



West Virginia Teachers' Retirement System

**Actuarial Valuation
As of July 1, 2011**

Prepared by:

buckconsultants[®]

A Xerox Company

**for the
West Virginia Consolidated Public Retirement Board**

January 2012

January 19, 2012

West Virginia Consolidated Public Retirement Board
4101 MacCorkle Avenue, SE
Charleston, WV 25304

Re: West Virginia Teachers' Retirement System: Actuarial Valuation as of July 1, 2011

Retirement Board Members:

We respectfully present our report on the actuarial valuation of the West Virginia Teachers' Retirement System (TRS) as of July 1, 2011. This valuation presents the liabilities of the plan as of the valuation date and the projected Employer contribution for fiscal year 2013.

Some key highlights are:

- The valuation was prepared based on an assumed interest rate of 7.5%.
- Based on the valuation results, the State contribution to TRS for fiscal year 2013 is \$457,977,000. The State appropriation needed for fiscal year 2013 for the Teachers' Retirement Plans (TRS and TDC) under the School Aid Formula is \$430,676,000.
- The funded percentage of plan assets to the actuarial accrued liability at the valuation date is 54%, compared to 47% for the prior year.

This report contains supporting data and background information pertaining to the development of costs and related liabilities of the plan. The valuation is based on:

- membership data as of June 30, 2011 maintained by the West Virginia Consolidated Public Retirement Board, and
- financial information received from the West Virginia Investment Management Board.

This report presents fairly the actuarial position of the West Virginia Teachers' Retirement System (TRS) as of July 1, 2011 in accordance with generally accepted actuarial principles applied on a basis consistent with that of the preceding valuation. In our opinion, the assumptions used in preparing the liabilities and costs are individually reasonable in respect to TRS experience and represent our best estimate of anticipated experience under TRS.

Retirement Board Members

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I am a Fellow of the Society of Actuaries and a member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and I am available to answer questions about it.

Respectfully submitted,

David L. Driscoll

David L. Driscoll, FSA, EA
Principal and Consulting Actuary

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This report presents the results of the July 1, 2011 actuarial valuation of the West Virginia Teachers' Retirement System and includes the projected employer contribution requirement for FY 2013. In addition, the report includes disclosure information under GASB 25 and GASB 27. A summary of the plan features, a summary of the method, factors and assumptions, and supplementary membership tables used in the valuation are also included.

Valuation Results

The West Virginia Teachers' Retirement System (TRS) is a defined benefit plan covering education employees hired prior to July 1, 1991, or hired on and after July 1, 2005, and prior Teachers' Defined Contribution Plan (TDC) members who elected to transfer from TDC to TRS effective July 1, 2008 or August 1, 2008. The plan provides unreduced monthly benefits to members upon retirement after 35 years of service, or at age 60 after completing 5 years of service. The plan also provides reduced early retirement benefits, benefits in the event of disability or death while active, and deferred benefits to members who terminate prior to retirement, providing plan eligibility conditions are met.

The plan is funded through member contributions of 6% of payroll and employer contributions sufficient to provide for any remaining normal cost (after member contributions are accounted for) and to amortize the unfunded liability as a level-dollar amount starting from FY 2009.

The major purpose of this valuation is to determine the amount of appropriation needed for FY 2013 for West Virginia's Teachers Retirement Plans under the School Aid Formula (SAF), which is determined to be \$430,676,000. Two components of the SAF determination are calculated in the valuation process: the contributions required from the State for TRS, and a projection of the State's contributions to TDC, both for FY 2013.

The State's contribution to TRS is based on an actuarial valuation of the provisions of the State code and the participant data, in consideration of the assets held in trust for TRS. The details of the TRS contribution for FY 2013 are shown in Table 1.

The State's TRS contribution for FY 2013, assuming a mid-year payment, consists of three separate components:

- The State share of the normal cost,
- The amount needed to fund the unfunded actuarial accrued liability, net of the liability for recent benefit changes, over a 40-year period which began in 1994 (as required by Section 18-9A-6a of the State code), and
- The amount required to separately amortize the liability for recent benefit changes. For FY 2013, this includes the retiree improvements under H.B. 3145.

The total State TRS contribution on this basis is \$457,977,000.

Starting with FY 2009, the annual amortization payment toward the unfunded liability is determined as a level-dollar amount that is amortized over a 40-year period from July 1, 1994. In prior years, the amortization was determined as a level percentage of the projected total education payroll. The total amount contributed to the plan from FY 2009 forward will fund the normal cost plus interest and principal on the unfunded liability, fully amortizing the unfunded liability by the end of FY 2034.

For FY 2013, the annual amortization payment toward the unfunded liability for the retiree improvements under H.B. 3145 is \$320,000. This payment will be made through FY 2017.

Table 2 presents the development of the School Aid Formula, separately identifying the TRS contribution based on the original 40-year amortization, the special payments toward the additional unfunded due to recent plan improvements, and other specific components. Detailed projections of the balance of the 40-year funding program under the level-dollar amortization schedule, net of the separately funded improvements, are shown in Tables 3 and 4.

The projected TDC contribution for FY 2013 for the School Aid Formula is based on projected payroll for that participant population. The split of both the TRS and the TDC contributions is based on information obtained from the state Education Department. The projected fire insurance premium tax shown in Table 2 was provided by the Department of Administration.

Comments on Valuation Results

Table 1 presents the development of the valuation results as of July 1, 2011 and, for comparison purposes, July 1, 2010. Based on the prior year's projections, the expected unfunded actuarial accrued liability as of July 1, 2011 was \$4.656 billion. The actual unfunded liability at the valuation date is \$4.370 billion, a decrease of \$0.286 billion.

The decrease in the unfunded liability was primarily due to the following:

- The return on assets for the year ending June 30, 2011 was approximately 21.3%. This return was well above the prior year's valuation assumption of 7.50% and decreased the unfunded liability by approximately \$573 million.
- Contributions in excess of those expected decreased the unfunded liability by approximately \$4 million.
- Effective July 1, 2011, the valuation assumptions for mortality, withdrawal rates, disability rates, retirement rates, salary scale, future service accrual and non-contributory service loads were changed to reflect the most recent experience study. These assumption changes increased the unfunded liability by \$296 million.
- The combined impact of turnover, mortality, and retirement experience decreased the unfunded liability by approximately \$5 million.

Tables 3 and 4 present projections of the unfunded accrued liability, net of the separately funded liability, to June 30, 2034. Table 3 illustrates the expected pattern of change in the unfunded

liability over the remaining 23-year period. The unfunded liability is expected to decrease steadily to zero at the end of the period. Table 4 presents the expected funding progress toward the unfunded actuarial accrued liability based on the funding policy. This table illustrates the expected dollar amount of change in this component of the unfunded liability from year to year.

Table 5 presents a cash flow projection of expected asset balances, contributions, disbursements, and earnings over the period to FY 2034.

The valuation results were determined using an assumed annual interest rate of 7.5% with an underlying assumed annual inflation rate of 3.0%.

Funding Progress

The information used to report on the funding status of the Plan for both the State's and the Plan's financial statements is presented in Table 6. This table presents information required under Governmental Accounting Standards Board Statement Numbers 25 and 27 (GASB 25 and GASB 27).

Plan Membership

A summary of plan membership, with a comparison to the prior year, follows:

	<u>July 1, 2011</u>	<u>July 1, 2010</u>
Actives	35,855	35,670
Retirees & Beneficiaries	31,043	30,127
Terminated Vested	1,579	1,621
Terminated Non-Vested	<u>1,669</u>	<u>1,420</u>
Total	70,146	68,838

Table 9 presents a reconciliation of plan membership during the year. Table 10 presents detailed information on the categories of plan membership.

Tables 11(a) and 11(b) present the number and total annual compensation of actives, separately for Teachers and Non-Teachers (including State), by 5-year age and service groups as of July 1, 2011.

Table 12 presents the number and average monthly benefits of retirees and beneficiaries included in the valuation distributed by 5-year age groups. Table 13 shows a similar distribution for terminated vested participants entitled to deferred benefits.

Table 1

Development of Valuation Results
(000's omitted)

	Valuation Date	
	July 1, 2011	July 1, 2010
1. Present Value of Future Benefits		
a. Active	\$ 5,290,591	\$ 5,111,052
b. Inactive - Retirees	4,949,646	4,430,259
- Disabled Retirees	205,448	179,532
- Beneficiaries	184,930	169,314
- Vested Terminated	92,251	92,727
- Non-Vested Terminated	6,314	5,452
c. Total	<u>\$ 10,729,180</u>	<u>\$ 9,988,336</u>
2. Actuarial Accrued Liability	\$ 9,445,148	\$ 8,904,312
3. Assets (Market Value)	<u>5,074,665</u>	<u>4,143,540</u>
4. Unfunded Actuarial Accrued Liability (UAL)	\$ 4,370,483	\$ 4,760,772
5. Annual Normal Cost Rate: Type 1 (Pre 7/1/1991 Group)		
a. Present Value of Future Normal Costs	\$ 223,020	\$ 266,145
b. Present Value of Future Pay	\$ 2,262,749	\$ 2,929,035
c. Normal Cost Rate as a % of Payroll	9.86%	9.09%
d. Employee share	6.00%	6.00%
e. Employer share	3.86%	3.09%
f. TRS FY 2012 (2011) Normal Cost Payroll	\$ 511,460	\$ 609,383
g. Employer FY 2012 (2011) Normal Cost (BOY)	\$ 19,742	\$ 18,830
h. TRS FY 2013 (2012) Normal Cost Payroll	\$ 457,713	\$ 550,413
i. Employer FY 2013 (2012) Normal Cost (BOY)	\$ 17,668	\$ 17,008
6. Annual Normal Cost Rate: Type 3 (Post 6/30/2005 Group)		
a. Present Value of Future Normal Costs	\$ 1,061,013	\$ 817,880
b. Present Value of Future Pay	\$ 10,070,529	\$ 8,534,762
c. Normal Cost Rate as a % of Payroll	10.54%	9.58%
d. Employee share	6.00%	6.00%
e. Employer share	4.54%	3.58%
f. TRS FY 2012 (2011) Normal Cost Payroll	\$ 994,289	\$ 891,378
g. Employer FY 2012 (2011) Normal Cost (BOY)	\$ 45,141	\$ 31,911
h. TRS FY 2013 (2012) Normal Cost Payroll	\$ 1,102,226	\$ 1,004,016
i. Employer FY 2013 (2012) Normal Cost (BOY)	\$ 50,041	\$ 35,944

Table 1 (continued)

Development of Valuation Results
(000's omitted)

	Valuation Date	
	July 1, 2011	July 1, 2010
7. Employer Contribution for FY 2012 and FY 2013, (FY 2011 and FY 2012), assumes mid-year contribution:		
a. FY 2012 (2011)	FY 2012	FY 2011
i. TRS and TDC Payroll	\$ 1,656,426	\$ 1,650,283
ii. FY 2012 (2011) TRS Contribution		
A. Normal Cost	67,272	52,609
B. Amortization components:		
- Original UAL over 40 years as a level-dollar amount	389,872	417,979
- H.B. 4846	583	583
- H.B. 3145	320	-
C. Total	\$ 458,047	\$ 471,171
iii. FY 2012 (2011) Contribution as a % of Payroll	27.65%	28.55%
b. FY 2013 (2012)	FY 2013	FY 2012
i. TRS and TDC Payroll	\$ 1,709,432	\$ 1,703,092
ii. FY 2013 (2012) TRS Contribution		
A. Normal Cost	70,203	54,902
B. Amortization components:		
- Original UAL over 40 years as a level-dollar amount	387,454	415,542
- H.B. 4846	-	583
- H.B. 3145	320	-
C. Total	\$ 457,977	\$ 471,027
iii. FY 2013 (2012) Contribution as a % of Payroll	26.79%	27.66%
iv. FY 2013 (2012) SAF appropriation ¹	\$ 430,676	\$ 440,901
v. FY 2013 (2012) SAF appropriation as a % of Payroll	25.19%	25.89%

¹ The School Aid Formula retirement allocation includes the amount that the State appropriates for the Teachers Defined Contribution Plan and required payments toward the TRS Unfunded Actuarial Accrued Liabilities. It does NOT include amounts contributed to TRS by nonstate groups or the fire premium tax.

Table 2

Development of School Aid Formula Appropriation for Fiscal Year 2013
(000's omitted)

TRS Contribution for FY 2013	\$ 457,657
+ 7.50% x School Aid Formula (TDC only) ¹	8,624
- 15.0% x County Portion of the Old Group TRS payroll ²	(16,351)
- 7.5% x County Portion of the New Group TRS payroll ³	(19,681)
- Fire Tax Per Code Section 33-3-14(d)	(2,591)
+ State payment equal to TDC forfeitures ⁴	<u>2,698</u>
Subtotal of Standard SAF Appropriation	\$ 430,356
Special Payments for Benefit Improvements under H.B. 3145	<u>320</u>
Total FY 2013 SAF Appropriation	\$ 430,676

¹ School Aid Formula for TDC only is 75.72% of FY 2013 TDC pay for County employees plus FY 2013 TDC pay for State employees = $75.72\% \times \$142,135 + \$7,358 = 114,983$.

² County portion of the Old Group TRS payroll is 24.28% of FY 2013 TRS pay for County employees = $24.28\% \times \$448,955 = \$109,006$.

³ County portion of the New Group TRS payroll is 24.28% of FY 2013 TRS pay for County employees = $24.28\% \times \$1,080,807 = \$262,420$.

⁴ Actual amount to be released from the TDC suspense account at 6/30/2011 per Code Section 18-7A-18a(b).

Table 3
Projection of Unfunded Accrued Liability and Annual Contributions
(000's omitted)

FY Ending 6/30	Unfunded AAL BOY ¹	Employer Normal Cost (MOY) ²		Projected Payroll			Total Type 1 Employer Contribution (MOY) ³		Total Type 3 Employer Contribution (MOY)	
		Type 1	Type 3	Type 1 TRS	Type 3 TRS	TRS+TDC	% of Payroll	Amount	% of Payroll	Amount
2012	\$ 4,368,363	\$ 17,634	\$ 37,268	\$ 511,460	\$ 994,289	\$ 1,656,426	26.15%	\$ 433,176	2.25%	\$ 37,268
2013	4,265,147	18,319	51,884	457,713	1,102,226	1,709,432	23.74%	405,773	3.04%	51,884
2014	4,183,312	16,272	56,942	406,572	1,209,687	1,764,134	22.89%	403,726	3.23%	56,942
2015	4,095,340	14,309	61,980	357,542	1,316,724	1,820,586	22.07%	401,763	3.40%	61,980
2016	4,000,770	12,440	67,017	310,826	1,423,728	1,878,845	21.28%	399,894	3.57%	67,017
2017	3,899,107	10,690	72,026	267,110	1,530,133	1,938,968	20.53%	398,144	3.71%	72,026
2018	3,789,819	9,069	76,999	226,617	1,635,760	2,001,015	19.82%	396,523	3.85%	76,999
2019	3,672,335	7,567	81,945	189,074	1,740,854	2,065,047	19.13%	395,021	3.97%	81,945
2020	3,546,039	6,234	86,798	155,784	1,843,951	2,131,129	18.47%	393,688	4.07%	86,798
2021	3,410,271	5,053	91,608	126,261	1,946,147	2,199,325	17.85%	392,507	4.17%	91,608
2022	3,264,320	4,034	96,345	100,814	2,046,754	2,269,703	17.25%	391,488	4.24%	96,345
2023	3,107,423	3,181	101,013	79,494	2,145,946	2,342,334	16.68%	390,635	4.31%	101,013
2024	2,938,759	2,459	105,649	61,459	2,244,438	2,417,288	16.13%	389,913	4.37%	105,649
2025	2,757,445	1,882	110,250	47,030	2,342,172	2,494,642	15.61%	389,336	4.42%	110,250
2026	2,562,533	1,424	114,839	35,565	2,439,662	2,574,470	15.11%	388,878	4.46%	114,839
2027	2,353,002	1,062	119,449	26,541	2,537,609	2,656,853	14.62%	388,516	4.50%	119,449
2028	2,127,756	780	124,080	19,494	2,635,977	2,741,873	14.16%	388,234	4.53%	124,080
2029	1,885,617	562	128,777	14,048	2,735,773	2,829,613	13.71%	388,016	4.55%	128,777
2030	1,625,317	399	133,547	9,967	2,837,088	2,920,160	13.28%	387,853	4.57%	133,547
2031	1,345,495	280	138,416	6,996	2,940,525	3,013,605	12.87%	387,734	4.59%	138,416
2032	1,044,686	193	143,383	4,824	3,046,056	3,110,041	12.46%	387,647	4.61%	143,383
2033	721,317	131	148,474	3,267	3,154,213	3,209,562	12.08%	387,585	4.63%	148,474
2034	373,695	87	153,691	2,180	3,265,041	3,312,268	11.70%	387,541	4.64%	153,691

¹ Net of the separately funded liability for recent benefit increases.

² Net of member contributions.

³ Net of the amortization amounts for separately funded benefit increases.

Table 4

**Funding Progress of Unfunded Actuarial Accrued Liability
Under Current Funding Policy
(000's omitted)**

FY Ending 6/30	Unfunded AAL BOY¹	Interest on Unfunded at 7.50%	MOY Contribution Toward Unfunded²	Unfunded Funding Progress³
2012	\$ 4,368,363	\$ 327,627	\$ 415,542	\$ 103,216
2013	4,265,147	319,886	387,454	81,835
2014	4,183,312	313,748	387,454	87,973
2015	4,095,340	307,151	387,454	94,570
2016	4,000,770	300,058	387,454	101,663
2017	3,899,107	292,433	387,454	109,288
2018	3,789,819	284,236	387,454	117,485
2019	3,672,335	275,425	387,454	126,296
2020	3,546,039	265,953	387,454	135,768
2021	3,410,271	255,770	387,454	145,951
2022	3,264,320	244,824	387,454	156,897
2023	3,107,423	233,057	387,454	168,664
2024	2,938,759	220,407	387,454	181,314
2025	2,757,445	206,808	387,454	194,913
2026	2,562,533	192,190	387,454	209,531
2027	2,353,002	176,475	387,454	225,246
2028	2,127,756	159,582	387,454	242,139
2029	1,885,617	141,421	387,454	260,300
2030	1,625,317	121,899	387,454	279,822
2031	1,345,495	100,912	387,454	300,809
2032	1,044,686	78,351	387,454	323,370
2033	721,317	54,099	387,454	347,622
2034	373,695	28,027	387,454	373,694

¹ Net of the separately funded liability for recent benefit increases.

² Net of employer contribution toward normal cost and separately funded benefit increases.

³ Equals (MOY Contribution) x 1.03682 - (Interest on Unfunded)

Table 5

Cash Flow Projection FY 2012 Through FY 2034
(000's omitted)

FY Ending 6/30	Assets Beg. of Year	Expected Contributions	Benefits	Earnings	Net Income	Assets End of Year
2012	\$ 5,074,665	\$ 561,692	\$ 605,278	\$ 378,995	\$ 335,409	\$ 5,410,074
2013	5,410,074	551,573	640,221	402,491	313,843	5,723,917
2014	5,723,917	557,964	676,202	424,940	306,702	6,030,619
2015	6,030,619	564,519	710,368	446,926	301,077	6,331,696
2016	6,331,696	571,304	742,845	468,561	297,020	6,628,716
2017	6,628,716	578,325	773,870	489,953	294,408	6,923,124
2018	6,923,124	585,265	803,394	511,202	293,073	7,216,197
2019	7,216,197	592,762	829,804	532,486	295,444	7,511,641
2020	7,511,641	600,470	853,078	554,072	301,464	7,813,105
2021	7,813,105	608,459	873,388	576,228	311,299	8,124,404
2022	8,124,404	616,687	889,944	599,268	326,011	8,450,415
2023	8,450,415	625,174	903,254	623,542	345,462	8,795,877
2024	8,795,877	633,916	913,150	649,409	370,175	9,166,052
2025	9,166,052	642,938	919,762	677,261	400,437	9,566,489
2026	9,566,489	652,231	923,797	707,487	435,921	10,002,410
2027	10,002,410	661,814	925,641	740,466	476,639	10,479,049
2028	10,479,049	671,642	925,542	776,580	522,680	11,001,729
2029	11,001,729	681,782	924,079	816,208	573,911	11,575,640
2030	11,575,640	692,223	920,986	859,749	630,986	12,206,626
2031	12,206,626	703,001	917,189	907,610	693,422	12,900,048
2032	12,900,048	714,083	912,821	960,186	761,448	13,661,496
2033	13,661,496	725,508	907,642	1,017,906	835,772	14,497,268
2034	14,497,268	737,265	901,661	1,081,242	916,846	15,414,114

Table 6
GASB 25 and GASB 27 Supplementary Disclosure Information as of June 30, 2011

Government Accounting Standards Board Statements 25 and 27 set forth certain items of required supplementary information to be disclosed in the financial statement of the System and the employer. The following information is intended to be used for this purpose in conjunction with other information prepared by the auditor.

1. Number of Members as of June 30, 2011 and June 30, 2010

<u>Group</u>	<u>June 30, 2011</u>	<u>June 30, 2010</u>
Retirees, disabled retirees, and beneficiaries currently receiving benefits	31,043	30,127
Terminated employees entitled to benefits, but not yet receiving benefits	1,579	1,621
Terminated employees entitled to a return of employee contributions	1,669	1,420
Active Plan members:		
Vested	25,534	25,491
Non-Vested	10,321	10,179
Total	70,146	68,838

2. Schedule of Funding Progress (000's omitted)

<u>Actuarial Valuation Date</u>	<u>Actuarial Value of Assets (a)</u>	<u>Actuarial Accrued Liability (Entry Age) (b)</u>	<u>Unfunded Accrued Liability (UAL) (b - a)</u>	<u>Funded Ratio (a / b)</u>	<u>Covered Payroll (c)</u>	<u>UAL as a Percentage of Covered Payroll (b - a) / (c)</u>
6/30/99	\$ 932,501	\$ 4,629,276	\$ 3,696,775	20.1%	\$ 891,165	414.8%
6/30/00	1,046,840	4,883,064	3,836,224	21.4%	874,166	438.8%
6/30/01	1,090,663	5,188,826	4,098,163	21.0%	867,018	472.7%
6/30/02	1,098,441	5,709,001	4,610,560	19.2%	841,627	547.8%
6/30/03*	1,191,238	6,243,834	5,052,596	19.1%	832,919	606.6%
6/30/04	1,427,475	6,440,738	5,013,263	22.2%	784,415	639.1%
6/30/05	1,627,355	6,617,708	4,990,353	24.6%	735,614	678.4%
6/30/06	2,174,464	6,877,872	4,703,408	31.6%	759,206	619.5%
6/30/07	3,665,993	7,142,711	3,476,718	51.3%	828,939	419.4%
6/30/08	4,133,883	8,268,578	4,134,695	50.0%	1,409,437	293.4%
6/30/09	3,554,771	8,607,869	5,053,098	41.3%	1,499,232	337.0%
6/30/10	4,143,540	8,904,312	4,760,772	46.5%	1,500,761	317.2%
6/30/11	5,074,665	9,445,148	4,370,483	53.7%	1,505,749	290.3%

* The 6/30/03 assets have been changed to reflect the final audited financial statements which were unavailable at the issuance of the July 1, 2003 valuation report.

Table 6 (continued)

GASB 25 and GASB 27 Supplementary Disclosure Information as of June 30, 2011

3. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at July 1, 2011. Additional information follows.

Valuation date	July 1, 2011
Actuarial cost method	Entry age
Amortization method	Level-dollar amount
Remaining amortization period	23 years
Asset valuation method	Market value
Actuarial assumptions:	
Investment rate of return	7.50%
Projected salary increases:	
Teachers	3.75% - 5.25%
Non-Teachers	3.40% - 6.50%
Inflation rate	3.00%

Table 7

Valuation Assets as of June 30, 2011
(000's omitted)

	<u>June 30, 2011</u>	<u>June 30, 2010</u>
Assets		
Cash with State Treasurer	\$ 1	\$ 5
Investments at Fair Value	5,010,213	4,099,694
Contributions Receivable	55,352	32,672
Participant Loans Receivable	9,244	11,295
Miscellaneous Revenue Receivable	5	1
Total Assets	<u>\$ 5,074,815</u>	<u>\$ 4,143,667</u>
Liabilities		
Accrued Expenses and Other Payables	<u>150</u>	<u>127</u>
Net Assets for Pension Benefits	\$ 5,074,665	\$ 4,143,540
Post Audit Adjustments		
Accrued Make up Contributions	\$ -	\$ -
TDC to TRS Asset Transfer 7/1/2008	-	-
Net Assets with TDC to TRS Accruals	<u>\$ 5,074,665</u>	<u>\$ 4,143,540</u>

Table 8

**Statement of Changes in Net Assets for Benefits
For Year ended June 30, 2011
(000's omitted)**

Net Assets for Pension Benefits - Beginning of Year	\$ 4,143,540
Post Valuation Adjustment	-
Net Assets for Pension Benefits - After Adjustment	\$ 4,143,540
Additions:	
Contributions:	
Member Type 1	\$ 30,148
Member Type 3	56,881
Employer Type 1	25,249
Employer Type 3	17,619
School Aid Formula	432,673
Make Up Contributions	244
Special Appropriations	22,650
Voluntary Special Contribution Members	668
Special Contribution Required Employers	70
Contribution Delinquency Fees	7
§33-3-14(d) Fees	2,591
Subtotal	<u>\$ 588,800</u>
Investment Income:	
Net Appreciation in Fair Value ¹	795,227
Interest	33,701
Subtotal	<u>\$ 828,928</u>
Other Income	60,569
Total	<u>\$ 1,478,297</u>
Deductions and Transfers:	
Benefit Expense	\$ 535,010
Refunds of Contributions	7,614
Administrative Expenses	4,130
TDC to TRS Accounts for Transfers	-
Transfers (to)/from plans	418
Total	<u>\$ 547,172</u>
Net Increase	\$ 931,125
Net Assets for Pension Benefits - End of Year	\$ 5,074,665
Investment Return for Year:	
Valuation purposes (assumes mid-year transactions and offsets investment income by investment and administrative expenses)	21.25%
Per Investment Management Board (time-weighted, excluding administrative expense)	20.51%

¹ Net of Investment Expense

Table 9

Reconciliation of Plan Participants

	<u>Active</u>	<u>Non- Vested Terms</u>	<u>Vested Terms</u>	<u>Service Retirees</u>	<u>Disabled Retirees</u>	<u>Beneficiaries</u>	<u>Total</u>
Census as of July 1, 2010	35,670	1,420	1,621	25,673	2,149	2,305	68,838
New Entrants	2,599	108	-	-	-	206	2,913
Returned to Active Status	215	(182)	(33)	-	-	-	-
Terminated Non-Vested	(433)	433	-	-	-	-	-
Terminated Vested	(173)	(1)	174	-	-	-	-
Withdrew Contributions	(256)	(79)	(51)	-	-	-	(386)
Retired	(1,639)	-	(95)	1,734	-	-	-
Disabled	(87)	(1)	(11)	-	99	-	-
Deceased	(44)	(4)	(22)	(885)	(79)	(135)	(1,169)
Certain Period Expired	-	-	-	-	-	(22)	(22)
Adjustments	3	(25)	(4)	-	-	(2)	(28)
Census as of July 1, 2011	35,855	1,669	1,579	26,522	2,169	2,352	70,146

Table 10
Summary of Membership

	<u>July 1, 2011</u> <u>Valuation</u>	<u>July 1, 2010</u> <u>Valuation</u>
Active Members:		
Teachers	21,517	21,461
Non-Teachers (including State)	14,338	14,209
Total	<u>35,855</u>	<u>35,670</u>
Inactive Members:		
Service Retirees	26,522	25,673
Disabled Retirees	2,169	2,149
Beneficiaries	2,352	2,305
Vested Terminated	1,579	1,621
Non-Vested Terminated	1,669	1,420
Total	<u>34,291</u>	<u>33,168</u>
Total Members	70,146	68,838

Table 11(a)
 Distribution of the Number and Total Annual Compensation of
 Active Teachers as of July 1, 2011

Attained Age	Years of Credited Service										Total Count / Total Comp
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over		
Under 25	Count / Total Comp 424 / 15,552,992	Count / Total Comp 1 / 58,686	Count / Total Comp 1 / 16,466,793	Count / Total Comp 52 / 2,573,611	Count / Total Comp 24 / 1,226,253	Count / Total Comp 89 / 4,764,628	Count / Total Comp 341 / 19,984,799	Count / Total Comp 786 / 48,711,551	Count / Total Comp 627 / 41,950,828	Count / Total Comp 2 / 159,717	Count / Total Comp 2 / 15,611,678
25 - 29	Count / Total Comp 1,908 / 71,665,541	Count / Total Comp 404 / 16,466,793	Count / Total Comp 1,291 / 52	Count / Total Comp 425 / 20,579,303	Count / Total Comp 261 / 13,925,254	Count / Total Comp 579 / 32,556,448	Count / Total Comp 954 / 56,961,392	Count / Total Comp 1,009 / 63,853,718	Count / Total Comp 388 / 26,610,869	Count / Total Comp 126 / 9,042,879	Count / Total Comp 2,312 / 88,132,334
30 - 34	Count / Total Comp 1,071 / 41,665,836	Count / Total Comp 1,291 / 55,827,417	Count / Total Comp 52 / 2,573,611	Count / Total Comp 52 / 2,573,611	Count / Total Comp 302 / 16,720,562	Count / Total Comp 579 / 32,556,448	Count / Total Comp 341 / 19,984,799	Count / Total Comp 786 / 48,711,551	Count / Total Comp 627 / 41,950,828	Count / Total Comp 2 / 159,717	Count / Total Comp 2,414 / 100,066,865
35 - 39	Count / Total Comp 877 / 34,126,075	Count / Total Comp 935 / 41,965,222	Count / Total Comp 425 / 20,579,303	Count / Total Comp 24 / 1,226,253	Count / Total Comp 89 / 4,764,628	Count / Total Comp 579 / 32,556,448	Count / Total Comp 954 / 56,961,392	Count / Total Comp 1,009 / 63,853,718	Count / Total Comp 388 / 26,610,869	Count / Total Comp 126 / 9,042,879	Count / Total Comp 2,261 / 97,896,853
40 - 44	Count / Total Comp 691 / 27,944,541	Count / Total Comp 737 / 33,449,577	Count / Total Comp 570 / 28,584,707	Count / Total Comp 261 / 13,925,254	Count / Total Comp 579 / 32,556,448	Count / Total Comp 954 / 56,961,392	Count / Total Comp 1,009 / 63,853,718	Count / Total Comp 388 / 26,610,869	Count / Total Comp 126 / 9,042,879	Count / Total Comp 19 / 12,348,418	Count / Total Comp 2,348 / 108,668,706
45 - 49	Count / Total Comp 408 / 17,217,564	Count / Total Comp 505 / 23,103,430	Count / Total Comp 344 / 17,609,484	Count / Total Comp 302 / 16,720,562	Count / Total Comp 579 / 32,556,448	Count / Total Comp 954 / 56,961,392	Count / Total Comp 1,009 / 63,853,718	Count / Total Comp 388 / 26,610,869	Count / Total Comp 126 / 9,042,879	Count / Total Comp 31 / 207	Count / Total Comp 2,479 / 127,192,286
50 - 54	Count / Total Comp 314 / 13,523,189	Count / Total Comp 386 / 18,059,458	Count / Total Comp 305 / 15,610,874	Count / Total Comp 224 / 12,287,114	Count / Total Comp 434 / 24,578,510	Count / Total Comp 954 / 56,961,392	Count / Total Comp 1,009 / 63,853,718	Count / Total Comp 388 / 26,610,869	Count / Total Comp 126 / 9,042,879	Count / Total Comp 19 / 12,348,418	Count / Total Comp 3,403 / 189,732,088
55 - 59	Count / Total Comp 218 / 10,268,215	Count / Total Comp 345 / 16,568,786	Count / Total Comp 313 / 16,172,008	Count / Total Comp 294 / 15,645,065	Count / Total Comp 460 / 25,966,304	Count / Total Comp 954 / 56,961,392	Count / Total Comp 1,009 / 63,853,718	Count / Total Comp 388 / 26,610,869	Count / Total Comp 126 / 9,042,879	Count / Total Comp 6 / 12,348,418	Count / Total Comp 3,858 / 225,729,387
60 - 64	Count / Total Comp 111 / 5,227,665	Count / Total Comp 177 / 8,708,480	Count / Total Comp 167 / 8,768,050	Count / Total Comp 128 / 6,990,516	Count / Total Comp 234 / 13,513,598	Count / Total Comp 954 / 56,961,392	Count / Total Comp 1,009 / 63,853,718	Count / Total Comp 388 / 26,610,869	Count / Total Comp 126 / 9,042,879	Count / Total Comp 6 / 12,348,418	Count / Total Comp 1,757 / 105,627,798
65 - 69	Count / Total Comp 23 / 1,032,294	Count / Total Comp 25 / 1,264,234	Count / Total Comp 20 / 1,096,540	Count / Total Comp 16 / 923,431	Count / Total Comp 26 / 1,558,161	Count / Total Comp 954 / 56,961,392	Count / Total Comp 1,009 / 63,853,718	Count / Total Comp 388 / 26,610,869	Count / Total Comp 126 / 9,042,879	Count / Total Comp 6 / 12,348,418	Count / Total Comp 207 / 105,627,798
70 & over	Count / Total Comp 7 / 308,479	Count / Total Comp 6 / 303,491	Count / Total Comp 5 / 282,075	Count / Total Comp 1 / 53,465	Count / Total Comp 2 / 108,872	Count / Total Comp 954 / 56,961,392	Count / Total Comp 1,009 / 63,853,718	Count / Total Comp 388 / 26,610,869	Count / Total Comp 126 / 9,042,879	Count / Total Comp 6 / 12,348,418	Count / Total Comp 53 / 3,144,981
Total	Count / Total Comp 6,052 / 238,532,392	Count / Total Comp 4,812 / 215,775,574	Count / Total Comp 2,201 / 111,276,651	Count / Total Comp 1,250 / 67,771,659	Count / Total Comp 1,824 / 103,046,520	Count / Total Comp 2,131 / 127,178,462	Count / Total Comp 2,033 / 127,840,368	Count / Total Comp 1,036 / 70,031,440	Count / Total Comp 178 / 12,698,327	Count / Total Comp 178 / 12,698,327	Count / Total Comp 21,517 / 1,074,151,393

Table 11(b)
 Distribution of the Number and Total Annual Compensation of
 Active Nonteachers (including State Employees) as of July 1, 2011

Attained Age	Years of Credited Service													Total Count / Total Comp	
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over						
	Count / Total Comp	Count / Total Comp	Count / Total Comp	Count / Total Comp	Count / Total Comp	Count / Total Comp	Count / Total Comp	Count / Total Comp	Count / Total Comp	Count / Total Comp	Count / Total Comp	Count / Total Comp			
Under 25	61 1,462,278														61 1,462,278
25 - 29	241 6,355,010	38 1,095,455													241 6,355,010
30 - 34	404 10,036,828	195 5,678,762	15 541,493	1 28,866											404 10,036,828
35 - 39	772 17,864,381	357 9,924,817	84 2,840,528	3 100,833	1 44,002										772 17,864,381
40 - 44	798 18,560,511	595 15,642,289	210 6,629,396	46 1,805,026	49 2,008,094	3 132,078									798 18,560,511
45 - 49	729 16,677,618	802 21,020,537	373 11,236,455	103 3,745,573	176 6,872,471	146 6,519,106	29 1,258,597								729 16,677,618
50 - 54	603 13,666,003	725 18,792,807	525 15,095,626	179 5,971,663	276 10,420,664	301 13,070,111	324 14,654,703	23 1,034,554							603 13,666,003
55 - 59	413 9,628,200	545 14,322,825	527 15,255,098	216 6,872,554	392 14,341,547	348 14,438,622	266 12,537,924	147 7,427,370	13 530,635						413 9,628,200
60 - 64	230 5,284,919	300 7,622,747	281 8,136,900	165 5,192,931	268 9,644,373	203 8,183,586	141 6,477,758	93 4,704,710	29 1,380,118						230 5,284,919
65 - 69	67 1,599,020	72 1,692,062	67 1,793,625	34 988,947	63 2,404,342	39 1,542,169	46 2,378,527	23 992,924	14 792,996						67 1,599,020
70 & over	22 455,326	13 309,912	18 385,252	11 300,978	18 544,797	12 417,844	18 645,384	11 399,427	26 1,184,434						22 455,326
Total	4,340 101,590,093	3,642 96,102,213	2,100 61,914,374	758 25,007,371	1,243 46,280,292	1,052 44,303,516	824 37,952,892	297 14,558,984	82 3,888,183						4,340 101,590,093

Table 12
Distribution of the Number and Average Monthly Benefits
of Retired Participants as of July 1, 2011

Current Age	Service Retirees			Disabled Retirees			Beneficiaries			Total		
	Count	Avg. Age	Avg. Mo. Benefit	Count	Avg. Age	Avg. Mo. Benefit	Count	Avg. Age	Avg. Mo. Benefit	Count	Avg. Age	Avg. Mo. Benefit
under 35	-	-	-	-	-	-	17	27	1,030	17	27	1,030
35 - 39	-	-	-	1	38	449	6	38	332	7	38	349
40 - 44	-	-	-	4	43	441	23	42	798	27	42	745
45 - 49	1	49	1,616	50	48	785	35	47	708	86	47	764
50 - 54	39	54	1,994	172	53	955	75	52	927	286	53	1,089
55 - 59	2,018	58	2,709	402	57	1,074	135	57	1,074	2,555	58	2,366
60 - 64	6,146	62	2,296	619	62	978	231	62	1,174	6,996	62	2,142
65 - 69	5,073	67	1,822	479	67	827	271	67	1,051	5,823	67	1,705
70 - 74	4,184	72	1,404	253	72	621	306	72	872	4,743	72	1,328
75 - 79	3,523	77	1,145	89	76	521	345	77	839	3,957	77	1,104
80 - 84	2,818	82	999	53	82	439	385	82	764	3,256	82	962
85 - 89	1,684	87	844	29	87	361	302	87	669	2,015	87	811
90 - 94	763	92	709	16	91	327	158	92	536	937	92	673
95 & over	273	97	590	2	96	365	63	97	484	338	97	569
Total	26,522	71	1,649	2,169	64	868	2,352	74	851	31,043	71	1,534
Total Annual Benefits			524,969,488			22,586,031			24,011,397			571,566,916

Table 13

**Distribution of the Number and Average Monthly Benefits
of Participants Entitled to Deferred Benefits as of July 1, 2011**

<u>Current Age</u>	<u>Deferred Vested</u>		
	<u>Count</u>	<u>Avg. Age</u>	<u>Avg. Mo. Benefit</u>
under 35	43	32	234
35 - 39	27	37	281
40 - 44	49	43	470
45 - 49	241	48	491
50 - 54	391	52	644
55 - 59	511	57	894
60 - 64	268	61	602
65 - 69	42	66	486
70 - 74	4	72	510
75 - 79	2	77	625
<u>80 & over</u>	<u>1</u>	<u>83</u>	<u>415</u>
Total	1,579	54	667
Total Annual Benefits			12,635,037

-
- A. **Plan Name:** The State Teachers' Retirement System (TRS)
- B. **Effective Date:** Originally enacted effective July 1, 1941.
- C. **Member:** Membership includes any employee hired before July 1991, or on or after July 1, 2005, in the public schools, state institutions of higher education, certain state departments, and the Board of Regents, and members of the Teachers' Defined Contribution Plan (TDC) who elected to transfer at July 1 or August 1, 2008. Other members of TDC or TIAA-CREF are not eligible for TRS.
- D. **Final Average Salary:** Final Average Salary is the average of the Member's 5 highest fiscal years of total earnings from covered employment during the Member's last 15 years of service.
- E. **Credited Service:** Credited Service is granted for each day the Member performs work and contributes to the System. At most one year of Credited Service may be earned in any one school year. Credited Service may be granted under certain guidelines for other State employment, for military service, and for out-of-state teaching service.
1. **Contributory Service:** Service credited for years in which a Member contributes to the retirement system. Contributory service is counted for both eligibility and benefit determination.
 2. **Military Service:** Active service in the U.S. military up to 25% of the amount of a Member's Contributory Service (but not more than 10 years) will be counted for both eligibility and benefit determination under the retirement system.
 3. **Purchased Service:** Service in parochial school or with other states' teacher retirement systems may count for benefits (but not eligibility), provided that the Member pays TRS double the amount contributed during the first year of

employment times the number of years credited plus interest, and cashes out his/her rights to any future benefits under his prior retirement system.

4. **Unused Leave:** A retiring member may choose to receive pension credited service for days of sick or annual leave unused at the time of retirement. Credited Service is granted at the rate of twice the actual number of unused days.

F. Contributions

1. **Member Contributions:** Members contribute 6.0% of their pay to the retirement system.
2. **Employer Contributions:** The State of West Virginia and its counties contribute directly to TRS at the following rates:
 - The State contributes:
 - (1) 15.0% of the payroll of State-employed Members,
 - (2) 15.0% of School Aid Formula (SAF) covered payroll of county-employed Members,
 - (3) 7.5% of SAF-covered payroll of members of the TDC Plan,
 - (4) a certain percentage of fire insurance premiums paid by state residents, and
 - (5) under Code Section 18-9-A-6a, beginning in fiscal year 1996, an amount determined by the State Actuary as being needed to eliminate the TRS Unfunded Liability within 40 years of June 30, 1994.
 - Counties contribute 15.0% of the payroll of TRS Members hired before July 1, 1991 and 7.5% of the payroll for TRS Members hired on or after July 1, 2005, and prior TDC members who transferred into TRS at July 1, 2008 or August 1, 2008, who are employed by county boards of education, which is not covered under the School Aid Formula.

G. Service Retirement

- 1. Eligibility:** A Member may retire with an unreduced pension (1) at any age with 35 years of Credited Service, or (2) at age 60 with 5 years of Credited Service. A member may retire with 30 years of Credited Service at any age, with the pension reduced actuarially if the Member retires before age 55.
- 2. Benefit:** The normal form of benefit is a single life annuity paid monthly, in an amount equal to 2% of Final Average Salary times years of Credited Service. Other forms of benefit may be elected, subject to actuarial reduction, including a Cash Refund Annuity, 50% or 100% Joint and Survivor Annuities, and a 10-Year Certain and Life Annuity.

H. Disability Retirement

- 1. Eligibility:** A Member may be eligible to receive a disability retirement benefit after completing 10 years of Credited Service, if the Member is disabled for 6 months, unable to perform his or her regular occupation and the Retirement Board expects the disability to be permanent.
- 2. Benefit:** An annual disability benefit amount, payable monthly as a Cash Refund Annuity, is equal to 2% of the Member's Final Average Salary times the total years of Credited Service to date of disability.

I. Pre-Retirement Death Benefits

- 1. Eligibility:** The surviving spouse of a deceased Member who had attained age 50 and completed 25 years of Credited Service is eligible for the Surviving Spouse Benefit. If a member dies prior to attaining age 50 or completing 25 years of Credited Service a Lump Sum Death Benefit is payable to the beneficiary.

2. Benefit:

- **Surviving Spouse Benefit:** The surviving spouse receives an annuity payable as if the Member had retired on the date of death with a 100% Joint and Survivor pension.
- **Lump Sum Death Benefit:** The sum of the accumulated Member contributions with interest and accumulated Member contributions without interest is paid to the Member's beneficiary (or estate).

J. Refund of Contributions

1. **Eligibility:** A Member who leaves employment and is not eligible for any other benefit will receive a refund of his or her contributions to the retirement system.
2. **Benefit:** A lump sum of the Member's accumulated contributions, with compound interest computed on any contributed amount from the end of the fiscal year in which contributed to the date of distribution of the lump sum (but in no case beyond 5 years after the end of the fiscal year during which the Member left service). For purposes of this benefit, interest is computed at a 4% annual rate.

K. Deferred Vested Benefit

1. **Eligibility:** A Member leaving employment with 5 years of Contributory Service may elect to receive either a refund of contributions or a deferred pension commencing at age 62. If a Member has 20 years of Contributory Service, the deferral age is age 60.
2. **Benefit:** An annuity defined as described under "Service Retirement."

L. Post-Retirement Cost-of-Living Adjustments

Ad hoc cost-of-living increases in pensions are periodically granted by the State Legislature. However, the retirement system makes no automatic provision for such increases.

Effective July 1, 2001 retirees age 65 and over who were retired for at least 5 years received a percentage increase in benefits as follows:

- Eligible retirees age 65 to age 70 received a 5% increase, and
- Eligible retirees over age 70 received a 10% increase.

However, if the retiree originally retired under an early retirement window the percentage increase was limited to 3%.

Effective July 1, 2006, retirees age 70 and over who were retired for at least 5 years received a 3% increase in retirement benefits.

Effective July 1, 2008, all retirees and applicable beneficiaries thereof who retired with 20 or more years of service and are receiving a primary retiree pension of \$600 or less per month received a thirteenth check single payment of \$600.

Effective July 1, 2011, a select group of retirees received a thirteenth check single payment of \$1200.

A. Valuation Date

July 1, 2011

B. Funding Method and Basis for Assumptions

The valuation is prepared under the Entry Age Cost Method with individually computed accrued liabilities. The Normal Cost is computed in aggregate. Entry is based on adjusted date of hire (i.e. valuation date minus known past service).

Experience studies are performed at least once in every five-year period. This valuation was prepared on the basis of assumptions that were recommended to and adopted by the Board on the basis of an experience study covering the period from July 1, 2005, to June 30, 2010. These assumptions will remain in effect for valuation purposes until such time as the Board adopts revised assumptions.

C. Interest Rate and Expenses

The valuation interest assumption is 7.5 % per annum, with no loading for plan expenses.

D. Pre-Retirement Mortality

Pre-retirement mortality rates are shown in the Appendix and are based on the results of the 2006-2010 experience study. The mortality tables are as follows:

In-service males: RP-2000 Non-Annuitant table

In-service females: RP-2000 Non-Annuitant table

E. Post-Retirement Mortality

Post-retirement mortality rates are shown in the Appendix and are based on the results of the 2006-2010 experience study. The mortality tables are as follows:

Healthy males: RP-2000 Healthy Annuitant table, projected to 2020

Healthy females: RP-2000 Healthy Annuitant table, projected to 2020

Disabled males: RP-2000 Disabled Annuitant table, projected to 2020, setback 2 years

Disabled females: RP-2000 Disabled Annuitant table, projected to 2020, setback 1 year

F. Withdrawal from Service

Withdrawal rates are shown in the Appendix and are based on the 2006-2010 experience study. Withdrawal rates are assumed to cease upon eligibility for retirement. All withdrawal is assumed to result in refund of contributions if non-vested or a deferred annuity if vested.

G. Disablement Rates

Disablement rates are shown in the Appendix and are based on the 2006-2010 experience study.

H. Retirement Rates

Retirement rates are shown in the Appendix and are based on the 2006-2010 experience study.

I. Salary Scales

Salary scales are shown in the Appendix and are based on the 2006-2010 experience study. Projected salary increases are in the following ranges by group, with an underlying inflation rate of 3.0%:

<u>Group</u>	<u>Range of Projected Salary Increases</u>
Teachers	3.75% - 5.25%
Non-Teachers	3.40% - 6.50%

J. Accrual of Future Service

Future service accrual factors are based on the 2006-2010 experience study. All active members will accrue 1.00 year of service for each future year of employment.

K. Non-Contributory Service Loadings

The load factor assumptions for non-contributory service (military, parochial or out-of-state teaching, transferred PERS service, and unused sick leave) are based on the 2006-2010 experience study and are as follows:

<u>Group</u>	<u>Male</u>	<u>Female</u>
Teachers	1.0750	1.0400
Non-Teachers	1.0400	1.0275

L. Family Composition

It is assumed that 85% of males and 80% of females are married, with husbands 3 years older than wives. Remarriage rates are not used.

M. Asset Valuation Method

Assets for valuation purposes are included at Market Value.

N. Plan Contribution

Both employee and employer contributions to the plan are assumed to be paid in the middle of the year.

Pre-Retirement Mortality

RP-2000 Non-Annuitant Table

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.00033	0.00019	45	0.00151	0.00112
20	0.00035	0.00019	46	0.00162	0.00122
21	0.00036	0.00019	47	0.00173	0.00133
22	0.00037	0.00019	48	0.00186	0.00143
23	0.00037	0.00020	49	0.00200	0.00155
24	0.00038	0.00020	50	0.00214	0.00168
25	0.00038	0.00021	51	0.00229	0.00181
26	0.00038	0.00021	52	0.00245	0.00197
27	0.00038	0.00022	53	0.00262	0.00214
28	0.00039	0.00024	54	0.00281	0.00232
29	0.00041	0.00025	55	0.00303	0.00253
30	0.00044	0.00026	56	0.00331	0.00276
31	0.00050	0.00031	57	0.00363	0.00301
32	0.00056	0.00035	58	0.00400	0.00329
33	0.00063	0.00039	59	0.00441	0.00360
34	0.00070	0.00044	60	0.00488	0.00393
35	0.00077	0.00048	61	0.00538	0.00429
36	0.00084	0.00051	62	0.00592	0.00466
37	0.00090	0.00055	63	0.00647	0.00504
38	0.00096	0.00060	64	0.00703	0.00543
39	0.00102	0.00065	65	0.00757	0.00582
40	0.00108	0.00071	66	0.00810	0.00621
41	0.00114	0.00077	67	0.00860	0.00658
42	0.00122	0.00085	68	0.00907	0.00695
43	0.00130	0.00094	69	0.00951	0.00729
44	0.00140	0.00103	70	0.00992	0.00761
			71	0.00000	0.00000

Post-Retirement Healthy Mortality

RP-2000 Healthy Annuitant Table
Projected to 2020 with Scale AA

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
49	0.00000	0.00000	85	0.09624	0.06866
50	0.00372	0.00166	86	0.10670	0.07814
51	0.00377	0.00178	87	0.12062	0.08892
52	0.00377	0.00200	88	0.13623	0.09904
53	0.00382	0.00227	89	0.15055	0.11221
54	0.00387	0.00261	90	0.16928	0.12400
55	0.00402	0.00301	91	0.18438	0.13617
56	0.00426	0.00348	92	0.20397	0.14843
57	0.00457	0.00397	93	0.22004	0.16374
58	0.00499	0.00445	94	0.23607	0.17562
59	0.00542	0.00500	95	0.25699	0.18688
60	0.00594	0.00561	96	0.27276	0.19732
61	0.00665	0.00626	97	0.28808	0.21098
62	0.00733	0.00696	98	0.30905	0.21951
63	0.00826	0.00770	99	0.32367	0.22680
64	0.00914	0.00850	100	0.33773	0.23276
65	0.01012	0.00938	101	0.35863	0.24483
66	0.01144	0.01032	102	0.37169	0.25450
67	0.01267	0.01134	103	0.38304	0.26604
68	0.01373	0.01246	104	0.39200	0.27906
69	0.01517	0.01371	105	0.39789	0.29312
70	0.01641	0.01515	106	0.40000	0.30781
71	0.01816	0.01647	107	0.40000	0.32273
72	0.02016	0.01832	108	0.40000	0.33744
73	0.02246	0.01996	109	0.40000	0.35154
74	0.02506	0.02212	110	0.40000	0.36462
75	0.02854	0.02394	111	0.40000	0.37625
76	0.03181	0.02637	112	0.40000	0.38602
77	0.03611	0.02964	113	0.40000	0.39351
78	0.04094	0.03267	114	0.40000	0.39831
79	0.04643	0.03607	115	0.40000	0.40000
80	0.05265	0.03987	116	0.40000	0.40000
81	0.06013	0.04412	117	0.40000	0.40000
82	0.06854	0.04892	118	0.40000	0.40000
83	0.07640	0.05431	119	0.40000	0.40000
84	0.08670	0.06041	120	1.00000	1.00000

Post-Retirement Disabled Mortality

RP-2000 Disabled Annuitant Table, Projected to 2020 with Scale AA
Set Back 2 Years for Males and Set Back 1 Year for Females

Age	Male	Female	Age	Male	Female	Age	Male	Female
21	0.00000	0.00000	54	0.02107	0.01136	87	0.12304	0.09688
22	0.01570	0.00529	55	0.02194	0.01268	88	0.12893	0.10569
23	0.01570	0.00529	56	0.02280	0.01409	89	0.13763	0.11303
24	0.01602	0.00540	57	0.02415	0.01560	90	0.14672	0.12333
25	0.01668	0.00551	58	0.02554	0.01688	91	0.15309	0.13188
26	0.01737	0.00562	59	0.02699	0.01783	92	0.16928	0.14097
27	0.01846	0.00585	60	0.02849	0.01879	93	0.18438	0.15060
28	0.02001	0.00585	61	0.02946	0.01976	94	0.20397	0.16374
29	0.02042	0.00585	62	0.03045	0.02075	95	0.22004	0.17562
30	0.02042	0.00585	63	0.03213	0.02178	96	0.23607	0.18688
31	0.02042	0.00609	64	0.03325	0.02288	97	0.25699	0.19732
32	0.02042	0.00634	65	0.03514	0.02406	98	0.27276	0.21098
33	0.02042	0.00634	66	0.03644	0.02535	99	0.28808	0.21951
34	0.02042	0.00622	67	0.03785	0.02677	100	0.30905	0.22680
35	0.02042	0.00609	68	0.04019	0.02834	101	0.32367	0.23276
36	0.02042	0.00597	69	0.04191	0.03006	102	0.33773	0.24483
37	0.02042	0.00585	70	0.04293	0.03196	103	0.35863	0.25450
38	0.02042	0.00574	71	0.04497	0.03405	104	0.37169	0.26604
39	0.02042	0.00562	72	0.04626	0.03559	105	0.38304	0.27906
40	0.02001	0.00551	73	0.04867	0.03799	106	0.39200	0.29312
41	0.01961	0.00551	74	0.05130	0.03977	107	0.39789	0.30781
42	0.01922	0.00551	75	0.05417	0.04249	108	0.40000	0.32273
43	0.01884	0.00551	76	0.05729	0.04448	109	0.40000	0.33744
44	0.01846	0.00551	77	0.06190	0.04750	110	0.40000	0.35154
45	0.01809	0.00551	78	0.06559	0.05174	111	0.40000	0.36462
46	0.01773	0.00540	79	0.07093	0.05522	112	0.40000	0.37625
47	0.01737	0.00581	80	0.07670	0.05891	113	0.40000	0.38602
48	0.01799	0.00623	81	0.08287	0.06283	114	0.40000	0.39351
49	0.01857	0.00680	82	0.08946	0.06703	115	0.40000	0.39831
50	0.01912	0.00740	83	0.09643	0.07151	116	0.40000	0.40000
51	0.01965	0.00819	84	0.10379	0.07633	117	0.40000	0.40000
52	0.02015	0.00904	85	0.10930	0.08150	118	0.40000	0.40000
53	0.02062	0.01015	86	0.11724	0.08884	119	0.40000	0.40000
						120	1.00000	1.00000

**Withdrawal Rates
Teachers (less than 1 year)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.30000	0.30000	36	0.23600	0.23600	53	0.16800	0.16800
20	0.30000	0.30000	37	0.23200	0.23200	54	0.16400	0.16400
21	0.29600	0.29600	38	0.22800	0.22800	55	0.16000	0.16000
22	0.29200	0.29200	39	0.22400	0.22400	56	0.15600	0.15600
23	0.28800	0.28800	40	0.22000	0.22000	57	0.15200	0.15200
24	0.28400	0.28400	41	0.21600	0.21600	58	0.14800	0.14800
25	0.28000	0.28000	42	0.21200	0.21200	59	0.14400	0.14400
26	0.27600	0.27600	43	0.20800	0.20800	60	0.14000	0.14000
27	0.27200	0.27200	44	0.20400	0.20400	61	0.14000	0.14000
28	0.26800	0.26800	45	0.20000	0.20000	62	0.14000	0.14000
29	0.26400	0.26400	46	0.19600	0.19600	63	0.14000	0.14000
30	0.26000	0.26000	47	0.19200	0.19200	64	0.14000	0.14000
31	0.25600	0.25600	48	0.18800	0.18800	65	0.14000	0.14000
32	0.25200	0.25200	49	0.18400	0.18400	66	0.14000	0.14000
33	0.24800	0.24800	50	0.18000	0.18000	67	0.14000	0.14000
34	0.24400	0.24400	51	0.17600	0.17600	68	0.14000	0.14000
35	0.24000	0.24000	52	0.17200	0.17200	69	0.14000	0.14000

**Withdrawal Rates
Teachers (1 to 2 years)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.14300	0.13000	36	0.10560	0.09600	53	0.06600	0.06000
20	0.14300	0.13000	37	0.10120	0.09200	54	0.06600	0.06000
21	0.14080	0.12800	38	0.09680	0.08800	55	0.06600	0.06000
22	0.13860	0.12600	39	0.09240	0.08400	56	0.06380	0.05800
23	0.13640	0.12400	40	0.08800	0.08000	57	0.06160	0.05600
24	0.13420	0.12200	41	0.08580	0.07800	58	0.05940	0.05400
25	0.13200	0.12000	42	0.08360	0.07600	59	0.05720	0.05200
26	0.12980	0.11800	43	0.08140	0.07400	60	0.05500	0.05000
27	0.12760	0.11600	44	0.07920	0.07200	61	0.05500	0.05000
28	0.12540	0.11400	45	0.07700	0.07000	62	0.05500	0.05000
29	0.12320	0.11200	46	0.07480	0.06800	63	0.05500	0.05000
30	0.12100	0.11000	47	0.07260	0.06600	64	0.05500	0.05000
31	0.11880	0.10800	48	0.07040	0.06400	65	0.05500	0.05000
32	0.11660	0.10600	49	0.06820	0.06200	66	0.05500	0.05000
33	0.11440	0.10400	50	0.06600	0.06000	67	0.05500	0.05000
34	0.11220	0.10200	51	0.06600	0.06000	68	0.05500	0.05000
35	0.11000	0.10000	52	0.06600	0.06000	69	0.05500	0.05000

**Withdrawal Rates
Teachers (2 to 3 years)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.10000	0.10000	36	0.06550	0.06200	53	0.05400	0.04000
20	0.10000	0.10000	37	0.06500	0.06000	54	0.05300	0.04000
21	0.10000	0.10000	38	0.06450	0.05800	55	0.05200	0.04000
22	0.10000	0.10000	39	0.06400	0.05600	56	0.05100	0.04000
23	0.09400	0.09600	40	0.06350	0.05400	57	0.05000	0.04000
24	0.08800	0.09200	41	0.06300	0.05200	58	0.05000	0.04000
25	0.08200	0.08800	42	0.06250	0.05000	59	0.05000	0.04000
26	0.07600	0.08400	43	0.06200	0.04800	60	0.05000	0.04000
27	0.07000	0.08000	44	0.06150	0.04600	61	0.05000	0.04000
28	0.06950	0.07800	45	0.06100	0.04400	62	0.05000	0.04000
29	0.06900	0.07600	46	0.06050	0.04200	63	0.05000	0.04000
30	0.06850	0.07400	47	0.06000	0.04000	64	0.05000	0.04000
31	0.06800	0.07200	48	0.05900	0.04000	65	0.05000	0.04000
32	0.06750	0.07000	49	0.05800	0.04000	66	0.05000	0.04000
33	0.06700	0.06800	50	0.05700	0.04000	67	0.05000	0.04000
34	0.06650	0.06600	51	0.05600	0.04000	68	0.05000	0.04000
35	0.06600	0.06400	52	0.05500	0.04000	69	0.05000	0.04000

**Withdrawal Rates
Teachers (3 to 4 years)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.08000	0.08000	36	0.05200	0.03680	53	0.03000	0.03000
20	0.08000	0.08000	37	0.04900	0.03600	54	0.03000	0.03000
21	0.08000	0.08000	38	0.04600	0.03600	55	0.03000	0.03000
22	0.08000	0.08000	39	0.04300	0.03600	56	0.03000	0.03000
23	0.08000	0.07600	40	0.04000	0.03600	57	0.03000	0.03000
24	0.08000	0.07200	41	0.03800	0.03600	58	0.03000	0.03000
25	0.08000	0.06800	42	0.03600	0.03600	59	0.03000	0.03000
26	0.07600	0.06400	43	0.03400	0.03400	60	0.03000	0.03000
27	0.07200	0.06000	44	0.03200	0.03200	61	0.03000	0.03000
28	0.06800	0.05600	45	0.03000	0.03000	62	0.03000	0.03000
29	0.06400	0.05200	46	0.03000	0.03000	63	0.03000	0.03000
30	0.06000	0.04800	47	0.03000	0.03000	64	0.03000	0.03000
31	0.05900	0.04400	48	0.03000	0.03000	65	0.03000	0.03000
32	0.05800	0.04000	49	0.03000	0.03000	66	0.03000	0.03000
33	0.05700	0.03920	50	0.03000	0.03000	67	0.03000	0.03000
34	0.05600	0.03840	51	0.03000	0.03000	68	0.03000	0.03000
35	0.05500	0.03760	52	0.03000	0.03000	69	0.03000	0.03000

**Withdrawal Rates
Teachers (4 to 5 years)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.06000	0.04000	36	0.03200	0.02800	53	0.01500	0.01500
20	0.06000	0.04000	37	0.02900	0.02667	54	0.01500	0.01500
21	0.06000	0.04000	38	0.02600	0.02533	55	0.01500	0.01500
22	0.06000	0.04000	39	0.02300	0.02400	56	0.01500	0.01500
23	0.06000	0.04000	40	0.02000	0.02267	57	0.01500	0.01500
24	0.06000	0.04000	41	0.02000	0.02133	58	0.01500	0.01500
25	0.06000	0.04000	42	0.02000	0.02000	59	0.01500	0.01500
26	0.05600	0.04000	43	0.02000	0.02000	60	0.01500	0.01500
27	0.05200	0.04000	44	0.02000	0.02000	61	0.01500	0.01500
28	0.04800	0.03867	45	0.02000	0.02000	62	0.01500	0.01500
29	0.04400	0.03733	46	0.01900	0.01900	63	0.01500	0.01500
30	0.04000	0.03600	47	0.01800	0.01800	64	0.01500	0.01500
31	0.03900	0.03467	48	0.01700	0.01700	65	0.01500	0.01500
32	0.03800	0.03333	49	0.01600	0.01600	66	0.01500	0.01500
33	0.03700	0.03200	50	0.01500	0.01500	67	0.01500	0.01500
34	0.03600	0.03067	51	0.01500	0.01500	68	0.01500	0.01500
35	0.03500	0.02933	52	0.01500	0.01500	69	0.01500	0.01500

**Withdrawal Rates
Teachers (greater than 5 years)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.03200	0.03200	36	0.02141	0.01920	53	0.01440	0.01040
20	0.03200	0.03200	37	0.02082	0.01840	54	0.01520	0.01120
21	0.03120	0.03120	38	0.02022	0.01760	55	0.01600	0.01200
22	0.03040	0.03040	39	0.01963	0.01680	56	0.01600	0.01200
23	0.02960	0.02960	40	0.01904	0.01600	57	0.01600	0.01200
24	0.02880	0.02880	41	0.01843	0.01520	58	0.01600	0.01200
25	0.02800	0.02800	42	0.01782	0.01440	59	0.01600	0.01200
26	0.02720	0.02720	43	0.01722	0.01360	60	0.01600	0.01200
27	0.02640	0.02640	44	0.01661	0.01280	61	0.01600	0.01200
28	0.02560	0.02560	45	0.01600	0.01200	62	0.01600	0.01200
29	0.02480	0.02480	46	0.01520	0.01120	63	0.01600	0.01200
30	0.02400	0.02400	47	0.01440	0.01040	64	0.01600	0.01200
31	0.02360	0.02320	48	0.01360	0.00960	65	0.01600	0.01200
32	0.02320	0.02240	49	0.01280	0.00880	66	0.01600	0.01200
33	0.02280	0.02160	50	0.01200	0.00800	67	0.01600	0.01200
34	0.02240	0.02080	51	0.01280	0.00880	68	0.01600	0.01200
35	0.02200	0.02000	52	0.01360	0.00960	69	0.01600	0.01200

**Withdrawal Rates
Non-Teachers and State (less than 1 year)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.22500	0.22500	36	0.17700	0.17700	53	0.12600	0.12600
20	0.22500	0.22500	37	0.17400	0.17400	54	0.12300	0.12300
21	0.22200	0.22200	38	0.17100	0.17100	55	0.12000	0.12000
22	0.21900	0.21900	39	0.16800	0.16800	56	0.11700	0.11700
23	0.21600	0.21600	40	0.16500	0.16500	57	0.11400	0.11400
24	0.21300	0.21300	41	0.16200	0.16200	58	0.11100	0.11100
25	0.21000	0.21000	42	0.15900	0.15900	59	0.10800	0.10800
26	0.20700	0.20700	43	0.15600	0.15600	60	0.10500	0.10500
27	0.20400	0.20400	44	0.15300	0.15300	61	0.10500	0.10500
28	0.20100	0.20100	45	0.15000	0.15000	62	0.10500	0.10500
29	0.19800	0.19800	46	0.14700	0.14700	63	0.10500	0.10500
30	0.19500	0.19500	47	0.14400	0.14400	64	0.10500	0.10500
31	0.19200	0.19200	48	0.14100	0.14100	65	0.10500	0.10500
32	0.18900	0.18900	49	0.13800	0.13800	66	0.10500	0.10500
33	0.18600	0.18600	50	0.13500	0.13500	67	0.10500	0.10500
34	0.18300	0.18300	51	0.13200	0.13200	68	0.10500	0.10500
35	0.18000	0.18000	52	0.12900	0.12900	69	0.10500	0.10500

**Withdrawal Rates
Non-Teachers and State (1 to 2 years)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.13000	0.11700	36	0.09600	0.08640	53	0.06000	0.05400
20	0.13000	0.11700	37	0.09200	0.08280	54	0.06000	0.05400
21	0.12800	0.11520	38	0.08800	0.07920	55	0.06000	0.05400
22	0.12600	0.11340	39	0.08400	0.07560	56	0.05800	0.05220
23	0.12400	0.11160	40	0.08000	0.07200	57	0.05600	0.05040
24	0.12200	0.10980	41	0.07800	0.07020	58	0.05400	0.04860
25	0.12000	0.10800	42	0.07600	0.06840	59	0.05200	0.04680
26	0.11800	0.10620	43	0.07400	0.06660	60	0.05000	0.04500
27	0.11600	0.10440	44	0.07200	0.06480	61	0.05000	0.04500
28	0.11400	0.10260	45	0.07000	0.06300	62	0.05000	0.04500
29	0.11200	0.10080	46	0.06800	0.06120	63	0.05000	0.04500
30	0.11000	0.09900	47	0.06600	0.05940	64	0.05000	0.04500
31	0.10800	0.09720	48	0.06400	0.05760	65	0.05000	0.04500
32	0.10600	0.09540	49	0.06200	0.05580	66	0.05000	0.04500
33	0.10400	0.09360	50	0.06000	0.05400	67	0.05000	0.04500
34	0.10200	0.09180	51	0.06000	0.05400	68	0.05000	0.04500
35	0.10000	0.09000	52	0.06000	0.05400	69	0.05000	0.04500

**Withdrawal Rates
Non-Teachers and State (2 to 3 years)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.10000	0.08000	36	0.06700	0.05360	53	0.04000	0.03200
20	0.10000	0.08000	37	0.06400	0.05120	54	0.04000	0.03200
21	0.10000	0.08000	38	0.06100	0.04880	55	0.04000	0.03200
22	0.10000	0.08000	39	0.05800	0.04640	56	0.04000	0.03200
23	0.10000	0.08000	40	0.05500	0.04400	57	0.04000	0.03200
24	0.10000	0.08000	41	0.05200	0.04160	58	0.04000	0.03200
25	0.10000	0.08000	42	0.04900	0.03920	59	0.04000	0.03200
26	0.09700	0.07760	43	0.04600	0.03680	60	0.04000	0.03200
27	0.09400	0.07520	44	0.04300	0.03440	61	0.04000	0.03200
28	0.09100	0.07280	45	0.04000	0.03200	62	0.04000	0.03200
29	0.08800	0.07040	46	0.04000	0.03200	63	0.04000	0.03200
30	0.08500	0.06800	47	0.04000	0.03200	64	0.04000	0.03200
31	0.08200	0.06560	48	0.04000	0.03200	65	0.04000	0.03200
32	0.07900	0.06320	49	0.04000	0.03200	66	0.04000	0.03200
33	0.07600	0.06080	50	0.04000	0.03200	67	0.04000	0.03200
34	0.07300	0.05840	51	0.04000	0.03200	68	0.04000	0.03200
35	0.07000	0.05600	52	0.04000	0.03200	69	0.04000	0.03200

**Withdrawal Rates
Non-Teachers and State (3 to 4 years)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.08000	0.07200	36	0.05200	0.04680	53	0.03000	0.02700
20	0.08000	0.07200	37	0.04900	0.04410	54	0.03000	0.02700
21	0.08000	0.07200	38	0.04600	0.04140	55	0.03000	0.02700
22	0.08000	0.07200	39	0.04300	0.03870	56	0.03000	0.02700
23	0.08000	0.07200	40	0.04000	0.03600	57	0.03000	0.02700
24	0.08000	0.07200	41	0.03800	0.03420	58	0.03000	0.02700
25	0.08000	0.07200	42	0.03600	0.03240	59	0.03000	0.02700
26	0.07600	0.06840	43	0.03400	0.03060	60	0.03000	0.02700
27	0.07200	0.06480	44	0.03200	0.02880	61	0.03000	0.02700
28	0.06800	0.06120	45	0.03000	0.02700	62	0.03000	0.02700
29	0.06400	0.05760	46	0.03000	0.02700	63	0.03000	0.02700
30	0.06000	0.05400	47	0.03000	0.02700	64	0.03000	0.02700
31	0.05900	0.05310	48	0.03000	0.02700	65	0.03000	0.02700
32	0.05800	0.05220	49	0.03000	0.02700	66	0.03000	0.02700
33	0.05700	0.05130	50	0.03000	0.02700	67	0.03000	0.02700
34	0.05600	0.05040	51	0.03000	0.02700	68	0.03000	0.02700
35	0.05500	0.04950	52	0.03000	0.02700	69	0.03000	0.02700

**Withdrawal Rates
Non-Teachers and State (4 to 5 years)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.04500	0.04500	36	0.02850	0.02850	53	0.01500	0.01500
20	0.04500	0.04500	37	0.02700	0.02700	54	0.01500	0.01500
21	0.04350	0.04350	38	0.02550	0.02550	55	0.01500	0.01500
22	0.04200	0.04200	39	0.02400	0.02400	56	0.01425	0.01425
23	0.04050	0.04050	40	0.02250	0.02250	57	0.01350	0.01350
24	0.03900	0.03900	41	0.02175	0.02175	58	0.01275	0.01275
25	0.03750	0.03750	42	0.02100	0.02100	59	0.01200	0.01200
26	0.03750	0.03750	43	0.02025	0.02025	60	0.01125	0.01125
27	0.03750	0.03750	44	0.01950	0.01950	61	0.01125	0.01125
28	0.03750	0.03750	45	0.01875	0.01875	62	0.01125	0.01125
29	0.03750	0.03750	46	0.01800	0.01800	63	0.01125	0.01125
30	0.03750	0.03750	47	0.01725	0.01725	64	0.01125	0.01125
31	0.03600	0.03600	48	0.01650	0.01650	65	0.01125	0.01125
32	0.03450	0.03450	49	0.01575	0.01575	66	0.01125	0.01125
33	0.03300	0.03300	50	0.01500	0.01500	67	0.01125	0.01125
34	0.03150	0.03150	51	0.01500	0.01500	68	0.01125	0.01125
35	0.03000	0.03000	52	0.01500	0.01500	69	0.01125	0.01125

**Withdrawal Rates
Non-Teachers and State (greater than 5 years)**

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.04000	0.02800	36	0.02150	0.02170	53	0.01400	0.01366
20	0.04000	0.02800	37	0.02050	0.02065	54	0.01450	0.01383
21	0.03900	0.02765	38	0.01950	0.01960	55	0.01500	0.01400
22	0.03800	0.02730	39	0.01850	0.01855	56	0.01500	0.01400
23	0.03700	0.02695	40	0.01750	0.01750	57	0.01500	0.01400
24	0.03600	0.02660	41	0.01700	0.01680	58	0.01500	0.01400
25	0.03500	0.02625	42	0.01650	0.01610	59	0.01500	0.01400
26	0.03400	0.02590	43	0.01600	0.01540	60	0.01500	0.01400
27	0.03300	0.02555	44	0.01550	0.01470	61	0.01500	0.01400
28	0.03200	0.02520	45	0.01500	0.01400	62	0.01500	0.01400
29	0.03100	0.02485	46	0.01450	0.01383	63	0.01500	0.01400
30	0.03000	0.02450	47	0.01400	0.01366	64	0.01500	0.01400
31	0.02850	0.02415	48	0.01350	0.01350	65	0.01500	0.01400
32	0.02700	0.02380	49	0.01300	0.01333	66	0.01500	0.01400
33	0.02550	0.02345	50	0.01250	0.01316	67	0.01500	0.01400
34	0.02400	0.02310	51	0.01300	0.01333	68	0.01500	0.01400
35	0.02250	0.02275	52	0.01350	0.01350	69	0.01500	0.01400

Disability Rates

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
19	0.00000	0.00000	40	0.00250	0.00200
20	0.00010	0.00008	41	0.00260	0.00208
21	0.00018	0.00014	42	0.00270	0.00216
22	0.00026	0.00021	43	0.00280	0.00224
23	0.00034	0.00027	44	0.00290	0.00232
24	0.00042	0.00034	45	0.00300	0.00240
25	0.00050	0.00040	46	0.00336	0.00267
26	0.00060	0.00048	47	0.00372	0.00294
27	0.00070	0.00056	48	0.00418	0.00322
28	0.00080	0.00064	49	0.00463	0.00349
29	0.00090	0.00072	50	0.00509	0.00376
30	0.00100	0.00080	51	0.00554	0.00413
31	0.00120	0.00096	52	0.00600	0.00450
32	0.00140	0.00112	53	0.00620	0.00486
33	0.00160	0.00128	54	0.00640	0.00523
34	0.00180	0.00144	55	0.00660	0.00560
35	0.00200	0.00160	56	0.00680	0.00624
36	0.00210	0.00168	57	0.00700	0.00688
37	0.00220	0.00176	58	0.00700	0.00752
38	0.00230	0.00184	59	0.00700	0.00816
39	0.00240	0.00192	60	0.00700	0.00880
			61+	0.00000	0.00000

Retirement Rates

<u>Age</u>	<u>Teachers</u>		<u>Non-Teachers & State</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
54	0.000	0.000	0.000	0.000
55	0.250	0.275	0.300	0.200
56	0.150	0.175	0.200	0.150
57	0.150	0.175	0.150	0.150
58	0.170	0.180	0.150	0.150
59	0.190	0.190	0.150	0.175
60	0.200	0.250	0.150	0.200
61	0.300	0.200	0.150	0.200
62	0.400	0.275	0.400	0.300
63	0.250	0.200	0.250	0.200
64	0.250	0.250	0.175	0.200
65	0.400	0.300	0.300	0.300
66	0.300	0.300	0.225	0.200
67	0.300	0.300	0.200	0.200
68	0.300	0.300	0.200	0.200
69	0.300	0.300	0.200	0.200
70+	1.000	1.000	1.000	1.000

Salary Scales

<u>Age</u>	<u>Teachers</u>	<u>Non-Teachers and State</u>	<u>Age</u>	<u>Teachers</u>	<u>Non-Teachers and State</u>
19	5.250%	6.500%	45	4.050%	4.850%
20	5.250%	6.500%	46	4.010%	4.800%
21	5.200%	6.500%	47	3.970%	4.750%
22	5.150%	6.375%	48	3.930%	4.650%
23	5.100%	6.250%	49	3.890%	4.550%
24	5.050%	6.125%	50	3.850%	4.400%
25	5.000%	6.000%	51	3.850%	4.234%
26	4.950%	5.900%	52	3.850%	4.178%
27	4.900%	5.800%	53	3.850%	4.122%
28	4.850%	5.700%	54	3.850%	4.066%
29	4.800%	5.600%	55	3.850%	4.010%
30	4.750%	5.500%	56	3.850%	3.954%
31	4.700%	5.475%	57	3.850%	3.898%
32	4.650%	5.450%	58	3.850%	3.842%
33	4.600%	5.425%	59	3.850%	3.785%
34	4.550%	5.400%	60	3.850%	3.730%
35	4.500%	5.375%	61	3.850%	3.674%
36	4.450%	5.350%	62	3.850%	3.618%
37	4.400%	5.325%	63	3.850%	3.562%
38	4.350%	5.300%	64	3.850%	3.506%
39	4.300%	5.275%	65	3.850%	3.400%
40	4.250%	5.250%	66	3.830%	3.400%
41	4.210%	5.200%	67	3.810%	3.400%
42	4.170%	5.100%	68	3.790%	3.400%
43	4.130%	5.000%	69	3.770%	3.400%
44	4.090%	4.900%	70	3.750%	3.400%