

**STATE OF WYOMING
RETIREMENT SYSTEM**

**REPORT ON ACTUARIAL VALUATION
AS OF JANUARY 1, 2004**

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STATE OF WYOMING RETIREMENT SYSTEM

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STATE OF WYOMING RETIREMENT SYSTEM

I. INTRODUCTION

This report summarizes the results of our actuarial valuation of the State of Wyoming Retirement System (the Retirement System) as of January 1, 2004. The contribution requirements presented in Section VI of the report are based on the following:

1. The benefit provisions of the Retirement System as of January 1, 2004.
2. The characteristics of covered active employees, inactive nonretired participants, and pensioners and beneficiaries as of December 31, 2003.
3. The assets of the Retirement System as of December 31, 2003.
4. Economic actuarial assumptions regarding future salary increases and investment earnings.
5. Other actuarial assumptions regarding employee termination, retirement disability, death, etc.

One purpose of the actuarial valuation is to determine the contribution sufficient to meet the long-term obligations to the participants covered by the Retirement System in accordance with the benefit provisions of the Wyoming Retirement Act.

If each of the actuarial assumptions were to be exactly fulfilled, the true actuarial cost of the Retirement System would equal the cost projected by the actuarial calculations. However, because of the length of time for which projections are made, and because of the great number of variables which can affect the emerging costs, the actual experience of the Retirement System will not match the assumptions. The costs, expressed as a percentage of payroll, will increase if the Retirement System experiences net actuarial losses and will decrease if the Retirement System experiences net actuarial gains.

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II. SUMMARY OF VALUATION RESULTS

This section summarizes financial results for the Retirement System Plan based upon actuarial valuations as of January 1, 2004 and January 1, 2003.

	January 1, 2004	January 1, 2003
Contribution Requirements (as % of pay)		
Total Normal Cost	11.24%	11.19%
Employee Contributions	<u>5.57%</u>	<u>5.57%</u>
Employer Share	5.67%	5.62%
Amortization of Unfunded Liability	2.95%	2.61%
Administrative Expenses	<u>0.14%</u>	<u>0.14%</u>
Total Employer Cost	8.76%	8.37%
Total Cost (Employee + Employer)	14.33%	13.94%
Funded Status		
Actuarial Value of Assets (AV)	\$ 4,657,898,000	\$ 4,352,424,000
Actuarial Accrued Liability (AAL)	5,077,443,000	4,718,618,000
AV Funded Percentage (AV ÷ AAL)	91.7%	92.2%
Market Value of Assets (MV)	\$ 4,299,955,000	\$ 3,627,020,000
MV Funded Percentage (MV ÷ AAL)	84.7%	76.9%

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III. MEMBERSHIP CHARACTERISTICS

As of December 31, 2003, there were 31,494 employees in active service covered under the provisions of the Retirement System. The significant age, service, salary and accumulated contribution information for the active employees are summarized below along with comparative figures from the previous year.

	2003	2002
Number of active employees	31,494	31,135
Average age	45.9	45.6
Average years of service	10.5	10.4
Total annual salary	\$1,032,259,432	\$ 988,134,564
Average annual salary	\$ 32,776	\$ 31,737
Total accumulated contributions	\$ 795,274,433	\$ 755,758,927
Average accumulated contributions	\$ 25,252	\$ 24,274

During 2003, the average age increased slightly, average service increased slightly, and the number of active employees increased by about 1%.

* * * * *

In addition to the data received on active employees, data were provided on 4,745 vested inactive nonretired members who did not elect to receive their accumulated contributions when they left covered employment. The significant age, service (on date of termination) and accumulated contribution information for these inactive members are summarized below with comparative figures from the previous year.

	2003	2002
Number of inactive employees	4,745	4,624
Average age	50.5	50.3
Average years of service	9.3	9.2
Total accumulated contributions	\$ 112,313,934	\$ 106,773,656
Average accumulated contributions	\$ 23,670	\$ 23,091

The average age increased from last year and average service increased slightly. The number of inactive members increased by 2.6% since last year.

* * * * *

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* * * * *

Detailed summaries of the census data for active and inactive participants are shown in the tables contained in the Appendix to this report. The first page of the Appendix contains the index of the tables contained therein.

For these tables, the salaries shown for active employees are the actual 2003 salaries reported. For calculating active employee liabilities, the actual 2003 salaries reported were increased by 2.50% (one half of the 5.0% salary scale) to approximate a pay rate as of January 1, 2004.

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IV. BENEFIT EXPERIENCE

During the year ended December 31, 2003, the Board approved 836 pension awards. Of that total, approximately 26.7% commenced before becoming eligible for unreduced benefits. 34.3% of new retirees have unreduced benefits due solely to reaching age 60 while 18.2% of new retirees have attained the rule of 85 without reaching age 60. The remaining 20.8% of new retirees have both age 60 and rule of 85.

On December 31, 2003, a total of 13,922 pensioners were receiving retirement benefits from the Plan. The average monthly benefit for the pensioners was \$1,010 compared to \$958 as of the end of 2002. In addition, 1,470 beneficiaries were receiving monthly payments at December 31, 2003.

Detailed summaries of the census data for pensioners and beneficiaries are shown in the tables contained in the Appendix to this report. The information presented may be summarized as follows:

- ◆ Total annual benefits in force as of December 31, 2003 for the 15,392 pensioners and beneficiaries were \$183.2 million.
- ◆ Of the 15,392 pensioners and beneficiaries, approximately 31% are under age 65, 38% are 65 through 74 and 31% are 75 or older.
- ◆ Approximately 43% of the 13,922 pensioners are receiving benefits in either a 50% or 100% joint and survivor annuity, including those with a pop-up feature (options 2, 3, 6 or 7).
- ◆ Approximately 10% of the 15,392 pensioners and beneficiaries were receiving monthly benefits of less than \$200 and 73% were receiving at least \$400 per month.
- ◆ For members retiring from active service during 2003, the average age of early and normal retirements was 60.2.
- ◆ Benefit payments from Plan assets in 2003 totaled \$185,826,481, including refund payments of \$9,460,758. In 2002, benefit payments were \$171,160,286, including refund payments of \$8,701,574.

The actuarial accrued liability for pension benefits to the 15,392 pensioners and beneficiaries amounted to over \$2,140 million as of January 1, 2004. This liability is the actuarially estimated amount necessary to pay benefits to the pensioners and beneficiaries assuming that the amounts set aside would earn 8.0% interest per year until they are expended in benefit payments. This amount includes the 3.0% annual cost-of-living increases.

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V. ASSETS

As shown in the auditor's report as of December 31, 2003, net assets totaled \$4,299,955,244 at market value, compared to a value of \$3,627,019,835 as of December 31, 2002. However, assets are taken at a somewhat different value for the actuarial valuation. Effective January 1, 2001, we are using a method that adjusts to market value gradually as follows:

Appreciation and depreciation in excess of the expected appreciation, whether realized or unrealized, is spread over five years beginning with the year of occurrence. Interest and dividends are recognized immediately. The procedure results in recognition of all changes in market value after five years.

The procedure is applied to all investments. The determination of the actuarial value of investments is shown in Table A that follows. There was approximately \$357.9 million of deferred depreciation that will be recognized in future years. A statement of the actuarial assets for the years ended December 31, 2003 and 2002 is provided in Table B. The asset value on this basis is \$4,657,897,625 and \$4,352,423,802, respectively.

The amount of write-up or write-down (which reflects changing market values) is considered part of the investment income for the year. This procedure treats realized and unrealized capital gains or losses equally. In other words, the sale of a security -- either at a gain or loss -- has no effect on the value of assets for actuarial purposes. If the market value has gone up, the increase is gradually reflected in the value of the fund's assets; it does not have to be sold for the appreciation to be realized. This automatic reflection of market value appreciation or depreciation should eliminate any need for making investment decisions for the explicit purpose of meeting the investment return assumption.

Chart 1 is a graph showing the historical asset values on both actuarial and market value bases. This graph illustrates that the growth of the market value of assets has also been reflected in the actuarial value of assets.

The investment portfolio is summarized in Table C. On December 31, 2003, approximately 63% of the assets at market value consisted of equities.

Income and disbursements for 2003 and 2002 on the actuarial value basis are given in Table D. The progress of the fund for the last eighteen years is provided in Table E. It shows that assets have increased consistently from year to year, although the amount of the increase has varied with fluctuations in investment income. Benefit payments have consistently increased, confirming the growth in assets needed to finance lifetime benefits for current pensioners and those participants who will retire in the future.

Table F shows the components of investment earnings over the last eighteen years. Over the full period, the earnings of \$4,217 million on an actuarial value basis represents an average annual return of 10.5%.

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Market Value Results

These investment results are used to determine whether investment experience is meeting the Retirement System's actuarially assumed return. They do not, however, necessarily indicate the relative success of the Retirement System's investment program. Rather than on the smoothed actuarial value of assets, comparisons of performance (with other funds, investment institutions and market indices) are generally based on rates of return that reflect market changes in full.

The estimated investment returns for the last thirteen years on a *market value basis* as reported by your investment advisors are as follows:

<u>Year</u>	<u>Rate of Return</u>	<u>Year</u>	<u>Rate of Return</u>
1989	18.00%	1997	20.92%
1990	5.30%	1998	19.02%
1991	20.30%	1999	13.88%
1992	8.57%	2000	(0.99)%
1993	10.24%	2001	(4.47)%
1994	(2.78)%	2002	(9.29)%
1995	25.90%	2003	21.00%
1996	11.73%		

These values can be used to illustrate the smoothing effect that results from using an actuarial value of assets. Chart 2 illustrates that the volatility of market values is reduced by using an actuarial value of assets. By using an actuarial value that reduces the year-to-year fluctuations in return, the year-to-year fluctuations in cost are reduced.

The difference between the investment return rates at market value, when compared to similar return rates on the actuarial valuation basis, stems from the inclusion in the market value figures of all capital appreciation or depreciation whereas the results based on the actuarial valuation basis reflect only the write-up/down in accordance with the adopted valuation procedure.

The rates of return, based on full market value changes as presented herein, should not be taken as a truly adequate measure of the Retirement System's investment performance. There are many reasons for differences among portfolios in return rates based on market value and among managers during a given time period. While a manager's investment choices are an important factor, consideration must also be given to the effects of established policy guidelines and any special characteristics of the Plan that influence investment decisions. Those other factors, commonly dealt with in an investment performance study, are beyond the scope of this report.

TABLE A

DETERMINATION OF WRITE-UP (DOWN) AMOUNT AND ACTUARIAL VALUE OF INVESTMENTS AS OF DECEMBER 31, 2003 AND 2002

Year Ending	Total Appreciation (Depreciation)	Expected Appreciation	Difference From Expected	OF TOTAL APPRECIATION OF TOTAL APPRECIATION		OF TOTAL APPRECIATION OF TOTAL APPRECIATION	
				% Deferred	\$ Deferred	% Deferred	\$ Deferred
12/31/99	401,008,675	-	401,008,675	0%	0	20%	80,201,735
12/31/00	(174,445,845)	230,318,773	(404,764,618)	20%	(80,952,924)	40%	(161,905,847)
12/31/01	(319,713,854)	223,300,711	(543,014,565)	40%	(217,205,826)	60%	(325,808,739)
12/31/02	(494,704,675)	212,650,620	(707,355,295)	60%	(424,413,177)	80%	(565,884,236)
12/31/03	634,778,699	178,991,767	455,786,932	80%	<u>364,629,546</u>	0%	<u>0</u>
(a) Total Deferred as of Valuation Date					\$ (357,942,381)		\$ (973,397,087)
(b) Total Appreciation (Depreciation) different from expected for Last Five Plan Years					(798,338,871)		(729,847,165)
(c) Write-Up/(Down) Amount for the Year-- Equals 20% of (b) Plus Rounding Adjustment					(159,667,774)		(145,969,434)
Market Value of Investments					January 1, 2004		January 1, 2003
Less: Deferred Appreciation (Depreciation)					\$ 4,427,411,397		\$ 3,747,498,074
Preliminary Actuarial Value of Investments					<u>(357,942,381)</u>		<u>(973,397,087)</u>
Adjustment for 20% Corridor					\$ 4,785,353,778		\$ 4,720,895,161
Actuarial Value of Investments*					0		(247,993,120)
					\$ 4,785,353,778		\$ 4,720,895,161

* See Table B for actuarial value of assets.

TABLE B**ASSETS OF THE FUND AS OF DECEMBER 31, 2003 AND 2002
(ACTUARIAL VALUE BASIS)**

	<u>2003</u>	<u>2002</u>
Net Accounts Receivable/(Payable)	(127,456,153)	(120,478,239)
Preliminary Actuarial Value of Investments	4,785,353,778	4,720,895,161
Net Assets	\$ 4,657,897,625	\$ 4,600,416,922
Market Value of Assets	\$ 4,299,955,244	\$ 3,627,019,835
80% Minimum Actuarial Value	\$ 3,439,964,196	\$ 2,901,615,868
120% Maximum Actuarial Value	\$ 5,159,946,292	\$ 4,352,423,802
Adjustment for 20% Corridor	\$ 0	\$ (247,993,120)
Actuarial Value of Assets	\$ 4,657,897,625	\$ 4,352,423,802

CHART 1

Value of Assets

■ Actuarial □ Market



Year Ended December 31

TABLE C

INVESTMENT PORTFOLIO

Type of Investment	December 31, 2003		December 31, 2002	
	Amount	Percentage Distribution	Amount	Percentage Distribution
Cash Investments	\$ 259,290,402	5.9%	\$ 211,422,014	5.7%
Fixed Income Investments	\$ 1,387,556,802	31.3%	\$ 1,582,378,848	42.2%
Equity Investments	\$ 2,780,564,193	62.8%	\$ 1,953,697,212	52.1%
Total Investments*	\$ 4,427,411,397	100.0%	\$ 3,747,498,074	100.0%

* Total market value of assets (after adjusting for accruals) is \$4,299,955,244 and \$3,627,019,835 as of December 31, 2003 and 2002.

TABLE D

**SUMMARY STATEMENT OF INCOME AND DISBURSEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2003 AND 2002
(ACTUARIAL VALUE BASIS)**

	2003	2002
Contribution Income:		
Employer Contributions	\$ 55,056,552	\$ 57,139,516
Employee Contributions	60,848,296	58,234,324
Other	307,236	237,912
Total Contribution Income	\$ 116,212,084	\$ 115,611,752
Less: Administrative Expenses	(1,435,922)	(1,281,554)
Net Contribution Income	\$ 114,776,162	\$ 114,330,198
Investment Income:		
Interest and Dividends	\$ 117,141,004	\$ 120,095,700
Less: Investment Expenses	(8,813,197)	(8,173,582)
Net Interest and Dividends	\$ 108,327,807	\$ 111,922,118
Gross Write-Up of Assets	(159,667,774)	(145,969,434)
Expected Appreciation	178,991,767	215,102,574
Prior Year Corridor adjustment no longer included	247,993,120	0
Net Adjustment for 20% Corridor Around Market Value	0	(247,993,120)
Net Investment Income	375,644,920	(66,937,862)
Net Income from Securities Lending	879,222	728,165
Total Income Available for Benefit Payments and Reserves	\$ 491,300,304	\$ 48,120,501
Benefit Payments:		
Pension Benefits	\$ (176,365,723)	\$ (162,458,712)
Refunds	(9,460,758)	(8,701,574)
Total Benefit Payments	(185,826,481)	(171,160,286)
Addition to Reserve for Future Benefit Payments	\$ 305,473,823	\$ (230,038,504)
Actuarial Value of Assets, Beginning of Year	4,352,423,802	4,582,462,306
Actuarial Value of Assets, End of Year	\$ 4,657,897,625	\$ 4,352,423,802

TABLE E

**PROGRESS OF THE FUND THROUGH DECEMBER 31, 2003
(ACTUARIAL VALUE BASIS)**

Plan Year	Employer Contributions*	Employee Contributions	Administrative Expenses	Net Investment Income	Benefit Payments	Transfers Out	Fund at Year End
18 Years Through December 31, 2003	\$ 806,965,794	\$ 806,239,094	\$ (17,344,223)	\$ 4,216,912,346	\$ (1,814,110,664)	\$ (106,998,719)	\$ 4,657,897,625
As of							
12/31/85	--	--	--	--	--	--	766,233,997**
12/31/86	41,364,465	36,365,804	(782,000)	98,998,090	(42,082,765)		900,097,591
12/31/87	39,901,834	36,039,418	(808,023)	91,374,783	(50,604,364)		1,016,001,239
12/31/88	38,414,939	33,222,264	(444,343)	103,025,282	(48,627,479)		1,141,591,902
12/31/89	36,139,394	36,231,108	(424,136)	128,370,680	(55,459,353)		1,286,449,595
12/31/90	38,668,634	38,960,372	(850,148)	114,218,588	(61,154,261)		1,416,292,780
12/31/91	38,903,350	39,288,267	(863,301)	148,064,188	(69,348,501)		1,572,336,783
12/31/92	42,354,843	42,883,874	(909,653)	175,246,400	(75,211,430)		1,756,700,817
12/31/93	41,596,571	42,266,219	(801,026)	189,281,426	(82,480,713)		1,946,563,294
12/31/94	42,791,243	43,415,880	(888,518)	136,210,578	(89,707,717)		2,078,384,760
12/31/95	43,714,263	44,435,762	(937,480)	230,731,781	(99,689,985)		2,296,639,101
12/31/96	43,495,146	44,761,611	(1,028,163)	233,212,720	(108,536,621)		2,508,543,794
12/31/97	44,958,544	46,152,691	(1,147,818)	314,340,179	(117,126,096)		2,795,721,294
12/31/98	46,183,091	47,366,181	(1,074,562)	436,098,461	(123,858,991)		3,200,435,474
12/31/99	48,681,209	50,106,535	(1,182,899)	475,758,627	(132,428,572)		3,641,370,374
12/31/2000	50,539,675	51,868,059	(1,096,747)	592,379,739	(144,620,949)		4,190,440,151***
12/31/2001	56,517,377	53,792,429	(1,387,930)	439,286,379	(156,189,100)		4,582,462,306
12/31/2002	57,377,428	58,234,324	(1,281,554)	(66,209,697)	(171,160,286)	\$ (106,998,719)	4,352,423,802
12/31/2003	55,363,788	60,848,296	(1,435,922)	376,524,142	(185,826,481)		4,657,897,625

* Includes other state funding sources.

** Includes contributions and investment income net of expenses and benefit payments through December 31, 1985.

*** Includes the effect of the change in actuarial asset method.

TABLE F

**SUMMARY OF INVESTMENT RESULTS
(ACTUARIAL VALUE BASIS)**

Plan Year	Average Amount of Assets in Fund	Assumed Investment Income		Net Dividends & Interest Income*	Appreciation Recognized**	Total Investment Income		Investment Gain (Loss)
		Amount	%			Amount	%	
1986	\$ 783,667,000	\$ 58,775,000	7.50%	\$ 75,380,000	\$ 23,618,000	\$ 98,998,000	12.6%	\$ 40,223,000
1987	912,362,000	68,427,000	7.50	76,183,000	15,192,000	91,375,000	10.0	22,948,000
1988	1,027,284,000	77,046,000	7.50	86,933,000	16,092,000	103,025,000	10.0	25,979,000
1989	1,149,835,000	86,238,000	7.50	88,865,000	39,506,000	128,371,000	11.7	42,133,000
1990	1,294,112,000	103,529,000	8.00	94,715,000	19,504,000	114,219,000	8.9	10,690,000
1991	1,420,283,000	113,623,000	8.00	99,550,000	48,514,000	148,064,000	10.4	34,441,000
1992	1,576,896,000	126,152,000	8.00	104,559,000	70,687,000	175,246,000	11.2	49,094,000
1993	1,757,392,000	140,591,000	8.00	106,022,000	83,259,000	189,281,000	10.8	48,690,000
1994	1,944,813,000	155,585,000	8.00	110,883,000	25,327,000	136,210,000	7.0	(19,375,000)
1995	2,072,615,000	165,809,000	8.00	117,721,000	113,011,000	230,732,000	11.1	64,923,000
1996	2,286,237,500	182,899,000	8.00	125,022,000	108,191,000	233,213,000	10.2	50,314,000
1997	2,495,225,000	199,618,000	8.00	123,671,000	190,669,000	314,340,000	12.6	114,722,000
1998	2,780,566,000	222,445,000	8.00	98,831,000	337,268,000	436,098,000	15.7	213,654,000
1999	3,183,615,000	254,689,000	8.00	133,493,000	342,266,000	475,759,000	14.9	221,070,000
2000	3,620,264,000	289,621,000	8.00	124,283,000	468,097,000	592,380,000	16.4	302,759,000***
2001	4,167,502,000	333,400,000	8.00	123,241,000	316,045,000	439,286,000	10.5	105,886,000
2002	4,501,189,000	360,095,000	8.00	112,650,000	(178,860,000)	(66,210,000)	(1.5)	(426,305,000)
2003	4,317,617,000	345,409,000	8.00	109,207,000	267,317,000	376,524,000	8.7	31,115,000
Total Amount	\$ 3,283,951,000	\$ 1,911,209,000		\$ 2,305,702,000	\$ 4,216,911,000	\$ 932,960,000		
Average Rate of Investment Income Over Period						10.5%		

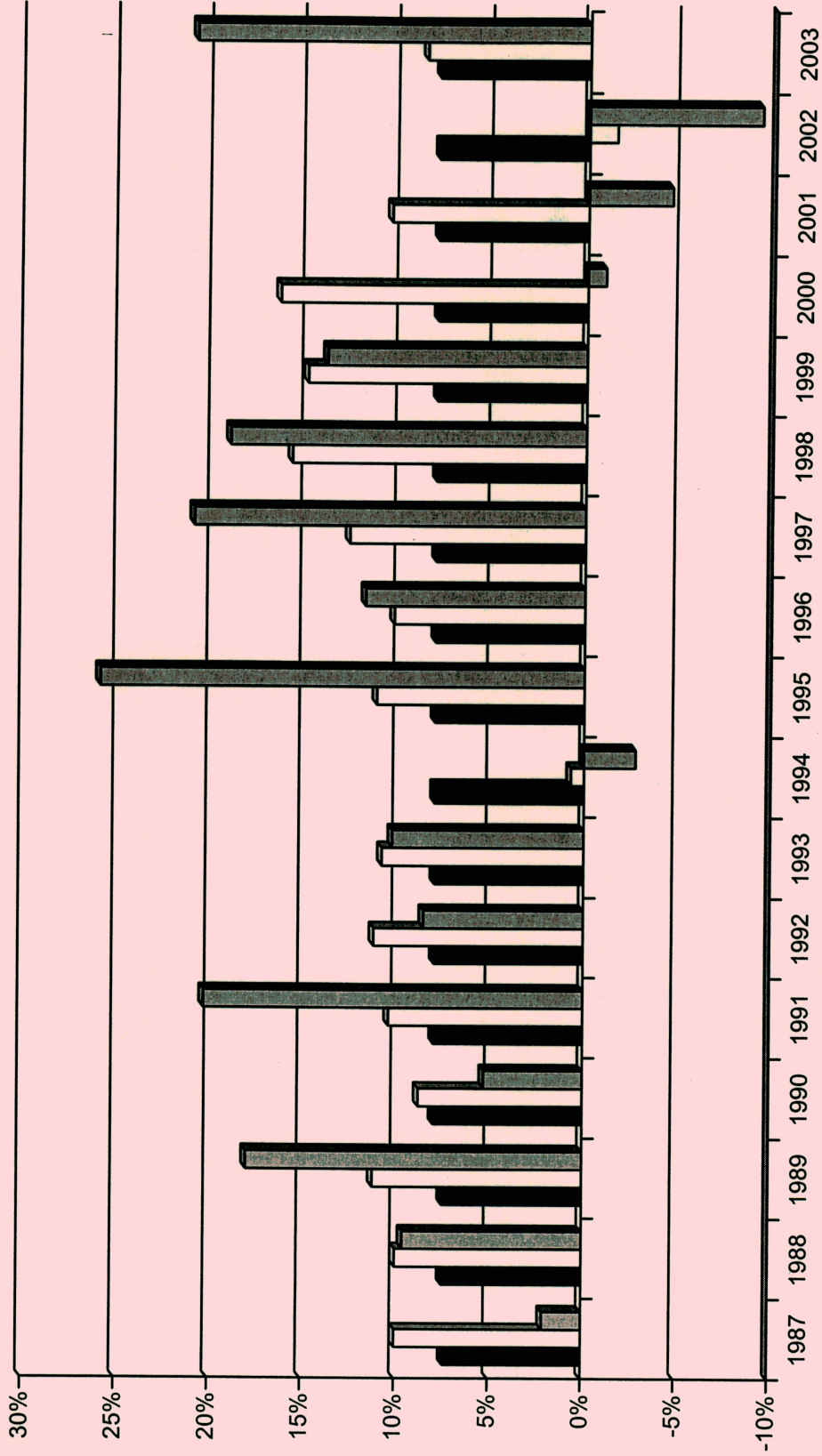
* Includes net effect of securities lending income, rebates and fees.

** Recognizes write-up of assets on an actuarial value basis and any adjustments necessary to bring the actuarial value within the 80% to 120% of market value corridor.

*** Includes effect of change in actuarial asset method

Investment Return

■ Actuarial Assumption □ Actuarial Value ■ Market Value



Year Ended December 31

STATE OF WYOMING RETIREMENT SYSTEM

VI. RESULTS OF ACTUARIAL VALUATION

We have utilized an actuarial cost procedure known as the entry age normal cost method for funding all benefits. This method is used in situations where a cost is desired that will relatively remain level as a percentage of the participating payroll.

Under the entry age normal method, the total contribution requirement has three components: an annual normal cost, an allowance for expenses and a payment with respect to the unfunded actuarial accrued liability (UAAL).

The annual normal cost is calculated as the level percentage of pay required over each employee's period of covered employment to fund the total expected benefits. If the average entry age remains stable, the total normal cost rate should remain a level percentage of payroll.

The normal cost payments are not sufficient to finance the benefit program because credit is given for periods of prior service during which the normal cost contributions were not paid. Additional actuarial liability was also created by changes in the benefits, actuarial assumptions, funding method and by experience which differed from that projected by the actuarial assumptions.

We have calculated the cost of funding (or amortizing) this unfunded actuarial accrued liability over a period of 20 years as of January 1, 2004. The amortization method uses payments that are assumed to increase at 4.0% per annum, the rate at which the covered payroll is assumed to increase.

The use of a level percentage of payroll amortization can result in an increase in cost on a percentage of payroll basis if the growth in aggregate payroll is less than assumed. This is because, in this situation, the amortization payment would be spread over a lower-than-expected aggregate payroll.

The contribution requirements are shown below.

Contribution Requirements

	2004 Cost as a % of Salaries	2004 Dollar Cost*	2003 Cost as a % of Salaries
1. Entry Age Normal Cost			
a. Total employee and employer	11.24%	\$ 116,017,000	11.19%
b. Employee share	<u>5.57%</u>	<u>57,497,000</u>	<u>5.57%</u>
c. Employer share equals (a) - (b)	5.67%	\$ 58,520,000	5.62%
2. Cost to Amortize Unfunded Actuarial Accrued Liability	2.95%	30,497,000	2.61%
3. Administrative Expenses	<u>0.14%</u>	<u>1,460,000</u>	<u>0.14%</u>
4. Total Employer Cost	8.76%	\$ 90,477,000	8.37%
5. Total Cost (Employee + Employer)	14.33%	\$ 147,974,000	13.94%

* Dollar costs based on 2004 estimated payroll of \$1,032,259,000.

STATE OF WYOMING RETIREMENT SYSTEM

VI. RESULTS OF ACTUARIAL VALUATION (continued)

The total employer cost of \$90,477,000 is 8.76% of payroll. This is more than the statutory contribution rate of 5.68% covered payroll. Hence, the current contribution rate does not meet the contribution requirements based upon the actuarial assumptions, actuarial method and financing objectives adopted by the Board.

Please note that the cost of the system exceeds its funding sources. There are three basic options for addressing this. First, increase contributions. Second, reduce benefits. Third, do nothing and hope that future experience is more favorable than assumed. The asset performance in 2003 has improved but there are still unrecognized asset losses, so the funding shortfall is likely to become larger in the next few years.

The benefit tool the board has most readily at its disposal is the COLA. The funding margin is calculated assuming that a COLA of 3.0% is granted each year. This COLA is granted by the board each year based on the system's ability to afford the COLA. This actuarial valuation demonstrates that current funding does not support a 3.0% COLA in every single future year.

As of January 1, 2003, the employer cost rate was 8.37%. An explanation of the change since the previous actuarial valuation is as follows:

Employer Cost Rate as of January 1, 2003	8.37%
Decrease due to actuarial investment return more than 8%	(0.22%)
Increase due to contributions below actuarially determined rate	0.16%
Increase due to decrease in amortization period	0.09%
Increase due to other experience factors	<u>0.36%</u>
Employer Cost Rate as of January 1, 2004	8.76%

STATE OF WYOMING RETIREMENT SYSTEM

VII. FUNDING STATUS

One measure of the progress of funding a retirement Plan is by benefit security ratios. The benefit security ratio is the ratio of Plan assets to Plan liabilities. The greater the ratio, the better funded the retirement Plan. This ratio can be calculated using different measures of the retirement Plan's liabilities.

Funding Basis -- Actuarial Accrued Liability

This measure of liabilities is used in calculating pension costs. It uses the Entry Age Normal Actuarial Cost method that spreads costs as a level percentage of payroll over a participant's working career.

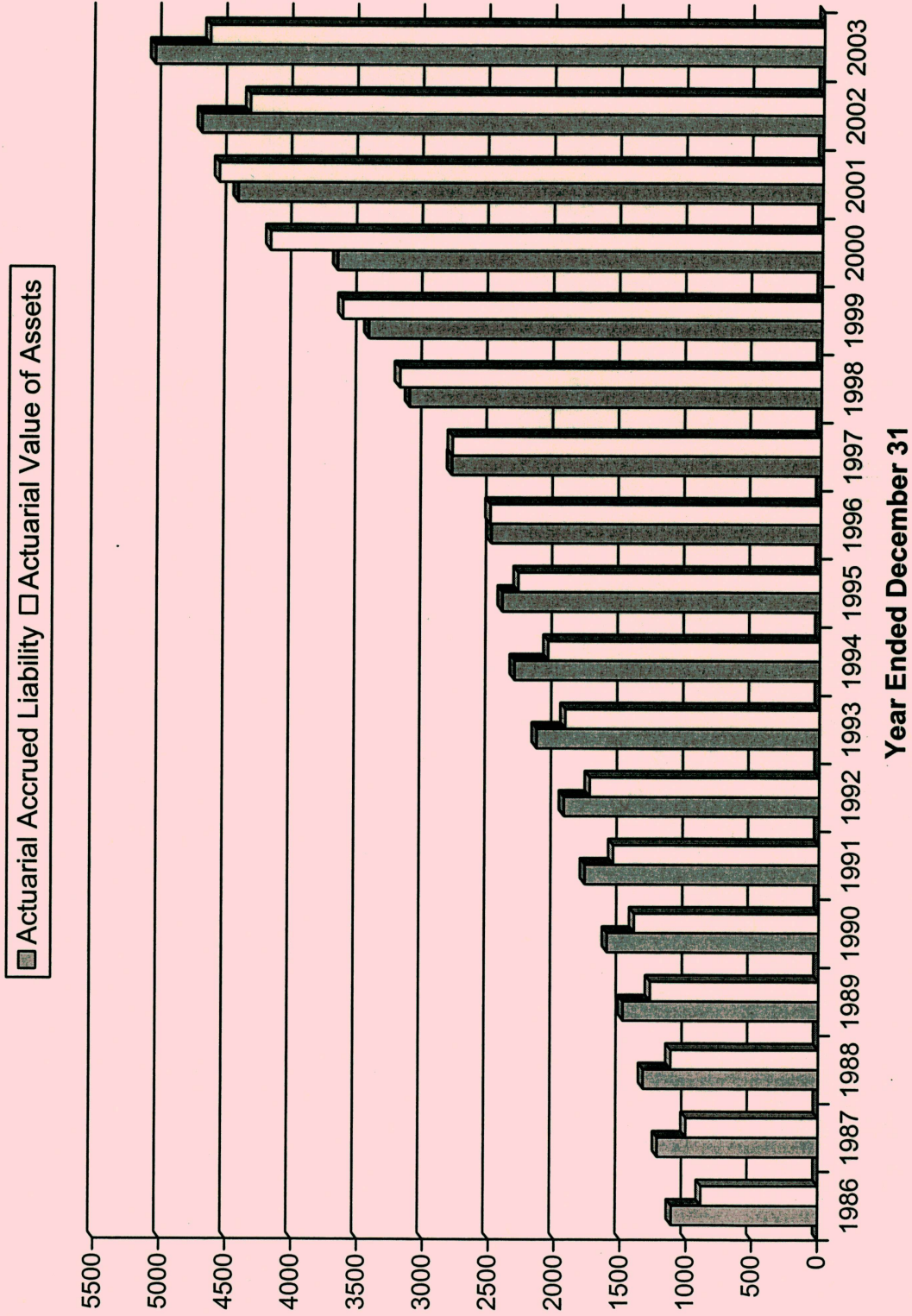
For determining Plan costs, a smoothed value of assets (called actuarial value) is used. Hence, for this ratio, the actuarial value of assets is used.

Historical Results

A comparison of the Actuarial Accrued Liabilities and Actuarial Values of Assets for the last eighteen years are graphed in Chart 3. These ratios are developed in Table G. The graphs show that on a funding basis, the benefit security ratio has steadily improved until 2001. The benefit ratio has decreased since then due to benefit improvements and investment return lower than expected in 2001 and 2002.

Funding ratios change over time due to several factors. These factors include the level of contributions, actual experience (including investment returns), Plan amendments and changes in assumptions.

Actuarial Accrued Liability vs Actuarial Value of Assets



Year Ended December 31

TABLE G

BENEFIT SECURITY RATIOS

As of Jan. 1	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability (UAAL)	Benefit Security Ratio	Covered Payroll	UAAL as % of Covered Payroll
1987	\$ 1,119,666,000	\$ 900,098,000	\$ 219,568,000	80.4%	\$ 700,527,000	31.3%
1988	1,225,515,000	1,016,001,000	209,514,000	82.9	679,401,000	30.8
1989	1,334,110,000	1,141,592,000	192,518,000	85.6	681,101,000	28.3
1990	1,482,235,000	1,286,450,000	195,785,000	86.8	712,693,000	27.5
1991	1,627,934,000	1,416,293,000	211,641,000	87.0	712,860,000	29.7
1992	1,777,417,000	1,572,337,000	205,080,000	88.5	743,632,000	27.6
1993	1,944,477,000	1,756,701,000	187,776,000	90.3	756,248,000	24.8
1994	2,151,784,000	1,946,563,000	205,221,000	90.5	760,859,000	27.0
1995	2,310,624,000	2,078,385,000	232,239,000	90.0	793,782,000	29.3
1996	2,408,980,000	2,296,639,000	112,341,000	95.3	789,639,000	14.2
1997	2,500,667,000	2,508,544,000	(7,877,000)	100.3	803,239,000	(1.0)
1998	2,799,891,000	2,795,721,000	4,170,000	99.9	827,991,000	0.5
1999	3,125,121,000	3,200,435,000	(75,314,000)	102.4	873,530,000	(8.6)
2000	3,440,152,000	3,641,370,000	(201,218,000)	105.8	862,512,000	(23.3)
2001	3,683,174,000	4,190,440,000	(507,266,000)	113.8	897,641,000	(56.5)
2002	4,442,033,000	4,582,462,000	(140,429,000)	103.2	964,121,000	(14.6)
2003	4,718,618,000	4,352,424,000	366,194,000	92.2	988,135,000	37.1
2004	5,077,443,000	4,657,898,000	419,545,000	91.7	1,032,259,000	40.6

STATE OF WYOMING RETIREMENT SYSTEM

VIII. ACTUARIAL ASSUMPTIONS AND COST METHOD

The actuarial assumptions and cost method used in this actuarial valuation are the same as that used in the previous valuation. The assumptions and cost method applied in the valuation are described below.

Investment Return

The actuarial calculations are based on the assumption that the effective return on the assets of the Retirement System will be 8.0% per annum net of investment expenses. This includes 3.0% for inflation and 5.0% real rate of return.

Salary Increases and Inflation

A salary scale is used in an actuarial valuation to estimate the salary progression of employees in the future.

The long-term salary increase assumption is 5.0% per year. It includes 3.0% for inflation, as assumed in the investment yield. There is an allowance for 1.0% for standard-of-living growth per year and 1.0% annually for merit, promotion and longevity.

The salary scale used in this actuarial valuation does not necessarily take full account of general across-the-board increases in salaries resulting from inflation and other factors under short-term current conditions. This is because actuarial assumptions are meant to be reasonable over the long-term and should not be unduly influenced by short-term economic conditions.

The following is a summary of the long-term economic assumptions applied in this valuation:

Investment yield	8.00%
Salary increases	5.00%
Inflation	3.00%

Demographic Assumptions

Assumptions as to retirement incidence, withdrawal, disability and mortality are specified in Exhibit III of the actuarial certification.

Funding Method

For purposes of determining pension costs, the entry age normal actuarial cost method has been used. It is used in situations where a cost is desired that will remain relatively level as a percentage of the participating payroll.

Under the entry age normal actuarial cost method, the total contribution requirement has three components: an annual normal cost, an operating expense component and a payment with respect to the unfunded actuarial accrued liability.

The annual normal cost is calculated for each employee as the level percentage of pay required over the employee's period of covered employment to pay the total expected benefits. If the actuarial assumptions remain unchanged and actuarial experience matches them, the normal cost rate for each employee will remain a level percentage of payroll.

STATE OF WYOMING RETIREMENT SYSTEM

VIII. ACTUARIAL ASSUMPTIONS AND COST METHOD (continued)

Unfunded actuarial accrued liability amounts are created by actuarial losses, changes in the actuarial assumptions and liberalizations in the benefit provisions. The unfunded liability is amortized over 20 years from January 1, 2004, using payments that rise 4.0% per annum. Such payments should remain a level percentage of aggregate salaries, since covered payroll is assumed to increase at the combined inflation and standard-of-living growth of 4.0% annually.

Assets

The assets are valued on a moving market-related basis for actuarial purposes. Interest and dividends are recognized immediately. The actuarial value includes the difference between expected appreciation and actual appreciation and depreciation, whether realized or not, spread over five years beginning with the year of occurrence. This procedure results in recognition of all changes in market value after five years. If the actuarial asset value is less than 80% of market value, or more than 120%, an adjustment will be made to bring it within that range.

Beginning January 1, 2001, the amount smoothed is the difference between the actual appreciation or depreciation and the expected appreciation, based on the market value of assets and on 8% total investment return.



May 17, 2004

STATE OF WYOMING RETIREMENT SYSTEM

Actuarial Valuation Certificate

This is to certify that we have prepared an Actuarial Valuation of the Plan as of January 1, 2004, in accordance with generally accepted actuarial principles and practices.

The certificate contains the following attached exhibits:

- I. Actuarial Valuation Results
- II. Changes in Actuarial Assumptions and Methods
- III. Actuarial Assumptions and Cost Method
- IV. Plan Amendments
- V. Summary of Plan Provisions

The valuation is based on information supplied by the Retirement Office with respect to participants and by McGee, Hearne & Paiz, LLP for financial data. We have not verified, and customarily would not verify, such information, but we have had no reason to doubt its substantial accuracy.

In our opinion, the assumptions used in the aggregate: (a) are reasonably related to the experience of the Plan and to reasonable expectations; and (b) represent our best estimate of anticipated experience under the Plan.

William B. Fornia, FSA, MAAA, EA
Principal and Consulting Actuary

Elena V. Black, ASA
Senior Consultant, Actuary

ACTUARIAL VALUATION RESULTS

1. Actuarial Accrued Liability on January 1, 2004:	
a. Active employees	\$ 2,810,578,000
b. Retired members and beneficiaries	2,139,783,000
c. Inactive nonretired members	<u>127,082,000</u>
d. Total	\$ 5,077,443,000
2. Assets of the Fund on December 31, 2003 at actuarial value*	\$ 4,657,898,000
3. Unfunded actuarial accrued liability -- equals (1) - (2)	\$ 419,545,000
4. Employee and employer normal cost for ensuing year	\$ 116,017,000
5. Estimated annual salaries of covered employees	\$ 1,032,259,000
6. Employee normal cost	\$ 57,497,000
7. Employer normal cost for ensuing year equals (4) - (6)	\$ 58,520,000
8. Amortization payment -- equals 20-year amortization of item (3) as a level percent of aggregate salary	\$ 30,497,000
9. Expected Administrative expenses	\$ 1,460,000
10. Total employer cost for ensuing year -- equals (7) + (8) + (9)	\$ 90,477,000
11. Total employer cost as percentage of payroll -- equals (10) ÷ (5)	8.76%

* \$4,299,955,244 at market value.

CHANGES IN ACTUARIAL ASSUMPTIONS & METHODS

There have been no changes in actuarial assumptions or methods since last year's valuation.

ACTUARIAL ASSUMPTIONS AND COST METHOD

Mortality Rates:

Healthy Lives: 1994 Group Annuity Mortality Table (with margins)

Disabled Lives: 1979 PBGC Disabled Lives Receiving Social Security

Termination Rates before retirement:

Sample Rates:

Age	RATE				
	Death			Withdrawal	
	Male	Female	Disability	Male	Female
25	.07%	.03%	--	31.91%	36.56%
30	.08%	.04%	.01%	18.38%	22.50%
35	.09%	.05%	.01%	10.03%	13.10%
40	.11%	.07%	.01%	7.61%	10.72%
45	.16%	.10%	.06%	7.29%	10.32%
50	.26%	.14%	.16%	6.32%	8.43%
55	.44%	.23%	.40%	4.62%	6.2%
60	.80%	.44%	--	--	--

Retirement Rates:

<u>Age</u>	<u>Rate of Retirement (Examples Shown)</u>
50	2%
55	6%
60	15%
62	25%
65	33%
70	100%

ACTUARIAL ASSUMPTIONS AND COST METHOD

Interest Rate: 8.0% per annum, net of investment expenses

Salary Scale: 5.0% per annum

Cost Method: Entry Age Normal Actuarial Cost Method

Actuarial Value of Assets:

Adjusted market value that immediately recognizes interest and dividends. The procedure recognizes 20% of each plan year's total appreciation (depreciation) in excess of the expected return on a market value basis beginning with the year of occurrence. After five years, the appreciation (depreciation) is fully recognized. If the adjusted market value is less than 80% of market value, or more than 120%, an adjustment will be made to bring it within that range.

Administrative Expenses:

Annual administrative expenses are assumed to increase 5% per year. Expenses for the valuation year are projected at this rate based on the prior two years' average adjusted expenses.

Cost-of-Living Adjustments:

It is assumed that the maximum 3.0% COLA will be awarded every year.

PLAN AMENDMENTS

Effective July 1, 2004, the Retirement Board has been given discretion to award cost-of-living increases in amounts less than 3% based on the System's ability to afford COLA. There are no other changes to the benefits for members of the State Wyoming Retirement System.

SUMMARY OF PLAN PROVISIONS

Following are the major benefit provisions of the State of Wyoming Retirement System. This summary is not intended to be a complete statement of all provisions of the Retirement System.

1. Service Retirement

Eligibility Members may retire from active service with age 60 and at least four years of service or combined age plus service of 85 or more points and receive full benefits. Members may take early retirement at age 50 with at least four years of service, or any age with at least 25 year of service, with benefits reduced by 5.0% per year for retirement prior to 60.

Benefit Calculated in two parts, (A) plus (B)

A. **Pre-1975 Benefits.** The larger of the monthly benefits calculated under the following two formulas (1) and (2):

1. The amount of employee and matching employer contributions, with interest (currently 5.5%), is used to purchase an annuity based upon a unisex actuarial factor. The monthly benefit thus obtained is increased as approved by the 1967, 1973 and 1975 legislature as follows:

- 1967 increase -- 25% (but not more than \$25 per month)
- 1973 increase -- 40%
- 1975 increase -- 20%

2. Calculate pre-1975 benefits as 2.125% of the average earnings for the three highest years of service, times years of service prior to July 1, 1975, for the first 15 years of service credit, plus 2.25% of the average earnings for the three highest years of service for any years of service credit exceeding 15 years. This amount is reduced by 5.0% per year for retirement prior to age 60. However, members retiring with a combined age and service of 85 receive an unreduced benefit prior to age 60.

B. **Post-1975 Benefits.** The larger of the monthly benefits calculated under the following two formulas (1) and (2):

1. The same formula as for 1953-1975 benefits, except that the 20% increase does not apply.

-
2. 2.125% of the average earnings for the three highest years of service, times years of service after July 1, 1975, for the first 15 years of service credit, plus 2.25% of the average earnings for the three highest years of service for any years of service credit exceeding 15 years. This amount is reduced by 5.0% per year for retirement prior to age 60. However, members retiring with a combined age and service of 85 receive an unreduced benefit prior to age 60.

NOTE: Employees hired on and after July 1, 1981 will only be entitled to the benefit described under B.2. above.

2. Options

Option 1 Monthly benefit for life, with a lump-sum death benefit equal to the excess (if any) of the employee contributions with interest over the total monthly benefits received. A choice of any option other than Option 1 changes the monthly benefit payable.

Option 2 Monthly benefit for life, with 100% of the benefit continuing for the life of the beneficiary.

Option 3 Monthly benefit for life, with 50% of the benefit continuing for the life of the beneficiary.

Option 4 Monthly benefit for life, with a guarantee of 120 monthly payments.

Option 5 Monthly benefit for life, with no death benefit. The choice of this option increases the monthly benefit slightly.

Option 6 Monthly benefit for life, with 100% of the benefit continuing for the life of the beneficiary. Benefit reverts to Option 1 amount but without cash refund feature at beneficiary's death.

Option 7 Monthly benefit for life, with 50% of the benefit continuing for the life of the beneficiary. Benefit reverts to Option 1 amount but without cash refund feature at beneficiary's death.

3. Disability Retirement

Eligibility Disability prior to age 60, after 10 or more years of service.

Benefit 100% of the service retirement benefit, calculated using Option 1 as if the employee were 60 years of age and service as of date of disability.

4. Vesting

An employee who terminates after at least 48 months of service can elect either to leave his contributions in the Retirement System and receive a service retirement benefit as described above, or to receive a lump-sum return of his contributions (including employer subsidies) with interest. An employee who terminates with less than 48 months of service is eligible only for the lump-sum benefit.

5. Preretirement Death Benefit

The beneficiary of a vested employee can elect either to receive a monthly benefit based on the beneficiary's age and the calculation method described above for service retirement, or to receive a lump-sum payment of two times the employee contributions, with interest. The beneficiary of an employee who dies prior to achieving vested status is eligible for the lump-sum benefit only.

6. Contributions

Currently 5.57% of salary by employee and 5.68% of salary by employer. The employer may subsidize all or part of the employee contributions. Interest is currently being credited at the rate of 5.50% on accumulated contributions.

7. Ad Hoc Benefit Increases to Retirees

Ad hoc adjustments have been made to benefit payments. The most recent one was effective July 2001, for all retirees and beneficiaries. This increased pensions by \$3 monthly per year of service.

8. Cost-of-Living Adjustments

Benefits will increase by the lesser of 3.0% per year, or the increase in the Consumer Price Index. If the increase in the CPI exceeds 3.0% in any year, the excess increase will be set aside and applied toward any future year in which the CPI increase is less than 3.0%. The first increase for a retiree is on the July 1 following two years of retirement. The first adjustments occurred in 1991.

CENSUS TABLES

	<u>Table Designation</u>
I. <u>Active Employees</u>	
A. Number of active employees grouped by five-year age and service cells	
Males	1-A
Females	1-B
Males and Females, combined	1-C
B. Salaries of active employees grouped by five-year age and service cells	
All Members	2
II. <u>Inactive Participants</u>	
A. Number of inactive participants grouped by five-year age and service cells	
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Females	3-B
Males and Females, combined	3-C
III. <u>Retired Participants</u>	
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C. Distribution of pensions in force by age and benefit option	
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Males and Females, combined	6-C
D. Distribution of pensions awarded during 2003 by amount of benefit and benefit option	7
E. Distribution of pensions awarded during 2003 by age and benefit option	8
F. Average monthly benefit by years elapsed since retirement and years of service at retirement	9
G. Distribution of retired participants by date of retirement	10

NOTE: See page 30 for description of benefit options by Code number.

CENSUS OF EMPLOYEES IN ACTIVE SERVICE ON DECEMBER 31, 2003

MALES

Age Last Birthday	Years of Service								Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	
15-19	29								29
20-24	280	2							282
25-29	606	77							683
30-34	580	327	68						975
35-39	491	298	315	77	7				1,188
40-44	512	301	300	275	163	8			1,559
45-49	482	275	297	319	388	129	1		1,891
50-54	463	248	302	301	386	390	84	2	2,176
55-59	344	187	225	227	285	264	142	43	1,717
60-64	169	95	89	101	90	67	59	39	709
Over 64	96	66	40	35	21	20	8	12	298
Total	4,052	1,876	1,636	1,335	1,340	878	294	96	11,507

Average Age = 46.5 Average Service = 11.5

CENSUS OF EMPLOYEES IN ACTIVE SERVICE ON DECEMBER 31, 2003

FEMALES

Age Last Birthday	Years of Service										Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34			
15-19	39										39
20-24	624	6									630
25-29	1,159	139	2								1,300
30-34	1,085	463	105	2							1,655
35-39	1,093	458	343	76	9						1,979
40-44	1,234	699	497	347	198	12					2,987
45-49	1,097	819	657	497	527	198	12				3,807
50-54	819	635	673	609	597	445	102				3,880
55-59	497	326	399	410	443	299	122	19			2,515
60-64	185	115	140	154	172	120	34	19			939
Over 64	87	27	53	36	27	11	9	6			256
Total	7,919	3,687	2,869	2,131	1,973	1,085	279	44			19,987

Average Age = 45.6 Average Service = 10.0

CENSUS OF EMPLOYEES IN ACTIVE SERVICE ON DECEMBER 31, 2003

MALES AND FEMALES COMBINED

Age Last Birthday	Years of Service										Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34			
15-19	68										68
20-24	904	8									912
25-29	1,765	216	2								1,983
30-34	1,665	790	173	2							2,630
35-39	1,584	756	658	153	16						3,167
40-44	1,746	1,000	797	622	361	20					4,546
45-49	1,579	1,094	954	816	915	327	13				5,698
50-54	1,282	883	975	910	983	835	186	2			6,056
55-59	841	513	624	637	728	563	264	62			4,232
60-64	354	210	229	255	262	187	93	58			1,648
Over 64	183	93	93	71	48	31	17	18			554
Total	11,971	5,563	4,505	3,466	3,313	1,963	573	140			31,494

Average Age = 45.9 Average Service = 10.5

CENSUS OF EMPLOYEES IN ACTIVE SERVICE ON DECEMBER 31, 2003
ALL MEMBERS

Age Last Birthdays	Years of Service										Total		
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34					
15-19	Number 68												68
	Tot. Salary 601,699												601,699
	Avg. Salary 8,849												8,849
20-24	Number 904	8											912
	Tot. Salary 15,390,355	175,521											15,565,876
	Avg. Salary 17,025	21,940											17,068
25-29	Number 1,765	216	2										1,983
	Tot. Salary 42,126,214	6,396,073	59,067										48,581,355
	Avg. Salary 23,868	29,611	29,534										24,499
30-34	Number 1,665	790	173	2									2,630
	Tot. Salary 41,067,669	27,417,174	6,094,316	52,400									74,631,559
	Avg. Salary 24,665	34,705	35,227	26,200									28,377
35-39	Number 1,584	756	688	153	16								3,167
	Tot. Salary 36,771,022	24,698,247	26,468,085	5,816,321	561,839								94,315,513
	Avg. Salary 23,214	32,670	40,225	38,015	35,115								29,781
40-44	Number 1,746	1,000	797	622	361	20							4,546
	Tot. Salary 38,750,601	29,560,339	29,531,072	26,241,594	15,611,020	755,739							140,450,365
	Avg. Salary 22,194	29,560	37,053	42,189	43,244	37,787							30,895
45-49	Number 1,579	1,094	954	816	915	327	13						5,698
	Tot. Salary 36,817,416	30,529,889	32,774,796	32,601,997	42,255,333	14,594,697	580,912						190,155,039
	Avg. Salary 23,317	27,907	34,355	39,953	46,181	44,632	44,686						33,372
50-54	Number 1,282	883	975	910	983	835	186	2					6,056
	Tot. Salary 30,823,735	25,704,787	32,968,281	34,455,656	43,663,211	40,772,722	9,173,529	94,284					217,656,205
	Avg. Salary 24,043	29,111	33,814	37,863	44,418	48,830	49,320	47,142					35,941
55-59	Number 841	513	624	637	728	563	264	62					4,232
	Tot. Salary 21,345,957	15,280,731	20,887,695	24,122,380	30,147,687	26,059,367	14,062,637	3,150,350					155,056,804
	Avg. Salary 25,382	29,787	33,474	37,869	41,412	46,287	53,268	50,812					36,639
60-64	Number 354	210	229	255	262	187	93	58					1,648
	Tot. Salary 7,685,411	5,732,478	6,842,475	8,970,348	10,178,087	7,997,180	4,921,787	3,018,226					55,345,993
	Avg. Salary 21,710	27,298	29,880	35,178	38,848	42,766	52,922	52,038					33,584
Over 64	Number 183	93	93	71	48	31	17	18					554
	Tot. Salary 2,720,443	2,431,056	2,562,722	2,307,790	1,659,370	1,248,835	770,692	1,021,055					14,721,964
	Avg. Salary 14,866	26,140	27,556	32,504	34,570	40,285	45,335	56,725					26,574
Total	Number 11,971	5,563	4,505	3,466	3,313	1,963	573	140					31,494
	Tot. Salary 274,100,524	167,926,294	158,188,510	134,568,486	144,076,547	91,428,541	29,509,557	7,283,914					1,007,082,373
	Avg. Salary 22,897	30,186	35,114	38,825	43,488	46,576	51,500	52,028					31,977

Average Age = 45.9 Average Service = 10.5

CENSUS OF DEFERRED VESTED PARTICIPANTS ON DECEMBER 31, 2003

MALES

Age Last Birthday	Years of Service							Total	
	0-4	5-9	10-14	15-19	20-24	25-29	30-34		Over 34
15-19									
20-24									
25-29	3	6							9
30-34	20	28							48
35-39	23	60	18	2					103
40-44	33	96	50	17	4				200
45-49	33	122	82	61	16	2			316
50-54	48	180	94	51	29	9			411
55-59	51	138	94	44	20	12	1		360
60-64	18	52	22	14	2		1		109
Over 64	20	29	12	1	1				63
Total	249	711	372	190	72	23	2		1,619

Average Age = 50.7

Average Service = 9.7

CENSUS OF DEFERRED VESTED PARTICIPANTS ON DECEMBER 31, 2003

FEMALES

Age Last Birthday	Years of Service								Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	
15-19									
20-24									
25-29	16	10							26
30-34	46	72	1						119
35-39	30	131	38	3					202
40-44	78	174	98	16	5				371
45-49	95	291	165	66	25				642
50-54	90	346	189	94	56	14	2		791
55-59	75	276	152	79	29	9			620
60-64	36	115	46	18	5	3			223
Over 64	40	64	19	8	1				132
Total	506	1,479	708	284	121	26	2		3,126

Average Age = 50.5 Average Service = 9.1

CENSUS OF DEFERRED VESTED PARTICIPANTS ON DECEMBER 31, 2003

MALES AND FEMALES COMBINED

Age Last Birthday	Years of Service								Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	
15-19									
20-24									
25-29	19	16							35
30-34	66	100	1						167
35-39	53	191	56	5					305
40-44	111	270	148	33	9				571
45-49	128	413	247	127	41	2			958
50-54	138	526	283	145	85	23	2		1,202
55-59	126	414	246	123	49	21	1		980
60-64	54	167	68	32	7	3	1		332
Over 64	60	93	31	9	2				195
Total	755	2,190	1,080	474	193	49	4		4,745

Average Age = 50.5

Average Service = 9.3

RETIREES AS OF DECEMBER 31, 2003

	NUMBER		MONTHLY AMOUNT			
	Male	Female	Total	Male	Female	Total
Pensioners						
Option 1	1,594	4,421	6,015	1,760,259	3,580,039	5,340,298
Option 2	2,784	1,317	4,101	3,577,268	1,037,084	4,614,353
Option 3	476	268	744	811,493	279,598	1,091,091
Option 4	276	389	665	285,406	285,419	570,825
Option 5	283	972	1,255	309,927	728,781	1,038,708
Option 6	454	397	851	560,364	398,745	959,109
Option 7	134	157	291	241,115	203,457	444,572
Total	6,001	7,921	13,922	7,545,832	6,513,124	14,058,956
Beneficiaries	225	1,245	1,470	154,436	1,053,592	1,208,028
Grand Total	6,226	9,166	15,392	7,700,268	7,566,716	15,266,984

RETIREE BENEFITS IN FORCE BY AMOUNT AND OPTION TYPE

	Total	PENSION OPTION						
		1	2	3	4	5	6	7
Males								
Under \$200	470	148	201	10	31	42	35	3
\$200-\$399	793	256	371	24	34	40	60	8
\$400-\$599	758	236	324	45	46	40	61	6
\$600-\$799	631	178	283	43	37	32	48	10
\$800-\$999	533	162	235	38	20	31	37	10
\$1,000-\$1,499	979	264	447	108	56	28	56	20
\$1,500-\$1,999	706	150	371	64	28	25	51	17
\$2,000-\$2,499	664	113	340	77	17	28	63	26
\$2,500 & Over	692	151	316	97	19	27	48	34
Total	6,226	1,658	2,888	506	288	293	459	134
Females								
Under \$200	1,108	549	259	20	61	183	34	2
\$200-\$399	1,817	945	431	65	93	208	66	9
\$400-\$599	1,527	799	353	54	70	168	61	22
\$600-\$799	1,215	644	281	57	54	110	52	17
\$800-\$999	821	429	184	42	40	66	40	20
\$1,000-\$1,499	1,277	614	319	83	49	118	58	36
\$1,500-\$1,999	681	320	167	40	19	67	44	24
\$2,000-\$2,499	431	203	102	21	20	39	30	16
\$2,500 & Over	289	148	51	7	10	36	24	13
Total	9,166	4,651	2,147	389	416	995	409	159
Males & Females								
Under \$200	1,578	697	460	30	92	225	69	5
\$200-\$399	2,610	1,201	802	89	127	248	126	17
\$400-\$599	2,285	1,035	677	99	116	208	122	28
\$600-\$799	1,846	822	564	100	91	142	100	27
\$800-\$999	1,354	591	419	80	60	97	77	30
\$1,000-\$1,499	2,256	878	766	191	105	146	114	56
\$1,500-\$1,999	1,387	470	538	104	47	92	95	41
\$2,000-\$2,499	1,095	316	442	98	37	67	93	42
\$2,500 & Over	981	299	367	104	29	63	72	47
Total	15,392	6,309	5,035	895	704	1,288	868	293

**PENSIONS IN FORCE ON DECEMBER 31, 2003
BY OPTION AND NEAREST AGE ON THAT DATE**

MALES

Age Last Birthday	Pension Option							Total
	1	2	3	4	5	6	7	
0-49	8	8	3			1		20
50-54	46	61	5	12	2	18	3	147
55-59	140	250	19	28	24	89	19	569
60-64	321	546	80	66	60	146	45	1,264
65-69	301	654	113	52	70	122	37	1,349
70-74	298	555	116	45	48	65	22	1,149
75-79	253	418	101	53	52	17	8	902
80-84	178	253	55	21	24	1		532
Over 84	113	143	14	11	13			294
Total	1,658	2,888	506	288	293	459	134	6,226

PENSIONS IN FORCE ON DECEMBER 31, 2003
BY OPTION AND NEAREST AGE ON THAT DATE

FEMALES

Age Last Birthday	Pension Option							Total
	1	2	3	4	5	6	7	
0-49	26	24	3	2	1	2		58
50-54	115	66	3	21	12	25	4	246
55-59	320	188	32	67	61	108	31	807
60-64	722	366	63	87	159	141	55	1,593
65-69	907	391	70	89	194	96	49	1,796
70-74	843	335	86	73	203	28	16	1,584
75-79	721	354	67	45	174	8	2	1,371
80-84	477	248	43	24	101		2	895
Over 84	520	175	22	8	90	1		816
Total	4,651	2,147	389	416	995	409	159	9,166

**PENSIONS IN FORCE ON DECEMBER 31, 2003
BY OPTION AND NEAREST AGE ON THAT DATE**

MALES & FEMALES COMBINED

Age Last Birthday	Pension Option							Total
	1	2	3	4	5	6	7	
0-49	34	32	6	2	1	3	0	78
50-54	161	127	8	33	14	43	7	393
55-59	460	438	51	95	85	197	50	1,376
60-64	1,043	912	143	153	219	287	100	2,857
65-69	1,208	1,045	183	141	264	218	86	3,145
70-74	1,141	890	202	118	251	93	38	2,733
75-79	974	772	168	98	226	25	10	2,273
80-84	655	501	98	45	125	1	2	1,427
Over 84	633	318	36	19	103	1	0	1,110
Total	6,309	5,035	895	704	1,288	868	293	15,392

PENSIONS AWARDED IN 2003 BY OPTION AND MONTHLY AMOUNT

MALES & FEMALES COMBINED

Monthly Amount	Pension Option							Total
	1	2	3	4	5	6	7	
0-199	26	23	1	14	11	12	2	89
200-399	31	31	1	5	2	20	2	92
400-599	23	25	1	3	9	12	4	77
600-799	35	23	2	4	1	16	1	82
800-999	19	16	2	1	6	10	7	61
1000-1499	27	56	2	4	7	17	6	119
1500-1999	29	24	3	1	6	21	6	90
2000-2499	24	49	7	2	5	18	2	107
Over 2499	42	41	5	1	8	15	7	119
Total	256	288	24	35	55	141	37	836

**PENSIONS AWARDED IN 2003
BY OPTION AND NEAREST AGE ON THAT DATE**

MALES & FEMALES COMBINED

Nearest Age	Pension Option							Total
	1	2	3	4	5	6	7	
0-49	5	7				1		13
50-54	42	43		11	4	14	4	118
55-59	63	86	11	11	15	53	13	252
60-64	101	102	11	10	27	47	11	309
65-69	35	44	1	2	5	22	6	115
70-74	8	5			4	4	2	23
75-79	2		1	1			1	5
80-84		1						1
Total	256	288	24	35	55	141	37	836

TABLE 9

AVERAGE MONTHLY BENEFIT OF RETIREES AS OF DECEMBER 31, 2003, BY YEARS ELAPSED SINCE RETIREMENT AND BY YEARS OF SERVICE AT RETIREMENT (EACH CELL INCLUDES NUMBER OF RETIREES AND AVERAGE BENEFIT)

Service at Retirement	Years Elapsed Since Retirement										Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34			
0-4	Number 152	175	182	179	110	34	11				843
	Avg. Benefit 197.29	170.09	137.98	167.50	175.41	172.46	240.56				169.22
5-9	Number 555	578	604	536	307	198	73	3			2,854
	Avg. Benefit 340.27	305.57	301.97	321.03	276.69	261.81	259.54	207.89			306.92
10-14	Number 624	754	679	461	258	170	54	9			3,009
	Avg. Benefit 593.98	575.23	548.88	537.19	438.76	444.38	374.55	403.63			543.94
15-19	Number 687	771	481	441	196	109	53	2			2,740
	Avg. Benefit 908.60	868.82	851.77	820.68	639.74	590.40	605.64	629.29			835.33
20-24	Number 632	576	357	366	147	110	19				2,207
	Avg. Benefit 1,291.96	1,248.97	1,191.96	1,163.53	830.07	798.06	779.15				1,183.47
25-29	Number 630	505	271	305	121	35	9	2			1,878
	Avg. Benefit 1,937.28	1,753.61	1,718.40	1,499.11	1,041.79	940.62	956.20	808.24			1,702.97
30-34	Number 475	412	251	277	23	16	1				1,455
	Avg. Benefit 2,468.25	2,456.88	2,443.43	1,990.67	1,384.63	1,071.48	823.00				2,336.21
35-39	Number 94	100	97	41	7	9	5	4			357
	Avg. Benefit 3,042.17	2,910.14	2,902.75	2,272.74	1,617.16	1,136.10	1,161.34	1,202.09			2,755.99
40 and over	Number 10	16	5	6	5	5	1	1			49
	Avg. Benefit 3,131.41	3,396.59	2,514.14	2,360.74	1,628.64	1,286.46	1,368.64	1,381.91			2,647.36
Total	Number 3,859	3,887	2,927	2,612	1,174	686	226	21			15,392
	Avg. Benefit 1,228.40	1,099.19	952.70	901.02	547.03	513.28	466.04	634.37			992.01

Average Service at Retirement = 17.2

Average Years Since Retirement = 10.7



**DISTRIBUTION OF RETIRED PARTICIPANTS BY DATE OF RETIREMENT
BASED ON CALENDAR YEARS**

<u>Year of Retirement</u>	<u>Counts</u>	<u>Year of Retirement</u>	<u>Counts</u>
1956	1	1980	197
1957	0	1981	267
1958	0	1982	248
1959	0	1983	269
1960	0	1984	372
1961	0	1985	424
1962	0	1986	490
1963	2	1987	741
1964	2	1988	585
1965	2	1989	523
1966	3	1990	527
1967	6	1991	554
1968	5	1992	691
1969	6	1993	632
1970	12	1994	679
1971	73	1995	1,070
1972	50	1996	697
1973	85	1997	721
1974	100	1998	720
1975	111	1999	739
1976	132	2000	719
1977	156	2001	789
1978	187	2002	761
1979	193	2003	851

Total: 15,392

Principal Actuarial Assumptions Big System

- Investment Return 8.0%, net of expenses
- Salary Increases 5.0% individual; 4.0% system-wide
- Retirement Age Varying retirement rates
- Cost of Living 3% annual increase
- Mortality 1994 Group Annuity Mortality table
- Termination Experience table

Present Value of Future Benefits \$5,901 Million as of January 1, 2004

Actuarial Accrued

Liability = \$5,077

Present Value of Future Normal Costs = \$824

2004 NC

(\$116 million)

2005 NC

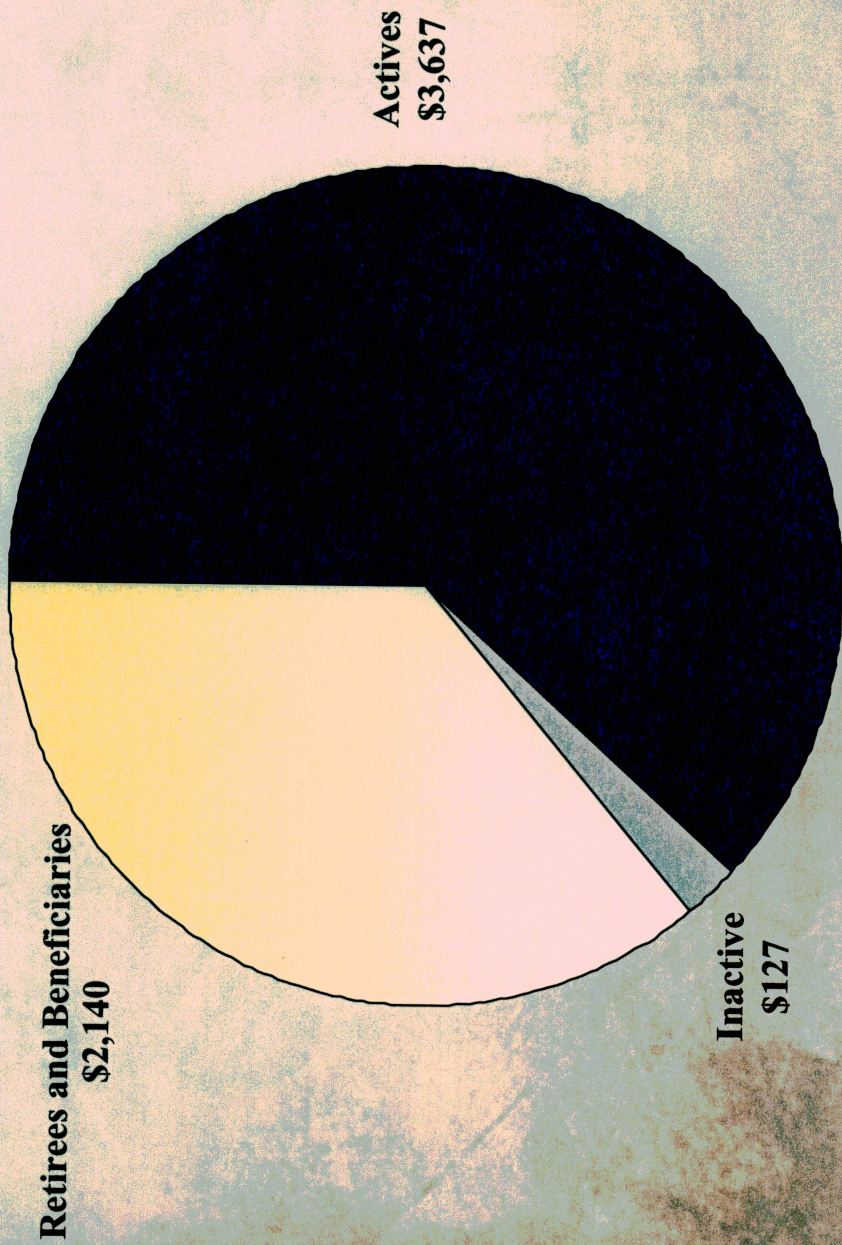
2006 NC

Valuation Date:

01/01/2004

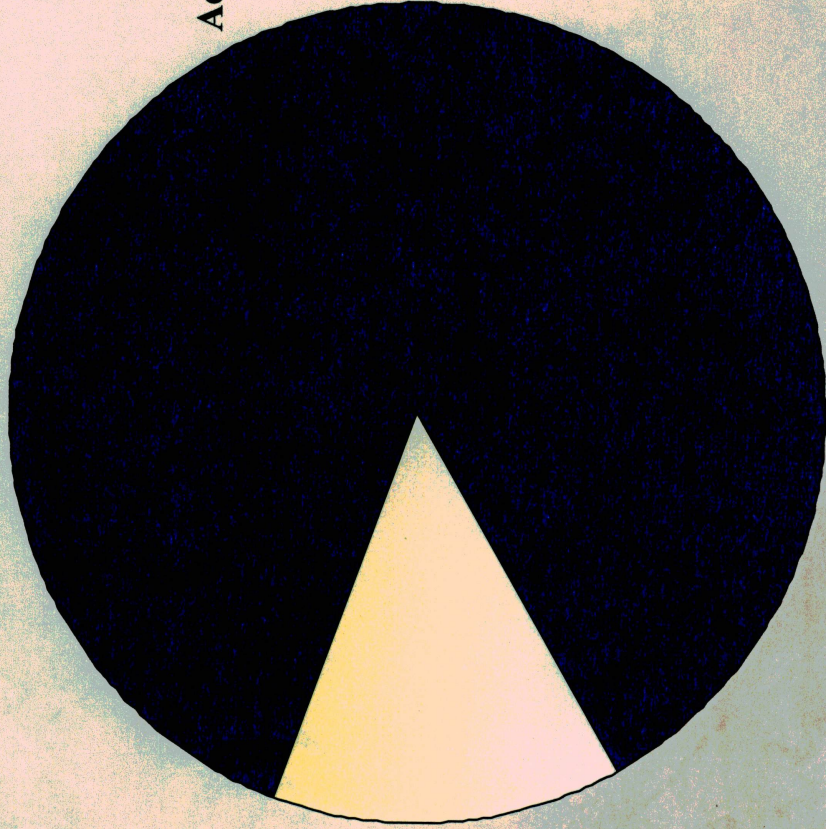
NC = Normal Cost

Wyoming Retirement System Present Value of Future Benefits (\$ millions)



TOTAL PRESENT VALUE: \$5.904 billion

Wyoming Retirement System Present Value of Future Benefits



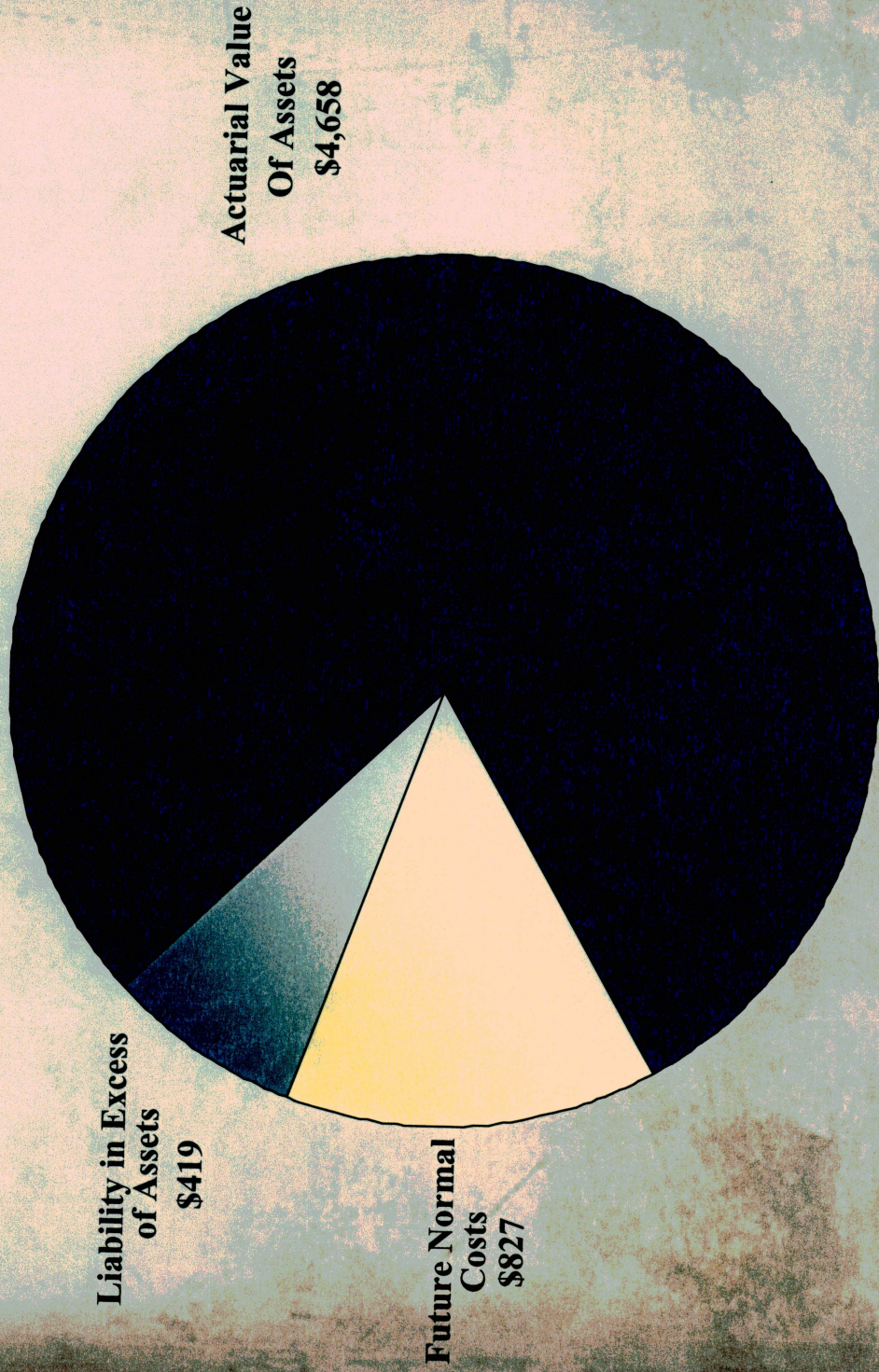
Actuarial Accrued
Liability
\$5,077

PV Future Normal
Costs
\$827

*If we had
this as a
big pie
we'd jump*

TOTAL PRESENT VALUE : \$5.904 billion

Wyoming Retirement System Projected Actuarial Assets



TOTAL PRESENT VALUE: \$5.904 billion

Wyoming Retirement System

Development of Funding Margin

• Normal Cost	11.24%
• Member Contributions	<u>5.57%</u>
• Employer Share of Normal Cost	5.67%
• Amortization of Unfunded Liability (20 years)	2.95%
• Administrative Expenses	<u>0.14%</u>
• Total Employer Cost	8.76%
• Statutory Employer Contribution	<u>5.68%</u>
• Funding Margin	<u>(3.08%)</u>

What If We Changed Amortization Period?

- Based on 20 year period from 2004 (big system)
 - Amortization requirement is 2.95% of pay (at 3% COLA)
 - Funded shortfall is 3.08% (at 3% COLA)
 - Break-even COLA assumption is 2.12%
- Based on 30 year period from 2004 (big system)
 - Amortization requirement is 2.31% of pay (at 3% COLA)
 - Funded shortfall is 2.44% (at 3% COLA)
 - Break-even COLA assumption is 2.16%

What About COLA Increase Assumptions?

- Actuarial valuation performed using 3% assumption
- 3% assumption not affordable in the long run
 - Based on current actuarial valuation
 - Based on current asset levels
 - \$4.4 billion actuarial value of assets
 - \$3.6 billion market value of assets
 - Based on 8% future return
- Actuarial results support a 2.12% COLA
- If we (Board & Mellon) believe that 2.12% COLA is the correct long term assumption, then the plan is actuarially sound

Wyoming Retirement System

Development of Funding Margin

	Status Quo	20 yr/2.12%	30 yr/2.16%
		<u>COLA</u>	<u>COLA</u>
• Normal Cost	11.24%	10.57%	10.60%
• Member Contributions	<u>5.57%</u>	<u>5.57%</u>	<u>5.57%</u>
• Employer Share of Normal Cost	5.67%	5.00%	5.03%
• Amortization of Unfunded Liability	2.95%	0.54%	0.51%
• Administrative Expenses	<u>0.14%</u>	<u>0.14%</u>	<u>0.14%</u>
• Total Employer Cost	8.76%	5.68%	5.68%
• Statutory Employer Contribution	<u>5.68%</u>	<u>5.68%</u>	<u>5.68%</u>
• Funding Margin	<u>(3.00%)</u>	<u>0.00%</u>	<u>0.00%</u>

What COLA Policy Should The Board Adopt?

30 yr
no dividend
2-16-78

- If we (Board & Mellon) believe that 2.12% COLA is the correct long term assumption, then the plan is actuarially sound



We propose 2.25% COLA for this year

- Continued annual monitoring
- If we continue as expected, in a few years we may need to grant 2.00% instead
- If situation improves enough, will be able to grant full 3.00%
- If situation deteriorates further, will need to give less than 2.00%

Wyoming Retirement System Comparative Summary of Key Demographic Information

	Valuation Date		Change
	01/01/03	01/01/04	
Number of Members			
- Active	31,135	31,494	+
- Retirees, Disableds and Beneficiaries			
- Inactive Vested Members	14,850	15,392	+
- Total	<u>4,624</u>	<u>4,745</u>	+
	50,609	51,631	+ 1,022
Projected Payroll (\$ millions)	\$ 964	\$ 1,032	+ 68
Active Averages			
- Age (years)	45.6	45.9	+ 0.3 years
- Service (years)	10.4	10.5	+ 0.1 years
Annual Disbursements			
- Pensions (\$millions)	\$ 162.6	\$ 176.4	+ \$13.8
- Refunds (\$millions)	\$ 8.7	\$ 9.5	+ \$0.8

Wyoming Retirement System History of Funding Percentage

