pension Contribution Rate Development (continued)

#### UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

The following table develops the UAL rate separately for each of the rate pools. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

|                               | <br>December 31, 2008 |      |               |    |                       |     |                                      |  |  |  |
|-------------------------------|-----------------------|------|---------------|----|-----------------------|-----|--------------------------------------|--|--|--|
|                               | SLGRP                 | Scho | ool Districts |    | dependent<br>mployers | Tie | er 1 / Tier 2<br>Totals <sup>1</sup> |  |  |  |
| 1. Total UAL                  | \$<br>7,692.8         | \$   | 6,895.6       | \$ | 1,070.3               | \$  | 15,807.1                             |  |  |  |
| 2. Next year's UAL payment    | 567.0                 |      | 510.8         |    | 78.2                  |     | 1,155.9                              |  |  |  |
| 3. Combined valuation payroll | \$<br>4,521.3         | \$   | 2,815.4       | \$ | 793.4                 | \$  | 8,130.1                              |  |  |  |
| 4. UAL rate (2 ÷ 3)           | 12.54%                | •    | 18.14%        |    | 9.86%                 |     | 14.22%                               |  |  |  |
|                               |                       |      |               |    |                       |     |                                      |  |  |  |

Amounts in millions

<sup>1</sup> While the Tier 1/Tier 2 Total UAL amount includes the UAL for Multnomah Fire District #10 (MFD), the UAL rate for MFD is developed separately in this report and is added to the rates shown in this table.

## Tier 1/Tier 2 Valuation (continued)

#### Tier 1/Tier 2 Pension Contribution Rate Development (continued)

#### Pre-SLGRP Pooled Rate

Prior to the formation of the SLGRP, the State and Community Colleges were pooled together and some employers participated in the Local Government Rate Pool (LGRP). The UAL attributable to the State and Community Colleges and the LGRP at the time the SLGRP was formed is maintained separately from the UAL for the SLGRP. The balance of the pre-SLGRP pooled liability attributable to the State and Community Colleges or the LGRP on the valuation date is amortized over the period ending December 31, 2027, and expressed as a percentage of combined valuation payroll.

|   | Dece | mber 31, 2008 | Dece | mber 31, 2007 |
|---|------|---------------|------|---------------|
| State and Community College Pool                |      |               |      |               |
| 1. Total pre-SLGRP pooled liability             | \$   | 630.8         | \$   | 639.9         |
| 2. Combined valuation payroll                   | \$   | 2,546.7       | \$   | 2,393.1       |
| 3. Amortization Factor                          |      | 13.091        |      | 13.772        |
| 4. Pre-SLGRP pooled rate $(1. \div 2. \div 3.)$ |      | 1.89%         |      | 1.94%         |
| Local Government Rate Pool                      |      |               |      |               |
| 1. Total pre-SLGRP pooled liability             | \$   | (259.6)       | \$   | (261.6)       |
| 2. Combined valuation payroll                   | \$   | 1,144.4       | \$   | 1,073.7       |
| 3. Amortization Factor                          |      | 13.091        |      | 13.772        |
| 4. Pre-SLGRP pooled rate $(1. \div 2. \div 3.)$ |      | (1.73%)       |      | (1.77%)       |

#### Tier 1/Tier 2 Valuation (continued)

#### Tier 1/Tier 2 Pension Contribution Rate Development (continued)

#### Transition Liability or Surplus Rate

When an employer joins the SLGRP, a transition liability or surplus is calculated to ensure that each employer enters the pool on a comparable basis. The transition liability is maintained separately from the UAL for the SLGRP. The transition liability for an employer who joined the SLGRP after the change to the PUC method is divided into a portion attributable to the change to PUC and a regular transition liability. In the prior valuation, the balance of the transition liability remaining on the valuation date attributable to the PUC change was amortized over a rolling three-year period and the balance attributable to the regular transition liability was amortized over the period ending December 31, 2027. It is anticipated that the PUC transition liability / (surplus) will be fully amortized by the conclusion of the biennium ending on June 30, 2011. As a result, in the current valuation only the "Regular transition liability / (surplus)" is used the calculation of advisory rates for the biennium commencing July 1, 2011. All amortizations are expressed as a percentage of combined valuation payroll.

|   |  | Dec | ember 31, 2008 | De   | ecember 31, 2007   |
|---|--|-----|----------------|------|--------------------|
| ( | Fotal transition liability / (surplus)   | \$  | (821.3)        | \$   | (832.9)            |
|   | Fransition liability / (surplus) - change to<br>PUC  | \$  | (11.4)         | \$   | (16.9)             |
|   | Fransition liability / (surplus) - regular UAL<br>1 2.)  | \$  | (809.9)        | \$   | (816.0)            |
| ; | Combined valuation payroll   | \$  | 1,866.5        | \$   | 1,770.3            |
| - | 3-Year amortization factor   |     | N/A            |      | 2.831              |
| N | Amortization Factor  |     | 13.091         |      | 13.772             |
|   | Average transition liability/(surplus) -<br>change to PUC (2. ÷ 4. ÷ 5.)<br>Average transition liability/(surplus) -<br>regular UAL (3. ÷ 4. ÷ 6.) |     | N/A<br>(3.31%) |      | (0.34%)<br>(3.35%) |
| e | Average transition liability/(surplus) -<br>egular UAL (3. ÷ 4. ÷ 6.)<br>unts in millions  |     | (3.3           | 31%) | 31%)               |

#### Tier 1/Tier 2 Valuation (continued)

#### Tier 1/Tier 2 Pension Contribution Rate Development (continued)

#### Multnomah FD #10 UAL Rate

The Multnomah FD #10 UAL rate is determined by amortizing Multnomah FD #10's unfunded actuarial accrued liability over the period ending December 31, 2027, and expressing the result as a percentage of combined valuation payroll.

As part of the 2003 Legislation, the Multnomah FD#10 UAL was allocated to Tier 1/Tier 2 employers. Multnomah FD#10 was allocated \$50,000 of the outstanding UAL, which was fully paid in November, 2003. Of the remaining UAL, City of Portland is allocated 21.8743%, while all Tier 1/Tier 2 employers, including City of Portland, share in the remaining 78.1257%. In addition, four other employers (City of Gresham, City of Fairview, City of Wood Village, and City of Troutdale) are required to pay twice the rate that is determined under item 6.b. below. Thus, the combined valuation payroll for all Tier 1/Tier 2 employers, shown below in item 4.b., includes twice the valuation payroll for those four employers.

|    |   | Dece | mber 31, 2008 | Dece | ember 31, 2007 |
|----|---|------|---------------|------|----------------|
| 1. | Actuarial accrued liability   |      | -             |      |                |
|    | a. Active members   | \$   | 1.1           | \$   | 1.1            |
|    | b. Dormant members  | \$   | 0.4           | \$   | 0.8            |
|    | c. Retired members and beneficiaries  | \$   | 60.7          | \$   | 60.6           |
|    | d. Total actuarial accrued liability  | \$   | 62.2          | \$   | 62.5           |
| 2. | Actuarial value of assets   |      |               |      |                |
|    | a. Employer reserve   | \$   | (122.2)       | \$   | (134.8)        |
|    | b. Members reserve  | \$   | 0.6           | \$   | 0.7            |
|    | c. Benefits in force reserve  | \$   | 35.3          | \$   | 53.0           |
|    | d. Total actuarial value of aseets  | \$   | (86.3)        | \$   | (81.2)         |
| 3. | Multnomah FD #10 UAL  | \$   | 148.5         | \$   | 143.7          |
| 0. | a. Portion allocated to City of Portland                                      |      |               | Ŧ    |                |
|    | (21.8743% x 3.)   | \$   | 32.5          | \$   | 31.4           |
|    | b. Portion allocated to all T1/T2 employers                                   |      |               |      |                |
|    | (78.1257% x 3.)   | \$   | 116.0         | \$   | 112.3          |
| 4. | Combined valuation payroll  |      |               |      |                |
|    | a. City of Portland   | \$   | 289.4         | \$   | 259.9          |
|    | b. All Tier 1 / Tier 2 employers  | \$   | 8,175.3       | \$   | 7,766.0        |
| 5. | Amortization factor   |      | 13.091        |      | 13.772         |
| 6  | Multnomah FD #10 UAL Rate   |      |               |      |                |
| 0. | a. City of Portland $(3.a. \div 4.a. \div 5.)$                                |      |               |      |                |
|    |   |      | 0.86%         |      | 0.88%          |
|    | <ul> <li>All Tier 1 / Tier 2 employers</li> <li>(3.b. ÷ 4.b. ÷ 5.)</li> </ul> |      |               |      |                |
|    | (3.b. ÷ 4.b. ÷ 5.)  |      | 0.11%         |      | 0.10%          |
| 7. | Total Multnomah FD #10 UAL Rate   |      |               |      |                |
|    | a. City of Portland (6.a. + 6.b.)   |      | 0.97%         |      | 0.98%          |
|    | b. City of Gresham, City of Fairview, City of                                 |      | 2.3.70        |      |                |
|    | Wood Village, City of Troutdale (2 x 6.b.)                                    |      | 0.22%         |      | 0.20%          |
|    | c. All other Tier 1 / Tier 2 employers (6.b.)                                 |      | 0.11%         |      | 0.10%          |
|    |   |      | 0.1170        |      | 0.1070         |

#### Tier 1/Tier 2 Valuation (continued)

#### Tier 1/Tier 2 Pension Contribution Rate Development (continued)

#### Calculated Employer Contribution Rate Summary (Pre-Rate Collar)

The following table summarizes the development of the total Tier 1/Tier 2 contribution rate for each rate pool as of the valuation date. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates are applied to combined valuation payroll. These rates are adjusted on an individual employer basis for side accounts and pre-SLGRP liabilities, if applicable. Weighted average adjustments for Side Account and pre-SLGRP liabilities are shown in the table. For individual employers, these adjustments cannot reduce the pension contribution rate below 0.0%. For purposes of this exhibit, independent employers, including State Judiciary, have been treated as a single rate pool.

|  |         | Advisory July 1    | , 2011 Rates    |                 |
|--|---------|--------------------|-----------------|-----------------|
|  | C       | alculated as of De | ecember 31, 200 | 3               |
|  |         |                    | Independent     | Tier 1 / Tier 2 |
|  | SLGRP   | School Districts   | Employers       | Totals          |
| Tier 1/Tier 2 pension contribution rates |         |                    |                 |                 |
| Employer normal cost rate                | 8.10%   | 6.90%              | 9.41%           | 7.82%           |
| Member normal cost rate                  |         |                    | 0.21%           | 0.02%           |
| UAL rate                                 | 12.54%  | 18.14%             | 9.86%           | 14.22%          |
| Multnomah FD #10 rate                    | 0.17%   | 0.11%              | 0.11%           | 0.14%           |
| Total Tier 1/Tier 2 pension rate         | 20.81%  | 25.15%             | 19.59%          | 22.20%          |
| Average adjustments                      |         |                    |                 |                 |
| Pre-SLGRP liability/(surplus) rate       | (0.74%) | N/A                | N/A             | (0.41%)         |
| Side account rate                        | (4.13%) | (7.09%)            | (0.78%)         | (4.82%)         |
| Total average adjustment                 | (4.87%) | (7.09%)            | (0.78%)         | (5.23%)         |
| Net pension contribution rate            | 15.94%  | 18.06%             | 18.81%          | 16.97%          |

#### Tier 1/Tier 2 Valuation (continued)

#### Tier 1/Tier 2 Pension Contribution Rate Development (continued)

#### Calculation of Rate Collar

Employer contribution rates cannot change by more than the greater of 3 percentage points or 20% of the current contribution rate. However, if the funded percentage is below 80% or above 120%, the size of the collar is doubled. All collar calculations are performed excluding amounts and contribution rates attributable to pre-SLGRP liabilities, side accounts and member contributions. Retiree medical rates are also excluded from the rate collar calculation.

The table below develops the impact of the collar for each of the Tier 1/Tier 2 rate pools. Although the calculation is performed individually for independent employers, the table shows the calculation as if independent employers were a pool. Note that independent employers, other than the State Judiciary, are subject to a minimum employer contribution rate of 6.0% that is not taken into account in the calculation below.

|  |        | Advisory July       | 1, 2011 Rates   |                     |
|--|--------|---------------------|-----------------|---------------------|
|  |        | Calculated as of De | ecember 31, 200 | 08                  |
|  |        |                     | Independent     | Tier 1 / Tier 2     |
| Calculation of Collar Adjustments  | SLGRP  | School Districts    | Employers       | Totals <sup>1</sup> |
| 1. Current employer contribution rate  | 11.15% | 14.01%              | 10.86%          | 12.11%              |
| 2. Size of rate collar   |        |                     |                 |                     |
| <ul> <li>Preliminary size of rate collar (maximum of 3% or 20% x 1.)</li> </ul>  | 3.00%  | 3.00%               | 3.00%           | 3.00%               |
| b. Funded percentage   | 72.1%  | 68.3%               | 76.6%           | 70.7%               |
| <ul> <li>c. Size of rate collar (<i>If b. &lt; 80% or b. &gt; 120%, 2 x a., otherwise a.</i>)</li> </ul>                             | 6.00%  | 6.00%               | 6.00%           | 6.00%               |
| <ol> <li>7/1/2011 Minimum employer contribution rate<br/>(1 2.c.)</li> </ol>   | 5.15%  | 8.01%               | 4.86%           | 6.11%               |
| <ol> <li>7/1/2011 Maximum employer contribution rate<br/>(1. + 2.c.)</li> </ol>  | 17.15% | 20.01%              | 16.86%          | 18.11%              |
| <ol> <li>Advisory July 1, 2011 employer contribution<br/>rate before collar</li> </ol>   | 20.81% | 25.15%              | 19.59%          | 22.20%              |
| <ol> <li>Advisory July 1, 2011 employer contribution<br/>rate after collar (5., but not less than 3. or more<br/>than 4.)</li> </ol> | 17.15% | 20.01%              | 16.86%          | 18.11%              |
| 7. Impact of collar <i>(6 5.)</i>  | -3.66% | -5.14%              | -2.73%          | -4.09%              |

<sup>1</sup> The average Tier 1/Tier 2 rate has been recalculated based on current valuation payroll.

#### Tier 1/Tier 2 Valuation (continued)

#### Tier 1/Tier 2 Pension Contribution Rate Development (continued)

#### Calculated Employer Contribution Rate Summary (Post Rate Collar)

Any adjustment for the collar is made to the UAL rate. The table below summarizes the average rates that would be effective July 1, 2011, by pool and component if the December 31, 2008 actuarial valuation determined those rates. The December 31, 2009 valuation will determine the actual contribution rates effective July 1, 2011. Although the rate collar is applied individually for independent employers, the table shows the average rates as if independent employers were a pool. Note that independent employers, other than the State Judiciary, are subject to a minimum employer contribution rate of 6.0% that is not taken into account in the average rates below.

|  |         | Advisory July 1    | , 2011 Rates    |                 |
|--|---------|--------------------|-----------------|-----------------|
|  | C       | alculated as of De | ecember 31, 200 | B               |
|  |         |                    | Independent     | Tier 1 / Tier 2 |
|  | SLGRP   | School Districts   | Employers       | Totals          |
| Tier 1/Tier 2 pension contribution rates |         |                    |                 |                 |
| Employer normal cost rate                | 8.10%   | 6.90%              | 9.41%           | 7.82%           |
| Member normal cost rate                  |         |                    | 0.21%           | 0.02%           |
| UAL rate                                 | 8.88%   | 13.00%             | 7.13%           | 10.13%          |
| Multnomah FD #10 rate                    | 0.17%   | 0.11%              | 0.11%           | 0.14%           |
| Total Tier 1/Tier 2 pension rate         | 17.15%  | 20.01%             | 16.86%          | 18.11%          |
| Average adjustments                      |         |                    |                 |                 |
| Pre-SLGRP liability/(surplus) rate       | (0.74%) | N/A                | N/A             | (0.41%)         |
| Side account rate                        | (4.13%) | (7.09%)            | (0.78%)         | (4.82%)         |
| Total average adjustment                 | (4.87%) | (7.09%)            | (0.78%)         | (5.23%)         |
| Net pension contribution rate            | 12.28%  | 12.92%             | 16.08%          | 12.88%          |

## **OPSRP** Valuation

## **OPSRP** Assets

Information on OPSRP assets is shown in the section of this report covering the system-wide assets. As of December 31, 2008, the actuarial value of assets for OPSRP is \$270.5 million.

#### **OPSRP** Liabilities

#### Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

A summary of the normal cost by decrement is shown below for the current and prior year.

|                                 |    | De     | cemb  | er 31, 20 | 800 |       | De          | cemb  | er 31, 20 | 007 |       |
|---------------------------------|----|--------|-------|-----------|-----|-------|-------------|-------|-----------|-----|-------|
|                                 | G  | eneral |       |           |     |       | <br>General |       |           |     |       |
|                                 | S  | ervice | Polic | e & Fire  |     | Total | Service     | Polic | e & Fire  |     | Total |
| Pre-Retirement Disability       |    |        |       |           |     |       |             |       |           |     |       |
| Duty                            | \$ | 0.2    | \$    | 0.1       | \$  | 0.3   | \$<br>0.2   | \$    | 0.2       | \$  | 0.3   |
| Non-Duty                        |    | 3.0    |       | 0.3       |     | 3.3   | 3.1         |       | 0.3       |     | 3.4   |
| Total Pre-Retirement Disability | \$ | 3.1    | \$    | 0.5       | \$  | 3.6   | \$<br>3.3   | \$    | 0.5       | \$  | 3.7   |
| Other Benefits                  |    |        |       |           |     |       |             |       |           |     |       |
| Service Retirement              | \$ | 78.5   | \$    | 12.5      | \$  | 91.0  | \$<br>55.7  | \$    | 8.2       | \$  | 64.0  |
| Vested Benefits                 |    | 11.0   |       | 1.3       |     | 12.3  | 8.1         |       | 0.9       |     | 9.0   |
| Death                           |    | 1.2    |       | 0.1       |     | 1.3   | 0.8         |       | 0.1       |     | 0.9   |
| Duty Disability Retirement      |    | 0.2    |       | 0.2       |     | 0.3   | 0.1         |       | 0.1       |     | 0.3   |
| Non-Duty Disability Retirement  |    | 1.9    |       | 0.2       |     | 2.1   | 1.7         |       | 0.2       |     | 1.9   |
| Total Other Benefits            | \$ | 92.7   | \$    | 14.4      | \$  | 107.1 | \$<br>66.5  | \$    | 9.6       | \$  | 76.0  |
| Assumed Administrative Expenses | \$ | 6.0    | \$    | 0.6       | \$  | 6.6   | \$<br>7.8   | \$    | 0.7       |     | 8.5   |
| Total Normal Cost               | \$ | 101.8  | \$    | 15.5      | \$  | 117.3 | \$<br>77.5  | \$    | 10.8      | \$  | 88.3  |

Amounts in millions

The increase in the normal cost since the prior valuation is primarily attributable to the new entrants to the OPSRP program. The table below reconciles the normal cost from the prior valuation to the current valuation.

#### **OPSRP Valuation** (continued)

#### **OPSRP** Liabilities (continued)

|                                     | OPSRP       |
|-------------------------------------|-------------|
| Normal Cost, December 31, 2007      | \$<br>88.3  |
| Expected increase                   | 3.3         |
| Assumption changes                  | (1.0)       |
| Plan changes                        | -           |
| New entrants                        | 24.1        |
| Deviations from expected experience | 2.6         |
| Normal Cost, December 31, 2008      | \$<br>117.3 |
| Amounts in millions                 |             |

#### Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. A summary of the actuarial accrued liability by decrement is shown below for the current and prior year.

|                                    |    | December 31, 2008 |       |           |    |       | December 31, 2007 |         |      |           |    |       |
|------------------------------------|----|-------------------|-------|-----------|----|-------|-------------------|---------|------|-----------|----|-------|
|                                    | G  | eneral            |       |           |    |       | (                 | General |      |           |    |       |
|                                    | S  | ervice            | Polic | ce & Fire |    | Total | :                 | Service | Poli | ce & Fire |    | Total |
| Active Members                     |    |                   |       |           |    |       |                   |         |      |           |    |       |
| Pre-retirement Duty Disability     | \$ | 0.5               | \$    | 0.4       | \$ | 0.9   | \$                | 0.5     | \$   | 0.4       | \$ | 0.9   |
| Pre-retirement Non-Duty Disability |    | 8.9               |       | 1.0       |    | 9.9   |                   | 7.8     |      | 0.8       |    | 8.6   |
| Service Retirement                 |    | 237.3             |       | 36.4      |    | 273.7 |                   | 142.1   |      | 20.6      |    | 162.7 |
| Vested Benefits                    |    | 33.4              |       | 4.0       |    | 37.4  |                   | 20.3    |      | 2.1       |    | 22.4  |
| Death                              |    | 3.6               |       | 0.4       |    | 3.9   |                   | 2.1     |      | 0.2       |    | 2.3   |
| Duty Disability Retirement         |    | 0.6               |       | 0.5       |    | 1.1   |                   | 0.4     |      | 0.3       |    | 0.7   |
| Non-Duty Disability Retirement     |    | 5.7               |       | 0.7       |    | 6.4   |                   | 4.2     |      | 0.6       |    | 4.8   |
| Total Active Members               | \$ | 289.9             | \$    | 43.3      | \$ | 333.2 | \$                | 177.3   | \$   | 25.1      | \$ | 202.4 |
| Dormant Members                    |    |                   |       |           | \$ | 3.3   |                   |         |      |           | \$ | 0.6   |
| Retired Members and Beneficiaries  |    |                   |       |           | \$ | 0.3   |                   |         |      |           | \$ | 0.0   |
| Total Actuarial Accrued Liability  |    |                   |       |           | \$ | 336.8 |                   |         |      |           | \$ | 203.0 |
| Amounto in millions                |    |                   |       |           |    |       |                   |         |      |           |    |       |

Amounts in millions

The change in actuarial accrued liability since the last valuation reflects the experience of the system. The table below reconciles the actuarial accrued liability from the last valuation to this valuation. The actuarial accrued liability is expected to increase due to benefits earned during the year and interest, and to decrease due to benefits paid during the year.

## **OPSRP** Valuation (continued)

# **OPSRP** Liabilities (continued)

|   | OPSRP       |
|---|-------------|
| Actuarial Accrued Liability December 31, 2007 | \$<br>203.0 |
| Expected change                               | 102.1       |
| Assumption changes                            | 1.3         |
| Plan changes                                  | -           |
| New entrants                                  | 31.0        |
| Deviations from expected experience           |             |
| Retirements from active status                | 1.1         |
| Active mortality and withdrawal               | (3.2)       |
| Pay increases                                 | 13.3        |
| Other   | (11.7)      |
| Total demographic (gains) and losses          | (0.6)       |
| Actuarial Accrued Liability December 31, 2008 | \$<br>336.8 |
| Amounts in millions                           |             |

## **OPSRP Valuation** (continued)

## **OPSRP Unfunded Accrued Liability (UAL)**

#### Calculation of UAL

The Unfunded Accrued Liability (UAL) represents the difference between the actuarial accrued liability and the valuation assets. The UAL is amortized over combined valuation payroll. The table below shows the OPSRP UAL, funded status, and UAL as a percentage of combined valuation payroll.

|   | December 31, 2008 | December 31, 2007 |
|---|-------------------|-------------------|
| 1. Actuarial accrued liability  | \$<br>336.8       | \$<br>203.0       |
| 2. Actuarial value of assets  | \$<br>270.5       | \$<br>275.1       |
| 3. Unfunded accrued liability   | \$<br>66.3        | \$<br>(72.1)      |
| 4. Funded percentage (2. ÷ 1.)  | 80%               | 135%              |
| 5. Combined valuation payroll   | \$<br>8,130.1     | \$<br>7,721.8     |
| <ol> <li>Unfunded accrued liability as % of combined<br/>valuation payroll</li> </ol> | 1%                | (1%)              |

Amounts in millions

#### **Reconciliation of UAL Bases**

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 16-year closed-period amortization base for outstanding OPSRP UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base will be calculated based on the total OPSRP UAL as of that valuation date less the remaining unamortized balance of any OPSRP UAL bases established at previous odd-year valuation dates. This even-year advisory valuation shows both the progress of the amortization base established December 31, 2007, and an estimate of the base to be established on December 31, 2009, with the estimate based on experience during 2008.

OPSRP

|                   | UAL, |                |    |         |       |    |          |       |       | UAL,         | Next Year's |
|-------------------|------|----------------|----|---------|-------|----|----------|-------|-------|--------------|-------------|
| Amortization Base | Dece | ember 31, 2007 |    | Payment |       |    | Interest |       | Decem | ber 31, 2008 | Payment     |
| December 31, 2007 | \$   | (72.1)         | \$ |         | (6.2) | \$ |          | (5.5) | \$    | (71.4)       | \$<br>(6.4) |
| December 31, 2008 |      | N/A            |    | N/A     |       |    | N/A      |       |       | 137.6        | 11.8        |
| Total             | \$   | (72.1)         | \$ |         | (6.2) | \$ |          | (5.5) | \$    | 66.3         | \$<br>5.4   |

## **OPSRP** Valuation (continued)

## **OPSRP Unfunded Accrued Liability (UAL) (continued)**

#### Actuarial Gain or Loss since Prior Valuation

In every actuarial valuation, assumptions are made as to the future experience of the plan and covered group of participants. Whenever there is a difference between the actual experience and that anticipated by the actuarial assumptions, there is a gain or loss to the plan. Gains are the result of experience that is more favorable than anticipated (i.e., serves to reduce the unfunded actuarial liability or increase the surplus), while losses are the result of unfavorable experience. The 2008 liability loss is primarily due to new entrants to the OPSRP program and pay increases greater than anticipated.

The table below develops the actuarial gain or loss for OPSRP for the year ending December 31, 2008.

| Am | ounts | in millions  |               |
|----|-------|--|---------------|
| 7. | Ne    | t actuarial gain/(loss)  (3. + 6.)   | \$<br>(156.8) |
| 6. | As    | set gain/(loss) (5 4.e.)   | \$<br>(126.5) |
| 5. | Act   | uarial value of assets as of December 31, 2008   | \$<br>270.5   |
|    |       | (a. + b. +c. + d. + e.)  | \$<br>397.0   |
|    | e.    | Expected actuarial value of assets at December 31, 2008                                |               |
|    | d.    | Interest   | \$<br>25.6    |
|    | c.    | Benefit payments and administrative expenses for fiscal year ending December 31, 2008  | \$<br>(7.2)   |
|    | b.    | Actual contributions for 2008  | \$<br>103.5   |
|    | a.    | Actuarial value of assets at December 31, 2007   | \$<br>275.1   |
| 4. | Exp   | pected actuarial value of assets   |               |
| 3. | Lia   | bility gain/(loss) (1.g 2)   | \$<br>(30.4)  |
| 2. | Act   | uarial accrued liability at December 31, 2008  | \$<br>336.8   |
|    |       | $(e_{.} + f_{.} + g_{.})$  | \$<br>306.4   |
|    | h.    | Expected actuarial accrued liability at December 31, 2008                              |               |
|    | g.    | Change in actuarial accrued liability at December 31, 2008, due to plan changes        | \$<br>0.0     |
|    | f.    | Change in actuarial accrued liability at December 31, 2008, due to assumption changes  | \$<br>1.3     |
|    |       | (a. + b. + c. + d.)  | \$<br>305.1   |
|    | e.    | Expected actuarial accrued liability before changes                                    |               |
|    | d.    | Interest   | \$<br>22.6    |
|    | c.    | Benefit payments (excluding administrative expenses) for year ending December 31, 2008 | \$<br>(0.3)   |
|    | b.    | Normal cost at December 31, 2007 (excluding administrative expenses)                   | \$<br>79.8    |
|    | a.    | Actuarial accrued liability at December 31, 2007                                       | \$<br>203.0   |
| 1. | Exp   | pected actuarial accrued liability   |               |

#### **OPSRP** Valuation (continued)

# **OPSRP Unfunded Accrued Liability (UAL) (continued)**

#### Reconciliation of the UAL

The table below summarizes the changes in UAL since the prior valuation.

|  | C  | OPSRP   |
|--|----|---------|
| UAL, December 31, 2007                                 | \$ | (72.1)  |
| Normal Cost (including actual administrative expenses) |    | 86.7    |
| Contributions  |    | (103.5) |
| Liability (gain) or loss                               |    | 30.4    |
| Asset (gain) or loss                                   |    | 126.5   |
| Assumption changes                                     |    | 1.3     |
| Plan changes   |    | 0.0     |
| Interest @ 8.0%  |    | (3.0)   |
| UAL, December 31, 2008                                 | \$ | 66.3    |
| Amounts in millions                                    |    |         |

## **OPSRP** Valuation (continued)

## **OPSRP Contribution Rate Development**

#### Normal Cost Rates

The table below shows the development of the OPSRP normal cost rates.

|                                    | _       | De      | ceml          | ber 31, 2 | 800          |         | <br>De        | cem           | ber 31, 2 | 007 |            |
|------------------------------------|---------|---------|---------------|-----------|--------------|---------|---------------|---------------|-----------|-----|------------|
|                                    | (       | General |               |           |              |         | General       |               |           |     |            |
| Development of Normal Cost Rate    | Service |         | Police & Fire |           | Average Rate |         | Service       | Police & Fire |           | Ave | erage Rate |
| Normal Cost                        |         |         |               |           |              |         |               |               |           |     |            |
| Pre-retirement Disability Benefits | \$      | 3.1     | \$            | 0.5       | \$           | 3.6     | \$<br>3.3     | \$            | 0.5       | \$  | 3.7        |
| All Other Benefits                 |         | 92.7    |               | 14.4      |              | 107.1   | 66.5          |               | 9.6       |     | 76.0       |
| Assumed Administrative Expenses    |         | 6.0     |               | 0.6       |              | 6.6     | 7.8           |               | 0.7       |     | 8.5        |
| Total Normal Cost                  | \$      | 101.8   | \$            | 15.5      | \$           | 117.3   | \$<br>77.5    | \$            | 10.8      | \$  | 88.3       |
| OPSRP Valuation Payroll            | \$      | 1,724.6 | \$            | 179.8     | \$           | 1,904.3 | \$<br>1,333.2 | \$            | 126.7     | \$  | 1,459.9    |
| Normal Cost Rate                   |         |         |               |           |              |         |               |               |           |     |            |
| Pre-retirement Disability Benefits |         | 0.18%   |               | 0.26%     |              | 0.19%   | 0.24%         |               | 0.39%     |     | 0.26%      |
| All Other Benefits                 |         | 5.38%   |               | 8.00%     |              | 5.62%   | 4.99%         |               | 7.55%     |     | 5.21%      |
| Assumed Administrative Expenses    |         | 0.35%   |               | 0.35%     |              | 0.35%   | 0.58%         |               | 0.58%     |     | 0.58%      |
| Total Normal Cost                  |         | 5.90%   |               | 8.61%     |              | 6.16%   | 5.81%         |               | 8.52%     |     | 6.05%      |
| Amounts in millions                |         |         |               |           |              |         |               |               |           |     |            |

#### UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

|                               | December 31, 200 |         |  |  |  |
|-------------------------------|------------------|---------|--|--|--|
|                               |                  | OPSRP   |  |  |  |
| 1. Total UAL                  | \$               | 66.3    |  |  |  |
| 2. Next year's UAL payment    | \$               | 5.4     |  |  |  |
| 3. Combined valuation payroll | \$               | 8,130.1 |  |  |  |
| 4. UAL rate (2 ÷ 3)           |                  | 0.07%   |  |  |  |

## **OPSRP** Valuation (continued)

#### **OPSRP Contribution Rate Development (continued)**

#### Calculated Employer Contribution Rates (Pre-Rate Collar)

The following table summarizes the OPSRP contribution rate for general service and police & fire members as of the valuation date prior to application of the collar.

The normal cost rates apply to OPSRP payroll only, but the UAL rate is applied to combined valuation payroll. These rates, after the application of the collar, are combined with each employer's Tier 1/Tier 2 rates (other than Tier 1/Tier 2 normal cost rate) to determine each employer's contribution rate on OPSRP payroll.

|                                  | Advisory July 1, 2011 Rates Calculated as of |               |              |  |  |  |  |  |
|----------------------------------|--|---------------|--------------|--|--|--|--|--|
|                                  | December 31, 2008                            |               |              |  |  |  |  |  |
|                                  | General                                      |               |              |  |  |  |  |  |
|                                  | Service                                      | Police & Fire | Average Rate |  |  |  |  |  |
| OPSRP pension contribution rates |  |               |              |  |  |  |  |  |
| Employer normal cost rate        | 5.90%  | 8.61%         | 6.16%        |  |  |  |  |  |
| Employer UAL rate                | 0.07%  | 0.07%         | 0.07%        |  |  |  |  |  |
| Total OPSRP pension rate         | 5.97%  | 8.68%         | 6.23%        |  |  |  |  |  |

## **OPSRP** Valuation (continued)

#### **OPSRP Contribution Rate Development (continued)**

#### Calculation of Rate Collar

The rate collar restricts the average OPSRP contribution rate so it generally cannot change by more than the greater of 3 percentage points or 20 percent of the current average OPSRP contribution rate. However, if the funded percentage is below 80 percent or above 120 percent, the size of the collar is doubled. All collar calculations are performed based on the weighted average OPSRP contribution rate, and any adjustment due to the collar is applied to the OPSRP UAL rate.

The table below shows the calculation of and any adjustment for the rate collar.

|    |   | Advis   | sory July 1, | 2011    |
|----|---|---------|--------------|---------|
|    |   | General | Police &     | Average |
|    |   | Service | Fire         | Rate    |
| 1. | Current employer contribution rate                                      | 5.73%   | 8.44%        | 5.97%   |
| 2. | Size of rate collar   |         |              |         |
|    | a. Preliminary size of rate collar (Maximum of 3% or 20% of 1.)         |         |              | 3.00%   |
|    | b. Funded percentage  |         |              | 80.3%   |
|    | c. Size of rate collar (If b. < 80% or b. > 120%, 2 x a., otherwise a.) |         |              | 3.00%   |
| 3. | July 1, 2011 Minimum contribution rate (1 2.c.)                         |         |              | 2.97%   |
| 4. | July 1, 2011 Maximum contribution rate (1. + 2.c.)                      |         |              | 8.97%   |
| 5. | Advisory July 1, 2011 employer contribution rate before collar          | 5.97%   | 8.68%        | 6.23%   |
| 6. | Advisory July 1, 2011 employer contribution rate after collar           | 5.97%   | 8.68%        | 6.23%   |
| 7. | Impact of collar (6 5.)   | 0.00%   | 0.00%        | 0.00%   |

## **OPSRP** Valuation (continued)

## **OPSRP Contribution Rate Development (continued)**

## Calculated Employer Contribution Rates (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for OPSRP after adjustments for the rate collar.

|                                  | Advisory July 1, 2011 Rates Calculated as of |                   |              |  |  |  |  |  |  |
|----------------------------------|--|-------------------|--------------|--|--|--|--|--|--|
|                                  |  | December 31, 2008 |              |  |  |  |  |  |  |
|                                  | General                                      |                   |              |  |  |  |  |  |  |
|                                  | Service                                      | Police & Fire     | Average Rate |  |  |  |  |  |  |
| OPSRP pension contribution rates |  |                   |              |  |  |  |  |  |  |
| Employer normal cost rate        | 5.90%  | 8.61%             | 6.16%        |  |  |  |  |  |  |
| Employer UAL rate                | 0.07%  | 0.07%             | 0.07%        |  |  |  |  |  |  |
| Total OPSRP pension rate         | 5.97%  | 8.68%             | 6.23%        |  |  |  |  |  |  |

## **Retiree Healthcare Assets**

#### Assets

A reconciliation of retiree healthcare assets is shown below.

|     |                                       |              |       |        | Retire | ee Healthcare |
|-----|---------------------------------------|--------------|-------|--------|--------|---------------|
| Rec | onciliation of Assets <sup>1</sup>    | RHIA         | RHIPA | Totals |        |               |
| Add | itions                                |              |       |        |        |               |
| 1.  | Employer contributions                | \$<br>28.0   | \$    | 1.9    | \$     | 29.9          |
| 2.  | Net investment income                 | \$<br>(66.1) | \$    | (2.0)  | \$     | (68.1)        |
| 3.  | Other                                 | \$<br>(0.0)  | \$    | (0.0)  | \$     | (0.0)         |
| 4.  | Total additions                       | \$<br>(38.0) | \$    | (0.1)  | \$     | (38.2)        |
| Ded | uctions                               |              |       |        |        |               |
| 4.  | Healthcare Premium Subsidies          | (28.0)       |       | (1.9)  |        | (29.9)        |
| 5.  | Administrative expenses               | (0.9)        |       | (0.1)  |        | (1.0)         |
| 6.  | Total deductions                      | (28.9)       |       | (2.0)  |        | (30.9)        |
| 7.  | Net change                            | (66.9)       |       | (2.1)  |        | (69.1)        |
| 8.  | Net assets held in trust for benefits |              |       |        |        |               |
|     | a. Beginning of year                  | 250.8        |       | 7.8    |        | 258.6         |
|     | b. End of year                        | <br>183.8    |       | 5.7    |        | 189.5         |

Amounts in millions.

<sup>1</sup> The reconciliation of assets is provided by PERS.

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## **Retiree Healthcare Liabilities**

#### Normal Cost

A summary of the normal cost by decrement is shown below for the retiree healthcare benefits.

|                    |      |   | RH | IA         |         | RHIPA |     |    |     |         |
|--------------------|------|---|----|------------|---------|-------|-----|----|-----|---------|
|                    |      |   |    |            | Percent |       |     |    |     | Percent |
|                    | 12/3 | 12/31/2008 12/31/2007 Change 12/31/2008 12/31/2 |    | 12/31/2007 | Change  |       |     |    |     |         |
| Normal Cost        |      |   |    |            |         |       |     |    |     |         |
| Service Retirement | \$   | 5.0   | \$ | 5.8        | (13.3%) | \$    | 0.7 | \$ | 0.9 | (17.7%) |
| Vested Benefits    |      | 0.5   |    | 0.6        | (22.2%) |       | 0.0 |    | 0.0 | 0.0%    |
| Duty Disability    |      | 0.0   |    | 0.0        | (18.2%) |       | 0.0 |    | 0.0 | (29.0%) |
| Nonduty Disability |      | 0.0   |    | 0.1        | (45.1%) |       | 0.0 |    | 0.1 | (35.9%) |
| Death              |      | 0.1   |    | 0.1        | (14.9%) |       | 0.0 |    | 0.0 | (9.7%)  |
| Total Normal Cost  | \$   | 5.6   | \$ | 6.6        | (14.5%) | \$    | 0.8 | \$ | 0.9 | (18.8%) |

Amounts in millions

The table below reconciles the normal cost from the prior valuation to the current valuation.

|                                     | RHIA  | RHIPA |
|-------------------------------------|-------|-------|
| Normal Cost December 31, 2007       | \$6.6 | \$0.9 |
| Expected increase                   | -     | -     |
| Assumption changes                  | (0.7) | (0.2) |
| Plan changes                        | -     | -     |
| Deviations from expected experience |       |       |
| Demographic (gains) or losses       | (0.2) | 0.0   |
| Normal Cost December 31, 2008       | \$5.6 | \$0.8 |

## Retiree Healthcare Liabilities (continued)

#### Actuarial Accrued Liability

A summary of the actuarial accrued liability by decrement is shown below for the retiree healthcare benefits.

|                                      |   |       | R    | HIA     |         | RHIPA |      |    |      |         |  |
|--------------------------------------|---|-------|------|---------|---------|-------|------|----|------|---------|--|
|                                      |   |       |      |         | Percent |       |      |    |      | Percent |  |
|                                      | 12/31/2008 12/31/2007 Change 12/31/2008 |       | 12/3 | 31/2007 | Change  |       |      |    |      |         |  |
| Active                               |   |       |      |         |         |       |      |    |      |         |  |
| Service Retirement                   | \$                                      | 79.0  | \$   | 86.5    | (8.7%)  | \$    | 12.9 | \$ | 14.8 | (12.7%) |  |
| Vested Benefits                      |   | 5.9   |      | 7.2     | (17.8%) |       | 0.0  |    | 0.0  | 0.0%    |  |
| Duty Disability                      |   | 0.1   |      | 0.1     | (14.6%) |       | 0.1  |    | 0.1  | (25.3%) |  |
| Nonduty Disability                   |   | 0.6   |      | 1.1     | (43.3%) |       | 0.6  |    | 0.9  | (33.1%) |  |
| Death                                |   | 1.4   |      | 1.6     | (10.5%) |       | 0.2  |    | 0.2  | (4.3%)  |  |
| Total Actives                        | \$                                      | 87.0  | \$   | 96.4    | (9.8%)  | \$    | 13.7 | \$ | 15.9 | (13.7%) |  |
| Dormant Members                      |   | 18.6  |      | 20.1    | (7.8%)  |       | 0.0  |    | 0.0  | 0.0%    |  |
| Retired Members and<br>Beneficiaries |   | 388.5 |      | 383.1   | 1.4%    |       | 7.5  |    | 7.3  | 2.5%    |  |
| Total Actuarial Accrued<br>Liability | \$                                      | 494.0 | \$   | 499.6   | (1.1%)  | \$    | 21.3 | \$ | 23.3 | (8.6%)  |  |

Amounts in millions

The change in actuarial accrued liability since the last valuation reflects the experience of the system. The table below reconciles the actuarial accrued liability from the last valuation to this valuation. The actuarial accrued liability is expected to increase due to benefits earned during the year and interest, and to decrease due to benefits paid during the year.

|   | RHIA           | RHIPA   | Total  |
|---|----------------|---------|--------|
| Actuarial Accrued Liability December 31, 2007 | \$<br>499.6 \$ | 23.3 \$ | 522.9  |
| Expected Change                               | 18.0           | 0.9     | 18.9   |
| Assumption Changes                            | (18.7)         | (3.7)   | (22.4) |
| Plan changes                                  | -              | -       | -      |
| Deviations from expected experience           |                |         |        |
| Demographic (gains) or losses                 | (4.9)          | 0.8     | (4.0)  |
| Actuarial Accrued Liability December 31, 2008 | \$<br>494.0 \$ | 21.3 \$ | 515.3  |
|   |                |         |        |

## **Retiree Healthcare Unfunded Accrued Liability (UAL)**

#### Calculation of UAL

The Unfunded Accrued Liability (UAL) represents the difference between the actuarial accrued Liability and the valuation assets. A summary of the UAL by program is shown on the following table.

|           |  |    |          |    | RHIA      |                   | R             | HIP | Α         |                   |
|-----------|--|----|----------|----|-----------|-------------------|---------------|-----|-----------|-------------------|
|           |  | 12 | /31/2008 | 12 | 2/31/2007 | Percent<br>Change | 12/31/2008    | 12  | 2/31/2007 | Percent<br>Change |
| 1. Actuar | ial accrued liability  | \$ | 494.0    | \$ | 499.6     | (1.1%)            | \$<br>21.3    | \$  | 23.3      | (8.6%)            |
| 2. Actuar | ial value of assets  | \$ | 183.8    | \$ | 250.8     | (26.7%)           | \$<br>5.7     | \$  | 7.8       | (27.4%)           |
| 3. Unfund | ded accrued liability  | \$ | 310.2    | \$ | 248.8     | 24.7%             | \$<br>15.6    | \$  | 15.5      | 0.9%              |
| 4. Funde  | d percentage (2. ÷ 1.)                                       |    | 37.2%    |    | 50.2%     | (25.9%)           | 26.7%         |     | 33.6%     | (20.5%)           |
| 5. Combi  | ned valuation payroll  | \$ | 8,130.2  | \$ | 7,721.8   | 5.3%              | \$<br>2,217.9 | \$  | 2,080.2   | 6.6%              |
|           | ded accrued liability as %<br>bined valuation payroll<br>5.) |    | 3.8%     |    | 3.2%      | 18.4%             | 0.7%          |     | 0.7%      | (5.4%)            |
| Amounts   | s in millions  |    | 0.070    |    | 5.270     | .0.170            | 011 /0        |     | 5.170     | (0.170)           |

## Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each rate-setting valuation establishes an amortization base for outstanding RHIA and RHIPA UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base will be calculated based on the total UAL as of that valuation date less the remaining unamortized balance of any UAL bases established at previous odd-year valuation dates. The amortization base established December 31, 2007 includes only the regular UAL as of that valuation, as the UAL attributable to the change to the Projected Unit Credit cost method is anticipated to be fully amortized by the conclusion of the biennium ending on June 30, 2011. This even-year advisory valuation shows both the progress of the amortization base established December 31, 2007, and an estimate of the base to be established on December 31, 2009, with the estimate based on experience during 2008.

|                   |     | UAL,           |        |      |          |      |       | UAL,         | Next Year's |
|-------------------|-----|----------------|--------|------|----------|------|-------|--------------|-------------|
| Amortization Base | Dec | ember 31, 2007 | Paymen | t    | Interest |      | Decem | ber 31, 2008 | Payment     |
| December 31, 2007 | \$  | 262.2          | \$     | 32.3 | \$       | 19.6 | \$    | 249.5        | \$<br>33.5  |
| December 31, 2008 |     | N/A            | N/A    |      | N/A      |      |       | 60.7         | 7.5         |
| Total             | \$  | 262.2          | \$     | 32.3 | \$       | 19.6 | \$    | 310.2        | \$<br>41.0  |
| RHIPA             |     |                |        |      |          |      |       |              | Nové Voorlo |
|                   |     | UAL,           |        |      |          |      |       | UAL,         | Next Year's |
| Amortization Base | Dec | ember 31, 2007 | Paymen | t    | Interest |      | Decem | ber 31, 2008 | Payment     |
| December 31, 2007 | \$  | 18.0           | \$     | 2.2  | \$       | 1.3  | \$    | 17.1         | \$<br>2.3   |
| December 31, 2008 |     | N/A            | N/A    |      | N/A      |      |       | (1.5)        | (0.2)       |
|                   | \$  | 18.0           | \$     | 2.2  | \$       | 1.3  | \$    | 15.6         | \$<br>2.1   |

Amounts in millions

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## Retiree Healthcare Unfunded Accrued Liability (UAL) (continued)

#### Actuarial Gain or Loss since Prior Valuation

In every actuarial valuation, assumptions are made as to the future experience of the plan and covered group of participants. Whenever there is a difference between the actual experience and that anticipated by the actuarial assumptions, there is a gain or loss to the plan. Gains are the result of experience that is more favorable than anticipated (i.e., serves to reduce the unfunded actuarial liability or increase the surplus), while losses are the result of unfavorable experience.

The table below shows the development of the actuarial gain (or loss) for RHIA and RHIPA.

|    |       |   | RHIA         | RHIPA       | н  | Retiree<br>ealthcare<br>Totals |
|----|-------|---|--------------|-------------|----|--------------------------------|
| Re | tiree | e Healthcare  |              |             |    |                                |
| 1. | Ex    | pected actuarial accrued liability  |              |             |    |                                |
|    | a.    | Actuarial accrued liability at December 31, 2007                                | \$<br>499.6  | \$<br>23.3  | \$ | 522.9                          |
|    | b.    | Normal cost at December 31, 2007  | \$<br>6.6    | \$<br>0.9   | \$ | 7.5                            |
|    | c.    | Benefit payments for fiscal year ending December 31, 2008                       | \$<br>(28.0) | \$<br>(1.9) | \$ | (29.9)                         |
|    | d.    | Interest  | \$<br>39.4   | \$<br>1.9   | \$ | 41.2                           |
|    | e.    | Expected actuarial accrued liability before changes                             |              |             |    |                                |
|    |       | (a. + b. + c. + d.)   | \$<br>517.6  | \$<br>24.2  | \$ | 541.8                          |
|    | f.    | Change in actuarial accrued liability at December 31, 2008, due to assumption   |              |             |    |                                |
|    |       | changes   | \$<br>(18.7) | \$<br>(3.7) | \$ | (22.4)                         |
|    | g.    | Change in actuarial accrued liability at December 31, 2008, due to plan changes | \$<br>-      | \$<br>-     | \$ | -                              |
|    | h.    | Expected actuarial accrued liability at December 31, 2008                       |              |             |    |                                |
|    |       | (e. + f. + g.)  | \$<br>498.9  | \$<br>20.4  | \$ | 519.4                          |
| 2. | Act   | tuarial accrued liability at December 31, 2008                                  | \$<br>494.0  | \$<br>21.3  | \$ | 515.3                          |
| 3. | Lia   | ıbility gain/(loss) (1.h 2)   | \$<br>4.9    | \$<br>(0.8) | \$ | 4.0                            |
| 4. | Ex    | pected actuarial value of assets  |              |             |    |                                |
|    | a.    | Actuarial value of assets at December 31, 2007                                  | \$<br>250.8  | \$<br>7.8   | \$ | 258.6                          |
|    | b.    | Actual contributions for 2008   | \$<br>28.0   | \$<br>1.9   | \$ | 29.9                           |
|    | c.    | Benefit payments and expenses for fiscal year ending December 31, 2008          | \$<br>(28.9) | \$<br>(2.0) | \$ | (30.9)                         |
|    | d.    | Interest  | \$<br>20.0   | \$<br>0.6   | \$ | 20.6                           |
|    | e.    | Expected actuarial value of assets before changes                               |              |             |    |                                |
|    |       | (a. + b. + c. + d.)   | \$<br>269.9  | \$<br>8.3   | \$ | 278.2                          |
|    | f.    | Change in actuarial value of assets at December 31, 2008, due to assumption     |              |             |    |                                |
|    |       | changes   | \$<br>-      | \$<br>-     | \$ | -                              |
|    | g.    | Change in actuarial value of assets at December 31, 2008, due to plan changes   | \$<br>-      | \$<br>-     | \$ | -                              |
|    | h.    | Expected actuarial value of assets at December 31, 2008                         |              |             |    |                                |
|    |       | (e. + f. + g.)  | \$<br>269.9  | \$<br>8.3   | \$ | 278.2                          |
| 5. | Act   | tuarial value of assets at December 31, 2008                                    | \$<br>183.8  | \$<br>5.7   | \$ | 189.5                          |
| 6. |       | tuarial asset gain/(loss) (5 4.h.)  | \$<br>(86.1) | \$<br>(2.6) | \$ | (88.7)                         |
| 7. | Ne    | t actuarial gain/(loss) (3. + 6.)   | \$<br>(81.2) | \$<br>(3.5) | \$ | (84.7)                         |
|    | Am    | ounts in millions   |              |             |    |                                |

Amounts in millions

#### Mercer

# Retiree Healthcare Unfunded Accrued Liability (UAL) (continued)

#### **Reconciliation of UAL**

The table below summarizes the changes in UAL since the prior valuation.

|  | RHIA           | RHIPA |
|--|----------------|-------|
| UAL, December 31, 2007                                 | \$<br>248.8 \$ | 15.5  |
| Normal Cost (including actual administrative expenses) | 7.5            | 1.1   |
| Contributions  | (28.0)         | (1.9) |
| Liability (gain) or loss                               | (4.9)          | 0.8   |
| Asset (gain) or loss                                   | 86.1           | 2.6   |
| Assumption changes                                     | (18.7)         | (3.7) |
| Interest @ 8.0%  | 19.3           | 1.2   |
| UAL, December 31, 2008                                 | \$<br>310.2 \$ | 15.6  |

## **Retiree Healthcare Contribution Rate Development**

#### Normal Cost Rate

The table below shows the development of the retiree healthcare normal cost rates. For RHIA, valuation payroll is shown on a system-wide basis. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only.

|                                 |       | RH            | IIA               |         |    | RHI              | PA                |         |
|---------------------------------|-------|---------------|-------------------|---------|----|------------------|-------------------|---------|
|                                 | Decen | nber 31, 2008 | December 31, 2007 |         |    | ecember 31, 2008 | December 31, 2007 |         |
| Normal Cost                     | \$    | 5.6           | \$                | 6.6     | \$ | 0.8              | \$                | 0.9     |
| Tier 1/Tier 2 Valuation Payroll | \$    | 6,225.8       | \$                | 6,261.9 | \$ | 1,708.5          | \$                | 1,692.1 |
| Normal Cost Rate                |       | 0.09%         |                   | 0.10%   |    | 0.05%            |                   | 0.06%   |

Amounts in millions

The table below shows the development of the retiree healthcare normal cost rates for the various rate pools. For RHIA, valuation payroll is shown on a system-wide basis. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

|                                   |               |     | Decembe       | er 3 | 1, 2008                  |    |                                |
|-----------------------------------|---------------|-----|---------------|------|--------------------------|----|--------------------------------|
|                                   | SLGRP         | Sch | ool Districts |      | Independent<br>Employers | ŀ  | Retiree<br>Iealthcare<br>Total |
| Tier 1/ Tier 2 Valuation Payroll  |               |     |               |      |                          |    |                                |
| a. Tier 1/Tier 2                  | \$<br>3,452.7 | \$  | 2,153.7       | \$   | 619.4                    | \$ | 6,225.8                        |
| b. State Only Payroll             | \$<br>1,689.8 | \$  | 0.0           | \$   | 18.7                     | \$ | 1,708.5                        |
| Normal Cost Rate                  |               |     |               |      |                          |    |                                |
| a. RHIA                           | 0.09%         |     | 0.09%         |      | 0.09%                    |    | 0.09%                          |
| b. RHIPA                          | 0.05%         |     | 0.00%         |      | 0.05%                    |    | 0.05%                          |
| Weighted Average Normal Cost Rate | 0.11%         |     | 0.09%         |      | 0.09%                    |    | 0.10%                          |

#### Retiree Healthcare Contribution Rate Development (continued)

#### UAL Rate

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

|                                 | <br>December  | 31, 3 | 2008    |
|---------------------------------|---------------|-------|---------|
|                                 | RHIA          |       | RHIPA   |
| 1. Total UAL, December 31, 2008 | 310.2         |       | 15.6    |
| 2. Next year's UAL payment      | 41.0          |       | 2.1     |
| 3. Combined valuation payroll   | \$<br>8,130.1 | \$    | 2,217.9 |
| <sup>4.</sup> UAL rate (2 ÷ 3)  | 0.50%         |       | 0.10%   |
| Amounts in millions             |               |       |         |

The table below shows the development of the retiree healthcare UAL rates for the various rate pools. For RHIA, combined valuation payroll is shown on a system-wide basis. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

|                                  |               |     | Decembe        | er 3 | 31, 2008                 |                                |
|----------------------------------|---------------|-----|----------------|------|--------------------------|--------------------------------|
|                                  | SLGRP         | Sch | nool Districts |      | Independent<br>Employers | Retiree<br>Healthcare<br>Total |
| Tier 1/ Tier 2 Valuation Payroll |               |     |                |      |                          |                                |
| a. Tier 1/Tier 2                 | \$<br>4,521.3 | \$  | 2,815.4        | \$   | 793.4                    | \$<br>8,130.1                  |
| b. State Only Payroll            | \$<br>2,199.2 | \$  | 0              | \$   | 18.7                     | \$<br>2,217.9                  |
| UAL Rate                         |               |     |                |      |                          |                                |
| a. RHIA - Reg                    | 0.50%         |     | 0.50%          |      | 0.50%                    | 0.50%                          |
| b. RHIPA - Reg                   | 0.10%         |     | 0.00%          |      | 0.10%                    | 0.10%                          |
| Average UAL Rate                 | 0.55%         |     | 0.50%          |      | 0.51%                    | 0.53%                          |
| Amounts in millions              |               |     |                |      |                          |                                |

#### Retiree Healthcare Contribution Rate Development (continued)

#### Calculated Employer Contribution Rate Summary

The following table summarizes the calculated employer contribution rates for the retiree healthcare programs. The normal cost rates are applied against Tier 1/Tier 2 payroll, but the UAL rates are applied against all payroll.

|                               | De             | cember 31, 200 | 08               |
|-------------------------------|----------------|----------------|------------------|
|                               | State Agencies | All Other      | Retiree          |
|                               | and Judiciary  | Employers      | Healthcare Total |
| Normal Cost Rates             |                |                |                  |
| RHIA                          | 0.09%          | 0.09%          | 0.09%            |
| RHIPA                         | 0.05%          | 0.00%          | 0.01%            |
| Total normal cost rate        | 0.14%          | 0.09%          | 0.10%            |
| UAL Rates                     |                |                |                  |
| RHIA                          | 0.50%          | 0.50%          | 0.50%            |
| RHIPA                         | 0.10%          | 0.00%          | 0.03%            |
| Total UAL rate                | 0.60%          | 0.50%          | 0.53%            |
| Total retiree healthcare rate | 0.74%          | 0.59%          | 0.63%            |

The following information as of December 31, 2008, has been prepared and provided to Oregon PERS for inclusion in the Actuarial Section of the 2009 Comprehensive Annual Financial Report (CAFR):

- Schedule of Active Member Valuation Data
- Schedule of Retirees and Beneficiaries Added to and Removed from Rolls
- Schedules of Funding Progress by Rate Pool
- Solvency Test
- Analysis of Financial Experience

In addition, the Schedules of Funding Progress, the Schedules of Employer Contributions and the Notes to Required Supplementary Schedules are provided for the Financial Section of the CAFR. Amounts shown for the December 31, 2003 actuarial valuation and earlier are the amounts reported by the prior actuary for those valuations. All data and amounts shown for the December 31, 2005 and later actuarial valuations include both Tier 1/Tier 2 and OPSRP member and employer counts, assets and liabilities.

Some employers have made supplemental deposits in addition to their regularly scheduled contributions. These deposits are placed in a side account within the pension trust and used to offset future contribution requirements of that employer. For financial reporting purposes, supplemental deposits are not considered as contributions toward meeting the Annual Required Contribution (ARC) or the contractually required contribution for employers in a cost-sharing pool. The Schedule of Funding Progress and Solvency Test also include side accounts as part of the Plan's assets.

Mercer prepared the Schedule of Employer Contributions exhibit for 2006 and subsequent years. Our understanding is that prior schedules were prepared by Oregon PERS. Due to the significant contribution rate increases indicated by the December 31, 2003 valuation, the Board elected to phase-in the rate increases to allow employers time to adjust. Consequently, the schedule indicates that only a portion of the pension annual required contribution (ARC) was contributed in 2006 and 2007. Effective July 1, 2007, contribution rates were implemented to return pension contributions for the system to the full ARC.

The exhibits are provided on the following pages.

#### **Actuarial Schedules**

#### Schedule of Active Member Valuation Data

| Valuation<br>Date       | Count   | ual Payroll (in<br>Thousands) | Av | erage Annual<br>Pay | % Increase in<br>Average Pay | Number of<br>Participating<br>Employers <sup>1</sup> |                        |
|-------------------------|---------|-------------------------------|----|---------------------|------------------------------|--|------------------------|
| 12/31/1993              | 137,513 | \$<br>4,466,797               | \$ | 32,483              | 4.9%                         | N/A  |                        |
| 12/31/1995              | 141,471 | \$<br>4,848,058               | \$ | 34,269              | 2.7%                         | N/A  |                        |
| 12/31/1997              | 143,194 | \$<br>5,161,562               | \$ | 36,045              | 2.6%                         | N/A  |                        |
| 12/31/1999              | 151,262 | \$<br>5,676,606               | \$ | 37,528              | 2.0%                         | N/A  |                        |
| 12/31/2000              | 156,869 | \$<br>6,195,862               | \$ | 39,497              | 5.2%                         | N/A  |                        |
| 12/31/2001              | 160,477 | \$<br>6,520,225               | \$ | 40,630              | 2.9%                         | N/A  | Old Basis              |
| 12/31/2001              | 160,477 | \$<br>6,253,965               | \$ | 38,971              |                              | N/A  | New Basis <sup>2</sup> |
| 12/31/2002              | 159,287 | \$<br>6,383,475               | \$ | 40,075              | 2.8%                         | N/A  |                        |
| 12/31/2003              | 153,723 | \$<br>6,248,550               | \$ | 40,648              | 1.4%                         | N/A  |                        |
| 12/31/2004              | 142,635 | \$<br>6,306,447               | \$ | 44,214              | 8.8%                         | 806  |                        |
| 12/31/2005 <sup>3</sup> | 156,501 | \$<br>6,791,891               | \$ | 43,398              | -1.8%                        | 810  |                        |
| 12/31/2006              | 163,261 | \$<br>7,326,798               | \$ | 44,878              | 3.4%                         | 758  |                        |
| 12/31/2007              | 167,023 | \$<br>7,721,819               | \$ | 46,232              | 3.0%                         | 760  |                        |
| 12/31/2008              | 170,569 | \$<br>8,130,136               | \$ | 47,665              | 3.1%                         | 766  |                        |

<sup>1</sup> Effective in 2006, participating employers are defined for this purpose as any employer with covered payroll during the prior year. In prior years, employers with liabilities but without covered payroll were included as well.

<sup>2</sup> Effective in 2001, the Annual Payroll excludes the member pick-up, if any.

<sup>3</sup> Effective with the 12/31/2005 valuation, OPSRP members and payroll are included.

## Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

Annual Allowances are shown in thousands.

|                   | _    | Adde  | d to | Rolls               | Remove | d fr | om Rolls           | Rolls - E | nd | of Year              | % Increase in                     | F  | Average           |
|-------------------|------|-------|------|---------------------|--------|------|--------------------|-----------|----|----------------------|-----------------------------------|----|-------------------|
| Valuation<br>Date |      | Count | A    | Annual<br>llowances | Count  | AI   | Annual<br>Iowances | Count     | А  | Annual<br>Illowances | Annual<br>Allowances <sup>1</sup> |    | Annual<br>owances |
| 12/31/1993        |      |       |      |                     |        |      |                    | 60,841    | \$ | 564,341              | 27.6%                             | \$ | 9,276             |
| 12/31/1995        |      |       |      |                     |        |      |                    | 64,796    | \$ | 700,171              | 24.1%                             | \$ | 10,806            |
| 12/31/1997        |      |       |      |                     |        |      |                    | 69,624    | \$ | 919,038              | 31.3%                             | \$ | 13,200            |
| 12/31/1999        |      |       |      |                     |        |      |                    | 82,819    | \$ | 1,299,380            | 41.4%                             | \$ | 15,689            |
| 12/31/2000        |      |       |      |                     |        |      |                    | 82,458    | \$ | 1,385,556            | 6.6%                              | \$ | 16,803            |
| 12/31/2001        |      |       |      |                     |        |      |                    | 85,216    | \$ | 1,514,491            | 9.3%                              | \$ | 17,772            |
| 12/31/2002        |      |       |      |                     |        |      |                    | 89,482    | \$ | 1,722,865            | 13.8%                             | \$ | 19,254            |
| 12/31/2003        |      |       |      |                     |        |      |                    | 97,777    | \$ | 2,040,533            | 8.4%                              | \$ | 20,869            |
| 12/31/2004        | 2    | 6,754 | \$   | 149,474             | 2,863  | \$   | 35,151             | 101,668   | \$ | 2,154,856            | 5.6%                              | \$ | 21,195            |
| 12/31/2005        | 2    | 4,472 | \$   | 149,127             | 3,217  | \$   | 36,784             | 102,923   | \$ | 2,267,198            | 5.2%                              | \$ | 22,028            |
| 12/31/2006        | 2, 3 | 5,060 | \$   | 151,240             | 3,263  | \$   | 39,735             | 104,720   | \$ | 2,378,704            | 4.9%                              | \$ | 22,715            |
| 12/31/2007        | 2, 3 | 5,385 | \$   | 183,232             | 3,304  | \$   | 40,590             | 106,801   | \$ | 2,521,345            | 6.0%                              | \$ | 23,608            |
| 12/31/2008        | 2, 3 | 5,963 | \$   | 171,484             | 3,626  | \$   | 47,062             | 109,138   | \$ | 2,645,767            | 4.9%                              | \$ | 24,242            |

<sup>1</sup> Since last valuation date.

<sup>2</sup> Annual allowances reflect estimated adjustments to retiree benefits due to the implementation of the Strunk v. PERB, et al. and City of Eugene v. State of Oregon, PERB, et al. decisions.

Annual allowances do not reflect adjustments due to any interpretation of Judge Kantor's June 20, 2007 ruling in the Arken and Robinson cases.

#### GASB Nos. 25 and 43 Information

#### Schedule of Funding Progress by Rate Pool

The GASB Statement Nos. 25 and 43 liabilities and assets resulting from the last five actuarial valuations are as follows (dollar amounts in millions):

| Actuarial<br>Valuation |          |      | Actuarial<br>Value of<br>Assets <sup>1,2</sup> |         | Actuarial<br>Accrued<br>bility (AAL) <sup>2</sup> | U     | nfunded AAL<br>(UAAL) | Funded<br>Ratio | Covered<br>Payroll <sup>3</sup> | UAAL as a<br>% of<br>Covered<br>Payroll |  |
|------------------------|----------|------|--|---------|---|-------|-----------------------|-----------------|---------------------------------|---|--|
| Date                   | Date (a) |      | (a)  |         | (b)   |       | (b-a)                 | (a/b)           | (c)                             | ((b-a)/c)                               |  |
| Tier 1/Tier 2          | Stat     | te & | Local Govern                                   | ment    | t Rate Pool                                       |       |                       |                 |                                 |   |  |
| 12/31/2004             |          | \$   | 22,768.1                                       | \$      | 23,407.2  | \$    | 639.1                 | 97.3%           | \$<br>3,171.0                   | 20.2%                                   |  |
| 12/31/2005             | 4        | \$   | 25,556.3                                       | \$      | 24,450.3  | \$    | (1,106.0)             | 104.5%          | \$<br>3,089.8                   | (35.8%)                                 |  |
| 12/31/2006             |          | \$   | 28,177.2                                       | \$      | 25,390.0  | \$    | (2,787.3)             | 111.0%          | \$<br>3,174.6                   | (87.8%)                                 |  |
| 12/31/2007             | 5        | \$   | 30,314.8                                       | \$      | 26,883.1  | \$    | (3,431.7)             | 112.8%          | \$<br>3,448.1                   | (99.5%)                                 |  |
| 12/31/2008             |          | \$   | 22,301.2                                       | \$      | 27,551.8  | \$    | 5,250.6               | 80.9%           | \$<br>3,452.7                   | 152.1%                                  |  |
| Tier 1/Tier 2          | Sch      | ool  | District Rate I                                | Pool    |   |       |                       |                 |                                 |   |  |
| 12/31/2004             |          | \$   | 18,679.3                                       | \$      | 19,483.0  | \$    | 803.7                 | 95.9%           | \$<br>2,173.6                   | 37.0%                                   |  |
| 12/31/2005             |          | \$   | 21,095.0                                       | \$      | 20,151.8  | \$    | (943.2)               | 104.7%          | \$<br>2,126.5                   | (44.4%)                                 |  |
| 12/31/2006             |          | \$   | 23,033.4                                       | \$      | 20,825.0  | \$    | (2,208.4)             | 110.6%          | \$<br>2,233.7                   | (98.9%)                                 |  |
| 12/31/2007             |          | \$   | 24,053.6                                       | \$      | 21,299.3  | \$    | (2,754.3)             | 112.9%          | \$<br>2,185.0                   | (126.1%)                                |  |
| 12/31/2008             |          | \$   | 17,458.5                                       | \$      | 21,742.7  | \$    | 4,284.2               | 80.3%           | \$<br>2,153.7                   | 198.9%                                  |  |
| Tier 1/Tier 2          | Inde     | eper | ndent Employe                                  | ers ai  | nd Judiciarv                                      |       |                       |                 |                                 |   |  |
| 12/31/2004             |          | \$   | 4,195.1  | \$      | 4,444.4   | \$    | 249.3                 | 94.4%           | \$<br>961.9                     | 25.9%                                   |  |
| 12/31/2005             | 4        | \$   | 4.742.9  | \$      | 4,575.0   | \$    | (167.9)               | 103.7%          | \$<br>894.9                     | (18.8%)                                 |  |
| 12/31/2006             |          | \$   | 5,330.5  | \$      | 4,860.1   | \$    | (470.4)               | 109.7%          | \$<br>928.1                     | (50.7%)                                 |  |
| 12/31/2007             | 5        | \$   | 4,765.5  | \$      | 4,423.2   | \$    | (342.3)               | 107.7%          | \$<br>628.8                     | (54.4%)                                 |  |
| 12/31/2008             |          | \$   | 3,576.7  | \$      | 4,566.0   | \$    | 989.3                 | 78.3%           | \$<br>619.4                     | 159.7%                                  |  |
| OPSRP Rate             | Po       | ol   |  |         |   |       |                       |                 |                                 |   |  |
| 12/31/2005             |          | \$   | 55.0   | \$      | 53.8  | \$    | (1.2)                 | 102.2%          | \$<br>680.7                     | (0.2%)                                  |  |
| 12/31/2006             |          | \$   | 151.4  | \$      | 115.0   | \$    | (36.4)                | 131.6%          | \$<br>990.4                     | (3.7%)                                  |  |
| 12/31/2007             |          | \$   | 275.1  | \$      | 203.0   | \$    | (72.1)                | 135.5%          | \$<br>1,459.9                   | (4.9%)                                  |  |
| 12/31/2008             |          | \$   | 270.5  | \$      | 336.8   | \$    | 66.3                  | 80.3%           | \$<br>1,904.3                   | 3.5%                                    |  |
| Postemploy             | men      | t He | althcare Bene                                  | efits - | Retirement H                                      | leal  | th Insurance Acc      | ount            |                                 |   |  |
| 12/31/2004             |          | \$   | 148.0  | \$      | 556.9   | \$    | 408.9                 | 26.6%           | \$<br>6,306.4                   | 6.5%                                    |  |
| 12/31/2005             |          | \$   | 181.0  | \$      | 495.9   | \$    | 314.9                 | 36.5%           | \$<br>6,111.2                   | 5.2%                                    |  |
| 12/31/2006             |          | \$   | 221.3  | \$      | 511.8   | \$    | 290.5                 | 43.2%           | \$<br>6,336.4                   | 4.6%                                    |  |
| 12/31/2007             |          | \$   | 250.8  | \$      | 499.6   | \$    | 248.8                 | 50.2%           | \$<br>6,261.9                   | 4.0%                                    |  |
| 12/31/2008             |          | \$   | 183.8  | \$      | 494.0   | \$    | 310.2                 | 37.2%           | \$<br>6,225.8                   | 5.0%                                    |  |
| Postemploy             | men      | t He | althcare Bene                                  | efits - | Retiree Healt                                     | th In | surance Premiu        | m Account       |                                 |   |  |
| 12/31/2004             |          | \$   | 5.2  | \$      | 28.2  | \$    | 23.0                  | 18.4%           | \$<br>1,701.0                   | 1.4%                                    |  |
| 12/31/2005             |          | \$   | 6.1  | \$      | 27.0  | \$    | 20.9                  | 22.7%           | \$<br>1,621.2                   | 1.3%                                    |  |
| 12/31/2006             |          | \$   | 7.0  | \$      | 23.4  | \$    | 16.4                  | 30.0%           | \$<br>1,665.7                   | 1.0%                                    |  |
| 12/31/2007             |          | \$   | 7.8  | \$      | 23.3  | \$    | 15.5                  | 33.6%           | \$<br>1,692.1                   | 0.9%                                    |  |
| 12/31/2008             |          | \$   | 5.7  | \$      | 21.3  | \$    | 15.6                  | 26.7%           | \$<br>1,708.5                   | 0.9%                                    |  |

#### Notes:

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<sup>1</sup> Side account assets are included with Tier 1/Tier 2 assets.

<sup>2</sup> Excludes effect of Multnomah Fire District (net UAAL of \$149 million as of 12/31/2008).

Covered payroll shown is payroll for members of the rate pool benefiting from the specified program. For example, Tier 1/Tier 2 School District payroll is only payroll for Tier 1/Tier 2 members and excludes OPSRP. However, UAL is amortized using combined Tier 1/Tier 2 and OPSRP payroll.

<sup>4</sup> Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2006.

<sup>5</sup> Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2008.

#### **Solvency Test**

#### Pension and Retiree Healthcare Plans

|                   |     |   | Actu     | arial | Accrued Li | abilit            | y <sup>1</sup> | -  |                       |              |                 |               |
|-------------------|-----|---|----------|-------|------------|-------------------|----------------|----|-----------------------|--------------|-----------------|---------------|
|                   |     | Retired<br>Active Member Members and      |          |       |            |                   |                |    |                       | Portion of A | ctuarial Accrue | d Liabilities |
| Valuation         |     | Contributions Beneficiaries Other Members |          | ١     | /aluation  | Covered by Assets |                |    |                       |              |                 |               |
| Date <sup>2</sup> |     |   | (1)      |       | (2)        |                   | (3)            |    | Assets <sup>1,3</sup> | (1)          | (2)             | (3)           |
| 12/31/1995        |     | \$  | 5,753.0  | \$    | 7,492.8    | \$                | 10,002.8       | \$ | 20,957.6              | 100%         | 100%            | 77%           |
| 12/31/1997        |     | \$  | 8,135.4  | \$    | 9,994.9    | \$                | 13,534.6       | \$ | 29,108.2              | 100%         | 100%            | 81%           |
| 12/31/1999        |     | \$  | 8,238.1  | \$    | 14,333.7   | \$                | 18,336.1       | \$ | 39,964.8              | 100%         | 100%            | 95%           |
| 12/31/2000        |     | \$  | 10,142.5 | \$    | 15,664.1   | \$                | 17,543.9       | \$ | 41,804.6              | 100%         | 100%            | 91%           |
| 12/31/2001        |     | \$  | 10,252.8 | \$    | 17,465.9   | \$                | 18,229.0       | \$ | 39,852.2              | 100%         | 100%            | 67%           |
| 12/31/2001        | 4   | \$  | 10,252.8 | \$    | 17,340.0   | \$                | 10,228.8       | \$ | 39,852.2              | 100%         | 100%            | 120%          |
| 12/31/2002        | 4   | \$  | 9,940.7  | \$    | 19,339.0   | \$                | 10,240.8       | \$ | 36,316.8              | 100%         | 100%            | 69%           |
| 12/31/2003        | 4   | \$  | 9,005.8  | \$    | 23,625.9   | \$                | 11,993.9       | \$ | 42,874.4              | 100%         | 100%            | 85%           |
| 12/31/2004        | 5,6 | \$  | 9,073.0  | \$    | 25,363.0   | \$                | 13,547.6       | \$ | 45,735.3              | 100%         | 100%            | 83%           |
| 12/31/2005        | 7,8 | \$  | 9,169.7  | \$    | 26,602.4   | \$                | 14,044.7       | \$ | 51,569.6              | 100%         | 100%            | 112%          |
| 12/31/2006        |     | \$  | 9,410.8  | \$    | 27,711.3   | \$                | 14,666.2       | \$ | 56,844.8              | 100%         | 100%            | 134%          |
| 12/31/2007        | 9   | \$  | 9,225.0  | \$    | 29,157.3   | \$                | 15,011.8       | \$ | 59,586.4              | 100%         | 100%            | 141%          |
| 12/31/2008        |     | \$  | 8,341.5  | \$    | 30,537.7   | \$                | 15,895.7       | \$ | 43,710.2              | 100%         | 100%            | 30%           |

<sup>1</sup> Includes effect of Multnomah Fire District (net UAAL of \$149 million as of 12/31/2008).

<sup>2</sup> An extensive revision of the actuarial assumptions occurs prior to each odd-year valuation; therefore, the figures are not directly comparable. Effective with the 12/31/2006 valuation, revisions to actuarial assumptions occur prior to each even-year valuation.

<sup>3</sup> Effective with the 12/31/2002 valuation, includes the value of UAL Lump Sum Side Accounts.

<sup>4</sup> The 2001 valuation was revised to include the impact of PERS Reform Legislation enacted in 2003. Figures through 12/31/2003 do no reflect the judicial review or subsequent Board action.

<sup>5</sup> Effective with the 2004 valuation, the Oregon Supreme Court rulings in Strunk v. PERB, et al. (Issued March 8, 2005) and City of Eugene v. State of Oregon, PERB, et al. (Issued August 11, 2005) are reflected.

<sup>6</sup> Effective with the 2004 valuation, the cost method was changed from Entry Age Normal to Projected Unit Credit, and the actuarial value of assets was changed from a 4-year smoothed value to market value.

<sup>7</sup> Assets and liabilities for OPSRP are first valued in the 2005 valuation.

<sup>8</sup> Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2006.

<sup>9</sup> Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2008.

#### **Actuarial Schedules**

#### Analysis of Financial Experience

Gains and Losses in Accrued Liability During Year Ended 2008 Resulting from Differences Between Assumed Experience and Actual Experience

|   |    | for Year      |        |
|---|----|---------------|--------|
| Pension and Retiree Healthcare Plans                    |    | 2008          | 2007   |
| Type of Activity  |    |               |        |
| Retirements from Active Status                          | \$ | (109.7) \$    | (96.2) |
| Active Mortality and Withdrawal                         |    | 19.6          | 64.3   |
| Pay Increases   |    | (93.3)        | (68.6) |
| Contributions   |    | 119.3         | 65.4   |
| Interest Crediting Experience                           |    | 701.2         | 72.5   |
| Investment Income                                       |    | (15,861.8)    | 327.2  |
| Retirement, Mortality and Lump Sums from Dormant Status |    | 137.7         | 124.5  |
| Retiree and Beneficiary Mortality                       |    | (69.7)        | (82.9) |
| Data Corrections  |    | -             | 54.7   |
| Other   |    | 119.2         | 84.3   |
| Gain (or Loss) During Year From Financial Experience    | \$ | (15,037.5) \$ | 545.3  |
| Non-Recurring Items                                     |    |               |        |
| Assumption Changes                                      |    | (263.7)       | -      |
| Composite Gain (or Loss) During Year                    | \$ | (15,301.2) \$ | 545.3  |

# GASB Nos. 25 and 43 Required Supplementary Information Schedules of Funding Progress

(dollar amounts in millions)

| Actuarial<br>Valuation<br>Date | Actuarial<br>Value of<br>Assets<br>(a) | Actuarial<br>Accrued<br>Liability (AAL)<br>(b) | Unfunded AAL<br>(UAAL)<br>(b-a) | Funded<br>Ratio<br>(a/b) | Covered<br>Payroll<br>(c) | UAAL as a<br>% of<br>Covered<br>Payroll<br>((b-a)/c) |
|--------------------------------|--|--|---------------------------------|--------------------------|---------------------------|--|
| Pension Benefit                | s - Tier 1/Tier 2 an                   | d OPSRP <sup>1</sup>                           |                                 |                          |                           |  |
| 12/31/2000                     | 41,739.6                               | 42,783.9                                       | 1,044.3                         | 97.6%                    | 6,195.9                   | 16.9%  |
| 12/31/2001                     | 39,772.7                               | 45,386.1                                       | 5,613.4                         | 87.6%                    | 6,254.0 <sup>2</sup>      | 89.8%  |
| 12/31/2001 <sup>3</sup>        | 39,772.7                               | 37,258.3                                       | (2,514.4)                       | 106.7%                   | 6,254.0                   | (40.2%)  |
| 12/31/2002 <sup>3</sup>        | 35,446.9                               | 38,947.0                                       | 3,500.1                         | 91.0%                    | 6,383.5                   | 54.8%  |
| 12/31/2003 <sup>3</sup>        | 42,753.3                               | 44,078.1                                       | 1,324.8                         | 97.0%                    | 6,248.5                   | 21.2%  |
| 12/31/2004 4,5                 | 45,581.1                               | 47,398.6                                       | 1,817.5                         | 96.2%                    | 6,772.4 <sup>6</sup>      | 26.8%  |
| 12/31/2005 <sup>6,7</sup>      | 51,382.6                               | 49,294.0                                       | (2,088.6)                       | 104.2%                   | 6,791.9                   | (30.8%)  |
| 12/31/2006                     | 56,616.5                               | 51,252.9                                       | (5,363.5)                       | 110.5%                   | 7,326.8                   | (73.2%)  |
| 12/31/2007 8                   | 59,327.8                               | 52,871.2                                       | (6,456.7)                       | 112.2%                   | 7,721.8                   | (83.6%)  |
| 12/31/2008                     | 43,520.6                               | 54,259.5                                       | 10,738.9                        | 80.2%                    | 8,130.1                   | 132.1%   |
| Postemploymen                  | t Healthcare Bene                      | fits - Retirement                              | Health Insurance A              | ccount                   |                           |  |
| 12/31/2000                     | 62.1                                   | 543.5  | 481.4                           | 11.4%                    | 6,195.9                   | 7.8%   |
| 12/31/2001                     | 76.6                                   | 532.1  | 455.5                           | 14.4%                    | 6,254.0 <sup>2</sup>      | 7.3%   |
| 12/31/2001 <sup>3</sup>        | 76.6                                   | 533.2  | 456.6                           | 14.4%                    | 6,254.0                   | 7.3%   |
| 12/31/2002 <sup>3</sup>        | 87.4                                   | 542.3  | 454.9                           | 16.1%                    | 6,383.5                   | 7.1%   |
| 12/31/2003 <sup>3</sup>        | 117.1                                  | 522.5  | 405.4                           | 22.4%                    | 6,248.5                   | 6.5%   |
| 12/31/2004 5                   | 148.0                                  | 556.9  | 408.9                           | 26.6%                    | 6,772.4 <sup>6</sup>      | 6.0%   |
| 12/31/2005                     | 181.0                                  | 495.9  | 314.9                           | 36.5%                    | 6,791.9                   | 4.6%   |
| 12/31/2006                     | 221.3                                  | 511.8  | 290.5                           | 43.2%                    | 7,326.8                   | 4.0%   |
| 12/31/2007                     | 250.8                                  | 499.6  | 248.8                           | 50.2%                    | 7,721.8                   | 3.2%   |
| 12/31/2008                     | 183.8                                  | 494.0  | 310.2                           | 37.2%                    | 8,130.1                   | 3.8%   |
| Postemploymen                  | t Healthcare Bene                      | fits - Retiree Hea                             | Ith Insurance Prem              | ium Account              |                           |  |
| 12/31/2000                     | 2.9                                    | 23.1   | 20.2                            | 12.6%                    | 1,984.0                   | 1.0%   |
| 12/31/2001                     | 3.0                                    | 29.5   | 26.5                            | 10.2%                    | 1,954.1 <sup>2</sup>      | 1.4%   |
| 12/31/2001 <sup>3</sup>        | 2.9                                    | 29.6   | 26.7                            | 9.8%                     | 1,954.1                   | 1.4%   |
| 12/31/2002 <sup>3</sup>        | 2.9                                    | 30.1   | 27.2                            | 9.6%                     | 1,741.9                   | 1.6%   |
| 12/31/2003 <sup>3</sup>        | 4.0                                    | 25.0   | 21.0                            | 16.0%                    | 1,711.9                   | 1.2%   |
| 12/31/2004 <sup>5</sup>        | 5.2                                    | 28.2   | 23.0                            | 18.4%                    | 1,851.4 <sup>6</sup>      | 1.2%   |
| 12/31/2005                     | 6.1                                    | 27.0   | 20.9                            | 22.7%                    | 1,827.0                   | 1.1%   |
| 12/31/2006                     | 7.0                                    | 23.4   | 16.4                            | 30.0%                    | 1,946.8                   | 0.8%   |
| 12/31/2007                     | 7.8                                    | 23.3   | 15.5                            | 33.6%                    | 2,080.2                   | 0.7%   |
| 12/31/2008                     | 5.7                                    | 21.3   | 15.6                            | 26.7%                    | 2,217.9                   | 0.7%   |

Notes:

<sup>1</sup> Includes UAAL for Multnomah Fire District (\$149 million as of 12/31/2008)

<sup>2</sup> Effective with the 2001 valuation, Annual Active Member Payroll excludes the member pick-up, if any.

<sup>3</sup> The 2001 valuation was revised to include the impact of PERS Reform Legislation enacted in 2003. Figures through 12/31/2003 do not reflect the judicial review or subsequent Board action.

<sup>4</sup> Effective with the 2004 valuation, the Oregon Supreme Court rulings in Strunk v. PERB, et al. (Issued March 8, 2005) and City of Eugene v. State of Oregon, PERB, et al. (Issued August 11, 2005) are reflected.

<sup>5</sup> Effective with the 2004 valuation, the cost method was changed from Entry Age Normal to Projected Unit Credit, and the actuarial value of assets was changed from a 4-year smoothed value to market value.

<sup>6</sup> Assets and liabilities for OPSRP are first valued in the 2005 valuation. OPSRP payroll, however, was included in the amortization of the UAAL beginning with the 2004 valuation.

<sup>7</sup> Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2006.

<sup>8</sup> Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2008.

#### Mercer

# GASB Nos. 25 and 43 Required Supplementary Information *(continued)*

#### Schedules of Employer Contributions

Dollar amounts in millions.

| Actuarial        | Annual                      |                   |
|------------------|-----------------------------|-------------------|
| Valuation        | Required                    | Percentage        |
| Date             | Contribution <sup>1,2</sup> | Contributed       |
| Pension Benefits | - Tier 1/Tier 2 and         | I OPSRP           |
| 12/31/2006       | \$938.6                     | 63%               |
| 12/31/2007       | \$805.7                     | 74%               |
| 12/31/2008       | \$707.4                     | 100% <sup>3</sup> |
| Postemployment   | Healthcare Benef            | its - Retirement  |
| 12/31/2006       | \$44.3                      | 89%               |
| 12/31/2007       | \$38.8                      | 91%               |
| 12/31/2008       | \$33.0                      | 85%               |
| Postemployment   | Healthcare Benef            | its - Retiree Hea |
| 12/31/2006       | \$2.5                       | 90%               |
| 12/31/2007       | \$2.7                       | 79%               |
| 12/31/2008       | \$2.9                       | 63%               |

The Annual Required Contribution prior to 7/1/2007 is based on the 7/1/2005 rates developed in the 12/31/2003 Milliman valuation prior to the adjustment to phase-in the rate increase and adjusted for supplemental payments since 12/31/2003. For most employers, the actual pension amount contributed from 7/1/2005 to 6/30/2007 was based on the phased-in rates.

<sup>2</sup> The Annual Required Contribution shown is an estimated amount based on system-wide contribution rates in effect for the year in question and system payroll as reported by PERS. For example, the 2008 pension benefits ARC is based on rates developed in the 12/31/2005 actuarial valuation and 2008 payroll as reported by PERS.

<sup>3</sup> Commencing 7/1/2007, system employers generally contribute 100% of the Annual Required Contribution, as a percent of pay. The actual dollar amount contributed in a given calendar year can vary from the estimated Annual Required Contribution based on factors such as month-to-month variations in payroll and timing of contributions.

# GASB Nos. 25 and 43 Required Supplementary Information *(continued)*

## Notes to Required Supplementary Schedules

| Valuation Date:  | December 31, 2008   |  |  |  |  |  |
|--|---|--|--|--|--|--|
| Actuarial Cost Method:   | Projected Unit Credit   |  |  |  |  |  |
| Amortization Method  | The UAL is amortized as a level percentage of payroll. The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare it is 10 years. Gains and losses between subsequent odd-year valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 years for Retiree Healthcare) from the odd-year valuation in which they are first recognized. Contribution rates effective July 1, 2007 through June 30, 2011 reflect an accelarated amortization of the change in UAL due to the change from Entry Age Normal to Projected Unit Credit on December 31, 2004. Gains and losses for OPSRP benefits are amortized over a closed 16 years from the odd-year valuation in which they are first recognized. |  |  |  |  |  |
| Equivalent Single Amortization Period:   |   |  |  |  |  |  |
| Pension  | 3 years   |  |  |  |  |  |
| RHIA   | 30 years  |  |  |  |  |  |
| RHIPA  | 30 years  |  |  |  |  |  |
| The Equivalent Single Amortization Period calcumost recently in the December 31, 2007 actuar | Ilation is performed with the ARC-setting valuation. This was calculated al valuation.  |  |  |  |  |  |
| Actuarial Assumptions:   |   |  |  |  |  |  |
| Investment Rate of Return:   | 8.00 percent  |  |  |  |  |  |
| Payroll Growth:  | 3.75 percent  |  |  |  |  |  |
| Consumer Price Inflation:  | 2.75 percent  |  |  |  |  |  |
| Health Cost Inflation:   | Graded from 7.0 percent in 2009 to 4.5 percent in 2029.   |  |  |  |  |  |
| Cost-of-Living Adjustments:  | 2.00 percent  |  |  |  |  |  |
| Method used to Value Assets:   | The actuarial value of assets equals the fair market value of asset excluding the Contingency, Capital Preservation and Rate Guaran Reserves.   |  |  |  |  |  |

# Data

This valuation is based upon the membership of the System as of December 31, 2008.

#### System Wide Data Exhibits

#### Valuation Pay and Census Exhibit

The following tables illustrate the breakdown of member counts and valuation payroll for the SLGRP, School District Pool, and independent employers.

#### SLGRP

|                                   | G  | eneral Service | Police & Fire  | Total           |
|-----------------------------------|----|----------------|----------------|-----------------|
| Tier 1                            | \$ | 1,653,035,760  | \$ 295,438,966 | \$1,948,474,726 |
| Tier 2                            |    | 1,227,072,931  | 277,111,378    | 1,504,184,309   |
| Tier 1/Tier 2 Valuation Payroll   |    | 2,880,108,691  | 572,550,344    | 3,452,659,035   |
| OPSRP Valuation Payroll           |    | 928,023,814    | 140,630,384    | 1,068,654,198   |
| <b>Combined Valuation Payroll</b> | \$ | 3,808,132,505  | \$ 713,180,728 | \$4,521,313,233 |

|                               |                   |             |      | D           | ece | mber 31 |              |           |
|-------------------------------|-------------------|-------------|------|-------------|-----|---------|--------------|-----------|
|                               |                   |             |      | 2008        | 3   |         |              | 2007      |
|                               |                   | Tier 1      |      | Tier 2      |     | OPSRP   | Total        |           |
| Active Members                |                   |             |      |             |     |         |              |           |
| General Service               |                   | 26,904      |      | 24,210      |     | 23,970  | 75,084       | 73,522    |
| Police & Fire                 |                   | 3,954       |      | 4,422       |     | 2,910   | 11,286       | 10,785    |
| Total                         |                   | 30,858      |      | 28,632      |     | 26,880  | 86,370       | 84,307    |
| Average Age                   |                   | 52.5        |      | 45.9        |     | 39.8    | 46.4         | 46.2      |
| Average Service               |                   | 19.4        |      | 8.3         |     | 2.6     | 10.5         | 10.4      |
| Average Valuation Pay         | \$                | 63,143      | \$   | 52,535      | \$  | 39,756  | \$<br>52,348 | \$ 50,579 |
| Active Members outside the Po | ol with pr        | evious Segm | ents | in the Pool |     |         |              |           |
| General Service               |                   | 6,588       |      | 3,719       |     |         | 10,307       | 10,680    |
| Police & Fire                 |                   | 521         |      | 389         |     |         | 910          | 926       |
| Total                         |                   | 7,109       |      | 4,108       |     |         | 11,217       | 11,606    |
| Average Age                   |                   | 51.5        |      | 42.4        |     |         | 48.2         | 47.7      |
| Average Service               |                   | 2.4         |      | 1.5         |     |         | 2.1          | 2.0       |
| Dormant Members <sup>1</sup>  |                   |             |      |             |     |         |              |           |
| General Service               |                   | 14,332      |      | 10,657      |     | 278     | 25,267       | 26,190    |
| Police & Fire                 |                   | 681         |      | 612         |     | 27      | 1,320        | 1,352     |
| Total                         |                   | 15,013      |      | 11,269      |     | 305     | 26,587       | 27,542    |
| Average Age                   |                   | 53.7        |      | 46.4        |     | 50.0    | 50.6         | 49.8      |
| Average Monthly Benefit       | \$                | 1,641       | \$   | 388         | \$  | 152     | \$<br>1,093  | \$ 1,087  |
| Retired Members and Beneficia | ries <sup>1</sup> |             |      |             |     |         |              |           |
| General Service               |                   | 52,523      |      | 1,179       |     | 3       | 53,705       | 52,265    |
| Police & Fire                 |                   | 6,982       |      | 231         |     | 0       | 7,213        | 6,979     |
| Total                         |                   | 59,505      |      | 1,410       |     | 3       | 60,918       | 59,244    |
| Average Age                   |                   | 69.4        |      | 63.6        |     | 66.5    | 69.3         | 69.1      |
| Average Monthly Benefit       | \$                | 1,749       | \$   | 510         |     | 24      | \$<br>1,720  | \$ 1,690  |
| Grand Total Number of Membe   | rs                | 112,485     |      | 45,419      |     | 27,188  | 185,092      | 182,699   |

<sup>1</sup> Dormant and Retiree counts are by lives within each rate pool. As a result, some individuals may be counted more than once.

# Data

# System Wide Data Exhibits (continued)

# Valuation Pay and Census Exhibit (continued)

## School District Pool

|                                   | General Service  | Police & Fire | Total           |
|-----------------------------------|------------------|---------------|-----------------|
| Tier 1                            | \$ 1,267,978,330 | \$ 2,982,080  | \$1,270,960,410 |
| Tier 2                            | 881,569,488      | 1,196,844     | 882,766,332     |
| Tier 1/Tier 2 Valuation Payroll   | 2,149,547,818    | 4,178,924     | 2,153,726,742   |
| OPSRP Valuation Payroll           | 660,870,643      | 806,358       | 661,677,001     |
| <b>Combined Valuation Payroll</b> | \$ 2,810,418,461 | \$ 4,985,282  | \$2,815,403,743 |

|                               |                    |             |      | D           | ece | mber 31 |              |           |
|-------------------------------|--------------------|-------------|------|-------------|-----|---------|--------------|-----------|
|                               |                    |             |      | 2008        | 3   |         |              | 2007      |
|                               |                    | Tier 1      |      | Tier 2      |     | OPSRP   | Total        |           |
| Active Members                |                    |             |      |             |     |         |              |           |
| General Service               |                    | 24,523      |      | 22,611      |     | 22,779  | 69,913       | 68,555    |
| Police & Fire                 |                    | 52          |      | 28          |     | 19      | 99           | 91        |
| Total                         |                    | 24,575      |      | 22,639      |     | 22,798  | 70,012       | 68,646    |
| Average Age                   |                    | 52.5        |      | 45.2        |     | 39.9    | 46.0         | 45.9      |
| Average Service               |                    | 19.1        |      | 8.0         |     | 2.7     | 10.2         | 10.1      |
| Average Valuation Pay         | \$                 | 51,718      | \$   | 38,993      | \$  | 29,023  | \$<br>40,213 | \$ 39,235 |
| Active Members outside the Po | ool with pre       | evious Segm | ents | in the Pool |     |         |              |           |
| General Service               | •                  | 2,547       |      | 1,466       |     |         | 4,013        | 4,038     |
| Police & Fire                 |                    | 13          |      | 8           |     |         | 21           | 18        |
| Total                         |                    | 2,560       |      | 1,474       |     |         | 4,034        | 4,056     |
| Average Age                   |                    | 52.7        |      | 43.2        |     |         | 49.2         | 48.8      |
| Average Service               |                    | 4.5         |      | 2.3         |     |         | 3.7          | 3.5       |
| Dormant Members <sup>1</sup>  |                    |             |      |             |     |         |              |           |
| General Service               |                    | 8,801       |      | 7,321       |     | 161     | 16,283       | 16,761    |
| Police & Fire                 |                    | 52          |      | 28          |     | 0       | 80           | 81        |
| Total                         |                    | 8,853       |      | 7,349       |     | 161     | 16,363       | 16,842    |
| Average Age                   |                    | 54.3        |      | 46.1        |     | 54.6    | 50.6         | 50.0      |
| Average Monthly Benefit       | \$                 | 1,337       | \$   | 330         | \$  | 91      | \$<br>872    | \$ 877    |
| Retired Members and Benefici  | aries <sup>1</sup> |             |      |             |     |         |              |           |
| General Service               |                    | 53,389      |      | 595         |     | 1       | 53,985       | 52,899    |
| Police & Fire                 |                    | 121         |      | 12          |     | 0       | 133          | 126       |
| Total                         |                    | 53,510      |      | 607         |     | 1       | 54,118       | 53,025    |
| Average Age                   |                    | 70.5        |      | 64.1        |     | 57.0    | 70.4         | 70.1      |
| Average Monthly Benefit       | \$                 | 1,834       | \$   | 464         |     | 174     | \$<br>1,819  | \$ 1,771  |
| Grand Total Number of Membe   | ers                | 89,498      |      | 32,069      |     | 22,960  | 144,527      | 142,569   |

<sup>1</sup> Dormant and Retiree counts are by lives within each rate pool. As a result, some individuals may be counted more than once.

# System Wide Data Exhibits (continued)

# Valuation Pay and Census Exhibit (continued)

# Independents

|                                   | Ge | neral Service | Police & Fire  | Total             |
|-----------------------------------|----|---------------|----------------|-------------------|
| Tier 1                            | \$ | 235,893,200   | \$ 109,655,044 | \$<br>345,548,244 |
| Tier 2                            |    | 188,618,131   | 85,237,910     | 273,856,041       |
| Tier 1/Tier 2 Valuation Payroll   |    | 424,511,331   | 194,892,954    | 619,404,285       |
| OPSRP Valuation Payroll           |    | 135,678,905   | 38,336,326     | 174,015,231       |
| <b>Combined Valuation Payroll</b> | \$ | 560,190,236   | \$ 233,229,280 | \$<br>793,419,516 |

|                               |                    |             |      | D           | ece | mber 31 |              |              |
|-------------------------------|--------------------|-------------|------|-------------|-----|---------|--------------|--------------|
|                               |                    |             |      | 2008        | 3   |         |              | 2007         |
|                               |                    | Tier 1      |      | Tier 2      |     | OPSRP   | Total        |              |
| Active Members                |                    |             |      |             |     |         |              |              |
| General Service               |                    | 3,873       |      | 3,676       |     | 3,495   | 11,044       | 10,965       |
| Police & Fire                 |                    | 1,296       |      | 1,166       |     | 681     | 3,143        | 3,105        |
| Total                         |                    | 5,169       |      | 4,842       |     | 4,176   | 14,187       | 14,070       |
| Average Age                   |                    | 51.6        |      | 44.4        |     | 39.4    | 45.6         | 45.4         |
| Average Service               |                    | 18.9        |      | 8.3         |     | 2.7     | 10.5         | 10.4         |
| Average Valuation Pay         | \$                 | 66,850      | \$   | 56,558      | \$  | 41,670  | \$<br>55,926 | \$<br>54,323 |
| Active Members outside the Pe | ool with pre       | vious Segme | ents | in the Pool |     |         |              |              |
| General Service               | -                  | 1,815       |      | 1,291       |     |         | 3,106        | 3,115        |
| Police & Fire                 |                    | 419         |      | 302         |     |         | 721          | 745          |
| Total                         |                    | 2,234       |      | 1,593       |     |         | 3,827        | 3,860        |
| Average Age                   |                    | 50.8        |      | 42.3        |     |         | 47.3         | 46.7         |
| Average Service               |                    | 4.1         |      | 2.2         |     |         | 3.3          | 3.1          |
| Dormant Members <sup>1</sup>  |                    |             |      |             |     |         |              |              |
| General Service               |                    | 1,961       |      | 1,518       |     | 55      | 3,534        | 3,651        |
| Police & Fire                 |                    | 233         |      | 149         |     | 8       | 390          | 385          |
| Total                         |                    | 2,194       |      | 1,667       |     | 63      | 3,924        | 4,036        |
| Average Age                   |                    | 53.0        |      | 46.6        |     | 52.6    | 50.3         | 49.3         |
| Average Monthly Benefit       | \$                 | 1,338       | \$   | 391         | \$  | 177     | \$<br>917    | \$<br>934    |
| Retired Members and Benefici  | aries <sup>1</sup> |             |      |             |     |         |              |              |
| General Service               |                    | 7,265       |      | 222         |     | 0       | 7,487        | 7,183        |
| Police & Fire                 |                    | 2,359       |      | 38          |     | 0       | 2,397        | 2,312        |
| Total                         |                    | 9,624       |      | 260         |     | 0       | 9,884        | 9,495        |
| Average Age                   |                    | 68.3        |      | 63.8        |     | .0      | 68.2         | 68.1         |
| Average Monthly Benefit       | \$                 | 1,766       | \$   | 443         |     | 0       | \$<br>1,731  | \$<br>1,685  |
| Grand Total Number of Membe   | ers                | 19,221      |      | 8,362       |     | 4,239   | 31,822       | 31,461       |

<sup>1</sup> Dormant and Retiree counts are by lives within each rate pool. As a result, some individuals may be counted more than once.

# System Wide Data Exhibits (continued)

# Valuation Pay and Census Exhibit (continued)

Total

|                                 | G  | eneral Service | Police & Fire  | Total            |
|---------------------------------|----|----------------|----------------|------------------|
| Tier 1                          | \$ | 3,156,907,290  | \$ 408,076,090 | \$ 3,564,983,380 |
| Tier 2                          |    | 2,297,260,550  | 363,546,132    | 2,660,806,682    |
| Tier 1/Tier 2 Valuation Payroll |    | 5,454,167,840  | 771,622,222    | 6,225,790,062    |
| OPSRP Valuation Payroll         |    | 1,724,573,362  | 179,773,068    | 1,904,346,430    |
| Combined Valuation Payroll      | \$ | 7,178,741,202  | \$ 951,395,290 | \$ 8,130,136,492 |

|                                    |                     |         | D            | ece | mber 31 |              |           |
|------------------------------------|---------------------|---------|--------------|-----|---------|--------------|-----------|
|                                    |                     |         | 2008         | 3   |         |              | 2007      |
|                                    |                     | Tier 1  | Tier 2       |     | OPSRP   | Total        |           |
| Active Members                     |                     |         |              |     |         |              |           |
| General Service                    |                     | 55,300  | 50,497       |     | 50,244  | 156,041      | 153,042   |
| Police & Fire                      |                     | 5,302   | 5,616        |     | 3,610   | 14,528       | 13,981    |
| Total                              |                     | 60,602  | 56,113       |     | 53,854  | 170,569      | 167,023   |
| Average Age                        |                     | 52.4    | 45.5         |     | 39.8    | 46.1         | 46.0      |
| Average Service                    |                     | 19.2    | 8.2          |     | 2.7     | 10.4         | 10.3      |
| Average Valuation Pay              | \$                  | 58,826  | \$<br>47,419 | \$  | 35,361  | \$<br>47,665 | \$ 46,232 |
| Dormant Members <sup>1</sup>       |                     |         |              |     |         |              |           |
| General Service                    |                     | 25,094  | 19,496       |     | 494     | 45,084       | 46,602    |
| Police & Fire                      |                     | 966     | 789          |     | 35      | 1,790        | 1,818     |
| Total                              |                     | 26,060  | 20,285       |     | 529     | 46,874       | 48,420    |
| Average Age                        |                     | 53.8    | 46.3         |     | 51.7    | 50.6         | 49.8      |
| Average Monthly Benefit            | \$                  | 1,512   | \$<br>367    | \$  | 136     | \$<br>1,001  | \$ 1,001  |
| <b>Retired Members and Benefic</b> | iaries <sup>1</sup> |         |              |     |         |              |           |
| General Service                    |                     | 113,177 | 1,996        |     | 4       | 115,177      | 112,347   |
| Police & Fire                      |                     | 9,462   | 281          |     | 0       | 9,743        | 9,417     |
| Total                              |                     | 122,639 | 2,277        |     | 4       | 124,920      | 121,764   |
| Average Age                        |                     | 69.8    | 63.8         |     | 64.1    | 69.7         | 69.5      |
| Average Monthly Benefit            | \$                  | 1,787   | \$<br>490    | \$  | 62      | \$<br>1,764  | \$ 1,725  |
| Grand Total Number of Memb         | ers                 | 209,301 | 78,675       |     | 54,387  | 342,363      | 337,207   |

<sup>1</sup> Dormant and Retiree counts are by lives within each rate pool. As a result, some individuals may be counted more than once.

## System Wide Data Exhibits (continued)

## Age/Service and Valuation Payroll by Tier and Job Class

## Tier 1 General Service Active Members

|       | 0-4          | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30-34  | 35-39  | 40+    | Total  |
|-------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 20-24 | 0            | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
|       | \$<br>0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| 25-29 | 0            | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
|       | \$<br>0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| 30-34 | 0            | 20     | 150    | 14     | 0      | 0      | 0      | 0      | 0      | 184    |
|       | \$<br>0      | 38,614 | 46,594 | *      | 0      | 0      | 0      | 0      | 0      | 45,862 |
| 35-39 | 10           | 124    | 1,458  | 423    | 9      | 0      | 0      | 0      | 0      | 2,024  |
|       | \$<br>*      | 37,202 | 55,204 | 54,343 | *      | 0      | 0      | 0      | 0      | 53,836 |
| 40-44 | 7            | 190    | 1,997  | 2,332  | 458    | 14     | 0      | 0      | 0      | 4,998  |
|       | \$<br>*      | 39,249 | 56,594 | 61,442 | 57,208 | *      | 0      | 0      | 0      | 58,245 |
| 45-49 | 17           | 207    | 2,328  | 3,343  | 2,527  | 548    | 12     | 0      | 0      | 8,982  |
|       | \$<br>*      | 41,322 | 52,270 | 58,522 | 62,997 | 58,362 | *      | 0      | 0      | 57,782 |
| 50-54 | 14           | 220    | 2,932  | 4,614  | 3,387  | 2,922  | 453    | 4      | 0      | 14,546 |
|       | \$<br>*      | 40,240 | 49,550 | 55,992 | 62,137 | 64,746 | 60,885 | *      | 0      | 57,768 |
| 55-59 | 12           | 187    | 2,791  | 5,046  | 3,881  | 2,737  | 1,114  | 96     | 1      | 15,865 |
|       | \$<br>*      | 42,424 | 48,913 | 54,604 | 59,973 | 65,277 | 68,121 | 64,960 | *      | 57,645 |
| 60-64 | 11           | 106    | 1,303  | 2,578  | 1,780  | 966    | 366    | 74     | 10     | 7,194  |
|       | \$<br>*      | 40,628 | 50,452 | 55,661 | 58,452 | 61,824 | 71,829 | 78,110 | *      | 57,053 |
| 65-69 | 4            | 31     | 263    | 427    | 317    | 137    | 62     | 24     | 13     | 1,278  |
|       | \$<br>*      | 30,296 | 48,588 | 54,357 | 61,745 | 66,498 | 59,558 | 69,165 | *      | 56,359 |
| 70-74 | 1            | 10     | 47     | 59     | 35     | 14     | 8      | 3      | 6      | 183    |
|       | \$<br>*      | *      | *      | *      | *      | *      | *      | *      | *      | *      |
| 75+   | 0            | 1      | 14     | 17     | 6      | 3      | 3      | 0      | 2      | 46     |
|       | \$<br>0      | *      | *      | *      | *      | *      | *      | 0      | *      | *      |
| Total | 76           | 1,096  | 13,283 | 18,853 | 12,400 | 7,341  | 2,018  | 201    | 32     | 55,300 |
|       | \$<br>51,040 | 39,624 | 51,381 | 56,393 | 60,706 | 63,945 | 66,513 | 68,996 | 48,914 | 57,230 |

### System Wide Data Exhibits (continued)

## Age/Service and Valuation Payroll by Tier and Job Class (continued)

# Tier 2 General Service Active Members

|       | 0-4          | 5-9    | 10-14  | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total  |
|-------|--------------|--------|--------|-------|-------|-------|-------|-------|-----|--------|
| 20-24 | 27           | 30     | 0      | 0     | 0     | 0     | 0     | 0     | 0   | 57     |
|       | \$<br>23,905 | 23,693 | 0      | 0     | 0     | 0     | 0     | 0     | 0   | 23,793 |
| 25-29 | 473          | 862    | 24     | 0     | 0     | 0     | 0     | 0     | 0   | 1,359  |
|       | \$<br>35,868 | 38,482 | 41,939 | 0     | 0     | 0     | 0     | 0     | 0   | 37,633 |
| 30-34 | 886          | 4,772  | 543    | 0     | 0     | 0     | 0     | 0     | 0   | 6,201  |
|       | \$<br>39,780 | 46,450 | 49,545 | 0     | 0     | 0     | 0     | 0     | 0   | 45,768 |
| 35-39 | 598          | 5,632  | 1,872  | 0     | 0     | 0     | 0     | 0     | 0   | 8,102  |
|       | \$<br>37,501 | 49,409 | 54,577 | 0     | 0     | 0     | 0     | 0     | 0   | 49,724 |
| 40-44 | 472          | 5,074  | 1,746  | 0     | 0     | 0     | 0     | 0     | 0   | 7,292  |
|       | \$<br>37,822 | 47,441 | 53,253 | 0     | 0     | 0     | 0     | 0     | 0   | 48,210 |
| 45-49 | 429          | 5,519  | 2,036  | 0     | 0     | 0     | 0     | 0     | 0   | 7,984  |
|       | \$<br>37,395 | 44,361 | 50,122 | 0     | 0     | 0     | 0     | 0     | 0   | 45,456 |
| 50-54 | 362          | 5,385  | 2,319  | 0     | 0     | 0     | 0     | 0     | 0   | 8,066  |
|       | \$<br>34,803 | 44,100 | 46,969 | 0     | 0     | 0     | 0     | 0     | 0   | 44,508 |
| 55-59 | 303          | 4,302  | 2,000  | 0     | 0     | 0     | 0     | 0     | 0   | 6,605  |
|       | \$<br>35,847 | 45,247 | 48,907 | 0     | 0     | 0     | 0     | 0     | 0   | 45,924 |
| 60-64 | 177          | 2,370  | 1,072  | 0     | 0     | 0     | 0     | 0     | 0   | 3,619  |
|       | \$<br>37,269 | 46,757 | 49,823 | 0     | 0     | 0     | 0     | 0     | 0   | 47,201 |
| 65-69 | 54           | 615    | 269    | 0     | 0     | 0     | 0     | 0     | 0   | 938    |
|       | \$<br>30,103 | 41,231 | 46,747 | 0     | 0     | 0     | 0     | 0     | 0   | 42,172 |
| 70-74 | 7            | 145    | 45     | 0     | 0     | 0     | 0     | 0     | 0   | 197    |
|       | \$<br>*      | *      | *      | 0     | 0     | 0     | 0     | 0     | 0   | *      |
| 75+   | 7            | 57     | 13     | 0     | 0     | 0     | 0     | 0     | 0   | 77     |
|       | \$<br>*      | *      | *      | 0     | 0     | 0     | 0     | 0     | 0   | *      |
| Total | 3,795        | 34,763 | 11,939 | 0     | 0     | 0     | 0     | 0     | 0   | 50,497 |
|       | \$<br>37,117 | 45,671 | 50,074 | 0     | 0     | 0     | 0     | 0     | 0   | 46,069 |

# System Wide Data Exhibits (continued)

## Age/Service and Valuation Payroll by Tier and Job Class (continued)

Tier 1 Police and Fire Active Members

|       | 0-4     | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30-34  | 35-39 | 40+ | Total  |
|-------|---------|--------|--------|--------|--------|--------|--------|-------|-----|--------|
| 20-24 | 0       | 0      | 0      | 0      | 0      | 0      | 0      | 0     | 0   | 0      |
|       | \$<br>0 | 0      | 0      | 0      | 0      | 0      | 0      | 0     | 0   | 0      |
| 25-29 | 0       | 0      | 1      | 0      | 0      | 0      | 0      | 0     | 0   | 1      |
|       | \$<br>0 | 0      | *      | 0      | 0      | 0      | 0      | 0     | 0   | *      |
| 30-34 | 0       | 3      | 27     | 0      | 0      | 0      | 0      | 0     | 0   | 30     |
|       | \$<br>0 | *      | 78,519 | 0      | 0      | 0      | 0      | 0     | 0   | 73,714 |
| 35-39 | 0       | 8      | 473    | 118    | 1      | 0      | 0      | 0     | 0   | 600    |
|       | \$<br>0 | *      | 78,930 | 82,619 | *      | 0      | 0      | 0     | 0   | 79,220 |
| 40-44 | 0       | 6      | 436    | 641    | 106    | 0      | 0      | 0     | 0   | 1,189  |
|       | \$<br>0 | *      | 77,042 | 82,000 | 80,130 | 0      | 0      | 0     | 0   | 79,810 |
| 45-49 | 0       | 1      | 218    | 519    | 474    | 80     | 2      | 0     | 0   | 1,294  |
|       | \$<br>0 | *      | 73,611 | 77,615 | 84,068 | 84,708 | *      | 0     | 0   | 79,749 |
| 50-54 | 0       | 3      | 141    | 308    | 364    | 291    | 45     | 0     | 0   | 1,152  |
|       | \$<br>0 | *      | 67,322 | 73,436 | 81,499 | 86,646 | 88,234 | 0     | 0   | 79,110 |
| 55-59 | 0       | 3      | 88     | 216    | 197    | 140    | 69     | 2     | 0   | 715    |
|       | \$<br>0 | *      | 64,077 | 68,745 | 75,898 | 79,980 | 82,954 | *     | 0   | 73,729 |
| 60-64 | 0       | 2      | 46     | 88     | 82     | 36     | 10     | 8     | 1   | 273    |
|       | \$<br>0 | *      | 63,133 | 65,482 | 69,529 | 73,664 | *      | *     | *   | 68,828 |
| 65-69 | 0       | 0      | 10     | 17     | 8      | 4      | 1      | 0     | 0   | 40     |
|       | \$<br>0 | 0      | *      | *      | *      | *      | *      | 0     | 0   | *      |
| 70-74 | 0       | 0      | 3      | 1      | 1      | 0      | 2      | 0     | 0   | 7      |
|       | \$<br>0 | 0      | *      | *      | *      | 0      | *      | 0     | 0   | *      |
| 75+   | 0       | 0      | 0      | 1      | 0      | 0      | 0      | 0     | 0   | 1      |
|       | \$<br>0 | 0      | 0      | *      | 0      | 0      | 0      | 0     | 0   | *      |
| Total | 0       | 26     | 1,443  | 1,909  | 1,233  | 551    | 129    | 10    | 1   | 5,302  |
|       | \$<br>0 | 47,433 | 74,302 | 76,387 | 80,058 | 83,194 | 82,721 | *     | *   | 77,436 |

## System Wide Data Exhibits (continued)

## Age/Service and Valuation Payroll by Tier and Job Class (continued)

## Tier 2 Police and Fire Active Members

|       | 0-4          | 5-9    | 10-14  | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total  |
|-------|--------------|--------|--------|-------|-------|-------|-------|-------|-----|--------|
| 20-24 | 1            | 0      | 0      | 0     | 0     | 0     | 0     | 0     | 0   | 1      |
|       | \$<br>*      | 0      | 0      | 0     | 0     | 0     | 0     | 0     | 0   | *      |
| 25-29 | 29           | 134    | 6      | 0     | 0     | 0     | 0     | 0     | 0   | 169    |
|       | \$<br>51,455 | 64,163 | *      | 0     | 0     | 0     | 0     | 0     | 0   | 61,609 |
| 30-34 | 64           | 988    | 179    | 0     | 0     | 0     | 0     | 0     | 0   | 1,231  |
|       | \$<br>56,632 | 68,040 | 72,422 | 0     | 0     | 0     | 0     | 0     | 0   | 68,084 |
| 35-39 | 37           | 978    | 597    | 0     | 0     | 0     | 0     | 0     | 0   | 1,612  |
|       | \$<br>56,616 | 68,130 | 73,719 | 0     | 0     | 0     | 0     | 0     | 0   | 69,936 |
| 40-44 | 17           | 580    | 409    | 0     | 0     | 0     | 0     | 0     | 0   | 1,006  |
|       | \$<br>*      | 65,184 | 70,666 | 0     | 0     | 0     | 0     | 0     | 0   | 67,237 |
| 45-49 | 9            | 363    | 219    | 0     | 0     | 0     | 0     | 0     | 0   | 591    |
|       | \$<br>*      | 61,988 | 64,145 | 0     | 0     | 0     | 0     | 0     | 0   | 62,437 |
| 50-54 | 8            | 275    | 179    | 0     | 0     | 0     | 0     | 0     | 0   | 462    |
|       | \$<br>*      | 57,972 | 64,088 | 0     | 0     | 0     | 0     | 0     | 0   | 60,285 |
| 55-59 | 10           | 209    | 112    | 0     | 0     | 0     | 0     | 0     | 0   | 331    |
|       | \$<br>*      | 57,474 | 60,004 | 0     | 0     | 0     | 0     | 0     | 0   | 58,115 |
| 60-64 | 7            | 113    | 53     | 0     | 0     | 0     | 0     | 0     | 0   | 173    |
|       | \$<br>*      | 62,394 | 56,103 | 0     | 0     | 0     | 0     | 0     | 0   | 59,749 |
| 65-69 | 1            | 20     | 8      | 0     | 0     | 0     | 0     | 0     | 0   | 29     |
|       | \$<br>*      | 0      | *      | 0     | 0     | 0     | 0     | 0     | 0   | *      |
| 70-74 | 0            | 5      | 2      | 0     | 0     | 0     | 0     | 0     | 0   | 7      |
|       | \$<br>0      | *      | *      | 0     | 0     | 0     | 0     | 0     | 0   | *      |
| 75+   | 0            | 3      | 1      | 0     | 0     | 0     | 0     | 0     | 0   | 4      |
|       | \$<br>0      | *      | *      | 0     | 0     | 0     | 0     | 0     | 0   | *      |
| Total | 183          | 3,668  | 1,765  | 0     | 0     | 0     | 0     | 0     | 0   | 5,616  |
|       | \$<br>53,593 | 64,822 | 68,788 | 0     | 0     | 0     | 0     | 0     | 0   | 65,702 |

### System Wide Data Exhibits (continued)

# Age/Service and Valuation Payroll by Tier and Job Class (continued)

All Tier 1/Tier 2 Active Members

|       | 0-4          | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30-34  | 35-39  | 40+    | Total   |
|-------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 20-24 | 28           | 30     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 58      |
|       | \$<br>25,192 | 23,693 | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 24,416  |
| 25-29 | 502          | 996    | 31     | 0      | 0      | 0      | 0      | 0      | 0      | 1,529   |
|       | \$<br>36,769 | 41,937 | 45,788 | 0      | 0      | 0      | 0      | 0      | 0      | 40,318  |
| 30-34 | 950          | 5,783  | 899    | 14     | 0      | 0      | 0      | 0      | 0      | 7,646   |
|       | \$<br>40,915 | 50,103 | 54,478 | *      | 0      | 0      | 0      | 0      | 0      | 49,473  |
| 35-39 | 645          | 6,742  | 4,400  | 541    | 10     | 0      | 0      | 0      | 0      | 12,338  |
|       | \$<br>38,555 | 51,900 | 60,000 | 60,511 | *      | 0      | 0      | 0      | 0      | 54,474  |
| 40-44 | 496          | 5,850  | 4,588  | 2,973  | 564    | 14     | 0      | 0      | 0      | 14,485  |
|       | \$<br>38,656 | 48,928 | 58,520 | 65,874 | 61,516 | *      | 0      | 0      | 0      | 55,588  |
| 45-49 | 455          | 6,090  | 4,801  | 3,862  | 3,001  | 628    | 14     | 0      | 0      | 18,851  |
|       | \$<br>38,604 | 45,312 | 52,870 | 61,088 | 66,325 | 61,719 | *      | 0      | 0      | 54,215  |
| 50-54 | 384          | 5,883  | 5,571  | 4,922  | 3,751  | 3,213  | 498    | 4      | 0      | 24,226  |
|       | \$<br>34,965 | 44,611 | 49,393 | 57,083 | 64,016 | 66,729 | 63,356 | *      | 0      | 54,416  |
| 55-59 | 325          | 4,701  | 4,991  | 5,262  | 4,078  | 2,877  | 1,183  | 98     | 1      | 23,516  |
|       | \$<br>37,942 | 45,681 | 49,427 | 55,185 | 60,742 | 65,992 | 68,986 | 65,727 | *      | 54,849  |
| 60-64 | 195          | 2,591  | 2,474  | 2,666  | 1,862  | 1,002  | 376    | 82     | 11     | 11,259  |
|       | \$<br>37,858 | 47,193 | 50,536 | 55,985 | 58,940 | 62,249 | 72,051 | 79,950 | *      | 54,213  |
| 65-69 | 59           | 666    | 550    | 444    | 325    | 141    | 63     | 24     | 13     | 2,285   |
|       | \$<br>29,947 | 39,484 | 46,097 | 52,276 | 60,225 | 64,611 | 58,613 | 69,165 | *      | 48,834  |
| 70-74 | 8            | 160    | 97     | 60     | 36     | 14     | 10     | 3      | 6      | 394     |
|       | \$<br>*      | 0      | 0      | 0      | 0      | *      | *      | *      | *      | 0       |
| 75+   | 7            | 61     | 28     | 18     | 6      | 3      | 3      | 0      | 2      | 128     |
|       | \$<br>*      | 0      | 0      | *      | *      | *      | *      | 0      | *      | 0       |
| Total | 4,054        | 39,553 | 28,430 | 20,762 | 13,633 | 7,892  | 2,147  | 211    | 33     | 116,715 |
|       | \$<br>38,122 | 47,281 | 53,076 | 58,231 | 62,456 | 65,289 | 67,487 | 70,375 | 50,086 | 53,727  |

# System Wide Data Exhibits (continued)

## Age/Service and Valuation Payroll by Rate Pool

## Tier 1/ Tier 2 SLGRP Active Members

|       | <br>0-4      | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30-34  | 35-39  | 40+    | Total  |
|-------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 20-24 | 17           | 19     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 36     |
|       | \$<br>*      | *      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| 25-29 | 173          | 582    | 24     | 0      | 0      | 0      | 0      | 0      | 0      | 779    |
|       | \$<br>34,624 | 43,846 | 42,884 | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| 30-34 | 302          | 2,689  | 579    | 7      | 0      | 0      | 0      | 0      | 0      | 3,577  |
|       | \$<br>41,498 | 51,912 | 55,601 | *      | 0      | 0      | 0      | 0      | 0      | 0      |
| 35-39 | 234          | 3,355  | 2,315  | 376    | 7      | 0      | 0      | 0      | 0      | 6,287  |
|       | \$<br>41,307 | 54,493 | 61,606 | 60,272 | *      | 0      | 0      | 0      | 0      | 0      |
| 40-44 | 186          | 2,934  | 2,529  | 1,503  | 374    | 8      | 0      | 0      | 0      | 7,534  |
|       | \$<br>41,869 | 53,988 | 60,789 | 67,400 | 62,338 | *      | 0      | 0      | 0      | 0      |
| 45-49 | 171          | 2,920  | 2,559  | 2,029  | 1,479  | 413    | 12     | 0      | 0      | 9,583  |
|       | \$<br>41,747 | 53,338 | 59,229 | 63,992 | 67,164 | 62,351 | *      | 0      | 0      | 0      |
| 50-54 | 164          | 2,874  | 2,665  | 2,420  | 2,003  | 1,356  | 321    | 3      | 0      | 11,806 |
|       | \$<br>39,386 | 52,517 | 57,486 | 63,439 | 67,405 | 67,571 | 63,892 | *      | 0      | 0      |
| 55-59 | 139          | 2,475  | 2,501  | 2,459  | 2,141  | 1,401  | 615    | 62     | 1      | 11,794 |
|       | \$<br>40,987 | 52,556 | 56,226 | 61,538 | 66,264 | 69,540 | 68,390 | 64,823 | *      | 0      |
| 60-64 | 109          | 1,507  | 1,412  | 1,429  | 1,054  | 585    | 246    | 46     | 8      | 6,396  |
|       | \$<br>39,545 | 52,235 | 55,330 | 61,744 | 63,883 | 68,087 | 78,803 | 77,761 | *      | 0      |
| 65-69 | 29           | 371    | 329    | 276    | 210    | 97     | 35     | 18     | 11     | 1,376  |
|       | \$<br>36,944 | 45,260 | 51,325 | 56,733 | 66,318 | 72,771 | 75,514 | *      | *      | 0      |
| 70-74 | 5            | 97     | 51     | 40     | 26     | 11     | 8      | 2      | 5      | 245    |
|       | \$<br>*      | *      | *      | *      | *      | *      | *      | *      | *      | *      |
| 75+   | 2            | 36     | 17     | 14     | 2      | 3      | 2      | 0      | 1      | 77     |
|       | \$<br>*      | *      | *      | *      | *      | *      | *      | 0      | *      | *      |
| Total | 1,531        | 19,859 | 14,981 | 10,553 | 7,296  | 3,874  | 1,239  | 131    | 26     | 59,490 |
|       | \$<br>39,909 | 52,323 | 58,072 | 62,815 | 65,955 | 67,666 | 68,972 | 69,841 | 49,405 | 58,367 |

## System Wide Data Exhibits (continued)

## Age/Service and Valuation Payroll by Rate Pool (continued)

Tier 1/Tier 2 School District Active Members

|       | <br>0-4      | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30-34  | 35-39  | 40+ | Total  |
|-------|--------------|--------|--------|--------|--------|--------|--------|--------|-----|--------|
| 20-24 | 7            | 6      | 0      | 0      | 0      | 0      | 0      | 0      | 0   | 13     |
|       | \$<br>*      | *      | 0      | 0      | 0      | 0      | 0      | 0      | 0 * |        |
| 25-29 | 301          | 292    | 4      | 0      | 0      | 0      | 0      | 0      | 0   | 597    |
|       | \$<br>38,099 | 33,993 | *      | 0      | 0      | 0      | 0      | 0      | 0   | 0      |
| 30-34 | 600          | 2,512  | 195    | 2      | 0      | 0      | 0      | 0      | 0   | 3,309  |
|       | \$<br>40,023 | 45,359 | 44,455 | *      | 0      | 0      | 0      | 0      | 0   | 0      |
| 35-39 | 373          | 2,715  | 1,594  | 93     | 0      | 0      | 0      | 0      | 0   | 4,775  |
|       | \$<br>35,975 | 46,261 | 54,319 | 49,974 | 0      | 0      | 0      | 0      | 0   | 0      |
| 40-44 | 283          | 2,353  | 1,597  | 1,156  | 118    | 3      | 0      | 0      | 0   | 5,510  |
|       | \$<br>35,638 | 40,389 | 51,476 | 61,831 | 56,887 | *      | 0      | 0      | 0   | 0      |
| 45-49 | 251          | 2,717  | 1,886  | 1,478  | 1,249  | 157    | 2      | 0      | 0   | 7,740  |
|       | \$<br>34,276 | 34,939 | 42,451 | 55,071 | 63,346 | 54,385 | *      | 0      | 0   | 0      |
| 50-54 | 201          | 2,587  | 2,459  | 2,106  | 1,390  | 1,622  | 132    | 1      | 0   | 10,498 |
|       | \$<br>29,357 | 34,500 | 38,775 | 48,201 | 58,038 | 64,735 | 61,125 | *      | 0   | 0      |
| 55-59 | 156          | 1,876  | 2,079  | 2,393  | 1,616  | 1,272  | 483    | 27     | 0   | 9,902  |
|       | \$<br>32,575 | 35,552 | 39,424 | 47,584 | 52,335 | 61,567 | 68,713 | 67,641 | 0   | 0      |
| 60-64 | 71           | 866    | 849    | 1,047  | 657    | 357    | 109    | 29     | 1   | 3,986  |
|       | \$<br>31,334 | 36,863 | 40,940 | 46,966 | 49,821 | 51,705 | 56,157 | 81,842 | *   | 0      |
| 65-69 | 24           | 239    | 176    | 128    | 96     | 36     | 23     | 5      | 2   | 729    |
|       | \$<br>21,311 | 30,191 | 36,751 | 42,948 | 49,265 | 47,019 | 37,493 | *      | *   | 0      |
| 70-74 | 3            | 51     | 39     | 13     | 6      | 3      | 1      | 0      | 1   | 117    |
|       | \$<br>*      | *      | *      | *      | *      | *      | *      | 0      | *   | *      |
| 75+   | 5            | 20     | 8      | 2      | 2      | 0      | 1      | 0      | 0   | 38     |
|       | \$<br>*      | *      | *      | *      | *      | 0      | *      | 0      | 0   | *      |
| Total | 2,275        | 16,234 | 10,886 | 8,418  | 5,134  | 3,450  | 751    | 62     | 4   | 47,214 |
|       | \$<br>35,792 | 39,093 | 43,745 | 50,804 | 56,202 | 61,488 | 64,356 | 71,918 | *   | 46,038 |

## System Wide Data Exhibits (continued)

## Age/Service and Valuation Payroll by Rate Pool (continued)

Tier 1/Tier 2 Independent Employers Active Members

|       | <br>0-4      | 5-9    | 10-14  | 15-19  | 20-24  | 25-29  | 30-34  | 35-39 | 40+ | Total  |
|-------|--------------|--------|--------|--------|--------|--------|--------|-------|-----|--------|
| 20-24 | 4            | 5      | 0      | 0      | 0      | 0      | 0      | 0     | 0   | 9      |
|       | \$<br>*      | *      | 0      | 0      | 0      | 0      | 0      | 0     | 0 * | E      |
| 25-29 | 28           | 122    | 3      | 0      | 0      | 0      | 0      | 0     | 0   | 153    |
|       | \$<br>35,723 | 51,844 | *      | 0      | 0      | 0      | 0      | 0     | 0   | 0      |
| 30-34 | 48           | 582    | 125    | 5      | 0      | 0      | 0      | 0     | 0   | 760    |
|       | \$<br>48,409 | 62,221 | 64,914 | *      | 0      | 0      | 0      | 0     | 0   | 0      |
| 35-39 | 38           | 672    | 491    | 72     | 3      | 0      | 0      | 0     | 0   | 1,276  |
|       | \$<br>46,924 | 61,738 | 70,869 | 75,368 | *      | 0      | 0      | 0     | 0   | 0      |
| 40-44 | 27           | 563    | 462    | 314    | 72     | 3      | 0      | 0     | 0   | 1,441  |
|       | \$<br>48,154 | 58,245 | 70,453 | 73,453 | 64,834 | *      | 0      | 0     | 0   | 0      |
| 45-49 | 33           | 453    | 356    | 355    | 273    | 58     | 0      | 0     | 0   | 1,528  |
|       | \$<br>55,238 | 55,788 | 62,358 | 69,543 | 75,410 | 77,066 | 0      | 0     | 0   | 0      |
| 50-54 | 19           | 422    | 447    | 396    | 358    | 235    | 45     | 0     | 0   | 1,922  |
|       | \$<br>*      | 52,754 | 59,550 | 65,477 | 68,271 | 75,638 | 66,081 | 0     | 0   | 0      |
| 55-59 | 30           | 350    | 411    | 410    | 321    | 204    | 85     | 9     | 0   | 1,820  |
|       | \$<br>51,737 | 51,361 | 58,654 | 61,443 | 66,235 | 69,223 | 74,846 | *     | 0   | 0      |
| 60-64 | 15           | 218    | 213    | 190    | 151    | 60     | 21     | 7     | 2   | 877    |
|       | \$<br>*      | 53,373 | 57,007 | 62,371 | 64,115 | 68,069 | 75,451 | *     | *   | 0      |
| 65-69 | 6            | 56     | 45     | 40     | 19     | 8      | 5      | 1     | 0   | 180    |
|       | \$<br>*      | 40,884 | 44,435 | 51,368 | *      | *      | *      | *     | 0   | 0      |
| 70-74 | 0            | 12     | 7      | 7      | 4      | 0      | 1      | 1     | 0   | 32     |
|       | \$<br>0      | *      | *      | *      | *      | 0      | *      | *     | 0   | *      |
| 75+   | 0            | 5      | 3      | 2      | 2      | 0      | 0      | 0     | 1   | 13     |
|       | \$<br>0      | *      | *      | *      | *      | 0      | 0      | 0     | *   | *      |
| Total | 248          | 3,460  | 2,563  | 1,791  | 1,203  | 568    | 157    | 18    | 3   | 10,011 |
|       | \$<br>48,462 | 56,755 | 63,508 | 66,127 | 67,930 | 72,161 | 70,747 | *     | *   | 62,411 |

## System Wide Data Exhibits (continued)

## Age/Service and Valuation Payroll by Rate Pool (continued)

**OPSRP Active Members Age and Valuation Payroll** 

| 1     | General |         | Р  | Police and |    |        |
|-------|---------|---------|----|------------|----|--------|
| Age   |         | Service |    | Fire       |    | Total  |
| <20   |         | 59      |    |            |    | 59     |
|       | \$      | 11,546  |    |            | \$ | 11,546 |
| 20-24 |         | 2,165   |    | 193        |    | 2,358  |
|       | \$      | 22,905  | \$ | 41,352     | \$ | 24,415 |
| 25-29 |         | 8,974   |    | 1,050      |    | 10,024 |
|       | \$      | 33,018  | \$ | 51,385     | \$ | 34,942 |
| 30-34 |         | 8,129   |    | 843        |    | 8,972  |
|       | \$      | 36,852  | \$ | 52,521     | \$ | 38,324 |
| 35-39 |         | 6,895   |    | 561        |    | 7,456  |
|       | \$      | 37,114  | \$ | 49,912     | \$ | 38,077 |
| 40-44 |         | 6,333   |    | 318        |    | 6,651  |
|       | \$      | 34,654  | \$ | 47,539     | \$ | 35,270 |
| 45-49 |         | 5,959   |    | 245        |    | 6,204  |
|       | \$      | 34,111  | \$ | 47,705     | \$ | 34,648 |
| 50-54 |         | 5,047   |    | 173        |    | 5,220  |
|       | \$      | 34,767  | \$ | 50,617     | \$ | 35,292 |
| 55-59 |         | 3,828   |    | 136        |    | 3,964  |
|       | \$      | 36,115  | \$ | 48,439     | \$ | 36,538 |
| 60-64 |         | 2,075   |    | 68         |    | 2,143  |
|       | \$      | 34,525  | \$ | 50,176     | \$ | 35,022 |
| 65-69 |         | 550     |    | 19         |    | 569    |
|       | \$      | 26,261  |    |            | \$ | 25,384 |
| 70-74 |         | 154     |    | 2          |    | 156    |
|       |         |         |    |            | \$ | -      |
| 75+   |         | 76      |    | 2          |    | 78     |
|       |         |         |    |            |    | -      |
| TOTAL |         | 50,244  |    | 3,610      |    | 53,854 |
|       | \$      | 34,324  | \$ | 49,799     | \$ | 35,361 |

# System Wide Data Exhibits (continued)

## Inactive Member Data Exhibits

For the following exhibits, inactive members are counted by lives, not by segments.

# Total Tier 1/ Tier 2

#### **Dormants**

|       |        | Average |
|-------|--------|---------|
|       |        | Monthly |
|       | Count  | Benefit |
| 0-20  | 0      | 0       |
| 20-24 | 111    | 51      |
| 25-29 | 914    | 225     |
| 30-34 | 2,858  | 572     |
| 35-39 | 4,029  | 988     |
| 40-44 | 4,212  | 1,267   |
| 45-49 | 5,473  | 1,375   |
| 50-54 | 7,761  | 1,460   |
| 55-59 | 8,945  | 1,283   |
| 60-64 | 4,770  | 818     |
| 65-69 | 1,722  | 611     |
| 70-74 | 525    | 335     |
| 75+   | 628    | 354     |
| Total | 41,948 | 1,117   |

### OPSRP

#### **Dormants**

| Dorma |       |         |
|-------|-------|---------|
|       |       | Average |
|       |       | Monthly |
|       | Count | Benefit |
| 0-20  | 0     | 0       |
| 20-24 | 7     | 97      |
| 25-29 | 52    | 162     |
| 30-34 | 58    | 194     |
| 35-39 | 60    | 210     |
| 40-44 | 40    | 190     |
| 45-49 | 29    | 162     |
| 50-54 | 47    | 186     |
| 55-59 | 35    | 182     |
| 60-64 | 21    | 181     |
| 65-69 | 99    | 56      |
| 70-74 | 60    | 38      |
| 75+   | 21    | 13      |
| Total | 529   | 137     |

Mercer

|       |         | Average |
|-------|---------|---------|
|       |         | Monthly |
|       | Count   | Benefit |
| 0-45  | 530     | 1,202   |
| 45-49 | 399     | 1,525   |
| 50-54 | 1,750   | 2,738   |
| 55-59 | 10,092  | 2,954   |
| 60-64 | 22,113  | 2,615   |
| 65-69 | 21,957  | 2,264   |
| 70-74 | 16,628  | 1,967   |
| 75-79 | 12,746  | 1,645   |
| 80-84 | 10,389  | 1,294   |
| 85-90 | 7,164   | 969     |
| 90-94 | 3,002   | 765     |
| 95-99 | 762     | 727     |
| 100+  | 111     | 576     |
| Total | 107,643 | 2,047   |

**Benefits in Force** 

### **Benefits in Force**

|       |       | Average |
|-------|-------|---------|
|       |       | Monthly |
|       | Count | Benefit |
| 0-45  | 0     | 0       |
| 45-49 | 0     | 0       |
| 50-54 | 0     | 0       |
| 55-59 | 1     | 2,093   |
| 60-64 | 0     | 0       |
| 65-69 | 3     | 282     |
| 70-74 | 0     | 0       |
| 75-79 | 0     | 0       |
| 80-84 | 0     | 0       |
| 85-90 | 0     | 0       |
| 90-94 | 0     | 0       |
| 95-99 | 0     | 0       |
| 100+  | 0     | 0       |
| Total | 4     | 0       |

# System Wide Data Exhibits (continued) Inactive Member Data Exhibits (continued)

# System-Wide Totals

#### **Dormants**

| Dormants |        | Benefit | ts in Force |         |         |
|----------|--------|---------|-------------|---------|---------|
|          |        | Average |             |         | Average |
|          |        | Monthly |             |         | Monthly |
|          | Count  | Benefit |             | Count   | Benefit |
| 0-20     | 0      | 0       | 0-45        | 530     | 1,202   |
| 20-24    | 118    | 53      | 45-49       | 399     | 1,525   |
| 25-29    | 966    | 222     | 50-54       | 1,750   | 2,738   |
| 30-34    | 2,916  | 565     | 55-59       | 10,093  | 2,954   |
| 35-39    | 4,089  | 977     | 60-64       | 22,113  | 2,615   |
| 40-44    | 4,252  | 1,257   | 65-69       | 21,960  | 2,264   |
| 45-49    | 5,502  | 1,368   | 70-74       | 16,628  | 1,967   |
| 50-54    | 7,808  | 1,453   | 75-79       | 12,746  | 1,645   |
| 55-59    | 8,980  | 1,279   | 80-84       | 10,389  | 1,294   |
| 60-64    | 4,791  | 815     | 85-90       | 7,164   | 969     |
| 65-69    | 1,821  | 581     | 90-94       | 3,002   | 765     |
| 70-74    | 585    | 305     | 95-99       | 762     | 727     |
| 75+      | 649    | 343     | 100+        | 111     | 576     |
| Total    | 42,477 | 1,105   | Total       | 107,647 | 2,047   |

# **Actuarial Methods and Valuation Procedures**

The Board adopted the following actuarial methods and valuation procedures for the December 31, 2008 and 2009, actuarial valuations of PERS Tier 1/Tier 2 benefits. The actuarial methods and procedures were first adopted effective December 31, 2004.

| Actuarial cost method   | <b>Projected Unit Credit.</b> Under the Projected Unit Credit cost method, the objective is to fund each member's benefit under the plan as it accrues, taking into consideration expected future compensation increases. Thus, the total pension to which each member is expected to become entitled at retirement is broken down into units, each associated with a year of past or future credited service. Typically, when this method is introduced, there will be an initial liability for benefits credited for service prior to that date, and to the extent that the liability is not covered by assets of the plan, there is an unfunded liability to be funded over a stipulated period in accordance with an amortization schedule.  |
|---|--|
|   | <ul> <li>A detailed description of the calculation follows:</li> <li>An individual member's accrued benefit for valuation purposes related to a particular separation date is the accrued benefit described under the plan, determined using the projected compensation and service that would be used in the calculation of the benefit on the expected separation date, multiplied by the ratio of credited service as of the valuation date over credited service as of the expected separation date. In no event can this be less than the accrued benefit described under the plan, determined using the compensation and service as of the valuation date.</li> </ul>  |
|   | The benefit deemed to accrue for an individual member during a plan<br>year is the excess of the accrued benefit for valuation purposes at the<br>end of the plan year over the accrued benefit for valuation purposes at<br>the beginning of the plan year. Both accrued benefits are calculated from<br>the same projections to the various anticipated separation dates as<br>described above.  |
|   | <ul> <li>An individual member's accrued liability is the present value of the accrued benefit for valuation purposes at the beginning of the plan year, and an individual member's normal cost is the present value of the benefit deemed to accrue in the plan year. The accrued liability and the normal cost for an individual member are the sum of the component accrued liabilities and normal costs associated with the various anticipated separation dates. Such accrued liabilities and normal costs reflect the accrued benefits as modified to obtain the benefits payable on those dates and the probability of the member separating on those dates.</li> <li>The plan's normal cost is the sum of the individual member normal costs, and the plan's accrued liability is the sum of the accrued liabilities for all members under the plan.</li> </ul> |
| Amortization of change<br>in Unfunded Actuarial<br>Liability (UAL) due to<br>change in actuarial cost<br>method (PUC change<br>UAL) | Contribution rates effective July 1, 2007 through June 30 2011 reflect an accelerated amortization of the change in UAL that occurred when the PUC cost method was first adopted for the December 31, 2004 valuation. By the time the current contribution rates are changed on July 1, 2011, four years of contributions will have been collected toward the 3-year amortization base. Consequently, the PUC change amortization was eliminated from the valuation so it will not be included in contribution rates that become effective July 1, 2011.   |

## Actuarial Methods and Valuation Procedures (continued)

| <i>Tier 1/Tier 2 UAL and<br/>Retiree Healthcare<br/>UAL amortization</i> | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of<br>December 31, 2007 are amortized as a level percentage of combined<br>valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period<br>is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses<br>between subsequent odd-year valuations are amortized as a level<br>percentage of combined valuation payroll over 20 (10 for Retiree<br>Healthcare) years from the odd-year valuation in which they are first<br>recognized.   |
|--|---|
| Asset valuation<br>method  | The actuarial value of assets equals the market value of assets, excluding the Contingency, Capital Preservation and Rate Guarantee Reserves.   |
|  | The value of assets used to determine employer contribution rates has<br>historically excluded any assets in the Tier 1 Rate Guarantee Reserve<br>(RGR). Due to investment results in 2008 the RGR is in a deficit situation<br>as of December 31, 2008. As part of the Board's July 16, 2009 motion<br>approving actuarial assumptions and methods, the Board approved<br>continued exclusion of the RGR from calculation of valuation assets. As a<br>result, valuation assets exceed the fair value of assets as of December 31,<br>2008. It is our understanding that if a RGR deficit persists for five years,<br>employers may be required to restore the RGR.<br>Market values are reported to Mercer by PERS. It is our understanding that<br>select real estate and private equity investments are reported on a three-<br>month lag basis. For those investments, the change in value between<br>September 30, 2008 and December 31, 2008 due to the market downturn<br>could be significant. This valuation report does not attempt to quantify any<br>such effects. |
| Contribution rate<br>stabilization method                                | Contribution rates are confined to a collar based on the prior contribution rate (prior to application of side accounts, pre-SLGRP liabilities, OPSRP UAL and 6 percent Independent Employer minimum). The new contribution rate will generally not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the prior contribution rate. If the funded percentage excluding side accounts drops below 80% or increases above 120%, the size of the collar doubles.   |
| Allocation of Liability<br>for Service Segments                          | For active Tier 1/Tier 2 members who have worked for multiple PERS<br>employers over their career, the calculated actuarial accrued liability is<br>allocated among the employers based on a weighted average of the Money<br>Match methodology, which utilizes account balance, and the Full Formula<br>methodology, which utilizes service. The allocation is 50% (15% for police<br>& fire) based on account balance with each employer and 50% (85% for<br>police & fire) based on service with each employer.<br>The entire Normal Cost is allocated to the current employer.  |
| Allocation of Benefits-<br>In-Force (BIF) Reserve                        | The BIF is allocated to each rate pool in proportion to the retiree liability attributable to the rate pool.  |
| , /  |   |

## **Economic Assumptions**

The Board adopted the following economic assumptions for the December 31, 2008 and 2009 actuarial valuations. The investment return assumption was first adopted in 1989, and the interest crediting assumptions were adopted in 2003. The healthcare cost inflation assumption was adopted December 31, 2008. All other economic assumptions were first adopted in 2005.

# Actuarial Methods and Valuation Procedures (continued)

| Investment return            | 8.0% compounded annually   |             |                        |         |
|------------------------------|--|-------------|------------------------|---------|
| Interest crediting           | 8.0% compounded annually on members' regular account balances<br>8.5% compounded annually on members' variable account balances                  |             |                        |         |
| Inflation                    | 2.75% compounde  | ed annually |                        |         |
| Payroll growth               | 3.75% compounded annually. This assumption represents the sum of the inflation assumption and a real wage growth assumption of 100 basis points. |             |                        |         |
| Healthcare cost<br>inflation | Health cost trend r<br>Maximum Subsidy   | •           | edict increases in the | e RHIPA |
|                              | Year <sup>1</sup>  | Rate        | Year                   | Rate    |
|                              | 2009   | 7.0%        | 2020                   | 6.2     |
|                              | 2010   | 7.0         | 2021                   | 6.0     |
|                              | 2011   | 7.0         | 2022                   | 5.8     |
|                              | 2012   | 6.9         | 2023                   | 5.6     |
|                              | 2013   | 6.9         | 2024                   | 5.4     |
|                              | 2014   | 6.9         | 2025                   | 5.2     |
|                              | 2015   | 6.9         | 2026                   | 5.0     |
|                              | 2016   | 6.8         | 2027                   | 4.9     |
|                              | 2017   | 6.8         | 2028                   | 4.7     |
|                              | 2018   | 6.6         | 2029+                  | 4.5     |
|                              | 2019   | 6.4         |                        |         |

<sup>&</sup>lt;sup>1</sup> For valuation purposes, the health cost trend rates are assumed to be applied at the beginning of the plan year.

# **Demographic Assumptions**

The Board adopted the following demographic assumptions for the December 31, 2008 and 2009 actuarial valuations.

### Mortality

The following mortality tables were first adopted in the December 31, 2008 valuation.

#### Healthy Retired Members

|   | RP 2000, Generational Combined<br>Active/Healthy Annuitant, |
|---|---|
| Basic Table   | Sex Distinct  |
| School District male                                    | White collar, set back 12 months                            |
| Other General Service male (including male beneficiary) | White collar, no set back                                   |
| Police & Fire male                                      | Blended 33% blue collar, no set back                        |
| School District female                                  | White collar, set back 18 months                            |
| Other female (including female beneficiary)             | Blended 33% blue collar, no setback                         |

The following disabled retiree mortality rates were first adopted for the December 31, 2008 actuarial valuation.

#### **Disabled Retired Members**

|             | RP 2000, Static, Combined Active/Healthy<br>Annuitant, |
|-------------|--|
| Basic Table | No Collar, Sex Distinct                                |
| Male        | Set Forward 60 months, min of 2.25%                    |
| Female      | Set Forward 48 months, min of 2.25%                    |

The following mortality rates were first adopted for non-annuitant members for the December 31, 2008 actuarial valuation.

#### Non-Annuitant Members

| Basic Table                | Percent of Healthy Retired Mortality Tables |
|----------------------------|---|
| School District male       | 75%   |
| Other General Service male | 75%   |
| Police & Fire male         | 70%   |
| School District female     | 50%   |
| Other female               | 50%   |

## Demographic Assumptions (continued)

## **Retirement Assumptions**

The retirement assumptions used in the actuarial valuation include the following:

- Retirement from active status/dormant status
- Probability a member will elect a lump sum option at retirement
- Percentage of members who elect to purchase credited service at retirement.

#### Rates of Retirement from Active Status

The following retirement rate assumptions were first adopted in the December 31, 2008 valuation. Judge members are assumed to retire at age 63.

| Police & Fire |           |         | <b>General Service / School Districts</b> |            |             |            |             |           |
|---------------|-----------|---------|---|------------|-------------|------------|-------------|-----------|
|               |           |         |   | General    | Service     | School     | Districts   |           |
| Age           | <13 Years | 13 - 24 | 25+ Years                                 | < 15 years | 15-29 Years | < 15 years | 15-29 Years | 30+ Years |
| 50            | 1.00%     | 3.00%   | 35.00%                                    |            |             |            |             | 27.00%    |
| 51            | 1.00%     | 3.00%   | 20.00%                                    |            |             |            |             | 27.00%    |
| 52            | 1.00%     | 3.00%   | 20.00%                                    |            |             |            |             | 40.00%    |
| 53            | 1.00%     | 3.00%   | 20.00%                                    |            |             |            |             | 40.00%    |
| 54            | 1.00%     | 3.00%   | 20.00%                                    |            |             |            |             | 35.00%    |
| 55            | 3.00%     | 12.00%  | 20.00%                                    | 1.00%      | 5.00%       | 1.00%      | 8.00%       | 30.00%    |
| 56            | 3.00%     | 8.50%   | 20.00%                                    | 1.00%      | 4.00%       | 1.00%      | 6.00%       | 25.00%    |
| 57            | 3.00%     | 8.50%   | 20.00%                                    | 1.50%      | 3.00%       | 1.00%      | 5.00%       | 25.00%    |
| 58            | 3.00%     | 8.50%   | 20.00%                                    | 1.50%      | 9.00%       | 2.00%      | 13.00%      | 25.00%    |
| 59            | 5.00%     | 8.50%   | 20.00%                                    | 2.50%      | 9.00%       | 2.00%      | 13.00%      | 25.00%    |
| 60            | 5.00%     | 8.50%   | 20.00%                                    | 4.00%      | 9.00%       | 3.00%      | 13.00%      | 20.00%    |
| 61            | 5.00%     | 8.50%   | 20.00%                                    | 4.00%      | 9.00%       | 5.00%      | 13.00%      | 20.00%    |
| 62            | 10.00%    | 30.00%  | 40.00%                                    | 10.00%     | 16.00%      | 10.00%     | 20.00%      | 30.00%    |
| 63            | 10.00%    | 20.00%  | 40.00%                                    | 7.50%      | 14.00%      | 9.00%      | 16.00%      | 20.00%    |
| 64            | 10.00%    | 10.00%  | 40.00%                                    | 7.50%      | 14.00%      | 9.00%      | 16.00%      | 20.00%    |
| 65            | 100.00%   | 100.00% | 100.00%                                   | 11.00%     | 24.00%      | 14.00%     | 27.00%      | 28.00%    |
| 66            |           |         |   | 18.00%     | 33.00%      | 16.00%     | 32.00%      | 20.00%    |
| 67            |           |         |   | 15.00%     | 22.00%      | 10.00%     | 29.00%      | 20.00%    |
| 68            |           |         |   | 12.00%     | 17.00%      | 7.50%      | 20.00%      | 20.00%    |
| 69            |           |         |   | 12.00%     | 17.00%      | 7.50%      | 20.00%      | 20.00%    |
| 70            |           |         |   | 100.00%    | 100.00%     | 100.00%    | 100.00%     | 100.00%   |

# Demographic Assumptions (continued)

## Retirement Assumptions (continued)

#### Retirement from Dormant Status

Dormant members are assumed to retire at Normal Retirement Age (age 58 for Tier 1, age 60 for Tier 2, age 60 for Judges, and age 55 for Police & Fire) or at the first unreduced retirement age (30 years of service, or age 50 with 25 years of service for Police & Fire).

### Lump Sum Option at Retirement

Members retiring may elect to receive a full or partial lump sum at retirement. The probability that a retiring member will elect a lump sum at retirement is summarized in the table below. These rates were first adopted effective December 31, 2008.

| Partial Lump Sum: | 6% for all years  |
|-------------------|---|
| Total Lump Sum:   | 6% for 2009, declining by 0.5% per year until reaching 0.0% |
| No Lump Sum:      | 88% in 2009, increasing by 0.5% until reaching 94.0%        |

#### Purchase of Credited Service at Retirement

The following percentages of members are assumed to purchase credit for the six-month waiting period at retirement. These rates were first adopted effective December 31, 2008.

| Money Match Retirements:     | 0%  |
|------------------------------|-----|
| Non-Money Match Retirements: | 55% |

## Judge Member Plan Election

All judge members are assumed to elect to retire under the provisions of Plan B.

## Demographic Assumptions (continued)

## **Disability Assumptions**

There are two disability assumptions used in the valuation - duty disability and ordinary disability. Duty Disability rates are separated between Police & Fire and General Service, while ordinary disability is the same for all members. The rates for ordinary disability were first adopted effective December 31, 2008. The rates for duty disability were first adopted effective December 31, 2008.

| Age                             | Percentage of the 1985<br>Disability Class 1 Rates |
|---------------------------------|--|
| Duty Disability Police & Fire   | 15%  |
| Duty Disability General Service | 1.5%   |
| Ordinary Disability             | 50% with 0.2% cap                                  |

## **Termination Assumptions**

The termination assumptions used in the actuarial valuation include the following assumptions:

- Termination from active status prior to retirement eligibility
- Probability that a member will not take a lump sum distribution prior to retirement.

All of the termination assumptions were first adopted effective December 31, 2008.

### **Termination Rates**

Sample termination rates are shown for each group below:

| Age | School<br>District | General<br>Service Male | General<br>Service | Employers<br>General | Employers<br>General | Police & Fire |
|-----|--------------------|-------------------------|--------------------|----------------------|----------------------|---------------|
| 30  | 4.32%              | 8.08%                   | 9.58%              | 6.11%                | 9.10%                | 3.45%         |
| 40  | 2.63%              | 4.63%                   | 5.36%              | 3.84%                | 5.70%                | 2.17%         |
| 50  | 1.90%              | 2.74%                   | 3.19%              | 2.47%                | 3.58%                | 1.24%         |

## Demographic Assumptions (continued)

## Termination Assumptions (continued)

#### Probability of Refund Before Retirement

The following table shows the probability that vested terminated members will elect to withdraw accumulated member contributions instead of receive a deferred benefit for sample ages:

|     | General |               |
|-----|---------|---------------|
| Age | Service | Police & Fire |
| 30  | 17.50%  | 30.00%        |
| 40  | 17.50%  | 27.00%        |
| 50  | 7.78%   | 0.00%         |

## Demographic Assumptions (continued)

#### Salary Increase Assumptions

The salary increase assumptions reflected in the actuarial valuation include:

- Merit scale increases in addition to the payroll growth increase
- Unused Sick Leave adjustments
- Vacation Pay adjustments

#### Merit Increases

Merit increases are based on duration of service for the following groups. The rates were first adopted effective December 31, 2008. For plan years 2009 and 2010, the merit increase is assumed to be 0 percent.

|          |                 | Other Genera | 1             |
|----------|-----------------|--------------|---------------|
| Duration | School District | Service      | Police & Fire |
| 5        | 2.07%           | 2.17%        | 2.55%         |
| 10       | 1.18%           | 1.13%        | 1.20%         |
| 15       | 0.53%           | 0.63%        | 0.67%         |
| 20       | 0.13%           | 0.45%        | 0.59%         |

#### Unused Sick Leave

Members covered by the provision allowing unused sick leave to be used to increase final average salary are assumed to receive increases in their final average salary in accordance with the table below. This adjustment is not applied to disability benefits. The rates for State general service female, School District and local general service male, and police and fire were first adopted December 31, 2008. Local general service females were adopted effective December 31, 2001, and all other rates were adopted effective December 31, 2005.

| Actives                | Rates |
|------------------------|-------|
| State GS Male          | 5.75% |
| State GS Female        | 4.25% |
| School District Male   | 7.50% |
| School District Female | 6.75% |
| Local GS Male          | 4.25% |
| Local GS Female        | 3.00% |
| State Police & Fire    | 7.25% |
| Local Police & Fire    | 8.25% |
|                        |       |

|                   | Rates | Dormants    |
|-------------------|-------|-------------|
| All members 3.50% | 3.50% | All members |

# Demographic Assumptions (continued)

## Vacation Pay

Members eligible to receive a lump sum payment of unused vacation pay are assumed to receive increases in their final average salary in accordance with the table below. This adjustment is not applied to disability benefits.

|                                   | Rates |
|-----------------------------------|-------|
| Tier 1 Non-School District/Judges | 2.8%  |
| Tier 1 School District            | 1.4%  |
| Tier 2                            | 0.0%  |

# **Demographic Assumptions** (continued)

## **Retiree Healthcare Participation**

The following percentages of eligible retiring members are assumed to elect RHIPA and RHIA coverage:

| RHIPA                                | 9%    |
|--------------------------------------|-------|
| RHIA                                 |       |
| <ul> <li>Healthy Retired</li> </ul>  | 42.5% |
| <ul> <li>Disabled Retired</li> </ul> | 20%   |

These rates were first adopted effective December 31, 2008.

# **Actuarial Methods and Assumptions — OPSRP**

Most of the methods and assumptions adopted for the OPSRP valuation are the same as those used for Tier 1/ Tier 2. A summary of the methods and assumptions that differ for OPSRP are summarized below. These assumptions are used for the December 31, 2008 and December 31, 2009 actuarial valuations.

## **Actuarial Methods and Valuation Procedures**

| OPSRP UAL amortization | Gains and losses between odd-year valuations are amortized as a level         |
|------------------------|---|
|                        | percentage of combined valuation payroll (Tier 1/ Tier 2 plus OPSRP           |
|                        | payroll) over 16 years from the valuation in which they are first recognized. |

## **Economic Assumptions**

Administrative expenses \$6.6 million per year is added to the normal cost.

### **Demographic Assumptions**

#### **Retirement Assumptions**

#### Retirement from Active Status

|     |          | Police & Fire |         | General Service |           |         |  |
|-----|----------|---------------|---------|-----------------|-----------|---------|--|
| Age | < 13 yrs | 13-24 yrs     | 25+ yrs | < 15 yrs        | 15-29 yrs | 30+ yrs |  |
| 50  | 1.0%     | 2.0%          | 7.5%    |                 |           |         |  |
| 51  | 1.0%     | 2.0%          | 7.5%    |                 |           |         |  |
| 52  | 1.0%     | 2.0%          | 7.5%    |                 |           |         |  |
| 53  | 1.0%     | 2.0%          | 35.0%   |                 |           |         |  |
| 54  | 1.0%     | 2.0%          | 20.0%   |                 |           |         |  |
| 55  | 3.0%     | 5.0%          | 20.0%   | 1.0%            | 5.0%      | 5.0%    |  |
| 56  | 3.0%     | 5.0%          | 20.0%   | 1.0%            | 4.0%      | 5.0%    |  |
| 57  | 3.0%     | 5.0%          | 20.0%   | 1.5%            | 3.0%      | 7.5%    |  |
| 58  | 3.0%     | 5.0%          | 20.0%   | 1.5%            | 3.0%      | 35.0%   |  |
| 59  | 5.0%     | 5.0%          | 20.0%   | 2.5%            | 3.0%      | 25.0%   |  |
| 60  | 5.0%     | 15.0%         | 20.0%   | 4.0%            | 3.75%     | 20.0%   |  |
| 61  | 5.0%     | 8.5%          | 20.0%   | 4.0%            | 5.0%      | 20.0%   |  |
| 62  | 10.0%    | 30.0%         | 40.0%   | 7.0%            | 12.0%     | 30.0%   |  |
| 63  | 10.0%    | 20.0%         | 40.0%   | 6.0%            | 10.0%     | 20.0%   |  |
| 64  | 10.0%    | 10.0%         | 40.0%   | 6.0%            | 10.0%     | 20.0%   |  |
| 65  | 100.0%   | 100.0%        | 100.0%  | 12.0%           | 40.0%     | 20.0%   |  |
| 66  |          |               |         | 18.0%           | 33.0%     | 20.0%   |  |
| 67  |          |               |         | 12.0%           | 22.0%     | 30.0%   |  |
| 68  |          |               |         | 10.0%           | 17.0%     | 20.0%   |  |
| 69  |          |               |         | 10.0%           | 17.0%     | 20.0%   |  |
| 70  |          |               |         | 100.0%          | 100.0%    | 100.0%  |  |

# **Actuarial Methods and Assumptions — OPSRP**

# **Demographic Assumptions** (continued)

## Retirement from Dormant Status

Dormant members are assumed to retire at Normal Retirement Age.

## **Termination Assumptions**

The termination rates are based on 3-year select and ultimate rates, with the ultimate rates being the same as the Tier 1/Tier 2 termination rates.

| Age |            | School     | District   |          | Police & Fire |            |            |          |
|-----|------------|------------|------------|----------|---------------|------------|------------|----------|
|     | 1st Select | 2nd Select | 3rd Select |          | 1st Select    | 2nd Select | 3rd Select |          |
|     | Period     | Period     | Period     | Ultimate | Period        | Period     | Period     | Ultimate |
| 25  | 8.70%      | 6.97%      | 6.58%      | 5.84%    | 14.05%        | 7.56%      | 5.44%      | 5.09%    |
| 35  | 5.85%      | 4.27%      | 3.95%      | 3.29%    | 12.10%        | 6.17%      | 4.33%      | 2.61%    |
| 45  | 4.83%      | 3.22%      | 2.89%      | 2.21%    | 13.04%        | 6.35%      | 4.12%      | 1.78%    |

| Age | Independ   | dent Employer | s General Serv | vice Male | Independent Employers General Service Female |            |            |          |
|-----|------------|---------------|----------------|-----------|--|------------|------------|----------|
|     | 1st Select | 2nd Select    | 3rd Select     |           | 1st Select                                   | 2nd Select | 3rd Select |          |
|     | Period     | Period        | Period         | Ultimate  | Period                                       | Period     | Period     | Ultimate |
| 25  | 20.00%     | 12.53%        | 10.55%         | 7.96%     | 19.71%                                       | 14.26%     | 12.99%     | 10.71%   |
| 35  | 15.89%     | 8.89%         | 7.14%          | 4.79%     | 13.09%                                       | 9.27%      | 8.81%      | 7.35%    |
| 45  | 15.72%     | 8.23%         | 5.98%          | 3.12%     | 12.86%                                       | 7.93%      | 6.65%      | 4.37%    |

| Age |            | SLGRP General Service Male |            |          | SLGRP General Service Female |            |            |          |
|-----|------------|----------------------------|------------|----------|------------------------------|------------|------------|----------|
|     | 1st Select | 2nd Select                 | 3rd Select |          | 1st Select                   | 2nd Select | 3rd Select |          |
|     | Period     | Period                     | Period     | Ultimate | Period                       | Period     | Period     | Ultimate |
| 25  | 18.28%     | 14.94%                     | 12.97%     | 10.20%   | 18.23%                       | 14.88%     | 14.21%     | 12.13%   |
| 35  | 13.44%     | 10.52%                     | 8.76%      | 6.20%    | 14.90%                       | 10.79%     | 9.74%      | 7.28%    |
| 45  | 10.01%     | 7.43%                      | 5.84%      | 3.45%    | 12.26%                       | 7.81%      | 6.59%      | 3.96%    |

# Actuarial Methods and Assumptions — Tier 1/ Tier 2 and OPSRP

A summary of key changes implemented since the December 31, 2007 valuation are described briefly below. Additional detail and a comprehensive list of changes in methods and assumptions can be found in the 2008 experience study report.

## **Changes in Actuarial Methods and Allocation Procedures**

#### Amortization of Changes in UAL due to actuarial cost method change

Contribution rates effective July 1, 2007 through June 30 2011 reflect an accelerated amortization of the change in UAL that occurred when the PUC cost method was first adopted for the December 31, 2004 valuation. By the time the current contribution rates are changed on July 1, 2011, four years of contributions will have been collected toward the 3-year amortization base. Consequently, the PUC change amortization was eliminated from the valuation so it will not be included in contribution rates that become effective July 1, 2011.

## RHIA / RHPIA Amortization Period

The RHIA and RHIPA amortization period has been reduced to 10 years.

### Money Match Weighting

For purposes of allocating a Tier 1/Tier 2 member's actuarial accrued liability among multiple employers, the valuation uses a weighted average of the Money Match methodology and the Full Formula methodology used by PERS when the member retires. The weights are determined based on the prevalence of each formula among the current Tier 1/Tier 2 population. For the December 31, 2006 and December 31, 2007 valuations, the Money Match method was weighted 65 percent for General Service members and 25 percent for Police & Fire members. This weighting has been adjusted to 50 percent for General Service members and 15 percent for Police & Fire members.

### Changes in Economic Assumptions

## RHIA / RHIPA Assumptions

Healthcare cost trend rates were updated to reflect a longer grade down period and a lower ultimate trend rate. The participation rate assumption for RHIA and RHIPA was lowered.

### **OPSRP** Administrative Expenses

The administrative expenses assumption has been lowered to reflect the completion of the initial IT setup.

## Changes in Demographic Assumptions

#### Mortality

The healthy mortality assumption has been changed from RP2000 static mortality tables to RP2000 generational mortality tables with group-specific class and set back adjustments. In addition, the disabled mortality assumption has been adjusted.

#### **Retirement Assumptions**

A third service band was added to the retirement rate structure. The probability that a member will elect a partial or total lump sum at retirement has been lowered and the percentage of members who purchase credited service was increased to 55% for non-Money Match retirements.

#### **Disability Assumptions**

The probability of becoming disabled has been lowered and is now reflected as a percentage of the standard 1985 Disability Class 1 table.

#### Termination Assumptions

The rates for School Districts and SLGRP employers have been updated. In addition, the probability a member will withdraw their account balance before retirement has been lowered.

#### Salary Assumptions

Merit increase assumptions have been consolidated for SLGRP and independent employers. The merit increase is assumed to be 0 percent for all groups during 2009 and 2010. In addition, minor adjustments have been made to the Unused Sick Leave assumption.

The following section summarizes the plan provisions considered in the actuarial valuation. A more detailed description of plan provisions is available from the PERS administrative office.

| Membership                | All employees of public employers participating in this System who are in qualifying positions become members of the System after completing six months of service except those who are eligible for and have elected to participate in an optional retirement plan. Different benefit provisions of the plan apply based on date of hire. |  |  |  |  |  |
|---------------------------|--|--|--|--|--|--|
|                           | Tier 1   | Hired prior to 1996  |  |  |  |  |
|                           | Tier 2   | Hired after 1995 and before August 29, 2003  |  |  |  |  |
|                           | OPSRP  | Hired after August 28, 2003, not a judge, and not a former Tier 1/Tier 2 member eligible to reestablish Tier 1/Tier 2 membership |  |  |  |  |
|                           | Judges   | Members of the State Judiciary   |  |  |  |  |
| Employee<br>Contributions | Judges   | 7% of salary   |  |  |  |  |
| Contributions             | All others   | None   |  |  |  |  |
| Employer<br>Contributions | Actuarially determined   |  |  |  |  |  |

| Police and Fire  | •   | Age 55   |  |  |
|--|---|--|--|--|
| Judges   |   | Age 65   |  |  |
| Tier 1 General   | Service   | Age 58   |  |  |
| Tier 2 General   | Service   | Age 60   |  |  |
| For Members who are not Judges, the greatest of the Full Formula benefit, the Match benefit, or the Formula Plus Annuity benefit (only available to Members w contributions before August 21, 1981). |   |  |  |  |
| Full Formula   | The percentage multiplier from the table below multiplied by final average<br>pay and years of credited service plus a prior service pension, if<br>applicable. |  |  |  |
|  | Percentage  | e Multiplier   | Membership Classification  |  |
|  | 2.00%   |  | Fire, Police and Legislators   |  |
|  | 1.67%   |  | All other members  |  |
| Money Match  |   |  | lance and a matching employer amount<br>equivalent annuity.  |  |
| Annuity cash refund annuity plus the percentage m<br>multiplied by final average pay and years o   |   |  | lance converted to an actuarially equivalent<br>ne percentage multiplier from the table below<br>pay and years of credited service, plus a prior<br>ble.   |  |
|  | Percentage  | e Multiplier   | Membership Classification  |  |
|  | 1.35%   |  | Fire, Police and Legislators   |  |
|  | 1.00%   |  | All other members  |  |
|  | Judges<br>Tier 1 General<br>Tier 2 General<br>For Members w<br>Match benefit, of<br>contributions be<br>Full Formula<br>Money Match<br>Formula Plus             | Tier 1 General ServiceTier 2 General ServiceFor Members who are not Ju<br>Match benefit, or the Formul<br>contributions before August 2Full FormulaThe percen<br>pay and yea<br>applicable.Full FormulaPercentage<br>2.00%<br>1.67%Money MatchThe Member<br>converted to<br>The Member<br>cash refund<br>multiplied b<br>service penFormula Plus<br>AnnuityThe Member<br>cash refund<br>nultiplied b<br>service penPercentage<br>1.35% | Judges       Age 65         Tier 1 General Service       Age 58         Tier 2 General Service       Age 60         For Members who are not Judges, the great Match benefit, or the Formula Plus Annuity contributions before August 21, 1981).       Full Formula         Full Formula       The percentage multiplier pay and years of credited applicable.         Percentage Multiplier       2.00%         1.67%       The Member's account bac converted to an actuarially         Formula Plus Annuity       The Member's account bac converted to an actuarially         Formula Plus Annuity       The Member's account bac converted by final average service pension, if applicable         Percentage Multiplier       1.35% |  |

| Normal<br>Retirement<br>Allowance<br>(continued) | Judges Final average pay multiplied by the first percentable below for up to 16 years of service plus to multiplier for any service in excess of 16 years maximum percentage of final average pay also must elect Plan A or Plan B no later than age serve as a pro tem judge for a total of 175 day |           |   |                         |                      | cond percentage<br>not to exceed the<br>wn below. Judges<br>"Plan B" judge must |
|--|--|-----------|---|-------------------------|----------------------|---|
|  |  | Plan      | Percentage Facto<br>(up to 16 years)            | r Percenta<br>(after 16 | age Factor<br>years) | Maximum<br>Percentage of<br>Final Average Pay                                   |
|  |  | А         | 2.8125%   | 1.                      | 67%                  | 65%   |
|  |  | В         | 3.75%   | 2.                      | 00%                  | 75%   |
| SB 656/HB<br>3349                                |  |           | n increase to their mo<br>nate Bill 656 (SB 656 |                         |                      | equal to the greater of 3349).  |
| Adjustment                                       | SB 656   | Years     | of Service G                                    | eneral Serv             | ice                  | Police & Fire   |
|  | Increase   | 0-9       |   | 0.0%                    |                      | 0.0%  |
|  |  |           | 10-14   | 1.0                     |                      | 1.0   |
|  |  | 15-19     |   | 1.0                     |                      | 1.0   |
|  |  | 20-24     |   | 2.0                     |                      | 2.5   |
|  |  | 25-29     |   | 3.0                     |                      | 4.0   |
|  |  | 30 & Over |   | 4.0                     |                      | 4.0   |
|  | HB 3349<br>Increase  | 1         |   |                         | Service pri          | or to October 1, 1991   |
|  |  |           | aximum Oregon pers<br>ne tax rate (limited to   |                         |                      | All Service   |
| Early  | Police and Fire  | e         | Age 50 or 30                                    | years of serv           | ice                  |   |
| Retirement<br>Eligibility                        | Judges   |           | Age 60  |                         |                      |   |
| Liigibiiity                                      | General Service Age 55 or 30 years of service  |           |   |                         |                      |   |
| Early<br>Retirement<br>Allowance                 | Normal retirement allowance, actuarially reduced to early retirement age. However, there is no reduction applied if a member has completed 30 years of service (25 years for police & fire members) or for judges in Plan B.   |           |   |                         |                      |   |
| Vesting  | Five years or a  | ttainmei  | nt of normal retireme                           | nt age.                 |                      |   |
| Termination                                      | Non-Vested   | Paym      | ent of member's acco                            | ount balance            |                      |   |
| Benefits   | Vested   |           | as normal (or early)<br>ed to normal (or early  |                         |                      | t commencement is   |

| The normal for   | rm of benefit is a cash refund annuity (joint and two-thirds survivor   |  |  |  |
|--|---|--|--|--|
| ement contingent annuity for a married judge). All optional amounts are adjusted t equivalent.   |   |  |  |  |
| •  | lable   |  |  |  |
| <ul> <li>Life annuity</li> </ul>   |   |  |  |  |
| <ul> <li>Cash refund</li> </ul>  | d annuity   |  |  |  |
| <ul> <li>Life annuity</li> </ul>   | guaranteed 15 years   |  |  |  |
| <ul> <li>Joint and 50</li> </ul>   | 0% or 100% survivor contingent annuity, with or without pop-up feature  |  |  |  |
|  | of member contribution account (under any form) plus a pension from   |  |  |  |
|  | ontributions under the Full Formula or Money Match method.  |  |  |  |
| •  | of member contribution account plus a matching employer amount.   |  |  |  |
| -  | Six or more years of service.   |  |  |  |
| All others   | Death occurring while the member is an employee of a participating<br>employer or within 120 days of termination provided the employee does<br>not withdraw the account balance or retire, or a result of injuries received<br>while in the service of a participating employer.  |  |  |  |
| Judges   | The spouse shall receive a life pension equal to two-thirds of the service retirement allowance. The beneficiary of an unmarried judge shall receive the member's accumulated contributions with interest.  |  |  |  |
| All others   | The member's account balance plus a matching employer amount.   |  |  |  |
|  | h of a retired police officer or firefighter, the surviving spouse or dependent   |  |  |  |
| children under   | age 18 will receive a monthly benefit based on 25% of the cash refund<br>wance due to police and fire service.  |  |  |  |
| Duty   | Disablement occurring as a direct result of a job-related injury or illness, regardless of length of service.   |  |  |  |
| Non-Duty   | Disablement occurring after ten years of service (six years, if a judge), but prior to normal retirement eligibility.   |  |  |  |
| been earned if<br>age 65 for judg  | tirement allowance calculated based on the service credit that would have<br>the member had continued working to age 58 (age 55 for police and fire,<br>ge members) payable commencing immediately.<br>ce Members' Alternative  |  |  |  |
| In lieu of the above, firefighters and police officers who qualify for duty disability may elect |   |  |  |  |
| to receive a benefit of 50% of final average monthly salary at the time of disablement.          |   |  |  |  |
| Minimum Mo   | nthly Retirement Allowance  |  |  |  |
| Judges 45% of final average monthly salary.  |   |  |  |  |
| All others   |   |  |  |  |
| Reduction of   | actuarially reduced if an optional form of benefit is chosen.<br>Benefits   |  |  |  |
|  | isabled employee's disability benefit and earned income for any month   |  |  |  |
| exceed the mo  | fit will be reduced by the excess.  |  |  |  |
| For Tier Two r   | nembers, the sum of the disability benefit and any workers' compensation not exceed the member's salary at the time of disablement.   |  |  |  |
|  | contingent and<br>equivalent.<br>Options Avail<br>Life annuity<br>Cash refund<br>Life annuity<br>Joint and 50<br>Lump sum of<br>employer co<br>Lump sum of<br>Judges<br>All others<br>Judges<br>All others<br>Upon the deat<br>children under<br>retirement allo<br>Duty<br>Non-Duty<br>The normal re<br>been earned if<br>age 65 for judg<br>Fire and Polio<br>In lieu of the a<br>to receive a be<br>Minimum Mon<br>Judges<br>Reduction of<br>Whenever a d<br>exceed the mon<br>disability bene<br>For Tier Two r |  |  |  |

| Police & Fire<br>Unit Purchases                             | Police & fire members may purchase 60-month annuity benefits (up to \$80 per month) that must be paid out by age 65 and cannot commence prior to the earliest retirement age. The amount purchased by the member is matched by the employer. In certain situations, such as termination of employment prior to retiring, or working beyond age 65, the employer's matching purchase is forfeited. |   |  |  |  |
|---|---|---|--|--|--|
| Postretirement<br>Adjustments                               | All monthly pension and postretirement adjustme   | annuity benefits except unit purchases are eligible for<br>ents.  |  |  |  |
|   | Automatic<br>Adjustments  | Benefits are adjusted annually to reflect the increase or decrease<br>in the Consumer Price Index (Portland area - all items) as<br>published by the Bureau of Labor Statistics.<br>The maximum adjustment to be made for any year is 2% of the<br>previous year's benefit. Any CPI change in excess of 2% is<br>accumulated for future benefit adjustments which would<br>otherwise be less than 2%. No benefit will be decreased below<br>its original amount.  |  |  |  |
|   | Ad Hoc Adjustments  | From time to time, as granted by the Legislature, retired members and beneficiaries have received increases in their monthly benefits.  |  |  |  |
| Variable Annuity<br>Program                                 | Contributions   | Prior to January 1, 2004, a member could elect to have 25, 50 or 75 percent of his or her contributions invested in the variable account.   |  |  |  |
|   | Benefit   | At retirement, a member may elect to receive a variable annuity<br>with the funds accumulated in his or her variable account.<br>Alternatively, a member may elect to have all or a portion of the<br>funds in his or her variable account transferred back to the<br>regular account and receive an annuity from the System as<br>though no variable annuity program existed.<br>The employer provided benefit, however, is based on the<br>earnings the member would have received in the regular<br>account. |  |  |  |
| Interest Credit<br>on Member<br>Accounts                    | Tier 1 Regular  | Actuarially assumed rate of return until the rate guarantee<br>reserve has been fully funded for three consecutive years and<br>the Board elects to credit additional interest.   |  |  |  |
|   | Tier 2 Regular  | Amount determined by the Board based on actual investment earnings of the regular account.  |  |  |  |
|   | Variable  | Actual earnings in variable account.  |  |  |  |
| Retiree<br>Healthcare –<br>Medicare<br>Supplement<br>(RHIA) | Eligibility   | <ul> <li>All of the following must be met:</li> <li>(a) Currently receiving a retirement allowance from the System,</li> <li>(b) Covered for eight years before retirement,</li> <li>(c) Enrolled in a PERS-sponsored health plan, and</li> <li>(d) Enrolled in both Medicare Part A and Part B.</li> </ul>   |  |  |  |
|   | Benefit Amount  | A monthly contribution of up to \$60 per retiree is applied to PERS-sponsored Medicare supplemental insurance costs.  |  |  |  |

| Retiree<br>Healthcare –                      | Eligibility   | Retired state employees enrolled plan.  | Retired state employees enrolled in a PERS-sponsored health plan. |  |  |  |
|--|---|---|---|--|--|--|
| Under Age 65<br>(RHIPA)                      | Benefit   | A percentage (as shown in the table below) of the maximum<br>monthly subsidy based on years of service. The maximum<br>monthly subsidy is calculated annually as the average difference<br>between the health insurance premiums paid by active state<br>employees and the premium retirees would pay if they were<br>rated separately from active state employees. |   |  |  |  |
|  |   | Years of Service  | Subsidized Amount   |  |  |  |
|  |   | Under 8   | 0%  |  |  |  |
|  |   | 8-9   | 50  |  |  |  |
|  |   | 10-14   | 60  |  |  |  |
|  |   | 15-19   | 70  |  |  |  |
|  |   | 20-24   | 80  |  |  |  |
|  |   | 25-29   | 90  |  |  |  |
|  |   | 30 & Over   | 100   |  |  |  |
| Benefits Not<br>Included in the<br>Valuation | No material benefits have been excluded from the liabilities. |   |   |  |  |  |
| Changes in<br>Plan Provisions                | <ul> <li>None</li> </ul>                                      |   |   |  |  |  |

# Summary of Chapter 238A Provisions — OPSRP

| Normal  | Police & Fire   | Age 60 or age 53 with 25 years of retirement credit  |  |  |  |  |
|---|---|--|--|--|--|--|
| Retirement Date                               | General Service   | Age 65 or age 58 with 30 years of retirement credit  |  |  |  |  |
|   | School Districts  | Age 65 or age 58 with 30 calendar years of active membership   |  |  |  |  |
| Normal<br>Retirement<br>Allowance             | attributable to servi   | A single life annuity equal to final average salary times years of retirement credit attributable to service as fire and police times 1.8% plus final average salary times all other years of retirement credit times 1.5% |  |  |  |  |
| Early Retirement                              | Police & Fire   | Age 50 and 5 years of vesting service  |  |  |  |  |
| Eligibility                                   | General Service   | Age 55 and 5 years of vesting service  |  |  |  |  |
| Early Retirement<br>Allowance                 | Normal retirement a   | allowance, actuarially reduced to early retirement age.  |  |  |  |  |
| Vesting                                       | Five years or attain  | ment of normal retirement age.   |  |  |  |  |
| Vested<br>Termination<br>Benefit              | Same as normal (or early) retirement allowance, but commencement is deferred to normal (or early) retirement date.  |  |  |  |  |  |
| Optional Forms of<br>Retirement<br>Benefit    | <ul> <li>The normal form of benefit is a life annuity. All optional amounts are adjusted to be actuarially equivalent.</li> <li>Options Available</li> <li>Life annuity</li> <li>Joint and 50% or 100% survivor contingent benefit, with or without pop-up feature</li> <li>Lump sum if monthly normal retirement benefit is less than \$200 or if lump sum value is less than \$5,000.</li> </ul>                                      |  |  |  |  |  |
| Preretirement<br>Death Benefit<br>Eligibility | Death of a vested member before retirement benefits begin.  |  |  |  |  |  |
| Preretirement<br>Death Benefit                | If member was eligible for early retirement, the actuarial equivalent of 50% of the early retirement benefit the participant was eligible to receive at date of death. If member was not eligible for early retirement, the actuarial equivalent of 50% of the early retirement benefit the participant would have been eligible to receive if he terminated employment on his date of death and retired at the earliest possible date. |  |  |  |  |  |
| Disability Benefit<br>Eligibility             | Duty  | Disablement occurring as a direct result of a job-related injury or illness, regardless of length of service.  |  |  |  |  |
|   | Non-Duty  | Disablement occurring after ten years of service, but prior to normal retirement eligibility.  |  |  |  |  |

# Summary of Chapter 238A Provisions — OPSRP (continued)

| Disability Benefit<br>Amounts | Preretirement<br>Benefit  | 45% of salary during last full month of employment before disability, reduced if total benefit including workers' compensation exceeds 75% of salary. Benefit is payable monthly until normal retirement age.  |  |  |
|-------------------------------|---|--|--|--|
|                               | Retirement<br>Benefit   | Same formula as Normal Retirement Benefit, except:<br>Final average salary is adjusted to reflect cost-of-living increases<br>from date of disability to normal retirement age, and<br>Retirement credits continue to accrue from date of disability to<br>normal retirement age.  |  |  |
| Postretirement                | All monthly pension and annuity benefits are eligible for postretirement adjustments. |  |  |  |
| Adjustments                   | Automatic<br>Adjustments  | Benefits are adjusted annually to reflect the increase or decrease<br>in the Consumer Price Index (Portland area - all items) as<br>published by the Bureau of Labor Statistics.<br>The maximum adjustment to be made for any year is 2% of the<br>previous year's benefit. Any CPI change in excess of 2% is<br>accumulated for future benefit adjustments which would otherwise<br>be less than 2%. No benefit will be decreased below its original<br>amount. |  |  |
|                               | Ad Hoc<br>Adjustments   | From time to time, as granted by the Legislature, retired members and beneficiaries have received increases in their monthly benefits.   |  |  |
| Changes in Plan<br>Provisions | None  |  |  |  |

# 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 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.

**Combined Valuation payroll.** Projected payroll for the calendar year following the valuation date for both Tier 1, Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

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

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

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

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

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

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

**OPSRP Valuation payroll.** Projected payroll for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

Pre-SLGRP Liability. The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created

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# Glossary

for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**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 45). 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.

**Tier 1/Tier 2 Valuation payroll.** Projected payroll for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate Tier 1/Tier 2 normal cost rates.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

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

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