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WISCONSIN RETIREMENT SYSTEM  
GAIN/LOSS ANALYSIS OF EXPERIENCE  
AMONG ACTIVE MEMBERS  
DURING CALENDAR YEAR 2005

GRS

Gabriel Roeder Smith & Company

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September 1, 2006

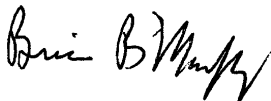
The Employee Trust Funds Board  
Wisconsin Retirement System  
801 West Badger Road  
Madison, Wisconsin 53713

Ladies and Gentlemen:

The results of the *Gain/Loss Analysis of Experience Among Active Participants* of the Wisconsin Retirement System, *covering the calendar year 2005 are presented in this report.* (The results of the December 31, 2005 regular annual actuarial valuation of active members were submitted in our report dated June 7, 2006.)

Your Secretary and staff furnished the statistical data concerning active participant changes and related financial information that was required for this analysis. The actuary did not audit the data. The actuarial assumptions used are shown in the Appendix portion of the December 31, 2005 annual actuarial valuation of active participants.

Respectfully submitted,



Brian B. Murphy, FSA



Mark Buis, FSA

BBM/MB:dm

## ACTIVE MEMBER GAIN/LOSS ANALYSIS

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### Introduction

*Purpose of Gain/Loss Analysis.* Regular actuarial valuations provide information about the composite change in computed contribution rates and total liabilities -- whether or not the rates and related liabilities are increasing or decreasing, and by how much. However, valuations do not show the portion of the change attributable to each risk area within the retirement system financial mechanism: the rate of investment income on plan assets; the rates of withdrawal of active participants who leave covered employment; the rates of mortality; the rates of disability; the rates of salary increases; and the assumed ages at actual retirement. In an actuarial valuation, assumptions are made as to what these rates will be for the next year and for decades in the future.

*The objective of a gain and loss analysis is to determine the portion of the change that is attributable to each risk area.*

The fact that actual experience differs from assumed experience should be expected. The future cannot be predicted with complete precision. Further, year-to-year statistical fluctuations occur, even in very large groups. This year's report reflects just a single year's experience. Changes in the valuation assumed experience for a risk area should be made only when the differences between assumed and actual experience have been observed to be sizable and persistent. One year's gain and loss analysis may or may not be indicative of *long-term trends, which are the basis of actuarial assumptions*. In the Wisconsin Retirement System, longer term trends are reviewed in connection with the regular 3-year investigation of experience (the most recent 3-year investigation covered the period January 1, 2000 to December 31, 2002). It is the results of the 3-year investigation that lead to recommendations for changes in actuarial assumptions.

## POPULATION DEVELOPMENT DURING CALENDAR YEAR 2005

	General	Executive & Elected	Protective		Total	Expected
			With S.S.	Without S.S.		
<b>Beginning Census</b>	238,943	1,469	18,964	2,709	262,085	
(-) Normal Retirement	2,526	36	271	64	2,897	3,238
(-) Early Retirement	3,354	21	82	6	3,463	3,672
(-) Death	221	2	21	0	244	298
(-) Disability Retirement						
-Total Disabilities approved	219	1	13	6	239	351
-Less Pending at Beginning of Year	86	0	2	1	89	
-Net new from active status	133	1	11	5	150	
(-) Other Separations	11,859	81	558	33	12,531	11,405
(-) Transfers Out	892	23	112	4	1,031	
(+) Transfers In	785	57	180	9	1,031	
(+) New Entrants	16,758	90	947	83	17,878	
<b>Ending Census</b>	237,501	1,452	19,036	2,689	260,678	

This schedule reconciles the active member populations reported in connection with the 2004 and 2005 valuations on an actual and expected basis. Assumptions related to population development are a primary focus of the gain/loss analysis. They generally tend to be more stable than economic assumptions, and therefore, measurements have more meaning.

## COMMENTS

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### **Population Results (refer to schedules on Page 4 and 9)**

**Normal Retirements** were less than assumed in all groups, overall producing a small gain.

**Early Retirements** varied by group and gender. Overall, there were fewer early retirements than expected. In general, fewer early retirements than assumed often creates a gain. However, looking at counts alone is not always an accurate predictor of whether a gain or loss occurs. If there are fewer retirements in shorter service, lower paid groups and more retirements than expected in longer service, higher paid groups, there will be a net loss to the System even though the actual total counts might be equal to or less than expected.

**Deaths** among active participants were slightly less than expected, overall producing a small loss.

**Disabilities** were less than expected and produced a gain in all groups. This means that the reserves needed for the disability benefit were slightly smaller than the reserves that had been held for retirement benefits.

**Other Separations** varied by group, gender, and service. Other separations among short (under 5 years) service participants produced a loss. Separations among longer service participants produced a gain. The loss from short service separations was overcome by the gain from long service separations, and a small gain was produced in total.

**In total**, the population risk areas (retirement, death, disability, and other separations) produced a small actuarial gain in 2005.

### **Economic Results (refer to schedules on Page 9 and 12)**

**Investment Return** activity produced a loss for all groups. However, the investment loss of \$464 million was partially absorbed by \$205 million loss in the combined value of variable excess benefits and money purchase benefits, resulting in a net loss of \$258 million.

**Pay Increases** were less than expected in all groups, producing a gain.

## COMMENTS

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### **Other Analysis (refer to schedule on Page 10)**

The schedule on page 10 analyzes gains or losses due to sources other than the demographic and economic areas. The **Reserve difference** produced a loss of \$175 million. This typically means that the actual benefits calculated for new retirees were higher than those estimated by our valuation software. This is most often due to higher pay or service amounts used in the actual benefit calculation than the pay or service amounts estimated by our valuation data. For refunds, the opposite was true. Actual refunds were lower than the expected refunds producing a **Refund difference** gain of about \$26 million. **Re-established liability** represents the liability for new or rehired active members who were not active in the prior year. Typically, it is expected a new hire will have very little liability. However, often new members appear with more than one year of service or with liability greater than contributions made on their behalf. Although this amount is difficult to determine accurately due to the timing of contribution amounts, we estimate the Re-established liability loss at about \$58 million.

The 2006 Milliman actuarial audit noted that the losses associated with emerging reserve transfers warranted further study. Such a study is beyond the scope of a normal gain/loss report. We agree with their findings and have also recommended this in the past. This year would be an ideal year to approve such a study in conjunction with the 3-year experience investigation.

### **Contribution Rate Change**

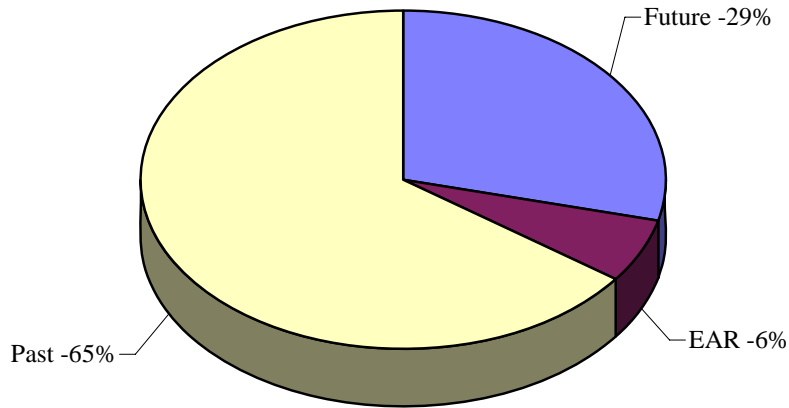
In total, the plan experienced a net loss of \$141.6 million. Losses due to unfavorable investment performance and actual reserve transfers being greater than expected were partially offset by gains associated with lower pay increases than expected. As a result, the total normal cost contribution increased by 0.2% for each valuation group.

This Gain/Loss Analysis is the third in the normal three-year experience cycle. It will be part of the basis for the experience investigation covering the period January 1, 2003 to December 31, 2005.

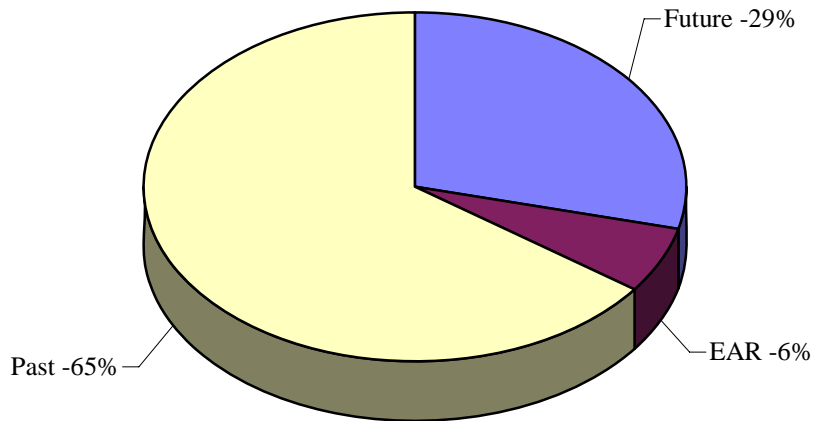
# FINANCING RETIREMENT SYSTEM BENEFIT LIABILITIES AT DECEMBER 31

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## 2005 - \$47.3 Billion



## 2004 - \$46.5 Billion



The gain/loss analysis studies changes in entry age normal accrued liabilities which are reflected in the Experience Amortization Reserve (EAR) as shown on page 50. Future liabilities are financed via normal cost contributions each year as they accrue. Past liabilities are financed by application of present assets and unfunded liability contributions. The liabilities assigned to the EAR are technically part of the future. However, as part of the valuation method, they are financed as though they were part of the past. The EAR amortization period is selected each year to minimize short term contribution rate fluctuations.



**GAIN/LOSS ANALYSIS  
2005 EXPERIENCE  
DIVISIONS COMBINED**

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**Amounts of Gain (Loss)  
as of \$ Millions**



**ACTUARIAL GAINS & LOSSES DURING CALENDAR YEAR 2005**  
**(\$ MILLIONS)**

Type of Activity	General	Executive & Elected	Protective		Total
			With S.S.	Without S.S.	
<b>Decrement Risk Areas</b>					
Normal Retirement	\$ 3.5	\$ 0.0	\$ 0.9	\$ 0.8	\$ 5.2
Early Retirement	(7.4)	0.4	0.2	0.2	(6.6)
Death with Benefit	(2.4)	0.0	0.7	(0.1)	(1.8)
Disability Retirement	15.8	0.1	0.5	0.6	17.0
Other Separations	(2.6)	0.7	2.3	0.2	0.6
<b>Economic Risk Areas</b>					
Salary Increases	231.8	3.5	47.8	6.4	289.5
Investment Return	(211.5)	(3.3)	(33.6)	(9.9)	(258.3)
<b>Other Activity (See Page 10)</b>	(166.6)	(4.5)	(13.4)	(2.7)	(187.2)
<b>Total Gain(Loss)</b>	<b>\$ (139.4)</b>	<b>\$(3.1)</b>	<b>\$5.4</b>	<b>\$(4.5)</b>	<b>(141.6)</b>
<b>-% of accrued liability</b>	<b>(0.5)%</b>	<b>(1.2)%</b>	<b>0.2%</b>	<b>(0.6)%</b>	<b>(0.4)%</b>

**ANALYSIS OF OTHER ACTIVITY**  
**(\$ MILLIONS)**

	General	Executive & Elected	Protective		Total
			With S.S.	Without S.S.	
Expected Reserve Transfers					
Normal Retirement	\$1,128	\$10	\$ 111	\$45	\$1,294
Early Retirement	979	5	35	3	1,022
Death	31	1	2	0	34
Disability Retirement	36	0	4	3	43
Deferred Retirement	259	7	16	8	290
Expected Total Reserve Transfers	2,433	23	168	59	2,683
Actual Reserve Transfer (From Retiree Report)	2,581	29	183	65	2,858
<b>Reserve Difference</b>	(148)	(6)	(15)	(6)	(175)
Expected Refunds	48	0	4	0	52
Actual Refunds	23	0	2	1	26
<b>Refund Difference</b>	25	0	2	(1)	26
<b>Re-established liability</b>	(55)	0	(3)	0	(58)
Total Explained Difference	(178)	(6)	(16)	(7)	(207)
Unknown Difference	11	1	3	4	20
Total Other Activity	\$ (167)	\$ (5)	\$ (13)	\$ (3)	\$ (187)

This schedule analyzes reserve transfers and contribution refunds and shows the portion of “other” activity that can be explained by those sources.

**COMPARATIVE SCHEDULE OF EXPERIENCE  
5-YEAR HISTORY OF GAINS AND (LOSSES)  
(\$ MILLIONS)**

Year	Normal & Early Retmt.	Disability Retmt.	Other Separations*	Salary Increases	Investment Return	Other	Total
<b>GENERAL</b>							
2001	\$(7.6)	\$ 8.7	\$(14.9)	\$303.3	\$ 419.9	\$(133.0)	\$ 576.4
2002	(3.1)	7.2	(23.7)	160.8	(285.6)	(339.6)	(484.0)
2003	(5.4)	10.3	(16.2)	80.5	(165.3)	(181.1)	(277.2)
2004	(1.0)	13.4	(10.3)	116.6	41.6	(190.2)	(29.9)
2005	<b>(3.9)</b>	<b>15.8</b>	<b>(5.0)</b>	<b>231.8</b>	<b>(211.5)</b>	<b>(166.6)</b>	<b>(139.4)</b>
<b>EXECUTIVE &amp; ELECTED</b>							
2001	\$(0.4)	\$0.1	\$0.9	\$2.3	\$11.1	\$(3.3)	\$10.7
2002	0.4	0.1	(0.1)	2.0	1.8	(3.7)	0.5
2003	(1.6)	0.1	2.4	3.2	(5.2)	(7.2)	(8.3)
2004	(0.6)	0.1	0.5	2.2	(0.6)	(4.5)	(2.9)
2005	<b>0.4</b>	<b>0.1</b>	<b>0.7</b>	<b>3.5</b>	<b>(3.3)</b>	<b>(4.5)</b>	<b>(3.1)</b>
<b>PROTECTIVE WITH SOCIAL SECURITY</b>							
2001	\$(1.1)	\$0.8	\$(0.4)	\$25.3	\$(12.6)	\$(10.4)	\$ 1.6
2002	(0.2)	1.1	0.0	35.7	(106.3)	(12.9)	(82.6)
2003	(0.9)	1.3	0.7	6.6	21.2	(22.2)	6.7
2004	0.5	1.1	(0.6)	22.8	6.5	(12.7)	17.6
2005	<b>1.1</b>	<b>0.5</b>	<b>3.0</b>	<b>47.8</b>	<b>(33.6)</b>	<b>(13.4)</b>	<b>5.4</b>
<b>PROTECTIVE WITHOUT SOCIAL SECURITY</b>							
2001	\$(0.1)	\$0.5	\$(0.5)	\$4.1	\$ 3.5	\$ (1.6)	\$ 5.9
2002	(0.3)	0.2	(0.3)	2.3	(23.9)	(6.4)	(28.4)
2003	0.2	0.5	(0.8)	2.9	0.3	3.2	6.3
2004	1.6	0.6	(0.2)	6.2	2.3	(3.2)	7.3
2005	<b>1.0</b>	<b>0.6</b>	<b>0.1</b>	<b>6.4</b>	<b>(9.9)</b>	<b>(2.7)</b>	<b>(4.5)</b>

\* Includes separation due to death.

## ECONOMIC ASSUMPTION EXPERIENCE

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**GAIN (LOSS) FROM INVESTMENT INCOME DURING CALENDAR YEAR 2005**  
**(\$ MILLIONS)**

	General	Executive & Elected	Protective		Total
			With SS	Without SS	
(1) Beginning of Year Active Participant Assets					
(a) Participant Accumulation Reserve	\$13,466.7	\$115.4	\$ 1,002.6	\$326.4	\$14,911.1
(b) PAR Closing Adjustment	0.0	0.0	0.0	0.0	0.0
(c) Employer Accumulation Reserve	17,589.7	165.5	1,879.9	501.3	20,136.4
(d) EAR Closing Adjustment	0.0	0.0	0.0	0.0	0.0
(e) Total	31,056.4	280.9	2,882.5	827.7	35,047.5
(2) End of Year Active Participant Assets					
(a) Participant Accumulation Reserve	13,555.4	110.8	1,023.4	321.0	15,010.6
(b) Employer Accumulation Reserve	17,949.8	167.9	1,976.8	517.7	20,612.2
(c) Total	31,505.2	278.7	3,000.2	838.7	35,622.8
(3) Investment Earnings Credited					
(a) Participant Accumulation Reserve	831.8	6.8	63.0	20.2	921.8
(b) Employer Accumulation Reserve	1,122.8	10.3	119.9	31.9	1,284.9
(c) Total	1,954.6	17.1	182.9	52.1	2,206.7
(4) Average Balance: .5 x {(1e)+(2c)-(3c)}	30,303.5	271.3	2,849.9	807.2	34,231.9
(5) Expected Earnings: .078 x (4)	2,363.7	21.2	222.3	63.0	2,670.2
(6) Gain (Loss) for year from investment experience: (3c)-(5)	(409.1)	(4.1)	(39.4)	(10.9)	(463.5)
(7) Portion applied to Change in Variable Excess Reserve and Money Purchase Minimum Benefit	(197.6)	(0.8)	(5.8)	(1.0)	(205.2)
<b>(8) Remaining Gain (Loss): (6)-(7)</b>	<b>\$ (211.5)</b>	<b>\$ (3.3)</b>	<b>\$ (33.6)</b>	<b>\$ (9.9)</b>	<b>\$ (258.3)</b>

**SALARY INCREASES DURING CALENDAR YEAR 2005  
TO PARTICIPANTS ACTIVE BOTH AT BEGINNING & END OF YEAR**

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Service Beginning of Year	Percent Salary Increases						Service Beginning of Year
	Teachers				Other General		
	University	Expected	Public School	Expected	Actual	Expected	
0-4	5.0 %	8.5 %	7.5 %	9.9 %	5.9 %	7.6 %	0-4
5-9	3.3 %	8.2 %	5.5 %	7.6 %	3.6 %	6.1 %	5-9
10-14	3.3 %	7.0 %	4.4 %	6.1 %	3.1 %	5.5 %	10-14
15-19	2.2 %	6.4 %	2.9 %	5.3 %	2.9 %	5.3 %	15-19
20-24	2.4 %	6.2 %	2.5 %	4.9 %	2.7 %	5.1 %	20-24
25-29	2.4 %	6.1 %	2.0 %	4.5 %	2.5 %	4.9 %	25-29
30-34	1.3 %	5.7 %	1.8 %	4.2 %	2.3 %	4.7 %	30-34
35-39	1.1 %	4.8 %	1.5 %	4.2 %	2.2 %	4.5 %	35-39
40 & Over	1.7 %	4.7 %	1.0 %	4.2 %	2.3 %	4.5 %	40 & Over
Average	3.2 %		4.2 %		3.6 %		Average

The salary increases shown on this and the following page are not necessarily reflective of pay increases awarded to any individual member. The figures are broad averages involving large groups of people. They can be distorted to the extent that younger people may have received less than a full year's pay during their first year of employment.

**SALARY INCREASES DURING CALENDAR YEAR 2005  
TO PARTICIPANTS ACTIVE BOTH AT BEGINNING & END OF YEAR  
(CONTINUED)**

Service Beginning of Year	Percent Salary Increases						Service Beginning of Year
	Protective				Executives & Elected		
	Actual		Expected				
	With Soc. Sec.	Without Soc. Sec.	With Soc. Sec.	Without Soc. Sec.	Actual	Expected	
0-4	7.5 %	9.8 %	8.1 %	8.6 %	2.9 %	5.3 %	0-4
5-9	3.2 %	3.9 %	6.9 %	7.1 %	3.3 %	5.2 %	5-9
10-14	2.4 %	4.0 %	6.1 %	6.1 %	2.6 %	5.2 %	10-14
15-19	2.7 %	3.8 %	5.6 %	4.6 %	1.4 %	5.1 %	15-19
20-24	2.5 %	4.0 %	5.1 %	4.6 %	2.3 %	5.0 %	20-24
25-29	2.9 %	2.9 %	5.1 %	4.6 %	2.4 %	4.8 %	25-29
30-34	3.0 %	2.6 %	5.1 %	4.6 %	5.2 %	4.6 %	30-34
35-39	3.1 %	4.2 %	4.6 %	4.6 %	1.7 %	4.5 %	35-39
40 & Over	5.5 %	0.0 %	4.6 %	4.6 %	0.0 %	4.1 %	40 & Over
Average	3.6 %	4.5 %			2.6 %		Average



## DECREMENT ASSUMPTION EXPERIENCE

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**GENERAL  
NORMAL AGE & SERVICE  
RETIREMENTS DURING CALENDAR YEAR 2005**

Age	Life Years Exposure	Male Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
57	392	94	110	0.2398	0.2800
58	325	86	91	0.2646	0.2800
59	222	44	62	0.1982	0.2800
60	173	43	48	0.2486	0.2800
61	146	24	44	0.1644	0.3000
62	127	39	51	0.3071	0.4000
63	86	34	34	0.3953	0.4000
64	40	9	14	0.2250	0.3500
65	248	53	87	0.2137	0.3500
66	177	51	62	0.2881	0.3500
67	102	21	15	0.2059	0.1500
68	76	11	11	0.1447	0.1500
69	65	12	10	0.1846	0.1500
70 & Up	247	39	37	0.1579	0.1500
<b>Total</b>	<b>2,426</b>	<b>560</b>	<b>676</b>	<b>0.2308</b>	<b>0.2786</b>

**Averages at Retirement (years)**

Age            62.1  
Service        28.7

Age	Life Years Exposure	Female Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
57	244	56	66	0.2295	0.2700
58	218	52	59	0.2385	0.2700
59	144	36	36	0.2500	0.2500
60	102	20	26	0.1961	0.2500
61	92	15	23	0.1630	0.2500
62	74	19	22	0.2568	0.3000
63	62	26	22	0.4194	0.3500
64	37	9	13	0.2432	0.3500
65	528	128	158	0.2424	0.3000
66	379	115	114	0.3034	0.3000
67	220	40	44	0.1818	0.2000
68	163	26	24	0.1595	0.1500
69	131	12	20	0.0916	0.1500
70 & Up	509	93	76	0.1827	0.1500
<b>Total</b>	<b>2,903</b>	<b>647</b>	<b>703</b>	<b>0.2229</b>	<b>0.2422</b>

**Averages at Retirement (years)**

Age            64.6  
Service        23.0

**GENERAL  
REDUCED AGE & SERVICE  
RETIREMENTS DURING CALENDAR YEAR 2005**

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Age	Life Years Exposure	Male Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
55	1,676	124	134	0.0740	0.0800
56	1,554	118	124	0.0759	0.0800
57	1,077	41	43	0.0381	0.0400
58	921	44	55	0.0478	0.0600
59	703	38	42	0.0541	0.0600
60	544	33	44	0.0607	0.0800
61	499	33	40	0.0661	0.0800
62	467	64	93	0.1370	0.2000
63	349	68	70	0.1948	0.2000
64	243	39	36	0.1605	0.1500
<b>Total</b>	<b>8,033</b>	<b>602</b>	<b>681</b>	<b>0.0749</b>	<b>0.0848</b>

**Averages at Retirement (years)**

Age            58.6  
Service        23.0

Age	Life Years Exposure	Female Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
55	2,378	118	143	0.0496	0.0600
56	2,285	126	137	0.0551	0.0600
57	1,932	92	97	0.0476	0.0500
58	1,686	82	84	0.0486	0.0500
59	1,380	73	69	0.0529	0.0500
60	1,196	90	96	0.0753	0.0800
61	1,109	94	89	0.0848	0.0800
62	1,046	146	188	0.1396	0.1800
63	828	155	149	0.1872	0.1800
64	591	90	83	0.1523	0.1400
<b>Total</b>	<b>14,431</b>	<b>1,066</b>	<b>1,135</b>	<b>0.0739</b>	<b>0.0787</b>

**Averages at Retirement (years)**

Age            59.6  
Service        19.5

**PUBLIC SCHOOL  
NORMAL AGE & SERVICE  
RETIREMENTS DURING CALENDAR YEAR 2005**

Age	Life Years Exposure	Male Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
57	434	148	109	0.3410	0.2500
58	343	131	86	0.3819	0.2500
59	194	63	49	0.3247	0.2500
60	136	41	41	0.3015	0.3000
61	101	34	35	0.3366	0.3500
62	85	24	51	0.2824	0.6000
63	47	17	24	0.3617	0.5000
64	21	7	11	0.3333	0.5000
65	39	12	27	0.3077	0.7000
66	33	6	23	0.1818	0.7000
67	20	3	10	0.1500	0.5000
68	12	1	6	0.0833	0.5000
69	9	1	5	0.1111	0.5000
70 & Up	25	1	13	0.0400	0.5000
<b>Total</b>	<b>1,499</b>	<b>489</b>	<b>490</b>	<b>0.3262</b>	<b>0.3269</b>

**Averages at Retirement (years)**

Age 59.1  
Service 33.0

Age	Life Years Exposure	Female Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
57	566	193	170	0.3410	0.3000
58	351	123	105	0.3504	0.3000
59	189	56	57	0.2963	0.3000
60	147	42	44	0.2857	0.3000
61	103	34	36	0.3301	0.3500
62	61	19	24	0.3115	0.4000
63	48	20	17	0.4167	0.3500
64	33	9	8	0.2727	0.2500
65	148	58	44	0.3919	0.3000
66	84	20	21	0.2381	0.2500
67	58	13	15	0.2241	0.2500
68	43	15	9	0.3488	0.2000
69	21	3	4	0.1429	0.2000
70 & Up	58	9	12	0.1552	0.2000
<b>Total</b>	<b>1,910</b>	<b>614</b>	<b>566</b>	<b>0.3215</b>	<b>0.2963</b>

**Averages at Retirement (years)**

Age 60.1  
Service 31.0

**PUBLIC SCHOOL  
REDUCED AGE & SERVICE  
RETIREMENTS DURING CALENDAR YEAR 2005**

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Age	Life Years Exposure	Males Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
55	1,146	149	172	0.1300	0.1500
56	987	164	148	0.1662	0.1500
57	417	30	63	0.0719	0.1500
58	333	34	50	0.1021	0.1500
59	230	20	23	0.0870	0.1000
60	150	23	23	0.1533	0.1500
61	123	16	18	0.1301	0.1500
62	93	17	23	0.1828	0.2500
63	72	14	18	0.1944	0.2500
64	41	9	6	0.2195	0.1500
<b>Total</b>	<b>3,592</b>	<b>476</b>	<b>544</b>	<b>0.1325</b>	<b>0.1515</b>

**Averages at Retirement (years)**

Age            57.0  
Service        26.6

Age	Life Years Exposure	Female Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
55	2,306	244	254	0.1058	0.1100
56	2,004	210	220	0.1048	0.1100
57	1,226	85	135	0.0693	0.1100
58	987	97	118	0.0983	0.1200
59	678	89	81	0.1313	0.1200
60	525	70	79	0.1333	0.1500
61	430	54	65	0.1256	0.1500
62	348	77	87	0.2213	0.2500
63	214	43	43	0.2009	0.2000
64	142	26	21	0.1831	0.1500
<b>Total</b>	<b>8,860</b>	<b>995</b>	<b>1103</b>	<b>0.1123</b>	<b>0.1245</b>

**Averages at Retirement (years)**

Age            57.8  
Service        23.2

**UNIVERSITY  
NORMAL AGE & SERVICE  
RETIREMENTS DURING CALENDAR YEAR 2005**

Age	Life Years Exposure	Male Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
57	33	4	8	0.1212	0.2500
58	45	9	9	0.2000	0.2000
59	49	4	10	0.0816	0.2000
60	50	8	10	0.1600	0.2000
61	64	5	13	0.0781	0.2000
62	76	12	15	0.1579	0.2000
63	72	11	14	0.1528	0.2000
64	70	12	14	0.1714	0.2000
65	121	30	24	0.2479	0.2000
66	78	15	16	0.1923	0.2000
67	55	11	11	0.2000	0.2000
68	41	4	8	0.0976	0.2000
69	34	6	7	0.1765	0.2000
70 & Up	105	23	21	0.2190	0.2000
<b>Total</b>	<b>893</b>	<b>154</b>	<b>180</b>	<b>0.1725</b>	<b>0.2016</b>

**Averages at Retirement (years)**

Age 64.9  
Service 30.7

Age	Life Years Exposure	Female Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
57	24	1	5	0.0417	0.2000
58	25	8	5	0.3200	0.2000
59	21	4	4	0.1905	0.2000
60	19	3	4	0.1579	0.2000
61	19	5	4	0.2632	0.2000
62	14	2	4	0.1429	0.2500
63	13	3	4	0.2308	0.3000
64	12	0	4	0.0000	0.3000
65	46	12	12	0.2609	0.2500
66	34	8	9	0.2353	0.2500
67	19	5	5	0.2632	0.2500
68	13	3	3	0.2308	0.2000
69	11	2	2	0.1818	0.2000
70 & Up	36	6	7	0.1667	0.2000
<b>Total</b>	<b>306</b>	<b>62</b>	<b>72</b>	<b>0.2026</b>	<b>0.2353</b>

**Averages at Retirement (years)**

Age 64.2  
Service 26.8

**UNIVERSITY  
REDUCED AGE & SERVICE  
RETIREMENTS DURING CALENDAR YEAR 2005**

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Age	Life Years Exposure	Male Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
55	275	13	14	0.0473	0.0500
56	252	17	13	0.0675	0.0500
57	231	5	9	0.0216	0.0400
58	238	13	10	0.0546	0.0400
59	189	5	9	0.0265	0.0500
60	170	13	9	0.0765	0.0500
61	146	11	7	0.0753	0.0500
62	115	16	12	0.1391	0.1000
63	84	5	8	0.0595	0.1000
64	68	6	7	0.0882	0.1000
<b>Total</b>	<b>1,768</b>	<b>104</b>	<b>98</b>	<b>0.0588</b>	<b>0.0555</b>

**Averages at Retirement (years)**

Age            59.1  
Service        20.5

Age	Life Years Exposure	Female Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
55	227	11	11	0.0485	0.0500
56	221	13	11	0.0588	0.0500
57	192	11	10	0.0573	0.0500
58	172	11	9	0.0640	0.0500
59	157	11	16	0.0701	0.1000
60	134	18	13	0.1343	0.1000
61	84	6	8	0.0714	0.1000
62	84	12	8	0.1429	0.1000
63	61	9	6	0.1475	0.1000
64	51	9	5	0.1765	0.1000
<b>Total</b>	<b>1,383</b>	<b>111</b>	<b>97</b>	<b>0.0803</b>	<b>0.0701</b>

**Averages at Retirement (years)**

Age            59.3  
Service        20.0

**PROTECTIVE WITH SOCIAL SECURITY  
NORMAL AND REDUCED AGE & SERVICE  
RETIREMENTS DURING CALENDAR YEAR 2005**

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Age	Life Years Exposure	Protective With Social Security Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
50	513	25	31	0.0487	0.0600
51	452	31	32	0.0686	0.0700
52	394	20	28	0.0508	0.0700
53	78	66	30	0.8462	0.3800
54	340	57	68	0.1676	0.2000
55	267	32	53	0.1199	0.2000
56	206	25	52	0.1214	0.2500
57	180	25	36	0.1389	0.2000
58	158	22	32	0.1392	0.2000
59	102	15	20	0.1471	0.2000
60	58	5	12	0.0862	0.2000
61	49	6	10	0.1224	0.2000
62	37	3	7	0.0811	0.2000
63	34	9	10	0.2647	0.3000
64	21	3	4	0.1429	0.2000
65	11	5	3	0.4545	0.3000
66	7	1	2	0.1429	0.2500
67	3	1	1	0.3333	0.2500
68	3	1	1	0.3333	0.2500
69	2	1	1	0.5000	0.2500
70 & Up	2	0	2	0.0000	1.0000
<b>Total</b>	<b>2,917</b>	<b>353</b>	<b>435</b>	<b>0.1210</b>	<b>0.1491</b>

**Averages at Retirement (years)**

Age            56.0  
Service        24.8



**PROTECTIVE WITHOUT SOCIAL SECURITY  
NORMAL AND REDUCED AGE & SERVICE  
RETIREMENTS DURING CALENDAR YEAR 2005**

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Age	Life Years Exposure	Protective Without Social Security Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
50	97	2	2	0.0206	0.0200
51	95	4	2	0.0421	0.0200
52	91	0	8	0.0000	0.0900
53	26	22	10	0.8462	0.3800
54	67	17	24	0.2537	0.3600
55	38	8	14	0.2105	0.3600
56	23	7	8	0.3043	0.3600
57	18	5	6	0.2778	0.3600
58	11	2	4	0.1818	0.4000
59	5	1	2	0.2000	0.3000
60	3	0	1	0.0000	0.3000
61	2	0	1	0.0000	0.3000
62	1	0	0	0.0000	0.1500
63	2	1	0	0.5000	0.1500
64	1	0	0	0.0000	0.1500
65	2	1	1	0.5000	0.4000
66	0	0	0	0.0000	0.4000
67	0	0	0	0.0000	0.4000
68	0	0	0	0.0000	0.4000
69	0	0	0	0.0000	0.4000
70 & Up	0	0	0	0.0000	1.0000
<b>Total</b>	<b>482</b>	<b>70</b>	<b>83</b>	<b>0.1452</b>	<b>0.1722</b>

**Averages at Retirement (years)**

Age            54.7  
Service        26.8

**EXECUTIVE AND ELECTED MEMBERS WHO BECAME  
NORMAL AGE & SERVICE  
RETIREMENTS DURING CALENDAR YEAR 2005**

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Age	Life Years Exposure	Executive and Elected Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
57	15	1	1	0.0667	0.0800
58	7	0	1	0.0000	0.0800
59	6	2	1	0.3333	0.1200
60	9	2	1	0.2222	0.1400
61	5	1	2	0.2000	0.3500
62	48	5	5	0.1042	0.1000
63	35	3	4	0.0857	0.1000
64	29	1	3	0.0345	0.1000
65	21	4	2	0.1905	0.1000
66	22	7	4	0.3182	0.2000
67	13	2	3	0.1538	0.2000
68	6	0	1	0.0000	0.2000
69	7	0	1	0.0000	0.2000
70 & Up	42	8	4	0.1905	0.1000
<b>Total</b>	<b>265</b>	<b>36</b>	<b>33</b>	<b>0.1358</b>	<b>0.1245</b>

**Averages at Retirement (years)**

Age            65.7  
Service        21.1

**EXECUTIVE AND ELECTED  
REDUCED AGE & SERVICE  
RETIREMENTS DURING CALENDAR YEAR 2005**

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Age	Life Years Exposure	Number of Retirements		Retirement Rates	
		Actual	Expected	Actual	Expected
55	55	3	3	0.0545	0.0500
56	57	3	3	0.0526	0.0500
57	46	2	2	0.0435	0.0400
58	42	5	2	0.1190	0.0400
59	39	2	2	0.0513	0.0400
60	37	3	1	0.0811	0.0400
61	37	3	1	0.0811	0.0400
<b>Total</b>	<b>313</b>	<b>21</b>	<b>14</b>	<b>0.0671</b>	<b>0.0448</b>

**Averages at Retirement (years)**

Age            58.0  
Service        19.2

**GENERAL  
DISABILITY RETIREMENTS  
DURING CALENDAR YEAR 2005**

Age	Life Years Exposure	Number of Male Disabilities		Disability Rates	
		Actual	Expected	Actual	Expected
20-24	3	0	0	0.0000	0.0001
25-29	304	0	0	0.0000	0.0001
30-34	1,396	0	0	0.0000	0.0001
35-39	2,872	0	1	0.0000	0.0003
40-44	4,805	0	4	0.0000	0.0009
45-49	6,729	9	8	0.0013	0.0012
50-54	8,105	20	27	0.0025	0.0033
55-59	6,582	24	39	0.0036	0.0059
60-64	2,482	9	29	0.0036	0.0117
65 & Over	822	1	4	0.0012	0.0045
<b>Totals</b>	<b>34,100</b>	<b>63</b>	<b>112</b>	<b>0.0018</b>	<b>0.0033</b>

**Averages at Retirement (years)**

Age                    54.0  
Service                20.6

Age	Life Years Exposure	Number of Female Disabilities		Disability Rates	
		Actual	Expected	Actual	Expected
20-24	10	0	0	0.0000	0.0001
25-29	588	0	0	0.0000	0.0001
30-34	2,240	0	1	0.0000	0.0004
35-39	4,195	0	2	0.0000	0.0005
40-44	7,185	0	6	0.0000	0.0008
45-49	10,798	12	12	0.0011	0.0011
50-54	12,103	32	23	0.0026	0.0019
55-59	9,955	24	36	0.0024	0.0036
60-64	4,806	17	22	0.0035	0.0045
65 & Over	1,721	2	6	0.0012	0.0036
<b>Totals</b>	<b>53,601</b>	<b>87</b>	<b>108</b>	<b>0.0016</b>	<b>0.0020</b>

**Averages at Retirement (years)**

Age                    53.5  
Service                19.8

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**PUBLIC SCHOOLS  
DISABILITY RETIREMENTS  
DURING CALENDAR YEAR 2005**

Age	Life Years Exposure	Number of Male Disabilities		Disability Rates	
		Actual	Expected	Actual	Expected
20-24	0	0	0	0.0000	0.0001
25-29	136	0	0	0.0000	0.0001
30-34	1,784	0	0	0.0000	0.0001
35-39	2,489	0	0	0.0000	0.0001
40-44	2,451	1	1	0.0004	0.0003
45-49	2,730	0	2	0.0000	0.0006
50-54	4,043	6	9	0.0015	0.0023
55-59	3,715	6	11	0.0016	0.0030
60-64	767	1	4	0.0013	0.0054
65 & Over	125	0	1	0.0000	0.0076
<b>Totals</b>	<b>18,240</b>	<b>14</b>	<b>28</b>	<b>0.0008</b>	<b>0.0015</b>

**Averages at Retirement (years)**

Age            56.6  
Service        24.4

Age	Life Years Exposure	Number of Female Disabilities		Disability Rates	
		Actual	Expected	Actual	Expected
20-24	0	0	0	0.0000	0.0001
25-29	470	0	0	0.0000	0.0001
30-34	4,471	0	1	0.0000	0.0001
35-39	5,952	1	1	0.0002	0.0001
40-44	5,730	2	2	0.0003	0.0004
45-49	6,806	3	9	0.0004	0.0013
50-54	9,769	14	18	0.0014	0.0018
55-59	7,763	20	21	0.0026	0.0028
60-64	1,854	4	7	0.0022	0.0038
65 & Over	352	0	1	0.0000	0.0022
<b>Totals</b>	<b>43,167</b>	<b>44</b>	<b>60</b>	<b>0.0010</b>	<b>0.0014</b>

**Averages at Retirement (years)**

Age            53.4  
Service        21.6

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**UNIVERSITY  
DISABILITY RETIREMENTS  
DURING CALENDAR YEAR 2005**

Age	Life Years Exposure	Number of Male Disabilities		Disability Rates	
		Actual	Expected	Actual	Expected
20-24	0	0	0	0.0000	0.0001
25-29	21	0	0	0.0000	0.0001
30-34	185	0	0	0.0000	0.0001
35-39	455	0	0	0.0000	0.0001
40-44	741	0	0	0.0000	0.0001
45-49	1,041	0	0	0.0000	0.0004
50-54	1,350	1	1	0.0007	0.0006
55-59	1,276	3	3	0.0024	0.0020
60-64	865	1	2	0.0012	0.0019
65 & Over	390	0	1	0.0000	0.0024
<b>Totals</b>	<b>6,324</b>	<b>5</b>	<b>7</b>	<b>0.0008</b>	<b>0.0011</b>

**Averages at Retirement (years)**

Age 57.0  
Service 19.5

Age	Life Years Exposure	Number of Female Disabilities		Disability Rates	
		Actual	Expected	Actual	Expected
20-24	0	0	0	0.0000	0.0001
25-29	25	0	0	0.0000	0.0001
30-34	239	0	0	0.0000	0.0001
35-39	501	0	0	0.0000	0.0005
40-44	744	0	1	0.0000	0.0007
45-49	966	0	1	0.0000	0.0005
50-54	1,258	2	2	0.0016	0.0013
55-59	1,005	4	2	0.0040	0.0017
60-64	457	0	1	0.0000	0.0027
65 & Over	141	0	0	0.0000	0.0018
<b>Totals</b>	<b>5,336</b>	<b>6</b>	<b>7</b>	<b>0.0011</b>	<b>0.0013</b>

**Averages at Retirement (years)**

Age 54.5  
Service 17.0

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**PROTECTIVE WITH SOCIAL SECURITY  
DISABILITY RETIREMENTS  
DURING CALENDAR YEAR 2005**

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Age	Life Years Exposure	Number of Disabilities		Disability Rates	
		Actual	Expected	Actual	Expected
20-24	5	0	0	0.0000	0.0001
25-29	577	0	0	0.0000	0.0001
30-34	2,267	0	0	0.0000	0.0002
35-39	2,847	1	1	0.0004	0.0004
40-44	2,536	1	1	0.0004	0.0005
45-49	2,522	1	3	0.0004	0.0012
50-54	1,958	2	8	0.0010	0.0043
55-59	752	7	10	0.0093	0.0137
60-64	150	1	0	0.0067	0.0020
65 & Over	23	0	0	0.0000	0.0020
<b>Totals</b>	<b>13,637</b>	<b>13</b>	<b>23</b>	<b>0.0010</b>	<b>0.0017</b>

**Averages at Retirement (years)**

Age            48.2  
Service        21.1

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**PROTECTIVE WITHOUT SOCIAL SECURITY  
DISABILITY RETIREMENTS  
DURING CALENDAR YEAR 2005**

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Age	Life Years Exposure	Number of Disabilities		Disability Rates	
		Actual	Expected	Actual	Expected
20-24	0	0	0	0.0000	0.0004
25-29	55	0	0	0.0000	0.0004
30-34	297	0	0	0.0000	0.0005
35-39	410	0	0	0.0000	0.0006
40-44	491	0	1	0.0000	0.0015
45-49	480	1	1	0.0021	0.0021
50-54	416	3	3	0.0072	0.0079
55-59	81	2	0	0.0247	0.0055
60-64	8	0	0	0.0000	0.0000
65 & Over	1	0	0	0.0000	0.0000
<b>Totals</b>	<b>2,239</b>	<b>6</b>	<b>5</b>	<b>0.0027</b>	<b>0.0022</b>

**Averages at Retirement (years)**

Age            51.6  
Service        23.4

The people shown on this page are cases involving \$40.63 disability benefits and includes those who were either active or inactive with pending benefits at the beginning of the year. LTDI plan cases are described in a separate report.



**EXECUTIVE AND ELECTED  
DISABILITY RETIREMENTS  
DURING CALENDAR YEAR 2005**

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Age	Life Years Exposure	Number of Disabilities		Disability Rates	
		Actual	Expected	Actual	Expected
20-24	0	0	0	0.0000	0.0001
25-29	1	0	0	0.0000	0.0001
30-34	7	0	0	0.0000	0.0001
35-39	30	0	0	0.0000	0.0001
40-44	77	0	0	0.0000	0.0002
45-49	146	0	0	0.0000	0.0003
50-54	222	0	0	0.0000	0.0006
55-59	251	1	1	0.0040	0.0024
60-64	153	0	0	0.0000	0.0021
65 & Over	131	0	0	0.0000	0.0018
<b>Totals</b>	<b>1,018</b>	<b>1</b>	<b>1</b>	<b>0.0010</b>	<b>0.0010</b>

**Averages at Retirement (years)**

Age            N/A  
Service        N/A

The people shown on this page are cases involving \$40.63 disability benefits and includes those who were either active or inactive with pending benefits at the beginning of the year. LTDI plan cases are described in a separate report.

**ACTIVE PARTICIPANTS WHO DIED DURING CALENDAR YEAR 2005  
WITH DEATH-IN-SERVICE BENEFIT PAYABLE  
VALUATION GROUPS COMBINED**

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**MALE DEATH-IN-SERVICE EXPERIENCE**

Age	Life Years Exposure	Pre - Retirement Death		Pre-Retirement Death Rates	
		Actual	Expected	Actual	Expected
Under 50	61,067	42	45	0.0007	0.0007
50- 54	18,063	35	34	0.0019	0.0019
55- 59	14,116	33	41	0.0023	0.0029
60- 64	5,315	16	24	0.0030	0.0046
65- 69	1,538	4	13	0.0026	0.0082
70 & Over	873	10	13	0.0115	0.0152
<b>Totals</b>	<b>100,972</b>	<b>140</b>	<b>170</b>	<b>0.0014</b>	<b>0.0017</b>

**Averages at Death (years)**

Age            53.1  
Service        14.7

**FEMALE DEATH-IN-SERVICE EXPERIENCE**

Age	Life Years Exposure	Pre - Retirement Death		Pre - Retirement Death Rates	
		Actual	Expected	Actual	Expected
Under 50	98,412	27	41	0.0003	0.0004
50- 54	29,061	29	24	0.0010	0.0008
55- 59	22,212	20	28	0.0009	0.0013
60- 64	8,682	20	19	0.0023	0.0022
65- 69	2,249	4	9	0.0018	0.0038
70 & Over	917	4	7	0.0044	0.0074
<b>Totals</b>	<b>161,533</b>	<b>104</b>	<b>128</b>	<b>0.0006</b>	<b>0.0008</b>

**Averages at Death (years)**

Age            53.3  
Service        14.0

**GENERAL MALES  
WITHDRAWALS  
DURING CALENDAR YEAR 2005**

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**WITHDRAWALS WITH LESS THAN 5 YEARS OF SERVICE**

Years of Service	Life Years Exposure	Male Withdrawals		Withdrawal Rates	
		Actual Experience	Expected Experience	Actual	Expected
0-1	3,790	715	682	0.1887	0.1800
1-2	3,036	367	304	0.1209	0.1000
2-3	2,958	259	237	0.0876	0.0800
3-4	3,038	211	182	0.0695	0.0600
4-5	2,694	133	135	0.0494	0.0500
<b>Totals</b>	<b>15,516</b>	<b>1,685</b>	<b>1,540</b>	<b>0.1086</b>	<b>0.0993</b>

**Averages at Separation**

Age                    38.7

**WITHDRAWALS WITH 5 OR MORE YEARS OF SERVICE**

Age	Life Years Exposure	Male Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
Under 30	313	14	16	0.0447	0.0500
30-34	1,424	56	50	0.0393	0.0350
35-39	2,913	82	67	0.0281	0.0230
40-44	4,861	113	87	0.0232	0.0180
45-49	6,785	117	95	0.0172	0.0140
50-54	8,164	130	106	0.0159	0.0130
55 & Over	7,146	139	93	0.0195	0.0130
<b>Totals</b>	<b>31,606</b>	<b>651</b>	<b>514</b>	<b>0.0206</b>	<b>0.0163</b>

**Averages at Separation**

Age                    46.4

Service                11.6

The above are people who were active at the beginning of 2005, who were inactive at the end of 2005, did not take a separation benefit, and who did qualify for retirement with a monthly benefit beginning at a later age. Some people who show up on this schedule will likely withdraw their contributions sometime during the following year and forfeit entitlement to a deferred benefit.

**GENERAL FEMALES  
WITHDRAWALS  
DURING CALENDAR YEAR 2005**

**WITHDRAWALS WITH LESS THAN 5 YEARS OF SERVICE**

Years of Service	Life Years Exposure	Female Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
0-1	9,945	1,815	1,790	0.1825	0.1800
1-2	7,992	884	879	0.1106	0.1100
2-3	7,362	678	663	0.0921	0.0900
3-4	6,624	511	464	0.0771	0.0700
4-5	5,713	390	343	0.0683	0.0600
<b>Totals</b>	<b>37,636</b>	<b>4,278</b>	<b>4,139</b>	<b>0.1137</b>	<b>0.1100</b>

**Averages at Separation**

Age 38.3

**WITHDRAWALS WITH 5 OR MORE YEARS OF SERVICE**

Age	Life Years Exposure	Female Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
Under 30	621	47	34	0.0757	0.0550
30-34	2,296	111	103	0.0483	0.0450
35-39	4,278	166	128	0.0388	0.0300
40-44	7,312	254	183	0.0347	0.0250
45-49	10,929	271	219	0.0248	0.0200
50-54	12,236	288	245	0.0235	0.0200
55 & Over	13,505	255	270	0.0189	0.0200
<b>Totals</b>	<b>51,177</b>	<b>1,392</b>	<b>1,182</b>	<b>0.0272</b>	<b>0.0231</b>

**Averages at Separation**

Age 45.8

Service 10.4

The above are people who were active at the beginning of 2005, who were inactive at the end of 2005, did not take a separation benefit, and who did qualify for retirement with a monthly benefit beginning at a later age. Some people who show up on this schedule will likely withdraw their contributions sometime during the following year and forfeit entitlement to a deferred benefit.

**PUBLIC SCHOOL MALES  
WITHDRAWALS  
DURING CALENDAR YEAR 2005**

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**WITHDRAWALS WITH LESS THAN 5 YEARS OF SERVICE**

Years of Service	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
0-1	1,293	161	142	0.1245	0.1100
1-2	1,156	102	81	0.0882	0.0700
2-3	1,218	71	61	0.0583	0.0500
3-4	1,215	66	55	0.0543	0.0450
4-5	1,147	57	40	0.0497	0.0350
<b>Totals</b>	<b>6,029</b>	<b>457</b>	<b>379</b>	<b>0.0758</b>	<b>0.0629</b>

**Averages at Separation**

Age            40.0

**WITHDRAWALS WITH 5 OR MORE YEARS OF SERVICE**

Age	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
Under 30	136	1	5	0.0074	0.0350
30-34	1,804	39	31	0.0216	0.0170
35-39	2,512	46	33	0.0183	0.0130
40-44	2,469	36	30	0.0146	0.0120
45-49	2,743	26	25	0.0095	0.0090
50-54	4,067	47	37	0.0116	0.0090
55 & Over	2,533	29	23	0.0114	0.0090
<b>Totals</b>	<b>16,264</b>	<b>224</b>	<b>184</b>	<b>0.0138</b>	<b>0.0113</b>

**Averages at Separation**

Age            43.1  
Service        12.0

The above are people who were active at the beginning of 2005, who were inactive at the end of 2005, did not take a separation benefit, and who did qualify for retirement with a monthly benefit beginning at a later age. Some people who show up on this schedule will likely withdraw their contributions sometime during the following year and forfeit entitlement to a deferred benefit.

**PUBLIC SCHOOL FEMALES  
WITHDRAWALS  
DURING CALENDAR YEAR 2005**

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**WITHDRAWALS WITH LESS THAN 5 YEARS OF SERVICE**

Years of Service	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
0-1	3,521	388	352	0.1102	0.1000
1-2	3,240	231	259	0.0713	0.0800
2-3	3,324	207	199	0.0623	0.0600
3-4	3,375	186	182	0.0551	0.0540
4-5	3,232	153	142	0.0473	0.0440
<b>Totals</b>	<b>16,692</b>	<b>1,165</b>	<b>1,134</b>	<b>0.0698</b>	<b>0.0679</b>

**Averages at Separation**

Age                    37.0

**WITHDRAWALS WITH 5 OR MORE YEARS OF SERVICE**

Age	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
Under 30	481	21	19	0.0437	0.0400
30-34	4,550	157	141	0.0345	0.0310
35-39	6,018	132	108	0.0219	0.0180
40-44	5,763	68	75	0.0118	0.0130
45-49	6,853	97	82	0.0142	0.0120
50-54	9,826	117	118	0.0119	0.0120
55 & Over	7,296	91	88	0.0125	0.0120
<b>Totals</b>	<b>40,787</b>	<b>683</b>	<b>631</b>	<b>0.0167</b>	<b>0.0155</b>

**Averages at Separation**

Age                    43.0

Service                10.6

The above are people who were active at the beginning of 2005, who were inactive at the end of 2005, did not take a separation benefit, and who did qualify for retirement with a monthly benefit beginning at a later age. Some people who show up on this schedule will likely withdraw their contributions sometime during the following year and forfeit entitlement to a deferred benefit.

**UNIVERSITY MALES  
WITHDRAWALS  
DURING CALENDAR YEAR 2005**

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**WITHDRAWALS WITH LESS THAN 5 YEARS OF SERVICE**

Years of Service	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
0-1	742	136	134	0.1833	0.1800
1-2	692	111	90	0.1604	0.1300
2-3	683	75	68	0.1098	0.1000
3-4	679	63	61	0.0928	0.0900
4-5	603	71	42	0.1177	0.0700
<b>Totals</b>	<b>3,399</b>	<b>456</b>	<b>395</b>	<b>0.1342</b>	<b>0.1162</b>

**Averages at Separation**

Age                    38.5

**WITHDRAWALS WITH 5 OR MORE YEARS OF SERVICE**

Age	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
Under 30	21	1	1	0.0476	0.0700
30-34	192	14	12	0.0729	0.0650
35-39	468	26	28	0.0556	0.0600
40-44	762	41	30	0.0538	0.0400
45-49	1,058	34	26	0.0321	0.0250
50-54	1,360	21	20	0.0154	0.0150
55 & Over	1,685	11	25	0.0065	0.0150
<b>Totals</b>	<b>5,546</b>	<b>148</b>	<b>142</b>	<b>0.0267</b>	<b>0.0256</b>

**Averages at Separation**

Age                    43.7

Service                8.6

The above are people who were active at the beginning of 2005, who were inactive at the end of 2005, did not take a separation benefit, and who did qualify for retirement with a monthly benefit beginning at a later age. Some people who show up on this schedule will likely withdraw their contributions sometime during the following year and forfeit entitlement to a deferred benefit.

**UNIVERSITY FEMALES  
WITHDRAWALS  
DURING CALENDAR YEAR 2005**

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**WITHDRAWALS WITH LESS THAN 5 YEARS OF SERVICE**

Years of Service	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
0-1	808	138	145	0.1708	0.1800
1-2	817	140	123	0.1714	0.1500
2-3	758	102	99	0.1346	0.1300
3-4	679	66	68	0.0972	0.1000
4-5	586	55	53	0.0939	0.0900
<b>Totals</b>	<b>3,648</b>	<b>501</b>	<b>488</b>	<b>0.1373</b>	<b>0.1338</b>

**Averages at Separation**

Age                    36.7

**WITHDRAWALS WITH 5 OR MORE YEARS OF SERVICE**

Age	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
Under 30	27	3	2	0.1111	0.0900
30-34	257	37	18	0.1440	0.0700
35-39	522	43	29	0.0824	0.0550
40-44	768	48	32	0.0625	0.0420
45-49	988	44	28	0.0445	0.0280
50-54	1,273	32	31	0.0251	0.0240
55 & Over	1,293	12	31	0.0093	0.0240
<b>Totals</b>	<b>5,128</b>	<b>219</b>	<b>171</b>	<b>0.0427</b>	<b>0.0333</b>

**Averages at Separation**

Age                    42.6

Service                8.7

The above are people who were active at the beginning of 2005, who were inactive at the end of 2005, did not take a separation benefit, and who did qualify for retirement with a monthly benefit beginning at a later age. Some people who show up on this schedule will likely withdraw their contributions sometime during the following year and forfeit entitlement to a deferred benefit.



**PROTECTIVE WITH SOCIAL SECURITY  
WITHDRAWALS  
DURING CALENDAR YEAR 2005**

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**WITHDRAWALS WITH LESS THAN 5 YEARS OF SERVICE**

Years of Service	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
0-1	850	90	93	0.1059	0.1100
1-2	979	74	59	0.0756	0.0600
2-3	1,147	51	40	0.0445	0.0350
3-4	1,278	53	41	0.0415	0.0320
4-5	1,096	62	35	0.0566	0.0320
<b>Totals</b>	<b>5,350</b>	<b>330</b>	<b>268</b>	<b>0.0617</b>	<b>0.0501</b>

**Averages at Separation**

Age                    33.6

**WITHDRAWALS WITH 5 OR MORE YEARS OF SERVICE**

Age	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
Under 30	590	15	9	0.0254	0.0160
30-34	2,295	57	32	0.0248	0.0140
35-39	2,876	59	37	0.0205	0.0130
40-44	2,553	34	31	0.0133	0.0120
45-49	2,544	44	28	0.0173	0.0110
50-54	1,966	19	12	0.0097	0.0060
<b>Totals</b>	<b>13,749</b>	<b>228</b>	<b>149</b>	<b>0.0166</b>	<b>0.0108</b>

**Averages at Separation**

Age                    40.3

Service                11.9

The above are people who were active at the beginning of 2005, who were inactive at the end of 2005, did not take a separation benefit, and who did qualify for retirement with a monthly benefit beginning at a later age. Some people who show up on this schedule will likely withdraw their contributions sometime during the following year and forfeit entitlement to a deferred benefit.

**PROTECTIVE WITHOUT SOCIAL SECURITY  
WITHDRAWALS  
DURING CALENDAR YEAR 2005**

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**WITHDRAWALS WITH LESS THAN 5 YEARS OF SERVICE**

Years of Service	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
0-1	58	3	3	0.0517	0.0500
1-2	76	3	2	0.0395	0.0250
2-3	91	2	2	0.0220	0.0220
3-4	117	1	2	0.0085	0.0200
4-5	132	2	2	0.0152	0.0170
<b>Totals</b>	<b>474</b>	<b>11</b>	<b>11</b>	<b>0.0232</b>	<b>0.0232</b>

**Averages at Separation**

Age                    37.8

**WITHDRAWALS WITH 5 OR MORE YEARS OF SERVICE**

Age	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
Under 30	55	0	1	0.0000	0.0100
30-34	299	3	2	0.0100	0.0080
35-39	412	3	3	0.0073	0.0080
40-44	493	4	4	0.0081	0.0080
45-49	483	5	3	0.0104	0.0070
50-54	417	7	3	0.0168	0.0070
<b>Totals</b>	<b>2,249</b>	<b>22</b>	<b>16</b>	<b>0.0098</b>	<b>0.0071</b>

**Averages at Separation**

Age                    45.7  
Service                17.4

The above are people who were active at the beginning of 2005, who were inactive at the end of 2005, did not take a separation benefit, and who did qualify for retirement with a monthly benefit beginning at a later age. Some people who show up on this schedule will likely withdraw their contributions sometime during the following year and forfeit entitlement to a deferred benefit.

**EXECUTIVE AND ELECTED  
WITHDRAWALS  
DURING CALENDAR YEAR 2005**

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**WITHDRAWALS WITH LESS THAN 5 YEARS OF SERVICE**

Years of Service	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
0-1	175	19	16	0.1086	0.0900
1-2	134	19	11	0.1418	0.0850
2-3	96	11	8	0.1146	0.0800
3-4	67	2	5	0.0299	0.0700
4-5	52	2	3	0.0385	0.0500
<b>Totals</b>	<b>524</b>	<b>53</b>	<b>43</b>	<b>0.1011</b>	<b>0.0821</b>

**Averages at Separation**

Age                    49.6

**WITHDRAWALS WITH 5 OR MORE YEARS OF SERVICE**

Age	Life Years Exposure	Number of Withdrawals		Withdrawal Rates	
		Actual	Expected	Actual	Expected
Under 30	1	0	0	0.0000	0.0500
30-34	7	0	0	0.0000	0.0450
35-39	31	2	1	0.0645	0.0400
40-44	78	2	2	0.0256	0.0300
45-49	150	8	3	0.0533	0.0200
50-54	227	9	5	0.0396	0.0200
55 & Over	407	7	8	0.0172	0.0200
<b>Totals</b>	<b>901</b>	<b>28</b>	<b>19</b>	<b>0.0311</b>	<b>0.0211</b>

**Averages at Separation**

Age                    50.0  
Service                13.6

The above are people who were active at the beginning of 2005, who were inactive at the end of 2005, did not take a separation benefit, and who did qualify for retirement with a monthly benefit beginning at a later age. Some people who show up on this schedule will likely withdraw their contributions sometime during the following year and forfeit entitlement to a deferred benefit.

**ACTIVE PARTICIPANTS  
INCLUDED IN VALUATIONS**

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**ACTIVE PARTICIPANTS AS OF DECEMBER 31, 2004**  
**PROTECTIVE PARTICIPANTS WITH SOCIAL SECURITY**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service to Valuation Date						Total
	Men			Women			
	0-4	5-29	30 Plus	0-4	5-29	30 Plus	
Under 20	0	0	0	0	0	0	0
20- 24	461	6	0	137	0	0	604
25- 29	1,347	427	0	440	158	0	2,372
30- 34	804	1,722	0	227	502	0	3,255
35- 39	451	2,379	0	146	563	0	3,539
40- 44	316	2,126	0	112	438	0	2,992
45- 49	235	2,103	2	85	435	0	2,860
50	55	411	13	12	62	1	554
51	35	406	23	4	55	1	524
52	26	278	37	6	49	1	397
53	26	281	42	5	50	2	406
54	25	205	40	13	39	3	325
55	25	164	41	2	31	0	263
56	19	114	28	7	33	4	205
57	23	94	17	3	21	3	161
58	17	95	23	5	20	0	160
59	11	58	18	2	28	1	118
60	5	36	4	0	11	1	57
61	12	20	7	1	7	3	50
62	5	18	3	0	6	0	32
63	6	17	1	1	6	0	31
64	3	11	2	0	4	0	20
65	4	10	1	1	1	0	17
66	0	4	1	0	1	0	6
67	1	2	0	0	2	0	5
68	0	0	0	0	1	0	1
69	2	1	0	0	1	0	4
70 & Over	4	2	0	0	0	0	6
<b>Totals</b>	<b>3,918</b>	<b>10,990</b>	<b>303</b>	<b>1,209</b>	<b>2,524</b>	<b>20</b>	<b>18,964</b>

Years of Service	Men	Women	Total
0	635	177	812
1	686	220	906
2	713	231	944
3	963	309	1,272
4	921	272	1,193
5 & Over	11,293	2,544	13,837
<b>TOTALS</b>	<b>15,211</b>	<b>3,753</b>	<b>18,964</b>

**ACTIVE PARTICIPANTS AS OF DECEMBER 31, 2004**  
**PROTECTIVE PARTICIPANTS WITHOUT SOCIAL SECURITY**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service to Valuation Date						Total
	Men			Women			
	0-4	5-29	30 Plus	0-4	5-29	30 Plus	
Under 20	0	0	0	0	0	0	0
20- 24	30	0	0	1	0	0	31
25- 29	160	54	0	8	4	0	226
30- 34	125	288	0	10	10	0	433
35- 39	62	398	0	6	25	0	491
40- 44	22	465	0	1	19	0	507
45- 49	7	470	0	0	19	0	496
50	0	89	2	0	2	0	93
51	1	80	3	0	2	0	86
52	2	84	12	0	1	0	99
53	0	63	16	0	1	0	80
54	1	51	13	0	2	0	67
55	1	28	11	0	0	0	40
56	0	13	5	0	0	0	18
57	0	12	2	0	0	0	14
58	1	9	4	0	0	0	14
59	0	2	3	0	0	0	5
60	0	3	1	0	0	0	4
61	0	1	0	0	0	0	1
62	0	1	0	0	0	0	1
63	0	2	0	0	0	0	2
64	0	0	0	0	0	0	0
65	0	0	1	0	0	0	1
66	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0
70 & Over	0	0	0	0	0	0	0
<b>Totals</b>	<b>412</b>	<b>2,113</b>	<b>73</b>	<b>26</b>	<b>85</b>	<b>0</b>	<b>2,709</b>

Years of Service	Men	Women	Total
0	55	3	58
1	67	4	71
2	71	7	78
3	95	6	101
4	124	6	130
5 & Over	2,186	85	2,271
<b>TOTALS</b>	<b>2,598</b>	<b>111</b>	<b>2,709</b>

**ACTIVE PARTICIPANTS AS OF DECEMBER 31, 2004**  
**EXECUTIVE AND ELECTED OFFICIALS**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service to Valuation Date						Total
	Men			Women			
	0-4	5-29	30 Plus	0-4	5-29	30 Plus	
Under 20	0	0	0	0	0	0	0
20- 24	0	0	0	0	0	0	0
25- 29	2	0	0	2	1	0	5
30- 34	12	2	0	7	4	0	25
35- 39	20	14	0	11	16	0	61
40- 44	51	34	0	19	34	0	138
45- 49	44	77	0	22	68	0	211
50	7	15	0	6	16	0	44
51	8	22	0	6	18	3	57
52	8	16	1	6	14	2	47
53	8	36	0	9	16	4	73
54	5	21	1	5	25	2	59
55	17	33	2	6	14	4	76
56	10	26	3	5	18	4	66
57	15	27	10	5	20	1	78
58	16	29	3	6	15	3	72
59	9	22	2	2	16	3	54
60	8	24	6	5	10	2	55
61	8	27	2	6	12	0	55
62	9	21	3	9	9	1	52
63	6	16	1	1	12	0	36
64	9	9	1	1	4	2	26
65	6	5	3	2	6	0	22
66	2	9	3	7	6	1	28
67	2	5	4	2	7	0	20
68	4	4	1	0	1	0	10
69	3	6	1	1	0	0	11
70 & Over	42	23	3	9	9	2	88
<b>Totals</b>	<b>331</b>	<b>523</b>	<b>50</b>	<b>160</b>	<b>371</b>	<b>34</b>	<b>1,469</b>

Years of Service	Men	Women	Total
0	108	45	153
1	85	37	122
2	63	37	100
3	40	20	60
4	35	21	56
5 & Over	573	405	978
<b>TOTALS</b>	<b>904</b>	<b>565</b>	<b>1,469</b>

**ACTIVE PARTICIPANTS AS OF DECEMBER 31, 2004**

**UNIVERSITY PARTICIPANTS**

**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service to Valuation Date						Total
	Men			Women			
	0-4	5-29	30 Plus	0-4	5-29	30 Plus	
Under 20	0	0	0	0	0	0	0
20- 24	51	0	0	97	0	0	148
25- 29	324	22	0	530	28	0	904
30- 34	596	192	0	653	238	0	1,679
35- 39	695	475	0	639	515	0	2,324
40- 44	506	761	0	507	750	0	2,524
45- 49	384	1,024	0	384	976	0	2,768
50	65	247	0	58	220	1	591
51	54	263	1	50	270	1	639
52	45	273	0	56	237	1	612
53	56	255	6	57	240	12	626
54	43	275	9	53	267	17	664
55	41	270	18	46	210	22	607
56	43	224	19	39	175	23	523
57	40	202	24	41	196	21	524
58	29	243	41	22	173	22	530
59	24	203	48	20	151	24	470
60	20	159	48	23	156	14	420
61	24	147	51	18	85	20	345
62	19	122	67	15	75	13	311
63	15	82	66	8	64	11	246
64	8	71	60	8	49	11	207
65	11	49	67	6	34	9	176
66	9	30	38	6	28	6	117
67	5	21	35	4	12	7	84
68	5	15	20	2	7	3	52
69	2	10	24	3	8	2	49
70 & Over	16	46	54	2	23	13	154
<b>Totals</b>	<b>3,130</b>	<b>5,681</b>	<b>696</b>	<b>3,347</b>	<b>5,187</b>	<b>253</b>	<b>18,294</b>

Years of Service	Men	Women	Total
0	677	740	1,417
1	640	724	1,364
2	562	652	1,214
3	654	661	1,315
4	597	570	1,167
5 & Over	6,377	5,440	11,817
<b>TOTALS</b>	<b>9,507</b>	<b>8,787</b>	<b>18,294</b>



**ACTIVE PARTICIPANTS AS OF DECEMBER 31, 2004**

**PUBLIC SCHOOL PARTICIPANTS**

**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service to Valuation Date						Total
	Men			Women			
	0-4	5-29	30 Plus	0-4	5-29	30 Plus	
Under 20	0	0	0	0	0	0	0
20- 24	158	0	0	615	0	0	773
25- 29	2,006	133	0	5,858	503	0	8,500
30- 34	1,146	1,807	0	2,638	4,491	0	10,082
35- 39	632	2,529	0	1,592	6,108	0	10,861
40- 44	451	2,516	0	1,543	5,849	0	10,359
45- 49	360	2,684	0	1,388	6,771	0	11,203
50	71	651	0	236	1,504	1	2,463
51	77	699	1	222	1,712	0	2,711
52	61	687	7	217	1,852	23	2,847
53	78	675	115	199	1,820	265	3,152
54	72	715	309	184	1,813	473	3,566
55	66	608	406	147	1,661	558	3,446
56	62	507	413	162	1,367	510	3,021
57	59	400	336	109	1,191	508	2,603
58	56	326	291	104	1,049	345	2,171
59	41	266	174	79	715	183	1,458
60	40	147	114	70	483	116	970
61	32	110	91	63	426	108	830
62	23	91	78	38	318	52	600
63	30	65	43	45	219	44	446
64	22	47	22	27	133	23	274
65	11	20	12	18	104	31	196
66	12	15	10	25	60	12	134
67	11	19	6	13	41	12	102
68	8	8	3	9	34	10	72
69	2	7	2	12	13	5	41
70 & Over	31	12	10	43	43	16	155
<b>Totals</b>	<b>5,618</b>	<b>15,744</b>	<b>2,443</b>	<b>15,656</b>	<b>40,280</b>	<b>3,295</b>	<b>83,036</b>

Years of Service	Men	Women	Total
0	1,200	3,351	4,551
1	1,014	2,869	3,883
2	1,083	3,033	4,116
3	1,204	3,145	4,349
4	1,117	3,258	4,375
5 & Over	18,187	43,575	61,762
<b>TOTALS</b>	<b>23,805</b>	<b>59,231</b>	<b>83,036</b>

**ACTIVE PARTICIPANTS AS OF DECEMBER 31, 2004**  
**GENERAL (NON-TEACHER) PARTICIPANTS**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service to Valuation Date						Total
	Men			Women			
	0-4	5-29	30 Plus	0-4	5-29	30 Plus	
Under 20	0	0	0	0	0	0	0
20- 24	1,015	3	0	2,357	11	0	3,386
25- 29	2,074	317	0	4,176	625	0	7,192
30- 34	1,825	1,377	0	3,620	2,243	0	9,065
35- 39	1,768	2,860	0	4,231	4,190	0	13,049
40- 44	1,794	4,723	0	5,993	7,026	0	19,536
45- 49	1,678	6,688	12	5,893	10,880	24	25,175
50	332	1,485	32	951	2,339	68	5,207
51	293	1,567	73	913	2,388	104	5,338
52	287	1,439	95	819	2,319	121	5,080
53	291	1,559	137	706	2,300	179	5,172
54	277	1,487	233	695	2,264	244	5,200
55	246	1,335	303	596	2,061	268	4,809
56	214	1,139	344	548	1,945	269	4,459
57	221	1,078	369	492	1,946	229	4,335
58	215	970	304	457	1,760	208	3,914
59	195	774	237	377	1,469	156	3,208
60	129	540	155	282	1,150	94	2,350
61	171	476	131	256	1,060	85	2,179
62	153	453	125	233	979	76	2,019
63	116	350	81	226	829	53	1,655
64	89	237	32	141	566	36	1,101
65	90	179	36	135	455	26	921
66	70	148	23	84	317	22	664
67	73	88	10	74	191	14	450
68	62	67	6	74	149	9	367
69	83	55	5	71	115	8	337
70 & Over	418	224	17	302	456	28	1,445
<b>Totals</b>	<b>14,179</b>	<b>31,618</b>	<b>2,760</b>	<b>34,702</b>	<b>52,033</b>	<b>2,321</b>	<b>137,613</b>

Years of Service	Men	Women	Total
0	3,408	9,043	12,451
1	2,698	6,954	9,652
2	2,453	6,708	9,161
3	2,855	6,375	9,230
4	2,765	5,622	8,387
5 & Over	34,378	54,354	88,732
<b>TOTALS</b>	<b>48,557</b>	<b>89,056</b>	<b>137,613</b>

# APPENDIX

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## Actuarial Methods

## ACTUARIAL VALUATION METHOD

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The actuarial funding method prescribed in the statute for WRS is the **Frozen Initial Liability Method**. 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 - a period of approximately 13 years. Hence, the computed normal cost is made up of two parts:

- The pure entry-age normal cost (EANC) determined without regard to past gains or losses, and
- an experience amortization component.

Section 40.04(1) of the Wisconsin Statutes provides authority to maintain accounts and reserves determined to be “useful in achieving the funds’ purposes - - -”. A fundamental WRS objective is stable contribution rates. Accordingly, based on the authority granted under Section 40.04, the experience portion of the normal cost is separately calculated each year and the amortization period is varied upward or downward in order to minimize short-term rate fluctuations.

## **WISCONSIN RETIREMENT SYSTEM ASSET VALUATION METHOD**

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An essential step in the valuation process is comparing valuation assets with computed liabilities. Computed liabilities result from actuarial calculations involving the covered population, the benefits, and actuarial assumptions. Valuation assets are those assets that are recognized and available to fund the System's liabilities. WRS assets are invested in the Core Investment Trust, and in the Variable Investment Trust, both of which are managed by the State of Wisconsin Investment Board (SWIB). Assets in the Variable Investment Trust are marked to market each year. Assets in the Core Investment Trust (most of the assets) are valued (or recognized) using an "asset valuation method."

Asset valuation methods are distinguished by the timing of the recognition of investment return. Total investment return is the sum of ordinary income and capital value changes. Under a pure market value approach, ordinary investment income and all capital value changes are recognized immediately. Because of market volatility, use of pure market values in retirement funding can result in volatile contribution rates and unstable financial ratios, contrary to WRS objectives.

The asset valuation method used for WRS valuations is statutory, and is referred to as the "Market Recognition Account" or MRA. Act 11 of 1999 closed the former Transaction Amortization Account (TAA) and created the Market Recognition Account. The MRA recognizes assumed return fully each year. Differences between actual and assumed return are phased in over a closed 5-year period. The objective is to give recognition to long-term changes in asset values while the minimizing effect of short-term fluctuations in the capital markets. In accordance with its smoothing objective, the MRA will tend to exceed the market value when the markets are doing poorly, and will fall short of the market value when markets are doing well. Some retirement systems set limits on the amount by which the recognized value of assets can differ from the market value.

The development of the Market Recognition Account is shown on the following page. The Core Investment Trust includes assets for other programs, such as Sick Leave, that are not related to the funding of the Wisconsin Retirement System, and does not include assets related to the Variable Investment Trust. Consequently, the asset value developed on the next page will not balance to the total system assets. ETF Staff maintains the breakdown of the separate asset accounts.

**WISCONSIN RETIREMENT SYSTEM**  
**MARKET RECOGNITION ACCOUNT (CORE TRUST FUND)**

	For the Year Ended December 31						
	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Beginning of year							
a. Funding Value	\$54,333,668,260	\$57,721,206,317	\$62,064,552,008	\$64,514,216,523	\$64,695,284,058	\$66,640,778,272	\$67,244,901,585
b. Market value	46,389,194,485	56,816,468,425	63,565,374,407	67,330,855,168	67,330,855,168	67,330,855,168	67,330,855,168
End of year							
c. Market value	56,816,468,425	63,565,374,407	67,330,855,168	67,330,855,168	67,330,855,168	67,330,855,168	67,330,855,168
d. Non-investment cash flow (contributions minus benefits)	(498,177,761)	(331,276,955)	(1,448,818,299)				
e. Investment income							
e1. Total Investment Income	10,925,451,701	7,080,182,937	5,214,299,060				
e2. Assumed rate	7.8%	7.8%	7.8%				
e3. Amount for immediate recognition	4,218,597,192	4,489,334,291	4,784,531,143	-	-	-	-
e4. Amount for phased-in recognition: e1-e3	6,706,854,509	2,590,848,645	429,767,917	-	-	-	-
f. Phased-in recognition of investment income							
f1. Current year: .2 x e4	1,341,370,902	518,169,729	85,953,583	-	-	-	-
f2. First prior year	(1,764,426,680)	1,341,370,902	518,169,729	85,953,583	-	-	-
f3. Second prior year	(1,067,115,864)	(1,764,426,680)	1,341,370,902	518,169,729	85,953,583	-	-
f4. Third prior year	(824,740,722)	(1,067,115,864)	(1,764,426,680)	1,341,370,902	518,169,729	85,953,583	-
f5. Fourth prior year	-	(824,740,722)	(1,067,115,864)	(1,764,426,680)	1,341,370,902	518,169,729	85,953,583
f6. Total MRA recognition	(2,314,912,363)	(1,796,742,634)	(886,048,329)	181,067,535	1,945,494,214	604,123,312	85,953,583
f7. Amount for TAA recognition	1,982,030,989	1,982,030,989	-	-	-	-	-
f8. Total recognized gain (loss)	(332,881,375)	185,288,354	(886,048,329)	181,067,535	1,945,494,214	604,123,312	85,953,583
g. Total Recognized Investment Income: e3 + f8	3,885,715,817	4,674,622,646	3,898,482,814	181,067,535	1,945,494,214	604,123,312	85,953,583
h. Funding value end of year: a + d + e3 + f8	57,721,206,317	62,064,552,008	64,514,216,523	64,695,284,058	66,640,778,272	67,244,901,585	67,330,855,168
i. Difference between market and funding values	(904,737,892)	1,500,822,399	2,816,638,645	2,635,571,110	690,076,896	85,953,583	-
j. Recognized Rate of Return	7.2%	8.1%	6.4%				
k. Market Rate of Return	21.1%	11.7%	7.9%				

**DEVELOPMENT OF EAR AS OF DECEMBER 31, 2005**

	General	Executive & Elected Officials	Protective Occupation		Total
			With Soc. Sec.	Without Soc. Sec.	
	<b>\$ Millions</b>				
1. Present Value of Future Benefits for Non-Retired	\$41,528.1	\$366.0	\$4,394.2	\$1,035.1	\$47,323.4
2. Present Value of Future Entry Age Normal Costs	11,628.1	97.6	1,701.0	329.1	13,755.8
3. Entry Age Accrued Liability: (1)-(2)	29,900.0	268.4	2,693.2	706.0	33,567.6
4. Non-Retired Assets-WRS	31,505.2	278.7	3,000.2	838.7	35,622.8
-LTDI	173.5	1.4	25.6	6.0	206.5
-Total	31,678.7	280.1	3,025.8	844.7	35,829.3
5. Entry Age Unfunded Accrued Liability:(3)-(4)	(1,778.7)	(11.7)	(332.6)	(138.7)	(2,261.7)
6. WRS Frozen Unfunded Accrued Liability	324.1	0.9	11.3	9.3	345.6
<b>7. EAR:(6)-(5)</b>	<b>\$2,102.8</b>	<b>\$12.6</b>	<b>\$343.9</b>	<b>\$148.0</b>	<b>\$2,607.3</b>

**ACTUAL VS. EXPECTED CHANGES IN EXPERIENCE AMORTIZATION RESERVE (EAR) - CALENDAR YEAR 2005**  
**(\$ MILLIONS)**

	Year Ended December 31, 2005				
	General	Executive & Elected	Protective		Total
			With S.S.	Without S.S.	
(1) Entry Age UAAL at start of year	\$ (1,841.5)	\$(15.3)	\$(334.7)	\$(141.6)	\$ (2,333.1)
(2) Normal cost from last valuation (Total)	1,204.7	11.9	155.2	34.3	1,406.1
(3) Actual contributions	1,140.2	10.3	122.9	25.2	1,298.6
(4) Interest	(141.1)	(1.1)	(24.8)	(10.7)	(177.7)
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	(1,918.1)	(14.8)	(327.2)	(143.2)	(2,403.3)
(6) Change from experience study	0.0	0.0	0.0	0.0	0.0
(7) Other changes	0.0	0.0	0.0	0.0	0.0
(8) Expected UAAL after changes: (5) + (6) + (7)	(1,918.1)	(14.8)	(327.2)	(143.2)	(2,403.3)
(9) Actual Entry Age UAAL at end of year	(1,778.7)	(11.7)	(332.6)	(138.7)	(2,261.7)
<b>(10) Gain (loss): (8) - (9)</b>	<b>\$ (139.4)</b>	<b>\$ (3.1)</b>	<b>\$ 5.4</b>	<b>\$ (4.5)</b>	<b>\$ (141.6)</b>

The gain loss analysis is intended to explain the financial effect of differences between actual and assumed experience in basic risk areas: Investment Income, Pay increases, retirement rates, turnover rates, etc. In order for the gain loss analysis to proceed, the change in the Entry Age Unfunded Actuarial Accrued Liabilities from one year to the next is analyzed to remove the effect of expected changes. The table above develops this year's gain or loss (line 10) which is added to the Experience Amortization Reserve (EAR). When the EAR increases "unexpectedly," this is favorable experience and downward pressure is exerted on contribution rates. Similarly, an unexpected decrease in the EAR is unfavorable experience and upward pressure is exerted on contribution rates. In addition to the gain or (loss) described in line 10, non-recurring changes in lines 6 and 7 also may affect contribution rates.

By measuring gains and losses each year and, to the extent possible, determining the "responsible" assumptions, insight is gained into how well the actuarial assumptions estimate WRS liabilities. Such information aids in understanding financial effects of emerging trends and is particularly useful during preparation of the WRS experience study.