



West Virginia Public Employees' Retirement System

**Actuarial Valuation
As of July 1, 2008**

Prepared by:



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

January 2009



January 16, 2009

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

Re: West Virginia Public Employees' Retirement System: Actuarial Valuation as of July 1, 2008

Retirement Board Members:

We respectfully present our report on the actuarial valuation of the West Virginia Public Employees' Retirement System as of July 1, 2008. This valuation presents the annual cost and related liabilities of the Plan as of the valuation date.

The valuation indicates that the expected state contributions of 10.5% of payroll plus the member contributions of 4.5% of payroll is not sufficient to meet the annual funding requirement of the plan.

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, 2008, 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 Public Employees' Retirement System as of July 1, 2008, 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 PERS experience and represent our best estimate of anticipated experience under PERS.

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, FSA, EA
Principal and Consulting Actuary

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This report presents the results of the July 1, 2008 actuarial valuation of the West Virginia Public Employees' Retirement System. The development of the results, including for comparison purposes the previous year's results as of July 1, 2007, is presented in Table 1. 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 Public Employees' Retirement System (PERS) is a defined benefit plan providing unreduced monthly benefits to members upon retirement at age 60 after completing 5 years of service, or retirement on or after age 55 and meeting the rule of 80. 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 employer contributions, currently at 10½% of payroll, and member contributions of 4½% of payroll. The major purpose of the valuation is to determine the adequacy of the expected contributions with respect to funding expected Plan liabilities.

The valuation indicates that current contribution levels are slightly less than the calculated cost to fund the benefits accruing during the year (the normal cost) plus the amount required to amortize at a level dollar amount the Plan's primary unfunded liability originally established as of July 1, 2005 over a 27-year period (30 years from July 1, 2005), the amount required to amortize the liability for benefit improvements to actives under SB 173 over a 8-year period (10 years from July 1, 2006), the amount required to amortize the liability for retiree improvements under HB 4846 over a 4-year period (6 years from July 1, 2006), and the amount required to amortize the liability for retiree improvements under HB 103 over a 6-year period from July 1, 2008. HB 103 authorized the payment of a so-called "13th check" to retirees in July of 2008.

Comments on Valuation Results

Table 1 presents the development of the valuation results as of July 1, 2008 and, for comparison purposes, July 1, 2007. The calculated Employer cost is determined as the Employer's share of the normal cost (the cost to fund benefits accruing during the year), plus amortization of the unfunded actuarial liability segments over the specified periods.

Table 2a presents a projection of the primary unfunded actuarial accrued liability to June 30, 2035. The primary unfunded actuarial accrued liability at the valuation date is approximately \$735 million. This table illustrates the expected pattern of change in the unfunded liability over the remaining 27-year period. Table 2b presents a projection of the unfunded liability for benefit improvements to actives under SB 173 to June 30, 2016. Table 2c presents a projection of the unfunded liability for retiree improvements under HB 4846 to June 30, 2012. Table 2d presents a projection of the unfunded liability for retiree improvements under HB 103 to June 30, 2014.

Table 3 presents a cash flow projection of expected asset balances, contributions, disbursements and earnings over the period to FY2034.

Funding Progress

The measures of funding status used by accountants for both the State's and the Plan's financial statements are presented in Table 4, which contains information required under Governmental Accounting Standards Board Statement Numbers 25 and 27 (GASB 25 and GASB 27).

Plan asset information is presented in Tables 5 and 6.

Plan Membership

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

	<u>7/1/08</u>	<u>7/1/07</u>
Actives	35,491	35,873
Retirees & Beneficiaries	20,912	20,514
Terminated Vested	3,863	3,658
Terminated Nonvested	<u>10,697</u>	<u>9,762</u>
Total recognized in the valuation	70,963	69,807

Table 7 presents a reconciliation of plan membership over the year and Table 8 presents supplemental information on plan membership. Tables 9a and 9b show the number and total compensation for state and non-state active participants by five-year age and service groupings as of July 1, 2008. Table 10 shows the number and average monthly benefits of regular retirees and beneficiaries, and disabled retirees included in the valuation distributed by fifth age, while Table 11 shows a similar distribution for terminated participants entitled to deferred benefits.

Table 1
Development of Valuation Results and Comparison to Prior Year
(000 omitted)

	July 1, 2008	July 1, 2007
Membership		
Active	35,491	35,873
Inactive	35,472	33,934
Total	<u>70,963</u>	<u>69,807</u>
1. Present Value of Future Benefits		
a. Active	\$ 3,399,810	\$ 3,271,928
b. Inactive - Retirees	1,721,292	1,601,848
- Disabled Retirees	164,286	158,592
- Beneficiaries	208,763	199,642
- Vested Terminated	86,423	82,870
- Non-Vested Terminated	8,498	7,592
c. Total	<u>5,589,072</u>	<u>5,322,472</u>
2. Actuarial Accrued Liability	4,677,027	4,426,051
3. Assets (Market Value)	3,939,059	4,293,296
4. Unfunded Actuarial Accrued Liability (2) - (3)	737,968	132,755
a. Primary Unfunded	735,093	128,565
b. Improvements for actives per SB 173	120	131
c. Retirement increase per HB 4846	2,245	4,059
d. Retiree improvements per HB 103	510	0
5. Annual Normal Cost Rate		
a. Present Value of Future Normal Cost (1c)-(2)	912,045	896,421
b. Present Value of Future Payroll	9,128,867	9,010,578
c. Normal Cost Rate as a % of Payroll (5a)/(5b)	9.99%	9.95%
d. Employee Contribution Rate	4.50%	4.50%
e. Employer Share of Normal Cost	5.49%	5.45%
f. Valuation Compensation FY 2009(2008)	1,219,388	1,191,130
6. Calculated Employer Cost FY 2009(2008)		
a. Amortization Payment on UAAL MOY ¹	61,967	10,714
b. Amortization Payment on SB 173 MOY ²	20	20
c. Amortization Payment on HB 4846 MOY ³	646	968
d. Amortization Payment on HB 103 MOY ⁴	105	0
d. Employer Normal Cost MOY	69,409	67,307
e. Total Employer Cost MOY	<u>132,147</u>	<u>79,009</u>
f. Employer Cost as Percentage of Compensation	10.84%	6.63%
7. Expected Employer Contributions FY 2009(2008)		
a. Employer Contribution Rate	10.50%	10.50%
b. Employer Contribution	128,036	125,069

¹ FY 2009, amortization payment is over 27 years, 30 years from July 1, 2005

² FY 2009, amortization payment is over 8 years, 10 years from July 1, 2006

³ FY 2009, amortization payment is over 4 years, 6 years from July 1, 2006

⁴ FY 2009, amortization payment is over 6 years from July 1, 2008

Table 2a

Projection of Unfunded Accrued Liability and Annual Contributions
Primary Unfunded Liability Established July 1, 2005

Fiscal Year Ending 6/30	Unfunded Liability at Beg. of Year	Projected Total Payroll	Employer Contributions	
			% of Payroll	Amount
2009	735,093,000	1,219,388,000	4.74%	57,856,000
2010	730,239,000	1,280,357,000	4.52%	57,856,000
2011	725,020,000	1,344,375,000	4.30%	57,856,000
2012	719,410,000	1,411,594,000	4.10%	57,856,000
2013	713,380,000	1,482,174,000	3.90%	57,856,000
2014	706,897,000	1,556,282,000	3.72%	57,856,000
2015	699,928,000	1,634,097,000	3.54%	57,856,000
2016	692,436,000	1,715,801,000	3.37%	57,856,000
2017	684,382,000	1,801,591,000	3.21%	57,856,000
2018	675,724,000	1,891,671,000	3.06%	57,856,000
2019	666,417,000	1,986,255,000	2.91%	57,856,000
2020	656,412,000	2,085,567,000	2.77%	57,856,000
2021	645,657,000	2,189,846,000	2.64%	57,856,000
2022	634,095,000	2,299,338,000	2.52%	57,856,000
2023	621,665,000	2,414,305,000	2.40%	57,856,000
2024	608,304,000	2,535,020,000	2.28%	57,856,000
2025	593,940,000	2,661,771,000	2.17%	57,856,000
2026	578,500,000	2,794,860,000	2.07%	57,856,000
2027	561,901,000	2,934,603,000	1.97%	57,856,000
2028	544,057,000	3,081,333,000	1.88%	57,856,000
2029	524,875,000	3,235,399,000	1.79%	57,856,000
2030	504,254,000	3,397,169,000	1.70%	57,856,000
2031	482,087,000	3,567,028,000	1.62%	57,856,000
2032	458,257,000	3,745,379,000	1.54%	57,856,000
2033	432,640,000	3,932,648,000	1.47%	57,856,000
2034	405,101,000	4,129,281,000	1.40%	57,856,000
2035	375,497,000	4,335,745,000	1.33%	57,856,000

Table 2b

**Projection of Unfunded Accrued Liability and Annual Contributions
Liability for Improvements for actives under SB 173 Established July 1, 2006**

Fiscal Year Ending 6/30	Unfunded Liability at Beg. of Year	Projected Total Payroll	Employer Contributions	
			% of Payroll	Amount
2009	120,000	1,219,388,000	0.00%	20,000
2010	108,000	1,280,357,000	0.00%	20,000
2011	96,000	1,344,375,000	0.00%	20,000
2012	82,000	1,411,594,000	0.00%	20,000
2013	67,000	1,482,174,000	0.00%	20,000
2014	52,000	1,556,282,000	0.00%	20,000
2015	35,000	1,634,097,000	0.00%	20,000
2016	17,000	1,715,801,000	0.00%	20,000

Table 2c

**Projection of Unfunded Accrued Liability and Annual Contributions
Liability for Retirement increase under HB 4846 established July 1, 2006**

Fiscal Year Ending 6/30	Unfunded Liability at Beg. of Year	Projected Total Payroll	Employer Contributions	
			% of Payroll	Amount
2009	2,245,000	1,219,388,000	0.05%	646,000
2010	1,743,000	1,280,357,000	0.05%	646,000
2011	1,204,000	1,344,375,000	0.05%	646,000
2012	625,000	1,411,594,000	0.05%	646,000

Table 2d

**Projection of Unfunded Accrued Liability and Annual Contributions
Liability for Retiree Improvements under HB 103 established July 1, 2008**

Fiscal Year Ending 6/30	Unfunded Liability at Beg. of Year	Projected Total Payroll	Employer Contributions	
			% of Payroll	Amount
2009	510,000	1,219,388,000	0.01%	105,000
2010	439,000	1,280,357,000	0.01%	105,000
2011	363,000	1,344,375,000	0.01%	105,000
2012	282,000	1,411,594,000	0.01%	105,000
2013	194,000	1,482,174,000	0.01%	105,000
2014	100,000	1,556,282,000	0.01%	105,000

Table 3
West Virginia Public Employees' Retirement System
Cash Flow Projection FY 2009 Through FY 2034

FY Ending 6/30	(1) Assets Beg. of Year	(2) Expected Contributions	(3) Benefits	(4) Earnings	(5) Net Income	(6) Assets End of Year
2009	3,939,059,000	182,908,000	266,321,000	292,301,000	208,888,000	4,147,947,000
2010	4,147,947,000	192,053,000	273,673,000	308,035,000	226,415,000	4,374,362,000
2011	4,374,362,000	201,656,000	289,896,000	324,768,000	236,528,000	4,610,890,000
2012	4,610,890,000	211,739,000	307,668,000	342,219,000	246,290,000	4,857,180,000
2013	4,857,180,000	222,326,000	326,336,000	360,388,000	256,378,000	5,113,558,000
2014	5,113,558,000	233,442,000	345,657,000	379,309,000	267,094,000	5,380,652,000
2015	5,380,652,000	245,114,000	365,292,000	399,042,000	278,864,000	5,659,516,000
2016	5,659,516,000	257,370,000	384,811,000	419,685,000	292,244,000	5,951,760,000
2017	5,951,760,000	270,239,000	404,956,000	441,330,000	306,613,000	6,258,373,000
2018	6,258,373,000	283,751,000	424,676,000	464,093,000	323,168,000	6,581,541,000
2019	6,581,541,000	297,939,000	443,708,000	488,149,000	342,380,000	6,923,921,000
2020	6,923,921,000	312,836,000	462,137,000	513,695,000	364,394,000	7,288,315,000
2021	7,288,315,000	328,478,000	479,219,000	540,971,000	390,230,000	7,678,545,000
2022	7,678,545,000	344,902,000	495,097,000	570,259,000	420,064,000	8,098,609,000
2023	8,098,609,000	362,147,000	510,078,000	601,848,000	453,917,000	8,552,526,000
2024	8,552,526,000	380,254,000	523,978,000	636,050,000	492,326,000	9,044,852,000
2025	9,044,852,000	399,267,000	536,155,000	673,231,000	536,343,000	9,581,195,000
2026	9,581,195,000	419,230,000	547,118,000	713,794,000	585,906,000	10,167,101,000
2027	10,167,101,000	440,192,000	557,244,000	758,143,000	641,091,000	10,808,192,000
2028	10,808,192,000	462,202,000	565,532,000	806,740,000	703,410,000	11,511,602,000
2029	11,511,602,000	485,312,000	572,229,000	860,111,000	773,194,000	12,284,796,000
2030	12,284,796,000	509,578,000	577,836,000	918,800,000	850,542,000	13,135,338,000
2031	13,135,338,000	535,057,000	581,894,000	983,394,000	936,557,000	14,071,895,000
2032	14,071,895,000	561,810,000	584,327,000	1,054,548,000	1,032,031,000	15,103,926,000
2033	15,103,926,000	589,901,000	585,396,000	1,132,963,000	1,137,468,000	16,241,394,000
2034	16,241,394,000	619,396,000	584,204,000	1,219,424,000	1,254,616,000	17,496,010,000

Assumed interest rate: 7.50%

Earnings: $[(1) + ((2) - (3)) / 2] \times \text{interest rate}$

Notes:

- The fund balance as of July 1, 2008 is the market value of the fund.
- The contribution for FY 2009 is determined as 15.0% of anticipated FY 2009 base pay (4.5% Member contributions, 10.5% State contributions). Thereafter, the contribution is assumed to increase at 5.0% per year to reflect the salary increase assumption. No new entrants are assumed in this projection.
- The projection of future benefit payments is based on all participants included in the valuation, including active and terminated vested participants who are not yet receiving benefits.

Table 4

GASB 25 and GASB 27 Supplementary Disclosure Information as of June 30, 2008

Governmental 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, 2008, and June 30, 2007

<u>Group</u>	<u>June 30, 2008</u>	<u>June 30, 2007</u>
Retirees, disabled retirees and beneficiaries currently receiving benefits	20,912	20,514
Terminated employees entitled to benefits but not yet receiving benefits	3,863	3,658
Terminated employees entitled to a return of employee contributions	10,697	9,762
Active Plan members		
Vested	23,557	23,858
Non Vested	11,934	12,015
Total	70,963	69,807

2. Schedule of Funding Progress (000 omitted)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AL) - Entry Age (b)	Unfunded Accrued Liability (UAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAL as a Percentage of Covered Payroll (b-a)/(c)
6/30/98	\$ 2,371,359	\$ 2,524,214	\$ 152,855	93.9%	\$ 836,541	18.3%
6/30/99	\$ 2,504,001	\$ 2,681,756	\$ 177,755	93.4%	\$ 854,883	20.8%
6/30/00	\$ 2,700,356	\$ 2,932,484	\$ 232,128	92.1%	\$ 930,331	25.0%
6/30/01	\$ 2,681,395	\$ 3,178,037	\$ 496,642	84.4%	\$ 972,711	51.1%
6/30/02	\$ 2,588,777	\$ 3,432,467	\$ 843,690	75.4%	\$1,040,269	81.1%
6/30/03	\$ 2,699,941	\$ 3,691,001	\$ 991,060	73.1%	\$1,109,272	89.3%
6/30/04	\$ 3,095,660	\$ 3,870,201	\$ 774,541	80.0%	\$1,134,111	68.3%
6/30/05	\$ 3,404,651	\$ 4,074,385	\$ 669,734	83.6%	\$1,162,098	57.6%
6/30/06	\$ 3,700,186	\$ 4,264,700	\$ 564,514	86.8%	\$1,159,715	48.7%
6/30/07	\$ 4,293,296	\$ 4,426,051	\$ 132,755	97.0%	\$1,191,130	11.1%
6/30/08	\$ 3,939,059	\$ 4,677,027	\$ 737,968	84.2%	\$1,219,388	60.5%

3. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at July 1, 2008. Additional information follows.

Valuation date	7/1/08
Actuarial cost method	Entry age
Amortization method	Level dollar amount
Remaining amortization period	27 years
Asset valuation method	Market value
Actuarial assumptions:	
Investment rate of return	7.5%
Projected salary increases	
State	4.25% - 6.0%
Nonstate	3.75% - 5.5%
Inflation rate	3.0%

Table 5
Valuation Assets as of June 30, 2008
(000 omitted)

Assets	<u>June 30, 2008</u>	<u>June 30, 2007</u>
Cash with State Treasurer	\$ 183	\$ 185
Investments at Fair Value	3,934,490	4,289,067
Contributions Receivable	4,528	4,312
Participant Loans Receivable	<u>0</u>	<u>0</u>
Total Assets	3,939,201	4,293,564
Liabilities		
Accrued Expenses and other Payables	<u>142</u>	<u>268</u>
Net Assets for Pension Benefits	\$ 3,939,059	\$ 4,293,296

Table 6
Statement of Changes in Net Assets for Benefits
For Year ended June 30, 2008
(000 omitted)

Net Assets for Pension Benefits - Beginning of Year	\$	4,293,296
Additions		
Contributions		
Member		53,958
Employer		125,993
Special Appropriation (2006 Retiree Increase)		2,013
Subtotal		<u>181,964</u>
Investment Income		
Net Appreciation in Fair Value *		(276,790)
Interest		0
Subtotal		<u>(276,790)</u>
Other Income		1,295
Annuity Payable		0
Total		<u>(93,531)</u>
Deductions and Transfers		
Benefit Expense		232,807
Refunds of Contributions		9,448
Administrative Expenses		4,188
Transfers (to)/from plans		14,263
Total		<u>260,706</u>
Net Increase		(354,237)
Net Assets for Pension Benefits - End of Year	\$	3,939,059
Investment Return for Year:		
Valuation purposes (assumes mid-year transactions and offsets investment income by investment and administrative expense)		-6.60%
Per Investment Management Board (time-weighted, excluding administrative expense)		-6.54%
* Net of Investment Expense		

Table 7

Reconciliation of Plan Participants

	Active	Non-Vested Terms	Vested Terms	Retired	Beneficiaries	Total
Census as of July 1, 2007	35,873	9,762	3,658	16,740	3,774	69,807
New Entrants	3,308	706	1	0	0	4,015
Returned to Active Status	499	(372)	(123)	(4)	0	0
Retired	(957)	(16)	(146)	1,119	0	0
Died	(75)	(23)	(22)	(724)	(223)	(1,067)
Terminated						0
- Vested	(622)	(6)	628	0	0	0
- Non Vested	(873)	873	0	0	0	0
- Withdrew Contributions	(1,297)	(225)	(115)	0	0	(1,637)
- Transfer to Teachers	0	0	(4)			(4)
- Transfer to Judges	0	0	0			0
- Transfer to EMSRS	(365)	(4)	(4)			(373)
New Beneficiaries	0	0	0	0	237	237
QDRO's	0	0	0	0	0	0
Adjustments	0	2	(10)	(5)	(2)	(15)
Census as of July 1, 2008	35,491	10,697	3,863	17,126	3,786	70,963

Table 8
Summary of Membership and Payroll

	<u>7/1/2008</u> Valuation	<u>7/1/2007</u> Valuation
Active Members		
State Employees	23,222	23,242
Nonstate Employees	12,269	12,631
Total	<u>35,491</u>	<u>35,873</u>
Average Age	46.3	46.0
Average Service	11.4	11.4
Inactive Members		
Retirees	15,071	14,716
Beneficiaries	3,786	3,774
Disabled Retirees	2,055	2,024
Vested Terminated	3,863	3,658
Nonvested Terminated	10,697	9,762
Total	<u>35,472</u>	<u>33,934</u>
Payroll For Normal Cost		
State Employees	\$ 831,227,000	\$ 804,519,000
Nonstate Employees	<u>388,161,000</u>	<u>386,610,000</u>
Total	\$ 1,219,388,000	\$ 1,191,129,000
PV of Future Payroll	\$ 9,128,867,000	\$ 9,010,578,000
PV Member Contributions	\$ 410,799,000	\$ 405,476,000

TABLE 9a - STATE
NUMBER AND TOTAL ANNUAL COMPENSATION OF ACTIVE PARTICIPANTS

Attained Age	Years of Credited Service																	Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up								
	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	
Under 25	324 7,421,544	327 9,312,633	5 144,710	-	-	-	-	-	-	-	-	-	-	-	-	-	-	656 16,878,887
25 to 29	378 8,932,518	982 28,597,193	279 8,942,229	8 259,160	-	-	-	-	-	-	-	-	-	-	-	-	-	1,647 46,731,100
30 to 34	254 5,797,550	795 23,560,620	765 26,563,860	241 9,384,299	5 171,920	-	-	-	-	-	-	-	-	-	-	-	-	2,060 65,478,249
35 to 39	276 6,136,032	751 22,352,013	816 27,507,360	670 27,355,430	214 9,060,118	6 256,782	-	-	-	-	-	-	-	-	-	-	-	2,733 92,667,735
40 to 44	236 5,206,396	666 19,407,240	670 22,291,570	561 22,042,812	486 21,103,578	177 7,526,748	17	-	-	-	-	-	-	-	-	-	-	2,813 98,255,216
45 to 49	197 4,246,729	636 18,905,736	703 23,095,659	540 20,750,580	499 20,977,960	438 19,371,864	345 14,490,000	68	-	-	-	-	-	-	-	-	-	3,426 124,594,568
50 to 54	188 4,225,112	555 17,088,450	702 24,123,528	527 19,446,300	562 23,195,426	476 20,551,776	592 26,415,040	561 24,744,027	52	-	-	-	-	-	-	-	-	4,215 162,026,231
55 to 59	131 3,138,236	442 13,531,830	574 19,032,692	502 18,480,628	498 19,793,010	447 18,959,058	311 13,924,092	416 20,218,432	223 11,030,249	8	-	-	-	-	-	-	-	3,552 138,413,227
60 to 64	29 669,494	176 5,695,888	266 9,247,756	251 9,882,623	272 11,221,088	190 7,677,710	127 5,669,026	129 6,036,426	110 5,812,400	50	-	-	-	-	-	-	-	1,600 64,562,211
65 to 69	12 299,556	31 1,103,538	60 2,171,820	53 2,065,463	63 2,500,848	52 2,174,640	38 1,926,220	26 1,137,422	16 922,928	16	-	-	-	-	-	-	-	367 15,130,371
70 & up	3 67,005	10 499,710	14 471,366	20 785,060	26 865,618	21 1,081,227	19 856,007	18 826,542	6 244,290	16	-	-	-	-	-	-	-	153 6,489,145
Total	2,028 46,140,172	5,371 160,054,851	4,854 163,592,550	3,373 130,452,355	2,625 108,889,566	1,807 77,599,805	1,449 63,957,257	1,218 55,718,889	407 20,246,439	90 4,575,056	-	-	-	-	-	-	-	23,222 831,226,940

TABLE 9b - NON-STATE
NUMBER AND TOTAL ANNUAL COMPENSATION OF ACTIVE PARTICIPANTS

Attained Age	Years of Credited Service																			Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up										
	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	No./ Total Comp.	
Under 25	177 3,229,896	242 5,701,762	9 278,739	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	428 9,210,397
25 to 29	160 3,254,400	507 13,817,778	159 4,893,225	7 206,780	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	833 22,172,183
30 to 34	131 2,636,375	438 12,831,210	338 11,254,724	112 3,801,504	2 71,676	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1,021 30,595,489
35 to 39	135 2,753,055	492 13,345,008	414 13,826,358	270 9,479,700	121 4,444,814	10 425,040	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1,442 44,273,975
40 to 44	106 2,005,626	439 11,891,632	383 12,191,273	274 9,998,260	202 7,323,712	104 4,051,112	13 498,264	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1,521 47,959,879
45 to 49	108 2,211,948	435 11,508,360	419 13,336,351	278 9,108,114	275 10,481,900	199 8,251,734	139 5,617,129	12 534,552	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1,865 61,050,088
50 to 54	94 1,825,386	423 12,474,270	360 10,697,760	312 10,177,440	261 9,545,031	223 9,097,954	221 8,478,444	136 5,837,392	14 551,712	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	2,044 68,685,389
55 to 59	59 1,235,932	313 9,047,578	326 10,223,360	263 8,606,149	307 10,903,412	184 6,961,640	155 5,985,170	99 4,451,733	47 2,053,571	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	1,753 59,468,545
60 to 64	20 410,340	154 4,645,564	171 5,040,225	138 4,337,064	143 4,759,612	98 3,626,392	71 2,790,797	49 2,037,518	23 1,105,633	14 774,886	- -	- -	- -	- -	- -	- -	- -	- -	- -	881 29,528,031
65 to 69	5 126,310	66 1,671,714	56 1,643,264	47 1,626,482	48 1,674,096	35 1,211,245	19 799,691	11 437,217	6 260,388	10 458,170	- -	- -	- -	- -	- -	- -	- -	- -	- -	303 9,908,577
70 & up	4 87,652	27 806,031	32 793,568	24 662,232	36 942,660	19 555,370	21 690,039	3 108,255	3 190,494	9 472,527	- -	- -	- -	- -	- -	- -	- -	- -	- -	178 5,308,828
Total	999 19,776,920	3,536 97,740,907	2,667 84,178,847	1,725 58,003,725	1,395 50,146,913	872 34,180,487	639 24,859,534	310 13,406,667	93 4,161,798	33 1,705,583	- -	- -	- -	- -	- -	- -	- -	- -	- -	12,269 388,161,381

TABLE 10

**DISTRIBUTION OF THE NUMBER AND AVERAGE MONTHLY BENEFITS
OF RETIRED PARTICIPANTS AS OF JULY 1, 2008**

Current Age	Service retirees		Beneficiaries		Disabled retirees		Total	
	Number	Average Monthly Benefit	Number	Average Monthly Benefit	Number	Average Monthly Benefit	Number	Average Monthly Benefit
Under 30	-	-	15	553	-	-	15	553
30-34	-	-	8	717	2	853	10	744
35-39	-	-	5	617	8	1,031	13	872
40-44	-	-	34	853	32	1,081	66	964
45-49	-	-	79	772	110	1,031	189	923
50-54	5	848	167	779	269	1,066	441	955
55-59	1,230	1,895	265	852	451	1,083	1,946	1,565
60-64	2,609	1,500	345	722	481	949	3,435	1,345
65-69	3,166	1,147	451	658	299	544	3,916	1,045
70-74	2,707	933	507	583	196	442	3,410	853
75-79	2,245	767	611	542	90	425	2,946	710
80-84	1,784	671	630	472	71	402	2,485	613
85-89	894	561	417	389	36	400	1,347	504
90-94	332	464	201	347	8	342	541	419
95 and over	99	407	51	401	2	425	152	405
Total	15,071	1,063	3,786	577	2,055	839	20,912	953
Total annual benefits		192,259,384		26,228,322		20,684,673		239,172,379

TABLE 11

**DISTRIBUTION OF THE NUMBER AND AVERAGE
MONTHLY BENEFITS OF PARTICIPANTS ENTITLED
TO DEFERRED BENEFITS AS OF JULY 1, 2008**

Deferred Vested		
Current Age	Number	Average Monthly Benefit
Under 30	43	141
30-34	179	193
35-39	427	247
40-44	489	317
45-49	572	399
50-54	850	454
55-59	820	432
60-64	401	395
65-69	53	341
70-74	24	363
75-79	4	56
80-84	-	-
85-89	1	16
90-94	-	-
95 and over	-	-
Total	3,863	377
Total annual benefits		17,460,046

A. DEFINITIONS

1. **Plan Name:** The West Virginia Public Employees' Retirement System
2. **Effective Date:** The West Virginia Public Employees' Retirement Act was originally enacted March 11, 1961 to be effective July 1, 1961.
3. **Plan Membership:** All employees of the State of West Virginia or of any participating political subdivisions are required (with certain exceptions) to become plan members. Among those employees not eligible for plan membership are members (and retirees) of other State retirement systems, except for retirees from the Department of Public Safety or from municipal police or fire departments. Members of the State legislature and of local legislative bodies may elect plan membership regardless of the above exclusions.
4. **Annual Compensation:** Annual compensation is the total salary paid to a member by a participating employer, including overtime pay and non-cash payments.
5. **Final Average Salary:** Final average salary is the average of the member's annual compensation during the 3 consecutive years of his credited service (during the 10 years preceding the termination of his employment) that produces the highest such average. If the member has less than 3 years of credited service, his final average salary is his average annual compensation during his period of credit service. Special rules apply to members of the legislature.

B. CONTRIBUTIONS

1. **Member Contributions:** Members contribute 4½% of their salary to the system. Member contributions earn interest at a rate of 4%, compounded annually (3% prior to July 1, 1968).

2. **Employer Contributions:** The State and its participating political subdivisions contribute 10½% of members' compensation to the retirement system.

C. SERVICE CREDITS

1. **Prior Service:** Prior service is the period of employment credited to a member who worked for a participating employer before July 1, 1961. To receive credit for prior service, the employee must have worked for a participating employer within the 30-year period prior to July 1, 1961, and the employee must become a member of the system within 15 years of July 1, 1961 (or within 15 years of his employer's participation in the system, if later).
2. **Contributing Service:** Contributing service is the member's period of employment commencing on his date of participation in the plan.
3. **Credited Service:** Credited service is the sum of the member's prior service and his contributing service. Under certain circumstances, credited service may also be granted for periods of military service and for credited service under the West Virginia Teacher's Retirement System.
4. **Reinstated Service:** A member who terminates service with a participating employer, who does not retire and who is not eligible for a deferred vested benefit, will forfeit his credited service. If the member subsequently reenters covered employment and remains employed for at least 1 year, then his forfeited credited service will be reinstated -- provided that he repays to the fund any member contributions (with interest) that he withdrew upon termination. Such repayment must commence no later than 2 years following his reemployment, and full repayment must be accomplished within 5 years following his reemployment.

5. ***Applied Unused Leave:*** A retiring member may have his unused sick or annual leave applied as credited service to increase the amount of his pension, but cannot apply it for purposes of gaining eligibility for benefits. Credited service for this purpose is determined by first doubling the number of unused leave days so applied, and then each 240 days of (doubled) leave counts as 1 year of credited service in the benefit formula used to compute the amount of the member's pension.

D. NORMAL RETIREMENT BENEFIT

1. ***Eligibility:*** A member who has attained age 60 and has earned 5 or more years of contributing service is eligible for a normal retirement benefit.
2. ***Benefit Amount:*** The annual normal retirement benefit, payable in monthly installments, is equal to 2% of the member's final average salary *times* the number of years of his credited service.
3. ***Normal Form of Benefit:*** The normal form of the retirement benefit is a single life cash refund annuity. This means that the pension is payable only during the member's lifetime, but if he dies before receiving pension payments which total the amount of his accumulated contributions (with interest) at the time of his retirement, then the difference will be paid to his beneficiary.
4. ***Optional Forms of Benefit:*** The retiring member may instead of the "Normal Form" choose an actuarially reduced joint and survivor annuity with his or her spouse as beneficiary, with either 100% or 50% of the amount payable while both are alive continuing to the surviving spouse during the spouse's remaining lifetime. This is a contingent joint and survivor annuity, reducing in amount only upon the retiree's dying first (and not upon the spouse's death).

E. EARLY RETIREMENT BENEFIT (Unreduced)

1. **Eligibility:** Rule of 80; A member who has completed at least 3 years of contributing service and who has attained age 55 with the sum of his age *plus* years of contributing service equal to or greater than 80, may retire at any age on or after age 55.
2. **Amount:** The early retirement benefit is equal to the members normal retirement benefit based on final average salary and years of credited service as of early retirement date, without reduction for early commencement. The early retirement benefit is payable in monthly installments under the same normal or optional forms as the normal retirement benefit.

F. EARLY RETIREMENT BENEFIT (Reduced)

1. **Eligibility:** A terminating member who has completed at least 3 years of contributing service and who either (i) has attained age 55 and completed 10 years of credited service, or (ii) has completed 20 years of credited service, may elect to have his deferred vested benefit commence on the first of any month following his 55th birthday. A terminating member with 30 years of credited service, at least 3 of which are contributing service, may retire early at any age.
2. **Amount:** The early retirement benefit is equal to the normal retirement benefit based on final average salary and years of credited service as of early retirement date actuarially reduced for the number of years by which the early retirement benefit commencement date precedes the retiring member's 62nd birthday. A member retiring after 30 years of service (who is not eligible for an unreduced benefit) receives a benefit actuarially reduced for the number of years by which his early retirement precedes age 60. The early retirement benefit is payable in monthly installments under the same normal or optional forms as the normal retirement benefit.

G. DISABILITY BENEFIT

1. **Eligibility:** A member who has completed 10 years of credited service, including three years of contributing service, and who is found to be totally and permanently disabled, is eligible for a disability benefit. A member with less than 10 years of credited service (or less than 3 years of contributing service) who incurs a service-connected total and permanent disability and who is receiving workers' compensation on account of this disability is also eligible for a disability benefit.
2. **Amount:** The monthly disability benefit is 2% of the member's final average salary *times* his credited service when disabled. Prior to age 65 the disability benefit is not less than 50% of the member's final average salary. At age 65 the benefit is the greater of (i) 2% of the member's final average salary *times* his credited service at the time of disablement or (ii) 20% of the member's final average salary.

H. DEFERRED VESTED BENEFIT

1. **Eligibility:** A terminating member who has completed 5 years of credited service, including at least 3 years of contributing service, and who does not withdraw his accumulated contributions, is entitled to a deferred vested benefit commencing at age 62.
2. **Amount:** The deferred vested pension is equal to 2% of the member's final average salary *times* his years of credited service. The deferred vested pension benefit is payable in monthly installments under the same normal or optional forms as the normal retirement benefit.

I. PRERETIREMENT DEATH BENEFITS

1. **Eligibility:** A life annuity is paid to the surviving spouse or other designated beneficiary of an active member (or former member entitled to a deferred benefit) who dies after completing 10 years of credited service and before retiring. If a member has no spouse or designated beneficiary, his children (if any) receive annuities until they reach age 21 or marry, if earlier. If there is no spouse, child, or qualified beneficiary, or if the member dies with less than 10 years of credited service, then the member's accumulated contributions will be paid to his estate as a death benefit.
2. **Amount:** The spouse's or designated beneficiary's pension is calculated as if the member had retired on the day of his death and elected a 100% joint and survivor annuity with his spouse or designated beneficiary as co-annuitant. There is no reduction for early commencement of benefits.

The amount of a (non-designated beneficiary) surviving child's annuity is based upon the annuity reserve the member would have had if he had retired on his date of death. This annuity is payable until the child reaches age 21 or is married, if earlier. In no event is a surviving child paid more than \$250 monthly, and the total paid to all surviving children will not exceed 60% of the member's final average salary.

J. POSTRETIREMENT DEATH BENEFITS

Other than the death benefit inherent in the cash refund feature of the normal form of benefit, or the survivor's annuity in the case of a joint and survivor pension, no postretirement death benefits are payable under this retirement plan.

K. OTHER TERMINATIONS

A member who terminates employment other than by death and prior to becoming eligible for a normal retirement, early retirement, deferred vested or disability benefit, may upon his request receive a refund of his contributions. If the member has at least 2 years of service in the plan, the refund will include accrued interest on the member's contributions. After receiving a refund of contributions, a member has no further right to benefits under this retirement system.

A. Valuation Date

July 1, 2008

B. Funding Method

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 date of hire.

C. Interest Rate and Expenses

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

D. Mortality

The 1971 Group Annuity Mortality Table, separately for males and females, is used for healthy lives. Healthy male mortality is based on a 1-year setback to the male table. Healthy female mortality is based on the female table without adjustment. Disabled male mortality is based on an 8-year age set forward to the healthy table. Disabled female mortality is based on the Revenue Ruling 96-7 Post 94 female disability mortality table.

E. Salary Scales

The salary scale is shown in the Appendix. Projected salary increases for State employees are in the range of 4.25% to 6.0% per year and for Nonstate employees in the range of 3.75% to 5.5% per year.

F. Withdrawal from Service

Withdrawal rates are shown in the Appendix. All withdrawal is assumed to result in refund of contributions if nonvested or a deferred annuity if vested. The liability for a refund of contributions for nonactive nonvested members as of the valuation date is assumed to be 60% of the total employee contribution balance of such members.

G. Disablement Rates

Disablement rates are shown in the Appendix.

H. 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.

I. Accrual of Future Service

It is assumed that active members will accrue one year of service for each future year of employment.

J. Noncontributory Service Loadings

Noncontributory service for active members is estimated from member's contributory service by adjusting the present value of benefits projected from contributory service alone. A 10.8% load is used for males and a 2.6% load is used for females. Loads of 8.0% and 0.4% are used to estimate military service credit for male and female participants.

K. Retirement Rates

The retirement rates are shown in the Appendix.

L. Asset Valuation Method

Assets for valuation purposes are included at Market Value.

M. Timing of Plan Contributions

Plan contributions, both employee and employer, are assumed to be paid in the middle of the year.

State Salary Scale

<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	1.06000	1.06000	37	1.05150	1.05150	54	1.04550	1.04550
20	1.06000	1.06000	38	1.05100	1.05100	55	1.04500	1.04500
21	1.05950	1.05950	39	1.05050	1.05050	56	1.04450	1.04450
22	1.05900	1.05900	40	1.05000	1.05000	57	1.04400	1.04400
23	1.05850	1.05850	41	1.04975	1.04975	58	1.04350	1.04350
24	1.05800	1.05800	42	1.04950	1.04950	59	1.04300	1.04300
25	1.05750	1.05750	43	1.04925	1.04925	60	1.04250	1.04250
26	1.05700	1.05700	44	1.04900	1.04900	61	1.04250	1.04250
27	1.05650	1.05650	45	1.04875	1.04875	62	1.04250	1.04250
28	1.05600	1.05600	46	1.04850	1.04850	63	1.04250	1.04250
29	1.05550	1.05550	47	1.04825	1.04825	64	1.04250	1.04250
30	1.05500	1.05500	48	1.04800	1.04800	65	1.04250	1.04250
31	1.05450	1.05450	49	1.04775	1.04775	66	1.04250	1.04250
32	1.05400	1.05400	50	1.04750	1.04750	67	1.04250	1.04250
33	1.05350	1.05350	51	1.04700	1.04700	68	1.04250	1.04250
34	1.05300	1.05300	52	1.04650	1.04650	69	1.04250	1.04250
35	1.05250	1.05250	53	1.04600	1.04600	70	1.04250	1.04250
36	1.05200	1.05200						

Nonstate Salary Scale

<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	1.05500	1.05500	37	1.04650	1.04650	54	1.04050	1.04050
20	1.05500	1.05500	38	1.04600	1.04600	55	1.04000	1.04000
21	1.05450	1.05450	39	1.04550	1.04550	56	1.03950	1.03950
22	1.05400	1.05400	40	1.04500	1.04500	57	1.03900	1.03900
23	1.05350	1.05350	41	1.04475	1.04475	58	1.03850	1.03850
24	1.05300	1.05300	42	1.04450	1.04450	59	1.03800	1.03800
25	1.05250	1.05250	43	1.04425	1.04425	60	1.03750	1.03750
26	1.05200	1.05200	44	1.04400	1.04400	61	1.03750	1.03750
27	1.05150	1.05150	45	1.04375	1.04375	62	1.03750	1.03750
28	1.05100	1.05100	46	1.04350	1.04350	63	1.03750	1.03750
29	1.05050	1.05050	47	1.04325	1.04325	64	1.03750	1.03750
30	1.05000	1.05000	48	1.04300	1.04300	65	1.03750	1.03750
31	1.04950	1.04950	49	1.04275	1.04275	66	1.03750	1.03750
32	1.04900	1.04900	50	1.04250	1.04250	67	1.03750	1.03750
33	1.04850	1.04850	51	1.04200	1.04200	68	1.03750	1.03750
34	1.04800	1.04800	52	1.04150	1.04150	69	1.03750	1.03750
35	1.04750	1.04750	53	1.04100	1.04100	70	1.03750	1.03750
36	1.04700	1.04700						

State Withdrawal Decrement (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	0.20000	0.20000	33	0.15700	0.15800	47	0.12600	0.12600
20	0.20000	0.20000	34	0.15400	0.15400	48	0.12400	0.12400
21	0.19600	0.19600	35	0.15200	0.15000	49	0.12200	0.12200
22	0.19300	0.19200	36	0.14800	0.14800	50	0.12000	0.12000
23	0.19000	0.18800	37	0.14600	0.14600	51	0.11800	0.11800
24	0.18700	0.18400	38	0.14400	0.14400	52	0.11600	0.11600
25	0.18300	0.18000	39	0.14200	0.14200	53	0.11400	0.11400
26	0.18000	0.17800	40	0.14000	0.14000	54	0.11200	0.11200
27	0.17700	0.17600	41	0.13800	0.13800	55	0.11000	0.11000
28	0.17400	0.17400	42	0.13600	0.13600	56	0.11000	0.11000
29	0.17000	0.17200	43	0.13400	0.13400	57	0.11000	0.11000
30	0.16600	0.17000	44	0.13200	0.13200	58	0.11000	0.11000
31	0.16300	0.16600	45	0.13000	0.13000	59	0.11000	0.11000
32	0.16000	0.16200	46	0.12800	0.12800	60	0.11000	0.11000

State Withdrawal Decrement (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	0.21000	0.18000	33	0.15000	0.14800	47	0.11000	0.10600
20	0.21000	0.18000	34	0.14500	0.14400	48	0.11000	0.10400
21	0.20600	0.17800	35	0.14000	0.14000	49	0.11000	0.10200
22	0.20200	0.17600	36	0.13600	0.13600	50	0.11000	0.10000
23	0.19800	0.17400	37	0.13200	0.13200	51	0.10800	0.09800
24	0.19400	0.17200	38	0.12800	0.12800	52	0.10600	0.09600
25	0.19000	0.17000	39	0.12400	0.12400	53	0.10400	0.09400
26	0.18500	0.16800	40	0.12000	0.12000	54	0.10200	0.09200
27	0.18000	0.16600	41	0.11800	0.11800	55	0.10000	0.09000
28	0.17500	0.16400	42	0.11600	0.11600	56	0.10000	0.09000
29	0.17000	0.16200	43	0.11400	0.11400	57	0.10000	0.09000
30	0.16500	0.16000	44	0.11200	0.11200	58	0.10000	0.09000
31	0.16000	0.15600	45	0.11000	0.11000	59	0.10000	0.09000
32	0.15500	0.15200	46	0.11000	0.10800	60	0.10000	0.09000

State Withdrawal Decrements (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	0.19000	0.16000	33	0.12800	0.12800	47	0.08600	0.08600
20	0.19000	0.16000	34	0.12400	0.12400	48	0.08400	0.08400
21	0.18600	0.15800	35	0.12000	0.12000	49	0.08200	0.08200
22	0.18200	0.15600	36	0.11600	0.11600	50	0.08000	0.08000
23	0.17800	0.15400	37	0.11200	0.11200	51	0.07800	0.07800
24	0.17400	0.15200	38	0.10800	0.10800	52	0.07600	0.07600
25	0.17000	0.15000	39	0.10400	0.10400	53	0.07400	0.07400
26	0.16400	0.14800	40	0.10000	0.10000	54	0.07200	0.07200
27	0.15800	0.14600	41	0.09800	0.09800	55	0.07000	0.07000
28	0.15200	0.14400	42	0.09600	0.09600	56	0.06800	0.06800
29	0.14600	0.14200	43	0.09400	0.09400	57	0.06600	0.06600
30	0.14000	0.14000	44	0.09200	0.09200	58	0.06400	0.06400
31	0.13600	0.13600	45	0.09000	0.09000	59	0.06200	0.06200
32	0.13200	0.13200	46	0.08800	0.08800	60	0.06000	0.06000

State Withdrawal Decrements (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	0.16000	0.14000	33	0.10800	0.10800	47	0.06600	0.07300
20	0.16000	0.14000	34	0.10400	0.10400	48	0.06400	0.07200
21	0.15600	0.13800	35	0.10000	0.10000	49	0.06200	0.07100
22	0.15200	0.13600	36	0.09600	0.09600	50	0.06000	0.07000
23	0.14800	0.13400	37	0.09200	0.09200	51	0.05800	0.06800
24	0.14400	0.13200	38	0.08800	0.08800	52	0.05600	0.06600
25	0.14000	0.13000	39	0.08400	0.08400	53	0.05400	0.06400
26	0.13600	0.12800	40	0.08000	0.08000	54	0.05200	0.06200
27	0.13200	0.12600	41	0.07800	0.07900	55	0.05000	0.06000
28	0.12800	0.12400	42	0.07600	0.07800	56	0.04800	0.05800
29	0.12400	0.12200	43	0.07400	0.07700	57	0.04600	0.05600
30	0.12000	0.12000	44	0.07200	0.07600	58	0.04400	0.05400
31	0.11600	0.11600	45	0.07000	0.07500	59	0.04200	0.05200
32	0.11200	0.11200	46	0.06800	0.07400	60	0.04000	0.05000

State Withdrawal Decrement (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	0.13000	0.10000	33	0.08800	0.08400	47	0.04600	0.05900
20	0.13000	0.10000	34	0.08400	0.08200	48	0.04400	0.05850
21	0.12600	0.09900	35	0.08000	0.08000	49	0.04200	0.05800
22	0.12200	0.09800	36	0.07600	0.07800	50	0.04000	0.05750
23	0.11800	0.09700	37	0.07200	0.07600	51	0.03800	0.05650
24	0.11400	0.09600	38	0.06800	0.07400	52	0.03600	0.05550
25	0.11000	0.09500	39	0.06400	0.07200	53	0.03400	0.05450
26	0.10800	0.09400	40	0.06000	0.07000	54	0.03200	0.05350
27	0.10600	0.09300	41	0.05800	0.06800	55	0.03000	0.05250
28	0.10400	0.09200	42	0.05600	0.06600	56	0.02800	0.05000
29	0.10200	0.09100	43	0.05400	0.06400	57	0.02600	0.04750
30	0.10000	0.09000	44	0.05200	0.06200	58	0.02400	0.04500
31	0.09600	0.08800	45	0.05000	0.06000	59	0.02200	0.04250
32	0.09200	0.08600	46	0.04800	0.05950	60	0.02000	0.04000

State Withdrawal Decrement (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	0.10000	0.11000	33	0.06100	0.06500	47	0.02600	0.03800
20	0.10000	0.11000	34	0.05800	0.06000	48	0.02400	0.03700
21	0.09600	0.10800	35	0.05500	0.05500	49	0.02200	0.03600
22	0.09200	0.10600	36	0.05200	0.05300	50	0.02000	0.03500
23	0.08800	0.10400	37	0.04900	0.05100	51	0.01800	0.03200
24	0.08400	0.10200	38	0.04600	0.04900	52	0.01600	0.02900
25	0.08000	0.10000	39	0.04300	0.04700	53	0.01400	0.02600
26	0.07800	0.09600	40	0.04000	0.04500	54	0.01200	0.02300
27	0.07600	0.09200	41	0.03800	0.04400	55	0.01000	0.02000
28	0.07400	0.08800	42	0.03600	0.04300	56	0.01000	0.01800
29	0.07200	0.08400	43	0.03400	0.04200	57	0.01000	0.01600
30	0.07000	0.08000	44	0.03200	0.04100	58	0.01000	0.01400
31	0.06700	0.07500	45	0.03000	0.04000	59	0.01000	0.01200
32	0.06400	0.07000	46	0.02800	0.03900	60	0.01000	0.01000

Nonstate Withdrawal Decrements (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	0.26000	0.25000	33	0.20800	0.20900	47	0.15200	0.16800
20	0.26000	0.25000	34	0.20400	0.20500	48	0.14800	0.16200
21	0.25600	0.24700	35	0.20000	0.20000	49	0.14400	0.15600
22	0.25200	0.24400	36	0.19600	0.19800	50	0.14000	0.15000
23	0.24800	0.24100	37	0.19200	0.19600	51	0.13600	0.14600
24	0.24400	0.23800	38	0.18800	0.19400	52	0.13200	0.14200
25	0.24000	0.23400	39	0.18400	0.19200	53	0.12800	0.13800
26	0.23600	0.23100	40	0.18000	0.19000	54	0.12400	0.13400
27	0.23200	0.22800	41	0.17600	0.18800	55	0.12000	0.13000
28	0.22800	0.22500	42	0.17200	0.18600	56	0.11600	0.12800
29	0.22400	0.22200	43	0.16800	0.18400	57	0.11200	0.12600
30	0.22000	0.21800	44	0.16400	0.18200	58	0.11000	0.12400
31	0.21600	0.21500	45	0.16000	0.18000	59	0.11000	0.12200
32	0.21200	0.21200	46	0.15600	0.17400	60	0.11000	0.12000

Nonstate Withdrawal Decrements (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	0.21000	0.21000	33	0.15800	0.18400	47	0.11600	0.14200
20	0.21000	0.21000	34	0.15400	0.18200	48	0.11400	0.13800
21	0.20800	0.20800	35	0.15000	0.18000	49	0.11200	0.13400
22	0.20600	0.20600	36	0.14600	0.17700	50	0.11000	0.13000
23	0.20400	0.20400	37	0.14200	0.17400	51	0.10800	0.12800
24	0.20200	0.20200	38	0.13800	0.17100	52	0.10600	0.12600
25	0.20000	0.20000	39	0.13400	0.16800	53	0.10400	0.12400
26	0.19400	0.19800	40	0.13000	0.16500	54	0.10200	0.12200
27	0.18800	0.19600	41	0.12800	0.16200	55	0.10000	0.12000
28	0.18200	0.19400	42	0.12600	0.15900	56	0.10000	0.11800
29	0.17600	0.19200	43	0.12400	0.15600	57	0.10000	0.11600
30	0.17000	0.19000	44	0.12200	0.15300	58	0.10000	0.11400
31	0.16600	0.18800	45	0.12000	0.15000	59	0.10000	0.11200
32	0.16200	0.18600	46	0.11800	0.14600	60	0.10000	0.11000

Nonstate Withdrawal Decrements (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	0.20000	0.19000	33	0.14200	0.16400	47	0.09900	0.12400
20	0.20000	0.19000	34	0.13600	0.16200	48	0.09600	0.12100
21	0.19700	0.18800	35	0.13000	0.16000	49	0.09300	0.11800
22	0.19400	0.18600	36	0.12700	0.15600	50	0.09000	0.11500
23	0.19100	0.18400	37	0.12400	0.15200	51	0.08900	0.11300
24	0.18800	0.18200	38	0.12100	0.14800	52	0.08800	0.11100
25	0.18500	0.18000	39	0.11800	0.14400	53	0.08700	0.10900
26	0.18000	0.17800	40	0.11500	0.14000	54	0.08600	0.10700
27	0.17500	0.17600	41	0.11300	0.13800	55	0.08500	0.10500
28	0.17000	0.17400	42	0.11100	0.13600	56	0.08400	0.10300
29	0.16500	0.17200	43	0.10900	0.13400	57	0.08300	0.10100
30	0.16000	0.17000	44	0.10700	0.13200	58	0.08200	0.09900
31	0.15400	0.16800	45	0.10500	0.13000	59	0.08100	0.09700
32	0.14800	0.16600	46	0.10200	0.12700	60	0.08000	0.09500

Nonstate Withdrawal Decrements (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	0.19000	0.18000	33	0.12200	0.14300	47	0.08600	0.10600
20	0.19000	0.18000	34	0.11600	0.13900	48	0.08400	0.10400
21	0.18600	0.17800	35	0.11000	0.13500	49	0.08200	0.10200
22	0.18200	0.17600	36	0.10800	0.13400	50	0.08000	0.10000
23	0.17800	0.17400	37	0.10600	0.13300	51	0.07800	0.09800
24	0.17400	0.17200	38	0.10400	0.13200	52	0.07600	0.09600
25	0.17000	0.17000	39	0.10200	0.13100	53	0.07400	0.09400
26	0.16400	0.16700	40	0.10000	0.13000	54	0.07200	0.09200
27	0.15800	0.16400	41	0.09800	0.12600	55	0.07000	0.09000
28	0.15200	0.16100	42	0.09600	0.12200	56	0.06800	0.08800
29	0.14600	0.15800	43	0.09400	0.11800	57	0.06600	0.08600
30	0.14000	0.15500	44	0.09200	0.11400	58	0.06400	0.08400
31	0.13400	0.15100	45	0.09000	0.11000	59	0.06200	0.08200
32	0.12800	0.14700	46	0.08800	0.10800	60	0.06000	0.08000

Nonstate Withdrawal Decrements (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	0.17000	0.17000	33	0.10700	0.11200	47	0.06100	0.07600
20	0.17000	0.17000	34	0.10100	0.10600	48	0.05900	0.07400
21	0.16500	0.16600	35	0.09500	0.10000	49	0.05700	0.07200
22	0.16000	0.16200	36	0.09100	0.09800	50	0.05500	0.07000
23	0.15500	0.15800	37	0.08700	0.09600	51	0.05300	0.06800
24	0.15000	0.15400	38	0.08300	0.09400	52	0.05100	0.06600
25	0.14500	0.15000	39	0.07900	0.09200	53	0.04900	0.06400
26	0.14100	0.14600	40	0.07500	0.09000	54	0.04700	0.06200
27	0.13700	0.14200	41	0.07300	0.08800	55	0.04500	0.06000
28	0.13300	0.13800	42	0.07100	0.08600	56	0.04300	0.05800
29	0.12900	0.13400	43	0.06900	0.08400	57	0.04100	0.05600
30	0.12500	0.13000	44	0.06700	0.08200	58	0.03900	0.05400
31	0.11900	0.12400	45	0.06500	0.08000	59	0.03700	0.05200
32	0.11300	0.11800	46	0.06300	0.07800	60	0.03500	0.05000

Nonstate Withdrawal Decrements (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	0.15000	0.16000	33	0.08100	0.08800	47	0.04600	0.04400
20	0.15000	0.16000	34	0.07800	0.08400	48	0.04400	0.04100
21	0.14400	0.15400	35	0.07500	0.08000	49	0.04200	0.03800
22	0.13800	0.14800	36	0.07200	0.07700	50	0.04000	0.03500
23	0.13200	0.14200	37	0.06900	0.07400	51	0.03800	0.03300
24	0.12600	0.13600	38	0.06600	0.07100	52	0.03600	0.03100
25	0.12000	0.13000	39	0.06300	0.06800	53	0.03400	0.02900
26	0.11400	0.12400	40	0.06000	0.06500	54	0.03200	0.02700
27	0.10800	0.11800	41	0.05800	0.06200	55	0.03000	0.02500
28	0.10200	0.11200	42	0.05600	0.05900	56	0.02800	0.02400
29	0.09600	0.10600	43	0.05400	0.05600	57	0.02600	0.02300
30	0.09000	0.10000	44	0.05200	0.05300	58	0.02400	0.02200
31	0.08700	0.09600	45	0.05000	0.05000	59	0.02200	0.02100
32	0.08400	0.09200	46	0.04800	0.04700	60	0.02000	0.02000

State and Nonstate Disability Decrements

<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	0.00000	0.00000	33	0.00052	0.00092	47	0.0047	0.00240
20	0.00010	0.00010	34	0.00056	0.00096	48	0.0053	0.00260
21	0.00012	0.00018	35	0.00060	0.00100	49	0.0059	0.00280
22	0.00014	0.00026	36	0.00078	0.00110	50	0.0065	0.00300
23	0.00016	0.00034	37	0.00096	0.00120	51	0.0070	0.00380
24	0.00018	0.00042	38	0.00114	0.00130	52	0.0075	0.00460
25	0.00020	0.00050	39	0.00132	0.00140	53	0.0080	0.00540
26	0.00024	0.00056	40	0.00150	0.00150	54	0.0085	0.00620
27	0.00028	0.00062	41	0.00190	0.00160	55	0.0090	0.00700
28	0.00032	0.00068	42	0.00230	0.00170	56	0.0092	0.00750
29	0.00036	0.00074	43	0.00270	0.00180	57	0.0094	0.00800
30	0.00040	0.00080	44	0.00310	0.00190	58	0.0096	0.00850
31	0.00044	0.00084	45	0.00350	0.00200	59	0.0098	0.00900
32	0.00048	0.00088	46	0.00410	0.00220	60	0.0100	0.01000

State and Nonstate Retirement Decrements

<u>Age</u>	<u>Male</u>	<u>Female</u>
55	0.15000	0.15000
56	0.15000	0.15000
57	0.15000	0.15000
58	0.15000	0.15000
59	0.15000	0.15000
60	0.15000	0.15000
61	0.15000	0.15000
62	0.35000	0.35000
63	0.18000	0.18000
64	0.18000	0.18000
65	0.30000	0.30000
66	0.20000	0.20000
67	0.20000	0.20000
68	0.20000	0.20000
69	0.20000	0.20000
70	1.00000	1.00000

and older