



**West Virginia  
Teachers Retirement System**

**Actuarial Valuation  
As of July 1, 2006**

**Prepared by:**

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an ACS company A C S

**for the**

**West Virginia Consolidated Public Retirement Board**

**December 2006**



January 5, 2007

West Virginia Consolidated Public Retirement Board  
Capitol Complex, Building 5, Room 1000  
1900 Kanawha Boulevard, East  
Charleston, WV 25305

Re: West Virginia Teachers' Retirement System; Actuarial Valuation as of July 1, 2006

Retirement Board Members:

We respectfully present our report on the actuarial valuation of the West Virginia Teachers' Retirement System as of July 1, 2006. This valuation presents the liabilities of the plan as of the valuation date and the projected Employer contribution for fiscal year 2008.

Some key highlights are:

- The valuation was prepared under an assumed interest rate of 7.5%.
- Based on the valuation results the State contribution to the Plan for Fiscal Year 2008 is \$337,316,000. The State appropriation needed for Fiscal Year 2008 for the Teachers' Retirement Plans (TRS and TDC) under the School Aid Formula is \$352,937,000.
- The funded percentage of plan assets to the actuarial accrued liability as of the valuation date is 32%, an increase of 7% over 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, 2006 maintained by the West Virginia Consolidated Public Retirement Board,
- financial information received from the West Virginia Investment Management Board.

Board of Trustees

January 5, 2007

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Effective July 1, 2005 all education employees hired on or after July 1, 2005 become members in TRS. All education employees hired from July 1, 1991 through June 30, 2005 became members in the Teachers Defined Contribution (TDC) Plan.

This report presents fairly the actuarial position of the West Virginia Teachers' Retirement System (TRS) as of July 1, 2006 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.

Respectfully submitted,



Peter D. Verne  
Principal and Consulting Actuary

PDV/caf

Enclosure

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This report presents the results of the July 1, 2006 actuarial valuation of the West Virginia Teachers' Retirement System and includes the projected employer contribution requirement for Fiscal Year 2008. 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 providing 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 percentage of total education payroll. For this purpose the total education payroll combines the payrolls of the Teachers' Retirement System plus the Teachers' Defined Contribution Plan (TDC).

The major purpose of this valuation is to determine the amount of appropriation needed for Fiscal Year 2008 for West Virginia's Teachers Retirement Plans under the School Aid Formula (SAF), which is determined to be \$352,937,000. Two components of the SAF determination are calculated in the valuation process: the contributions required from the State of West Virginia for the Teachers Retirement System (TRS), and a projection of the State's contributions to the Teachers Defined Contribution Plan (TDC), both for the Fiscal Year 2008.

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 Fiscal Year 2008 are shown in Table 1.

Effective July 1, 2005 all education employees hired on and after July 1, 2005 become members in TRS. (All education employees hired on or after July 1, 1991 through June 30, 2005 became members in the Teachers Defined Contribution (TDC) Plan).

The State's TRS contribution for FY2008, 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. The liabilities for recent benefit changes include the 2001 and 2006 retiree increases.

The total State TRS contribution on this basis is \$337,316,000.

The annual amortization payments toward the segment of the unfunded liability that is being amortized over the 40-year period from July 1, 1994 are in constant proportion to the projected education total payroll. The effect is that the amortization amounts are increasing at roughly 3.2% per annum. As a result, the total amount currently contributed to the Plan is less than the sum of the normal cost plus interest on the unfunded liability; however, payments are projected to exceed the normal cost plus interest on the unfunded liability starting in FY2015 and will fully amortize the unfunded liability by the end of FY2034.

The annual amortization payment toward the unfunded liability for the 2001 retiree increase is \$14,334,000. This payment will be made through FY2008.

The annual amortization payment toward the unfunded liability for the 2006 retiree increase is \$4,685,000. This payment will be made through FY2012.

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, net of the separately funded improvements, are shown in Tables 3 and 4.

The projected TDC contribution for Fiscal Year 2008 is based on projected payroll for that participant population, taking into account growth in total teacher payroll for the state. The split of both the TRS and the TDC contributions is based on information provided by 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, 2006 and, for comparison purposes, July 1, 2005. Under the funding target it is expected that the unfunded actuarial accrued liability will gradually increase for approximately 8 years, then decrease to zero over the remaining time to the end of the period. Based on the prior year's projections, the expected unfunded actuarial accrued liability as of July 1, 2006 was \$5.036 billion. The actual unfunded liability at the valuation date is \$4.703 billion, a decrease of \$333 million.

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

- Plan assets returned approximately 8% over the year ending June 30, 2006. This was slightly above the prior year's valuation assumption of a 7.5% return and decreased the unfunded liability by approximately \$8.5 million.

- Employer contributions were higher than expected which decreased the unfunded liability by approximately \$408 million.
- The increase to retiree benefits effective July 1, 2006 increased the unfunded liability by approximately \$30.8 million.
- The combined impact of plan experience from turnover, mortality and retirement, and data adjustments increased the unfunded liability by approximately \$51 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 28 year period, i.e., increasing to approximately \$4.9 billion by FY2015 then gradually decreasing thereafter 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 segment of the unfunded from year to year.

Table 5 presents a cash flow projection of expected asset balances, contributions, disbursements and earnings over the period to FY2034.

The valuation results were determined using an interest rate of 7.5% with an underlying inflation assumption 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>7/1/2006</u>	<u>7/1/2005</u>
Actives	18,633	17,728
Retirees & Beneficiaries	27,389	26,751
Terminated Vested	3,397	3,521
Terminated Nonvested	55	43
Total	<u>49,474</u>	<u>48,043</u>

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

Tables 11(a) and 11(b) present an age and service distribution of actives separately for the Teachers and Nonteachers (including State) groups, showing the number of participants in each age/service cell and the total annual compensation. Tables 12 and 13 present the retired participants and deferred vested participants respectively by 5-year age groups, showing the number of participants and average monthly benefit.

West Virginia Teachers' Retirement System  
Table 1

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

	Valuation Date	
	July 1, 2006	July 1, 2005
1. Present Value of Benefits		
a. Active	\$ 3,602,335	\$ 3,624,297
b. Inactive - Retirees	3,283,033	2,999,453
- Disabled Retirees	156,643	147,137
- Beneficiaries	141,490	131,985
- Vested Terminated	127,950	126,665
- Non-Vested Terminated	<u>285</u>	<u>268</u>
c. Total	7,311,736	7,029,805
2. Actuarial Accrued Liability	6,877,872	6,617,708
3. Assets (Market Value)	<u>2,174,464</u>	<u>1,627,355</u>
4. Unfunded Actuarial Accrued Liability (UAL)	4,703,408	4,990,353
5. Annual Normal Cost Rate: Type 1 (Pre 7/1/1991 Group)		
a. Present Value of Future Normal Costs	369,812	412,097
b. Present Value of Future Pay	4,085,821	4,498,554
c. Normal Cost Rate as a % of Payroll	9.05%	9.16%
d. Employee share	6.00%	6.00%
e. Employer share	3.05%	3.16%
f. TRS FY2007 (2006) Normal Cost Payroll	703,678	735,614
g. Employer FY2007 (2006) Normal Cost (BOY)	21,462	23,245
h. TRS FY2008 (2007) Normal Cost Payroll	649,644	690,924
i. Employer FY2008 (2007) Normal Cost (BOY)	19,814	21,833
6. Annual Normal Cost Rate: Type 3 (Post 6/30/2005 Group)		
a. Present Value of Future Normal Costs	64,052	N/A
b. Present Value of Future Pay	625,934	N/A
c. Normal Cost Rate as a % of Payroll	10.23%	10.34%
d. Employee share	6.00%	6.00%
e. Employer share	4.23%	4.34%
f. TRS FY2007 (2006) Normal Cost Payroll	55,529	56,142
g. Employer FY2007 (2006) Normal Cost (BOY)	2,349	2,437
h. TRS FY2008 (2007) Normal Cost Payroll	153,108	149,907
i. Employer FY2008 (2007) Normal Cost (BOY)	6,476	6,506

Table 1 (Continued)  
(000 omitted)

	Valuation Date	
	July 1, 2006	July 1, 2005
7. Employer Contribution for FY2007/FY2008, assumes mid-year contribution:		
	FY2007	FY2006
a. FY2007 (2006)		
i. TRS and TDC Payroll	1,391,490	1,426,056
ii. FY2007 (2006) TRS Contribution		
A. Normal Cost	24,687	26,627
B. Amortization components		
- Original UAL over 40 years as level % of TRS + TDC Payroll	283,362	295,774
- 1999, \$500 retiree minimum	0	3,080
- 2001, retiree increase	14,334	14,334
- 2006, retiree increase	4,685	N/A
C. Total	327,068	339,815
iii. FY2007 (2006) Contribution as a % of Payroll	23.50%	23.83%
	FY2008	FY2007
b. FY2008 (2007)		
i. TRS and TDC Payroll	1,436,018	1,471,690
ii. FY2008 (2007) TRS Contribution		
A. Normal Cost	27,259	29,383
B. Amortization Components		
- original UAL over 40 years as level % of TRS & TDC payroll	291,038	304,971
- 1999, \$500 retiree minimum	0	0
- 2001, retiree increase	14,334	14,334
- 2006, retiree increase	4,685	N/A
C. Total	337,316	348,688
iii. FY2008 (2007) TRS Contribution as a % of Payroll	23.49%	23.69%
iv. FY2008 (2007) SAF appropriation <sup>1/</sup>	352,937 <sup>2/</sup>	363,324
v. FY2008 (2007) SAF appropriation as a % of Payroll	24.58%	24.69%

<sup>1/</sup> The School Aid Formula retirement allocation includes the amount 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.

<sup>2/</sup> This is the SAF amount the State should appropriate in the budget for FY2008.

## West Virginia Teachers' Retirement System

Table 2

Development of School Aid Formula Appropriation for Fiscal Year 2008  
(000 omitted)

TRS Contribution for FY2008	\$	318,297
+ .075 x School Aid Formula (TDC only) <sup>1/</sup>		37,250
- .15 x County Portion of the Old Group TRS payroll <sup>2/</sup>		(21,124)
- .075 x County Portion of the New Group TRS Payroll <sup>3/</sup>		(2,496)
- Fire Tax Per Code section 33-3-14(d)		(2,519)
+ State payment equal to TDC forfeitures <sup>4/</sup>		<u>4,510</u>
Subtotal of Standard SAF Appropriation	\$	333,918
Special Payments for Benefit Improvements 2001 and 2006 Retiree Increases		<u>19,019</u>
Total FY2008 SAF Appropriation		352,937

<sup>1/</sup> School Aid Formula for TDC only is  $.7793 \times \text{FY2008 TDC pay for County employees} + \text{FY2008 TDC pay for State employees} = .7793 \times \$618,937 + \$14,328 = \$496,666$

<sup>2/</sup> County portion of the Old Group TRS payroll is  $.2207 \times \text{FY2008 TRS pay for County employees} = .2207 \times \$638,080 = \$140,824$

<sup>3/</sup> County portion of the New Group TRS payroll is  $.2207 \times \text{FY2008 TRS pay for County employees} = .2207 \times \$150,764 = \$33,274$

<sup>4/</sup> Actual amount to be released from the TDC suspense account at 6/30/2006 per Code section 18-7A-18a(b)

West Virginia Teachers' Retirement System

Table 3

Projection of Unfunded Accrued Liability and Annual Contributions  
(000 omitted)

FY Ending 6/30	Unfunded		Employer		Employer		Projected		Projected		Projected		Total Type 1 Employer		Total Type 3 Employer	
	AAL BOY	BOY	Normal Cost <sup>2</sup> Type 1 (MOY)	Normal Cost <sup>2</sup> Type 3 (MOY)	Type 1 TRS Payroll	Type 3 TRS Payroll	Type 1 TRS Payroll	Type 3 TRS Payroll	TRRS+TDC	% of Payroll	Amount (MOY)	% of Payroll	Amount (MOY)	% of Payroll	Amount (MOY)	% of Payroll
2007	4,653,885	4,686,725	22,637	6,746	703,678	55,529	1,391,490	1,436,018	1,481,970	23.54%	327,608	0.48%	6,746			
2008	4,736,475	4,780,301	19,256	6,715	608,933	153,108	1,481,970	1,529,393	1,529,393	21.70%	311,582	0.47%	6,715			
2009	4,817,448	4,847,098	17,835	10,480	563,976	238,946	1,529,393	1,578,334	1,578,334	21.57%	319,606	0.71%	10,480			
2010	4,868,358	4,880,260	16,314	14,545	515,902	331,653	1,578,334	1,628,841	1,628,841	21.43%	327,797	0.95%	14,545			
2011	4,881,752	4,871,690	14,742	18,884	466,173	430,578	1,628,841	1,680,964	1,680,964	21.30%	336,194	1.20%	18,884			
2012	4,811,844	4,811,844	13,135	23,437	415,373	534,396	1,680,964	1,734,754	1,734,754	21.17%	344,859	1.44%	23,437			
2013	4,759,257	4,759,257	11,557	28,199	365,448	642,959	1,734,754	1,790,267	1,790,267	21.05%	353,815	1.68%	28,199			
2014	4,689,494	4,689,494	10,046	33,079	317,693	754,248	1,790,267	1,847,555	1,847,555	20.93%	363,139	1.91%	33,079			
2015	4,600,845	4,600,845	8,630	38,036	272,904	867,271	1,847,555	1,906,677	1,906,677	20.83%	372,879	2.12%	38,036			
2016	4,491,456	4,491,456	7,327	43,015	231,705	980,778	1,906,677	1,967,690	1,967,690	20.73%	383,073	2.33%	43,015			
2017	4,359,320	4,359,320	6,120	48,004	193,517	1,094,540	1,967,690	2,030,657	2,030,657	20.65%	393,753	2.52%	48,004			
2018	4,202,266	4,202,266	5,042	53,037	159,454	1,209,311	2,030,657	2,095,638	2,095,638	20.58%	404,911	2.70%	53,037			
2019	4,017,945	4,017,945	4,095	58,046	129,510	1,323,513	2,095,638	2,162,698	2,162,698	20.52%	416,595	2.86%	58,046			
2020	3,803,816	3,803,816	3,273	63,021	103,493	1,436,942	2,162,698	2,231,904	2,231,904	20.46%	428,817	3.01%	63,021			
2021	3,557,132	3,557,132	2,572	67,964	81,341	1,549,654	2,231,904	2,303,325	2,303,325	20.42%	441,586	3.14%	67,964			
2022	3,274,924	3,274,924	1,985	72,903	62,776	1,662,274	2,303,325	2,377,032	2,377,032	20.38%	454,911	3.27%	72,903			
2023	2,953,982	2,953,982	1,515	77,917	47,920	1,776,602	2,377,032	2,453,097	2,453,097	20.35%	468,799	3.38%	77,917			
2024	2,181,752	2,181,752	1,140	83,029	36,054	1,893,144	2,453,097	2,531,596	2,531,596	20.33%	483,267	3.49%	83,029			
2025	1,722,673	1,722,673	844	88,175	26,688	2,010,491	2,531,596	2,612,607	2,612,607	20.31%	498,308	3.59%	88,175			
2026	1,209,237	1,209,237	615	93,334	19,435	2,128,124	2,612,607	2,696,210	2,696,210	20.30%	513,922	3.69%	93,334			
2027	636,729	636,729	439	98,493	13,878	2,245,758	2,696,210	2,782,489	2,782,489	20.29%	530,111	3.77%	98,493			
2028			308	103,669	9,752	2,363,770	2,782,489	2,871,529	2,871,529	20.28%	546,879	3.84%	103,669			
2029			214	108,892	6,778	2,482,861	2,871,529	2,963,418	2,963,418	20.28%	564,234	3.91%	108,892			
2030			146	114,170	4,633	2,603,191	2,963,418	3,058,247	3,058,247	20.27%	582,186	3.98%	114,170			
2031			98	119,520	3,104	2,725,184	3,058,247	3,156,111	3,156,111	20.27%	600,741	4.03%	119,520			
2032			66	124,962	2,101	2,849,269	3,156,111	3,257,106	3,257,106	20.27%	619,912	4.09%	124,962			
2033			45	130,499	1,412	2,975,509	3,257,106			20.27%	639,714	4.13%	130,499			
2034				136,116		3,103,586				20.27%	660,162	4.18%	136,116			

<sup>1</sup> Net of the separately funded liability for recent benefit increases.

<sup>2</sup> Net of member contributions.

<sup>3</sup> Net of the amortization amounts for separately funded benefit increases.

## West Virginia Teachers' Retirement System

Table 4

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

FY Ending 6/30	(1) Unfunded AAL BOY <sup>1</sup>	(2) Interest on Unfunded @ 7.5 %	(3) MOY Contribution Toward Unfunded <sup>2</sup>	(4) Unfunded Funding Progress (3)x1.03682 - (2)
2007	4,653,885	349,041	304,971	(32,840)
2008	4,686,725	351,504	291,038	(49,749)
2009	4,736,475	355,236	300,350	(43,826)
2010	4,780,301	358,523	309,962	(37,148)
2011	4,817,448	361,309	319,880	(29,650)
2012	4,847,098	363,532	330,117	(21,259)
2013	4,868,358	365,127	340,680	(11,902)
2014	4,880,260	366,020	351,582	(1,492)
2015	4,881,752	366,131	362,833	10,062
2016	4,871,690	365,377	374,443	22,854
2017	4,848,836	363,663	386,426	36,992
2018	4,811,844	360,888	398,791	52,587
2019	4,759,257	356,944	411,553	69,763
2020	4,689,494	351,712	424,722	88,649
2021	4,600,845	345,063	438,313	109,390
2022	4,491,456	336,859	452,339	132,136
2023	4,359,320	326,949	466,814	157,054
2024	4,202,266	315,170	481,752	184,321
2025	4,017,945	301,346	497,168	214,129
2026	3,803,816	285,286	513,078	246,685
2027	3,557,132	266,785	529,496	282,208
2028	3,274,924	245,619	546,440	320,942
2029	2,953,982	221,549	563,926	363,142
2030	2,590,840	194,313	581,972	409,088
2031	2,181,752	163,631	600,595	459,079
2032	1,722,673	129,200	619,814	513,437
2033	1,209,237	90,693	639,648	572,508
2034	636,729	47,755	660,117	636,669

<sup>1</sup> Net of the separately funded liability for recent benefit increases.

<sup>2</sup> Net of employer contribution toward normal cost and separately funded benefit increases.

## West Virginia Teachers' Retirement System

Table 5

## Cash Flow Projection FY2007 Through FY2034

FY Ending 6/30	(1)	(2)	(3)	(4)	(5)	(6)
	Assets Beg. of Year	Expected Contributions	Benefits	Earnings	Net Income	Assets End of Year
2007	2,174,464,000	398,925,000	419,907,000	162,312,000	141,330,000	2,315,794,000
2008	2,315,794,000	385,481,000	444,162,000	171,524,000	112,843,000	2,428,637,000
2009	2,428,637,000	385,644,000	470,702,000	179,016,000	93,958,000	2,522,595,000
2010	2,522,595,000	400,765,000	498,689,000	185,589,000	87,665,000	2,610,260,000
2011	2,610,260,000	416,552,000	527,181,000	191,696,000	81,067,000	2,691,327,000
2012	2,691,327,000	433,015,000	556,068,000	197,318,000	74,265,000	2,765,592,000
2013	2,765,592,000	445,514,000	585,141,000	202,278,000	62,651,000	2,828,243,000
2014	2,828,243,000	463,400,000	612,374,000	206,633,000	57,659,000	2,885,902,000
2015	2,885,902,000	482,013,000	637,082,000	210,733,000	55,664,000	2,941,566,000
2016	2,941,566,000	501,309,000	658,458,000	214,831,000	57,682,000	2,999,248,000
2017	2,999,248,000	521,332,000	676,348,000	219,236,000	64,220,000	3,063,468,000
2018	3,063,468,000	542,118,000	691,028,000	224,277,000	75,367,000	3,138,835,000
2019	3,138,835,000	563,619,000	701,415,000	230,339,000	92,543,000	3,231,378,000
2020	3,231,378,000	585,825,000	707,633,000	237,868,000	116,060,000	3,347,438,000
2021	3,347,438,000	608,739,000	709,875,000	247,334,000	146,198,000	3,493,636,000
2022	3,493,636,000	632,431,000	707,852,000	259,246,000	183,825,000	3,677,461,000
2023	3,677,461,000	657,079,000	702,231,000	274,147,000	228,995,000	3,906,456,000
2024	3,906,456,000	682,760,000	692,744,000	292,617,000	282,633,000	4,189,089,000
2025	4,189,089,000	709,276,000	679,593,000	315,275,000	344,958,000	4,534,047,000
2026	4,534,047,000	736,545,000	663,402,000	342,747,000	415,890,000	4,949,937,000
2027	4,949,937,000	764,516,000	644,619,000	375,660,000	495,557,000	5,445,494,000
2028	5,445,494,000	793,207,000	623,368,000	414,666,000	584,505,000	6,029,999,000
2029	6,029,999,000	822,683,000	600,302,000	460,438,000	682,819,000	6,712,818,000
2030	6,712,818,000	852,954,000	575,720,000	513,670,000	790,904,000	7,503,722,000
2031	7,503,722,000	884,050,000	549,829,000	575,086,000	909,307,000	8,413,029,000
2032	8,413,029,000	916,016,000	522,795,000	645,456,000	1,038,677,000	9,451,706,000
2033	9,451,706,000	948,870,000	495,154,000	725,585,000	1,179,301,000	10,631,007,000
2034	10,631,007,000	982,578,000	467,126,000	816,306,000	1,331,758,000	11,962,765,000

## West Virginia Teachers' Retirement System

Table 6

## GASB-25 and GASB-27 Supplementary Disclosure Information as of June 30, 2006

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, 2006

<u>Group</u>	<u>Number</u>
Retirees, disabled retirees and beneficiaries currently receiving benefits	27,389
Terminated employees entitled to benefits but not yet receiving benefits	3,397
Terminated employees entitled to a return of employee contributions	55
Active Plan members	
Vested	16,160
Nonvested	<u>2,473</u>
Total	49,474

## 2. Schedule of Funding Progress (000 omitted)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial 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)
6/30/97	\$ 683,807	\$4,161,039	\$3,477,232	16.4%	\$ 924,529	376.1%
6/30/98	\$ 839,597	\$4,262,797	\$3,423,200	19.7%	\$ 878,364	389.7%
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%

\* 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.



3. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at July 1, 2006. Additional information follows.

Valuation date	7/1/2006
Actuarial cost method	Entry age
Amortization method	Level percentage of TRS and TDC Payrolls
Remaining amortization period	28 years
Asset valuation method	Market value
Actuarial assumptions:	
Investment rate of return	7.5%
Projected salary increases	
Teachers	3.5% - 5.0%
Non Teachers	4.25% - 5.5%
Inflation rate	3.0%

## West Virginia Teachers' Retirement System

Table 7

Valuation Assets as of June 30, 2006  
(000 omitted)

	<u>June 30, 2006</u>	<u>June 30, 2005</u>
Assets		
Cash with State Treasurer	\$ -	\$ 1
Investments at Fair Value	2,079,390	1,598,239
Contributions Receivable	85,460	16,701
Participant Loans Receivable	9,077	11,913
Miscellaneous Revenue Receivable	614	638
Total Assets	<u>\$ 2,174,541</u>	<u>\$ 1,627,492</u>
Liabilities		
Accrued Expenses and other Payables	<u>77</u>	<u>137</u>
Net Assets for Pension Benefits	\$ 2,174,464	\$ 1,627,355

## West Virginia Teachers' Retirement System

Table 8

Statement of Changes in Net Assets for Benefits  
For Year ended June 30, 2006  
(000 omitted)

Net Assets for Pension Benefits - Beginning of Year	\$ 1,627,355
Additions	
Contributions	
Member Type 1	45,262
Member Type 3	2,940
Employer Type 1	26,142
Employer Type 3	1,396
School Aid Formula	402,046
Special Appropriations	290,114
Special Contribution 2006 Retiree Incr	7,987
§33-3-14(d) Fees	2,519
Subtotal	<u>778,406</u>
Investment Income	
Net Appreciation in Fair Value *	130,649
Interest	16,524
Subtotal	<u>147,173</u>
Other Income	1,283
Total	<u>926,862</u>
Deductions and Transfers	
Benefit Expense	372,687
Refunds of Contributions	3,994
Administrative Expenses	2,282
Transfers (to)/from plans	790
Total	<u>379,753</u>
Net Increase	547,109
Net Assets for Pension Benefits - End of Year	\$ 2,174,464
Investment Return for Year:	
Valuation purposes (assumes mid-year transactions and offsets investment income by investment and administrative expenses)	8.00%
Per Investment Management Board (time-weighted, excluding administrative expense)	9.55%
* Net of Investment Expense	

## West Virginia Teachers' Retirement System

Table 9

## Reconciliation of Plan Participants

	Active	Retired	Beneficiaries	Vested Terms	Non-Vested Terms	Total
Census as of July 1, 2005	17,728	24,609	2,142	3,521	43	48,043
New Entrants	2,426	0	0	0	0	2,426
Returned to Active Status	44	0	0	(44)	0	0
Retired	(1,386)	1,507	0	(121)	0	0
Died	(36)	(909)	(104)	(10)	0	(1,059)
Terminated						
- Vested	(112)	0	0	112	0	0
- Non Vested	(4)	0	0	0	4	0
- Withdrew Contributions	(27)	0	0	(62)	(4)	(93)
New Beneficiaries	0	0	148	0	0	148
Transfers	0	0	0	0	0	0
Adjustments	0	3	(7)	1	12	9
Census as of July 1, 2006	18,633	25,210	2,179	3,397	55	49,474

## West Virginia Teachers' Retirement System

Table 10

## Summary of Membership

	7/1/2006 Valuation	7/1/2005 Valuation
<b>Active Members</b>		
Teachers	12,026	11,553
Non Teachers (including State)	6,607	6,175
Total	18,633	17,728
<b>Inactive Members</b>		
Retirees	23,172	22,642
Beneficiaries	2,179	2,142
Disabled Retirees	2,038	1,967
Vested Terminated	3,397	3,521
Nonvested Terminated	55	43
Total	30,841	30,315
<b>Total Members</b>	49,474	48,043

West Virginia  
Teachers' Retirement System  
Teachers

Table 11(a)

Number and Total Annual Compensation of Active Participants

Attained Age	Years of Credited Service																TOTAL
	0 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 & up		
	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	Tot. Comp.	
Under 25	247 6,894,129	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	247 6,894,129
25 to 29	431 12,484,150	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	431 12,484,150
30 to 34	192 5,671,943	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	192 5,671,943
35 to 39	210 5,941,902	2 71,491	46 1,933,580	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	210 5,941,902
40 to 44	132 4,003,357	12 508,182	278 12,382,454	263 12,209,067	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	132 4,003,357
45 to 49	99 3,189,868	18 733,083	219 9,836,009	742 34,540,686	764 36,097,019	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	99 3,189,868
50 to 54	108 3,638,531	25 1,094,964	308 13,671,813	547 25,593,138	1,626 77,469,856	1,557 77,255,787	4 210,790	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	108 3,638,531
55 to 59	83 3,046,738	23 1,078,749	337 15,682,852	528 24,890,333	734 35,251,734	1,207 63,010,985	477 26,018,686	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	83 3,046,738
60 to 64	30 1,094,029	9 424,820	85 3,862,071	135 6,275,259	126 6,014,426	103 5,300,404	145 8,148,433	40 2,310,517	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	30 1,094,029
65 to 69	3 129,177	1 58,271	13 589,692	20 895,554	18 859,198	15 815,206	17 906,523	19 976,831	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	3 129,177
70 & up	2 59,003	0 0	4 184,425	1 52,269	1 56,621	4 242,320	6 292,555	10 576,342	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	2 59,003
TOTAL	1,537 46,152,827	90 3,969,560	1,290 58,142,896	2,236 104,456,306	3,269 155,748,854	2,886 146,624,702	649 35,576,987	69 3,863,690	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	1,537 46,152,827

West Virginia  
Teachers' Retirement System  
Nonteachers (Including State Employees)

Table 11(b)

Number and Total Annual Compensation of Active Participants

Attained Age	Years of Credited Service														TOTAL	
	0 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up								
	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	No./ Comp.	Tot. Comp.	
Under 25	28 458,236	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 458,236	
25 to 29	84 1,535,665	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	84 1,535,665	
30 to 34	98 1,580,277	0 0	1 37,180	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	98 1,617,457	
35 to 39	190 3,071,771	0 0	46 1,442,884	3 108,729	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	239 4,623,384	
40 to 44	201 3,196,984	3 83,646	163 4,821,349	136 4,788,599	29 1,028,661	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	532 13,919,239	
45 to 49	145 2,369,341	7 176,497	225 6,610,454	278 9,340,172	347 12,698,286	44 1,602,002	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	1,046 32,796,752	
50 to 54	133 2,307,459	15 484,062	350 10,059,326	357 11,919,039	423 15,707,294	321 12,703,198	27 955,522	0 0	0 0	0 0	0 0	0 0	0 0	0 0	1,626 54,135,900	
55 to 59	74 1,196,058	12 291,717	403 11,523,946	503 15,707,373	479 16,444,292	237 9,415,734	88 4,019,294	8 312,960	0 0	0 0	0 0	0 0	0 0	0 0	1,804 58,911,374	
60 to 64	35 538,649	9 261,356	211 5,837,135	193 6,060,432	214 7,302,200	132 4,817,865	44 1,897,251	13 480,133	0 0	0 0	0 0	0 0	0 0	0 0	851 27,195,021	
65 to 69	8 143,314	0 0	44 1,114,522	40 1,239,533	35 1,081,128	38 1,243,167	22 789,685	16 968,520	0 0	0 0	0 0	0 0	0 0	0 0	203 6,579,869	
70 & up	1 16,663	1 10,013	21 471,503	7 169,579	20 686,339	15 514,925	15 521,766	15 506,864	0 0	0 0	0 0	0 0	0 0	0 0	95 2,897,652	
TOTAL	997 16,414,417	47 1,307,291	1,464 41,918,299	1,517 49,333,456	1,547 54,948,200	787 30,296,891	196 8,183,518	52 2,268,477	0 0	0 0	0 0	0 0	0 0	0 0	6,607 204,670,549	

West Virginia  
Teachers' Retirement System

Table 12

Distribution of the Number and Average Monthly Benefits  
of Retired Participants by Fifth Age as of July 1, 2006

Current Age	Service Retirees & Beneficiaries		Disabled Retirees		Total	
	Number	Avg. Mo. Benefit	Number	Avg. Mo. Benefit	Number	Avg. Mo. Benefit
35	35	638	1	165	36	625
40	24	703	11	364	35	596
45	38	822	76	653	114	709
50	108	1,211	226	979	334	1,054
55	2,155	2,291	530	985	2,685	2,033
60	3,872	1,882	554	837	4,426	1,751
65	4,461	1,389	336	632	4,797	1,336
70	4,248	1,117	127	522	4,375	1,099
75	3,904	959	75	434	3,979	949
80	3,032	806	63	384	3,095	798
85	2,000	681	28	406	2,028	677
90	1,083	585	11	320	1,094	583
95 and over	391	518	0	0	391	518
Total	25,351	1,253	2,038	790	27,389	1,218



West Virginia  
Teachers' Retirement System

Table 13

Distribution of the Number and Average Monthly Benefits  
of Participants Entitled to Deferred Benefits by Fifth Age as of July 1, 2006

Current Age	Total	
	Number	Avg. Mo. Benefit
30	0	0
35	19	407
40	470	294
45	962	421
50	856	635
55	762	705
60	257	632
65	47	466
70	24	451
75	0	0
80 and over	0	0
Total	3,397	538

- A. **Plan Name:** The State Teachers' Retirement System
- B. **Effective Date:** The State Teachers' Retirement System was 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. Members of the Teachers' Defined Contribution ("TDC") Plan 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 one-fourth 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 returning 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% 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% 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 §18-9-A-6a, beginning in Fiscal 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 of TRS Members hired on or after July 1, 2005 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% Contingent 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 and employer contributions with 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 3% 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.

**A. Valuation Date**

July 1, 2006

**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 adjusted date of hire, i.e., valuation date minus known past service.

**C. Interest Rate and Expenses**

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

**D. Mortality**

Mortality rates are shown in the Appendix.

The mortality tables for TRS and TDC Plan Members are as follows:

Healthy males: 1983 GAM male

Healthy females: 1983 GAM female set forward 1 year

Disabled males: Revenue ruling 96-7 disabled male table

Disabled females: Revenue ruling 96-7 disabled female table

**E. Salary Scales**

Salary scales are shown in the Appendix.

Salary scale rates are based on the 1998 - 2002 experience study.

Projected Salary increases are in the following ranges by group:

	<u>Range of Projected Salary Increases</u>
Teachers	3.50% - 5.00%
Non Teachers	4.25% - 5.50%

The underlying inflation rate is 3.0%.

For purposes of amortizing the unfunded actuarial accrued liability, the total TRS and TDC salary at July 1, 2006 was projected to increase 3.2% per year after FY2007.

**F. Withdrawal from Service**

Withdrawal rates are shown in the Appendix.

Withdrawal rates are assumed to cease upon eligibility for retirement. All withdrawal is assumed to result in refund of contributions if nonvested or a deferred annuity if vested.



**G. Disablement Rates**

Disablement rates are shown in the Appendix.

Disablement rates are those based on the 1998 - 2002 experience study.

**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**

Active members will accrue the following service for each future year of employment.

<u>Group</u>	<u>Males</u>	<u>Females</u>
Teachers	.98	.97
Nonteachers	.98	.98

**J. Noncontributory Service Loadings**

The load factor assumptions for noncontributory service (military, parochial or out-of-state teaching, transferred PERS service and unused sick leave) is as follows:

**Noncontributory Service Load Factors**

<u>Group</u>	<u>Males</u>	<u>Females</u>
Teachers	1.085	1.030
Nonteachers	1.080	1.030

**K. Retirement Rates**

Retirement rates are shown in the Appendix.

**L. Asset Valuation Method**

Assets for valuation purposes are included at Market Value.

**M. Plan Contribution**

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

Pre & Post-Retirement Healthy Mortality  
 1983 Group Annuity Mortality Male  
 1983 Group Annuity Mortality Female set forward 1 year

Age	Male	Female	Age	Male	Female	Age	Male	Female
19	0.00037	0.00019	50	0.00391	0.00179	80	0.07407	0.04766
20	0.00038	0.00020	51	0.00432	0.00195	81	0.08148	0.05269
21	0.00039	0.00021	52	0.00476	0.00212	82	0.08932	0.05807
22	0.00041	0.00023	53	0.00520	0.00232	83	0.09753	0.06381
23	0.00042	0.00024	54	0.00566	0.00254	84	0.10605	0.06992
24	0.00044	0.00025	55	0.00613	0.00280	85	0.11484	0.07657
25	0.00046	0.00027	56	0.00662	0.00310	86	0.12417	0.08387
26	0.00049	0.00028	57	0.00714	0.00344	87	0.13387	0.09194
27	0.00051	0.00030	58	0.00772	0.00382	88	0.14407	0.10135
28	0.00054	0.00032	59	0.00838	0.00424	89	0.15486	0.11175
29	0.00057	0.00034	60	0.00916	0.00470	90	0.16631	0.12308
30	0.00061	0.00036	61	0.01006	0.00521	91	0.17821	0.13563
31	0.00065	0.00039	62	0.01113	0.00577	92	0.19046	0.14958
32	0.00069	0.00041	63	0.01239	0.00639	93	0.20301	0.16510
33	0.00073	0.00044	64	0.01387	0.00706	94	0.21790	0.18242
34	0.00079	0.00048	65	0.01559	0.00782	95	0.23409	0.20176
35	0.00086	0.00050	66	0.01758	0.00868	96	0.24844	0.22204
36	0.00091	0.00054	67	0.01980	0.00970	97	0.26395	0.24390
37	0.00097	0.00057	68	0.02223	0.01092	98	0.28080	0.26819
38	0.00104	0.00062	69	0.02482	0.01239	99	0.29915	0.29519
39	0.00113	0.00067	70	0.02753	0.01413	100	0.31919	0.32523
40	0.00124	0.00072	71	0.03035	0.01616	101	0.34109	0.35890
41	0.00137	0.00078	72	0.03337	0.01848	102	0.36505	0.39584
42	0.00153	0.00084	73	0.03668	0.02109	103	0.39310	0.43836
43	0.00172	0.00092	74	0.04039	0.02399	104	0.42726	0.48782
44	0.00193	0.00101	75	0.04460	0.02719	105	0.46953	0.54589
45	0.00218	0.00112	76	0.04939	0.03067	106	0.52195	0.61431
46	0.00247	0.00124	77	0.05476	0.03446	107	0.58652	0.69489
47	0.00279	0.00137	78	0.06068	0.03855	108	0.66527	0.78947
48	0.00314	0.00151	79	0.06713	0.04295	109	0.76022	1.00000
49	0.00351	0.00165				110	1.00000	1.00000

Pre & Post-Retirement Disabled Mortality  
Revenue Ruling 96-7 Disabled Mortality Table

Age	Male	Female	Age	Male	Female	Age	Male	Female
19	0.02404	0.00924	50	0.04800	0.02796	80	0.10711	0.08048
20	0.02458	0.00965	51	0.04902	0.02883	81	0.11152	0.08524
21	0.02513	0.01008	52	0.05004	0.02973	82	0.11628	0.09048
22	0.02570	0.01052	53	0.05107	0.03066	83	0.12146	0.09622
23	0.02627	0.01098	54	0.05209	0.03161	84	0.12711	0.10251
24	0.02686	0.01147	55	0.05312	0.03259	85	0.13326	0.10937
25	0.02746	0.01197	56	0.05414	0.03361	86	0.13997	0.11684
26	0.02807	0.01250	57	0.05509	0.03466	87	0.14729	0.12495
27	0.02870	0.01306	58	0.05607	0.03573	88	0.15527	0.13374
28	0.02935	0.01363	59	0.05708	0.03685	89	0.16394	0.14323
29	0.03000	0.01423	60	0.05812	0.03799	90	0.17336	0.15348
30	0.03066	0.01484	61	0.05917	0.03918	91	0.18359	0.16450
31	0.03133	0.01547	62	0.06023	0.04040	92	0.19465	0.17633
32	0.03201	0.01610	63	0.06130	0.04165	93	0.20662	0.18901
33	0.03269	0.01660	64	0.06243	0.04295	94	0.21952	0.20257
34	0.03341	0.01712	65	0.06367	0.04429	95	0.23409	0.21705
35	0.03418	0.01765	66	0.06508	0.04567	96	0.24844	0.23247
36	0.03498	0.01820	67	0.06672	0.04683	97	0.26395	0.24887
37	0.03580	0.01877	68	0.06864	0.04807	98	0.28080	0.26629
38	0.03663	0.01936	69	0.07083	0.04958	99	0.29915	0.28476
39	0.03749	0.01996	70	0.07328	0.05133	100	0.31919	0.30343
40	0.03837	0.02058	71	0.07598	0.05327	101	0.34109	0.32739
41	0.03927	0.02122	72	0.07890	0.05536	102	0.36505	0.35902
42	0.04019	0.02188	73	0.08207	0.05757	103	0.39310	0.39584
43	0.04112	0.02256	74	0.08561	0.05998	104	0.42726	0.43836
44	0.04207	0.02326	75	0.08892	0.06257	105	0.46953	0.48782
45	0.04303	0.02399	76	0.09221	0.06548	106	0.52195	0.54589
46	0.04401	0.02473	77	0.09563	0.06869	107	0.58652	0.61431
47	0.04499	0.02550	78	0.09922	0.07224	108	0.66527	0.69488
48	0.04599	0.02630	79	0.10303	0.07616	109	0.76022	0.78947
49	0.04699	0.02712				110	1.00000	1.00000

## Teachers Salary Scale (Male &amp; Female)

<u>Age</u>		<u>Age</u>		<u>Age</u>	
19	1.05000	37	1.04150	54	1.03790
20	1.05000	38	1.04100	55	1.03775
21	1.04950	39	1.04050	56	1.03760
22	1.04900	40	1.04000	57	1.03745
23	1.04850	41	1.03985	58	1.03730
24	1.04800	42	1.03970	59	1.03715
25	1.04750	43	1.03955	60	1.03700
26	1.04700	44	1.03940	61	1.03680
27	1.04650	45	1.03925	62	1.03660
28	1.04600	46	1.03910	63	1.03640
29	1.04550	47	1.03895	64	1.03620
30	1.04500	48	1.03880	65	1.03600
31	1.04450	49	1.03865	66	1.03580
32	1.04400	50	1.03850	67	1.03560
33	1.04350	51	1.03835	68	1.03540
34	1.04300	52	1.03820	69	1.03520
35	1.04250	53	1.03805	70	1.03500
36	1.04200				

## Nonteachers and State Salary Scale (Male &amp; Female)

<u>Age</u>		<u>Age</u>		<u>Age</u>	
19	1.05500	37	1.05075	54	1.04650
20	1.05500	38	1.05050	55	1.04625
21	1.05475	39	1.05025	56	1.04600
22	1.05450	40	1.05000	57	1.04575
23	1.05425	41	1.04975	58	1.04550
24	1.05400	42	1.04950	59	1.04525
25	1.05375	43	1.04925	60	1.04500
26	1.05350	44	1.04900	61	1.04475
27	1.05325	45	1.04875	62	1.04450
28	1.05300	46	1.04850	63	1.04425
29	1.05275	47	1.04825	64	1.04400
30	1.05250	48	1.04800	65	1.04375
31	1.05225	49	1.04775	66	1.04350
32	1.05200	50	1.04750	67	1.04325
33	1.05175	51	1.04725	68	1.04300
34	1.05150	52	1.04700	69	1.04275
35	1.05125	53	1.04675	70	1.04250
36	1.05100				

## Teachers Withdrawal Decrements (less than 1 year)

Age	Male	Female	Age	Male	Female	Age	Male	Female
19	0.15000	0.15000	36	0.11800	0.11800	53	0.08400	0.08400
20	0.15000	0.15000	37	0.11600	0.11600	54	0.08200	0.08200
21	0.14800	0.14800	38	0.11400	0.11400	55	0.08000	0.08000
22	0.14600	0.14600	39	0.11200	0.11200	56	0.07800	0.07800
23	0.14400	0.14400	40	0.11000	0.11000	57	0.07600	0.07600
24	0.14200	0.14200	41	0.10800	0.10800	58	0.07400	0.07400
25	0.14000	0.14000	42	0.10600	0.10600	59	0.07200	0.07200
26	0.13800	0.13800	43	0.10400	0.10400	60	0.07000	0.07000
27	0.13600	0.13600	44	0.10200	0.10200	61	0.07000	0.07000
28	0.13400	0.13400	45	0.10000	0.10000	62	0.07000	0.07000
29	0.13200	0.13200	46	0.09800	0.09800	63	0.07000	0.07000
30	0.13000	0.13000	47	0.09600	0.09600	64	0.07000	0.07000
31	0.12800	0.12800	48	0.09400	0.09400	65	0.07000	0.07000
32	0.12600	0.12600	49	0.09200	0.09200	66	0.07000	0.07000
33	0.12400	0.12400	50	0.09000	0.09000	67	0.07000	0.07000
34	0.12200	0.12200	51	0.08800	0.08800	68	0.07000	0.07000
35	0.12000	0.12000	52	0.08600	0.08600	69	0.07000	0.07000

## Teachers Withdrawal Decrements (1 to 2 years)

Age	Male	Female	Age	Male	Female	Age	Male	Female
19	0.13000	0.13000	36	0.09600	0.09600	53	0.06000	0.06000
20	0.13000	0.13000	37	0.09200	0.09200	54	0.06000	0.06000
21	0.12800	0.12800	38	0.08800	0.08800	55	0.06000	0.06000
22	0.12600	0.12600	39	0.08400	0.08400	56	0.05800	0.05800
23	0.12400	0.12400	40	0.08000	0.08000	57	0.05600	0.05600
24	0.12200	0.12200	41	0.07800	0.07800	58	0.05400	0.05400
25	0.12000	0.12000	42	0.07600	0.07600	59	0.05200	0.05200
26	0.11800	0.11800	43	0.07400	0.07400	60	0.05000	0.05000
27	0.11600	0.11600	44	0.07200	0.07200	61	0.05000	0.05000
28	0.11400	0.11400	45	0.07000	0.07000	62	0.05000	0.05000
29	0.11200	0.11200	46	0.06800	0.06800	63	0.05000	0.05000
30	0.11000	0.11000	47	0.06600	0.06600	64	0.05000	0.05000
31	0.10800	0.10800	48	0.06400	0.06400	65	0.05000	0.05000
32	0.10600	0.10600	49	0.06200	0.06200	66	0.05000	0.05000
33	0.10400	0.10400	50	0.06000	0.06000	67	0.05000	0.05000
34	0.10200	0.10200	51	0.06000	0.06000	68	0.05000	0.05000
35	0.10000	0.10000	52	0.06000	0.06000	69	0.05000	0.05000

## Teachers Withdrawal Decrements (2 to 3 years)

Age	Male	Female	Age	Male	Female	Age	Male	Female
19	0.10000	0.10000	36	0.06700	0.06700	53	0.04000	0.04000
20	0.10000	0.10000	37	0.06400	0.06400	54	0.04000	0.04000
21	0.10000	0.10000	38	0.06100	0.06100	55	0.04000	0.04000
22	0.10000	0.10000	39	0.05800	0.05800	56	0.04000	0.04000
23	0.10000	0.10000	40	0.05500	0.05500	57	0.04000	0.04000
24	0.10000	0.10000	41	0.05200	0.05200	58	0.04000	0.04000
25	0.10000	0.10000	42	0.04900	0.04900	59	0.04000	0.04000
26	0.09700	0.09700	43	0.04600	0.04600	60	0.04000	0.04000
27	0.09400	0.09400	44	0.04300	0.04300	61	0.04000	0.04000
28	0.09100	0.09100	45	0.04000	0.04000	62	0.04000	0.04000
29	0.08800	0.08800	46	0.04000	0.04000	63	0.04000	0.04000
30	0.08500	0.08500	47	0.04000	0.04000	64	0.04000	0.04000
31	0.08200	0.08200	48	0.04000	0.04000	65	0.04000	0.04000
32	0.07900	0.07900	49	0.04000	0.04000	66	0.04000	0.04000
33	0.07600	0.07600	50	0.04000	0.04000	67	0.04000	0.04000
34	0.07300	0.07300	51	0.04000	0.04000	68	0.04000	0.04000
35	0.07000	0.07000	52	0.04000	0.04000	69	0.04000	0.04000

## Teachers Withdrawal Decrements (3 to 4 years)

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

## Teachers Withdrawal Decrements (4 to 5 years)

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

## Teachers Withdrawal Decrements (greater than 5 years)

Age	Male	Female	Age	Male	Female	Age	Male	Female
19	0.04500	0.04500	36	0.02400	0.02300	53	0.01000	0.00962
20	0.04500	0.04500	37	0.02300	0.02100	54	0.01000	0.01000
21	0.04400	0.04400	38	0.02200	0.01900	55	0.01500	0.01000
22	0.04300	0.04300	39	0.02100	0.01700	56	0.01750	0.01100
23	0.04200	0.04200	40	0.02000	0.01500	57	0.01500	0.01250
24	0.04100	0.04100	41	0.01900	0.01350	58	0.01250	0.01100
25	0.04000	0.04000	42	0.01800	0.01200	59	0.01000	0.01000
26	0.03800	0.03800	43	0.01700	0.01050	60	0.01000	0.01000
27	0.03600	0.03600	44	0.01600	0.00900	61	0.01000	0.01000
28	0.03400	0.03400	45	0.01500	0.00750	62	0.01000	0.01000
29	0.03200	0.03200	46	0.01400	0.00770	63	0.01000	0.01000
30	0.03000	0.03000	47	0.01300	0.00790	64	0.01000	0.01000
31	0.02900	0.02900	48	0.01200	0.00810	65	0.01000	0.01000
32	0.02800	0.02800	49	0.01100	0.00830	66	0.01000	0.01000
33	0.02700	0.02700	50	0.01000	0.00850	67	0.01000	0.01000
34	0.02600	0.02600	51	0.01000	0.00888	68	0.01000	0.01000
35	0.02500	0.02500	52	0.01000	0.00925	69	0.01000	0.01000



## Nonteachers and State Withdrawal Decrements (less than 1 year)

Age	Male	Female	Age	Male	Female	Age	Male	Female
19	0.15000	0.15000	36	0.11800	0.11800	53	0.08400	0.08400
20	0.15000	0.15000	37	0.11600	0.11600	54	0.08200	0.08200
21	0.14800	0.14800	38	0.11400	0.11400	55	0.08000	0.08000
22	0.14600	0.14600	39	0.11200	0.11200	56	0.07800	0.07800
23	0.14400	0.14400	40	0.11000	0.11000	57	0.07600	0.07600
24	0.14200	0.14200	41	0.10800	0.10800	58	0.07400	0.07400
25	0.14000	0.14000	42	0.10600	0.10600	59	0.07200	0.07200
26	0.13800	0.13800	43	0.10400	0.10400	60	0.07000	0.07000
27	0.13600	0.13600	44	0.10200	0.10200	61	0.07000	0.07000
28	0.13400	0.13400	45	0.10000	0.10000	62	0.07000	0.07000
29	0.13200	0.13200	46	0.09800	0.09800	63	0.07000	0.07000
30	0.13000	0.13000	47	0.09600	0.09600	64	0.07000	0.07000
31	0.12800	0.12800	48	0.09400	0.09400	65	0.07000	0.07000
32	0.12600	0.12600	49	0.09200	0.09200	66	0.07000	0.07000
33	0.12400	0.12400	50	0.09000	0.09000	67	0.07000	0.07000
34	0.12200	0.12200	51	0.08800	0.08800	68	0.07000	0.07000
35	0.12000	0.12000	52	0.08600	0.08600	69	0.07000	0.07000

## Nonteachers and State Withdrawal Decrements (1 to 2 years)

Age	Male	Female	Age	Male	Female	Age	Male	Female
19	0.13000	0.13000	36	0.09600	0.09600	53	0.06000	0.06000
20	0.13000	0.13000	37	0.09200	0.09200	54	0.06000	0.06000
21	0.12800	0.12800	38	0.08800	0.08800	55	0.06000	0.06000
22	0.12600	0.12600	39	0.08400	0.08400	56	0.05800	0.05800
23	0.12400	0.12400	40	0.08000	0.08000	57	0.05600	0.05600
24	0.12200	0.12200	41	0.07800	0.07800	58	0.05400	0.05400
25	0.12000	0.12000	42	0.07600	0.07600	59	0.05200	0.05200
26	0.11800	0.11800	43	0.07400	0.07400	60	0.05000	0.05000
27	0.11600	0.11600	44	0.07200	0.07200	61	0.05000	0.05000
28	0.11400	0.11400	45	0.07000	0.07000	62	0.05000	0.05000
29	0.11200	0.11200	46	0.06800	0.06800	63	0.05000	0.05000
30	0.11000	0.11000	47	0.06600	0.06600	64	0.05000	0.05000
31	0.10800	0.10800	48	0.06400	0.06400	65	0.05000	0.05000
32	0.10600	0.10600	49	0.06200	0.06200	66	0.05000	0.05000
33	0.10400	0.10400	50	0.06000	0.06000	67	0.05000	0.05000
34	0.10200	0.10200	51	0.06000	0.06000	68	0.05000	0.05000
35	0.10000	0.10000	52	0.06000	0.06000	69	0.05000	0.05000

Nonteachers and 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	0.10000	0.10000	36	0.06700	0.06700	53	0.04000	0.04000
20	0.10000	0.10000	37	0.06400	0.06400	54	0.04000	0.04000
21	0.10000	0.10000	38	0.06100	0.06100	55	0.04000	0.04000
22	0.10000	0.10000	39	0.05800	0.05800	56	0.04000	0.04000
23	0.10000	0.10000	40	0.05500	0.05500	57	0.04000	0.04000
24	0.10000	0.10000	41	0.05200	0.05200	58	0.04000	0.04000
25	0.10000	0.10000	42	0.04900	0.04900	59	0.04000	0.04000
26	0.09700	0.09700	43	0.04600	0.04600	60	0.04000	0.04000
27	0.09400	0.09400	44	0.04300	0.04300	61	0.04000	0.04000
28	0.09100	0.09100	45	0.04000	0.04000	62	0.04000	0.04000
29	0.08800	0.08800	46	0.04000	0.04000	63	0.04000	0.04000
30	0.08500	0.08500	47	0.04000	0.04000	64	0.04000	0.04000
31	0.08200	0.08200	48	0.04000	0.04000	65	0.04000	0.04000
32	0.07900	0.07900	49	0.04000	0.04000	66	0.04000	0.04000
33	0.07600	0.07600	50	0.04000	0.04000	67	0.04000	0.04000
34	0.07300	0.07300	51	0.04000	0.04000	68	0.04000	0.04000
35	0.07000	0.07000	52	0.04000	0.04000	69	0.04000	0.04000

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

## Nonteachers and State Withdrawal Decrements (4 to 5 years)

Age	Male	Female	Age	Male	Female	Age	Male	Female
19	0.06000	0.06000	36	0.03800	0.03800	53	0.02000	0.02000
20	0.06000	0.06000	37	0.03600	0.03600	54	0.02000	0.02000
21	0.05800	0.05800	38	0.03400	0.03400	55	0.02000	0.02000
22	0.05600	0.05600	39	0.03200	0.03200	56	0.01900	0.01900
23	0.05400	0.05400	40	0.03000	0.03000	57	0.01800	0.01800
24	0.05200	0.05200	41	0.02900	0.02900	58	0.01700	0.01700
25	0.05000	0.05000	42	0.02800	0.02800	59	0.01600	0.01600
26	0.05000	0.05000	43	0.02700	0.02700	60	0.01500	0.01500
27	0.05000	0.05000	44	0.02600	0.02600	61	0.01500	0.01500
28	0.05000	0.05000	45	0.02500	0.02500	62	0.01500	0.01500
29	0.05000	0.05000	46	0.02400	0.02400	63	0.01500	0.01500
30	0.05000	0.05000	47	0.02300	0.02300	64	0.01500	0.01500
31	0.04800	0.04800	48	0.02200	0.02200	65	0.01500	0.01500
32	0.04600	0.04600	49	0.02100	0.02100	66	0.01500	0.01500
33	0.04400	0.04400	50	0.02000	0.02000	67	0.01500	0.01500
34	0.04200	0.04200	51	0.02000	0.02000	68	0.01500	0.01500
35	0.04000	0.04000	52	0.02000	0.02000	69	0.01500	0.01500

## Nonteachers and State Withdrawal Decrements (greater than 5 years)

Age	Male	Female	Age	Male	Female	Age	Male	Female
19	0.04000	0.04000	36	0.02150	0.03100	53	0.01063	0.01750
20	0.04000	0.04000	37	0.02050	0.02950	54	0.01000	0.01750
21	0.03900	0.04395	38	0.01950	0.02800	55	0.01000	0.01750
22	0.03800	0.03900	39	0.01850	0.02650	56	0.01100	0.01650
23	0.03700	0.03850	40	0.01750	0.02500	57	0.01250	0.01500
24	0.03600	0.03800	41	0.01700	0.02400	58	0.01100	0.01250
25	0.03500	0.03750	42	0.01650	0.02300	59	0.01000	0.01000
26	0.03400	0.03700	43	0.01600	0.02200	60	0.01000	0.01000
27	0.03300	0.03650	44	0.01550	0.02100	61	0.01000	0.01000
28	0.03200	0.03600	45	0.01500	0.02000	62	0.01000	0.01000
29	0.03100	0.03550	46	0.01450	0.01950	63	0.01000	0.01000
30	0.03000	0.03500	47	0.01400	0.01900	64	0.01000	0.01000
31	0.02850	0.03450	48	0.01350	0.01850	65	0.01000	0.01000
32	0.02700	0.03400	49	0.01300	0.01800	66	0.01000	0.01000
33	0.02550	0.03350	50	0.01250	0.01750	67	0.01000	0.01000
34	0.02400	0.03300	51	0.01187	0.01750	68	0.01000	0.01000
35	0.02250	0.03250	52	0.01125	0.01750	69	0.01000	0.01000

