Accumulated Sick Leave Conversion Credit Programs

**Annual Actuarial Valuations** 

**DECEMBER 31, 2003** 

Presented to the Wisconsin Department of Employee Trust Funds

Combined Results and Discussion

# ASLCC PROGRAM BASE PLUS SUPPLEMENTAL COMPUTED TOTAL EMPLOYER CONTRIBUTION RATES

The financial objectives of the ASLCC Program are to establish and receive contributions to support benefits that will remain approximately level from year to year. Combined program valuation results since 1995 are presented below.

Valuation Date December 31	Base	Supplemental	Total	UAAL* Amortization
December 31	Base	Supplemental	Total	Years
1995	1.9%	1.1%	3.0%	29
1996	1.8%	1.1%	2.9%	28
1997@#	1.8%	0.9%	2.7%	27
1998	1.9%	0.8%	2.7%	20
1999	1.8%	0.9%	2.7%	25
2000@	1.7%	1.0%	2.7%	24
2001	1.7%	1.1%	2.8%	24
2002	1.8%	1.2%	3.0%	23
2003@&	0.9%	0.5%	1.4%	22

<sup>\*</sup> Unfunded actuarial accrued liabilities

### **COMMENTS**

- Based on the policy established at the June 2002 ETF Board meeting, the amortization period for unfunded actuarial accrued liabilities was closed. Therefore, the remaining period will decline one year at a time until the UAAL is fully amortized.
- The decrease in contribution rates shown above from 2002 to 2003 is primarily due to the issuance of Pension Obligation Bonds by the state of Wisconsin which paid off the majority of unfunded liabilities of the ASLCC Program.
- In computing the recommended rates in this report, we used the frozen initial liability (FIL) method. This method was used because the Pension Obligation Bond paid off unfunded liabilities for some, but not all employers, requiring separate contribution rates for some of the employers. We recommend the use of the FIL method in this report and future reports. This method is described further on page 12.

<sup>(</sup>a) Assumption change.

<sup>#</sup> Benefit change.

<sup>&</sup>amp; Method change.

# ASLCC PROGRAM SUMMARY OF PARTICIPANT DATA DECEMBER 31, 2003

# **Active Participants**

	State Employees			
	(Non-University)	University	University Hospital	Total
Number	34,569	28,655	5,142	68,366
Annual Payroll	\$ 1,638,018,246	\$ 1,483,218,060	\$227,772,490	\$ 3,349,008,795
Accrued Unused Sick Days	2,763,831 days	2,563,645 days	205,848 days	5,533,324 days
Averages: Age	44.6 years	46.3 years	40.4 years	45.0 years
Service	12.5 years	11.7 years	8.1 years	11.8 years
Sick Leave Days	80.0 days	89.5 days	40.0 days	80.9 days

# Retirees & Beneficiaries

Rate Category

	Nate Ca	uegui y	
	Without Medicare	With Medicare	Total
Number*	3,572	5,472	9,044
Monthly Premiums			
Total	\$2,787,430	\$3,096,612	\$5,884,042
Average	\$780.36	\$565.90	. ,
Prior Year Average	\$761.02	\$536.91	•

<sup>\*</sup> Number count does not include 2,983 escrowed annuitants.

# ASLCC PROGRAM SUMMARY OF ASSETS DECEMBER 31, 2003

		Base Program	Supplemental Program	Total
				 3 0 1 11
Beginning Balance	\$	618,955,692	\$ 154,164,557	\$ 773,120,249
Adjustment		0_	0	0
Adjusted Beginning Balance		618,955,692	154,164,557	773,120,249
Revenues				
Contributions		462,650,884	350,467,725	813,118,609
Investment Income		60,801,328	24,049,969	84,851,297
Total Revenues		523,452,212	374,517,694	897,969,906
Expenses				
Insurance Premiums		57,177,009	8,711,644	65,888,653
Administration		106,118	86,027	192,145
Total Expenses		57,283,127	<u>8,797,671</u>	66,080,798
Ending Balance - December 31, 2003	\$ :	1,085,124,777	\$ 519,884,580	\$ 1,605,009,357

# ASLCC PROGRAM UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL) DECEMBER 31, 2003

	University Hospital Authority	Health and Education Facility	Housing and Economic Development	Wiscraft	Other State Employers	Totals
Balance October 1, 2003	\$17,624,242	\$56,405	\$2,095,906	\$217,078	\$782,440,304	\$802,433,935
Less: Adjustments Less: Payments Plus: Interest	0 (414,054) 344,204	0 (777) 1,113	0 (32,763) 41,263	0 (4,530) 4,251	0 (782,440,304) 0	0 (782,892,428) 390,831
Balance December 31, 2003	\$17,554,392	\$56,741	\$2,104,406	\$216,799	0 \$	0 \$ 19,932,338

10,866,605	9,065,733
0	0
118,155	98,644
1,113,231	991,175
32,967	23,774
9,602,252	7,952,140
Base UAAL*	Supplemental UAAL

<sup>\*</sup> Base and Supplemental UAAL were allocated in proportion to initial UAAL as of October 1, 2003.

Base Plan Results

# **SECTION 40.05(4)(B)**

# ACCUMULATED SICK LEAVE CONVERSION CREDIT PROGRAM SUMMARY OF ACCUMULATION AND PAYMENT CONDITIONS

Accumulation. For most participants, sick leave has historically accrued at the rate of 4 hours every two weeks to a maximum of 13 days a year. The potential accrual rate was increased to 5 hours per pay period in 1998, which corresponds to 16.25 days per year. Unused portions accumulate from year to year and are converted at retirement as indicated below. The average annual sick leave balance of Wisconsin state employees (other than University employees) in 2003 was 80 days. Based upon an average of 12.5 years of service, this would correspond to an average annual addition of 6.4 days per year to sick leave accounts for past years. For University and University Hospital employees, the average balance was 81.9 days. Based upon an average of 11.1 years of service, this would correspond to an average annual addition of 7.4 days per year to the sick leave accounts for past years. In the future, average annual additions are assumed to be higher because potential sick leave accrual rates have been increased. For purposes of estimating sick leave balances at retirement, each individual was assumed to continue using sick leave at the same rate as in the past but not less than 25% nor more than 75% of the person's annual accrual rate (usually 16.25 days).

Eligibility For Payment of Accrued Sick Leave. Termination of employment with 20 or more years of service or eligibility for an immediate annuity from the Wisconsin Retirement System. State elected officials and certain state administrative officials terminating before their minimum service retirement age retain eligibility for benefits at their minimum service retirement age providing they do not elect a WRS separation benefit.

Amount of Payment for Unused Sick Leave. A conversion credit is computed at the time of retirement or death by multiplying the number of days of unused sick leave by the current basic pay rate. The conversion credit is then used to cover the cost of health insurance premiums for the employee and eligible dependents. Unused portions are carried forward from year to year without interest and when total health insurance premiums paid on behalf of the retired employee equal or exceed the conversion credit, no further payments are made under the ASLCC program. Payments from the sick leave account may be escrowed indefinitely after retirement for participants who provide evidence of comparable health insurance coverage from another source.

# 40.05(4)(B) - BASE ASLCC PROGRAM DEVELOPMENT OF NORMAL COST DECEMBER 31, 2003

	Actuarial Present Value for	<b>Total Present Value</b>
(1)	Future Amount to be paid on behalf of present retirants and beneficiaries	\$ 237,108,487
(2)	Future Amount to be paid on behalf of future retirees and beneficiaries	1,169,352,222
(3)	Total	\$ 1,406,460,709
(4)	Assets	1,085,124,777
(5)	Unfunded Actuarial Accrued Liabilities (UAAL)	\$ 10,866,605
(6)	Present Value of Future Normal Cost (3) - (4) - (5)	\$ 310,469,327
(7)	Present Value of Future Salary	\$33,340,885,349
(8)	Normal Cost (6) / (7)	0.9%

# 40.05(4)(B) - BASE ASLCC PROGRAM COMPUTED EMPLOYER CONTRIBUTIONS DECEMBER 31, 2003

Contributions for	Computed Employer Contribution Rate as a % of Covered Payroll
Normal Cost	0.9%
UAAL*	0.0%
Total	0.9%

<sup>\*</sup> Unfunded actuarial accrued liabilities of \$10.9 million were amortized over 22 years. Although this results in a 0.0% of pay contribution due to rounding, unfunded liabilities are allocated to individual employers as shown on page 4 and employers having an unfunded liability will make a separate contribution towards this unfunded liability.

### Discussion:

The financial objective of the ASLCC program is to establish and receive contributions to support benefits that will remain approximately level from year to year. In 2003, the state of Wisconsin issued Pension Obligation Bonds which paid off the majority of unfunded liabilities of the ASLCC Program. Since unfunded liabilities remained for certain employers, the liability method was changed to the Frozen Initial Cost Method. Under this method, gains and losses arising from the difference between actual and assumed experience are reflected in the determination of the normal cost. Separate amortization schedules are established for employers with unfunded liabilities (see page 4), resulting in separate contribution rates for each participating employer.

# COMPARATIVE STATEMENT OF RESULTS 40.05(4)(B) - BASE ASLCC PROGRAM

Valuation         Covered         Accr.         \$ Millions         Covered         Accr.         \$ Millions         Covered         Bayroll         Covered         Bayroll         Accr.         Sick         LAAL         Bayroll         Eary oll         Bick         Book         <			1		Average		,		
No. Active         \$ Millions         Age         Service         Days         Assets         UAAL           48,127         \$1,319.9         43.1         11.0         80.6         \$20.2         \$355.0           48,292         1,412.7         43.4         11.2         81.3         34.4         391.9           48,292         1,412.7         43.4         11.2         81.3         34.4         391.9           48,247         1,434.5         43.4         11.2         80.7         50.0         383.5           49,983         1,624.3         43.4         12.2         80.7         50.0         383.5           49,983         1,624.3         43.6         11.8         78.0         92.4         407.9           54,675         1,810.4         43.4         11.8         78.0         92.4         407.9           57,577         1,932.4         43.6         11.8         77.0         186.7         380.4           58,299         2,021.8         43.5         11.8         77.0         186.7         364.4           58,290         2,184.3         44.2         12.3         79.4         283.2         54.4           57,920         2,184.3	ation		Covered			Acer.	\$ Mil	lions	Computed
No. Active         \$ Millions         Age         Service         Days         Assets         UAAL           48,127         \$1,319.9         43.1         11.0         80.6         \$20.2         \$355.0           48,292         1,412.7         43.4         11.2         81.3         34.4         391.9           48,292         1,412.7         43.4         11.2         80.7         50.0         383.5           49,983         1,624.3         43.4         12.2         80.7         50.0         383.5           49,983         1,624.3         43.4         11.8         74.7         121.6         387.4           54,675         1,810.4         43.4         11.8         74.7         121.6         387.4           58,299         2,021.8         43.5         11.6         76.0         156.4         407.9           58,299         2,021.8         43.6         11.8         77.0         186.7         364.4           58,290         2,021.8         43.6         11.8         77.0         186.7         364.4           57,920         2,184.3         44.2         12.3         79.4         283.2         241.9           60,502         2,415.5 <th>ate</th> <th></th> <th>Payroll</th> <th></th> <th></th> <th>Sick</th> <th>•</th> <th></th> <th>Employer</th>	ate		Payroll			Sick	•		Employer
48,127       \$1,319.9       43.1       11.0       80.6       \$20.2         48,292       1,412.7       43.4       11.2       81.3       34.4         48,247       1,434.5       43.4       12.2       80.7       50.0         49,983       1,624.3       43.5       12.1       80.8       73.9         54,675       1,810.4       43.4       11.8       78.0       92.4         57,577       1,932.4       43.0       11.3       74.7       121.6         58,299       2,021.8       43.3       11.6       76.0       156.4         58,299       2,021.8       43.5       11.8       77.0       186.7         58,971       2,136.9       43.6       11.8       77.0       186.7         57,940       2,184.3       44.2       12.3       79.4       283.2         58,872       2,260.8       44.3       12.3       79.4       457.0         60,502       2,415.5       44.4       12.2       79.9       392.9         62,158       2,521.6       44.6       12.2       81.0       611.7         64,510       2,980.6       44.5       12.8       80.9       619.0 <tr< th=""><th>lber 31</th><th>No. Active</th><th>\$ Millions</th><th>Age</th><th>Service</th><th>Days</th><th>Assets</th><th>UAAL</th><th>Rate</th></tr<>	lber 31	No. Active	\$ Millions	Age	Service	Days	Assets	UAAL	Rate
48,292       1,412.7       43.4       11.2       81.3       34.4         48,247       1,434.5       43.4       12.2       80.7       50.0         49,983       1,624.3       43.5       12.1       80.8       73.9         54,675       1,810.4       43.4       11.8       78.0       92.4         57,577       1,932.4       43.0       11.3       74.7       121.6         58,299       2,021.8       43.3       11.6       76.0       156.4         58,971       2,136.9       43.6       11.8       77.0       186.7         57,920       2,184.3       44.2       12.5       80.3       236.8         57,920       2,184.3       12.3       79.4       283.2         60,502       2,415.5       44.4       12.2       79.9       392.9         60,502       2,415.5       44.4       12.2       79.9       392.9         62,158       2,521.6       44.6       12.2       80.6       611.7         64,510       2,980.6       44.5       11.8       80.9       619.0         66,442       3,096.7       44.8       11.8       80.9       619.0         68,366 <td>7</td> <td>48,127</td> <td>\$1,319.9</td> <td>43.1</td> <td>11.0</td> <td>9.08</td> <td>\$20.2</td> <td>\$355.0</td> <td>2.3%</td>	7	48,127	\$1,319.9	43.1	11.0	9.08	\$20.2	\$355.0	2.3%
48,247       1,434.5       43.4       12.2       80.7       50.0         49,983       1,624.3       43.5       12.1       80.8       73.9         54,675       1,810.4       43.4       11.8       78.0       92.4         57,577       1,932.4       43.0       11.3       74.7       121.6         58,299       2,021.8       43.3       11.6       76.0       156.4         58,971       2,136.9       43.6       11.8       77.0       186.7         57,920       2,184.3       44.2       12.5       80.3       236.8         57,920       2,184.3       44.2       12.3       79.4       283.2         58,872       2,260.8       44.3       12.3       79.5       337.2         60,502       2,415.5       44.4       12.2       79.9       392.9         62,158       2,521.6       44.6       12.2       81.0       457.0         63,008       2,753.3       44.6       12.2       80.9       611.7         66,442       3,096.7       44.8       11.8       80.9       619.0         68,366       3,349.0       45.0       11.8       80.9       1,108.1 <td>8@</td> <td>48,292</td> <td>1,412.7</td> <td>43.4</td> <td>11.2</td> <td>81.3</td> <td>34.4</td> <td>391.9</td> <td>2.4%</td>	8@	48,292	1,412.7	43.4	11.2	81.3	34.4	391.9	2.4%
49,9831,624.343.512.180.873.954,6751,810.443.411.878.092.457,5771,932.443.011.374.7121.658,2992,021.843.311.676.0156.458,9712,136.943.611.877.0186.757,9412,151.944.212.580.3236.857,9202,184.344.212.379.4283.258,8722,260.844.412.279.9392.960,5022,415.544.612.279.9392.962,1582,521.644.612.280.6515.664,5102,980.644.511.880.9611.766,4423,096.744.811.880.9619.068,3663,349.045.011.880.91,085.1	6	48,247	1,434.5	43.4	12.2	80.7	50.0	383.5	2.1%
54,675       1,810.4       43.4       11.8       78.0       92.4         57,577       1,932.4       43.0       11.3       74.7       121.6         58,299       2,021.8       43.5       11.6       76.0       156.4         58,971       2,136.9       43.6       11.8       77.0       186.7         57,941       2,151.9       44.2       12.5       80.3       236.8         57,920       2,184.3       44.2       12.3       79.4       283.2         58,872       2,260.8       44.3       12.3       79.5       337.2         60,502       2,415.5       44.4       12.2       79.9       392.9         62,158       2,521.6       44.6       12.2       81.0       457.0         63,008       2,753.3       44.6       12.2       80.6       515.6         64,510       2,980.6       44.5       11.8       80.9       611.7         66,442       3,096.7       44.8       11.8       80.9       619.0         68,366       3,349.0       45.0       11.8       80.9       71,085.1	0	49,983	1,624.3	43.5	12.1	80.8	73.9	377.4	2.1%
57,577       1,932.4       43.0       11.3       74.7       121.6         58,299       2,021.8       43.3       11.6       76.0       156.4         58,299       2,021.8       43.5       11.8       77.0       156.4         57,941       2,151.9       44.2       12.5       80.3       236.8         57,920       2,184.3       44.2       12.3       79.4       283.2         58,872       2,260.8       44.3       12.3       79.5       337.2         60,502       2,415.5       44.4       12.2       79.9       392.9         62,158       2,521.6       44.6       12.2       81.0       457.0         63,008       2,753.3       44.6       12.2       81.0       457.0         64,510       2,980.6       44.5       11.8       80.9       611.7         66,442       3,096.7       44.5       11.8       80.9       11.0         68,366       3,349.0       45.0       11.8       80.9       11.0	1@	54,675	1,810.4	43.4	11.8	78.0	92.4	407.9	2.1%
58,299       2,021.8       43.3       11.6       76.0       156.4         58,971       2,136.9       43.6       11.8       77.0       186.7         57,941       2,151.9       44.2       12.5       80.3       236.8         57,920       2,184.3       44.2       12.3       79.4       283.2         58,872       2,260.8       44.3       12.3       79.5       337.2         60,502       2,415.5       44.4       12.2       79.9       392.9         62,158       2,521.6       44.6       12.2       81.0       457.0         63,008       2,753.3       44.6       12.0       80.6       515.6         64,510       2,980.6       44.5       11.8       80.9       611.7         66,442       3,096.7       44.8       11.8       80.9       1,085.1	~1	57,577	1,932.4	43.0	11.3	74.7	121.6	387.4	2.1%
58,971       2,136.9       43.6       11.8       77.0       186.7         57,941       2,151.9       44.2       12.5       80.3       236.8         57,920       2,184.3       44.2       12.3       79.4       283.2         58,872       2,260.8       44.3       12.3       79.5       337.2         60,502       2,415.5       44.4       12.2       79.9       392.9         62,158       2,521.6       44.6       12.2       81.0       457.0         63,008       2,753.3       44.6       12.0       80.6       515.6         64,510       2,980.6       44.5       11.8       80.9       611.7         66,442       3,096.7       44.8       11.8       80.9       619.0         68,366       3,349.0       45.0       11.8       80.9       1,085.1	~	58,299	2,021.8	43.3	11.6	76.0	156.4	364.4	2.1%
57,941       2,151.9       44.2       12.5       80.3       236.8         57,920       2,184.3       44.2       12.3       79.4       283.2         58,872       2,260.8       44.3       12.3       79.5       337.2         60,502       2,415.5       44.4       12.2       79.9       392.9         62,158       2,521.6       44.6       12.2       81.0       457.0         63,008       2,753.3       44.6       12.0       80.6       515.6         64,510       2,980.6       44.5       11.8       80.9       611.7         66,442       3,096.7       44.8       11.8       80.9       619.0         68,366       3,349.0       45.0       11.8       80.9       1,085.1	<u>@</u>	58,971	2,136.9	43.6	11.8	77.0	186.7	380.4	1.9%
57,920       2,184.3       44.2       12.3       79.4       283.2         58,872       2,260.8       44.3       12.3       79.5       337.2         60,502       2,415.5       44.4       12.2       79.9       392.9         62,158       2,521.6       44.6       12.2       81.0       457.0         63,008       2,753.3       44.6       12.0       80.6       515.6         64,510       2,980.6       44.5       11.8       80.9       611.7         66,442       3,096.7       44.8       11.8       80.9       619.0         68,366       3,349.0       45.0       11.8       80.9       1,085.1	10	57,941	2,151.9	44.2	12.5	80.3	236.8	370.1	1.9%
58,872         2,260.8         44.3         12.3         79.5         337.2           60,502         2,415.5         44.4         12.2         79.9         392.9           62,158         2,521.6         44.6         12.2         81.0         457.0           63,008         2,753.3         44.6         12.0         80.6         515.6           64,510         2,980.6         44.5         11.8         80.9         611.7           66,442         3,096.7         44.8         11.8         80.9         619.0           68,366         3,349.0         45.0         11.8         80.9         1,085.1		57,920	2,184.3	44.2	12.3	79.4	283.2	354.4	1.8%
60,502       2,415.5       44.4       12.2       79.9       392.9         62,158       2,521.6       44.6       12.2       81.0       457.0         63,008       2,753.3       44.6       12.0       80.6       515.6         64,510       2,980.6       44.5       11.8       80.9       611.7         66,442       3,096.7       44.8       11.8       80.9       619.0         68,366       3,349.0       45.0       11.8       80.9       1,085.1	1(Q)#	58,872	2,260.8	44.3	12.3	79.5	337.2	251.8	1.8%
62,158       2,521.6       44.6       12.2       81.0       457.0         63,008       2,753.3       44.6       12.0       80.6       515.6         64,510       2,980.6       44.5       11.8       80.9       611.7         66,442       3,096.7       44.8       11.8       80.9       619.0         68,366       3,349.0       45.0       11.8       80.9       1,085.1	~	60,502	2,415.5	44.4	12.2	79.9	392.9	241.9	1.9%
63,008       2,753.3       44.6       12.0       80.6       515.6         64,510       2,980.6       44.5       11.8       80.9       611.7         66,442       3,096.7       44.8       11.8       80.9       619.0         68,366       3,349.0       45.0       11.8       80.9       1,085.1	•	62,158	2,521.6	44.6	12.2	81.0	457.0	260.0	1.8%
64,510     2,980.6     44.5     11.8     80.9     611.7       66,442     3,096.7     44.8     11.8     80.9     619.0       68,366     3,349.0     45.0     11.8     80.9     1,085.1	<u>@</u>	63,008	2,753.3	44.6	12.0	9.08	515.6	214.2	1.7%
66,442       3,096.7       44.8       11.8       80.9       619.0         68,366       3,349.0       45.0       11.8       80.9       1,085.1		64,510	2,980.6	44.5	11.8	80.9	611.7	218.7	1.7%
68,366 3,349.0 45.0 11.8 80.9 \1,085.1	<b>5</b> )	66,442	3,096.7	44.8	11.8	80.9	619.0	262.6	1.8%
	3@&	998'399	3,349.0	45.0	11.8	6.08	$^{\sim}1,085.1$	10.9	%6.0

(a) Assumption change.# Benefit change.& Method change.

Wisconsin Department of Employee Trust Funds

# • Supplemental Plan Results

# ACCUMULATED SICK LEAVE CONVERSION CREDIT PROGRAM SUPPLEMENTAL PLAN DECEMBER 31, 2003

This supplemental plan provides matching credits for participants retiring with 15 or more years of state service as follows:

• Protective: Match up to 78 hours (9.75 days) per full year of service through 24 years, plus 104 hours (13 days) per full year of service over 24 years.

• Others: Match up to 52 hours (6.5 days) per full year of service through 24 years, plus up to 104 hours (13 days) per full year of service over 24 years.

The results below are for the supplemental program only. (The results on page 6 are for the ASLCC base program only.) The supplemental plan accrued liabilities are offset by supplemental plan assets which are accounted for separately by DETF. The contribution rate sufficient to amortize the UAAL over a period of 22 years (the same period as in the base program) is 0.5% of covered payroll as shown below.

Contributions for	Computed Employer Contribution Rate as a % of Covered Payroll
Normal Cost	0.5%
UAAL*	0.0%
Total	0.5%

<sup>\*</sup> Unfunded actuarial accrued liabilities of \$9.1 million were amortized over 22 years. Although this results in a 0.0% of pay contribution due to rounding, unfunded liabilities are allocated to individual employers as shown on page 4 and employers having an unfunded liability will make a separate contribution towards this unfunded liability.

The contribution rate shown above was developed based upon the active participant data as shown on page 2. This is the same data that was used in the development of the base plan rates.

# 40.05(4)(B) – SUPPLEMENTAL ASLCC PROGRAM DEVELOPMENT OF NORMAL COST DECEMBER 31, 2003

Actuarial Present Value f	or Total Present Value
(1) Future Amount to be paid on behalf of present retiran and beneficiaries	ts \$ 149,752,027
(2) Future Amount to be paid on behalf of future retirees and beneficiaries	538,954,157
(3) Total	\$ 688,706,184
(4) Assets	519,884,580
(5) Unfunded Actuarial Accru Liabilities (UAAL)	s 9,065,733
(6) Present Value of Future Normal Cost (3) - (4) - (5)	\$ 159,755,871
(7) Present Value of Future Sa	slary \$33,340,885,349
(8) Normal Cost (6) / (7)	0.5%

# COMPARATIVE STATEMENT OF RESULTS ASLCC SUPPLEMENTAL PLAN

				Average				
Valuation		Covered			Acer.	\$ Mil	\$ Millions	Computed
Date December 31	No. Active	Fayroll \$ Millions	Age	Service	Sick Days	Assets	UAAL	Rate
		0.121.0	C 77	10.5	803	<b>0</b>	8368	1 1%
1995	57,941	\$2,151.9	7.44	17.7	00.0	o. 9	0.0020	0/11
1996	57,920	2,184.3	44.2	12.3	79.4	0.1	273.2	1.1%
1997@#	58.872	2,260.8	44.3	12.3	79.5	13.7	154.5	%6.0
1998	60,502	2,415.5	44.4	12.2	79.9	41.2	139.6	0.8%
1999	62,158	2,521.6	44.6	12.2	81.0	69.4	143.1	%6.0
2000@	63.008	2.753.3	44.6	12.0	9.08	97.3	212.6	1.0%
2001	64.510	2,980.6	44.5	11.8	80.9	133.4	245.0	1.1%
2002	66,442	3.096.7	44.8	11.8	80.9	154.2	273.9	1.2%
2003	68 366	3 349 0	45.0	11.8	80.9	519.9	9.1	0.5%

Assumption change. Benefit change. Method change. & # B

For the 2000 and subsequent valuations, retiree liabilities were separately calculated for the supplemental plan. For 1999 and prior, those liabilities were reported as base plan liabilities. Actuarial Methods and Assumptions

# **ACTUARIAL VALUATION METHOD**

The actuarial funding method prescribed in the statute for WRS is the **Frozen Initial Liability Method**. This funding method is also used for the ASLCC valuation. Under this method, the amount of remaining unfunded accrued actuarial liabilities at any valuation date is affected only by the monthly amortization payments, compound interest, the added liability created by new employer units, and any added liabilities caused by changes in benefit provisions.

Actuarial gains or losses arising from the difference between actual and assumed experience are reflected in the determination of the normal cost. In this manner, experience gains or losses in any year are amortized (spread) over the average future working lifetime of the active participant group.

# ACTUARIAL METHOD AND ASSUMPTIONS USED IN VALUATIONS

### The principal areas of risk assumption are:

- long-term rates of investment return likely to be generated by system assets
- rates of mortality among participants, retirees and beneficiaries
- rates of withdrawal of active participants
- rates of disability among participants
- patterns of salary increases to be experienced by participants
- the age and service distribution of actual retirements
- future rates of sick leave usage by plan participants.

In an actuarial valuation, the actuary projects the monetary effect of each risk assumption for each distinct experience group, for the next year and for each year over the next half-century or longer.

Once actual risk experience has occurred and been observed, it will not coincide exactly with assumed risk experience, regardless of the skill of the actuary, the completeness of the data, and the precision of the calculations. Each valuation provides a complete recalculation of assumed future risk experience and takes into account all past differences between assumed and actual risk experience. The result is a continual series of small adjustments to the computed contribution rate. From time to time it becomes necessary to adjust the package of risk measurements to reflect basic experience trends — but not random year to year fluctuations.

The liabilities calculated in this report reflect a 5% load for contingencies. Examples of contingencies are:

- A change in the potential sick leave accrual rate in 1998 from 4 hours per pay period to 5
  hours per pay period. This reduces the accuracy of the assumption regarding future accrual
  rates since they are developed based on historical accrual rates.
- Actual data for some employers (including Health and Education Facility, Housing and Economic Development and Wiscraft) was not available at the time of this report. Based on prior calculations, they represent approximately 0.2% of total liabilities.
- Higher than anticipated rate of increase in health care costs.

# SUMMARY OF ASSUMPTIONS USED FOR ANNUAL ACTUARIAL VALUATIONS ASSUMPTIONS ADOPTED BY ETF BOARD AFTER CONSULTING WITH ACTUARY

### **ECONOMIC ASSUMPTIONS**

The long-term rates of investment return used in making the valuation was 7.8% a year, compounded yearly.

Salary adjustment factors used to project earnings for each participant between the valuation date and the participant's retirement age are shown below for sample years of service. This assumption is used to project a participant's current earnings to the earnings upon which benefits will be based.

	% Merit and Longvity Increase Next Year										
		University	Public School	Prote	Exec. &						
Service	Gen.	Teachers	Teachers	With S.S.	w/o S.S.	Elec.					
1	3.5 %	4.4 %	5.8 %	4.0 %	4.5 %	1.2 %					
2	3.5 %	4.4 %	5.8 %	4.0 %	4.5 %	1.2 %					
3	3.2 %	4.3 %	5.3 %	3.6 %	4.0 %	1.2 %					
4	2.9 %	4.3 %	4.9 %	3.2 %	3.5 %	1.2 %					
5	2.6 %	4.2 %	4.4 %	2.8 %	3.0 %	1.1 %					
10	1.6 %	3.4 %	2.6 %	1.7 %	1.1 %	1.0 %					
15	1.3 %	2.5 %	1.5 %	1.2 %	0.5 %	0.9 %					
20	1.1 %	2.2 %	1.0 %	1.0 %	0.5 %	0.8 %					
25	0.9 %	2.0 %	0.6 %	1.0 %	0.5 %	0.6 %					
30	0.7 %	1.8 %	0.2 %	1.0 %	0.5 %	0.4 %					

If the number of active participants remains constant, then the total active participant payroll will increase 4.1% a year, the base portion of the individual salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities. Premium payments from the ASLCC Program were also assumed to increase 4.1% a year.

Separate assumptions regarding secular trend of health care inflation and aging assumptions were not used. Because of the structure of the ASLCC program, use of these assumptions would not significantly affect results.

### **DECREMENT PROBABILITIES**

The mortality table used to measure mortality for retired participants was the Wisconsin Projected Experience Table - 2002 for men and women, as adopted by the Board in connection with the 2000-2002 Experience Study. Sample life expectancy values from this table are shown below. This assumption is used to measure the probabilities of participants dying before retirement and the probabilities of each benefit payment being made after retirement.

SINGLE LIFE EXPECTANCY
WISCONSIN PROJECTED EXPERIENCE TABLE – 2002

Sample	Future Life					
Attained	Expectancy (years)					
Ages	Males	Females				
40	40.3	45.1				
45	35.5	40.3				
50	30.8	35.4				
55	26.3	30.7				
60	21.9	26.1				
65	17.8	21.6				
70	14.0	17.3				
75	10.7	13.4				
80	7.9	10.1				
85	5.8	7.3				

The values shown above are for non-disabled participants.

# **ACTIVE PARTICIPANT MORTALITY RATES**

Sample	Mortali	ty Rates
Attained Ages	Males	Females
20	0.000145	0.000085
25	0.000179	0.000113
30	0.000234	0.000153
35	0.000324	0.000212
40	0.000472	0.000305
45	0.000844	0.000454
50	0.001526	0.000699
55	0.002460	0.001057
60	0.003788	0.001782
65	0.006433	0.003126
70	0.011998	0.005513
75	0.020418	0.011278
80	0.035773	0.020671

This assumption is used to measure the probability of participants dying while in service.

# RATES OF RETIREMENT FOR THOSE ELIGIBLE TO RETIRE

### **Normal Retirement Pattern**

	Gen	eral	Public	School	Univ	ersity	Prote	ctive*	Exec. &
Age	Male	Female	Male	Female	Male	Female	With S.S.	W/O S.S.	Elected
50			***				6%	2%	
51				•			7%	2%	
52							7%	9%	
53							38%	38%	
54							20%	36%	
55							20%	36%	
56							25%	36%	
57	28%	27%	25%	. 30%	25%	20%	20%	36%	8%
58	28%	27%	25%	30%	20%	20%	20%	40%	8%
59	28%	25%	25%	30%	20%	20%	20%	30%	12%
60	28%	25%	30%	30%	20%	20%	20%	30%	14%
61	30%	25%	35%	35%	20%	20%	20%	30%	35%
62	40%	30%	60%	40%	20%	25%	20%	15%	10%
63	40%	35%	50%	35%	20%	30%	30%	15%	10%
64	35%	35%	50%	25%	20%	30%	20%	15%	10%
65	35%	30%	70%	30%	20%	25%	30%	40%	10%
66	35%	30%	70%	25%	20%	25%	25%	40%	20%
67	15%	20%	50%	25%	20%	25%	25%	40%	20%
68	15%	15%	50%	20%	20%	20%	25%	40%	20%
69	15%	15%	50%	20%	20%	20%	25%	40%	20%
70	15%	15%	50%	20%	20%	20%	100%	100%	10%
71	15%	15%	50%	20%	20%	20%	100%	100%	10%
72	15%	15%	50%	20%	20%	20%	100%	100%	10%
73	15%	15%	50%	20%	20%	20%	100%	100%	10%
74	15%	15%	50%	20%	20%	20%	100%	100%	10%
75	100%	100%	100%	100%	100%	100%	100%	100%	100%

<sup>\*</sup> Includes early retirements.

# **Early Retirement Pattern**

	% Retiring Next Year									
	General		Public	School	Univ	Exec. &				
Age	Male	Female	Male	Female	Male	Female	Elected			
55	8%	6%	15%	11%	5%	5.0%	5%			
56	8%	6%	15%	11%	5%	5.0%	5%			
57	4%	5%	15%	11%	4%	5.0%	4%			
58	6%	5%	15%	12%	4%	5.0%	4%			
59	6%	5%	10%	12%	5%	10.0%	4%			
60	8%	8%	15%	15%	5%	10.0%	4%			
61	8%	8%	15%	15%	5%	10.0%	4%			
62	20%	18%	25%	25%	10%	10.0%	1,0			
63	20%	18%	25%	20%	10%	10.0%				
64	15%	14%	15%	15%	10%	10.0%				

The assumed rates of separation from employment prior to service retirement due to disability and other causes are shown below for sample ages. For other terminations it was assumed that a percentage depending on age of participants terminating after age 35 with 5 or more years service will leave their contributions on deposit and be paid a benefit at normal retirement age and that the remaining participants would take a separation benefit. The percentage taking a separation benefit is 100% at age 35, grading downward to 0% at retirement eligibility. All participants terminating prior to normal retirement age with less than 5 years of service were assumed to take a separation benefit.

# ASSUMED TERMINATION RATES BY ATTAINED AGE AND YEARS OF SERVICE

		% of Active Participants Terminating								
	Ī	Prot	ective					_		
		With	Without					1		
		Soc.	Soc.	Public	<b>Schools</b>	Unive	ersity	Exec. &	O	ther
Age &	Service	Sec.	Sec.	Males	Females	Males	Females	Elected	Males	Females
•	0	11.0%	5.0%	11.0%	10.0%	18.0%	18.0%	9.0%	18.0%	18.0%
	1	6.0%	2.5%	7.0%	8.0%	13.0%	15.0%	8.5%	10.0%	11.0%
	2	3.5%	2.2%	5.0%	6.0%	10.0%	13.0%	8.0%	8.0%	9.0%
	3	3.2%	2.0%	4.5%	5.4%	9.0%	10.0%	7.0%	6.0%	7.0%
	4	3.2%	1.7%	3.5%	4.4%	7.0%	9.0%	5.0%	5.0%	6.0%
25	5 & Over	1.6%	1.0%	3.5%	4.0%	7.0%	9.0%	5.0%	5.0%	5.5%
30		1.5%	0.9%	2.7%	3.5%	6.7%	7.8%	4.7%	4.1%	4.9%
35		1.3%	0.8%	1.5%	2.3%	6.2%	6.1%	4.2%	2.8%	3.6%
40		1.2%	0.8%	1.2%	1.5%	4.8%	4.7%	3.4%	2.0%	2.7%
45		1.1%	0.7%	1.0%	1.2%	3.1%	3.4%	2.4%	1.6%	2.2%
50		0.8%	0.7%	0.9%	1.2%	1.9%	2.6%	2.0%	1.3%	2.0%
55		0.6%	0.7%	0.9%	1.2%	1.5%	2.4%	2.0%	1.3%	2.0%
60		0.6%	0.7%	0.9%	1.2%	1.5%	2.4%	2.0%	1.3%	2.0%

### **DISABILITY RATES**

	% of Active Participants Becoming Disabled										
	Protective		Public Schools		University		Exec. & Elected		Other		
Age	With SS	W/O SS	Males	Females	Males	Females	Males	Females	Males	Females	
20	0.01%	0.04%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	
25	0.01%	0.04%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	
30	0.01%	0.05%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.04%	
35	0.03%	0.06%	0.01%	0.01%	0.01%	0.04%	0.01%	0.01%	0.02%	0.05%	
40	0.05%	0.11%	0.02%	0.02%	0.01%	0.06%	0.01%	0.01%	0.06%	0.07%	
45	0.09%	0.19%	0.05%	0.08%	0.03%	0.05%	0.02%	0.02%	0.11%	0.10%	
50	0.30%	0.59%	0.14%	0.16%	0.05%	0.10%	0.05%	0.05%	0.25%	0.16%	
55	1.00%	0.65%	0.26%	0.23%	0.15%	0.15%	0.18%	0.18%	0.48%	0.29%	
60	0.68%	0.50%	0.43%	0.34%	0.20%	0.23%	0.22%	0.22%	0.85%	0.41%	