

**REPORT ON THE SIXTY-THIRD ANNUAL VALUATION  
OF THE TEACHERS' AND STATE EMPLOYEES'  
RETIREMENT SYSTEM OF NORTH CAROLINA  
PREPARED AS OF DECEMBER 31, 2005**



October 5, 2006

Board of Trustees  
Teachers' and State Employees'  
Retirement System of North Carolina  
325 North Salisbury Street  
Raleigh, NC 27603

Members of the Board:

We submit herewith our report on the sixty-third annual valuation of the Teachers' and State Employees' Retirement System of North Carolina prepared as of December 31, 2005. The report has been prepared in accordance with North Carolina General Statute 135-6(o).

The System was amended effective July 1, 2006 to provide a 3.00% increase in the benefit to beneficiaries on the roll as of July 1, 2005 and to provide a prorated portion of a 3.00% increase for beneficiaries who retired after July 1, 2005 but before June 30, 2006. The cost of this amendment was covered by gains which developed during the 2004 valuation year and the increase in the contribution rate from 2.34% of payroll to 2.66% of payroll.

The Appropriations Act of 2006 sets contributions at 2.66% of payroll effective for the fiscal year ending June 30, 2007. The valuation has been prepared in accordance with the parameters of Statement Nos. 25 and 27 of the Governmental Accounting Standards Board. The annual required contribution (ARC) under GASB for the 2007-2008 fiscal year is 2.32% of payroll which will liquidate the unfunded accrued liability within a 9-year period. On this basis, there is a preliminary reserve from undistributed gains equivalent to 0.34% of payroll. However, the System is owed 0.49% of employer contributions, the unpaid portion of the amount escrowed during the 2000/2001 fiscal year. Assuming that the undistributed gains are used to apply towards all of the amount owed to the System, there are no remaining undistributed gains to be used for benefit improvements.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,



Richard A. Mackesey, F.S.A.  
Principal, Consulting Actuary

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**REPORT ON THE SIXTY-THIRD ANNUAL VALUATION OF THE  
TEACHERS' AND STATE EMPLOYEES' RETIREMENT SYSTEM OF NORTH CAROLINA  
PREPARED AS OF DECEMBER 31, 2005**

**SECTION I - SUMMARY OF PRINCIPAL RESULTS**

1. This report, prepared as of December 31, 2005, presents the results of the sixty-third actuarial valuation of the system. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below. The current valuation reflects the benefit increases granted to beneficiaries as of July 1, 2005 and amendments to the system effective through July 1, 2006.

**TABLE I  
SUMMARY OF PRINCIPAL RESULTS**

VALUATION DATE	12/31/05	12/31/04
Active members included in valuation		
Number	321,513	311,612
Annual compensation	\$ 10,990,238,891	\$ 10,366,136,571
Beneficiaries		
Number	134,719	128,577
Annual allowances	\$ 2,514,627,247	\$ 2,315,858,563
Assets		
Actuarial value	\$ 49,670,182,206	\$ 47,383,509,397
Market value	51,558,604,486	49,711,421,866
Unfunded accrued liability	\$ (3,045,514,417)	\$ (3,555,655,121)
<b>CONTRIBUTIONS FOR FISCAL YEAR ENDING</b>	<b>June 30, 2008</b>	<b>June 30, 2007</b>
<u>Appropriations Act</u>		
Employer contribution rate		
Normal	6.15%	6.74%
Accrued liability	<u>(3.49)</u>	<u>(4.40)</u>
Total	2.66%	2.34%
Liquidation period	11 years	12 years
<u>GASB 25/27</u>		
Annual required contribution (ARC) of employer		
Normal	6.15%	6.74%
Accrued liability	<u>(3.83)</u>	<u>(5.14)</u>
Total	2.32%	1.60%
Liquidation period	9 years	9 years
Preliminary undistributed gains	0.34%	0.74%
Estimated adjustment for required Employer contributions not made	<u>(0.49%)</u>	<u>(0.57%)</u>
Reserve from undistributed gains	N/A	0.17%

2. The valuation balance sheet showing the results of the valuation is given in Section III.
3. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains during the valuation year are given in Section V and the rates of contribution payable by employers are given in Section VI.
4. Schedule B of this report outlines the full set of actuarial assumptions and methods employed. Since the previous valuation, the assumptions have been revised to reflect the results of the experience investigation prepared as of December 31, 2004 and adopted by the Board of Trustees on April 20, 2006. Schedule A of this report presents the development of the actuarial value of assets.
5. Schedule C gives a summary of the benefit and contribution provisions of the system.

## SECTION II - MEMBERSHIP DATA

Data regarding the membership of the system for use as a basis for the valuation were furnished by the system's office. The following tables summarize the membership of the system as of December 31, 2005 upon which the valuation was based. Detailed tabulations of the data are given in Schedule D.

**TABLE II**

### **THE NUMBER AND ANNUAL COMPENSATION OF ACTIVE MEMBERS INCLUDED IN THE VALUATION AS OF DECEMBER 31, 2005**

GROUP	NUMBER	ANNUAL COMPENSATION
Teachers	147,286	\$ 5,297,673,077
Employees	171,480	5,570,321,265
Law Enforcement Officers	<u>2,747</u>	<u>122,244,549</u>
Total	321,513	\$ 10,990,238,891

There are, in addition, 54,003 inactive members who were excluded from the table because of insufficient data. The results of the valuation were adjusted to take these members into account.



TABLE III

**THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF BENEFICIARIES  
AND SURVIVORS ON THE ROLL AS OF DECEMBER 31, 2005**

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES
<u>Beneficiaries Receiving Service Retirement Allowances</u>		
Teachers	57,483	\$ 1,359,005,726
Employees	58,306	868,913,221
Law Enforcement Officers	<u>1,855</u>	<u>50,508,937</u>
Total	117,644	\$ 2,278,427,884
<u>Beneficiaries Receiving Disability Retirement Allowances</u>		
Teachers	1,745	\$ 39,233,606
Employees	4,286	68,060,529
Law Enforcement Officers	<u>155</u>	<u>3,631,662</u>
Total	6,186	\$ 110,925,797
<u>Benefits to Survivors of Deceased Beneficiaries</u>		
Teachers	3,311	\$ 49,374,455
Employees	7,307	71,040,083
Law Enforcement Officers	<u>271</u>	<u>4,859,029</u>
Total	10,889	\$ 125,273,567
Grand Total	<u>134,719</u>	<u>\$ 2,514,627,247</u>

**SECTION III - VALUATION BALANCE SHEET**

The following valuation balance sheet shows the assets and liabilities of the retirement system as of the current valuation date of December 31, 2005 and, for comparison purposes, as of the immediately previous valuation date of December 31, 2004. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date. The development of the actuarial value of assets is presented in Schedule A.

**TABLE IV**

**VALUATION BALANCE SHEET**  
**SHOWING THE ASSETS AND LIABILITIES OF THE**  
**TEACHERS' AND STATE EMPLOYEES'**  
**RETIREMENT SYSTEM OF NORTH CAROLINA**

<b>ASSETS</b>	<b>DECEMBER 31, 2005</b>	<b>DECEMBER 31, 2004</b>
Current actuarial value of assets:		
Annuity Savings Fund	\$ 7,807,735,473	\$ 7,469,590,963
Pension Accumulation Fund	<u>41,862,446,733</u>	<u>39,913,918,434</u>
Total current assets	\$ 49,670,182,206	\$ 47,383,509,397
Future member contributions to Annuity Savings Fund	\$ 6,652,279,194	\$ 6,044,472,900
Prospective contributions to Pension Accumulation Fund:		
Normal contributions	\$ 6,707,714,854	\$ 6,689,216,676
Unfunded accrued liability contributions	(3,045,514,417)	(3,555,655,121)
Undistributed gain contributions	<u>266,747,475</u>	<u>510,208,590</u>
Total prospective contributions	\$ 3,928,947,912	\$ 3,643,770,145
Total Assets	<u>\$ 60,251,409,312</u>	<u>\$ 57,071,752,442</u>
<b>LIABILITIES</b>		
Annuity Savings Fund:		
Past member contributions	\$ 7,807,735,473	\$ 7,469,590,963
Future member contributions	<u>6,652,279,194</u>	<u>6,044,472,900</u>
Total contributions to Annuity Savings Fund	\$ 14,460,014,667	\$ 13,514,063,863
Pension Accumulation Fund:		
Benefits currently in payment	\$ 23,048,139,224	\$ 20,788,257,882
Benefits to be paid to current active members	21,769,438,603	21,830,816,339
Reserve for increases in retirement allowances effective July 1, 2006 (July 1, 2005 for December 31, 2004 figure)	707,069,343	428,405,768
Reserve from undistributed gains	<u>266,747,475</u>	<u>510,208,590</u>
Total benefits payable from Pension Accumulation Fund	\$ 45,791,394,645	\$ 43,557,688,579
Total Liabilities	<u>\$ 60,251,409,312</u>	<u>\$ 57,071,752,442</u>

#### SECTION IV - COMMENTS ON VALUATION

The valuation balance sheet gives the following information with respect to the funds of the system as of December 31, 2005.

##### Annuity Savings Fund

The Annuity Savings Fund is the fund to which are credited contributions made by members together with interest thereon. When a member retires, the amount of his accumulated contributions is transferred from the Annuity Savings Fund to the Pension Accumulation Fund. The assets credited to the Annuity Savings Fund on December 31, 2005, which represent the accumulated contributions of members to that date, amounted to \$7,807,735,473. The balance sheet also shows that the future contributions by members have a present value of \$6,652,279,194. The present value of both past and future contributions of members is therefore equal to \$14,460,014,667. The liabilities of this fund are also shown to be equal to \$14,460,014,667.

##### Pension Accumulation Fund

The Pension Accumulation Fund is the fund to which the contributions made by employers are credited and from which are paid all benefits on account of beneficiaries and their survivors.

The current market related actuarial value of assets creditable to the Pension Accumulation Fund on December 31, 2005 amounted to \$41,862,446,733. The liabilities on account of active members amounted to \$21,769,438,603. In addition, the balance sheet indicates liabilities of \$23,048,139,224 on account of all benefits payable to beneficiaries and survivors as of December 31, 2005. The balance sheet also shows a reserve of \$707,069,343 to provide for the increases in retirement allowances effective July 1, 2006, and a reserve from undistributed gains of \$266,747,475. The total liabilities of the Pension Accumulation Fund, therefore, amounted to \$45,791,394,645. The difference between these liabilities and the current assets credited to this fund is \$3,928,947,912 which represents the present value of future contributions to be made by the employers. Of this amount, \$6,707,714,854 represents the present value of prospective normal contributions by the employers, \$(3,045,514,417) represents the present value of prospective accrued liability contributions by employers and the balance of \$266,747,475 represents the present value of prospective contributions on account of undistributed actuarial gains.

The retirement act provides that the contributions of employers shall consist of a normal contribution and an accrued liability contribution. G.S. 135-8(d)(2) of the retirement act provides that the normal contribution rate is to be determined as the uniform percentage of the earnable compensation of the average new entrant throughout his entire period of active service and is to be determined after each valuation. The valuation indicates that the uniform normal percentage contribution rate should be set at 6.15% of compensation.



The present valuation indicates that if the employer contribution rate is set at 2.66% of payroll in accordance with the Appropriations Act of 2006, the accrued liability rate would be equal to (3.49%) of payroll effective July 1, 2006. The required employer contribution is 2.32% which will liquidate the unfunded accrued liability within a 9-year period.

#### **SECTION V - COMMENTS ON EXPERIENCE AND GAINS**

The unfunded accrued liability has decreased to \$(3,046) million from \$(3,556) million since the prior valuation. The significant items which affected the unfunded accrued liability were the amendment effective July 1, 2006 which increased the unfunded accrued liability by \$707 million, the assumption changes which increased the unfunded accrued liability by \$324 million, and the 2005 adjustment towards market value of assets which decreased the unfunded accrued liability by \$472 million.

The valuation results indicates that there is a preliminary reserve from undistributed gains equivalent to 0.34% of payroll. However, the System is owed 0.49% of employer contributions, the unpaid portion of the amount escrowed during the 2000/2001 fiscal year. Assuming that the undistributed gains are used to apply towards all of the amount owed to the System, there are no remaining undistributed gains to be used for benefit improvements. Each 1.0% increase in retirement allowances as of July 1, 2007 to beneficiaries on the retirement roll on July 1, 2006 and a prorated portion of each 1.0% increase as of July 1, 2007 for beneficiaries who retired after July 1, 2006 but before June 30, 2007 is equivalent to 0.33% of payroll. The cost of each 0.01% increase in the defined benefit formula with a corresponding increase in retirement allowances to all current benefit recipients is 0.41% of payroll.

**SECTION VI - RATES OF PAYMENT TO PENSION ACCUMULATION FUND**

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Pension Accumulation Fund and the Death Benefit Fund under the provisions of the retirement act. The following table shows the rates of contribution payable by employers as determined from the Appropriations Act and the present valuation for the 2007/2008 fiscal year.

**TABLE V**

**RATES OF CONTRIBUTION PAYABLE BY EMPLOYERS  
FOR THE 2007/2008 FISCAL YEAR  
BASED ON THE APPROPRIATIONS ACT  
AND THE VALUATION AS OF DECEMBER 31, 2005**

<b>CONTRIBUTION</b>	<b>RATE</b>
Normal	6.15%
Actuarial Accrued Liability	<u>(3.49)</u>
Total	2.66%

**SECTION VII - ACCOUNTING INFORMATION**

1. Statement Nos. 25 and 27 of the Governmental Accounting Standards Board (GASB) set forth certain items of information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED PARTICIPANTS  
AS OF DECEMBER 31, 2005**

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	134,719
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	54,003
Active Participants	<u>321,513</u>
Total	510,235

2. Another such item is the schedule of funding progress as shown below.

**SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (( b - a ) / c)
12/31/00*	\$39,773,747,165	\$35,248,769,986	\$(4,524,977,179)	112.8	\$9,001,353,605	(50.27)
12/31/01	42,104,086,026	37,713,663,200	(4,390,422,826)	111.6	9,494,602,568	(46.24)
12/31/02	43,226,837,217	39,863,983,389	(3,362,853,828)	108.4	9,734,447,779	(34.55)
12/31/03	45,117,507,733	41,733,701,348	(3,383,806,385)	108.1	10,082,153,001	(33.56)
12/31/04	47,383,509,397	43,827,854,276	(3,555,655,121)	108.1	10,366,136,571	(34.30)
12/31/05	49,670,182,206	46,624,667,789	(3,045,514,417)	106.5	10,990,238,891	(27.71)

\* These numbers have been revised since the previous valuation to reflect the requirements enacted by the legislature.

3. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2006.

Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending 6/30/2006

(a)	Employer annual required contribution	\$ 269,587,000
(b)	Interest on net pension obligation	4,261,000
(c)	Adjustment to annual required contribution	<u>(8,802,000)</u>
(d)	Annual pension cost: (a) + (b) + (c)	\$ 265,046,000
(e)	Employer contributions made for fiscal year ending 6/30/2006	<u>269,587,000</u>
(f)	Increase (decrease) in net pension obligation: (d) – (e)	\$ (4,541,000)
(g)	Net pension obligation beginning of fiscal year	<u>58,770,000</u>
(h)	Net pension obligation end of fiscal year: (f) + (g)	\$ 54,229,000

TREND INFORMATION

<u>Year Ending</u>	<u>Annual Pension Cost (APC)</u>	<u>Percentage of APC Contributed</u>	<u>Net Pension Obligation</u>
June 30, 2004	\$ 14,151,000	375.5	\$ 63,691,000
June 30, 2005	232,249,000	102.1	58,770,000
June 30, 2006	265,046,000	101.7	54,229,000

4. The annual required contribution (ARC) of the employer as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below. The accrued liability rate is based on amortization of the unfunded actuarial accrued liability of \$(3,045,514,417) over a 9-year period from the valuation date.

2007/2008 FISCAL YEAR  
ANNUAL REQUIRED CONTRIBUTION (ARC)  
BASED ON THE VALUATION AS OF DECEMBER 31, 2005

<u>ANNUAL REQUIRED CONTRIBUTION (ARC)</u>	<u>RATE</u>
Normal	6.15%
Accrued liability	<u>(3.83)</u>
Total	2.32%



5. Additional information as of December 31, 2005 follows.

Valuation date	12/31/05
Actuarial cost method	Entry age
Amortization method	Level dollar open
Remaining amortization period	9 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.25%
Projected salary increases*	4.50 – 16.10%
*Includes inflation at	3.75%
Cost-of-living adjustments	N/A

**SCHEDULE A****DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS  
FOR THE YEAR ENDING DECEMBER 31, 2005**

1.	Actuarial Value of Assets as of December 31, 2004	\$ 47,383,509,397
2.	2005 Net Cash Flow	
	a. Contributions	984,923,893
	b. Disbursements	<u>2,548,964,609</u>
	c. Net Cash Flow: (a) - (b)	(1,564,040,716)
3.	Expected Investment Return: [(1) x .0725] + [(2)c x .03625]	3,378,607,955
4.	Expected Actuarial Value of Assets as of December 31, 2005: (1) + (2)c + (3)	49,198,076,636
5.	Market Value of Assets as of December 31, 2005	51,558,604,486
6.	Excess of Market Value over Expected Actuarial Value of Assets: (5) - (4)	2,360,527,850
7.	20% Adjustment towards Market Value: (6) x .20	472,105,570
8.	Actuarial Value of Assets as of December 31, 2005: (4) + (7)	49,670,182,206
9.	Rate of investment return on actuarial value	8.26%
10.	Rate of investment return on market value	6.97%

**SCHEDULE B****STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

Assumptions are based on the experience investigation prepared as of December 31, 2004 and adopted by the Board of Trustees on April 20, 2006.

INTEREST RATE: 7.25% per annum, compounded annually.

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed rates of separation from active service are as follows:

**GENERAL EMPLOYEES**

Annual Rates of

Age	<u>Withdrawal* and Vesting</u>		<u>Death</u>		<u>Disability</u>		<u>Service Retirement**</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	.0800	.0850	.0006	.0003	.0001	.0001		
30	.0800	.0850	.0008	.0003	.0004	.0004		
35	.0680	.0740	.0009	.0005	.0010	.0010		
40	.0530	.0500	.0010	.0007	.0029	.0018		
45	.0400	.0400	.0015	.0009	.0049	.0033		
50	.0400	.0350	.0023	.0013	.0084	.0050	.3500	.3500
55	.0400	.0350	.0040	.0021	.0144	.0088	.3000	.3500
60			.0071	.0039	.0240	.0138	.1500	.1500
65			.0129	.0076			.3000	.3000
69			.0199	.0118			.1500	.2000

**TEACHERS**

Annual Rates of

Age	<u>Withdrawal* and Vesting</u>		<u>Death</u>		<u>Disability</u>		<u>Service Retirement**</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	.0550	.0600	.0006	.0003	.0001	.0002		
30	.0550	.0600	.0007	.0003	.0001	.0003		
35	.0550	.0500	.0008	.0004	.0003	.0006		
40	.0350	.0350	.0009	.0006	.0007	.0010		
45	.0300	.0250	.0013	.0008	.0014	.0018		
50	.0350	.0300	.0019	.0011	.0023	.0032	.3500	.3500
55	.0350	.0300	.0032	.0017	.0047	.0055	.3500	.4500
60			.0056	.0029	.0077	.0102	.1500	.1500
65			.0102	.0058			.3000	.3500
69			.0162	.0097			.2500	.1500

\* Higher rates of withdrawal are used during the first 3 years of membership in the system.

\*\* An additional 15% of general employees and an additional 20% of teachers are assumed to retire in the year when first eligible for unreduced service retirement. Special rates are used for early service retirement.

**LAW ENFORCEMENT OFFICERS - MALES**

Annual Rates of

Age	Withdrawal and Vesting	Death		Disability		Service Retirement*
		Ordinary	Accidental	Ordinary	Accidental	
25	.0980	.00056	.00006	.0029	.0003	
30	.0570	.00070	.00008	.0036	.0004	
35	.0370	.00077	.00009	.0047	.0005	
40	.0300	.00090	.00010	.0061	.0007	
45	.0220	.00131	.00015	.0090	.0010	
50	.0220	.00210	.00023	.0151	.0017	.2000
55		.00358	.00040			.2000
60		.00638	.00071			.2000
65		.01165	.00129			.4000
69		.01787	.00199			.3000

**LAW ENFORCEMENT OFFICERS - FEMALES**

Annual Rates of

Age	Withdrawal and Vesting	Death		Disability		Service Retirement*
		Ordinary	Accidental	Ordinary	Accidental	
25	.0980	.00026	.00003	.0029	.0003	
30	.0570	.00030	.00003	.0036	.0004	
35	.0370	.00041	.00005	.0047	.0005	
40	.0300	.00059	.00007	.0061	.0007	
45	.0220	.00083	.00009	.0090	.0010	
50	.0220	.00118	.00013	.0151	.0017	.2000
55		.00187	.00021			.2000
60		.00347	.00039			.2000
65		.00686	.00076			.4000
69		.01058	.00118			.3000

\* An additional 40% are assumed to retire in the year when first eligible for unreduced service retirement. Special rates are used for early service retirement.

SALARY INCREASES: Representative values of the assumed annual rates of salary increases are as follows:

Age	Annual Rate of Salary Increase			
	General Employees	Law Enforcement Officers	Service	Teachers
25	10.28%	9.70%	0	14.73%
30	6.17	7.20	5	10.38
35	5.22	5.87	10	6.86
40	5.08	5.30	15	6.65
45	4.98	4.96	20	6.43
50	4.77	4.50	25	6.34
55	4.50	4.50	30	6.29
60	4.50	4.50	35	5.90
64	4.50	4.50	40	4.50
65	4.50	4.50	45	4.50
69	4.50	4.50	50	4.50



DEATH AFTER RETIREMENT: According to the 1994 Group Annuity Mortality Tables. These tables are not adjusted for male teachers, set forward one year for female teachers, set forward two years for general employees and law enforcement officers, and set forward two years for the beneficiaries of deceased members.

MORTALITY PROJECTION: All mortality rates are projected using Scale AA.

ADMINISTRATIVE EXPENSES: 0.10% of payroll.

MARRIAGE ASSUMPTION: 100% married with the husband four years older than his wife.

VALUATION METHOD: Entry age normal cost method. Entry age is established on an individual basis.

ASSET VALUATION METHOD: Actuarial value, as developed in Schedule A. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value.

**SCHEDULE C****SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS**

A summary of the main benefit provisions of the Retirement System and of the sources of revenue from which benefits are paid is presented in the following digest. Items in parentheses in the text are the provisions applicable to law enforcement officers.

"Average final compensation" as used in the summary means the average annual compensation during the four consecutive years of membership service which afford the highest such average. "Membership service" means service represented by regular contributions. "Prior service" means service prior to July 1, 1941 for which credit is allowed. "Creditable service" means the sum of prior service plus membership service. Creditable service may also include certain special purchased service.

**BENEFITS****Service Retirement Allowance****Condition for Allowance**

A service retirement allowance is payable to any member who retires from service after he has attained age 60 and completed 5 years of membership service (age 55 and 5 years of creditable service) or completed 30 years of creditable service.

**Amount of Allowance**

On service retirement on or after age 65 (55), or after age 60 and completion of 25 years of creditable service, or after completion of 30 years of creditable service, a member receives a retirement allowance equal to 1.82% of his average final compensation multiplied by the number of years of his creditable service.

If a member who is not a law enforcement officer has not attained age 65 or has not completed 25 or more years of creditable service at the time of his retirement, his allowance is reduced 1/4 of 1% for each month by which his age at retirement is less than age 65.

In no event will a member whose creditable service commenced on or before June 30, 1963 receive a smaller retirement allowance than he would have received under the benefit provisions of the system in effect on that date.

## Early Service Retirement Allowance

### Condition for Allowance

An early service retirement allowance is payable to any member who retires from service after he has attained age 50 and completed 20 (15) years of creditable service but prior to becoming eligible for a service retirement allowance.

### Amount of Allowance

The member's early service retirement allowance is equal to 1.82% of his average final compensation multiplied by the number of years of his creditable service at his date of retirement reduced by the lesser of:

(i)  $5/12$  ( $1/3$ ) of 1% for each month by which his age is less than 60 (55), plus  $1/4$  of 1% for each month by which his age is less than 65.

(ii) 5% times the difference between 30 years and his creditable service at retirement.

## Deferred Service Retirement Allowance

Any member who separates from service prior to becoming eligible for a service retirement allowance or an early service retirement allowance after completing 5 or more years of membership service and who leaves his total accumulated contributions in the system may receive a deferred retirement allowance, beginning at age 60 (55), computed in the same way as a service retirement allowance, or, if the member has 20 or more years of service, at age 50 computed in the same way as an early service retirement allowance, on the basis of his creditable service and compensation to the date of separation.

## Return of Contributions

Upon the withdrawal of a member without a retirement allowance and upon his request, his contributions are returned to him, together with accumulated regular interest thereon if he has at least 5 years of membership service.

Upon the death of a member before retirement, his contributions, together with the full accumulated regular interest thereon, are paid to his estate or to person(s) designated by the member unless the designated beneficiary, if eligible, elects the survivor's alternate benefit described below.

## Survivor's Alternate Benefit

Upon the death of a member in service who has attained age 60(55) and has completed 5 years of membership (creditable) service or completed 20 years of creditable service, his designated beneficiary may elect to receive a benefit equal to that which would have been payable under the provisions of Option 2 had the member retired on the first day of the month following his death and elected such option, in lieu of the member's accumulated contributions, provided the member had not instructed the Board of



Death After Retirement

Trustees in writing that he did not wish the alternate benefit to apply.

Upon the death of a beneficiary who did not retire under an effective election of Option 2 or Option 3, an amount equal to the excess if any, of his accumulated contributions at retirement over the retirement allowance payments received is paid to a designated person or to the beneficiary's estate.

Upon the death of the survivor of a beneficiary who retired under an effective election of Option 2 or Option 3, an amount equal to the excess, if any, of the beneficiary's accumulated contributions at retirement over the total retirement allowance payments received is paid to such other person designated by the beneficiary or to the beneficiary's estate.

Optional Arrangements at Retirement

In lieu of the full retirement allowance, any member may elect to receive a reduced retirement allowance equal in value to the full allowance, with the provision that:

Option 1 - A member retiring prior to July 1, 1993, may elect that at his death within 10 years from his retirement date, an amount equal to his accumulated contributions at retirement, less 1/120 for each month he has received a retirement allowance, is paid to his estate, or to a person(s) designated by the member, or

Option 2 - At the death of the member his allowance shall be continued throughout the life of such other person as the member shall have designated at the time of his retirement, or

Option 3 - At the death of the member one-half of his allowance shall be continued throughout the life of such other person as the member shall have designated at the time of his retirement.

Option 4 - A member may elect to receive a retirement allowance in such amount that, together with his Social Security benefit, he will receive approximately the same income per annum before and after the earliest age at which he becomes eligible to receive the Social Security benefit.

Option 5 - A member retiring prior to July 1, 1993 may elect to receive a reduced retirement allowance under the provisions of Option 2 or Option 3 in conjunction with the provisions of Option 1.



Option 6 - A member may elect either Option 2 or Option 3 with the added provision that in the event the designated beneficiary predeceases the member, the retirement allowance payable to the member after the designated beneficiary's death shall be equal to the retirement allowance which would have been payable had the member not elected the option.

Post-Retirement Increases  
in Allowances

Future increases in allowances may be granted if the Consumer Price Index rises, provided the liabilities on account of such increases do not increase the total employer rate of contribution.

## CONTRIBUTIONS

### REGULAR CONTRIBUTIONS

By Members

Each member contributes 6% of his compensation.

By Employers

Employers make annual contributions consisting of a normal contribution and an accrued liability contribution. The normal contribution covers the liability on account of current service and is determined by the actuary after each valuation.

The accrued liability contribution covers the liability on account of service rendered before the establishment of the retirement system and the liability on account of increases in benefits for service rendered prior to the effective date of any amendment.

**SCHEDULE D****TABLE 1**

**THE NUMBER AND ANNUAL COMPENSATION OF  
ACTIVE MEMBERS DISTRIBUTED BY AGE  
AS OF DECEMBER 31, 2005**

Age	Men		Women	
	Number	Amount	Number	Amount
16	3	\$32,949	3	\$79,586
17			3	54,782
18	6	32,386	4	16,774
19	34	358,286	40	345,287
20	90	1,118,518	88	984,488
21	212	2,993,903	240	2,799,192
22	364	5,693,755	825	10,750,326
23	811	13,566,427	2,326	38,262,814
24	1,224	24,538,989	3,850	81,384,743
25	1,576	35,487,886	4,332	101,138,815
26	1,729	42,273,628	4,623	111,721,750
27	1,743	45,304,887	4,720	122,658,339
28	1,839	50,679,946	4,606	124,362,369
29	1,927	55,710,771	4,676	129,863,600
30	3,076	67,269,612	5,690	137,994,752
31	2,464	75,255,674	5,104	149,194,459
32	2,241	72,583,689	4,743	140,553,497
33	2,361	77,552,759	4,926	147,254,102
34	2,519	85,002,831	5,249	158,498,605
35	2,771	94,595,360	5,814	177,976,389
36	2,632	94,941,983	5,698	176,061,956
37	2,463	90,209,772	5,473	170,676,779
38	2,473	90,642,630	5,350	164,780,570
39	2,367	87,444,771	5,357	164,499,731
40	2,518	92,028,688	5,261	162,036,616
41	2,547	95,409,089	5,604	175,327,634
42	2,661	99,659,581	5,877	183,774,795
43	2,756	106,349,536	5,952	189,817,290
44	2,768	105,984,602	6,336	203,803,588
45	2,759	107,796,570	6,531	213,456,145
46	2,763	109,365,856	6,537	219,272,610
47	2,888	114,314,780	6,596	221,617,417
48	2,920	117,021,298	7,035	249,150,817
49	3,025	124,645,403	7,302	265,870,088
50	2,956	121,758,401	7,178	269,483,874
51	2,996	127,014,996	7,114	271,140,083
52	3,001	129,411,270	7,284	282,011,406

**TABLE 1**  
**THE NUMBER AND ANNUAL COMPENSATION OF**  
**ACTIVE MEMBERS DISTRIBUTED BY AGE**  
**AS OF DECEMBER 31, 2005**

CONTINUED

Age	Men		Women	
	Number	Amount	Number	Amount
53	2,950	\$130,712,908	6,934	\$272,651,560
54	2,883	129,246,246	6,472	255,301,026
55	2,734	120,468,397	5,974	232,765,717
56	2,555	112,078,157	5,482	210,985,483
57	2,579	112,340,884	5,148	197,725,174
58	2,471	107,803,123	4,891	185,827,327
59	2,446	111,825,114	4,970	189,192,097
60	1,656	72,678,665	3,269	123,956,374
61	1,539	67,363,626	2,535	95,126,526
62	1,254	56,609,807	2,138	77,919,664
63	960	44,257,817	1,605	57,574,293
64	655	31,587,404	1,003	36,250,590
65	532	24,620,221	746	26,533,149
66	359	17,530,657	450	15,298,690
67	276	12,282,506	350	11,739,518
68	222	9,529,167	254	7,880,870
69	166	7,462,999	204	6,621,633
70	137	5,238,210	143	4,002,134
71	119	5,094,620	130	3,919,380
72	95	3,737,218	76	2,327,769
73	64	2,455,337	72	1,985,323
74	54	2,218,747	36	1,056,671
75	48	2,149,808	43	1,340,467
76	1	77,250		
77	1	45,624		
78				
79				
80				
81				
82			1	44,951
83				
84	1	70,443		
85				
86				
87				
88				
89				
	100,240	\$3,753,536,437	221,273	\$7,236,702,454

**SCHEDULE D****TABLE 2**

**THE NUMBER AND ANNUAL COMPENSATION OF  
ACTIVE MEMBERS DISTRIBUTED BY SERVICE  
AS OF DECEMBER 31, 2005**

Years of Service	Men		Women	
	Number	Amount	Number	Amount
0	5,087	\$36,122,791	9,860	\$68,796,279
1	11,383	\$261,686,822	25,403	511,980,016
2	8,618	266,194,042	18,612	511,892,787
3	6,843	228,405,244	14,939	435,091,436
4	5,386	186,716,955	12,755	381,245,217
5	5,650	199,987,218	13,353	407,011,738
6	5,059	183,045,046	12,264	375,742,817
7	4,564	168,704,388	11,045	349,849,955
8	4,124	159,131,084	9,751	320,781,787
9	3,702	143,842,411	9,119	308,449,350
10	3,235	131,791,907	6,966	244,986,964
11	3,132	128,320,263	6,591	237,428,146
12	3,242	133,723,954	5,937	219,507,631
13	2,537	110,525,799	5,417	206,685,254
14	2,423	105,146,280	4,723	184,977,472
15	1,973	88,635,760	4,041	161,992,687
16	2,291	100,618,241	4,786	191,494,163
17	2,173	95,912,608	5,050	201,014,940
18	1,991	94,007,054	4,516	187,057,734
19	1,734	84,973,153	3,578	154,454,388
20	1,581	80,982,931	3,482	152,296,604
21	1,693	84,796,906	3,542	156,658,137
22	1,596	81,335,348	3,128	143,385,785
23	1,277	67,060,513	2,357	110,725,056
24	1,120	58,785,296	2,373	112,935,223
25	1,047	56,636,475	2,607	121,652,562
26	1,167	65,186,487	2,935	137,353,974
27	1,230	69,965,899	3,055	150,885,776
28	1,151	66,688,840	2,754	140,431,200
29	918	54,208,955	2,263	118,970,754
30	547	34,556,727	1,394	76,628,644
31	404	26,624,855	862	49,504,289
32	357	22,812,672	662	37,078,111
33	260	17,240,138	371	21,490,957
34	209	15,612,464	243	13,927,414
35	135	9,924,453	171	10,362,178
36	124	10,242,684	115	7,047,683



**TABLE 2**  
**THE NUMBER AND ANNUAL COMPENSATION OF**  
**ACTIVE MEMBERS DISTRIBUTED BY AGE**  
**AS OF DECEMBER 31, 2005**

CONTINUED

Years of Service	Men		Women	
	Number	Amount	Number	Amount
37	80	\$6,529,099	69	\$4,345,671
38	66	5,679,006	54	3,205,059
39	42	3,438,394	42	2,380,291
40	27	2,341,147	24	1,269,660
41	18	1,584,773	17	1,029,328
42	14	1,218,509	7	373,907
43	9	939,109	10	593,432
44	7	665,955	7	381,648
45	6	452,536	8	405,948
46	3	184,387	1	73,123
47	1	45,624	1	32,294
48	1	109,811	3	152,031
49			4	395,329
50	1	89,486	1	62,551
51			2	84,522
52				
53	1	35,495	2	108,818
54				
55	1	70,443		
56			1	33,734
Total	100,240	\$3,753,536,437	221,273	\$7,236,702,454

**SCHEDULE D****TABLE 3**

**THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF BENEFICIARIES AND  
SURVIVORS BY AGE AS OF DECEMBER 31, 2005**

**SERVICE RETIREMENTS AND  
DEPENDENTS OF DECEASED BENEFICIARIES**

Age	Men		Women	
	Number	Amount	Number	Amount
25	30	\$297,146	16	\$131,886
26	2	34,388	2	18,681
27	5	73,315	3	37,859
28	9	105,185	1	8,623
29	8	125,368	8	114,676
30	5	79,567	4	54,654
31	7	57,528	3	67,326
32	7	70,019	3	15,502
33	7	78,266	2	14,103
34	17	197,561	4	36,983
35	14	103,204	5	66,630
36	11	90,159	7	108,840
37	14	171,732	8	74,437
38	11	105,513	8	84,413
39	18	130,848	8	49,103
40	25	233,736	15	176,992
41	22	218,467	10	89,345
42	23	210,573	10	92,244
43	29	240,756	17	154,889
44	26	156,023	15	181,338
45	35	315,906	20	276,368
46	28	227,589	13	153,001
47	29	295,725	30	260,148
48	40	477,550	25	288,133
49	69	1,437,261	58	1,031,927
50	122	2,535,050	116	2,377,595
51	245	5,339,679	337	7,427,939
52	358	8,603,580	609	15,085,181
53	491	12,867,325	1,093	29,378,232
54	643	17,760,958	1,395	39,078,749
55	789	22,336,314	1,704	48,415,334
56	960	28,136,401	1,871	52,015,170
57	1,095	33,839,947	2,104	57,921,842
58	1,299	39,810,578	2,259	60,768,141
59	1,621	48,693,709	2,580	68,983,662
60	1,191	35,499,921	2,026	50,077,199
61	1,336	38,562,765	2,591	56,939,292
62	1,453	37,021,890	3,027	60,925,321
63	1,804	41,935,389	3,607	63,890,736
64	1,644	36,011,500	3,265	55,334,848

**TABLE 3**  
**THE DISTRIBUTION OF THE NUMBER AND ANNUAL**  
**RETIREMENT ALLOWANCES OF BENEFICIARIES AND**  
**SURVIVORS BY AGE AS OF DECEMBER 31, 2005**

**SERVICE RETIREMENTS AND**  
**DEPENDENTS OF DECEASED BENEFICIARIES**

CONTINUED

Age	Number	Men		Women	
		Number	Amount	Number	Amount
65	1,648		\$35,611,339	3,300	\$54,232,492
66	1,720		35,776,440	3,317	52,351,814
67	1,778		36,701,229	3,146	48,864,855
68	1,693		34,521,794	3,187	47,722,941
69	1,570		32,665,013	2,974	44,666,026
70	1,588		33,639,368	2,975	43,776,505
71	1,493		30,462,475	2,928	42,586,946
72	1,426		30,248,382	2,534	35,276,084
73	1,361		28,258,517	2,553	35,767,719
74	1,355		28,184,162	2,488	33,776,305
75	1,314		27,895,290	2,451	34,109,558
76	1,258		26,390,813	2,288	31,332,949
77	1,133		23,064,480	2,257	28,961,174
78	1,027		20,436,975	2,175	27,736,149
79	974		18,629,145	2,016	25,601,649
80	875		17,204,992	1,900	22,851,523
81	811		15,236,287	1,801	20,560,657
82	672		12,130,668	1,620	18,228,307
83	629		10,993,188	1,440	16,605,913
84	522		10,555,251	1,472	16,178,198
85	549		9,424,620	1,308	14,857,110
86	385		6,157,918	1,186	12,476,951
87	347		5,647,681	972	10,194,145
88	244		3,851,561	850	9,173,410
89	205		3,110,092	733	7,865,749
90	161		2,341,703	628	6,739,340
91	125		1,829,361	545	6,627,911
92	104		1,671,301	475	5,331,858
93	63		937,450	369	4,392,211
94	38		478,883	268	3,272,946
95	34		380,840	217	2,535,137
96	25		351,320	162	2,090,678
97	24		243,472	126	1,614,897
98	5		38,733	95	1,130,976
99	6		57,767	61	741,187
100	7		96,133	50	571,657

**TABLE 3**  
**THE DISTRIBUTION OF THE NUMBER AND ANNUAL**  
**RETIREMENT ALLOWANCES OF BENEFICIARIES AND**  
**SURVIVORS BY AGE AS OF DECEMBER 31, 2005**

**SERVICE RETIREMENTS AND**  
**DEPENDENTS OF DECEASED BENEFICIARIES**

CONTINUED

	Age	Men		Women	
		Number	Amount	Number	Amount
	101	2	\$48,536	30	\$375,502
	102	1	23,753	21	234,012
	103	1	68,997	13	164,500
	104			4	43,774
	105	1	3,164	2	13,015
	106			1	1,889
<b>Total</b>		<b>42,716</b>	<b>\$959,857,486</b>	<b>85,817</b>	<b>\$1,443,843,965</b>
<b>Maximum</b>		<b>11,635</b>	<b>252,904,647</b>	<b>39,608</b>	<b>637,812,046</b>
<b>Cash Refund</b>		<b>2,655</b>	<b>52,712,571</b>	<b>9,895</b>	<b>128,382,124</b>
<b>100% J&amp;S</b>		<b>7,079</b>	<b>155,034,882</b>	<b>2,473</b>	<b>31,623,755</b>
<b>50% J&amp;S</b>		<b>3,465</b>	<b>87,869,269</b>	<b>1,966</b>	<b>34,537,810</b>
<b>Soc Sec Level</b>		<b>7,582</b>	<b>194,313,314</b>	<b>16,417</b>	<b>379,459,895</b>
<b>Odd Surv</b>		<b>25</b>	<b>850,988</b>	<b>15</b>	<b>289,589</b>
<b>100% J&amp;S Popup</b>		<b>4,729</b>	<b>108,774,762</b>	<b>3,141</b>	<b>52,384,140</b>
<b>50% J&amp;S Popup</b>		<b>3,096</b>	<b>84,864,150</b>	<b>3,863</b>	<b>76,613,943</b>
<b>Beneficiaries</b>		<b>2,450</b>	<b>22,532,903</b>	<b>8,439</b>	<b>102,740,663</b>



SCHEDULE D

TABLE 4

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF BENEFICIARIES AND  
SURVIVORS BY AGE AS OF DECEMBER 31, 2005

## DISABILITY RETIREMENTS

Age	Men		Women	
	Number	Amount	Number	Amount
41	1	\$7,486		
42	1	18,626	1	13,771
43	1	13,629	1	11,032
44	5	83,106	3	38,860
45	3	42,533	13	187,818
46	4	66,953	8	97,965
47	10	159,486	19	281,416
48	26	548,385	18	372,276
49	25	515,094	33	567,045
50	41	868,398	65	1,291,124
51	45	949,594	74	1,734,224
52	54	1,197,684	76	1,745,539
53	53	1,160,333	112	2,757,705
54	56	1,481,046	138	3,485,304
55	62	1,467,267	149	3,669,680
56	80	1,792,032	138	3,529,984
57	74	1,617,648	155	3,799,305
58	107	2,417,827	155	3,635,631
59	116	2,804,450	175	3,766,012
60	86	1,895,427	134	2,837,279
61	74	1,478,145	147	2,808,222
62	64	1,277,646	154	2,802,797
63	77	1,668,008	158	3,067,204
64	83	1,570,155	147	2,559,098
65	73	1,391,552	131	2,009,790
66	90	1,662,215	117	1,745,082
67	55	916,583	124	1,790,923
68	56	940,713	135	2,008,090
69	51	964,699	80	1,133,409
70	68	1,084,795	99	1,330,878
71	54	920,749	84	1,261,127
72	52	789,725	89	1,137,507
73	47	797,447	76	919,386
74	38	576,801	69	838,180
75	37	571,213	62	799,169
76	43	643,628	73	905,810
77	37	520,116	77	922,594
78	39	494,575	69	792,230
79	38	466,381	75	803,937
80	45	593,352	71	771,082

**TABLE 4**  
**THE DISTRIBUTION OF THE NUMBER AND ANNUAL**  
**RETIREMENT ALLOWANCES OF BENEFICIARIES AND**  
**SURVIVORS BY AGE AS OF DECEMBER 31, 2005**

**DISABILITY RETIREMENTS**

CONTINUED

Age	Number	Men		Women	
		Number	Amount	Number	Amount
81	40		\$598,663	63	\$522,792
82	29		367,782	62	750,215
83	44		610,373	63	630,045
84	27		367,768	42	466,010
85	19		270,721	50	539,071
86	13		257,479	40	433,484
87	19		196,023	26	244,030
88	15		214,923	31	392,769
89	6		46,923	27	297,291
90	7		71,500	24	267,920
91	2		35,785	14	152,069
92	3		25,744	13	128,370
93	2		42,697	11	99,348
94	3		17,804	7	97,778
95	2		27,814		
96	1		19,078	2	23,739
97				1	17,699
98				1	6,188
99				1	8,690
100				1	13,228
<b>Total</b>	<b>2,203</b>		<b>\$41,606,578</b>	<b>3,983</b>	<b>\$69,319,219</b>
<b>Maximum</b>	<b>1,211</b>		<b>26,188,743</b>	<b>2,794</b>	<b>53,676,708</b>
Cash Refund	314		4,835,010	791	9,718,971
100% J&S	174		2,142,481	86	980,533
50% J&S	240		3,560,514	107	1,344,576
Soc Sec Level	14		392,988	26	698,826
Odd Surv				2	30,167
100% J&S Popup	69		989,276	44	597,254
50% J&S Popup	181		3,497,564	133	2,272,185