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# Oregon Public Employees Retirement System

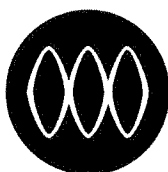
ACTUARIAL VALUATION  
December 31, 2003

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Mark O. Johnson

Fellow, Society of Actuaries  
Member, American Academy of Actuaries

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**Milliman**

*Consultants and Actuaries*

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**ACTUARIAL VALUATION  
December 31, 2003**

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January 19, 2005

Retirement Board  
Public Employees Retirement System  
State of Oregon

Dear Members of the Board:

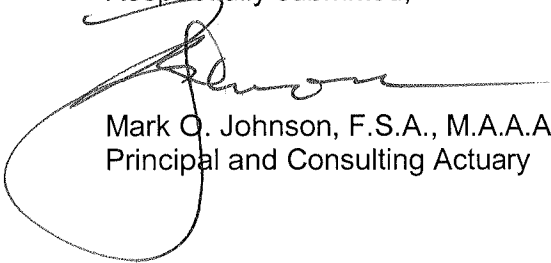
We have performed an Actuarial Valuation of the Oregon Public Employees Retirement System as of December 31, 2003. The report documents our findings, which have been presented during regularly scheduled meetings.

Details about the Actuarial Valuation are contained in the enclosed report. We have several comments about the preparation of the valuation, including references to the professional guidelines used in preparing this report, and the sources and the reliability of both the data and the actuarial assumptions upon which our findings depend. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

We would like to express our appreciation to members of the PERS staff, who gave substantial assistance in supplying the data and other information on which this report is based.

Any distribution of this report must be in its entirety unless prior written consent is obtained from Milliman, Inc.

Respectfully submitted,



Mark O. Johnson, F.S.A., M.A.A.A., E.A.  
Principal and Consulting Actuary

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

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# OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

## 2003 ACTUARIAL VALUATION

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### Section 1 Summary of the Findings

This report presents the results of the Actuarial Valuation of the Oregon Public Employees Retirement System as of December 31, 2003.

**Purpose of the Valuation:** The actuary does not determine the cost of a retirement system. The ultimate costs of a system are determined by adding all of the benefits and expenses that are paid, and subtracting all investment earnings. These costs cannot be determined exactly until the last member or beneficiary has received the final benefit payment due.

The purpose of an actuarial valuation is to provide a timely best estimate of the ultimate cost of benefits in order to allocate the cost to the appropriate generations of taxpayers in an orderly fashion. Actuarial valuations measure the current and projected financial health of a retirement system and recommend contribution rates to the appropriate authority.

The members and employers share the cost of the benefits from the Oregon Public Employees Retirement System. Member contributions are set at fixed rates by statute, and the Retirement Board has the statutory mandate to set employer contribution rates on an actuarially sound basis. Beginning in 2004, all non-judge member contributions will be deposited in a separate fund (the Individual Account Plan) and will not be used to finance the benefits projected in this report.

By using the actuarial methods and assumptions adopted by the Retirement Board, this report provides the best current estimate of the long-term funding status of the System.

The key findings of this Actuarial Valuation are:

- ◆ **Investment Returns** PERS, like virtually every other major pension fund, experienced significant investment losses from 2000 to 2002; however, the System experienced investment gains in 2003. The net investment gains and losses are measured against the assumed long-term assumption of 8% per year. The employer contribution rates in this valuation do not include \$368 million in unrecognized investment losses through 2003.
  
- ◆ **Funded Status** The Funded Status of a retirement plan is equal to the difference between its Actuarial Value of Assets and its Actuarial Liabilities. The Funded Ratio is equal to the Actuarial Value of Assets divided by the Actuarial Liabilities.

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\$(Millions)	2003 Valuation	2002 Valuation	2001 Valuation
Actuarial Liability	\$ 44,625.6	\$ 39,520.5	\$ 37,821.6
Value of Assets*	<u>42,874.4</u>	<u>36,316.8</u>	<u>39,852.2</u>
Unfunded AL	\$ 1,751.2	\$ 3,203.7	\$ (2,030.6)
Funded Ratio	96.1%	91.9%	105.4%
<b>*Includes UAL Lump Sum Accounts</b>			

The following table shows a history of the Funded Status.

\$(Millions) Year End	Actuarial Value of Assets	Actuarial Liability	Funded Ratio
1975	\$ 933.9	\$ 1,578.8	59%
1977	1,395.9	2,193.9	64
1979	2,026.0	2,905.7	70
1982	3,991.7	4,822.8	83
1985	6,775.6	7,287.6	93
1987	8,408.7	9,290.5	91
1989	11,606.7	11,533.3	101
1991	14,667.9	14,671.2	100
1993	17,552.0	19,001.3	92
1995	20,957.6	23,248.6	90
1997	29,108.2	31,664.9	92
1999	39,964.8	40,907.9	98
2000	41,804.6	43,350.5	96
2001	39,852.2	37,821.6	105
2002*	36,316.8	39,520.5	92
2003*	42,874.4	44,625.6	96
<b>*Includes UAL Lump Sum Accounts</b>			

◆ **Litigation**

There is current litigation involving the PERS benefits projected in this report. The most important of the current actions with respect to this report involves the sustainability of the 2003 PERS Reform Legislation, which is being reviewed by the Oregon Supreme Court. If the Supreme Court voids all or part of the 2003 legislation, the Retirement Board may need to adjust employer contribution rates accordingly at a future date.

◆ **City of Eugene v. PERB**

As a result of *City of Eugene v. State of Oregon, Public Employees Retirement Board*, the following changes were made, which are reflected in this Actuarial Valuation:

- The Board adopted an administrative rule that revised the Variable Annuity Adjustment to the Money Match.

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- Assets were transferred from the Employer Reserves to the Contingency Reserves for earnings improperly credited due to an “employer-in-variable” rule.

◆ **UAL Lump Sum Accounts**

The Board has established an Administrative Rule for the actuarial treatment of lump sum supplemental employer contributions. A number of employers have made lump sum supplemental contributions (referred to as UAL Lump Sum Accounts), and the impact of these contributions has been included in their rates developed as of the later of the 2003 valuation date or the date of deposit of the supplemental contributions. The results for the System as a whole are shown on a cash basis with respect to supplemental lump sum contributions.

◆ **Contribution Rates**

The valuations completed at the end of odd-numbered calendar years include recommendations for revisions to employer contribution rates. The valuations completed at the end of even-numbered calendar years are used to analyze the funding progress of the System as a whole, and individual employer contribution rates are not developed. The following average employer contribution rates would be appropriate to fund the System as of the valuation date. The level rate of 18.89% of salaries excludes the impact of UAL Lump Sum Accounts not yet recognized in the Actuarial Value of Assets. Below the dotted line, we show the impact of these accounts on the average employer contribution rate.

<b>Average Employer Contribution Rates as of the Valuation Date</b>		
	<b>Change</b>	<b>Final Rate</b>
2001 Valuation		16.48%
2003 PERS Reform	(5.84)%	10.64
2002 Valuation		
Actuarial (Gains) and Losses	5.71	16.35
2003 Valuation		
Actuarial (Gains) and Losses	(0.33)	16.02
Revised Methods and Assumptions	2.91	18.93
Lipscomb Benefit Changes	(0.04)	18.89
Impact of UAL Lump Sum Accounts		
2002 and 2003 Deposits	(4.54)	14.35

Employer contributions are equal to the Normal Cost plus an amortization of the Unfunded Actuarial Liability (or Actuarial Surplus) over the period from the valuation date

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through December of 2027. The following table shows the history of the average employer contribution rates, broken down by Normal Cost and UAL Amortization, since 1975.

Date of Valuation	Employer Normal Cost	UAL Amortization	Employer Contribution
1975	8.43%	3.03%	11.46%
1977	8.63	3.24	11.87
1979	7.92	3.05	10.97
1982	7.51	2.62	10.13
1985	8.96	1.91	10.87
1987	9.30	2.00	11.30
1989	9.33	0.41	9.74
1991	9.19	0.00	9.19
1993	7.65	1.50	9.15
1995	7.09	2.33	9.42
1997	8.64	2.76	11.40
1999	9.82	0.92	10.74
2000	9.76	1.44	11.20
2001	12.55	(1.91)	10.64
2002	12.59	3.76	16.35
2003	12.58	6.31	18.89

◆ **Closed Group**

The 2003 Legislative Assembly adopted a number of amendments to the benefit structure of PERS. An important aspect of the changes was the closing of PERS membership to new employees beginning in 2004.

◆ **Assumptions and Methods Revised**

As a result of recent experience and judgment about future trends, some of the actuarial methods and assumptions were revised since the 2002 Actuarial Valuation. The changes are described in the 2003 Experience Study report, which was presented to and accepted by the Retirement Board on September 14, 2004.

◆ **Further Information**

Details of our findings are included in later sections of this report. The Appendices include supporting documentation on the benefit and eligibility provisions used to project future benefits, the actuarial methods and assumptions used to value the projected benefits, and the underlying census data provided by PERS for this valuation.

**Exhibit 1** includes a summary of the key results of this actuarial valuation.



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**Exhibit 1 Summary of Key Valuation Results**

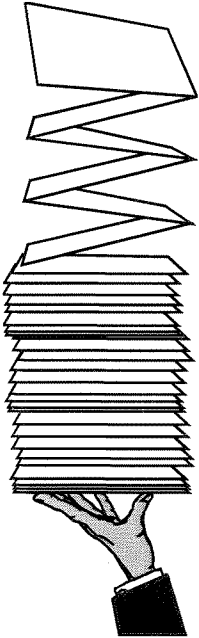
	2003 Valuation	2002 Valuation	Percentage Change
<b>1. Total Membership</b>			
A. Active Members	153,723	159,287	(3.5)%
B. Inactive Members	52,854	53,328	(0.9)%
C. Retired Members and Beneficiaries	<u>97,777</u>	<u>89,482</u>	9.3%
D. Total Membership	304,354	302,097	0.7%
<b>2. Annualized Salaries as of Valuation Date</b>			
A. Annual Total (\$Millions)	\$ 6,248.5	\$ 6,383.5	(2.1)%
B. Annual Average per Active Member	\$ 40,648	\$ 40,075	1.4%
<b>3. Annual Benefits Currently Payable (\$Millions)</b>			
A. Service Retirement	\$ 1,875.5	\$ 1,573.1	19.2%
B. Beneficiaries and QDROs	91.1	81.0	12.5%
C. Duty Disabilities	9.5	8.4	13.1%
D. Ordinary Disabilities	<u>64.4</u>	<u>60.3</u>	6.8%
E. Total	\$ 2,040.5	\$ 1,722.8	18.4%
<b>4. Value of System Assets (\$Millions)</b>			
A. Fair Value	\$ 38,030.7	\$ 32,306.4	17.7%
B. Smoothing Reserve	<u>368.4</u>	<u>3,230.7</u>	
C. Actuarial Value (Rates)	\$ 38,399.1	\$ 35,537.1	8.1%
D. Ratio of Actuarial Value to Fair Value	101%	110%	
E. UAL Lump Sum Accounts	4,475.3	779.7	
F. Actuarial Value (Disclosure)*	\$ 42,874.4	\$ 36,316.8	18.1%
<b>5. Actuarial Liability (\$Millions)</b>			
A. Active Members	\$ 16,842.4	\$ 16,070.1	4.8%
B. Inactive Members	3,799.5	3,766.7	0.9%
C. Retired Members and Beneficiaries	<u>23,983.7</u>	<u>19,683.7</u>	21.8%
D. Total	\$ 44,625.6	\$ 39,520.5	12.9%
<b>6. Funded Status</b>			
A. Unfunded Actuarial Liability* (\$Millions)	\$ 1,751.2	\$ 3,203.7	
B. Funded Ratio* (4C + 5D)	96.1%	91.9%	
<b>7. Contribution Rates (percent of salaries)</b>			
A. Total Normal Cost for Pension Plan	12.41%	12.38%	
B. Less, Judge Member Contributions	<u>(0.02)</u>	<u>(0.02)</u>	
C. Employer Normal Cost for Pension Plan	12.39%	12.36%	
D. UAL Amortization for Pension Plan	<u>5.88</u>	<u>3.30</u>	
E. Pension Plan Total	18.27	15.66	
F. Retiree Healthcare Plans Total	<u>0.62</u>	<u>0.69</u>	
G. Total (Average) Employer Contribution	18.89%	16.35%	

\*Includes UAL Lump Sum Accounts

# OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM 2003 ACTUARIAL VALUATION

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## Section 2 Scope of the Report



This report presents the actuarial valuation of the Oregon Public Employees Retirement System as of December 31, 2003. Oregon statutes require an actuarial valuation to be performed at least every two years for the purposes of setting employer contribution rates. The 2003 valuation meets this requirement.

In reading our Actuarial Certification in the Section 3, please pay particular attention to the guidelines employed in the preparation of this report. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings depend. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the key results of this valuation was presented in the previous section. The remainder of this report is arranged as follows.

Section 4 outlines the Fair Value of Assets of the System and the determination of the Actuarial Value of Assets as of December 31, 2003. Because we do not expect either the Contingency Reserves or the Capital Preservation Reserve to be used for financing the benefits projected in this Actuarial Valuation, we excluded these reserves from the value of assets. All of the other assets of the System are available to finance future benefits and expenses.

Section 5 describes the benefit obligations of PERS including the development of the Normal Cost and the Actuarial Liability. Section 6 shows the relationship between the Actuarial Value of Assets and the Actuarial Liabilities.

Section 7 discusses the development of employer contribution rates needed to fund the benefits under the actuarial cost method in use.

This report includes several appendices:

Appendix A A summary of the current benefit structure, as determined by the provisions of governing law on December 31, 2003. We

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also disclose the changes made by the 2003 Legislative Assembly that were included in this valuation at the direction of the Legislature.

For retirements on or after July 1, 2004, the Board adopted an administrative rule that revised the Variable Annuity Adjustment to the Money Match. Generally, this rule established that the employer would not double the earnings in the Variable Annuity Program; the employer portion of the Money Match would be based on Regular Account earnings.

Appendix B A summary of the actuarial methods and assumptions used to estimate liabilities and contributions.

In our opinion, the assumptions used in the valuation are reasonably related to the past experience of the System, are internally consistent, and represent our best estimate of future conditions affecting the System. Nevertheless, the emerging costs of the System will vary from those presented in this report to the extent that actual experience differs from that projected by the actuarial assumptions.

Appendix C Schedules of valuation data classified by various categories of plan members. We relied upon the membership and beneficiary data supplied by the System. We compared the data for this and the prior valuation and tested for reasonableness. Based on these tests, we believe the data to be sufficient for the purposes of our calculations.

Appendix D A glossary of actuarial terms used in this report.

# OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

## 2003 ACTUARIAL VALUATION

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### Section 3 Actuarial Certification

The major findings of the 2003 Actuarial Valuation are contained in this report. This report reflects the benefit provisions in effect as of the valuation date, modified to include provisions enacted by the 2003 Legislative Assembly. To the best of our knowledge and belief, this report is complete and accurate and contains sufficient information to fully and fairly disclose the funded condition of the Oregon Public Employees Retirement System as of December 31, 2003.

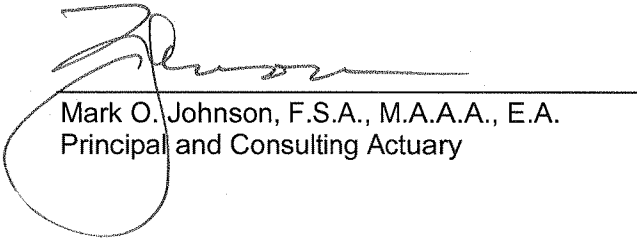
In preparing the valuation, we relied without audit upon the financial and membership data furnished by the System. Although we did not audit this data, we compared the data for this and the prior valuation and tested for reasonableness. Based on these tests, we believe the data to be sufficiently accurate for the purposes of our calculations.

The Retirement Board has sole authority to determine the actuarial assumptions and methods used for the valuation of the System. The Board adopted all of the actuarial methods and assumptions used in the 2003 valuation.

The findings have been determined according to actuarial assumptions and methods that were chosen on the basis of recent experience of the System and of current expectations concerning future economic conditions. In our opinion, the assumptions used in the actuarial valuation are appropriate for purposes of the valuation, are internally consistent, and reflect reasonable expectations. The assumptions represent our best estimate of future conditions affecting the System. Nevertheless, the emerging costs of the System will vary from those presented in this report to the extent that actual experience differs from that projected by the assumptions.

On the basis of the foregoing, I hereby certify that, to the best of my knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with principles prescribed by the Actuarial Standards Board and the code of Professional conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries.

The undersigned is an independent actuary, a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, an Enrolled Actuary, and experienced in performing valuations for large public employee retirement systems.



Mark O. Johnson, F.S.A., M.A.A.A., E.A.  
Principal and Consulting Actuary

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### Section 4 Assets



In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is December 31, 2003. On that date, the assets available for the payment of retirement benefits are appraised. These assets are compared with the actuarial liabilities, which are generally in excess of the actuarial assets. The purpose of the valuation is to determine what future contributions by the members and employers are needed to pay all expected future benefits.

This section of the report deals with the determination of assets used for funding purposes. In the next sections, we will discuss the actuarial liabilities and deal with the process for determining required contributions based on the relationship between the actuarial assets and the actuarial liabilities.

The audited financial statements of the System are created as of June 30<sup>th</sup> of each year and reflect the Fair Value of Assets. Because the actuarial valuation is performed as of December 31, we rely on unaudited financial statements prepared by PERS staff. The information we used for this report is shown in **Exhibit 2** and **Exhibit 3**.

(\$Millions) Fair Value	Pension Plan	Retiree Healthcare Plans	
		RHIA	RHIPA
January 1, 2003	\$ 32,224.3	\$ 79.4	\$ 2.6
Change in Net Assets	<u>5,683.5</u>	<u>39.8</u>	<u>1.1</u>
December 31, 2003	\$ 37,907.8	\$ 119.2	\$ 3.7

The System's financial statements include all of the Supplemental Deposits made by employers through December 31, 2003. Those deposits are in Unfunded Actuarial Liability (UAL) Lump Sum Accounts and are treated as an advance against contributions calculated without respect to the UAL Lump Sum Accounts. The actuarial procedure set up by the Legislature and by Administrative Rule is to credit the UAL Lump Sum Accounts with actuarial earnings and make an annual transfer, or amortization payment, from the UAL Lump Sum Account to the employer reserves used for funding.

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Exhibit 3.1 shows the Pension Plan with and without the UAL Lump Sum Accounts.

The System's financial statements also include the Contingency Reserves and the Capital Preservation Reserve. We excluded these reserves from the value of assets because we do not expect they will be used to fund the benefits projected in this Actuarial Valuation.

The valuation of assets for an actuarial valuation may be thought of in a different light than the valuation of assets for a retirement system's financial statement. The purpose in a financial statement is to make a representation of the current value of the assets on a fair market value basis. Because the underlying calculations in the actuarial valuation are long-term in nature, and one of the goals of the actuarial valuation process is to ensure funding stability, it can be advantageous to smooth out short-term fluctuations in the market value of the system's assets.

The asset smoothing method is effective for the investment experience commencing in 2000. Annual investment gains and losses will be recognized over a period of four years, and the Actuarial Value of Assets will be limited to the corridor between 90% and 110% of Fair Market Value.

In the 2003 Actuarial Valuation, 25% of the net investment loss from 2001 will be held in the Asset Smoothing Reserve along with 50% of the investment loss incurred in 2002 and 75% of the investment gain incurred in 2003.

In order to calculate the investment gain or loss, we next calculate the expected Fair Market Value of Assets at the end of the year, based on the beginning of year values and the cash flow during the year. The expected earnings are added at the rate of 8%, net of all investment and administrative expenses.

**Exhibit 4** shows the calculation of the expected change in the Fair Value of Assets as of December 31, 2003. Then the investment gain or loss is the difference between the expected Fair Value of Assets and the actual Fair Value of Assets.

Because UAL Lump Sum Accounts are credited with actual earnings on a fair market value basis, the unamortized

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portion of the UAL Lump Sum Accounts is not included in the gain and loss calculation. The Actuarial Value of Assets is net of the UAL Lump Sum Accounts.

(\$Millions)	Pension Plan	Retiree Healthcare Plans	
		RHIA	RHIPA
January 1, 2003	\$ 32,224.3	\$ 79.4	\$ 2.6
Contributions	966.4	40.8	2.2
Earnings at 8%	2,521.7	7.0	0.2
UAL Acct. Amort.	97.2	0.0	0.0
Benefits	(2,371.8)	(24.2)	(1.5)
Expenses	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
Net Increase	1,213.5	23.6	0.9
Excluded Reserves*	(1,220.7)	-	-
<b>Expected Fair Value</b>	<b>\$ 32,217.1</b>	<b>\$ 103.0</b>	<b>\$ 3.5</b>
Actual Fair Value	<u>37,907.8</u>	<u>119.2</u>	<u>3.7</u>
<b>Investment Gain (Loss) for 2003</b>	<b>\$ 5,690.7</b>	<b>\$ 16.2</b>	<b>\$ 0.2</b>

\*The Capital Preservation Reserve and the Contingency Reserves.

The determination of the Actuarial Value of Assets is shown below and in **Exhibit 5**.

Note that the 10% corridor does not affect the Actuarial Value of Assets as of this valuation date. This means that for each of the three plans in PERS, the Actuarial Value of Assets is within 90% to 110% of the Fair Value of Assets as of December 31, 2003.

(\$Millions)	Gain or (Loss)	Reserve Factor	Value of Assets
<b>Defined Benefit Pension Plan</b>			
A. Fair Value December 31, 2003			\$ 37,907.8
2001	\$ (5,858.4)	25%	\$ (1,464.6)
2002	(6,347.3)	50%	(3,173.7)
2003	5,690.7	75%	<u>4,268.1</u>
B. Preliminary Smoothing Reserve			\$ (370.2)
C. Corridor Adjustment			-
<b>Actuarial Value of Assets (A) – (B) + (C)</b>			<b>\$ 38,278.0</b>

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(\$Millions)	Gain or (Loss)	Reserve Factor	Value of Assets
<b>Retirement Health Insurance Account</b>			
A. Fair Value December 31, 2003			\$ 119.2
2001	\$ (12.0)	25%	\$ (3.0)
2002	(14.1)	50%	(7.0)
2003	16.2	75%	<u>12.1</u>
B. Preliminary Smoothing Reserve			\$ 2.1
C. Corridor Adjustment			-
<b>Actuarial Value of Assets (A) – (B) + (C)</b>			<b>\$ 117.1</b>
<b>Retiree Health Insurance Premium Account</b>			
A. Fair Value December 31, 2003			\$ 3.7
2001	\$ (0.5)	25%	\$ (0.1)
2002	(0.6)	50%	(0.3)
2003	0.2	75%	<u>0.1</u>
B. Preliminary Smoothing Reserve			\$ (0.3)
C. Corridor Adjustment			-
<b>Actuarial Value of Assets (A) – (B) + (C)</b>			<b>\$ 4.0</b>

The difference between the Actuarial Value of Assets and the Fair Value of Assets as of the valuation date represents a deferral of past investment gains or losses that is expected to be recognized in future valuations. If the investment return on the Fair Value of Assets is equal to the assumed return in future years, \$368 million of deferred investment losses will be recognized in future actuarial valuations for contribution rate calculations.

(\$Millions)	Actuarial Value of Assets	Fair Value of Assets	Deferred Gains or (Losses)
Pension Plan	\$ 38,278.0	\$ 37,907.8	\$ (370.2)
Retiree Healthcare Plans	<u>121.1</u>	<u>122.9</u>	<u>1.8</u>
System Total (Rates)	\$ 38,399.1	\$ 38,030.7	\$ (368.4)
UAL Lump Sum Accounts	<u>4,475.3</u>	<u>4,475.3</u>	-
System Total (Disclosure)	\$ 42,874.4	\$ 42,506.0	\$ (368.4)



## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM 2003 ACTUARIAL VALUATION

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A historical summary of the system's assets is presented below. Several different asset-smoothing methods have been used over the years, and the current method was adopted beginning with the 2000 valuation.

<i>\$(Millions)</i>	<b>Actuarial Value of Assets</b>	<b>Year End</b>	<b>Year End</b>	<b>Actuarial Value of Assets</b>
	\$ 933.9	<b>1975</b>	<b>1993</b>	\$ 17,552.0
	1,395.9	<b>1977</b>	<b>1995</b>	20,957.6
	2,026.0	<b>1979</b>	<b>1997</b>	29,108.2
	3,991.7	<b>1982</b>	<b>1999</b>	39,964.8
	6,775.6	<b>1985</b>	<b>2000</b>	41,804.6
	8,408.7	<b>1987</b>	<b>2001</b>	39,852.2
	11,606.7	<b>1989</b>	<b>2002*</b>	36,316.8
	14,667.9	<b>1991</b>	<b>2003*</b>	42,874.4
<b>*Includes UAL Lump Sum Accounts</b>				

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Exhibit 2      Statement of Plan Net Assets  
For Year Ended December 31, 2003**

(\$000)	Defined Benefit Pension Plan	Retirement Health Ins. Account	Retiree Health Ins. Premium Account	Total Retirement System
<b>Assets</b>				
Cash	\$ 2,685,941	\$       59	\$        6	\$ 2,686,006
Receivables				
Employer	17,958	3,808		21,766
Employee	8,958			8,958
Interest and Dividends	152,744			152,744
Other	<u>326,673</u>			<u>326,673</u>
Total Receivables	506,333	3,808	0	510,141
Investments	42,302,916	114,248	3,509	42,420,673
Other Assets	9,171	0	0	9,171
Due from Other Funds	<u>1,242</u>	<u>1,119</u>	<u>221</u>	<u>2,582</u>
Total Assets	\$45,505,603	\$ 119,234	\$ 3,736	\$45,628,573
<b>Liabilities</b>				
Accounts Payable	\$ 1,811,627			\$ 1,811,627
Deposits and Other Liabilities	36,495			36,495
Due Other Funds	1,405			1,405
Bonds Payable	<u>52,120</u>			<u>52,120</u>
Total Liabilities	\$ 1,901,647	\$        0	\$        0	\$ 1,901,647
<b>Net Assets Held in Trust</b>	<b>\$43,603,956</b>	<b>\$ 119,234</b>	<b>\$ 3,736</b>	<b>\$43,726,926</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
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**Exhibit 3.1 Statement of Changes in Plan Net Assets**  
**For Year Ended December 31, 2003**

(\$000)	Defined Benefit Pension Plan	UAL Lump Sum Accounts	Net Pension Plan *
<b>Additions</b>			
Contributions			
Employer	\$ 3,726,733	\$ 3,186,652	\$ 540,081
Members – Tier One	264,242		264,242
Members – Tier Two	140,748		140,748
Other	<u>21,371</u>		<u>21,371</u>
Total Contributions	4,153,094	<u>3,186,652</u>	<u>966,442</u>
Investment Income			
Net Appreciation or (Depreciation) in Fair Value	8,693,443	606,279	8,087,164
Interest, Dividends and other			
Investment Income	295,688		295,688
Investment Expense	<u>(147,977)</u>		<u>(147,977)</u>
Net Investment Income	8,841,154	<u>606,279</u>	<u>8,234,875</u>
Amortize to Employer Accounts	0	(97,179)	97,179
Other, net	<u>294</u>		<u>294</u>
Total Additions	\$ 12,994,542	\$ 3,695,752	\$ 9,298,790
<b>Deductions</b>			
Benefits	\$ 2,318,720		\$ 2,318,720
Death Benefits	8,565		8,565
Refunds of Contributions	44,486		44,486
Healthcare Premium Subsidies	0		0
Administrative Expense	<u>22,870</u>	<u>173</u>	<u>22,697</u>
Total Deductions	\$ 2,394,641	173	\$ 2,394,468
<b>Net Increase</b>	<b>\$ 10,599,901</b>	<b>\$ 3,695,579</b>	<b>\$ 6,904,322</b>
<b>Net Assets Held in Trust</b>			
Beginning of year	33,004,055	779,745	32,224,310
End of Year	\$ 43,603,956	\$ 4,475,324	\$ 39,128,632
<b>Adjustments to Net Assets</b>			
Capital Preservation Reserve	(432,929)		(432,929)
Contingency Reserves	<u>(787,899)</u>		<u>(787,899)</u>
End of Year Adjusted Assets	\$42,383,128	\$ 4,475,324	\$37,907,804

\* Excludes unamortized value of UAL Lump Sum Accounts.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
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**Exhibit 3.2 Statement of Changes in Plan Net Assets**  
**For Year Ended December 31, 2003**

(\$000)	Defined Benefit Pension Plan *	Retirement Health Ins. Account	Retiree Health Ins. Premium Account	Total Retirement System *
<b>Additions</b>				
Contributions				
Employer	\$ 540,081	\$ 40,789	\$ 2,176	\$ 583,046
Members – Tier One	264,242			264,242
Members – Tier Two	140,748			140,748
Other	<u>21,371</u>			<u>21,371</u>
Total Contributions	966,442	<u>40,789</u>	<u>2,176</u>	1,009,407
Investment Income				
Net Appreciation or (Depreciation) in Fair Value	8,087,164			8,087,164
Interest, Dividends and other				
Investment Income	295,688	23,714	728	320,130
Investment Expense	<u>(147,977)</u>			<u>(147,977)</u>
Net Investment Income	8,234,875	<u>23,714</u>	<u>728</u>	8,259,317
Amortize to Employer Accounts	97,179			97,179
Other, net	<u>294</u>			<u>294</u>
Total Additions	\$ 9,298,790	\$ 64,503	\$ 2,904	\$ 9,366,197
<b>Deductions</b>				
Benefits	\$ 2,318,720	\$ 0	\$ 0	\$ 2,318,720
Death Benefits	8,565			8,565
Refunds of Contributions	44,486			44,486
Healthcare Premium Subsidies	0	24,236	1,519	25,755
Administrative Expense	<u>22,697</u>	<u>467</u>	<u>220</u>	<u>23,384</u>
Total Deductions	\$ 2,394,468	\$ 24,703	\$ 1,739	\$ 2,420,910
<b>Net Increase</b>	<b>\$ 6,904,322</b>	<b>\$ 39,800</b>	<b>\$ 1,165</b>	<b>\$ 6,945,287</b>
<b>Net Assets Held in Trust</b>				
Beginning of year	32,224,310	79,434	2,571	32,306,315
End of Year	\$39,128,632	\$ 119,234	\$ 3,736	\$39,251,602
<b>Adjustments to Net Assets</b>				
Capital Preservation Reserve	(432,929)			(432,929)
Contingency Reserves	<u>(787,899)</u>			<u>(787,899)</u>
<b>End of Year Adjusted Assets</b>	<b>\$37,907,804</b>	<b>\$ 119,234</b>	<b>\$ 3,736</b>	<b>\$38,030,774</b>

\* Excludes unamortized value of UAL Lump Sum Accounts.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Exhibit 4 Investment Gain or Loss  
For Year Ended December 31, 2003**

(\$000)	Defined Benefit Pension Plan *	Retirement Health Ins. Account	Retiree Health Ins. Premium Account	Total Retirement System
<b>Additions</b>				
Contributions				
Employer	\$ 540,081	\$ 40,789	\$ 2,176	\$ 583,046
Members – Tier One	264,242			264,242
Members – Tier Two	140,748			140,748
Other	21,371			21,371
Total Contributions	966,442	40,789	2,176	1,009,407
Investment Income				
Assumed at 8% per year, net of All Expenses	2,521,732	7,017	231	2,528,980
Amortize to Employer Accounts	97,179			97,179
Total Additions	\$ 3,585,353	\$ 47,806	\$ 2,407	\$ 3,635,566
<b>Deductions</b>				
Benefits	\$ 2,318,720	\$ 0	\$ 0	\$ 2,318,720
Death Benefits	8,565			8,565
Refunds of Contributions	44,486			44,486
Healthcare Premium Subsidies	0	24,236	1,519	25,755
Administrative Expense #	0	0	0	0
Total Deductions	\$ 2,371,771	\$ 24,236	\$ 1,519	\$ 2,397,526
<b>Assumed Net Increase</b>	<b>\$ 1,213,582</b>	<b>\$ 23,570</b>	<b>\$ 888</b>	<b>\$ 1,238,040</b>
Actual Net Increase (Exhibit 3)	6,904,322	39,800	1,165	6,945,287
<b>Investment Gain (Loss)</b>	<b>\$ 5,690,740</b>	<b>\$ 16,230</b>	<b>\$ 277</b>	<b>\$ 5,707,247</b>

\* Excludes unamortized value of UAL Lump Sum Accounts.

# The assumed investment return is net of investment and administrative expenses.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Exhibit 5 Actuarial Value of Assets  
For Year Ended December 31, 2003**

(\$million)	Gain or (Loss)	Reserve Factor	Value of Assets
<b>Defined Benefit Pension Plan</b>			
2001 Investment Gain (Loss)	\$ (5,858.4)	25%	\$ (1,464.6)
2002 Investment Gain (Loss)	(6,347.3)	50%	(3,173.7)
2003 Investment Gain (Loss)	5,690.7	75%	<u>4,268.1</u>
Preliminary Smoothing Reserve			\$ (370.2)
Fair Value at December 31, 2003			<u>37,907.8</u>
Preliminary Actuarial Value of Assets			\$ 38,278.0
Corridor Test: Upper Bound at 110% of Fair Value		\$ 43,041.5	
Lower Bound at 90% of Fair Value		35,215.8	
Corridor Adjustment			<u>0.0</u>
<b>Actuarial Value of Assets</b>			<b>\$ 38,278.0</b>

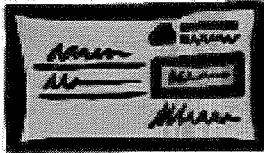
<b>Retirement Health Insurance Account</b>			
2001 Investment Gain (Loss)	\$ (12.0)	25%	\$ (3.0)
2002 Investment Gain (Loss)	(14.1)	50%	(7.0)
2003 Investment Gain (Loss)	16.2	75%	<u>12.1</u>
Preliminary Smoothing Reserve			\$ 2.1
Fair Value at December 31, 2003			<u>119.2</u>
Preliminary Actuarial Value of Assets			\$ 117.1
Corridor Test: Upper Bound at 110% of Fair Value		\$ 131.2	
Lower Bound at 90% of Fair Value		107.3	
Corridor Adjustment			<u>0.0</u>
<b>Actuarial Value of Assets</b>			<b>\$ 117.1</b>

<b>Retiree Health Insurance Premium Account</b>			
2001 Investment Gain (Loss)	\$ (0.5)	25%	\$ (0.1)
2002 Investment Gain (Loss)	(0.6)	50%	(0.3)
2003 Investment Gain (Loss)	0.2	75%	<u>0.1</u>
Preliminary Smoothing Reserve			\$ (0.3)
Fair Value at December 31, 2003			<u>3.7</u>
Preliminary Actuarial Value of Assets			\$ 4.0
Corridor Test: Upper Bound at 110% of Fair Value		\$ 4.1	
Lower Bound at 90% of Fair Value		3.4	
Corridor Adjustment			<u>0.0</u>
<b>Actuarial Value of Assets</b>			<b>\$ 4.0</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

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**Section 5  
Actuarial Liabilities**



In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of the PERS assets as of the valuation date, December 31, 2003. In this section, the discussion will focus on the commitments of PERS for retirement benefits, which are referred to as its actuarial liabilities.

In an active system, the actuarial liabilities will often exceed the actuarial assets. This deficiency has to be provided by future contributions and investment returns. An actuarial valuation method sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion. The determination of the level of future contributions needed is discussed in a later section.

**Normal Cost**

The Normal Cost represents the cost assigned to an average member for a given year such that, if contributed each year starting with the date of membership, it would meet the continuing costs of that particular benefit. The Entry Age Cost Method is designed to produce a Normal Cost as a level percentage of salaries, so it is best expressed as a rate. The average Normal Cost Rate for the system as a whole is 12.60% of payroll.

Normal Cost Rate (percent of salaries)	Defined Benefit Pension Plan	Retiree Healthcare Plans	System Total
Normal Cost – 2002 Valuation	12.38%	0.23%	12.61%
(Gains) or Losses	0.00	(0.01)	(0.01)
Benefit Changes	0.00	0.00	0.00
Assumption & Method Changes	<u>0.03</u>	<u>(0.03)</u>	<u>(0.00)</u>
Normal Cost – 2003 Valuation	12.41%	0.19%	12.60%

The employer Normal Cost Rate is the total Normal Cost Rate less the Member Contribution Rate. Member contributions to PERS after 2003 will only be those for judge members (7% of judge member salaries), which represents only 0.02% of the total PERS payroll.

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The relatively small demographic gain indicates that the actuarial assumptions for active members were reasonable in the aggregate.

See **Exhibit 6** for more details on the Normal Cost Rates.

See **Appendix B** for more details on the assumptions and methods adopted for the 2003 Actuarial Valuation.

**Actuarial Liabilities**

All future benefit payments from the System are projected for current members and retirees. The level of benefits currently being paid is known, but assumptions are needed to estimate how long those benefits will be paid, as well as the amount and timing of the payment of future benefits for active and inactive members who are not currently receiving payments. The sum of the discounted values to the valuation date, at the valuation interest rate, of all of the projected benefit payments for all current members and beneficiaries is called the **Actuarial Present Value of Projected Benefits**.

<i>(\$Millions)</i>	<b>Pension Plan</b>	<b>Retiree Healthcare Plans</b>	<b>System Total</b>
<b>2002 Valuation</b>			
Retired Members	\$ 19,339.0	\$ 344.7	\$ 19,683.7
Inactive Members	3,732.6	34.1	3,766.7
Active Members	<u>22,350.5</u>	<u>295.3</u>	<u>22,645.8</u>
<b>Projected Benefits</b>	<b>\$ 45,422.1</b>	<b>\$ 674.1</b>	<b>\$ 46,096.2</b>
<b>2003 Valuation</b>			
Retired Members	\$ 23,625.9	\$ 357.8	\$ 23,983.7
Inactive Members	3,774.2	25.3	3,799.5
Active Members	<u>22,991.1</u>	<u>250.4</u>	<u>23,241.5</u>
<b>Projected Benefits</b>	<b>\$ 50,391.2</b>	<b>\$ 633.5</b>	<b>\$ 51,024.7</b>

The **Actuarial Present Value of Future Normal Costs** is the value of all Normal Costs expected to be received over the future working lifetime of current members. The Actuarial Present Value of Future Normal Costs is subtracted from the Actuarial Present Value of Projected Benefits to arrive at the **Actuarial Liability**. Therefore, the Actuarial Liability is equal to the assets that should be available on the valuation date if the Normal Costs are to



**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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be the only contributions necessary in the future, and all future experience emerges as assumed.

The following table shows the Actuarial Liability by program.

<i>(\$Millions)</i>	<b>Pension Plan</b>	<b>Retiree Healthcare Plans</b>	<b>System Total</b>
<b>2002 Valuation</b>			
Projected Benefits	\$ 45,422.1	\$ 674.1	\$ 46,096.2
Future Normal Costs	<u>6,475.1</u>	<u>100.6</u>	<u>6,575.7</u>
<b>Actuarial Liability</b>	<b>\$ 38,947.0</b>	<b>\$ 573.5</b>	<b>\$ 39,520.5</b>
<b>2003 Valuation</b>			
Projected Benefits	\$ 50,391.2	\$ 633.5	\$ 51,024.7
Future Normal Costs	<u>6,313.1</u>	<u>86.0</u>	<u>6,399.1</u>
<b>Actuarial Liability</b>	<b>\$ 44,078.1</b>	<b>\$ 547.5</b>	<b>\$ 44,625.6</b>

See **Exhibit 7** for more details as of December 31, 2003.

Our estimates indicate that the Actuarial Liability as calculated as of December 31, 2003 was significantly different from the expected Actuarial Liability based on the findings and actuarial assumptions contained in the previous valuation.

The net actuarial losses on liabilities in the Pension Plan were about 2% of Actuarial Liabilities. The RHIPA and the RHIA had gains, and they were about 3% of the total Actuarial Liabilities for those plans combined.

Gains and losses vary by employer. Those employers who did not elect to join the State and Local Government Rate Pool (SLGRP), especially the smaller ones, are likely to have much more variability in emerging experience from one year to the next.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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(\$Millions)	Pension Plan	Retiree Healthcare Plans	System Total
Actuarial Liability on December 31, 2002	\$ 38,947.0	\$ 573.5	\$ 39,520.5
Normal Costs	788.4	14.6	803.0
Benefit Payments	(2,371.8)	(25.8)	(2,397.6)
Interest at 8%	<u>3,052.6</u>	<u>45.6</u>	<u>3,098.2</u>
<b>Expected Actuarial Liability at end of year</b>	<b>\$ 40,416.2</b>	<b>\$ 607.9</b>	<b>\$ 41,024.1</b>
<b>Sources of (Gain) or Loss</b>			
Tier One Crediting	\$ 2,468.8	\$ 0.0	\$ 2,468.8
Variable Earnings	970.1	0.0	970.1
All Other (G)/L	(102.1)	(17.8)	(119.9)
Assumption Changes	362.7	(42.6)	320.1
Benefit Changes*	<u>(37.6)</u>	<u>0.0</u>	<u>(37.6)</u>
<b>Net Change</b>	<b>\$ 3,661.9</b>	<b>\$ (60.4)</b>	<b>\$ 3,601.5</b>
<b>Actuarial Liability</b>	<b>\$ 44,078.1</b>	<b>\$ 547.5</b>	<b>\$ 44,625.6</b>
<b>Experience (G) or L as a Percent of Expected AL**</b>	<b>2.1%</b>	<b>(2.9)%</b>	<b>2.1%</b>
* Change to the Variable Annuity Adjustment for Money Match benefits.			
** Includes loss due to Variable Earnings in 2003.			

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Exhibit 6.1 Normal Cost Rate  
State & Local Government Rate Pool**

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	<i>(Percent of Salaries)</i>	<b>SLGRP – Tier One Pension</b>		
		<b>General Service</b>	<b>Police &amp; Fire</b>	<b>Total</b>
1.	Service Retirement	8.48%	14.26%	9.43%
2.	Vested Benefits	1.80	1.30	1.72
3.	Duty Disability	0.05	0.79	0.17
4.	Nonduty Disability	0.61	0.80	0.64
5.	Death while Active	0.00	0.00	0.00
6.	Return of Contributions	0.00	0.00	0.00
7.	Fire & Police Unit Purchases	<u>0.00</u>	<u>0.08</u>	<u>0.01</u>
<b>8.</b>	<b>Normal Cost Rate - Pension</b>	<b>10.94%</b>	<b>17.23%</b>	<b>11.97%</b>
9.	<i>2002 Valuation</i>	<i>10.86%</i>	<i>17.14%</i>	<i>11.86%</i>
10.	<i>2001 Valuation</i>	<i>10.87%</i>	<i>17.15%</i>	<i>11.85%</i>

		<b>SLGRP – Tier Two Pension</b>		
		<b>General Service</b>	<b>Police &amp; Fire</b>	<b>Total</b>
1.	Service Retirement	9.95%	15.17%	10.83%
2.	Vested Benefits	1.09	1.04	1.08
3.	Duty Disability	0.04	0.76	0.16
4.	Nonduty Disability	0.49	0.64	0.51
5.	Death while Active	0.00	0.00	0.00
6.	Return of Contributions	0.00	0.00	0.00
7.	Fire & Police Unit Purchases	<u>0.00</u>	<u>0.15</u>	<u>0.02</u>
<b>8.</b>	<b>Normal Cost Rate - Pension</b>	<b>11.57%</b>	<b>17.76%</b>	<b>12.60%</b>
9.	<i>2002 Valuation</i>	<i>11.51%</i>	<i>17.61%</i>	<i>12.51%</i>
10.	<i>2001 Valuation</i>	<i>11.43%</i>	<i>17.59%</i>	<i>12.41%</i>

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**Exhibit 6.2 Normal Cost Rate  
Other than SLGRP; Pension Plan Totals**

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	<i>(Percent of Salaries)</i>	Independent Local Employers Pension		
		General Service	Police & Fire	Total
1.	Service Retirement	8.81%	14.11%	9.92%
2.	Vested Benefits	1.48	1.22	1.43
3.	Duty Disability	0.05	1.10	0.27
4.	Nonduty Disability	0.53	0.97	0.62
5.	Death while Active	0.00	0.00	0.00
6.	Return of Contributions	0.00	0.00	0.00
7.	Fire & Police Unit Purchases	<u>0.00</u>	<u>0.07</u>	<u>0.01</u>
<b>8.</b>	<b>Normal Cost Rate - Pension</b>	<b>10.87%</b>	<b>17.47%</b>	<b>12.25%</b>
9.	<i>2002 Valuation</i>	<i>10.85%</i>	<i>17.36%</i>	<i>12.23%</i>
10.	<i>2001 Valuation</i>	<i>10.80%</i>	<i>17.47%</i>	<i>12.19%</i>

		Pension Plan		
		School Districts	State Judiciary	System Totals
1.	Service Retirement	10.70%	26.54%	10.27%
2.	Vested Benefits	1.33	0.00	1.41
3.	Duty Disability	0.05	0.10	0.14
4.	Nonduty Disability	0.56	0.72	0.58
5.	Death while Active	0.00	0.48	0.00
6.	Return of Contributions	0.00	0.01	0.00
7.	Fire & Police Unit Purchases	<u>0.00</u>	<u>0.00</u>	<u>0.01</u>
<b>8.</b>	<b>Normal Cost Rate - Pension</b>	<b>12.64%</b>	<b>27.85%</b>	<b>12.41%</b>
9.	<i>2002 Valuation</i>	<i>12.75%</i>	<i>28.69%</i>	<i>12.38%</i>
10.	<i>2001 Valuation</i>	<i>12.75%</i>	<i>28.28%</i>	<i>12.34%</i>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Exhibit 6.3 Normal Cost Rate  
Retiree Healthcare Plans; System Totals**

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<i>(Percent of Salaries)</i>	<b>Retiree Healthcare Plans</b>		
	<b>RHIA</b>	<b>RHIPA *</b>	<b>Total</b>
1. <b>Normal Cost Rate</b>	0.18%	0.05%	0.19%
2. <i>2002 Valuation</i>	0.21%	0.07%	0.23%
3. <i>2001 Valuation</i>	0.21%	0.07%	0.23%

*\* percent of State Agency salaries*

	<b>Pension Plan and Retiree Healthcare Plans</b>
1. Pension Plan	12.41%
2. Healthcare Plans	<u>0.19</u>
3. <b>Total Normal Cost Rate</b>	<b>12.60%</b>
4. Member Contribution Rate	<u>(0.02)</u>
5. <b>Employer Normal Cost Rate</b>	<b>12.58%</b>
6. <i>2002 Valuation</i>	12.59%
7. <i>2001 Valuation</i>	12.55%

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Exhibit 7.1 Actuarial Liabilities  
Pension Plan**

	(\$Millions)	Pension Plan		
		SLGRP	Independent Local Employers	Mult. Co. Fire District #10
<b>Present Value of Projected Benefits</b>				
1.	Active Members	\$ 11,540.7	\$ 2,741.8	\$ 2.1
2.	Retirees and Beneficiaries	11,157.8	1,766.3	62.3
3.	Inactive Members	<u>2,190.1</u>	<u>326.3</u>	<u>0.6</u>
4.	<b>PV of Projected Benefits</b>	<b>\$ 24,888.6</b>	<b>\$ 4,834.4</b>	<b>\$ 65.0</b>
5.	PV of Future Normal Costs	<u>3,112.7</u>	<u>950.9</u>	<u>0.0</u>
6.	<b>Actuarial Liability</b>	<b>\$ 21,775.9</b>	<b>\$ 3,883.5</b>	<b>\$ 65.0</b>
7.	<i>2002 Valuation</i>	\$ 19,188.3	\$ 3,422.8 *	
8.	<i>2001 Valuation</i>	\$ 18,393.1	\$ 3,185.9 *	
		Pension Plan		
		School Districts	State Judiciary	System Totals
<b>Present Value of Projected Benefits</b>				
1.	Active Members	\$ 8,605.1	\$ 101.4	\$ 22,991.1
2.	Retirees and Beneficiaries	10,576.4	63.1	23,625.9
3.	Inactive Members	<u>1,253.7</u>	<u>3.5</u>	<u>3,774.2</u>
4.	<b>PV of Projected Benefits</b>	<b>\$ 20,435.2</b>	<b>\$ 168.0</b>	<b>\$ 50,391.2</b>
5.	PV of Future Normal Costs	<u>2,218.9</u>	<u>30.6</u>	<u>6,313.1</u>
6.	<b>Actuarial Liability</b>	<b>\$ 18,216.3</b>	<b>\$ 137.4</b>	<b>\$ 44,078.1</b>
7.	<i>2002 Valuation</i>	\$ 16,205.5	\$ 130.4	\$ 38,947.0
8.	<i>2001 Valuation</i>	\$ 15,557.2	\$ 122.1	\$ 37,258.3

\* The 2001 and 2002 Valuations included Multnomah County Fire District #10.

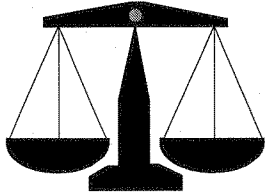
**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Exhibit 7.2 Actuarial Liabilities  
Retiree Healthcare Plans; System Total**

<i>(\$Millions)</i>	<b>Retiree Healthcare Plans</b>		
	<b>RHIA</b>	<b>RHIPA</b>	<b>Total</b>
<b>Present Value of Projected Benefits</b>			
1. Active Members	\$ 225.7	\$ 24.7	\$ 250.4
2. Retirees and Beneficiaries	350.0	7.8	357.8
3. Inactive Members	<u>25.3</u>	<u>0.0</u>	<u>25.3</u>
<b>4. PV of Projected Benefits</b>	<b>\$ 601.0</b>	<b>\$ 32.5</b>	<b>\$ 633.5</b>
5. PV of Future Normal Costs	<u>78.5</u>	<u>7.5</u>	<u>86.0</u>
<b>6. Actuarial Liability</b>	<b>\$ 522.5</b>	<b>\$ 25.0</b>	<b>\$ 547.5</b>
7. 2002 Valuation	\$ 542.3	\$ 31.2	\$ 573.5
8. 2001 Valuation	\$ 533.2	\$ 30.1	\$ 563.3
<b>Pension Plan and Retiree Healthcare Plans</b>			
<b>Present Value of Projected Benefits</b>			
1. Active Members		\$ 23,241.5	
2. Retirees and Beneficiaries		23,983.7	
3. Inactive Members		<u>3,799.5</u>	
<b>4. PV of Projected Benefits</b>		<b>\$ 51,024.7</b>	
5. PV of Future Normal Costs		<u>6,399.1</u>	
<b>6. Actuarial Liability</b>		<b>\$ 44,625.6</b>	
7. 2002 Valuation		\$ 39,520.5	
8. 2001 Valuation		\$ 37,821.6	

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Section 6  
Funded Status**



The **Unfunded Actuarial Liability** is the difference between the Actuarial Liability and the Actuarial Value of Assets. The Unfunded Actuarial Liability (UAL) represents a liability that must be funded over time. If the Assets exceed the Actuarial Liability, the difference is called an Actuarial Surplus.

The **Funded Ratio** is equal to the Actuarial Value of Assets divided by the Actuarial Liability. A Funded Ratio of 100% means the Value of Assets equals the Actuarial Liability, and the Plan could be financed by contributions equal to the Normal Cost, if all future experience emerges as assumed. With a 100% Funded Ratio, the Board's goal is met, and the current generation of taxpayers is only paying for the benefits that are currently being earned by active members of the System.

<i>(\$Millions)</i>	<b>Pension Plan</b>	<b>Retiree Healthcare Plans</b>	<b>System Totals</b>
<b>2002 Valuation</b>			
Actuarial Liability	\$ 38,947.0	\$ 573.5	\$ 39,520.5
Value of Assets	<u>35,446.9</u>	<u>90.2</u>	<u>35,537.1</u>
<b>UAL</b>	<b>\$ 3,500.1</b>	<b>\$ 483.3</b>	<b>\$ 3,983.4</b>
<b>Funded Ratio</b>	<b>91.0%</b>	<b>15.7%</b>	<b>89.9%</b>
UAL Lump Sum Accounts	\$ 779.7	\$ 0	\$ 779.7
UAL*	\$ 2,720.4	\$ 483.3	\$ 3,203.7
Funded Ratio*	93.0%	15.7%	91.9%
<b>2003 Valuation</b>			
Actuarial Liability	\$ 44,078.1	\$ 547.5	\$ 44,625.6
Value of Assets	<u>38,278.0</u>	<u>121.1</u>	<u>38,399.1</u>
<b>UAL</b>	<b>\$ 5,800.1</b>	<b>\$ 426.4</b>	<b>\$ 6,226.5</b>
<b>Funded Ratio</b>	<b>86.8%</b>	<b>22.1%</b>	<b>86.0%</b>
UAL Lump Sum Accounts	\$ 4,475.3	\$ 0	\$ 4,475.3
UAL*	\$ 1,324.8	\$ 426.4	\$ 1,751.2
Funded Ratio*	97.0%	22.1%	96.1%
<b>*Includes UAL Lump Sum Amounts</b>			



## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM 2003 ACTUARIAL VALUATION

The UAL Lump Sum Accounts are allocated to individual employers, whether or not the employer is participating in an actuarial pool.

See **Exhibit 8** for a breakdown of the Unfunded Actuarial Liability by employer group as of December 31, 2003.

The Fair Value of Assets in excess of the sum of the Primary Reserves (Member Accounts, Employer Reserves, and Benefit Reserve,) is allocated in proportion to the sum of the Primary Reserves.

The following table shows a history of the Funded Ratio including the Pension Plan and the Retiree Healthcare Plans for each actuarial valuation since 1975.

\$(Millions) Year Ending	Actuarial Value of Assets	Actuarial Liability	Unfunded Actuarial Liability	Funded Ratio
1975	\$ 933.9	\$ 1,578.8	\$ 644.9	59%
1977	1,395.9	2,193.9	798.0	64
1979	2,026.0	2,905.7	879.7	70
1982	3,991.7	4,822.8	831.1	83
1985	6,775.6	7,287.6	512.0	93
1987	8,408.7	9,290.5	881.8	91
1989	11,606.7	11,533.3	(73.4)	101
1991	14,667.9	14,671.2	3.3	100
1993	17,552.0	19,001.3	1,449.3	92
1995	20,957.6	23,248.6	2,291.0	90
1997	29,108.2	31,664.9	2,556.7	92
1999	39,964.8	40,907.9	943.1	98
2000	41,804.6	43,350.5	1,545.9	96
2001	39,852.2	37,821.6	(2,030.6)	105
2002*	36,316.8	39,520.5	3,203.7	92
2003*	42,874.4	44,625.6	1,751.2	96

\*Includes UAL Lump Sum Accounts

The Schedule of Funding Progress is shown in **Exhibit 9** and the Solvency Test is shown in **Exhibit 10**.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Exhibit 8      Unfunded Actuarial Liabilities**

(\$Millions)	SLGRP	Indep. Locals	Mult. Co. FD #10	School Districts	Judiciary	System Total
<b>Defined Benefit Pension Plan</b>						
1. Member Accounts	\$ 4,649.9	\$ 953.6	\$ 0.9	\$ 3,368.7	\$ 32.6	\$ 9,005.7
2. Employer Reserves	5,458.0	1,377.9	(100.5)	3,596.2	44.2	10,375.8
3. Benefit Reserves	<u>11,157.8</u>	<u>1,766.3</u>	<u>62.3</u>	<u>10,576.4</u>	<u>63.1</u>	<u>23,625.9</u>
4. Subtotal < Allocation	21,265.7	4,097.8	(37.3)	17,541.3	139.9	43,007.4
5. Allocation Factor : -11.8576%	<u>(2,521.6)</u>	<u>(485.9)</u>	<u>4.4</u>	<u>(2,079.9)</u>	<u>(16.6)</u>	<u>(5,099.6)</u>
6. Fair Value of Assets	\$18,744.1	\$ 3,611.9	\$ (32.9)	\$15,461.4	\$ 123.3	\$37,907.8
7. 2001 Smoothing*	726.8	131.6	(0.3)	601.6	4.9	1,464.6
8. 2002 Smoothing*	1,566.5	300.9	(0.8)	1,296.7	10.4	3,173.7
8. 2003 Smoothing	(2,110.4)	(406.7)	3.7	(1,740.8)	(13.9)	(4,268.1)
8. Corridor Adjustment	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
<b>9. Actuarial Assets</b>	<b>18,927.0</b>	<b>3,637.7</b>	<b>(30.3)</b>	<b>15,618.9</b>	<b>124.7</b>	<b>38,278.0</b>
10. Actuarial Liability	<u>21,775.9</u>	<u>3,883.5</u>	<u>65.0</u>	<u>18,216.3</u>	<u>137.4</u>	<u>44,078.1</u>
<b>11. UAL (Rates) **</b>	<b>\$ 2,848.9</b>	<b>\$ 245.8</b>	<b>\$ 95.3</b>	<b>\$ 2,597.4</b>	<b>\$ 12.7</b>	<b>\$ 5,800.1</b>
<b>12. Funded Ratio</b>	<b>86.9%</b>	<b>93.7%</b>	<b>(46.6)%</b>	<b>85.7%</b>	<b>90.8%</b>	<b>86.8%</b>
<b>Post-employment Healthcare Plans</b>						
13. Actuarial Assets						\$ 121.1
14. Actuarial Liability						<u>547.5</u>
<b>15. UAL</b>						<b>\$ 426.4</b>
<b>16. Funded Ratio</b>						<b>22.1%</b>
<b>Pension and Healthcare Plans</b>						
17. Actuarial Assets						\$38,399.1
18. Actuarial Liability						<u>44,625.6</u>
<b>19. UAL (Rates) **</b>						<b>\$ 6,226.5</b>
<b>20. Funded Ratio</b>						<b>86.0%</b>

\* The 2001 and 2002 Smoothing Reserves by employer group were updated since the December 31, 2002 Valuation to reflect changes in the SLGRP and some employer combinations.

\*\* Does not include UAL Lump Sum Accounts. The UAL Lump Sum Accounts of \$4,475.3 million reduces the UAL for the Pension Plan to \$1,324.8 million (97.0% Funded) and \$1,751.2 million (96.1% Funded) for the System.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Exhibit 9      Schedule of Funding Progress  
Pension and Healthcare Plans**

Year Ending	\$(Millions)			\$(Millions)		
	Actuarial Value of Assets	Actuarial Liability	Funded Ratio	Unfunded Actuarial Liability	Covered Payroll	Ratio
1975	\$ 933.9	\$ 1,578.8	59%	\$ 644.9	\$ 1,014.5	64%
1977	1,395.9	2,193.9	64	798.0	1,226.8	65
1979	2,026.0	2,905.7	70	879.7	1,488.0	59
1982	3,991.7	4,822.8	83	831.1	2,062.1	40
1985	6,775.6	7,287.6	93	512.0	2,428.3	21
1987	8,408.7	9,290.5	91	881.8	2,764.7	32
1989	11,606.7	11,533.3	101	(73.4)	3,199.4	(2)
1991	14,667.9	14,671.2	100	3.3	3,887.5	0
1993	17,552.0	19,001.3	92	1,449.3	4,466.8	32
1995	20,957.6	23,248.6	90	2,291.0	4,848.1	47
1997	29,108.2	31,664.9	92	2,556.7	5,161.6	50
1999	39,964.8	40,907.9	98	943.1	5,676.6	17
2000	41,804.6	43,350.5	96	1,545.9	6,195.9	25
2001	39,852.2	37,821.6	105	(2,030.6)	6,256.5	(32)
2002*	36,316.8	39,520.5	92	3,203.7	6,383.5	50
2003*	42,874.4	44,625.6	96	1,751.2	6,248.5	28

\*Includes UAL Lump Sum Accounts

*Note: An extensive revision of the actuarial valuation assumptions occurs at each valuation, and legislative changes occur from time to time. Therefore, the figures are not directly comparable from year to year.*

*The 2001, 2002 and 2003 valuations include the impact of PERS Reform Legislation enacted in 2003. This legislation is currently under judicial review.*

*The 2003 valuation includes the impact of the Lipscomb Money Match benefit changes.*

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Exhibit 10 Solvency Test  
Pension and Healthcare Plans**

\$(Millions)

Year Ending	Non-Retired Member Contributions	Retiree & Beneficiaries	Other Members	Valuation Assets	Portion of Actuarial Liabilities Covered by Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
1975	\$ 346.1	\$ 352.6	\$ 880.1	\$ 933.9	100%	100%	27%
1977	481.6	598.3	1,114.0	1,395.9	100	100	28
1979	695.2	740.8	1,469.7	2,026.0	100	100	40
1982	1,099.2	1,294.4	2,429.2	3,991.7	100	100	66
1985	1,760.5	2,202.1	3,325.0	6,775.6	100	100	85
1987	2,315.1	2,871.2	4,104.2	8,408.7	100	100	79
1989	3,182.0	3,551.7	4,799.6	11,606.7	100	100	102
1991	4,000.7	4,471.6	6,198.9	14,667.9	100	100	100
1993	4,853.4	6,239.3	7,908.6	17,552.0	100	100	82
1995	5,753.0	7,492.8	10,002.8	20,957.6	100	100	77
1997	8,135.4	9,994.9	13,534.6	29,108.2	100	100	81
1999	8,238.1	14,661.3	18,008.5	39,964.8	100	100	95
2000	10,142.5	15,664.1	17,543.9	41,804.6	100	100	91
2001	10,252.8	17,465.9	10,102.9	39,852.2	100	100	120
2002*	9,940.7	19,339.0	10,240.8	36,316.8	100	100	69
2003*	9,005.8	23,625.9	11,993.9	42,874.4	100	100	85

\*Includes UAL Lump Sum Accounts

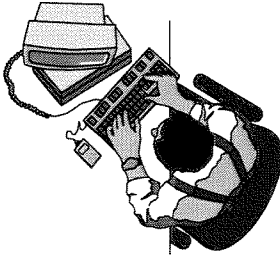
*Note: An extensive revision of the actuarial valuation assumptions occurs at each valuation, and legislative changes occur from time to time. Therefore, the figures are not directly comparable from year to year.*

*The 2001 and 2002 valuations include the impact of PERS Reform Legislation enacted in 2003. This legislation is currently under judicial review.*

*The 2003 valuation includes the impact of the Lipscomb Money Match benefit changes.*

# OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM 2003 ACTUARIAL VALUATION

## Section 7 Contributions



The Entry Age Cost Method is designed to finance a retirement system with contributions equal to the Normal Cost plus an additional payment to amortize the Unfunded Actuarial Liability. If the plan has an Actuarial Surplus, the contribution is equal to the Normal Cost less a credit to amortize the Surplus. Typically, UAL payments and Surplus credits are calculated over the same amortization period. This adds stability to the year to year fluctuations that are expected.

### Amortization

For reasons outlined in the 1999 Experience Study, the Board adopted a fixed amortization schedule for all Unfunded Actuarial Liabilities or Actuarial Surpluses calculated as of December 31, 1999, with one exception noted below. The amortization period will decrease one year for every year of elapsed time until the period reaches twenty years in the 2007 valuation. In the 2009 valuation, the actuarial gains and losses will be amortized over 20 years, and the remaining balance from the 2007 valuation will be amortized over 18 years and declining until fully amortized. The pattern will continue so that each separate balance of gains and losses will be amortized over a fixed 20-year period.

The "normal schedule" in the following table illustrates the declining amortization period adopted by the Retirement Board for the 1999 Actuarial Valuation.

Valuation Date	Normal Schedule	Extended Schedule
2003	24 years	26 years
2005	22	22
2007	20	*
2009	18 / 20	*
2011	16 / 18 / 20	*

\* The Extended Schedule merges into the Normal Schedule at December 31, 2005

The employers that elected the extended amortization period after the 1997 valuation represent an exception to

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

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this rule. They will remain on an extended amortization period only for the remaining balance of their 1997 Unfunded Actuarial Liability. Actuarial gains or losses, or changes in assumptions or methods will be amortized over 24 years for all employers. Some employers previously elected the extended amortization period forfeited the extended amortization period when they elected to join a risk pool.

In an effort to bring the extended amortization schedules of these employers into conformance with the schedules of all other employers, the Board has adopted an accelerated amortization of two years for each year of elapsed time, until the extended period catches up to the normal schedule in the valuation as of December 31, 2005. This is shown in the right column in the previous table.

**Employer Contributions**

The employer Normal Cost Rates, plus the 24-year amortization of the Unfunded Actuarial Liability are shown below.

<i>(Percent of Salaries)</i>	<b>Pension Plan</b>	<b>Healthcare Plans</b>		<b>System Totals</b>
		<b>RHIA</b>	<b>RHIPA *</b>	
<b>2001 Valuation</b>				
Normal Cost	12.32%	0.21%	0.07%	12.55%
Amortization of UAL	<u>(2.36)</u>	<u>0.43</u>	<u>0.09</u>	<u>(1.91)</u>
<b>Level Employer Rate</b>	<b>9.96%</b>	<b>0.64%</b>	<b>0.16%</b>	<b>10.64%</b>
<b>2002 Valuation</b>				
Normal Cost	12.36%	0.21%	0.07%	12.59%
Amortization of UAL	<u>3.30</u>	<u>0.43</u>	<u>0.10</u>	<u>3.76</u>
<b>Level Employer Rate</b>	<b>15.66%</b>	<b>0.64%</b>	<b>0.17%</b>	<b>16.35%</b>
<b>2003 Valuation</b>				
Normal Cost	12.39%	0.18%	0.05%	12.58%
Amortization of UAL	<u>5.88</u>	<u>0.41</u>	<u>0.08</u>	<u>6.31</u>
<b>Level Employer Rate</b>	<b>18.27%</b>	<b>0.59%</b>	<b>0.13%</b>	<b>18.89%</b>
* Expressed as a percentage of State Agency covered payroll only				

The cost of the RHIPA is shown as a percent of the State Agency covered payroll, since only State members are eligible for the program. The cost of the RHIPA is 0.03% as a percentage of the total System covered payroll.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

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The average change in the employer contribution rate from the 2001 Actuarial Valuation to the 2002 Valuation was 5.71% of payroll, and the increase from the 2002 Actuarial Valuation to the current valuation is an increase of 2.54% of payroll. The impact on the average contribution rate of actuarial gains and losses, and the key changes since the last valuation, are outlined below.

<i>(Percent of Salaries)</i>	<b>Pension Plan</b>	<b>Healthcare Plans</b>		<b>System Totals</b>
		<b>RHIA</b>	<b>RHIPA *</b>	
<b>2001 Valuation Rate</b>	<b>9.96%</b>	<b>0.64%</b>	<b>0.16%</b>	<b>10.64%</b>
Actuarial (Gain) Loss				
Investment	6.35	0.02	0.01	6.38
All Other (G)/L	<u>(0.65)</u>	<u>(0.02)</u>	<u>0.00</u>	<u>(0.67)</u>
Net Change	5.70	0.00	0.01	5.71
<b>2002 Valuation Rate</b>	<b>15.66%</b>	<b>0.64%</b>	<b>0.17%</b>	<b>16.35%</b>
Actuarial (Gain) Loss				
Investment	(2.54)	(0.01)	0.00	(2.55)
Tier One Crediting	2.44	0.00	0.00	2.44
Variable Earnings	0.96	0.00	0.00	0.96
All Other (G)/L	0.04	0.01	0.00	0.05
Assumption Changes	0.54	(0.05)	(0.04)	0.47
Reserves**	1.21	0.00	0.00	1.21
Benefit Changes***	<u>(0.04)</u>	<u>0.00</u>	<u>0.00</u>	<u>(0.04)</u>
Net Change	2.61	(0.05)	(0.04)	2.54
<b>2003 Valuation Rate</b>	<b>18.27%</b>	<b>0.59%</b>	<b>0.13%</b>	<b>18.89%</b>
* Expressed as a percentage of State Agency covered payroll only				
** Funding the Capital Preservation Reserve and the Contingency Reserves				
*** Change to the Variable Annuity Adjustment for Money Match benefits.				

**Timing of Changes**

The Retirement Board has historically revised employer contribution rates based on valuations performed at the end of odd-numbered calendar years. Therefore, this valuation will produce recommendations for changes in employer contribution rates.

A Supplemental Report including individual employer information and contribution rates will be produced separately.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

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**Appendix A  
Provisions of Governing Law**

All of the actuarial calculations contained in this report are based upon our understanding of the Oregon Public Employees Retirement System, State of Oregon, as contained in Chapter 238, Oregon Revised Statutes, 2001 Edition. The provisions used in the valuation are summarized briefly below for reference purposes.

This Actuarial Valuation does not reflect outcomes of pending or future litigation, legislation, or ballot initiatives as of or subsequent to December of 2003.

**The provisions of the 2003 Reform Legislation included in this report are outlined at the end of this Section.**



**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

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**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.

Contributions:                      Judges:                      7% of salary  
   All Others:                      6% of salary

An employer may agree to make, or "pick-up", the member contributions on behalf of its employees pursuant to IRC 414(h).

**Unit Purchases**

Purpose:                                      To allow fire and police members to purchase additional benefits payable between retirement and age 65.

Contributions:                              That amount actuarially determined to be necessary to provide half the additional benefits desired. Benefits are in units of \$10 per month, and may be purchased for up to \$80 per month at age 60.

Matching Feature:                              Each unit 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.

**Normal Retirement Allowance**

Eligibility:                                      Fire and Police:      Age 55  
   Judges:                      Age 65  
   All Others:                      Age 58 for Tier One; Age 60 for Tier Two

Amount of Monthly Retirement Allowance:                              The greatest of the following three calculation methods.

Full Formula:                                      The sum of (a.) and (b.):

- a.      A current service life pension equal to final average monthly salary\* times years of membership service times a percentage factor; plus
- b.      A prior service life pension of \$4 (\$6 for members retired before April 8, 1953) times years of prior service, not to exceed twenty years. Service is

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determined by an agreement between the Retirement Board and the employer.

- \* Final average monthly salary is based upon either the three calendar years during which the highest salaries were earned out of the last ten calendar years of employment or the last 36 calendar months of membership, whichever is larger. For many employers the total salary used in this computation includes the value of one-half of the accumulated unused sick leave.

Percentage Factor	Membership
2.00%	Fire, Police and Legislators
2.8125% for 16 yrs. 1.67% after 16 yrs.	Judges Plan A, limited to 65% of final average monthly salary.
3.75% for 16 yrs. 2.00% after 16 yrs.	Judges Plan B, limited to 75% of final average monthly salary.
1.67%	All other members

**Pension Plus Annuity:** For Members on August 21, 1981, the current service allowance stated above will not be less than the sum of:

- a. A cash refund annuity actuarially equivalent to the member's accumulated contributions with interest; plus
- b. A current service life pension equal to final average monthly salary times years of service times a percentage factor but at least equal to the cash refund annuity.

Percentage Factor	Membership
1.35%	Fire, Police and Legislators
1.00%	All other members

**Money Match:** The current service allowance stated above will not be less than the sum of:

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- a. A cash refund annuity actuarially equivalent to the member's accumulated contributions with interest; plus
- b. A matching amount from the employer.

Minimum Monthly Retirement Allowance: \$100 for a member with at least 15 years of credited service, actuarially reduced prior to age 65. Benefits under the former Judges' Retirement System are grandfathered for those who retire after age 70 with at least 12 years of service.

**Voluntary Service Retirement Allowance**

Eligibility:	Fire and Police:	Age 50
	Judges:	Age 60
	All Others:	Age 55
Amount of Benefit:	Fire and Police:	Normal retirement allowance, actuarially reduced if retirement occurs prior to age 55 or 25 years of service.
	Judges:	Normal retirement allowance, actuarially reduced from age 65 for Judges in Plan A.
	Others:	Normal retirement allowance, actuarially reduced if retirement occurs prior to age 58 (Tier One) or age 60 (Tier Two), or at 30 years of service.

**Optional Forms of Service Retirement Allowance**

Amount of Benefit:	All options are the actuarial equivalent of the unmodified monthly retirement allowance.
Options Available:	Lifetime annuity, Cash refund annuity, Lifetime annuity guaranteed 15 years, Joint and 50% or 100% survivor contingent benefit, with or without pop-up feature, or

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Lump sum of member contribution account (under any form) plus a pension from employer contributions under the Full Formula or Money Match method.

**Death Benefits Prior to Retirement**

Eligibility:	Judges:	Six or more years of service.
	All Others:	Death occurring while the member is an employee of a participating employer or within 120 days of termination provided the employee does not withdraw the account balance or retire, or a result of injuries received while in the service of a participating employer.

Amount of Benefit:	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:	If death occurs while the member is an active member or within 120 days of termination without a withdrawn account balance, or as a result of injuries received while in the service of a participating employer, the benefit is twice the account balance. If death occurs more than 120 days after termination, the benefit is the member account balance.

**Death Benefits after Retirement**

Eligibility:	All retired members.	
Amount of Benefit:	Judges:	Joint and two-thirds survivor contingent benefit for a married judge, and a cash refund annuity for an unmarried judge.
	All Others:	According to the form of benefits elected at retirement.

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**Additional Death Benefits for Fire and Police Members**

Eligibility: Spouse or dependent child under age 18 of deceased firefighter or police officer whose death occurred after retirement for service or disability.

Amount of Benefit: 25% of the unmodified retirement allowance such firefighter or police officer was entitled to at the time of death.

**Duty Related Disability Benefits**

Eligibility: Disablement occurring as a direct result of a job-related injury or illness, regardless of length of service.

Amount of Benefit: The sum of:

- a. The current service pension the employee would be entitled to at normal retirement age or age at disablement, if greater, plus
- b. The same prior service pension the employee would be entitled to at normal retirement age.

Fire and Police Members' Alternative: In lieu of the above, firefighters and police officers may elect to receive a benefit of 50% of final average monthly salary at the time of disablement.

Minimum Monthly Retirement Allowance:

Judges:	45% of final average monthly salary.
Others:	\$100 for a member with at least 15 years of credited service, actuarially reduced if an optional form of benefit is chosen.

Reduction of Benefits: Whenever a disabled employee's disability benefit and earned income for any month exceed the monthly salary received at the time of disablement or \$400, if greater, the disability benefit will be reduced by the excess.

For Tier Two members, the sum of the disability benefit and any workers' compensation benefits may not exceed the member's salary at the time of disablement.

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**Non-duty Related Disability Benefits**

Eligibility: Disablement occurring after ten years of service (six years, if a judge), but prior to normal retirement.

Amount of Benefit: Same as duty-related disability benefit, but with no fire and police member alternative benefit.

**Withdrawal Benefits**

Form of Benefits: Payment of accumulated contributions with interest. Judges must have completed at least five years of service; otherwise contributions are forfeited.

**Vested Withdrawal Benefits**

Eligibility: Termination with service in five calendar years without withdrawal of contributions.

Form of Benefits: A deferred retirement allowance with payments starting on the member's earliest retirement date.

During the deferral period, the vested member is eligible for death and, in some instances, disability benefits.

Amount of Benefits: Service retirement allowance.

Alternative Benefit: In lieu of all other benefits, a member may receive a payment of accumulated contributions with interest.

**Post-Retirement Adjustments**

Benefits Affected: All monthly pension and annuity benefits except unit purchases.

Automatic Adjustments: Benefits are adjusted annually to reflect the increase or decrease in the Consumer Price Index (Portland area - all items) as published by the Bureau of Labor Statistics, U.S. Department of Labor.

The maximum adjustment to be made for any year is 2% of the previous year's benefit. Any CPI change in excess of 2% is accumulated for future benefit adjustments which would otherwise be less than 2%. No benefit will be decreased below its original amount.

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**Ad Hoc Adjustments:** From time to time, as granted by the Legislature, retired members and beneficiaries have received increases in their monthly benefits.

**SB 656 Adjustment:** In addition to the provisions described above, all retired members of the System are eligible for an adjustment to their monthly retirement allowances based on the schedule below, effective January 1, 1991. In addition, all active members are eligible for an adjustment based on the schedule for any retirement, disability or death payment on or after January 1, 1991. No adjustment is made for the return of member contributions prior to retirement age.

Years of Service	General Service	Police & Fire
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

**HB3349 Adjustment:** The excess of the following adjustment over the SB 656 adjustment, if any, is payable

$$\frac{1}{1 - \text{max. Oregon personal income tax rate}} \times \frac{\text{Creditable Service prior to October 1, 1991}}{\text{All Creditable Service}}$$

**Retiree Healthcare - Medicare Supplement**

**Eligibility:** A member is eligible for a Retirement Health Insurance Account contribution if all of the following are met:

- a. Currently receiving a retirement benefit or allowance from the System,
- b. Covered for eight years before retirement,
- c. Enrolled in a PERS-sponsored health plan, and
- d. Enrolled in both Medicare Part A and Part B.

**Benefit:** A monthly contribution of up to \$60 per retiree is applied to PERS-sponsored Medicare supplemental insurance costs.

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## Retiree Healthcare - Under Age 65

Eligibility: Retired state employees.

Benefit: A monthly subsidy based on the average difference between the health insurance premiums paid by active state employees that is attributable to grouping retired state employees separately from active state employees.

The average difference is the maximum subsidy allowed and is recalculated every year. The scheduled subsidy as a percentage of the maximum subsidy is shown below.

Years of Service	Subsidized Amount
Under 8	0%
8 to 9	50
10 to 14	60
15 to 19	70
20 to 24	80
25 to 29	90
30 & Over	100

## Variable Annuity Program

Member Contributions: A member may elect to have 25%, 50% or 75% of his contributions to the System placed into the variable annuity account.

Variable Annuity Account Funds at Retirement: At retirement, a member may elect to receive a variable annuity with the funds accumulated in his variable account.

Alternatively, the employee may elect to have all or a portion of the funds in his or her account transferred back to the Public Employees Retirement Fund and receive an annuity from the System as though no variable annuity program existed.

## 2003 PERS Reform Legislation

Member Contributions Beginning in January of 2004, member contributions for all active members (except judges) will be deposited in a Transitional Account that is supplemental to the determination of the PERS retirement benefit.



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Tier One Interest Credits	No earnings may be credited to Tier One regular accounts in any year in which the Gain and Loss Reserve is in a deficit position, and no earnings may be credited that would result in a deficit. This change becomes effective with the crediting of earnings for 2003. The assumed interest rate guarantee is applied on a compounded basis for all years of membership rather than individually in each year. Interest credits may not exceed the assumed interest rate until the Gain and Loss Reserve has been fully funded in each of the last three years.
COLA Suspension	For Tier One members who retired with an effective date of retirement on or after April 1, 2000 and before April 1, 2004, and receive a service retirement allowance under the Money Match formula, a "Revised Service Retirement Allowance" is calculated. The Revised Service Retirement Allowance is calculated with the member's regular account balance and is adjusted as though 11.33% was credited for 1999 (instead of 20%), and includes an imputed cost-of-living adjustment. Members will receive the "Fixed Service Retirement Allowance", the benefit amount received on July 1, 2003, with no additional postemployment adjustment until the Revised Service Retirement Allowance with postemployment adjustments provides a higher benefit.
Conversion Factors	For effective retirement dates on or after July 1, 2003, new actuarial factors are put into use. The retirement allowance uses the member account balance, final average salary, years of service, and actuarial factors in effect as of the retirement date. The retirement allowance can be no less than that produced by a "look-back" calculation which uses the member account balance, final average salary, years of service and actuarial factors in effect on June 30, 2003.
150% Lump Sum	An inactive member who withdraws the member account balance between July 1, 2004 and June 30, 2006 receives an additional 50% of the account balance. The member must be inactive on January 1, 2000 and remain inactive to the date of withdrawal, and be vested.
Fire District 10	The Unfunded Actuarial Liability of Multnomah County Fire District No. 10 is reallocated according to a statutory formula. The Unfunded Actuarial Liability for District No. 10 is set at \$50,000.

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**Variable Annuity  
Adjustment**

As a result of *City of Eugene v. State of Oregon, Public Employees Retirement Board*, an administrative rule (OAR) was established that revised the Money Match calculation. The rule, OAR 459-013-0280, applies to members who retire on or after July 1, 2004, and establishes that the Variable Annuity adjustment will only apply to the portion of the Money Match benefit funded by the member's account balance. Generally, employers would no longer be required to double the Variable Annuity Adjustment to the Money Match benefit; the portion funded by the employer would be based on earnings in the Regular Account.

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**Appendix B**  
**Actuarial Methods and Assumptions**

This section of the report discloses the actuarial methods and assumptions used in this Actuarial Valuation. These methods and assumptions have been chosen on the basis of recent experience of the System and on current expectations as to future economic conditions.

As a result of recent experience and judgment about future trends, some of the actuarial methods and assumptions were revised since the 2002 Actuarial Valuation. The changes are described in the 2003 Experience Study report, which was presented to and accepted by the Retirement Board on September 14, 2004.

The assumptions are intended to estimate the future experience of the members of the System and of the System itself in areas that affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in estimated costs of the System's benefits.

Table B.1 on the next page includes a list of all of the major methods and assumptions used in this actuarial valuation. A brief description of the methods and selective illustrations of assumptions follow later in this section.

We modified several assumptions when we included the impact of the 2003 Reform Legislation. These changes are highlighted in Italics.

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**Table B.1 List of Major Valuation Methods and Assumptions**

### Actuarial Methods

1. Actuarial Cost Method	Entry Age
2. Asset Valuation Method	Four-year Smoothed Market Value with 10% Corridor
3. Allocation of Benefit Reserve	By Employer Segment
4. Allocation of Assets in Excess of Primary Reserves	By Total of Primary Reserves
5. Allocation of Costs by Tier	Separate Calculations Combined by Employer
6. Allocation of Costs for Credited Service with Multiple Employers	Segmented Service by Account Balance
7. Records and Data	Serialim

### Economic Assumptions

1. Consumer Price Inflation	3.00%
2. Healthcare Cost Inflation	Graded from 8.00% in 2005 to 5.00% in 2011
3. Investment Return (Portfolio)	8.00%
4. Investment Return (Variable Program Only)	8.50%
5. Interest Credit on Member Contributions	8.00%
6. Future General Wage Inflation	4.00%

### Demographic Assumptions

1. Salary Increases due to Promotion and Longevity	Table B.2
2. Unused Sick Leave at Retirement	Table B.3
3. Service Retirement	Table B.4
4. Probability of Electing a Lump Sum Option at Retirement	Table B.5
5. Purchases of Credited Service	Waiting Time
6. Retiree Healthcare Participation	RHIPA: 15% RHIA: 80%
7. Disablement	Table B.6
8. Retired Members' Mortality	Table B.7
9. Contributing Members' Mortality	Table B.8
10. Other Terminations of Employment	Table B.9
11. Probabilities of Vesting on Termination of Employment	Table B.10

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### Actuarial Methods

#### 1. Actuarial Cost Method

The accruing costs of all benefits are measured by the Entry Age Actuarial Cost Method. The Unfunded Actuarial Liability, or Actuarial Surplus, created by this method is amortized as an increasing dollar amount (designed to mimic the prior method of level percentage of pay amortization) over a period of twenty-four years (twenty-six for certain employers). Future salaries for purposes of amortization include general wage inflation, but no increase or decrease in the number of active members.

**Method:** The actuarial present value of projected benefits for each individual member included in the valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the Normal Cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future Normal Costs is called the Actuarial Liability. The excess of the Actuarial Liability over the Actuarial Value of Assets is called the Unfunded Actuarial Liability. If the Actuarial Value of Assets exceeds the Actuarial Liability, the difference is called the Actuarial Surplus.

**Entry Age:** The ages at entry of future active members are assumed to average the same as the entry ages of the present active members they replace. As the active member population decreases, it is further assumed that the average entry age of the smaller group will be the same, from an actuarial standpoint, as that of the present active group. Under these assumptions, the Normal Cost Rates will not vary with the termination of the present active membership.

**Amortization Amount:** The Unfunded Actuarial Liability, or Actuarial Surplus, is amortized as an increasing dollar amount. This is a change from the 2002 Actuarial Valuation. The current method, however, was designed to mimic the prior method of amortization as a level percentage of future payroll, including increases in salaries due to general wage inflation, but assuming no increase or decrease in the number of active members.

Amortization of the Unfunded Actuarial Liability as a level percentage of PERS payroll is no longer reasonable; PERS covered payroll will be declining because new hires will be participating in the OPSRP. Flat dollar amortization, the primary alternative, produces higher initial contributions that decline as a percentage of PERS and OPSRP payroll in the future.

**Amortization Period:** The Unfunded Actuarial Liability (Actuarial Surplus) has been amortized as an increase (decrease) to the employer contribution rate over period beginning on the valuation date and ending on December 31, 2027 (twenty-four years). Exceptions to this rule include a few employers that elected a 38-year amortization period in the 1997 actuarial valuation (twenty-six years).

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### 2. Asset Valuation Method

The asset smoothing method is effective for the investment experience commencing in 2000.

Annual investment gains and losses will be recognized over a period of four years, and the Actuarial Value of Assets will be limited to the corridor between 90% and 110% of Fair Market Value.

The asset smoothing method will ratably recognize investment gains or losses over the four years subsequent to the valuation date. In the 2003 actuarial valuation, 75% of the 2003 net investment gains will be held in the Asset Smoothing Reserve along with 50% of the net investment losses incurred in 2002 and 25% of the net investment losses incurred in 2001. Portions of the three years of net gains or losses are held in the Asset Smoothing Reserve, and all net investment gains or losses incurred prior to 2001 are fully recognized in the 2003 valuation.

**Lump Sum UAL Payments:** Effective January 1, 2002, certain employers making Lump Sum UAL Payments (contributions in addition to the regularly scheduled employer contributions) have a Lump Sum UAL Account that is treated separately for a number of reasons. The Account is not pooled with the other assets of the pool so the additional deposit only affects that employer and is not used to fund other employers' liabilities.

Also, recent legislation provides a specific calculation for the earnings that are credited to the Lump Sum UAL Accounts. Therefore, these Accounts are not included in the calculation of the Actuarial Value of Assets. The Lump Sum UAL Accounts are subtracted from PERS assets prior to the smoothing process, then added back only at the individual employer level.

**Excluded Reserves:** The Retirement Board funded two reserves as of December 31, 2003. The Contingency Reserves and the Capital Preservation Reserve are part of the invested portfolio and generate earnings. However, these reserves are not expected to be credited with earnings each year. Therefore, income generated from these reserves is available for financing the benefits in the valuation.

On the other hand, we do not expect either the Contingency Reserves or the Capital Preservation Reserve to be used for financing the benefits we are projecting in the valuation. Therefore, we excluded both of these reserves from the value of assets. They are included in the assets for purposes of smoothing the Fair Value of Assets. Then they are subtracted from the Actuarial Value of Assets before the allocation to employers of the net available assets.

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### 3. **Allocation of the Benefit Reserve**

The Benefit Reserve is allocated to each employer in proportion to the allowance allocated and charged to that employer at the time of retirement.

### 4. **Allocation of System Assets in Excess of the Primary Reserves**

All System assets in excess of the Primary Reserves (Benefit Reserve, Member Accounts, and Employer Reserves) are allocated in proportion to the sum of the Primary Reserves.

### 5. **Allocation of Costs by Tier**

The liabilities for each Tier are calculated separately, then combined to determine an aggregate employer contribution rate for each employer.

The one exception to this rule is that the Normal Cost Rates for the State and Local Government Rate Pool are calculated and applied in four components: Tiers One and Two for the General Service and Police & Fire classifications.

### 6. **Allocation of Costs for Credited Service with Multiple Employers**

Census data is obtained on all members in service segments for each employer the member has earned Credited Service. The total projected liabilities for each member are assigned to the appropriate employer based on the following:

**Retired Members:** In proportion to the benefit allocated and charged to each employer at the time of retirement.

**Non-Retired Members:** In proportion to the accumulated member account balance at the projected time of decrement.

### 7. **Records and Data**

The data used in this valuation consists of financial information and records of age, service, compensation and account balances of contributing members, former contributing members and their survivors. All of the data were supplied by the System and are accepted for valuation purposes without audit. All liability projections were performed on a seriatim basis.

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**Economic Assumptions**

The Actuarial Standards Board has adopted Actuarial Standard of Practice No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*. This Standard provides guidance on selecting economic assumptions under defined benefit retirement programs such as PERS. In our opinion, the economic assumptions have been developed in accordance with the Standard.

**1. Consumer Price Inflation**

The underlying long-term assumed rate of inflation is 3.00%, compounded annually. Because it is assumed that inflation will continue to increase at a rate greater than 2% per year, retirement allowances are assumed to increase at the rate of 2% per year for present retirees and, after retirement, for currently active members and their beneficiaries

**2. Healthcare Cost Inflation**

The underlying long-term assumed rate of health cost inflation is equal to 2.00% above the long-term rate of price inflation, or 5.00%, compounded annually. The assumed increase is 8.00% in 2005, and then declining by 0.50% per year until the ultimate rate of 5.00% is reached in 2011.

**3. Investment Return**

**Portfolio:** The future investment earnings of the assets of the System are assumed to accrue at an annual rate of 8.00%, compounded annually. This rate of return is assumed to be net of all investment-related and administrative expenses.

**Variable Program:** The future investment earnings of the Variable Accounts are assumed to accrue at an annual rate of 8.50%, compounded annually. This rate of return is assumed to be net of all investment-related and administrative expenses.

**4. Interest Credit on Member Contributions**

Interest on all member contributions in Tier One and Tier Two Regular Accounts is assumed to accrue at an annual rate of 8.00%, compounded annually.

**2003 Legislation:** *The assumed Tier One interest credit was changed to 8.00%.*

**5. Future General Wage Inflation**

The total annual rate of wage inflation is assumed to be 1.00% above price inflation, or 4.00%, compounded annually.



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### Demographic Assumptions

The Actuarial Standards Board has adopted Actuarial Standard of Practice No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*. This Standard provides guidance on selecting demographic assumptions under defined benefit retirement programs such as PERS. In our opinion, the demographic assumptions have been developed in accordance with the Standard.

#### 1. Salary Adjustments

Merit salary increases, other than wage inflation, are illustrated in Table B.2 and represent the rates of salary increase due to promotion and longevity.

Members covered by the provision allowing unused sick leave to increase the final average salary used to calculate the pension are assumed to receive an increase in their final average salaries on account of such provision according to Table B.3. The increases for vested terminated members' pensions are assumed to be 50% of the rates shown.

An adjustment of 2.8% (1.4% for School District Members) is added to the projected final average salary of members of Tier One to reflect lump sum payments for vacation pay and payroll practices.

#### 2. Service Retirement

The rates of retirement used in this valuation are shown in Table B.4.

*2003 Legislation:* Service retirements from active status were assumed to be 30% higher than the rates shown in this section for 2002 (but not higher than 100%), and 50% higher for 2003 (but not higher than 100%). The service retirement rates shown were applied for 2004 and beyond.

#### 3. Lump Sum Option at Retirement

Retiring members may forfeit their right to an annuity based on the value of their employee contributions with interest if they withdraw their accumulated contributions. The probability of electing a lump sum option is shown in Table B.5.

#### 4. Purchases of Credited Service

It is assumed that all members retiring under the Full Formula and Formula plus Annuity calculation methods purchase the six-month waiting period at the time of retirement.

#### 5. Retiree Healthcare Participation

Of the members eligible to participate in the RHIA, we assumed 80% would participate. We also assumed that only 15% of the eligible members for the RHIPA would participate.

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**6.     Disablement**

The rates of non-duty and duty disablement used in this valuation are shown in Table B.6 at various ages.

**7.     Retired Members' Mortality**

The rates of mortality for retired members and beneficiaries used in this valuation are illustrated in Tables B.7 at various ages. The rates are based on the following mortality tables published by the Society of Actuaries:

**Healthy Retired State Agency and Local Employer Members**

Male General Service	RP-2000 Male Table, set back 18 months
Male Police & Fire	RP-2000 Male Table, set back 12 months
Female	RP-2000 Female Table, set back 18 months

**Healthy Retired School District Members**

Male	RP-2000 Male Table, set back 24 months
Female	RP-2000 Female Table, set back 36 months

**Healthy Retired Judges**

Male	RP-2000 Male Table, set back 18 months
Female	RP-2000 Female Table, set back 18 months

**Disabled Members**

Male	RP-2000 Male Table, set forward 36 months, with a minimum rate of 2.5% per year
Female	RP-2000 Female Table, set forward 24 months, with a minimum rate of 3.0% per year

**Beneficiaries**

Male	RP-2000 Male Table, set back 18 months
Female	RP-2000 Female Table, set back 18 months

**9.     Non-retired Members' Mortality**

The rates of mortality of contributing and inactive but non-retired members used in this valuation are illustrated in Table B.8. These rates are the following percentages of the rates for service retirees of the same employment class:

**State Agencies and Local Employers**

Male General Service	75% of service retiree rates
Female General Service	60% of service retiree rates
Fire and Police	40% of service retiree rates

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**School Districts**

Male	50% of service retiree rates
Female	50% of service retiree rates

**Judges**

Male and Female	100% of service retiree rates
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**10. Terminations of Employment**

The rates of assumed future withdrawal from active service for reasons other than death, disability or retirement are shown for representative ages in Table B.9. Judges are assumed to withdraw only for death, disability or retirement.

**11. Probability of Vesting on Termination of Employment**

Terminating members may forfeit a vested right to a deferred benefit if they withdraw their accumulated contributions. Table B.10 gives the assumed probabilities, at selected ages, that vested terminating members will elect to receive the deferred benefit instead of withdrawing accumulated contributions.

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**Table B.2      Annual Rates of Salary Increase  
Due to Promotion and Longevity**

Duration	<u>State Agencies</u>		School Districts	OHSU Only	<u>Other Local Employers</u>	
	General	P&F			General	P&F
1	3.50%	3.75%	3.50%	2.25%	3.50%	4.50%
2	3.00	3.25	3.25	1.75	3.00	4.00
3	2.50	2.75	3.00	1.50	2.50	3.50
4	2.00	2.25	2.75	1.25	2.00	3.00
5	1.80	2.00	2.50	1.00	1.80	2.50
6	1.60	1.75	2.30	0.75	1.60	2.00
7	1.40	1.50	2.10	0.60	1.40	1.75
8	1.20	1.25	1.90	0.50	1.25	1.50
9	1.00	1.05	1.75	0.40	1.10	1.40
10	0.90	0.95	1.60	0.30	1.00	1.30
11	0.80	0.85	1.45	0.25	0.90	1.20
12	0.70	0.75	1.30	0.25	0.80	1.10
13	0.60	0.65	1.20	0.25	0.70	1.00
14	0.50	0.55	1.10	0.25	0.60	0.90
15	0.40	0.45	1.00	0.25	0.55	0.80
16	0.30	0.35	0.90		0.50	0.70
17	0.20	0.25	0.80		0.45	0.60
18	0.10	0.15	0.70		0.40	0.50
19		0.05	0.60		0.35	0.50
20			0.50		0.30	0.50
21			0.40		0.25	0.50
22			0.30		0.20	0.50
23			0.20		0.15	0.50
24			0.10		0.10	0.50
25					0.05	0.50
26						0.50
27						0.50
28						0.50
29						0.50
30						0.50
31						

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

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**Table B.3     Adjustment to Final Average Salary  
For Unused Sick Leave at Retirement**

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	<u>General Service</u>		<b>Police &amp; Fire</b>
	Male	Female	
<b>State Agencies</b>	8%	4%	9%
<b>School Districts</b>	10	7	
<b>Local Employers</b>	5	3	7

Note: Adjustments to Final Average Salary for vested terminated members are assumed to be 50% of the rates in the table above.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Table B.4 Annual Rates of Service Retirement**

Age	State Agencies			School Districts		Local Employers		
	Male	Female	P&F	Male	Female	Male	Female	P&F
50			13.1%					11.3%
51			8.6					11.3
52			6.8					11.3
53			4.9					11.3
54			11.3					22.2
55 <sup>(2)</sup>	9.5%	4.9%	11.3	14.0	8.6%	4.9%	4.9%	22.2
56 <sup>(2)</sup>	5.8	3.9	11.3	14.0	9.5	4.9	5.8	22.2
57 <sup>(2)</sup>	11.3	10.4	11.3	14.0	11.3	9.5	6.8	22.2
58 <sup>(2)</sup>	13.1	10.4	11.3	18.2	14.0	14.0	7.7	22.2
59 <sup>(2)</sup>	13.1	9.5	11.3	18.2	15.7	9.5	8.6	22.2
60	11.3	9.5	14.0	18.2	17.4	9.5	9.5	22.2
61	26.1	18.2	22.2	22.2	22.2	26.1	18.2	33.3
62	33.3	26.1	29.8	46.2	33.3	43.1	26.1	51.9
63	22.2	22.2	22.2	26.1	26.1	33.3	22.2	26.1
64	22.2	22.2	14.0	26.1	26.1	33.3	22.2	26.1
65	49.1	51.9	100.0	40.0	46.2	54.6	40.0	100.0
66	26.1	26.1		26.1	26.1	26.1	26.1	
67	26.1	26.1		26.1	26.1	26.1	26.1	
68	26.1	26.1		26.1	26.1	26.1	26.1	
69	26.1	26.1		26.1	26.1	26.1	26.1	
70	100.0	100.0		100.0	100.0	100.0	100.0	
30 & out	33.3	18.2		33.3	33.3	22.2	14.0	

Note:

- (1) Judge members are assumed to retire under Plan B at age 63.
- (2) Rates of retirement from ages 55 through 59 are 1/3<sup>rd</sup> less for Tier Two members.
- (3) For the calculation of the liabilities including the provisions of 2003 Legislation, retirements from active status were assumed to be 30% higher in 2002 and 50% higher in 2003 than the rates shown, subject to a maximum rate of 100%.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

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**Table B.5      Probability of Electing a Lump Sum Option  
                    At Retirement**

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	<b>Male</b>	<b>Female</b>	<b>P&amp;F</b>
<b>State Agencies</b>	20%	20%	20%
<b>School Districts</b>	20	20	
<b>Local Employers</b>	20	20	20

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Table B.6 Annual Rates of Disablement**

Age	Male	<u>State Agencies</u>		P&F	<u>School Districts</u>	
		Female			Male	Female
<b>Ordinary Disablement</b>						
32	0.10%	0.16%		0.08%	0.00%	0.00%
37	0.10	0.16		0.17	0.13	0.10
42	0.16	0.24		0.20	0.13	0.17
47	0.20	0.24		0.25	0.32	0.28
52	0.40	0.69		0.33	0.64	0.45
57	0.72	0.80		0.00	0.80	0.45
<b>Duty Disablement</b>						
32	0.01%	0.01%		0.03%	0.01%	0.01%
37	0.01	0.01		0.06	0.01	0.01
42	0.01	0.01		0.07	0.02	0.01
47	0.01	0.01		0.07	0.02	0.01
52	0.03	0.02		0.19	0.02	0.01
57	0.04	0.02		0.00	0.08	0.01

Age	Male	<u>Local Employers</u>		P&F	<u>Judge Members</u>	
		Female			Male	Female
<b>Ordinary Disablement</b>						
32	0.09%	0.02%		0.12%	0.07%	0.10%
37	0.09	0.02		0.25	0.07	0.10
42	0.13	0.23		0.30	0.10	0.16
47	0.44	0.23		0.38	0.10	0.16
52	0.66	0.75		0.51	0.21	0.45
57	0.88	0.75		0.00	0.42	0.52
<b>Duty Disablement</b>						
32	0.02%	0.00%		0.11%	0.01%	0.02%
37	0.02	0.00		0.11	0.01	0.02
42	0.02	0.01		0.11	0.01	0.02
47	0.02	0.01		0.46	0.01	0.02
52	0.02	0.01		0.38	0.03	0.03
57	0.03	0.03		0.00	0.04	0.03



**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Table B.7 Annual Rates of Mortality  
Retired Members**

**Service Retirements**

Age	<u>State and Local Employers</u>				<u>School Districts</u>	
	<u>General Service (1)</u>		<u>Police &amp; Fire</u>		Male	Female
	Male	Female	Male	Female		
52	0.229%	0.176%	0.245%	0.176%	0.214%	0.155%
57	0.391	0.290	0.420	0.290	0.362	0.242
62	0.721	0.543	0.768	0.543	0.675	0.444
67	1.357	1.033	1.441	1.033	1.274	0.862
72	2.339	1.766	2.457	1.766	2.221	1.486
77	4.000	2.954	4.217	2.954	3.783	2.546
82	6.820	4.833	7.204	4.833	6.437	4.151
87	11.678	8.191	12.280	8.191	11.076	6.952
92	19.159	13.814	19.977	13.814	18.341	11.915

**Disabilities**

Age	<u>State and Local Employers</u>				<u>School Districts</u>	
	<u>General Service (1)</u>		<u>Police &amp; Fire</u>		Male	Female
	Male	Female	Male	Female		
52	2.500%	3.000%	2.500%	3.000%	2.500%	3.000%
57	2.500	3.000	2.500	3.000	2.500	3.000
62	2.500	3.000	2.500	3.000	2.500	3.000
67	2.500	3.000	2.500	3.000	2.500	3.000
72	3.214	3.000	3.390	3.000	3.039	3.000
77	5.503	3.585	5.793	3.585	5.212	3.097
82	9.475	5.940	9.978	5.940	8.972	5.078
87	15.851	10.182	16.642	10.182	15.059	8.638
92	24.218	16.403	25.069	16.403	23.366	14.460

Note:

- (1) Includes Judge Members and Beneficiaries of all classes.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

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**Table B.8      Annual Rates of Mortality  
Non-Retired Members**

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Age	<u>State and Local Employers</u>			
	<u>General Service</u>		<u>Police &amp; Fire</u>	
	Male	Female	Male	Female
22	0.026%	0.012%	0.014%	0.008%
27	0.028	0.013	0.015	0.081
32	0.035	0.017	0.020	0.011
37	0.061	0.030	0.034	0.020
42	0.083	0.044	0.046	0.030
47	0.117	0.070	0.065	0.047
52	0.172	0.106	0.098	0.071
57	0.293	0.174	0.168	0.116
62	0.541	0.326	0.307	0.217

Age	<u>School Districts</u>		<u>Judge Members</u>	
	Male	Female	Male	Female
22	0.017%	0.010%	0.035%	0.019%
27	0.019	0.010	0.038	0.021
32	0.022	0.012	0.047	0.029
37	0.039	0.022	0.081	0.049
42	0.054	0.032	0.111	0.074
47	0.075	0.052	0.156	0.117
52	0.107	0.078	0.229	0.176
57	0.181	0.121	0.391	0.290
62	0.337	0.222	0.721	0.543

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table B.9 Annual Rates of Other Terminations  
From Active Membership**

Entry Age & Duration	<u>State Agencies – GS - Male</u>			<u>State Agencies – GS - Female</u>		
	22	32	42	22	32	42
1	27.2%	18.2%	13.7%	23.8%	16.6%	11.7%
2	20.8	13.4	9.6	18.8	13.5	9.5
3	16.8	10.7	7.5	16.1	8.8	6.2
4	14.9	8.4	6.8	14.3	7.8	5.8
5	10.9	6.3	3.9	11.3	5.6	3.8
10	7.5	3.9	2.7	8.2	4.7	2.9
15	6.3	3.9		5.6	3.8	
20	3.9	2.7		4.7	2.9	
25	3.9			3.8		
30	2.7			2.9		

Entry Age & Duration	<u>State Agencies – P&amp;F</u>		
	22	32	42
1	14.8%	10.3%	6.7%
2	9.2	4.9	4.1
3	5.4	4.4	3.9
4	5.5	4.9	4.1
5	3.4	2.6	1.7
10	2.8	2.0	
15	2.6	1.7	
20	2.0		
25	1.7		

Entry Age & Duration	<u>School Districts - Male</u>			<u>School Districts - Female</u>		
	22	32	42	22	32	42
1	22.9%	13.5%	9.0%	16.7%	11.7%	9.3%
2	18.2	10.7	7.0	13.2	8.7	6.6
3	16.1	7.7	5.1	12.2	6.4	4.7
4	15.0	6.2	5.0	11.5	6.4	4.5
5	8.7	3.3	2.0	9.5	3.3	2.2
10	5.0	2.2	1.7	6.4	2.7	2.2
15	3.3	2.0		3.3	2.2	
20	2.2	1.7		2.7	2.2	
25	2.0			2.2		
30	1.7			2.2		

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Table B.9 Annual Rates of Other Terminations  
From Active Membership**

Entry Age & Duration	<u>OHSU - Male</u>			<u>OHSU - Female</u>		
	22	32	42	22	32	42
1	18.0%	14.5%	11.5%	21.8%	15.6%	13.3%
2	12.4	10.6	9.2	21.0	15.0	11.5
3	9.9	8.4	6.8	18.2	11.9	9.5
4	9.9	8.2	6.1	15.7	10.1	7.6
5	5.3	4.1	3.0	11.4	7.0	5.9
10	4.7	3.6	2.4	9.2	6.4	4.1
15	4.1	3.0		7.0	5.9	
20	3.6	2.4		6.4	4.1	
25	3.0			5.9		
30	2.4			4.1		

Entry Age & Duration	<u>Other Local Employers – GS - Male</u>			<u>Other Local Employers – GS - Female</u>		
	22	32	42	22	32	42
1	18.0%	14.5%	11.5%	21.8%	15.6%	13.3%
2	11.8	10.1	8.7	19.9	14.2	10.9
3	9.4	8.0	6.4	17.3	11.3	9.0
4	9.0	7.4	5.5	14.3	9.2	7.0
5	4.2	3.3	2.3	9.0	5.5	4.6
10	3.7	2.8	1.9	7.3	5.1	3.3
15	3.3	2.3		5.5	4.6	
20	2.8	1.9		5.1	3.3	
25	2.3			4.6		
30	1.9			3.3		

Entry Age & Duration	<u>Other Local Employers – P&amp;F</u>		
	22	32	42
1	9.3%	6.4%	4.2%
2	6.6	3.5	2.9
3	6.2	3.3	2.7
4	3.7	3.1	2.6
5	3.4	2.1	1.3
10	2.6	1.6	
15	2.1	1.3	
20	1.6		
25	1.3		

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Table B.10 Annual Rates of Vesting Upon Termination of Employment**

Age	Male	<u>State Agencies</u>		P&F	<u>School Districts</u>	
		Female			Male	Female
22	46%	46%		40%	63%	53%
27	46	46		40	63	79
32	58	58		45	63	79
37	69	69		55	69	79
42	75	75		60	75	79
47	75	75		70	81	89
52	92	92		100	94	95
55 & up	100	100		100	100	100

Age	Male	<u>Local Employers</u>		P&F	<u>Judge Members</u>	
		Female			Male	Female
22	44%	48%		50%	100%	100%
27	44	48		50	100	100
32	55	72		60	100	100
37	61	78		65	100	100
42	72	78		70	100	100
47	77	84		80	100	100
52	83	84		100	100	100
55 & up	100	100		100	100	100

**Note:**

The expected percentage of vested members who do not withdraw their contributions after termination of employment, thus retaining the right to accrued benefits provided by employer contributions, rather than electing the lump sum option.

For the calculation of the liabilities including the provisions of 2003 Legislation, 20% of the eligible members under age 45 are assumed to elect the "double lump sum" option in SB 258 during the eligible period.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Appendix C  
Valuation Data**

This valuation is based upon the membership of the System as of December 31, 2003. The data was supplied by the System and accepted for valuation purposes without audit. A comparison of the number of members with previous data is shown below.

Number of Members	<u>2003</u>	<u>2002</u>
<b>Active Members</b>		
State Agencies		
General Service	41,973	43,565
Fire & Police	<u>5,112</u>	<u>5,235</u>
All State Members	47,085	48,800
School Districts	60,897	63,604
Local Employers		
General Service	37,566	38,628
Fire & Police	<u>7,993</u>	<u>8,079</u>
All Local Members	45,559	46,707
Judge Members	<u>182</u>	<u>176</u>
<b>All Active Members</b>	<b>153,723</b>	<b>159,287</b>
<b>Inactive Members</b>	<b>52,854</b>	<b>53,328</b>
<b>Retirees and Beneficiaries</b>		
Service Retirement	85,123	77,460
Beneficiaries and QDRO's	8,535	8,046
Duty Disability Retirement	638	609
Nonduty Disability Retirement	<u>3,481</u>	<u>3,367</u>
<b>All Retirees and Beneficiaries</b>	<b>97,777</b>	<b>89,482</b>
<b>Total System Membership</b>	<b>304,354</b>	<b>302,097</b>

Tier Two members were first included in the 1997 actuarial valuation. The following table shows the growth in Tier Two membership over the previous year.

Active Members	Tier One		Tier Two		Tier Two %	
	<u>2003</u>	<u>2002</u>	<u>2003</u>	<u>2002</u>	<u>2003</u>	<u>2002</u>
State Agencies	24,847	27,750	22,238	21,050	47%	43%
School Districts	33,640	37,929	27,257	25,675	45%	40%
Local Employers	23,129	25,591	22,430	21,116	49%	45%
Judge Members	<u>163</u>	<u>161</u>	<u>19</u>	<u>15</u>	<u>10%</u>	<u>9%</u>
<b>All Active Members</b>	<b>81,779</b>	<b>91,431</b>	<b>71,944</b>	<b>67,856</b>	<b>47%</b>	<b>43%</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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The following tables provide more details about the members included in this actuarial valuation as of December 31, 2003.

Table C.1      Membership History

	<u>Status</u>	<u>Employer</u>	<u>Classification</u>	<u>Tier</u>
Table C.2	Active	All	All	All
Table C.3	Active	All	All	Tier One
Table C.4	Active	All	All	Tier Two
Table C.5	Active	State Agencies	General Service	Tier One
Table C.6	Active	State Agencies	General Service	Tier Two
Table C.7	Active	State Agencies	Police & Fire	Tier One
Table C.8	Active	State Agencies	Police & Fire	Tier Two
Table C.9	Active	Comm. Colleges	All	Tier One
Table C.10	Active	Comm. Colleges	All	Tier Two
Table C.11	Active	School Districts	All	Tier One
Table C.12	Active	School Districts	All	Tier Two
Table C.13	Active	Local Employers	General Service	Tier One
Table C.14	Active	Local Employers	General Service	Tier Two
Table C.15	Active	Local Employers	Police & Fire	Tier One
Table C.16	Active	Local Employers	Police & Fire	Tier Two
Table C.17	Active	Judge Members	All	Tier One
Table C.18	Active	Judge Members	All	Tier Two
Table C.19	Inactive	All	All	All
Table C.20	Service Retirements	All	All	All
	Beneficiaries and			
Table C.21	QDROs	All	All	All
Table C.22	Duty Disabilities	All	All	All
Table C.23	Ordinary Disabilities	All	All	All

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Table C.1 Membership History**

<b>Active Members</b>				
Valuation Date Dec. 31	Number	Annual Salaries in Millions	Average Annual Salary	Annualized Percentage Increase in Average Salary
1975	90,819	\$1,014.5	\$11,171	
1977	95,284	1,226.8	12,875	7.4%
1979	101,094	1,488.0	14,719	6.9
1982	108,701	2,062.1	18,970	8.8
1985	110,768	2,428.3	21,922	4.9
1987	114,934	2,764.7	24,055	4.8
1989	121,495	3,199.4	26,334	4.6
1991	131,721	3,887.5	29,513	5.9
1993	137,513	4,466.8	32,483	4.9
1995	141,471	4,848.1	34,269	2.7
1997	143,194	5,161.6	36,045	2.6
1999	151,262	5,676.6	37,528	2.0
2000	156,869	6,195.9	39,497	5.2
2001	160,482	6,520.2	40,630	* 2.9 old basis
2001	160,482	6,256.5	38,986	* - new basis
2002	159,287	6,383.5	40,075	2.8
2003	153,723	6,248.5	40,648	1.4

\* Effective in 2001, the Annual Payroll excludes member pick-up, if any.

**Annuitants**

Valuation Date Dec. 31	Number	Annual Benefits in Thousands	Average Annual Benefit	Annualized Percentage Increase in Average Benefit
1975	21,993	\$ 34,363	\$1,562	
1977	27,259	56,893	2,087	15.6%
1979	30,713	71,482	2,327	5.6
1982	38,251	124,297	3,248	11.8
1985	45,394	201,989	4,449	11.1
1987	50,355	276,856	5,498	11.2
1989	54,786	344,771	6,328	7.3
1991	56,779	442,112	7,787	10.9
1993	60,841	564,341	9,276	9.1
1995	64,796	700,171	10,806	7.9
1997	69,624	919,038	13,200	10.5
1999	82,819	1,299,380	15,689	9.0
2000	82,458	1,385,556	16,803	7.1
2001	85,216	1,532,650	17,985	7.0
2002	89,482	1,722,865	19,254	7.1
2003	97,777	2,040,533	20,869	8.4



**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Table C.2 Active Membership  
All Employers, All Classes, All Tiers**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	2,042	38,513,828	4,017,640	50	1,091,112	349,596	-	-	-	-	-	-	-	-	-
25 to 29	8,457	256,581,700	40,430,054	1,202	44,276,485	16,395,282	15	551,219	374,671	-	-	-	-	-	-
30 to 34	9,229	304,041,318	55,021,251	5,384	223,325,997	103,348,709	633	28,130,689	25,485,287	13	545,836	749,011	-	-	-
35 to 39	7,572	240,452,309	42,798,050	5,506	226,658,250	114,379,659	3,332	159,472,669	165,336,052	608	28,434,069	45,094,949	18	797,196	1,802,675
40 to 44	7,621	228,979,838	40,832,061	5,750	217,369,092	110,624,570	4,288	195,697,294	219,424,224	3,224	163,010,394	289,370,703	685	32,537,077	87,667,681
45 to 49	7,308	220,170,609	39,864,426	6,611	238,144,417	124,733,100	5,504	237,601,537	268,523,256	4,179	206,848,098	387,873,135	3,746	198,327,958	586,480,403
50 to 54	5,958	189,531,925	34,780,368	6,170	228,005,442	122,932,074	6,422	272,255,262	316,148,331	5,418	257,474,539	492,875,228	4,545	238,548,355	732,129,590
55 to 59	3,802	126,312,760	23,888,862	3,725	140,787,383	76,542,835	4,381	189,516,814	222,378,877	3,747	174,275,458	335,785,660	2,488	126,250,789	387,942,889
60 to 64	1,410	42,378,614	7,942,314	1,468	53,375,994	29,001,634	1,384	58,313,899	68,581,497	1,068	49,090,226	95,212,448	486	24,104,344	70,806,631
65 & Up	515	12,008,072	2,287,258	435	12,353,101	6,621,960	260	10,113,867	11,966,851	127	5,708,924	10,626,865	42	1,825,411	5,541,261
<b>Total</b>	<b>53,914</b>	<b>1,658,970,973</b>	<b>291,862,284</b>	<b>36,301</b>	<b>1,385,387,273</b>	<b>704,929,419</b>	<b>26,219</b>	<b>1,151,653,250</b>	<b>1,298,219,046</b>	<b>18,384</b>	<b>885,387,544</b>	<b>1,657,587,999</b>	<b>12,010</b>	<b>622,391,130</b>	<b>1,872,371,130</b>

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	2,092	39,604,940	4,367,236
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	9,674	301,409,404	57,200,007
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	15,259	556,043,840	184,604,258
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	17,036	655,814,493	369,411,385
40 to 44	16	765,109	2,385,830	-	-	-	-	-	-	-	-	-	21,584	838,358,804	750,305,069
45 to 49	998	51,333,319	194,046,778	7	295,034	1,504,480	-	-	-	-	-	-	28,353	1,152,720,972	1,603,025,578
50 to 54	3,683	205,137,985	839,770,688	195	10,905,708	50,196,296	3	138,064	853,140	-	-	-	32,394	1,401,997,280	2,589,685,715
55 to 59	1,402	78,547,984	322,348,564	225	13,994,825	67,693,245	18	910,854	4,500,737	-	-	-	19,788	850,596,867	1,441,081,669
60 to 64	191	9,902,894	41,987,330	69	4,428,469	22,450,477	25	1,378,792	8,863,946	3	124,589	576,303	6,104	243,097,821	345,422,580
65 & Up	24	1,252,260	5,225,928	14	892,299	5,204,956	17	1,313,134	7,935,961	5	301,849	3,718,430	1,439	45,768,917	59,129,470
<b>Total</b>	<b>6,314</b>	<b>346,939,551</b>	<b>1,405,765,118</b>	<b>510</b>	<b>30,516,335</b>	<b>147,049,454</b>	<b>63</b>	<b>3,740,844</b>	<b>22,153,784</b>	<b>8</b>	<b>426,438</b>	<b>4,294,733</b>	<b>153,723</b>	<b>6,085,413,338</b>	<b>7,404,232,967</b>

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM 2003 ACTUARIAL VALUATION

**Table C.3 Active Membership  
All Employers, All Classes, Tier One**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	15	395,161	104,668	230	8,065,684	3,989,204	15	551,219	374,671	-	-	-	-	-	-
30 to 34	67	1,895,370	620,259	2,237	95,760,064	56,545,342	633	28,130,689	25,485,287	13	545,836	749,011	-	-	-
35 to 39	62	1,764,367	673,339	2,757	117,257,829	73,921,590	3,332	159,472,669	165,336,052	608	28,434,069	45,094,949	18	797,196	1,802,675
40 to 44	63	1,685,338	710,804	2,846	111,921,969	71,176,773	4,288	195,697,294	219,424,224	3,224	163,010,394	289,370,703	685	32,537,077	87,667,681
45 to 49	59	1,397,629	566,558	3,438	127,354,851	83,319,561	5,503	237,554,525	268,492,641	4,178	206,782,592	387,776,291	3,746	198,327,958	586,480,403
50 to 54	45	1,182,844	811,512	3,386	126,558,208	84,855,962	6,422	272,255,262	316,148,331	5,418	257,474,539	492,875,228	4,545	238,548,355	732,129,590
55 to 59	36	747,706	836,774	2,007	77,055,278	52,489,840	4,381	189,516,814	222,378,877	3,746	174,129,944	335,635,938	2,488	126,250,789	387,942,889
60 to 64	21	530,809	163,634	767	28,617,824	19,531,563	1,383	58,231,493	68,541,936	1,068	49,090,226	95,212,448	486	24,104,344	70,906,631
65 & Up	16	446,432	166,188	223	6,556,908	4,363,480	260	10,113,867	11,966,851	127	5,706,924	10,626,865	42	1,825,411	5,541,261
<b>Total</b>	<b>384</b>	<b>10,045,656</b>	<b>4,653,736</b>	<b>17,891</b>	<b>699,148,615</b>	<b>450,193,335</b>	<b>26,217</b>	<b>1,151,523,832</b>	<b>1,298,148,870</b>	<b>18,382</b>	<b>885,176,524</b>	<b>1,657,341,433</b>	<b>12,010</b>	<b>622,391,130</b>	<b>1,872,371,130</b>

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	260	9,012,064	4,468,543
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	2,950	126,331,959	83,399,899
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	6,777	307,726,130	286,828,605
40 to 44	16	765,109	2,385,830	-	-	-	-	-	-	-	-	-	11,122	505,617,181	670,736,015
45 to 49	998	51,333,319	194,046,778	7	295,034	1,504,480	-	-	-	-	-	-	17,929	823,045,908	1,522,186,712
50 to 54	3,683	205,137,985	839,770,688	195	10,905,708	50,196,296	3	138,064	853,140	-	-	-	23,697	1,112,200,965	2,517,640,767
55 to 59	1,402	78,547,984	322,348,564	225	13,994,825	67,693,245	18	910,854	4,500,737	-	-	-	14,303	661,154,194	1,393,826,864
60 to 64	191	9,902,894	41,987,330	69	4,428,469	22,450,477	25	1,378,792	8,863,946	3	124,589	576,303	4,013	176,409,440	328,134,268
65 & Up	24	1,252,260	5,225,928	14	892,299	5,204,956	17	1,313,134	7,935,961	5	301,849	3,718,430	728	28,411,084	54,749,920
<b>Total</b>	<b>6,314</b>	<b>346,939,551</b>	<b>1,405,765,118</b>	<b>510</b>	<b>30,516,335</b>	<b>147,049,454</b>	<b>63</b>	<b>3,740,844</b>	<b>22,153,784</b>	<b>8</b>	<b>426,438</b>	<b>4,294,733</b>	<b>81,779</b>	<b>3,749,908,925</b>	<b>6,861,971,593</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.4 Active Membership  
All Employers, All Classes, Tier Two**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	2,042	38,513,828	4,017,640	50	1,091,112	349,596	-	-	-	-	-	-	-	-	-
25 to 29	8,442	256,186,539	40,325,386	972	36,210,801	12,406,078	-	-	-	-	-	-	-	-	-
30 to 34	9,162	302,145,948	54,400,992	3,147	127,565,933	46,803,367	-	-	-	-	-	-	-	-	-
35 to 39	7,510	238,687,942	42,124,711	2,749	109,400,421	40,458,069	-	-	-	-	-	-	-	-	-
40 to 44	7,558	227,294,500	40,121,257	2,904	105,447,123	39,447,797	-	-	-	-	-	-	-	-	-
45 to 49	7,249	218,772,980	39,297,868	3,173	110,789,566	41,413,539	1	47,012	30,615	1	65,506	96,844	-	-	-
50 to 54	5,913	188,349,081	33,968,856	2,784	101,447,234	38,076,092	-	-	-	-	-	-	-	-	-
55 to 59	3,766	125,565,054	23,052,088	1,718	63,732,105	24,052,995	-	-	-	1	145,514	149,722	-	-	-
60 to 64	1,389	41,847,805	7,778,680	701	24,758,170	9,470,071	1	82,406	39,561	-	-	-	-	-	-
65 & Up	499	11,561,640	2,121,070	212	5,796,193	2,258,480	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>53,530</b>	<b>1,648,925,317</b>	<b>287,208,548</b>	<b>18,410</b>	<b>686,238,658</b>	<b>254,736,084</b>	<b>2</b>	<b>129,418</b>	<b>70,176</b>	<b>2</b>	<b>211,020</b>	<b>246,566</b>	-	-	-

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	2,092	39,604,940	4,367,236
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	9,414	292,397,340	52,731,464
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	12,309	429,711,881	101,204,359
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	10,259	348,088,363	82,582,780
40 to 44	-	-	-	-	-	-	-	-	-	-	-	-	10,462	332,741,623	79,569,054
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-	10,424	329,675,064	80,838,866
50 to 54	-	-	-	-	-	-	-	-	-	-	-	-	8,697	289,796,315	72,044,948
55 to 59	-	-	-	-	-	-	-	-	-	-	-	-	5,485	189,442,673	47,254,805
60 to 64	-	-	-	-	-	-	-	-	-	-	-	-	2,091	66,688,381	17,288,312
65 & Up	-	-	-	-	-	-	-	-	-	-	-	-	711	17,357,833	4,379,550
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>71,944</b>	<b>2,335,504,413</b>	<b>542,261,374</b>

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM 2003 ACTUARIAL VALUATION

**Table C.5 Active Membership  
State Agencies, General Service, Tier One**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	1	36,727	7,153	67	2,318,946	1,188,272	5	198,601	126,250	-	-	-	-	-	-
30 to 34	16	483,229	140,740	365	14,157,685	8,291,723	166	6,465,040	6,064,292	7	294,841	390,431	-	-	-
35 to 39	8	251,445	105,953	492	20,128,246	12,344,654	626	27,745,706	28,081,642	212	8,861,170	14,573,923	7	266,826	632,966
40 to 44	10	295,413	115,528	639	26,559,015	16,505,654	925	41,766,726	45,567,032	787	36,103,175	63,579,318	255	10,986,234	29,382,472
45 to 49	16	458,604	141,588	688	29,487,746	18,877,397	1,224	56,788,567	64,745,631	1,134	55,741,568	102,638,404	753	35,690,539	102,926,599
50 to 54	11	394,124	169,235	676	28,445,843	18,811,007	1,296	60,079,506	69,377,724	1,422	70,115,714	134,887,054	1,009	51,377,458	153,167,603
55 to 59	10	240,625	161,799	452	18,780,880	12,346,873	1,017	47,542,782	56,514,985	974	46,800,200	91,025,426	674	35,207,247	108,018,461
60 to 64	6	169,424	55,694	177	7,453,788	5,039,076	386	17,364,999	20,665,045	332	15,972,229	32,117,731	153	8,460,825	25,075,193
65 & Up	2	26,331	7,532	47	1,781,697	1,157,815	71	3,314,564	4,228,877	45	2,390,091	4,626,946	13	636,459	2,025,762
<b>Total</b>	<b>80</b>	<b>2,355,922</b>	<b>905,122</b>	<b>3,603</b>	<b>149,113,846</b>	<b>94,562,471</b>	<b>5,716</b>	<b>261,266,491</b>	<b>294,371,478</b>	<b>4,913</b>	<b>236,278,978</b>	<b>443,839,233</b>	<b>2,864</b>	<b>142,625,588</b>	<b>421,229,056</b>
Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	73	2,554,274	1,321,675
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	554	21,400,795	14,887,186
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	1,345	57,253,393	55,739,138
40 to 44	6	311,726	887,417	-	-	-	-	-	-	-	-	-	2,622	116,022,289	156,037,421
45 to 49	338	15,499,603	59,503,543	4	192,679	933,065	-	-	-	-	-	-	4,157	193,859,296	349,766,227
50 to 54	828	42,012,019	177,462,679	58	2,782,273	13,443,138	2	102,958	598,976	-	-	-	5,302	255,309,895	567,917,416
55 to 59	379	21,317,590	90,641,139	54	3,038,656	16,069,027	7	313,479	1,712,557	-	-	-	3,567	173,241,459	375,490,267
60 to 64	58	3,351,845	13,695,634	31	2,124,454	10,821,944	12	642,501	4,547,227	-	-	-	1,155	55,540,065	112,017,444
65 & Up	8	326,181	1,298,822	5	321,161	2,167,754	11	854,155	5,114,334	2	95,318	862,877	204	9,745,957	21,490,719
<b>Total</b>	<b>1,617</b>	<b>82,818,964</b>	<b>343,489,234</b>	<b>152</b>	<b>8,459,223</b>	<b>43,434,928</b>	<b>32</b>	<b>1,913,093</b>	<b>11,973,094</b>	<b>2</b>	<b>95,318</b>	<b>862,877</b>	<b>18,979</b>	<b>884,927,423</b>	<b>1,654,667,493</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.6 Active Membership  
State Agencies, General Service, Tier Two**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	490	9,606,437	1,024,167	12	333,885	104,777	-	-	-	-	-	-	-	-	-
25 to 29	1,615	44,682,332	6,650,944	247	8,081,309	2,771,869	-	-	-	-	-	-	-	-	-
30 to 34	1,839	58,509,744	9,429,023	638	23,744,896	8,535,601	-	-	-	-	-	-	-	-	-
35 to 39	1,602	53,375,426	8,993,626	696	26,886,702	9,818,443	-	-	-	-	-	-	-	-	-
40 to 44	1,620	56,560,276	9,705,801	750	29,633,608	11,046,807	-	-	-	-	-	-	-	-	-
45 to 49	1,587	55,111,446	9,515,867	707	28,017,822	10,311,878	1	47,012	30,615	-	-	-	-	-	-
50 to 54	1,350	48,024,915	8,441,139	702	28,728,653	10,679,099	-	-	-	-	-	-	-	-	-
55 to 59	931	32,905,909	5,854,993	450	17,994,238	6,654,664	-	-	-	-	-	-	-	-	-
60 to 64	330	11,842,049	2,135,754	207	8,367,216	3,155,095	-	-	-	-	-	-	-	-	-
65 & Up	108	3,471,043	658,562	37	1,354,566	520,506	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>11,472</b>	<b>373,989,577</b>	<b>62,409,876</b>	<b>4,446</b>	<b>173,142,895</b>	<b>63,598,739</b>	<b>1</b>	<b>47,012</b>	<b>30,615</b>	-	-	-	-	-	-

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	502	9,940,322	1,128,944
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	1,862	52,663,641	9,422,813
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	2,477	82,254,640	17,964,624
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	2,298	80,262,128	18,812,069
40 to 44	-	-	-	-	-	-	-	-	-	-	-	-	2,370	86,193,884	20,752,608
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-	2,295	83,176,280	19,858,360
50 to 54	-	-	-	-	-	-	-	-	-	-	-	-	2,052	76,753,568	19,120,238
55 to 59	-	-	-	-	-	-	-	-	-	-	-	-	1,381	50,900,147	12,509,657
60 to 64	-	-	-	-	-	-	-	-	-	-	-	-	537	20,209,265	5,290,849
65 & Up	-	-	-	-	-	-	-	-	-	-	-	-	145	4,825,609	1,179,068
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>15,919</b>	<b>547,179,484</b>	<b>126,039,230</b>

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM 2003 ACTUARIAL VALUATION

**Table C.7 Active Membership  
State Agencies, Police & Fire, Tier One**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	10	470,715	231,999	-	-	-	-	-	-	-	-	-
30 to 34	-	-	-	142	6,832,512	3,979,211	45	2,405,565	2,123,923	-	-	-	-	-	-
35 to 39	1	31,868	3,983	137	6,546,913	3,866,217	182	9,598,526	10,391,400	34	1,849,963	2,831,615	1	42,043	103,126
40 to 44	-	-	-	91	4,224,843	2,691,076	214	11,085,706	13,676,479	144	8,008,049	15,215,651	28	1,603,895	4,121,868
45 to 49	1	9,588	16,768	73	3,300,200	1,987,412	147	7,391,050	8,651,023	143	7,651,241	15,704,962	153	9,176,806	28,413,685
50 to 54	2	49,172	57,275	57	2,684,843	1,592,519	144	7,024,825	8,552,296	128	6,541,688	13,461,838	98	5,478,775	17,406,814
55 to 59	2	56,351	337,728	46	2,053,023	1,347,343	95	4,913,257	5,849,376	65	3,180,311	6,237,791	44	2,447,174	7,731,734
60 to 64	1	39,008	12,286	13	651,026	401,644	23	1,137,006	1,300,554	16	805,877	1,562,696	11	568,339	1,605,744
65 & Up	-	-	-	3	164,433	90,523	1	33,028	30,394	1	39,383	110,312	1	51,570	222,986
<b>Total</b>	<b>7</b>	<b>185,987</b>	<b>428,040</b>	<b>572</b>	<b>26,928,508</b>	<b>16,187,944</b>	<b>851</b>	<b>43,588,963</b>	<b>50,575,445</b>	<b>531</b>	<b>28,076,512</b>	<b>55,124,865</b>	<b>336</b>	<b>19,368,602</b>	<b>59,605,957</b>

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	10	470,715	231,999
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	187	9,238,077	6,103,134
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	355	18,069,313	17,196,341
40 to 44	2	92,185	293,707	-	-	-	-	-	-	-	-	-	479	25,014,678	35,998,781
45 to 49	56	3,605,973	13,452,976	-	-	-	-	-	-	-	-	-	573	31,134,858	68,226,826
50 to 54	84	4,933,491	20,730,233	7	533,475	2,209,208	-	-	-	-	-	-	520	27,246,269	64,010,183
55 to 59	28	1,682,820	7,073,173	3	231,093	975,590	-	-	-	-	-	-	283	14,564,029	29,552,735
60 to 64	5	267,341	1,318,290	1	87,176	206,409	-	-	-	-	-	-	70	3,555,773	6,407,623
65 & Up	1	69,327	337,692	-	-	-	-	-	-	-	-	-	7	357,741	791,907
<b>Total</b>	<b>176</b>	<b>10,651,137</b>	<b>43,206,071</b>	<b>11</b>	<b>851,744</b>	<b>3,391,207</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,484</b>	<b>129,651,453</b>	<b>228,519,529</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.8 Active Membership  
State Agencies, Police & Fire, Tier Two**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	29	826,593	78,238	1	29,193	8,371	-	-	-	-	-	-	-	-	-
25 to 29	291	10,872,689	1,793,904	57	2,495,778	884,893	-	-	-	-	-	-	-	-	-
30 to 34	378	14,065,408	2,672,632	215	9,911,514	3,575,319	-	-	-	-	-	-	-	-	-
35 to 39	277	10,465,637	1,968,725	187	8,604,303	3,106,040	-	-	-	-	-	-	-	-	-
40 to 44	233	9,360,608	1,772,394	147	6,537,141	2,412,129	-	-	-	-	-	-	-	-	-
45 to 49	198	7,646,598	1,376,124	124	5,666,549	2,024,375	-	-	-	-	-	-	-	-	-
50 to 54	174	6,702,308	1,234,090	92	4,041,132	1,481,757	-	-	-	-	-	-	-	-	-
55 to 59	101	3,963,191	789,574	63	2,775,032	1,018,752	-	-	-	1	145,514	149,722	-	-	-
60 to 64	33	1,279,522	218,621	16	730,303	275,590	-	-	-	-	-	-	-	-	-
65 & Up	8	459,028	76,722	3	246,713	97,031	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>1,722</b>	<b>65,661,582</b>	<b>11,981,024</b>	<b>905</b>	<b>41,037,658</b>	<b>14,884,257</b>	-	-	-	<b>1</b>	<b>145,514</b>	<b>149,722</b>	-	-	-

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	30	855,766	86,609
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	348	13,368,467	2,678,797
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	593	23,976,922	6,247,951
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	464	19,069,940	5,074,765
40 to 44	-	-	-	-	-	-	-	-	-	-	-	-	380	15,917,749	4,184,523
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-	322	13,313,147	3,400,499
50 to 54	-	-	-	-	-	-	-	-	-	-	-	-	266	10,743,440	2,715,847
55 to 59	-	-	-	-	-	-	-	-	-	-	-	-	165	6,883,737	1,958,048
60 to 64	-	-	-	-	-	-	-	-	-	-	-	-	49	2,009,825	494,211
65 & Up	-	-	-	-	-	-	-	-	-	-	-	-	11	705,741	173,753
<b>Total</b>	-	-	-	-	-	-	-	-	-	-	-	-	<b>2,628</b>	<b>106,844,754</b>	<b>27,015,003</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.9 Active Membership  
Community Colleges, Tier One**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	1	26,408	8,888	3	82,819	44,057	-	-	-	-	-	-	-	-	-
30 to 34	2	40,109	12,897	37	1,324,885	721,515	20	601,253	631,971	-	-	-	-	-	-
35 to 39	3	74,768	22,878	83	2,883,271	1,916,836	68	2,850,020	2,715,419	11	461,707	685,263	-	-	-
40 to 44	8	296,224	75,255	117	4,816,811	3,163,326	144	6,130,387	6,513,642	63	2,966,859	4,761,951	16	774,679	2,003,697
45 to 49	1	29,228	6,327	157	6,005,866	3,868,978	229	9,689,331	10,523,613	107	5,094,462	9,242,639	70	3,151,397	9,280,986
50 to 54	2	23,996	37,689	219	7,964,859	5,271,592	368	16,254,203	17,493,801	211	10,083,824	18,675,404	157	8,401,107	24,233,270
55 to 59	3	82,701	22,400	145	5,532,702	3,776,373	257	10,710,847	12,060,738	191	9,236,304	17,118,787	118	6,338,785	18,751,881
60 to 64	3	45,857	13,826	70	2,334,708	1,584,376	85	3,285,921	3,553,383	78	3,782,398	6,937,330	39	2,095,605	6,206,811
65 & Up	2	42,670	14,617	16	422,045	275,139	22	848,312	958,244	15	556,008	979,846	7	283,092	699,845
<b>Total</b>	<b>25</b>	<b>661,961</b>	<b>214,777</b>	<b>847</b>	<b>31,367,966</b>	<b>20,622,192</b>	<b>1,193</b>	<b>50,370,274</b>	<b>54,450,811</b>	<b>676</b>	<b>32,171,562</b>	<b>58,401,220</b>	<b>407</b>	<b>21,044,665</b>	<b>61,176,490</b>
Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	4	109,227	52,945
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	59	1,966,247	1,366,383
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	165	6,269,766	5,340,396
40 to 44	-	-	-	-	-	-	-	-	-	-	-	-	348	14,974,960	16,517,871
45 to 49	17	847,272	2,890,258	-	-	-	-	-	-	-	-	-	581	24,817,556	35,812,801
50 to 54	108	5,876,716	23,591,432	8	414,160	1,769,847	-	-	-	-	-	-	1,073	49,018,865	91,073,035
55 to 59	73	4,064,531	16,774,979	11	624,292	3,207,324	-	-	-	-	-	-	798	36,590,162	71,712,482
60 to 64	7	353,885	1,330,232	9	604,284	3,477,783	2	168,488	1,088,799	-	-	-	293	12,671,146	24,192,540
65 & Up	-	-	-	1	58,344	452,994	-	-	-	-	-	-	63	2,210,471	3,360,665
<b>Total</b>	<b>205</b>	<b>11,142,404</b>	<b>44,586,901</b>	<b>29</b>	<b>1,701,080</b>	<b>8,907,948</b>	<b>2</b>	<b>168,488</b>	<b>1,088,799</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3,384</b>	<b>148,628,400</b>	<b>249,449,138</b>



**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.10 Active Membership  
Community Colleges, Tier Two**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	126	1,552,292	167,856	1	17,733	4,051	-	-	-	-	-	-	-	-	-
25 to 29	240	5,336,359	750,688	24	714,338	242,547	-	-	-	-	-	-	-	-	-
30 to 34	384	10,257,813	1,727,522	68	2,314,079	857,541	-	-	-	-	-	-	-	-	-
35 to 39	360	10,693,153	1,812,199	112	3,754,257	1,396,668	-	-	-	-	-	-	-	-	-
40 to 44	369	10,720,019	1,867,020	140	5,022,100	1,822,469	-	-	-	-	-	-	-	-	-
45 to 49	406	12,156,327	2,171,701	161	5,706,751	2,138,802	-	-	-	-	-	-	-	-	-
50 to 54	423	12,638,595	2,232,487	176	6,658,788	2,592,618	-	-	-	-	-	-	-	-	-
55 to 59	306	9,394,319	1,713,645	143	4,890,999	1,872,390	-	-	-	-	-	-	-	-	-
60 to 64	109	2,989,468	575,501	50	1,665,291	570,123	-	-	-	-	-	-	-	-	-
65 & Up	48	999,555	190,634	25	447,831	172,695	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>2,791</b>	<b>76,737,900</b>	<b>13,209,253</b>	<b>900</b>	<b>31,092,167</b>	<b>11,669,704</b>	-	-	-	-	-	-	-	-	-

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	127	1,570,025	171,907
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	264	6,050,697	993,235
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	452	12,571,892	2,585,063
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	492	14,447,410	3,208,867
40 to 44	-	-	-	-	-	-	-	-	-	-	-	-	509	15,742,119	3,689,489
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-	567	17,863,078	4,310,303
50 to 54	-	-	-	-	-	-	-	-	-	-	-	-	599	19,297,383	4,825,105
55 to 59	-	-	-	-	-	-	-	-	-	-	-	-	449	14,285,318	3,586,035
60 to 64	-	-	-	-	-	-	-	-	-	-	-	-	159	4,554,759	1,145,624
65 & Up	-	-	-	-	-	-	-	-	-	-	-	-	73	1,447,386	363,329
<b>Total</b>	-	-	-	-	-	-	-	-	-	-	-	-	<b>3,691</b>	<b>107,830,067</b>	<b>24,878,967</b>

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM 2003 ACTUARIAL VALUATION

**Table C.11 Active Membership  
School Districts, Tier One**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	4	137,413	32,858	46	1,148,551	627,798	1	38,890	25,437	-	-	-	-	-	-
30 to 34	28	658,139	249,282	870	31,575,354	19,450,499	107	3,949,602	3,554,016	1	61,195	99,665	-	-	-
35 to 39	35	760,660	345,448	1,048	37,758,333	25,174,264	1,276	55,558,749	57,874,836	117	5,148,527	7,783,396	4	146,406	386,218
40 to 44	29	491,707	301,253	1,175	35,963,288	23,734,440	1,606	64,537,223	73,087,894	1,312	63,987,284	114,496,634	167	6,978,541	19,454,284
45 to 49	29	642,460	271,723	1,571	45,440,362	30,158,504	2,297	81,991,923	92,313,462	1,498	67,348,274	129,183,693	1,783	91,438,034	274,333,938
50 to 54	19	352,499	212,732	1,517	45,306,112	31,114,339	2,918	105,418,275	122,320,011	2,237	93,625,663	181,261,038	2,087	102,959,937	322,650,666
55 to 59	18	305,884	150,115	807	24,481,161	17,366,830	1,849	68,259,685	79,749,098	1,549	63,354,952	123,042,143	1,093	50,207,756	154,691,785
60 to 64	8	182,218	47,149	281	8,435,661	5,992,570	466	16,323,904	19,435,654	351	13,376,075	25,886,908	167	6,454,704	19,464,120
65 & Up	4	69,410	24,151	82	1,862,030	1,161,898	76	1,956,107	2,197,550	33	1,035,931	2,064,206	13	530,742	1,649,816
<b>Total</b>	<b>174</b>	<b>3,600,410</b>	<b>1,634,711</b>	<b>7,407</b>	<b>231,770,852</b>	<b>154,781,142</b>	<b>10,596</b>	<b>398,034,358</b>	<b>450,557,958</b>	<b>7,098</b>	<b>307,937,901</b>	<b>583,817,683</b>	<b>5,314</b>	<b>258,716,120</b>	<b>792,630,847</b>

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	53	1,324,854	686,093
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	1,014	36,244,290	23,353,462
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	2,480	99,372,695	91,564,162
40 to 44	2	86,243	309,194	-	-	-	-	-	-	-	-	-	4,291	172,044,286	231,383,699
45 to 49	278	13,375,004	51,853,552	2	48,274	348,003	-	-	-	-	-	-	7,458	300,284,331	578,462,875
50 to 54	1,923	107,244,140	441,253,009	57	3,487,164	16,570,526	-	-	-	-	-	-	10,758	458,393,790	1,115,382,341
55 to 59	591	31,308,509	127,293,528	92	5,667,815	27,823,622	2	121,264	853,117	-	-	-	6,001	243,707,026	530,970,238
60 to 64	71	2,666,551	10,930,338	17	753,691	4,000,357	7	381,351	2,271,321	-	-	-	1,368	48,574,155	88,028,417
65 & Up	5	152,180	576,181	3	126,319	806,947	1	60,142	473,255	-	-	-	217	5,592,861	8,954,004
<b>Total</b>	<b>2,870</b>	<b>154,832,627</b>	<b>632,215,802</b>	<b>171</b>	<b>10,083,263</b>	<b>49,549,455</b>	<b>10</b>	<b>562,757</b>	<b>3,597,693</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>33,640</b>	<b>1,365,538,288</b>	<b>2,668,785,291</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.12 Active Membership  
School Districts, Tier Two**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	536	9,031,265	845,044	4	100,046	32,409	-	-	-	-	-	-	-	-	-
25 to 29	3,569	99,112,918	16,416,333	226	7,018,019	2,530,878	-	-	-	-	-	-	-	-	-
30 to 34	3,556	102,494,576	20,340,633	1,093	38,707,628	14,882,769	-	-	-	-	-	-	-	-	-
35 to 39	2,887	71,608,308	13,446,377	783	25,110,839	9,672,379	-	-	-	-	-	-	-	-	-
40 to 44	3,213	69,081,163	13,069,201	1,026	26,802,591	10,042,263	-	-	-	-	-	-	-	-	-
45 to 49	3,079	67,884,552	13,010,603	1,264	31,685,827	11,984,856	-	-	-	1	65,506	96,844	-	-	-
50 to 54	2,245	54,108,919	10,516,858	996	26,152,859	9,951,050	-	-	-	-	-	-	-	-	-
55 to 59	1,244	31,271,378	6,282,471	558	16,023,667	6,170,098	-	-	-	-	-	-	-	-	-
60 to 64	507	11,017,446	2,226,916	225	5,744,268	2,269,412	-	-	-	-	-	-	-	-	-
65 & Up	178	2,757,448	518,884	67	1,354,810	540,934	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>21,014</b>	<b>518,367,973</b>	<b>96,673,320</b>	<b>6,242</b>	<b>178,700,554</b>	<b>68,077,048</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>65,506</b>	<b>96,844</b>	<b>-</b>	<b>-</b>	<b>-</b>

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	540	9,131,311	877,453
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	3,795	106,130,937	18,947,211
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	4,649	141,202,204	35,223,402
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	3,670	96,719,147	23,118,756
40 to 44	-	-	-	-	-	-	-	-	-	-	-	-	4,239	95,883,754	23,111,464
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-	4,344	99,635,885	25,092,303
50 to 54	-	-	-	-	-	-	-	-	-	-	-	-	3,241	80,261,778	20,467,908
55 to 59	-	-	-	-	-	-	-	-	-	-	-	-	1,802	47,295,045	12,452,569
60 to 64	-	-	-	-	-	-	-	-	-	-	-	-	732	16,761,714	4,496,328
65 & Up	-	-	-	-	-	-	-	-	-	-	-	-	245	4,112,258	1,059,818
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>27,257</b>	<b>697,134,033</b>	<b>164,847,212</b>

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM 2003 ACTUARIAL VALUATION

**Table C.13 Active Membership  
Local Employers, General Service, Tier One**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	7	105,746	37,285	82	2,857,099	1,377,873	9	313,728	222,984	-	-	-	-	-	-
30 to 34	18	622,984	179,131	430	18,009,537	10,500,779	212	9,153,014	8,425,564	5	189,800	258,915	-	-	-
35 to 39	13	550,955	167,281	652	28,821,526	17,791,480	671	30,873,843	31,868,421	156	6,974,901	11,652,227	5	276,473	544,412
40 to 44	15	599,875	206,667	676	31,146,239	19,441,517	1,047	49,716,767	55,152,731	564	27,970,430	49,504,645	157	7,751,793	21,474,949
45 to 49	11	201,532	103,834	848	37,508,917	24,805,730	1,390	67,895,153	76,429,874	1,001	51,629,877	94,812,838	633	33,870,406	100,053,633
50 to 54	9	275,446	151,524	848	37,725,484	25,111,995	1,531	73,471,129	85,900,567	1,216	63,693,446	119,680,732	924	51,411,582	158,744,439
55 to 59	2	5,691	62,195	520	23,495,347	15,884,984	1,076	52,592,188	62,256,842	855	44,399,792	83,689,496	476	26,090,905	78,723,018
60 to 64	3	94,302	34,779	213	8,865,272	5,974,531	397	18,469,840	21,507,190	266	13,614,920	25,503,765	105	5,785,599	16,211,969
65 & Up	8	308,021	119,888	72	2,310,791	1,491,951	88	3,776,396	4,367,409	32	1,591,347	2,749,782	8	323,548	942,852
<b>Total</b>	<b>86</b>	<b>2,764,552</b>	<b>1,062,584</b>	<b>4,341</b>	<b>190,730,212</b>	<b>122,380,840</b>	<b>6,421</b>	<b>306,262,058</b>	<b>346,131,582</b>	<b>4,095</b>	<b>210,064,513</b>	<b>387,852,400</b>	<b>2,308</b>	<b>125,510,306</b>	<b>376,695,272</b>
Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	98	3,276,573	1,638,142
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	665	27,975,335	19,364,389
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	1,497	67,497,698	62,023,821
40 to 44	5	211,548	733,772	-	-	-	-	-	-	-	-	-	2,464	117,396,652	146,514,281
45 to 49	210	10,613,947	39,744,842	1	54,081	223,412	-	-	-	-	-	-	4,094	201,773,913	336,174,163
50 to 54	596	34,320,970	137,023,290	56	2,978,401	13,124,395	1	35,106	254,164	-	-	-	5,181	263,911,564	539,991,106
55 to 59	298	17,497,075	69,388,524	52	3,354,306	14,608,584	8	406,931	1,707,083	-	-	-	3,287	167,842,235	326,320,726
60 to 64	45	2,798,504	11,780,380	11	858,864	3,943,984	4	186,452	956,599	3	124,589	576,303	1,047	50,788,342	86,489,500
65 & Up	6	360,018	1,220,899	3	230,471	1,164,213	4	290,354	1,661,594	3	206,531	2,855,553	224	9,397,477	16,574,141
<b>Total</b>	<b>1,160</b>	<b>65,802,062</b>	<b>259,891,707</b>	<b>123</b>	<b>7,476,123</b>	<b>33,064,588</b>	<b>17</b>	<b>918,843</b>	<b>4,579,440</b>	<b>6</b>	<b>331,120</b>	<b>3,431,856</b>	<b>18,557</b>	<b>909,859,789</b>	<b>1,535,090,269</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.14 Active Membership  
Local Employers, General Service, Tier Two**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	776	14,421,971	1,620,616	31	554,168	191,438	-	-	-	-	-	-	-	-	-
25 to 29	1,985	62,118,491	9,155,915	279	10,434,913	3,560,640	-	-	-	-	-	-	-	-	-
30 to 34	2,303	82,407,108	13,963,823	676	27,181,068	9,963,448	-	-	-	-	-	-	-	-	-
35 to 39	2,004	75,080,935	12,563,120	708	30,504,783	11,219,539	-	-	-	-	-	-	-	-	-
40 to 44	1,960	73,296,191	12,255,948	736	31,945,861	12,111,186	-	-	-	-	-	-	-	-	-
45 to 49	1,875	70,985,662	12,334,635	832	35,196,993	13,277,822	-	-	-	-	-	-	-	-	-
50 to 54	1,650	63,271,136	10,906,525	769	33,341,409	12,392,987	-	-	-	-	-	-	-	-	-
55 to 59	1,122	44,825,201	7,793,255	485	21,016,486	7,948,597	-	-	-	-	-	-	-	-	-
60 to 64	399	14,281,408	2,517,296	200	8,228,434	3,158,468	1	82,406	39,561	-	-	-	-	-	-
65 & Up	150	3,604,884	638,680	78	2,311,160	895,545	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>14,214</b>	<b>504,292,987</b>	<b>83,749,813</b>	<b>4,794</b>	<b>200,715,295</b>	<b>74,719,670</b>	<b>1</b>	<b>82,406</b>	<b>39,561</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	807	14,976,159	1,812,054
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	2,264	72,553,404	12,716,555
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	2,979	109,588,176	23,927,271
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	2,712	105,585,718	23,782,659
40 to 44	-	-	-	-	-	-	-	-	-	-	-	-	2,686	105,242,052	24,367,134
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-	2,707	106,182,655	25,612,457
50 to 54	-	-	-	-	-	-	-	-	-	-	-	-	2,419	96,612,545	23,299,512
55 to 59	-	-	-	-	-	-	-	-	-	-	-	-	1,607	65,841,687	15,741,852
60 to 64	-	-	-	-	-	-	-	-	-	-	-	-	600	22,592,248	5,715,325
65 & Up	-	-	-	-	-	-	-	-	-	-	-	-	228	5,916,044	1,534,225
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>19,009</b>	<b>705,090,688</b>	<b>158,509,044</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.15 Active Membership  
Local Employers, Police & Fire, Tier One**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	2	88,867	18,484	20	1,187,554	519,205	-	-	-	-	-	-	-	-	-
30 to 34	3	90,909	38,209	385	23,860,091	13,601,615	83	5,556,215	4,685,521	-	-	-	-	-	-
35 to 39	2	94,651	27,796	345	21,119,540	12,828,139	509	32,845,825	34,404,334	78	5,137,801	7,568,525	1	65,448	135,953
40 to 44	1	2,119	12,101	146	9,022,497	5,580,726	349	22,186,289	25,171,318	354	23,984,597	41,812,504	62	4,441,935	11,230,411
45 to 49	1	56,217	26,318	97	5,228,232	3,380,085	211	13,319,145	15,213,463	294	19,221,298	36,044,301	354	25,000,776	71,471,562
50 to 54	1	59,433	180,028	54	2,968,853	1,860,314	149	8,467,416	10,318,703	193	12,373,526	22,897,664	264	18,336,937	54,043,685
55 to 59	1	56,454	102,537	23	1,361,013	832,465	72	4,038,875	4,835,939	100	6,006,329	11,501,077	67	4,422,543	13,227,097
60 to 64	-	-	-	7	309,983	197,426	21	1,169,406	1,384,478	20	1,051,168	1,914,427	9	546,944	1,555,161
65 & Up	-	-	-	2	119,986	85,234	2	185,460	184,377	-	-	-	-	-	-
<b>Total</b>	<b>11</b>	<b>448,650</b>	<b>405,473</b>	<b>1,079</b>	<b>65,177,749</b>	<b>38,885,209</b>	<b>1,396</b>	<b>87,768,631</b>	<b>96,198,133</b>	<b>1,039</b>	<b>67,774,719</b>	<b>121,738,498</b>	<b>757</b>	<b>52,814,583</b>	<b>151,663,869</b>

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	22	1,276,421	537,689
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	471	29,507,215	18,325,345
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	935	59,263,265	54,964,747
40 to 44	1	63,407	161,740	-	-	-	-	-	-	-	-	-	913	59,700,844	83,968,800
45 to 49	99	7,391,520	26,601,607	-	-	-	-	-	-	-	-	-	1,056	70,217,188	152,737,336
50 to 54	141	10,462,900	38,547,834	9	710,235	3,079,182	-	-	-	-	-	-	811	53,379,300	130,927,410
55 to 59	25	1,909,421	6,943,169	11	877,272	3,743,956	1	69,180	227,980	-	-	-	300	18,741,087	41,414,220
60 to 64	1	63,675	253,714	-	-	-	-	-	-	-	-	-	58	3,141,176	5,305,206
65 & Up	1	45,439	4,560	1	59,840	201,102	-	-	-	-	-	-	6	410,725	475,273
<b>Total</b>	<b>268</b>	<b>19,936,362</b>	<b>72,512,624</b>	<b>21</b>	<b>1,647,347</b>	<b>7,024,240</b>	<b>1</b>	<b>69,180</b>	<b>227,980</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4,572</b>	<b>295,637,221</b>	<b>488,656,026</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.16 Active Membership  
Local Employers, Police & Fire, Tier Two**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	85	3,075,270	281,719	1	56,067	8,550	-	-	-	-	-	-	-	-	-
25 to 29	742	34,163,750	5,557,602	139	7,466,444	2,415,251	-	-	-	-	-	-	-	-	-
30 to 34	702	34,411,299	6,267,359	457	25,706,748	8,988,689	-	-	-	-	-	-	-	-	-
35 to 39	360	17,464,483	3,340,664	263	14,539,537	5,245,000	-	-	-	-	-	-	-	-	-
40 to 44	171	8,073,563	1,431,806	105	5,505,822	2,012,943	-	-	-	-	-	-	-	-	-
45 to 49	101	4,708,405	857,482	85	4,515,624	1,676,006	-	-	-	-	-	-	-	-	-
50 to 54	66	3,163,356	579,893	49	2,524,393	978,581	-	-	-	-	-	-	-	-	-
55 to 59	56	2,625,830	472,520	19	1,031,683	388,494	-	-	-	-	-	-	-	-	-
60 to 64	10	341,748	76,223	3	122,658	41,383	-	-	-	-	-	-	-	-	-
65 & Up	5	85,764	10,041	2	81,113	31,769	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>2,298</b>	<b>108,113,468</b>	<b>18,875,309</b>	<b>1,123</b>	<b>61,550,089</b>	<b>21,786,666</b>	-	-	-	-	-	-	-	-	-

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	86	3,131,337	290,269
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	881	41,630,194	7,972,853
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	1,159	60,118,047	15,256,048
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	623	32,004,020	8,585,664
40 to 44	-	-	-	-	-	-	-	-	-	-	-	-	276	13,579,385	3,444,749
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-	186	9,224,029	2,533,488
50 to 54	-	-	-	-	-	-	-	-	-	-	-	-	115	5,687,749	1,558,474
55 to 59	-	-	-	-	-	-	-	-	-	-	-	-	75	3,657,513	861,014
60 to 64	-	-	-	-	-	-	-	-	-	-	-	-	13	464,406	117,606
65 & Up	-	-	-	-	-	-	-	-	-	-	-	-	7	166,877	41,810
<b>Total</b>	-	-	-	-	-	-	-	-	-	-	-	-	<b>3,421</b>	<b>169,663,557</b>	<b>40,661,975</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.17 Active Membership  
Judge Members, Tier One**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 to 44	-	-	-	2	189,276	60,034	3	274,196	255,128	-	-	-	-	-	-
45 to 49	-	-	-	4	383,528	241,455	5	479,356	615,575	1	95,882	149,454	-	-	-
50 to 54	1	28,174	3,029	15	1,462,214	1,094,216	16	1,539,908	2,185,229	11	1,040,678	2,011,498	6	582,559	1,883,093
55 to 59	-	-	-	14	1,351,152	934,972	15	1,459,180	2,111,899	12	1,152,056	3,021,218	16	1,536,379	6,798,913
60 to 64	-	-	-	6	577,386	341,940	5	480,417	695,632	5	487,559	1,289,591	2	192,328	687,633
65 & Up	-	-	-	1	95,926	100,920	-	-	-	1	96,164	95,773	-	-	-
<b>Total</b>	<b>1</b>	<b>28,174</b>	<b>3,029</b>	<b>42</b>	<b>4,059,482</b>	<b>2,773,537</b>	<b>44</b>	<b>4,233,057</b>	<b>5,863,463</b>	<b>30</b>	<b>2,872,339</b>	<b>6,567,534</b>	<b>24</b>	<b>2,311,266</b>	<b>9,369,639</b>
Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 to 44	-	-	-	-	-	-	-	-	-	-	-	-	5	463,472	315,162
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-	10	958,766	1,006,484
50 to 54	3	287,749	1,162,211	-	-	-	-	-	-	-	-	-	52	4,941,282	8,339,276
55 to 59	8	768,038	4,234,052	2	201,391	1,265,142	-	-	-	-	-	-	67	6,468,196	18,366,196
60 to 64	4	401,093	2,678,742	-	-	-	-	-	-	-	-	-	22	2,138,783	5,693,538
65 & Up	3	299,115	1,787,774	1	96,164	411,946	1	108,483	686,778	-	-	-	7	695,852	3,083,191
<b>Total</b>	<b>18</b>	<b>1,755,995</b>	<b>9,862,779</b>	<b>3</b>	<b>297,555</b>	<b>1,877,088</b>	<b>1</b>	<b>108,483</b>	<b>686,778</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>163</b>	<b>15,666,351</b>	<b>36,803,847</b>



**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.18 Active Membership  
Judge Members, Tier Two**

Age	0 - 4			5 - 9			10 - 14			15 - 19			20 - 24		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 to 44	2	182,680	19,087	-	-	-	-	-	-	-	-	-	-	-	-
45 to 49	3	279,990	31,456	-	-	-	-	-	-	-	-	-	-	-	-
50 to 54	5	439,852	57,864	-	-	-	-	-	-	-	-	-	-	-	-
55 to 59	6	579,226	145,630	-	-	-	-	-	-	-	-	-	-	-	-
60 to 64	1	96,164	28,369	-	-	-	-	-	-	-	-	-	-	-	-
65 & Up	2	183,918	27,547	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>19</b>	<b>1,761,830</b>	<b>309,953</b>	-	-	-	-	-	-	-	-	-	-	-	-

Age	25 - 29			30 - 34			35 - 39			40 & Up			Total		
	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account	Number	Salary	Member Account
Under 25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40 to 44	-	-	-	-	-	-	-	-	-	-	-	-	2	182,680	19,087
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-	3	279,990	31,456
50 to 54	-	-	-	-	-	-	-	-	-	-	-	-	5	439,852	57,864
55 to 59	-	-	-	-	-	-	-	-	-	-	-	-	6	579,226	145,630
60 to 64	-	-	-	-	-	-	-	-	-	-	-	-	1	96,164	28,369
65 & Up	-	-	-	-	-	-	-	-	-	-	-	-	2	183,918	27,547
<b>Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>19</b>	<b>1,761,830</b>	<b>309,953</b>

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.19 Inactive Membership**

Age	<u>State Agencies</u>		<u>Community Colleges</u>		<u>School Districts</u>		<u>Local Agencies</u>		<u>Judge Members</u>		<u>System Totals</u>	
	Number	Member Account	Number	Member Account	Number	Member Account	Number	Member Account	Number	Member Account	Number	Member Account
<b>Under 30</b>	1,803	2,784,588	330	378,105	1,978	3,310,560	2,389	3,717,163	-	-	6,500	10,190,416
<b>30 - 34</b>	1,794	8,031,882	341	782,016	2,192	10,384,805	2,201	10,773,608	-	-	6,528	29,972,311
<b>35 - 39</b>	1,868	21,027,865	376	1,791,147	2,048	20,882,406	2,045	19,086,089	-	-	6,337	62,787,507
<b>40 - 44</b>	2,258	50,819,443	472	3,453,058	2,334	38,286,368	2,213	37,500,244	-	-	7,277	130,059,113
<b>45 - 49</b>	2,976	108,934,299	741	8,320,428	2,983	84,940,448	2,771	73,355,537	-	-	9,471	275,550,712
<b>50 - 54</b>	3,949	212,762,347	1,069	18,067,792	3,947	184,949,231	3,495	134,886,942	3	477,266	12,463	551,143,578
<b>55 - 59</b>	2,575	143,248,670	750	13,293,951	2,748	128,953,382	2,152	75,842,079	2	229,008	8,227	361,567,090
<b>60 - 64</b>	1,037	48,121,644	328	3,868,466	1,069	25,453,849	861	16,463,036	1	378,573	3,296	94,285,568
<b>65 - 69</b>	371	11,962,340	120	831,933	407	6,227,302	269	3,423,024	2	116,482	1,169	22,561,081
<b>70 &amp; Up</b>	496	6,470,972	94	489,509	667	5,246,269	343	1,721,851	1	811,713	1,601	14,740,314
<b>Total</b>	19,127	614,164,050	4,621	51,276,405	20,373	508,634,620	18,739	376,769,573	9	2,013,042	62,869	1,552,857,690

Note - The number of members shown above reflects employer segments, not lives.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
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**Table C.20 Retired Members and Beneficiaries  
Service Retirements**

Age	<u>State Agencies</u>		<u>Community Colleges</u>		<u>School Districts</u>		<u>Local Agencies</u>		<u>Judge Members</u>		<u>System</u>	
	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit
<b>Under 50</b>	14	461,150	-	-	6	149,769	7	166,226	-	-	27	777,145
<b>50 - 54</b>	882	25,470,972	155	707,938	629	26,217,879	936	26,267,000	-	-	2,602	78,663,789
<b>55 - 59</b>	5,215	115,792,011	1,527	14,061,917	6,711	209,832,949	4,456	96,608,105	1	6,515	17,910	436,301,497
<b>60 - 64</b>	7,064	142,402,019	2,110	20,830,898	9,581	229,069,470	5,115	86,368,305	19	1,189,747	23,889	479,860,439
<b>65 - 69</b>	6,442	116,416,200	1,509	13,463,143	8,119	156,471,024	4,202	58,639,533	20	1,020,240	20,292	346,010,140
<b>70 - 74</b>	4,968	84,131,118	922	8,168,452	6,592	104,094,958	2,780	33,212,241	25	1,388,409	15,287	230,995,178
<b>75 - 79</b>	3,724	58,823,446	419	3,155,781	5,379	70,862,121	2,078	23,325,741	23	1,403,095	11,623	157,570,184
<b>80 - 84</b>	2,677	33,052,097	161	1,224,366	4,064	41,438,007	1,462	12,689,242	20	1,010,936	8,384	89,414,648
<b>85 - 89</b>	1,406	13,950,237	40	293,155	2,385	19,064,793	669	4,636,437	10	445,179	4,510	38,389,801
<b>90 &amp; Up</b>	698	5,525,837	2	12,694	1,386	9,948,270	304	1,888,880	3	110,482	2,393	17,486,163
<b>Total</b>	33,090	596,025,087	6,845	61,918,344	44,852	867,149,240	22,009	343,801,710	121	6,574,603	106,917	1,875,468,984

Note - The number of members shown above reflects employer segments, not lives.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.21 Retired Members and Beneficiaries  
Beneficiaries and QDRO's**

Age	<u>State Agencies</u>		<u>Community Colleges</u>		<u>School Districts</u>		<u>Local Agencies</u>		<u>Judge Members</u>		<u>System</u>	
	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit
<b>Under 50</b>	271	2,319,490	49	176,636	265	2,004,316	237	1,682,524	-	-	822	6,182,966
<b>50 - 54</b>	205	2,228,733	50	251,899	163	1,754,327	218	2,245,738	-	-	636	6,480,697
<b>55 - 59</b>	308	3,807,092	69	407,262	273	3,708,698	312	3,290,537	-	-	962	11,213,589
<b>60 - 64</b>	348	4,948,741	61	378,301	342	4,484,677	245	2,834,036	2	43,742	998	12,689,497
<b>65 - 69</b>	353	4,441,254	63	547,683	329	4,261,624	287	3,096,459	-	-	1,032	12,347,021
<b>70 - 74</b>	360	4,412,759	35	223,808	318	3,175,068	305	2,683,572	5	210,060	1,023	10,705,267
<b>75 - 79</b>	441	4,361,485	25	117,601	430	3,574,398	375	2,699,372	7	215,379	1,278	10,968,235
<b>80 - 84</b>	558	5,176,152	15	69,049	485	3,094,166	349	2,248,875	4	112,532	1,411	10,700,774
<b>85 - 89</b>	346	2,704,074	8	48,990	375	2,202,210	256	1,293,051	11	268,601	996	6,516,925
<b>90 &amp; Up</b>	228	1,535,102	-	-	194	1,000,117	116	607,349	7	167,986	545	3,310,554
<b>Total</b>	<b>3,418</b>	<b>35,934,880</b>	<b>375</b>	<b>2,221,229</b>	<b>3,174</b>	<b>29,259,602</b>	<b>2,700</b>	<b>22,681,512</b>	<b>36</b>	<b>1,018,300</b>	<b>9,703</b>	<b>91,115,523</b>

Note - The number of members shown above reflects employer segments, not lives.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.22 Retired Members and Beneficiaries  
Duty Disabilities**

Age	<u>State Agencies</u>		<u>Community Colleges</u>		<u>School Districts</u>		<u>Local Agencies</u>		<u>Judge Members</u>		<u>System</u>	
	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit
<b>Under 50</b>	25	305,280	3	21,456	18	151,743	58	1,189,863	-	-	104	1,668,342
<b>50 - 54</b>	40	536,270	5	8,982	23	210,455	74	1,339,715	-	-	142	2,095,422
<b>55 - 59</b>	29	506,262	6	32,608	26	232,107	65	1,427,790	-	-	126	2,198,767
<b>60 - 64</b>	25	348,448	-	-	27	139,268	60	862,691	-	-	112	1,350,407
<b>65 - 69</b>	23	201,536	2	30,558	25	110,730	36	429,813	-	-	86	772,637
<b>70 - 74</b>	19	175,371	-	-	23	83,525	24	375,198	-	-	66	634,094
<b>75 - 79</b>	10	51,785	-	-	21	87,832	10	139,163	-	-	41	278,780
<b>80 - 84</b>	16	82,132	1	2,388	16	60,748	17	162,386	-	-	50	307,654
<b>85 - 89</b>	11	51,226	-	-	9	37,055	9	55,284	-	-	29	143,565
<b>90 &amp; Up</b>	5	22,673	-	-	4	20,937	1	5,279	-	-	10	48,889
<b>Total</b>	203	2,280,983	17	95,992	192	1,134,400	354	5,987,182	-	-	766	9,498,557

Note - The number of members shown above reflects employer segments, not lives.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM  
2003 ACTUARIAL VALUATION**

**Table C.23 Retired Members and Beneficiaries  
Ordinary Disabilities**

Age	<u>State Agencies</u>		<u>Community Colleges</u>		<u>School Districts</u>		<u>Local Agencies</u>		<u>Judge Members</u>		<u>System</u>	
	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit	Number	Annual Benefit
<b>Under 50</b>	127	2,135,506	24	86,484	91	1,608,231	141	2,249,628	-	-	383	6,079,849
<b>50 - 54</b>	209	3,422,594	52	376,530	221	4,422,681	222	3,891,526	-	-	704	12,113,331
<b>55 - 59</b>	328	4,800,132	53	402,621	316	6,491,429	305	4,972,065	-	-	1,002	16,666,247
<b>60 - 64</b>	249	3,850,908	36	257,640	281	4,465,143	213	3,589,833	-	-	779	12,163,524
<b>65 - 69</b>	175	2,562,620	34	314,324	239	3,738,623	121	1,729,281	-	-	569	8,344,848
<b>70 - 74</b>	99	1,358,748	7	88,364	151	2,084,910	65	929,284	-	-	322	4,461,306
<b>75 - 79</b>	54	553,280	1	11,414	105	1,214,598	54	549,811	-	-	214	2,329,103
<b>80 - 84</b>	36	269,754	-	-	76	675,499	37	358,934	-	-	149	1,304,187
<b>85 - 89</b>	28	184,862	-	-	39	320,364	21	141,581	-	-	88	646,807
<b>90 &amp; Up</b>	11	64,268	-	-	32	224,311	9	52,336	-	-	52	340,915
<b>Total</b>	1,316	19,202,672	207	1,537,377	1,551	25,245,789	1,188	18,464,279	-	-	4,262	64,450,117

Note - The number of members shown above reflects employer segments, not lives.

# OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

## 2003 ACTUARIAL VALUATION

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### Appendix D Glossary

The following definitions are largely excerpts from a list adopted in 1981 by the major actuarial organizations in the United States. In some cases, the definitions have been modified for specific applicability to this System. Defined terms are capitalized throughout this Appendix.

- 1. Accrued Benefit**

The amount of an individual's benefit (whether or not vested) as of a specific date, determined in accordance with the terms of a pension plan and based on compensation and service to that date.
- 2. Actuarial Assumptions**

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement, and retirement; changes in compensation; rates of investment earnings, and asset appreciation or depreciation; and other relevant items.
- 3. Actuarial Cost Method**

A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Liability.
- 4. Actuarial Gain (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.
- 5. Actuarial Liability**

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.
- 6. Actuarial Present Value**

The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions.
- 7. Actuarial Valuation**

The determination, as of a Valuation Date, of the Normal Cost, Actuarial Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

**OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM**  
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**8. Actuarial Value of Assets**

The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation. An asset smoothing method recognizes investment gains and losses over a period of years, rather than immediately.

**9. Actuarially Equivalent**

Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

**10. Amortization Payment**

That portion of the pension plan contribution that is designed to pay interest on and to amortize the Unfunded Actuarial Liability.

**11. Entry Age Actuarial Cost Method**

A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the Actuarial Present Value of future Normal Costs is called the Actuarial Liability.

**12. Normal Cost**

That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

**13. Projected Benefits**

Those pension plan benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits.

**14. Unfunded Actuarial Liability**

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

**15. Valuation Date**

December 31, 2003.