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**Provision: Actuarial Equivalency Factor Tables** 

**Date: January 27, 2003** 

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#### **SUMMARY OF PROVISIONS**

Our understanding of the impact of the provision of this bill on the Oregon Public Employees Retirement Systems benefits or funding, based on our discussion with the PERS staff, is as follows:

The proposal requires the Retirement Board to adopt new actuarial equivalency factor tables based on the best available actuarial information. The current wording of the bill has an effective date for the next change of January 1, 2004. The bill is silent with respect to a member's protected accrued benefit, if any.

Due to recent requests for information, we have calculated four separate fiscal impacts based on the following combinations of effective dates and definitions of a member's protected accrued benefit as of the effective date.

| Effective Date  | Protected Accrued Benefit  |
|-----------------|----------------------------|
| January 1, 2004 | Look back with interest    |
| January 1, 2004 | Look back without interest |
| January 1, 2004 | No Look back               |
| January 1, 2003 | No Look back               |
|                 |                            |

For purposes of this report, a "look back" feature prevents the implementation of the new factors from reducing a member's monthly benefit at the effective date of the change. A member would be guaranteed to receive no less that the accrued benefit at the effective date with the application of the previous set of tables. A look back without interest protects the member account balance on the effective date, and a look back with interest also protects future interest credits to the account balance at the effective date.

#### **COMMENTS**

The purpose of this report is to estimate the fiscal impact of the proposed benefit changes. The figures presented in this report have been estimated based on the findings in the 2001 actuarial valuation. The overall funded position of the System shown in this report reflects the actuarial value of System assets as of December 31, 2001. Therefore, although the incremental costs of this proposal are reasonable, the overall current funded position of the System may be significantly different than shown in this report.

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The following table compares the conversion factors (converts the member account balance to a monthly lifetime benefit) on the Old Rule basis (members hired prior to 1999) and the New Basis for several illustrative retirement ages. Although many other factors are included in the full set, the conversion factors represent the major issue with respect to the current determination of benefits.

| Monthly Allowance per \$1,000 Account Balance |                                    |         |           | lance             |  |  |
|---|------------------------------------|---------|-----------|-------------------|--|--|
| Age at Old Rule                               |                                    | New     |           | <u>Comparison</u> |  |  |
| Retirement                                    | Basis                              | Basis   | Dollar    | Percent           |  |  |
| <u>Option</u>                                 | Option 1 – Non-Refund Life Annuity |         |           |                   |  |  |
| 50  | \$ 7.43                            | \$ 7.21 | \$ (0.22) | (3.0)%            |  |  |
| 55  | 7.86                               | 7.56    | (0.30)    | (3.8)             |  |  |
| 60  | 8.67                               | 8.06    | (0.61)    | (7.0)             |  |  |
| 65  | 9.79                               | 8.79    | (1.00)    | (10.2)            |  |  |
| Option 0 – Refund Life Annuity                |                                    |         |           |                   |  |  |
| 50  | \$ 7.32                            | \$ 7.15 | \$ (0.17) | (2.3)%            |  |  |
| 55  | 7.66                               | 7.45    | (0.21)    | (2.7)             |  |  |
| 60  | 8.09                               | 7.86    | (0.23)    | (2.8)             |  |  |
| 65  | 8.76                               | 8.42    | (0.34)    | (3.9)             |  |  |
|   |                                    |         |           |                   |  |  |
| Option 4 – 15-Year Certain and Life Annuity   |                                    |         |           |                   |  |  |
| 50  | \$ 7.24                            | \$ 7.13 | \$ (0.11) | (1.5)%            |  |  |
| 55  | 7.51                               | 7.39    | (0.12)    | (1.6)             |  |  |
| 60  | 7.84                               | 7.73    | (0.11)    | (1.4)             |  |  |
| 65  | 8.22                               | 8.13    | (0.09)    | (1.1)             |  |  |

### **DATA, METHODS AND ASSUMPTIONS**

All active and inactive members on the effective date will be impacted by this provision.

We have developed this analysis based on the data, methods, and assumptions contained in the actuarial valuation of the System performed as of December 31, 2001. In addition, we made the following assumptions with respect to this bill:

- For purposes of this fiscal impact statement, we assumed that this is the only benefit provision being considered. If other provisions are enacted, the cost associated with this provision may be different.
- We have not made any adjustment for actuarial gains or losses that may have emerged since the last valuation date, December 31, 2001. We are

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aware of the significant investment losses (returns lower than 8% per year on a fair market value basis) in 2002. We will not be able to measure the actuarial gains or losses from other sources until we complete future valuations with updated census information.

 We assumed that 6,600 members retired in 2002 and that 8,500 will retire in 2003. Both of these estimates far exceed the current assumption of about 4,500 retirements per year for these two years.

These cost estimates are subject to the uncertainties of a regular actuarial valuation; the costs are inexact because they are based on assumptions that are themselves necessarily inexact, even though we consider them reasonable. Thus, the emerging costs may vary from those presented in this letter to the extent actual experience differs from that projected by the actuarial assumptions.

#### FISCAL IMPACT

Based on our understanding of this proposal and the data, methods and assumptions outlined above, we have developed the following estimated impact on the funding of the System, based on the 2001 actuarial valuation.

The following table shows a brief summary of the impact of each of the four scenarios we evaluated.

|                              |                                 | Reductions to Liabilities and Costs |                                    |  |
|------------------------------|---------------------------------|-------------------------------------|------------------------------------|--|
| Effective Date of New Tables | Rule to Protect Accrued Benefit | Unfunded Liability (\$millions)     | Employer Rates (Percent of Salary) |  |
| January 1, 2004              | Look back with interest         | \$ (442.8)                          | (0.78)%                            |  |
| January 1, 2004              | Look back without interest      | (1,460.3)                           | (1.97)%                            |  |
| January 1, 2004              | No Look back                    | (1,553.6)                           | (2.05)%                            |  |
| January 1, 2003              | No Look back                    | (1,667.8)                           | (2.16)%                            |  |

A more complete fiscal impact statement for each scenario follows.

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Actuarial Equivalency Factor Tables January 27, 2003 Provision:

| Pension Plan Only<br>(excludes Retiree Healthcare Plans)<br><u>Look back with interest at 2004</u>                                  | 2001<br>Actuarial<br>Valuation  | Results<br>Including<br>Proposal  | Change<br>due to<br>Proposal                             |
|---|---|---|--|
| Actuarial Balance Sheet (\$millions)  |   |   |  |
| Value of Projected Benefits Value of Future Normal Costs Actuarial Liability Actuarial Value of Assets Unfunded Actuarial Liability | \$ 54,132.5<br><u>8,746.4</u><br>\$ 45,386.1<br><u>39,772.7</u><br>\$ 5,613.4 | \$ 53,496.9<br><u>8,553.6</u><br>\$ 44,943.3<br><u>39,772.7</u><br>\$ 5,170.6 | \$ (635.6)<br>(192.8)<br>\$ (442.8)<br>0.0<br>\$ (442.8) |
| Increase in Actuarial Liability: Active an Increase in Actuarial Liability: Retirees  |   | rs  | \$ (442.8)<br>\$ 0.0                                     |
| Average Employer Contribution Rate (per   | rcent of member sa  | laries)   |  |
| Employer Normal Cost Rate   | 10.52%  | 10.16%  | (0.36)%  |
| Rate of Amortization Contribution through December, 2027  | <u>5.28</u> %   | <u>4.86</u> %   | <u>(0.42)</u> %  |
| Employer Contribution Rate<br>(Normal Cost plus Amortization using<br>the Actuarial Value of Assets)                                | 15.80%  | 15.02%  | (0.78)%  |
| Annual Revenue Required to Fund this P  | Proposal (\$millions  | 5)  |  |
|   | Projected<br>2003-04<br>Salaries  | Change in<br>Employer<br>Rate   | Change in<br>Employer<br>Contributions                   |
| State and Local Government Rate Pool  |   |   |  |
| State Agencies Community Colleges Pooled Local Employers  | \$ 1,832.9<br>290.8<br>   | (0.77)%<br>(0.77)<br>(0.77)   | \$ (14.1)<br>(2.2)<br>(9.6)                              |
| Total SLGRP   | \$ 3,369.4<br>972.2   | (0.77)%<br>(0.68)   | \$ (25.9)  |
| Independent Local Employers (Average) School Districts  | 972.2<br>2,437.8  | (0.84)  | (6.6)<br>(20.5)  |
| State Judiciary   | 17.4  | (0.00)  | (0.0)  |
| Total   | \$ 6,796.8  | (0.78)%   | \$ (53.0)  |

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Actuarial Equivalency Factor Tables January 27, 2003 Provision:

| Pension Plan Only<br>(excludes Retiree Healthcare Plans)<br>Look back without interest at 2004                                      | 2001<br>Actuarial<br>Valuation  | Results<br>Including<br>Proposal  | Change<br>due to<br>Proposal           |
|---|---|---|--|
| Actuarial Balance Sheet (\$millions)  |   |   |  |
| Value of Projected Benefits Value of Future Normal Costs Actuarial Liability Actuarial Value of Assets Unfunded Actuarial Liability | \$ 54,132.5<br><u>8,746.4</u><br>\$ 45,386.1<br><u>39,772.7</u><br>\$ 5,613.4 | \$ 52,360.2<br><u>8,434.4</u><br>\$ 43,925.8<br><u>39,772.7</u><br>\$ 4,153.1 | \$ (1,772.3)                           |
| Increase in Actuarial Liability: Active an Increase in Actuarial Liability: Retirees  |   | rs  | \$ (1,430.3)<br>\$ 0.0                 |
| Average Employer Contribution Rate (per   | rcent of member sa  | laries)   |  |
| Employer Normal Cost Rate   | 10.52%  | 9.93%   | (0.59)%                                |
| Rate of Amortization Contribution through December, 2027  | <u>5.28</u> %   | <u>3.90</u> %   | <u>(1.38)</u> %                        |
| Employer Contribution Rate<br>(Normal Cost plus Amortization using<br>the Actuarial Value of Assets)                                | 15.80%  | 13.83%  | (1.97)%                                |
| Annual Revenue Required to Fund this P  | roposal (\$millions   | s)  |  |
|   | Projected<br>2003-04<br>Salaries  | Change in<br>Employer<br>Rate   | Change in<br>Employer<br>Contributions |
| State and Local Government Rate Pool  |   |   |  |
| State Agencies Community Colleges Pooled Local Employers  | \$ 1,832.9<br>290.8<br><u>1,245.7</u>   | (1.96)%<br>(1.96)<br><u>(1.96)</u>  | \$ (35.9)<br>(5.7)<br>(24.4)           |
| Total SLGRP   | \$ 3,369.4<br>972.2   | (1.96)%<br>(1.65)   | \$ (66.0)<br>(16.0)                    |
| Independent Local Employers (Average) School Districts  | 972.2<br>2,437.8  | (1.65)  | (16.0)<br>(51.6)                       |
| State Judiciary   | 17.4  | (0.00)  | (0.0)                                  |
| Total   | \$ 6,796.8  | (1.97)%   | \$ (133.6)                             |

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Actuarial Equivalency Factor Tables January 27, 2003 Provision:

| Pension Plan Only<br>(excludes Retiree Healthcare Plans)<br><u>No Look back at 2004</u>   | 2001<br>Actuarial<br>Valuation  | Results<br>Including<br>Proposal  | Change<br>due to<br>Proposal                                   |
|---|---|---|--|
| Actuarial Balance Sheet (\$millions)  |   |   |  |
| Value of Projected Benefits Value of Future Normal Costs Actuarial Liability Actuarial Value of Assets Unfunded Actuarial Liability | \$ 54,132.5<br><u>8,746.4</u><br>\$ 45,386.1<br><u>39,772.7</u><br>\$ 5,613.4 | \$ 52,266.9<br><u>8,434.4</u><br>\$ 43,832.5<br><u>39,772.7</u><br>\$ 4,059.8 | \$ (1,865.6)<br>(312.0)<br>\$ (1,553.6)<br>0.0<br>\$ (1,553.6) |
| Increase in Actuarial Liability: Active an Increase in Actuarial Liability: Retirees  |   | rs  | \$ (1,553.6)<br>\$ 0.0   |
| Average Employer Contribution Rate (per   | rcent of member sa  | laries)   |  |
| Employer Normal Cost Rate   | 10.52%  | 9.93%   | (0.59)%  |
| Rate of Amortization Contribution through December, 2027  | <u>5.28</u> %   | <u>3.82</u> %   | <u>(1.46)</u> %  |
| Employer Contribution Rate<br>(Normal Cost plus Amortization using<br>the Actuarial Value of Assets)                                | 15.80%  | 13.75%  | (2.05)%  |
| Annual Revenue Required to Fund this P  | roposal (\$millions   | 5)  |  |
|   | Projected<br>2003-04<br>Salaries  | Change in<br>Employer<br>Rate   | Change in<br>Employer<br>Contributions                         |
| State and Local Government Rate Pool  |   |   |  |
| State Agencies Community Colleges Pooled Local Employers  | \$ 1,832.9<br>290.8<br>   | (2.04)%<br>(2.04)<br>(2.04)   | \$ (37.4)<br>(5.9)<br>(25.4)                                   |
| Total SLGRP   | \$ 3,369.4<br>972.2   | (2.04)%<br>(1.72)   | \$ (68.7)<br>(16.7)  |
| Independent Local Employers (Average) School Districts  | 2,437.8   | (2.22)  | (54.0)   |
| State Judiciary   | 17.4  | (0.00)  | (0.0)  |
| Total   | \$ 6,796.8  | (2.05)%   | \$ (139.4)   |

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Actuarial Equivalency Factor Tables January 27, 2003 Provision:

| Pension Plan Only<br>(excludes Retiree Healthcare Plans)<br><u>No Look back at 2003</u>   | 2001<br>Actuarial<br>Valuation  | Results<br>Including<br>Proposal  | Change<br>due to<br>Proposal           |
|---|---|---|--|
| Actuarial Balance Sheet (\$millions)  |   |   |  |
| Value of Projected Benefits Value of Future Normal Costs Actuarial Liability Actuarial Value of Assets Unfunded Actuarial Liability | \$ 54,132.5<br><u>8,746.4</u><br>\$ 45,386.1<br><u>39,772.7</u><br>\$ 5,613.4 | \$ 52,152.7<br><u>8,434.4</u><br>\$ 43,718.3<br><u>39,772.7</u><br>\$ 3,945.6 | \$ (1,979.8)                           |
| Increase in Actuarial Liability: Active an Increase in Actuarial Liability: Retirees  |   | rs  | \$ (1,667.8)<br>\$ 0.0                 |
| Average Employer Contribution Rate (per   | rcent of member sa  | laries)   |  |
| Employer Normal Cost Rate   | 10.52%  | 9.93%   | (0.59)%                                |
| Rate of Amortization Contribution through December, 2027  | <u>5.28</u> %   | <u>3.71</u> %   | <u>(1.57)</u> %                        |
| Employer Contribution Rate<br>(Normal Cost plus Amortization using<br>the Actuarial Value of Assets)                                | 15.80%  | 13.64%  | (2.16)%                                |
| Annual Revenue Required to Fund this P  | roposal (\$millions   | ;)  |  |
|   | Projected<br>2003-04<br>Salaries  | Change in<br>Employer<br>Rate   | Change in<br>Employer<br>Contributions |
| State and Local Government Rate Pool  |   |   |  |
| State Agencies<br>Community Colleges<br>Pooled Local Employers  | \$ 1,832.9<br>290.8<br>1,245.7  | (2.15)%<br>(2.15)<br><u>(2.15)</u>  | \$ (39.4)<br>(6.3)<br>(26.8)           |
| Total SLGRP   | \$ 3,369.4  | (2.15)%   | \$ (72.5)                              |
| Independent Local Employers (Average)   | 972.2   | (1.80)  | (17.5)                                 |
| School Districts  | 2,437.8   | (2.34)  | (57.0)                                 |
| State Judiciary Total   | <u>17.4</u><br>\$ 6,796.8   | <u>(0.00)</u><br>(2.16)%  | <u>(0.0)</u><br>\$ (147.0)             |