



**West Virginia  
Teachers Retirement System**

**Actuarial Valuation  
As of July 1, 2005**

**Prepared by:**

**buckconsultants**   
an ACS company A C S

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

**January 2006**



January 16, 2006

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, 2005

Retirement Board Members:

We respectfully present our report on the actuarial valuation of the West Virginia Teachers' Retirement System as of July 1, 2005. This valuation presents the liabilities of the plan as of the valuation date and the projected Employer contribution for fiscal year 2007.

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 2007 is \$348,688,000. The State appropriation needed for Fiscal Year 2007 for the Teachers' Retirement Plans (TRS and TDC) under the School Aid Formula is \$363,324,000.
- The funded percentage of plan assets to the actuarial accrued liability as of the valuation date is 25%, an increase of 3% 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, 2005 maintained by the West Virginia Consolidated Public Retirement Board,
- financial information received from the West Virginia Investment Management Board.

Board of Trustees

January 16, 2006

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Effective July 1, 2005 all education employees hired on or after July 1, 2005 will 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. The July 1, 2005 valuation of TRS does not include any new hires as of July 1, 2005. However, both the projected State contribution to the Plan for Fiscal Year 2007 and the projected State appropriation needed for Fiscal Year 2007 under the School Aid Formula anticipate this change, based on the results of prior special studies.

This report presents fairly the actuarial position of the West Virginia Teachers' Retirement System (TRS) as of July 1, 2005 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, 2005 actuarial valuation of the West Virginia Teachers' Retirement System and includes the projected employer contribution requirement for Fiscal Year 2007. 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 2007 for West Virginia's Teachers Retirement Plans under the School Aid Formula (SAF), which is determined to be \$363,324,000. 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 2007.

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 2007 are shown in Table 1.

Effective July 1, 2005 all education employees hired on and after July 1, 2005 will 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).

Both the projected FY2007 State contribution to TRS and the projected FY2007 State appropriation under the School Aid Formula anticipate this change, based on the results of prior special studies.

The State's TRS contribution for FY2007, 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 1999 \$500 retiree minimum and the 2001 retiree increase.

The total State TRS contribution on this basis is \$348,688,000.

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 1999 \$500 retiree minimum is \$3,080,000. This payment will be made through FY2006.

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

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 2007 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, 2005 and, for comparison purposes, July 1, 2004. Under the funding target it is expected that the unfunded actuarial accrued liability will gradually increase for approximately 8 years, remain relatively level for about 2-3 years and 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, 2005 was \$5.061 billion. The actual unfunded liability at the valuation date is \$4.990 billion, a decrease of \$71 million.

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

- Plan assets returned approximately 10.1% over the year ending June 30, 2005. This was well above the prior year's valuation assumption of a 7.5% return and decreased the unfunded liability by approximately \$38 million.
- Employer contributions were higher than expected which decreased the unfunded liability by approximately \$11 million.
- The combined impact of plan experience from turnover, mortality and retirement, and data adjustments decreased the unfunded liability by approximately \$22 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 30 year period, i.e., increasing to approximately \$5.3 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>7/1/2005</u> | <u>7/1/2004</u> |
|--------------------------|-----------------|-----------------|
| Actives                  | 17,728          | 19,313          |
| Retirees & Beneficiaries | 26,751          | 26,050          |
| Terminated Vested        | 3,521           | 3,629           |
| Terminated Nonvested     | 43              | 47              |
| Total                    | <u>48,043</u>   | <u>49,039</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, 2005     | July 1, 2004     |
| 1. Present Value of Benefits                              |                  |                  |
| a. Active                                                 | \$ 3,624,297     | \$ 3,767,496     |
| b. Inactive - Retirees                                    | 2,999,453        | 2,756,053        |
| - Disabled Retirees                                       | 147,137          | 133,954          |
| - Beneficiaries                                           | 131,985          | 123,014          |
| - Vested Terminated                                       | 126,665          | 123,588          |
| - Non-Vested Terminated                                   | <u>268</u>       | <u>278</u>       |
| c. Total                                                  | 7,029,805        | 6,904,383        |
| 2. Actuarial Accrued Liability                            | 6,617,708        | 6,440,738        |
| 3. Assets (Market Value)                                  | <u>1,627,355</u> | <u>1,427,475</u> |
| 4. Unfunded Actuarial Accrued Liability (UAL)             | 4,990,353        | 5,013,263        |
| 5. Annual Normal Cost Rate: Type 1 (Pre 7/1/1991 Group)   |                  |                  |
| a. Present Value of Future Normal Costs                   | 412,097          | 463,645          |
| b. Present Value of Future Pay                            | 4,498,554        | 5,043,708        |
| c. Normal Cost Rate as a % of Payroll                     | 9.16%            | 9.19%            |
| d. Employee share                                         | 6.00%            | 6.00%            |
| e. Employer share                                         | 3.16%            | 3.19%            |
| f. TRS FY2006 (2005) Normal Cost Payroll                  | 735,614          | 784,415          |
| g. Employer FY2006 (2005) Normal Cost (BOY)               | 23,245           | 25,023           |
| h. TRS FY2007 (2006) Normal Cost Payroll                  | 690,924          | 745,127          |
| i. Employer FY2007 (2006) Normal Cost (BOY)               | 21,833           | 23,770           |
| 6. Annual Normal Cost Rate: Type 3 (Post 6/30/2005 Group) |                  |                  |
| a. Present Value of Future Normal Costs                   | N/A              | N/A              |
| b. Present Value of Future Pay                            | N/A              | N/A              |
| c. Normal Cost Rate as a % of Payroll                     | 10.34%           | 10.34%           |
| d. Employee share                                         | 6.00%            | 6.00%            |
| e. Employer share                                         | 4.34%            | 4.34%            |
| f. TRS FY2006 (2005) Normal Cost Payroll                  | 56,142           | N/A              |
| g. Employer FY2006 (2005) Normal Cost (BOY)               | 2,437            | N/A              |
| h. TRS FY2007 (2006) Normal Cost Payroll                  | 149,907          | 69,825           |
| i. Employer FY2007 (2006) Normal Cost (BOY)               | 6,506            | 3,030            |

Table 1 (Continued)  
(000 omitted)

|                                                                               | Valuation Date        |              |
|-------------------------------------------------------------------------------|-----------------------|--------------|
|                                                                               | July 1, 2005          | July 1, 2004 |
| 7. Employer Contribution for FY2006/FY2007,<br>assumes mid-year contribution: |                       |              |
|                                                                               | FY2006                | FY2005       |
| a. FY2006 (2005)                                                              |                       |              |
| i. TRS and TDC Payroll                                                        | 1,426,056             | 1,414,130    |
| ii. FY2006 (2005) TRS Contribution                                            |                       |              |
| A. Normal Cost                                                                | 26,627                | 25,944       |
| B. Amortization components                                                    |                       |              |
| - Original UAL over 40 years as<br>level % of TRS + TDC Payroll               | 295,774               | 291,175      |
| - 1999, \$500 retiree minimum                                                 | 3,080                 | 3,080        |
| - 2001, retiree increase                                                      | 14,334                | 14,334       |
| C. Total                                                                      | 339,815               | 334,533      |
| iii. FY2006 (2005) Contribution as a %<br>of Payroll                          | 23.83%                | 23.66%       |
|                                                                               | FY2007                | FY2006       |
| b. FY2007 (2006)                                                              |                       |              |
| i. TRS and TDC Payroll                                                        | 1,471,690             | 1,459,382    |
| ii. FY2007 (2006) TRS Contribution                                            |                       |              |
| A. Normal Cost                                                                | 29,383                | 27,787       |
| B. Amortization Components                                                    |                       |              |
| - original UAL over 40 years as a<br>level % of TRS & TDC payroll             | 304,971               | 300,014      |
| - 1999, \$500 retiree minimum                                                 | 0                     | 3,080        |
| - 2001, retiree increase                                                      | 14,334                | 14,334       |
| C. Total                                                                      | 348,688               | 345,215      |
| iii. FY2007 (2006) TRS Contribution as a %<br>of Payroll                      | 23.69%                | 23.65%       |
| iv. FY2007 (2006) SAF appropriation <sup>1/</sup>                             | 363,324 <sup>2/</sup> | 362,870      |
| v. FY2007 (2006) SAF appropriation as a %<br>of Payroll                       | 24.69%                | 24.86%       |

<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 FY2007.

## West Virginia Teachers' Retirement System

Table 2

Development of School Aid Formula Appropriation for Fiscal Year 2007  
(000 omitted)

|                                                                    |    |               |
|--------------------------------------------------------------------|----|---------------|
| TRS Contribution for FY2007                                        | \$ | 334,354       |
| + .075 x School Aid Formula (TDC only) <sup>1/</sup>               |    | 37,618        |
| - .15 x County Portion of the Old Group TRS payroll <sup>2/</sup>  |    | (21,359)      |
| - .075 x County Portion of the New Group TRS Payroll <sup>3/</sup> |    | (2,318)       |
| - Fire Tax Per Code section 33-3-14(d)                             |    | (2,546)       |
| + State payment equal to TDC forfeitures <sup>4/</sup>             |    | <u>3,241</u>  |
| Subtotal of Standard SAF Appropriation                             | \$ | 348,990       |
| Special Payments for Benefit Improvements<br>2001 Retiree Increase |    | <u>14,334</u> |
| Total FY2007 SAF Appropriation                                     |    | 363,324       |

<sup>1/</sup> School Aid Formula for TDC only is  $.7904 \times \text{FY2007 TDC pay for County employees} + \text{FY2007 TDC pay for State employees} = .7904 \times \$616,850 + \$14,010 = \$501,568$

<sup>2/</sup> County portion of the Old Group TRS payroll is  $.2096 \times \text{FY2007 TRS pay for County employees} = .2096 \times \$679,346 = \$142,391$

<sup>3/</sup> County portion of the New Group TRS payroll is  $.2096 \times \text{FY2007 TRS pay for County employees} = .2096 \times \$147,464 = \$30,908$

<sup>4/</sup> Actual amount to be released from the TDC suspense account at 6/30/2005 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<br>6/30 | Unfunded<br>AAL<br>BOY | Employer<br>Normal Cost <sup>1</sup><br>Type 1 (MOY) | Projected<br>Type 1 TRS<br>Payroll | Projected<br>Type 3 TRS<br>Payroll | Projected<br>Total Payroll<br>TRS+TDC | Total Type 1 Employer<br>Contribution <sup>3</sup> |              |
|-------------------|------------------------|------------------------------------------------------|------------------------------------|------------------------------------|---------------------------------------|----------------------------------------------------|--------------|
|                   |                        |                                                      |                                    |                                    |                                       | % of Payroll                                       | Amount (MOY) |
| 2006              | 4,948,698              | 24,645                                               | 735,614                            | 56,142                             | 1,426,056                             | 22.77%                                             | 324,659      |
| 2007              | 5,008,789              | 22,637                                               | 690,924                            | 149,907                            | 1,471,690                             | 22.26%                                             | 327,608      |
| 2008              | 5,068,248              | 21,440                                               | 654,387                            | 232,558                            | 1,518,784                             | 22.13%                                             | 336,169      |
| 2009              | 5,122,049              | 20,068                                               | 612,500                            | 322,221                            | 1,567,385                             | 22.00%                                             | 344,868      |
| 2010              | 5,169,443              | 18,550                                               | 566,191                            | 419,013                            | 1,617,542                             | 21.87%                                             | 353,744      |
| 2011              | 5,209,615              | 16,937                                               | 516,938                            | 521,934                            | 1,669,303                             | 21.74%                                             | 362,857      |
| 2012              | 5,241,679              | 15,272                                               | 466,129                            | 629,735                            | 1,722,721                             | 21.61%                                             | 372,262      |
| 2013              | 5,264,670              | 13,582                                               | 414,537                            | 742,082                            | 1,777,848                             | 21.49%                                             | 381,996      |
| 2014              | 5,277,540              | 11,925                                               | 363,972                            | 857,093                            | 1,834,739                             | 21.37%                                             | 392,128      |
| 2015              | 5,279,153              | 10,334                                               | 315,426                            | 974,086                            | 1,893,450                             | 21.27%                                             | 402,703      |
| 2016              | 5,268,273              | 8,863                                                | 270,523                            | 1,090,982                          | 1,954,041                             | 21.18%                                             | 413,788      |
| 2017              | 5,243,558              | 7,506                                                | 229,104                            | 1,208,342                          | 2,016,570                             | 21.09%                                             | 425,389      |
| 2018              | 5,203,555              | 6,256                                                | 190,952                            | 1,326,557                          | 2,081,100                             | 21.02%                                             | 437,511      |
| 2019              | 5,146,687              | 5,144                                                | 156,993                            | 1,444,247                          | 2,147,696                             | 20.96%                                             | 450,199      |
| 2020              | 5,071,246              | 4,167                                                | 127,180                            | 1,561,247                          | 2,216,422                             | 20.91%                                             | 463,464      |
| 2021              | 4,975,380              | 3,321                                                | 101,349                            | 1,677,596                          | 2,287,347                             | 20.87%                                             | 477,315      |
| 2022              | 4,857,086              | 2,598                                                | 79,303                             | 1,794,050                          | 2,360,542                             | 20.83%                                             | 491,760      |
| 2023              | 4,714,193              | 1,997                                                | 60,962                             | 1,912,215                          | 2,436,080                             | 20.80%                                             | 506,812      |
| 2024              | 4,544,354              | 1,517                                                | 46,303                             | 2,032,746                          | 2,514,034                             | 20.78%                                             | 522,486      |
| 2025              | 4,345,028              | 1,135                                                | 34,641                             | 2,154,207                          | 2,594,483                             | 20.77%                                             | 538,775      |
| 2026              | 4,113,468              | 835                                                  | 25,484                             | 2,276,088                          | 2,677,507                             | 20.75%                                             | 555,680      |
| 2027              | 3,846,703              | 603                                                  | 18,408                             | 2,398,148                          | 2,763,187                             | 20.74%                                             | 573,203      |
| 2028              | 3,541,521              | 426                                                  | 12,990                             | 2,520,774                          | 2,851,609                             | 20.74%                                             | 591,349      |
| 2029              | 3,194,453              | 294                                                  | 8,988                              | 2,644,649                          | 2,942,861                             | 20.73%                                             | 610,127      |
| 2030              | 2,801,749              | 201                                                  | 6,120                              | 2,769,941                          | 3,037,032                             | 20.73%                                             | 629,548      |
| 2031              | 2,359,359              | 133                                                  | 4,061                              | 2,897,082                          | 3,134,217                             | 20.73%                                             | 649,619      |
| 2032              | 1,862,910              | 85                                                   | 2,596                              | 3,026,507                          | 3,234,512                             | 20.73%                                             | 670,355      |
| 2033              | 1,307,678              | 54                                                   | 1,634                              | 3,158,283                          | 3,338,017                             | 20.72%                                             | 691,773      |
| 2034              | 688,564                | 32                                                   | 979                                | 3,292,089                          | 3,444,833                             | 20.72%                                             | 713,886      |

<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<br>6/30 | (1)<br>Unfunded<br>AAL<br>BOY <sup>1</sup> | (2)<br>Interest<br>on Unfunded<br>@ 7.5 % | (3)<br>MOY<br>Contribution<br>Toward<br>Unfunded <sup>2</sup> | (4)<br>Unfunded<br>Funding<br>Progress<br>(3)x1.03682 - (2) |
|-------------------|--------------------------------------------|-------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------|
| 2006              | 4,948,698                                  | 371,152                                   | 300,014                                                       | (60,091)                                                    |
| 2007              | 5,008,789                                  | 375,659                                   | 304,971                                                       | (59,458)                                                    |
| 2008              | 5,068,248                                  | 380,119                                   | 314,729                                                       | (53,801)                                                    |
| 2009              | 5,122,049                                  | 384,154                                   | 324,800                                                       | (47,394)                                                    |
| 2010              | 5,169,443                                  | 387,708                                   | 335,194                                                       | (40,171)                                                    |
| 2011              | 5,209,615                                  | 390,721                                   | 345,920                                                       | (32,064)                                                    |
| 2012              | 5,241,679                                  | 393,126                                   | 356,990                                                       | (22,991)                                                    |
| 2013              | 5,264,670                                  | 394,850                                   | 368,414                                                       | (12,870)                                                    |
| 2014              | 5,277,540                                  | 395,816                                   | 380,203                                                       | (1,613)                                                     |
| 2015              | 5,279,153                                  | 395,936                                   | 392,369                                                       | 10,881                                                      |
| 2016              | 5,268,273                                  | 395,120                                   | 404,925                                                       | 24,715                                                      |
| 2017              | 5,243,558                                  | 393,267                                   | 417,883                                                       | 40,003                                                      |
| 2018              | 5,203,555                                  | 390,267                                   | 431,255                                                       | 56,868                                                      |
| 2019              | 5,146,687                                  | 386,002                                   | 445,055                                                       | 75,441                                                      |
| 2020              | 5,071,246                                  | 380,343                                   | 459,297                                                       | 95,866                                                      |
| 2021              | 4,975,380                                  | 373,154                                   | 473,994                                                       | 118,293                                                     |
| 2022              | 4,857,086                                  | 364,281                                   | 489,162                                                       | 142,893                                                     |
| 2023              | 4,714,193                                  | 353,564                                   | 504,815                                                       | 169,839                                                     |
| 2024              | 4,544,354                                  | 340,827                                   | 520,969                                                       | 199,325                                                     |
| 2025              | 4,345,028                                  | 325,877                                   | 537,640                                                       | 231,560                                                     |
| 2026              | 4,113,468                                  | 308,510                                   | 554,845                                                       | 266,766                                                     |
| 2027              | 3,846,703                                  | 288,503                                   | 572,600                                                       | 305,181                                                     |
| 2028              | 3,541,521                                  | 265,614                                   | 590,923                                                       | 347,068                                                     |
| 2029              | 3,194,453                                  | 239,584                                   | 609,833                                                       | 392,704                                                     |
| 2030              | 2,801,749                                  | 210,131                                   | 629,347                                                       | 442,390                                                     |
| 2031              | 2,359,359                                  | 176,952                                   | 649,486                                                       | 496,449                                                     |
| 2032              | 1,862,910                                  | 139,718                                   | 670,270                                                       | 555,233                                                     |
| 2033              | 1,307,678                                  | 98,076                                    | 691,719                                                       | 619,114                                                     |
| 2034              | 688,564                                    | 51,642                                    | 713,854                                                       | 688,498                                                     |

<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 FY2006 Through FY2034

| FY<br>Ending<br>6/30 | (1)                    | (2)                       | (3)         | (4)         | (5)           | (6)                   |
|----------------------|------------------------|---------------------------|-------------|-------------|---------------|-----------------------|
|                      | Assets<br>Beg. of Year | Expected<br>Contributions | Benefits    | Earnings    | Net Income    | Assets<br>End of Year |
| 2006                 | 1,627,355,000          | 389,578,000               | 384,497,000 | 122,239,000 | 127,320,000   | 1,754,675,000         |
| 2007                 | 1,754,675,000          | 392,392,000               | 405,994,000 | 131,100,000 | 117,498,000   | 1,872,173,000         |
| 2008                 | 1,872,173,000          | 403,720,000               | 431,708,000 | 139,382,000 | 111,394,000   | 1,983,567,000         |
| 2009                 | 1,983,567,000          | 400,951,000               | 459,321,000 | 146,618,000 | 88,248,000    | 2,071,815,000         |
| 2010                 | 2,071,815,000          | 412,856,000               | 488,450,000 | 152,603,000 | 77,009,000    | 2,148,824,000         |
| 2011                 | 2,148,824,000          | 425,189,000               | 518,510,000 | 157,726,000 | 64,405,000    | 2,213,229,000         |
| 2012                 | 2,213,229,000          | 438,014,000               | 548,711,000 | 161,916,000 | 51,219,000    | 2,264,448,000         |
| 2013                 | 2,264,448,000          | 451,393,000               | 578,624,000 | 165,149,000 | 37,918,000    | 2,302,366,000         |
| 2014                 | 2,302,366,000          | 465,392,000               | 606,544,000 | 167,480,000 | 26,328,000    | 2,328,694,000         |
| 2015                 | 2,328,694,000          | 480,074,000               | 631,900,000 | 169,062,000 | 17,236,000    | 2,345,930,000         |
| 2016                 | 2,345,930,000          | 495,478,000               | 653,539,000 | 170,125,000 | 12,064,000    | 2,357,994,000         |
| 2017                 | 2,357,994,000          | 511,636,000               | 671,812,000 | 170,952,000 | 10,776,000    | 2,368,770,000         |
| 2018                 | 2,368,770,000          | 528,562,000               | 686,478,000 | 171,843,000 | 13,927,000    | 2,382,697,000         |
| 2019                 | 2,382,697,000          | 546,273,000               | 696,740,000 | 173,162,000 | 22,695,000    | 2,405,392,000         |
| 2020                 | 2,405,392,000          | 564,770,000               | 702,750,000 | 175,324,000 | 37,344,000    | 2,442,736,000         |
| 2021                 | 2,442,736,000          | 584,052,000               | 704,649,000 | 178,765,000 | 58,168,000    | 2,500,904,000         |
| 2022                 | 2,500,904,000          | 604,161,000               | 702,309,000 | 183,954,000 | 85,806,000    | 2,586,710,000         |
| 2023                 | 2,586,710,000          | 625,203,000               | 696,218,000 | 191,388,000 | 120,373,000   | 2,707,083,000         |
| 2024                 | 2,707,083,000          | 647,229,000               | 686,091,000 | 201,600,000 | 162,738,000   | 2,869,821,000         |
| 2025                 | 2,869,821,000          | 670,106,000               | 672,253,000 | 215,158,000 | 213,011,000   | 3,082,832,000         |
| 2026                 | 3,082,832,000          | 693,774,000               | 655,310,000 | 232,629,000 | 271,093,000   | 3,353,925,000         |
| 2027                 | 3,353,925,000          | 718,196,000               | 635,745,000 | 254,580,000 | 337,031,000   | 3,690,956,000         |
| 2028                 | 3,690,956,000          | 743,375,000               | 613,708,000 | 281,596,000 | 411,263,000   | 4,102,219,000         |
| 2029                 | 4,102,219,000          | 769,345,000               | 589,639,000 | 314,284,000 | 493,990,000   | 4,596,209,000         |
| 2030                 | 4,596,209,000          | 796,112,000               | 563,896,000 | 353,266,000 | 585,482,000   | 5,181,691,000         |
| 2031                 | 5,181,691,000          | 823,688,000               | 536,840,000 | 399,189,000 | 686,037,000   | 5,867,728,000         |
| 2032                 | 5,867,728,000          | 852,101,000               | 508,797,000 | 452,721,000 | 796,025,000   | 6,663,753,000         |
| 2033                 | 6,663,753,000          | 881,368,000               | 480,001,000 | 514,561,000 | 915,928,000   | 7,579,681,000         |
| 2034                 | 7,579,681,000          | 911,470,000               | 450,768,000 | 585,440,000 | 1,046,142,000 | 8,625,823,000         |

## West Virginia Teachers' Retirement System

Table 6

## GASB-25 and GASB-27 Supplementary Disclosure Information as of June 30, 2005

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, 2005

| <u>Group</u>                                                               | <u>Number</u> |
|----------------------------------------------------------------------------|---------------|
| Retirees, disabled retirees and beneficiaries currently receiving benefits | 26,751        |
| Terminated employees entitled to benefits but not yet receiving benefits   | 3,521         |
| Terminated employees entitled to a return of employee contributions        | 43            |
| Active Plan members                                                        |               |
| Vested                                                                     | 17,656        |
| Nonvested                                                                  | <u>72</u>     |
| Total                                                                      | 48,043        |

## 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%                                           |

\* 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, 2005. Additional information follows.

|                               |                                 |
|-------------------------------|---------------------------------|
| Valuation date                | 7/1/2005                        |
| Actuarial cost method         | Entry age                       |
| Amortization method           | Level percentage of TRS and TDC |
|                               | Payrolls                        |
| Remaining amortization period | 29 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, 2005  
(000 omitted)

| Assets                                 | <u>June 30, 2005</u> | <u>June 30, 2004</u> |
|----------------------------------------|----------------------|----------------------|
| Cash with State Treasurer              | \$ 1                 | \$ 465               |
| Investments at Fair Value              | 1,598,239            | 1,391,895            |
| Contributions Receivable               | 16,701               | 18,751               |
| Participant Loans Receivable           | 11,913               | 15,871               |
| Miscellaneous Revenue Receivable       | 638                  | 599                  |
| Total Assets                           | <u>\$ 1,627,492</u>  | <u>\$ 1,427,581</u>  |
| Liabilities                            |                      |                      |
| Accrued Expenses and<br>other Payables | <u>137</u>           | <u>106</u>           |
| Net Assets for Pension Benefits        | \$ 1,627,355         | \$ 1,427,475         |

## West Virginia Teachers' Retirement System

Table 8

**Statement of Changes in Net Assets for Benefits  
For Year ended June 30, 2005  
(000 omitted)**

|                                                                                                                            |                |
|----------------------------------------------------------------------------------------------------------------------------|----------------|
| Net Assets for Pension Benefits - Beginning of Year                                                                        | \$ 1,427,475   |
| Additions                                                                                                                  |                |
| Revenue                                                                                                                    |                |
| Member Contributions                                                                                                       | 49,287         |
| Employer Contributions                                                                                                     | 339,724        |
| §33-3-33(a)(1) and §33-3-14(d) Fees                                                                                        | 13,281         |
| Subtotal                                                                                                                   | <u>402,292</u> |
| Investment Income                                                                                                          |                |
| Net Appreciation in Fair Value *                                                                                           | 146,399        |
| Interest                                                                                                                   | 1,392          |
| Subtotal                                                                                                                   | <u>147,791</u> |
| Other Income                                                                                                               | 1,138          |
| Total                                                                                                                      | <u>551,221</u> |
| Deductions and Transfers                                                                                                   |                |
| Benefit Expense                                                                                                            | 344,841        |
| Refunds of Contributions                                                                                                   | 4,098          |
| Administrative Expenses                                                                                                    | 1,716          |
| Transfers (to)/from plans                                                                                                  | 686            |
| Total                                                                                                                      | <u>351,341</u> |
| Net Increase                                                                                                               | 199,880        |
| Net Assets for Pension Benefits - End of Year                                                                              | \$ 1,627,355   |
| Investment Return for Year:                                                                                                |                |
| Valuation purposes (assumes mid-year transactions and offsets investment income by investment and administrative expenses) | 10.04%         |
| Per Investment Management Board (time-weighted, excluding administrative expense)                                          | 10.56%         |

\* Net of Investment Expense

## West Virginia Teachers' Retirement System

Table 9

## Reconciliation of Plan Participants

|                                  | Active  | Retired | Beneficiaries | Vested<br>Terms | Non-Vested<br>Terms | Total   |
|----------------------------------|---------|---------|---------------|-----------------|---------------------|---------|
| <b>Census as of July 1, 2004</b> | 19,313  | 23,992  | 2,058         | 3,629           | 47                  | 49,039  |
| New Entrants                     | 23      | 0       | 0             | 0               | 0                   | 23      |
| Returned to Active Status        | 46      | 0       | 0             | (45)            | (1)                 | 0       |
| Retired                          | (1,443) | 1,574   | 0             | (130)           | (1)                 | 0       |
| Died                             | (39)    | (958)   | (122)         | (7)             | (1)                 | (1,127) |
| Terminated                       |         |         |               |                 |                     |         |
| - Vested                         | (136)   | 0       | 0             | 136             | 0                   | 0       |
| - Non Vested                     | (1)     | 0       | 0             | 0               | 1                   | 0       |
| - Withdrew Contributions         | (35)    | 0       | 0             | (36)            | (1)                 | (72)    |
| New Beneficiaries                | 0       | 0       | 210           | 0               | 0                   | 210     |
| Transfers                        | 0       | 0       | 0             | (27)            | (1)                 | (28)    |
| Adjustments                      | 0       | 1       | (4)           | 1               | 0                   | (2)     |
| <b>Census as of July 1, 2005</b> | 17,728  | 24,609  | 2,142         | 3,521           | 43                  | 48,043  |

## West Virginia Teachers' Retirement System

Table 10

## Summary of Membership

|                                | <u>7/1/2005<br/>Valuation</u> | <u>7/1/2004<br/>Valuation</u> |
|--------------------------------|-------------------------------|-------------------------------|
| <b>Active Members</b>          |                               |                               |
| Teachers                       | 11,553                        | 12,504                        |
| Non Teachers (including State) | 6,175                         | 6,809                         |
| Total                          | <u>17,728</u>                 | <u>19,313</u>                 |
| <b>Inactive Members</b>        |                               |                               |
| Retirees                       | 22,642                        | 22,144                        |
| Beneficiaries                  | 2,142                         | 2,058                         |
| Disabled Retirees              | 1,967                         | 1,848                         |
| Vested Terminated              | 3,521                         | 3,629                         |
| Nonvested Terminated           | 43                            | 47                            |
| Total                          | <u>30,315</u>                 | <u>29,726</u>                 |
| <b>Total Members</b>           | 48,043                        | 49,039                        |

West Virginia  
Teachers' Retirement System  
Teachers

Table 11(a)

Number and Total Annual Compensation of Active Participants

| Attained Age | Years of Credited Service |                  |                  |                     |                      |                      |                      |                    |                   |                  |                  |                  |                  |                  | TOTAL<br>No./<br>Tot. Comp. |                  |                       |
|--------------|---------------------------|------------------|------------------|---------------------|----------------------|----------------------|----------------------|--------------------|-------------------|------------------|------------------|------------------|------------------|------------------|-----------------------------|------------------|-----------------------|
|              | 0 to 9                    | 10 to 14         | 15 to 19         | 20 to 24            | 25 to 29             | 30 to 34             | 35 to 39             | 40 & up            | No./<br>Comp.     |                  | No./<br>Comp.    |                  | No./<br>Comp.    |                  |                             |                  |                       |
| Under 25     | No./<br>Comp.             | 0<br>0           | 0<br>0           | 0<br>0              | 0<br>0               | 0<br>0               | 0<br>0               | 0<br>0             | 0<br>0            | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0                      | 0<br>0           | 0<br>0                |
| 25 to 29     | No./<br>Comp.             | 1<br>34,791      | 0<br>0           | 0<br>0              | 0<br>0               | 0<br>0               | 0<br>0               | 0<br>0             | 0<br>0            | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0                      | 0<br>0           | 1<br>34,791           |
| 30 to 34     | No./<br>Comp.             | 0<br>0           | 0<br>0           | 0<br>0              | 0<br>0               | 0<br>0               | 0<br>0               | 0<br>0             | 0<br>0            | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0                      | 0<br>0           | 0<br>0                |
| 35 to 39     | No./<br>Comp.             | 3<br>123,565     | 17<br>646,464    | 80<br>3,405,546     | 0<br>0               | 0<br>0               | 0<br>0               | 0<br>0             | 0<br>0            | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0                      | 0<br>0           | 100<br>4,175,575      |
| 40 to 44     | No./<br>Comp.             | 10<br>363,313    | 24<br>965,069    | 385<br>16,552,404   | 334<br>14,907,445    | 0<br>0               | 0<br>0               | 0<br>0             | 0<br>0            | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0                      | 0<br>0           | 753<br>32,788,231     |
| 45 to 49     | No./<br>Comp.             | 14<br>488,570    | 41<br>1,680,286  | 297<br>12,737,918   | 851<br>38,131,376    | 942<br>43,409,639    | 0<br>0               | 0<br>0             | 0<br>0            | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0                      | 0<br>0           | 2,145<br>96,447,789   |
| 50 to 54     | No./<br>Comp.             | 41<br>1,644,833  | 50<br>2,060,370  | 412<br>17,820,500   | 589<br>26,683,703    | 1,827<br>84,678,349  | 1,759<br>84,007,408  | 1<br>0             | 0<br>0            | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0                      | 0<br>0           | 4,679<br>216,943,687  |
| 55 to 59     | No./<br>Comp.             | 29<br>1,162,241  | 33<br>1,471,021  | 395<br>17,684,981   | 499<br>22,567,416    | 693<br>32,264,388    | 1,093<br>55,383,635  | 0<br>0             | 0<br>0            | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0                      | 0<br>0           | 3,105<br>149,823,217  |
| 60 to 64     | No./<br>Comp.             | 9<br>331,867     | 12<br>510,868    | 108<br>4,769,857    | 113<br>5,066,612     | 117<br>5,475,506     | 110<br>5,531,426     | 36<br>1,953,430    | 0<br>0            | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0           | 0<br>0                      | 0<br>0           | 638<br>30,894,545     |
| 65 to 69     | No./<br>Comp.             | 0<br>0           | 1<br>39,126      | 22<br>927,599       | 17<br>782,413        | 19<br>914,244        | 13<br>697,507        | 17<br>876,194      | 13<br>597,216     | 13<br>4,928,239  | 13<br>876,194    | 13<br>597,216    | 13<br>4,928,239  | 13<br>597,216    | 13<br>4,928,239             | 13<br>597,216    | 102<br>1,521,911      |
| 70 & up      | No./<br>Comp.             | 0<br>0           | 0<br>0           | 3<br>126,087        | 3<br>135,501         | 3<br>140,328         | 5<br>274,475         | 5<br>2,980         | 5<br>166,882,454  | 5<br>145,894,451 | 5<br>27,532,498  | 5<br>11          | 5<br>11          | 5<br>11          | 5<br>11                     | 5<br>11          | 30<br>11,553          |
| TOTAL        | No./<br>Comp.             | 107<br>4,149,180 | 178<br>7,373,204 | 1,702<br>74,024,892 | 2,406<br>108,274,466 | 3,601<br>166,882,454 | 2,980<br>145,894,451 | 2,980<br>3,426,840 | 515<br>27,532,498 | 515<br>1,521,911 | 515<br>4,928,239 | 515<br>3,426,840 | 515<br>4,928,239 | 515<br>3,426,840 | 515<br>4,928,239            | 515<br>3,426,840 | 11,553<br>537,557,985 |

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./<br>Comp.             | No./<br>Comp.    | No./<br>Comp.       | No./<br>Comp.       | No./<br>Comp.       | No./<br>Comp.     | No./<br>Comp.    | No./<br>Comp.   | No./<br>Comp. | No./<br>Comp. | No./<br>Comp. | No./<br>Comp. | No./<br>Comp. | No./<br>Comp.        |        |  |
| Under 25     | 0<br>0                    | 0<br>0           | 0<br>0              | 0<br>0              | 0<br>0              | 0<br>0            | 0<br>0           | 0<br>0          | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0               | 0<br>0 |  |
| 25 to 29     | 0<br>0                    | 0<br>0           | 0<br>0              | 0<br>0              | 0<br>0              | 0<br>0            | 0<br>0           | 0<br>0          | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0               | 0<br>0 |  |
| 30 to 34     | 0<br>0                    | 1<br>36,041      | 2<br>60,306         | 0<br>0              | 0<br>0              | 0<br>0            | 0<br>0           | 0<br>0          | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 3<br>96,347          | 0<br>0 |  |
| 35 to 39     | 0<br>0                    | 10<br>256,987    | 68<br>2,009,529     | 6<br>216,544        | 0<br>0              | 0<br>0            | 0<br>0           | 0<br>0          | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 84<br>2,483,060      | 0<br>0 |  |
| 40 to 44     | 3<br>102,199              | 17<br>423,505    | 196<br>5,731,771    | 182<br>6,090,837    | 52<br>1,790,058     | 0<br>0            | 0<br>0           | 0<br>0          | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 450<br>14,138,370    | 0<br>0 |  |
| 45 to 49     | 2<br>69,089               | 44<br>1,247,066  | 266<br>7,446,742    | 320<br>10,654,083   | 344<br>12,164,246   | 52<br>1,814,041   | 0<br>0           | 0<br>0          | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 1,028<br>33,395,267  | 0<br>0 |  |
| 50 to 54     | 5<br>172,258              | 52<br>1,442,697  | 445<br>12,405,760   | 409<br>13,312,324   | 440<br>15,864,278   | 296<br>11,356,494 | 20<br>740,486    | 0<br>0          | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 1,667<br>55,294,297  | 0<br>0 |  |
| 55 to 59     | 4<br>114,912              | 44<br>1,163,287  | 489<br>13,522,968   | 452<br>13,816,964   | 498<br>16,236,684   | 228<br>9,152,715  | 75<br>2,919,746  | 3<br>113,784    | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 1,793<br>57,041,060  | 0<br>0 |  |
| 60 to 64     | 2<br>39,130               | 21<br>491,126    | 234<br>6,380,725    | 206<br>6,233,117    | 212<br>7,072,806    | 120<br>4,079,747  | 46<br>1,779,037  | 7<br>391,017    | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 848<br>26,466,705    | 0<br>0 |  |
| 65 to 69     | 2<br>63,769               | 6<br>137,634     | 59<br>1,479,556     | 31<br>951,548       | 39<br>1,237,193     | 39<br>1,197,785   | 23<br>819,101    | 12<br>718,067   | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 211<br>6,604,653     | 0<br>0 |  |
| 70 & up      | 0<br>0                    | 2<br>22,635      | 23<br>489,308       | 6<br>134,765        | 21<br>644,484       | 15<br>465,258     | 8<br>250,623     | 16<br>529,412   | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 91<br>2,536,485      | 0<br>0 |  |
| TOTAL        | 18<br>561,357             | 197<br>5,220,978 | 1,782<br>49,526,665 | 1,612<br>51,410,182 | 1,606<br>55,009,749 | 750<br>28,066,040 | 172<br>6,508,993 | 38<br>1,752,280 | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 0<br>0        | 6,175<br>198,056,244 | 0<br>0 |  |

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, 2005

| Current Age | Service Retirees & Beneficiaries |                  | Disabled Retirees |                  | Total  |                  |
|-------------|----------------------------------|------------------|-------------------|------------------|--------|------------------|
|             | Number                           | Avg. Mo. Benefit | Number            | Avg. Mo. Benefit | Number | Avg. Mo. Benefit |
| 35          | 36                               | 670              | 2                 | 230              | 38     | 647              |
| 40          | 28                               | 612              | 13                | 397              | 41     | 544              |
| 45          | 40                               | 875              | 86                | 659              | 126    | 728              |
| 50          | 104                              | 1,144            | 247               | 942              | 351    | 1,002            |
| 55          | 2,007                            | 2,247            | 527               | 964              | 2,534  | 1,980            |
| 60          | 3,643                            | 1,776            | 514               | 803              | 4,157  | 1,656            |
| 65          | 4,336                            | 1,313            | 290               | 588              | 4,626  | 1,268            |
| 70          | 4,220                            | 1,045            | 117               | 506              | 4,337  | 1,031            |
| 75          | 3,937                            | 898              | 76                | 404              | 4,013  | 888              |
| 80          | 2,987                            | 756              | 59                | 367              | 3,046  | 749              |
| 85          | 1,976                            | 632              | 29                | 382              | 2,005  | 628              |
| 90          | 1,096                            | 555              | 7                 | 273              | 1,103  | 554              |
| 95 and over | 374                              | 511              | 0                 | 0                | 374    | 511              |
| Total       | 24,784                           | 1,175            | 1,967             | 768              | 26,751 | 1,145            |



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, 2005**

| Current Age | Total  |                     |
|-------------|--------|---------------------|
|             | Number | Avg. Mo.<br>Benefit |
| 30          | 1      | 143                 |
| 35          | 41     | 348                 |
| 40          | 655    | 308                 |
| 45          | 959    | 455                 |
| 50          | 844    | 638                 |
| 55          | 731    | 732                 |
| 60          | 223    | 589                 |
| 65          | 51     | 393                 |
| 70          | 15     | 407                 |
| 75          | 1      | 173                 |
| 80 and over | 0      | 0                   |
| Total       | 3,521  | 535                 |

- 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%.

**A. Valuation Date**

July 1, 2005

**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:

|              | <b>Range of Projected<br/>Salary Increases</b> |
|--------------|------------------------------------------------|
| 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, 2005 was projected to increase 3.2% per year after FY2006.

**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

| <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         | 0.00037     | 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

| <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         | 0.02404     | 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 & 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 & 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)

| <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     | 0.15000       | 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)

| <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     | 0.13000       | 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)

| <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       |

Teachers 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       |

Teachers 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         | 0.06000     | 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)

| <u>Age</u> | <u>Male</u> | <u>Female</u> | <u>Age</u> | <u>Male</u> | <u>Female</u> | <u>Age</u> | <u>Male</u> | <u>Female</u> |
|------------|-------------|---------------|------------|-------------|---------------|------------|-------------|---------------|
| 19         | 0.04500     | 0.04500       | 36         | 0.02400     | 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 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         | 0.15000     | 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 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         | 0.13000     | 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 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         | 0.06000     | 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 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         | 0.04000     | 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       |

**Teachers, Nonteachers and State  
Disability Decrements (Male and Female)**

| <u>Age</u> |         | <u>Age</u> |         | <u>Age</u> |         |
|------------|---------|------------|---------|------------|---------|
| 19         | 0.00000 | 33         | 0.00160 | 47         | 0.00340 |
| 20         | 0.00010 | 34         | 0.00180 | 48         | 0.00360 |
| 21         | 0.00018 | 35         | 0.00200 | 49         | 0.00380 |
| 22         | 0.00026 | 36         | 0.00210 | 50         | 0.00400 |
| 23         | 0.00034 | 37         | 0.00220 | 51         | 0.00440 |
| 24         | 0.00042 | 38         | 0.00230 | 52         | 0.00480 |
| 25         | 0.00050 | 39         | 0.00240 | 53         | 0.00520 |
| 26         | 0.00060 | 40         | 0.00250 | 54         | 0.00560 |
| 27         | 0.00070 | 41         | 0.00260 | 55         | 0.00600 |
| 28         | 0.00080 | 42         | 0.00270 | 56         | 0.00680 |
| 29         | 0.00090 | 43         | 0.00280 | 57         | 0.00760 |
| 30         | 0.00100 | 44         | 0.00290 | 58         | 0.00840 |
| 31         | 0.00120 | 45         | 0.00300 | 59         | 0.00920 |
| 32         | 0.00140 | 46         | 0.00320 | 60         | 0.01000 |
|            |         |            |         | 61         | 0.00000 |

and older

**Retirement Rates**

| <u>Age</u> | <u>Teachers</u> |               | <u>Nonteachers &amp; State</u> |               |
|------------|-----------------|---------------|--------------------------------|---------------|
|            | <u>Male</u>     | <u>Female</u> | <u>Male</u>                    | <u>Female</u> |
| 54         | 0.000           | 0.000         | 0.000                          | 0.000         |
| 55         | 0.250           | 0.225         | 0.200                          | 0.200         |
| 56         | 0.150           | 0.175         | 0.150                          | 0.150         |
| 57         | 0.150           | 0.175         | 0.150                          | 0.150         |
| 58         | 0.150           | 0.175         | 0.150                          | 0.150         |
| 59         | 0.150           | 0.175         | 0.150                          | 0.150         |
| 60         | 0.250           | 0.225         | 0.150                          | 0.200         |
| 61         | 0.200           | 0.175         | 0.150                          | 0.150         |
| 62         | 0.450           | 0.350         | 0.450                          | 0.350         |
| 63         | 0.300           | 0.250         | 0.200                          | 0.200         |
| 64         | 0.300           | 0.250         | 0.200                          | 0.200         |
| 65         | 0.500           | 0.350         | 0.450                          | 0.350         |
| 66         | 0.350           | 0.300         | 0.200                          | 0.200         |
| 67         | 0.350           | 0.300         | 0.200                          | 0.200         |
| 68         | 0.350           | 0.300         | 0.200                          | 0.200         |
| 69         | 0.350           | 0.300         | 0.200                          | 0.200         |
| 70         | 1.000           | 1.000         | 1.000                          | 1.000         |

and older