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C O N SULTIN G, LLC
The experience and dedication you deserve

January 24, 2012

Ms. Cynthia W. Comer
Policy, Planning and Compliance Director
Virginia Retirement System
1200 E. Main Street
Richmond, VA 23219

Dear Ms. Comer:

Enclosed are 13 original bound copies of the "Report on the Actuarial Valuation of the Virginia Retirement System" prepared as of June 30, 2011.

Please let us know if you have any questions concerning the report.
Sincerely,


Jose I. Fernandez, ASA, FCA, EA, MAAA
Principal and Consulting Actuary
TJC/JIF:lam

## Enclosure

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# Cavanaugh Macdonald CONSULTING, LLC 

The experience and dedication you deserve


## Virginia <br> Retirement <br> System

## Report on the Actuarial Valuation for Virginia Retirement System

Prepared as of June 30, 2011


# Cavanaugh Macdonald <br> C O N SULTIN G, LLC <br> The experience and dedication you deserve 

January 24, 2012
The Board of Trustees
Virginia Retirement System
1200 E. Main Street
Richmond, VA 23219
Dear Trustees:
We are pleased to submit the results of the annual actuarial valuation for the following divisions of the Virginia Retirement System (VRS), prepared as of June 30, 2011.

- State Employees
- Teachers
- State Police (SPORS)
- Judicial
- Virginia Law Officers (VaLORS)

In addition, this report includes information in aggregate on the actuarial valuations of the Political Subdivisions participating in VRS as of June 30, 2011. We have prepared and provided separately, actuarial valuation reports for each of the Political Subdivisions. Please refer to the individual reports for the valuation results, summary of actuarial assumptions and methods, and plan provisions for each of the Political Subdivision plans.

The purpose of this report is to provide a summary of the funded status of VRS as of June 30, 2011, to recommend rates of contribution and to provide accounting information under Governmental Accounting Standards Board Statements No. 25 and 27 (GASB 25 and 27). While not verifying the data at source, the actuary performed tests for consistency and reasonability.

The valuation results indicate that the employer contribution rates shown in the table below are sufficient to fund the normal cost for all members and finance the unfunded accrued liability of the plans. For comparison, in the table below we present the recommended employer contribution rates based on the June 30, 2011 actuarial valuations and the employer contribution rates adopted for fiscal years ending in 2011 and 2012.

|  | Employer Contribution Rates |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Division | 2013 and 2014 | 6/30/2010 | Valuation | 2012 (4th Quarter) |
| State Employees | $13.07 \%$ | $13.29 \%$ | $2.13 \%$ \& $6.58 \%$ |  |
| Teachers | 16.77 | 17.41 | $3.93 \%$ \& $6.33 \%$ |  |
| State Police | 32.62 | 33.31 | $7.76 \%$ \& $21.16 \%$ |  |
| Judicial | 54.11 | 55.13 | $28.81 \%$ \& $42.58 \%$ |  |
| Virginia Law Officers | 19.52 | 20.31 | $5.12 \%$ \& 13.09\% |  |
| Political Subdivisions <br> (Average Rates) | 10.63 | 11.00 | $8.00 \%{ }^{*}$ |  |

[^0]Below are the contribution rates adopted for the first three quarters of the 2012 fiscal year:

- State - 2.08\%
- Teachers - 6.33\%
- State Police (SPORS) - 7.73\%
- Judicial - 28.65\%
- Virginia Law Officers (VaLORS) - 5.07\%

Contribution rates for VRS employers are established every two years. The actuarially calculated employer contribution rates based on the June 30, 2010 results presented in this report are for informational purposes only.

The promised benefits of VRS are included in the calculated contribution rates which are developed using the entry age normal cost method. The valuation takes into account the differentiation between Plan 1 members, employees hired prior to July 1, 2010, and Plan 2 members, new employees hired on or after July 1, 2010. Five-year smoothed market value of assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded accrued liability. In accordance with the supplemental contribution provision of House Bill 30, the portion of the unfunded accrued liability with respect to deferred contributions for the 2010-2012 biennium is amortized using a level-dollar, closed, 10 year period. The balance of the unfunded accrued liability is being amortized by regular annual contributions as a level percentage of payroll within a 30-year period, on the assumption that payroll will increase by $3 \%$ annually and the amortization period will decrease by one year until reaching the minimum period of 20 years. The June 30, 2011 valuation reflects an increase in the amortization period from 20 to 30 years to phase-in the impact of the previously adopted change in the assumed annual rate of return from $7.5 \%$ to $7.0 \%$. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the Fund and to reasonable expectations of anticipated experience under the Fund and meet the parameters for the disclosures under GASB 25 and 27.

We have prepared the Schedule of Funding Progress and Trend Information shown in the financial section of the Comprehensive Annual Financial Report and all supporting schedules, including the Schedule of Active Member Data, the Solvency Test and the Analysis of Financial Experience shown in the actuarial section of the Comprehensive Annual Financial Report. For completeness, the table of Changes in Unfunded Actuarial Accrued Liabilities in Section VII, the Solvency Test in Schedule A, and the Retiree and Beneficiary Data in Schedule H include the information with respect to the Political Subdivisions participating in VRS. All historical information that references a valuation date prior to June 30, 2008 was prepared by a previous actuarial firm.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the System and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

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


Thomas J. Cavanaugh, FSA, FCA, EA, MAAA Chief Executive Officer


TJC/JIF:lam

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## Section I - Summary of Principal Results

1. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results for State Employees, Teachers, State Police, Judicial and Virginia Law Officers are summarized below. In addition, we present a summary of the valuation results for the political subdivisions.

STATE EMPLOYEES
(\$ IN THOUSANDS)

| VALUATION DATE | June 30, 2011 |  | June 30, 2010 |  |
| :---: | :---: | :---: | :---: | :---: |
| Members: |  |  |  |  |
| Active |  | 75,820 |  | 76,033 |
| Long Term Disability |  | 2,087 |  | 2,573 |
| Retirees and Beneficiaries |  | 52,480 |  | 50,600 |
| Inactive, Vested |  | 10,195 |  | 9,806 |
| Inactive, Non-Vested |  | 19,739 |  | 18,792 |
| Inactive, active elsewhere in VRS |  | 9,363 |  | 9,682 |
| Total |  | 169,684 |  | 167,486 |
| Annual Covered Payroll | \$ | 3,686,259 | \$ | 3,514,396 |
| Annual Retirement Benefits | \$ | 912,995 | \$ | 861,362 |
| Total Assets: |  |  |  |  |
| Actuarial Value | \$ | 14,406,275 | \$ | 14,700,854 |
| Market Value |  | 13,992,901 |  | 12,384,638 |
| Actuarial Accrued Liability | \$ | 20,407,958 | \$ | 19,539,453 |
| Unfunded Actuarial Accrued Liability (UAAL) |  |  |  |  |
| 10-Year Payback of Deferred Contributions | \$ | 278,155 |  | N/A |
| Balance of UAAL |  | 5,723,528 |  | 4,838,599 |
| Total UAAL | \$ | 6,001,683 | \$ | 4,838,599 |
| RECOMMENDED CONTRIBUTIONS FOR |  |  |  | formational |
| FISCAL YEAR ENDING* |  | 2013 \& 2014 |  | Purposes |
| Employer Contribution Rate: |  |  |  |  |
| Normal Cost (net of employee contributions) |  | 3.55 \% |  | 3.64 \% |
| Amortization of Deferred Contributions |  | 1.00 \% |  | N/A |
| Amortization of Balance of UAAL |  | 8.52 \% |  | 9.65 \% |
| Annual Recommended Contribution |  | 13.07 \% |  | 13.29 \% |
| Amortization Period |  |  |  |  |
| Deferred Contributions |  | 10 years |  | N/A |
| Balance of UAAL |  | 30 years |  | 20 years |

* The adopted contribution rates for fiscal years ending 2011 and 2012 are $2.13 \%$ and $2.08 \%$ (first 3 quarters) and $6.58 \%$ (fourth quarter), respectively.


## TEACHERS

(\$ IN THOUSANDS)

| VALUATION DATE | June 30, 2011 |  | June 30, 2010 |  |
| :---: | :---: | :---: | :---: | :---: |
| Members: |  |  |  |  |
| Active |  | 146,152 |  | 148,462 |
| Retirees and Beneficiaries |  | 71,010 |  | 66,934 |
| Inactive, Vested |  | 17,146 |  | 16,393 |
| Inactive, Non-Vested |  | 27,342 |  | 27,020 |
| Inactive, active elsewhere in VRS |  | 5,304 |  | 5,237 |
| Total |  | 266,954 |  | 264,046 |
| Annual Covered Payroll | \$ | 6,922,130 | \$ | 7,119,889 |
| Annual Retirement Benefits | \$ | 1,501,649 | \$ | 1,393,163 |
| Total Assets: |  |  |  |  |
| Actuarial Value | \$ | 25,166,124 | \$ | 25,447,677 |
| Market Value |  | 24,520,362 |  | 21,517,178 |
| Actuarial Accrued Liability | \$ | 37,771,732 | \$ | 37,088,576 |
| Unfunded Actuarial Accrued Liability (UAAL) |  |  |  |  |
| 10-Year Payback of Deferred Contributions | \$ | 741,432 |  | N/A |
| Balance of UAAL |  | 11,864,176 |  | 11,640,899 |
| Total UAAL | \$ | 12,605,608 | \$ | 11,640,899 |
| RECOMMENDED CONTRIBUTIONS FOR |  |  |  | Informational |
| FISCAL YEAR ENDING* |  | 2013 \& 2014 |  | Purposes |
| Employer Contribution Rate: |  |  |  |  |
| Normal Cost (net of employee contributions) |  | 5.93 \% |  | 5.95 \% |
| Amortization of Deferred Contributions |  | 1.43 \% |  | N/A |
| Amortization of Balance of UAAL |  | $\underline{9.41 \%}$ |  | 11.46\% |
| Annual Recommended Contribution |  | 16.77 \% |  | 17.41 \% |
| Amortization Period |  |  |  |  |
| Deferred Contributions |  | 10 years |  | N/A |
| Balance of UAAL |  | 30 years |  | 20 years |

*The adopted contribution rates for fiscal years ending 2011 and 2012 are $3.93 \%$ and $6.33 \%$, respectively.

STATE POLICE (\$ IN THOUSANDS)

| VALUATION DATE | June 30, 2011 |  | June 30, 2010 |  |
| :---: | :---: | :---: | :---: | :---: |
| Members: |  |  |  |  |
| Active |  | 1,738 |  | 1,767 |
| Long-Term Disability |  | 8 |  | 0 |
| Retirees and Beneficiaries |  | 1,289 |  | 1,240 |
| Inactive, Vested |  | 93 |  | 87 |
| Inactive, Non-Vested |  | 120 |  | 113 |
| Inactive, active elsewhere in VRS |  | $\underline{210}$ |  | $\underline{210}$ |
| Total |  | 3,458 |  | 3,417 |
| Annual Covered Payroll | \$ | 99,669 | \$ | 97,601 |
| Annual Retirement Benefits | \$ | 43,768 | \$ | 41,226 |
| Total Assets: |  |  |  |  |
| Actuarial Value | \$ | 616,603 | \$ | 633,415 |
| Market Value |  | 598,686 |  | 533,962 |
| Actuarial Accrued Liability | \$ | 985,704 | \$ | 948,892 |
| Unfunded Actuarial Accrued Liability (UAAL) |  |  |  |  |
| 10-Year Payback of Deferred Contributions | \$ | 23,086 |  | N/A |
| Balance of UAAL |  | 346,015 |  | 315,477 |
| Total UAAL | \$ | 369,101 | \$ | 315,477 |
| RECOMMENDED CONTRIBUTIONS FOR |  |  |  | nformational |
| FISCAL YEAR ENDING* |  | 2013 \& 2014 |  | Purposes |
| Employer Contribution Rate: |  |  |  |  |
| Normal Cost (net of employee contributions) |  | 10.49 \% |  | 10.65 \% |
| Amortization of Deferred Contributions |  | 3.08 \% |  | N/A |
| Amortization of Balance of UAAL |  | 19.05 \% |  | $\underline{22.66 \%}$ |
| Annual Recommended Contribution |  | 32.62 \% |  | 33.31 \% |
| Amortization Period |  |  |  |  |
| Deferred Contributions |  | 10 years |  | N/A |
| Balance of UAAL |  | 30 years |  | 20 years |

*The adopted contribution rates for fiscal years ending 2011 and 2012 are $7.76 \%$ and $7.73 \%$ (first 3 quarters) and $21.16 \%$ (fourth quarter), respectively.

JUDICIAL
(\$ IN THOUSANDS)

| VALUATION DATE | June 30, 2011 |  | June 30, 2010 |  |
| :---: | :---: | :---: | :---: | :---: |
| Members: |  |  |  |  |
| Active |  | 394 |  | 408 |
| Retirees and Beneficiaries |  | 459 |  | 463 |
| Inactive, Vested |  | 8 |  | 10 |
| Inactive, Non-Vested |  | 0 |  | 1 |
| Inactive, active elsewhere in VRS |  | 4 |  | 3 |
| Total |  | 865 |  | 885 |
| Annual Covered Payroll | \$ | 58,919 | \$ | 61,021 |
| Annual Retirement Benefits | \$ | 30,559 | \$ | 30,356 |
| Total Assets: |  |  |  |  |
| Actuarial Value | \$ | 371,051 | \$ | 372,096 |
| Market Value |  | 361,401 |  | 314,794 |
| Actuarial Accrued Liability | \$ | 569,494 | \$ | 559,920 |
| Unfunded Actuarial Accrued Liability (UAAL) |  |  |  |  |
| 10-Year Payback of Deferred Contributions | \$ | 14,585 |  | N/A |
| Balance of UAAL |  | 183,858 |  | 187,824 |
| Total UAAL | \$ | 198,443 | \$ | 187,824 |
| RECOMMENDED CONTRIBUTIONS FOR |  |  |  | rmational |
| FISCAL YEAR ENDING* |  | 2013 \& 2014 |  | urposes |
| Employer Contribution Rate: |  |  |  |  |
| Normal Cost (net of employee contributions) |  | 33.69 \% |  | 33.55 \% |
| Amortization of Deferred Contributions |  | 3.29 \% |  | N/A |
| Amortization of Balance of UAAL |  | 17.13\% |  | 21.58\% |
| Annual Recommended Contribution |  | 54.11 \% |  | 55.13 \% |
| Amortization Period |  |  |  |  |
| Deferred Contributions |  | 10 years |  | N/A |
| Balance of UAAL |  | 30 years |  | 20 years |

*The adopted contribution rates for fiscal years ending 2011 and 2012 are $28.81 \%$ and $28.65 \%$ (first 3 quarters) and $42.58 \%$ (fourth quarter), respectively.

VIRGINIA LAW OFFICERS (\$ IN THOUSANDS)

| VALUATION DATE | June 30, 2011 |  | June 30, 2010 |  |
| :---: | :---: | :---: | :---: | :---: |
| Members: |  |  |  |  |
| Active |  | 9,631 |  | 9,734 |
| Long Term Disability |  | 525 |  | 0 |
| Retirees and Beneficiaries |  | 2,730 |  | 2,428 |
| Inactive, Vested |  | 569 |  | 482 |
| Inactive, Non-Vested |  | 2,932 |  | 2,633 |
| Inactive, active elsewhere in VRS |  | 1,927 |  | 2,369 |
| Total |  | 18,314 |  | 17,646 |
| Annual Covered Payroll | \$ | 356,240 | \$ | 346,040 |
| Annual Retirement Benefits | \$ | 57,030 | \$ | 51,498 |
| Total Assets: |  |  |  |  |
| Actuarial Value | \$ | 926,082 | \$ | 925,443 |
| Market Value |  | 910,666 |  | 792,429 |
| Actuarial Accrued Liability | \$ | 1,683,191 | \$ | 1,579,321 |
| Unfunded Actuarial Accrued Liability (UAAL) |  |  |  |  |
| 10-Year Payback of Deferred Contributions | \$ | 48,155 |  | N/A |
| Balance of UAAL |  | 708,954 |  | 653,878 |
| Total UAAL | \$ | 757,109 | \$ | 653,878 |
| RECOMMENDED CONTRIBUTIONS FOR FISCAL YEAR ENDING* |  | 2013 \& 2014 |  | Informational Purposes |
| Employer Contribution Rate: |  |  |  |  |
| Normal Cost (net of employee contributions) |  | 6.80 \% |  | 7.06 \% |
| Amortization of Deferred Contributions |  | 1.80 \% |  | N/A |
| Amortization of Balance of UAAL |  | 10.92\% |  | 13.25\% |
| Annual Recommended Contribution |  | 19.52 \% |  | 20.31 \% |
| Amortization Period |  |  |  |  |
| Deferred Contributions |  | 10 years |  | N/A |
| Balance of UAAL |  | 30 years |  | 20 years |

* The adopted contribution rates for fiscal years ending 2011 and 2012 are 5.12\% and 5.07\% (first 3 quarters) and $13.09 \%$ (fourth quarter), respectively.


## POLITICAL SUBDIVISIONS

(\$ IN THOUSANDS)

| VALUATION DATE | June 30, 2011 |  |
| :---: | :---: | :---: |
| Number of Political Subdivisions in VRS: |  | 579 |
| Members: |  |  |
| Active |  | 104,385 |
| Long Term Disability |  | 0 |
| Retirees and Beneficiaries* |  | 37,552 |
| Inactive, Vested* |  | 12,148 |
| Inactive, Non-Vested* |  | 29,132 |
| Inactive, active elsewhere in VRS |  | 26,613 |
| Total |  | 209,830 |
| Annual Covered Payroll | \$ | 4,100,470 |
| Annual Retirement Benefits | \$ | 585,297 |
| Total Assets:** |  |  |
| Actuarial Value | \$ | 12,986,598 |
| Market Value |  | 12,767,072 |
| Actuarial Accrued Liability** | \$ | 17,005,070 |
| Unfunded Actuarial Accrued Liability (UAAL)** |  | 4,018,472 |
| Average Annual Contribution (net of employee contributions) |  | 10.63 \% |
| Amortization Period |  | 30 years |

* Includes count for each plan from which members are receiving pension benefits or entitled to deferred vested benefits. Therefore, members with benefits from more than one political subdivision are counted more than once.
** Includes Political Subdivisions with no active members.


## Section I - Summary of Principal Results

2. Comments on the valuation results as of June 30, 2011 are given in Section IV and further discussion of the contribution level for each plan is set out in Section V.
3. Schedule B shows the development of the actuarial value of assets. Schedule D and Schedule E of this report outline the full set of actuarial assumptions and methods used in the current valuation. Changes to the actuarial assumptions and methods since the previous valuation include increasing the amortization period to 30 years for the unfunded accrued liability less the VRS deferred contributions defined under HB 30, to phase-in the impact of the previously adopted change in the assumed annual rate of return from $7.5 \%$ to $7.0 \%$. The deferred contributions are amortized using a level-dollar, closed, 10 year period.
4. The valuation takes into account the effect of amendments to VRS through the valuation date. The main provisions of VRS, as summarized in Schedule F, were taken into account in the current valuation. The valuation takes into account the differentiation between Plan 1 members, employees hired prior to July 1, 2010, and Plan 2 members, new employees hired on or after July 1, 2010.
5. In accordance with the supplemental contribution provision of House Bill 30, Item 469, the portion of the unfunded accrued liability with respect to deferred contributions for the 2010-2012 biennium will be paid back to the plans over a 10-year period. Below we provide an estimate of the deferred contributions as provided by VRS.

| DIVISION | Estimated Deferred Contributions (\$ in thousands) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2011 Fiscal Year |  | 2012 Fiscal Year |  | Total |  |
| State Employees | \$ | 154,836 | \$ | 123,319 | \$ | 278,155 |
| Teachers |  | 453,558 |  | 287,874 |  | 741,432 |
| State Police |  | 12,881 |  | 10,205 |  | 23,086 |
| Virginia Law Officers |  | 26,860 |  | 21,296 |  | 48,155 |
| Judicial |  | 8,270 |  | 6,315 |  | 14,585 |
| Total | \$ | 656,405 | \$ | 449,009 | \$ | 1,105,413 |

System

## Section II - Membership Data

1. Data regarding the membership of VRS for use as a basis of the valuation was furnished by VRS.

The following table shows the number of active members and their annual compensation as of June 30,2011 on the basis of which the valuation was prepared.

TABLE 1

## THE NUMBER AND ANNUAL COMPENSATION OF ACTIVE MEMBERS AS OF JUNE 30, 2011 (\$ IN THOUSANDS)

| DIVISION | NUMBER | COMPENSATION |
| :--- | ---: | ---: |
| State Employees | 75,820 | $\$ 3,686,259$ |
| Teachers | 146,152 | $6,922,130$ |
| State Police | 1,738 | 99,669 |
| Judicial | 394 | 58,919 |
| Virginia Law Officers | 9,631 | 356,240 |
| Political Subdivisions | 104,385 | $4,100,470$ |
| Total | 338,120 | $\$ 15,223,687$ |

2. The following table shows a five-year history of active member valuation data. The data as of June 30, 2011 includes the political subdivisions, while the data for valuation dates prior to June 30, 2011 does not include the political subdivisions.

TABLE 2
SCHEDULE OF TOTAL ACTIVE MEMBER VALUATION DATA

| VALUATION <br> DATE | NUMBER | ANNUAL <br> PAYROLL | ANNUAL <br> (\$ IN THOUSANDS) | \% CHANGE IN <br> AVERAGE PAY |
| :---: | :---: | :---: | :---: | :---: |
| $6 / 30 / 2011$ | 338,120 | $\$ 15,223,687$ | $\$ 45,025$ | $(4.44) \%$ |
| $6 / 30 / 2010$ | 236,404 | $11,138,947$ | 47,118 | $(0.19) \%$ |
| $6 / 30 / 2009$ | 239,437 | $11,303,072$ | 47,207 | $2.11 \%$ |
| $6 / 30 / 2008$ | 239,420 | $11,068,331$ | 46,230 | $3.50 \%$ |
| $6 / 30 / 2007$ | 236,693 | $10,571,538$ | 44,664 | $4.50 \%$ |

## Section II - Membership Data

3. The following table shows the number and annual retirement benefits payable to retired members and survivors on the roll of VRS as of the valuation date.

TABLE 3
THE NUMBER AND ANNUAL RETIREMENT BENEFITS OF RETIRED MEMBERS AND SURVIVORS OF DECEASED MEMBERS ON THE ROLL AS OF JUNE 30, 2011 (\$ IN THOUSANDS)

| TYPE OF RETIREMENT | DIVISION |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | STATE EMPLOYEES | TEACHERS | STATE POLICE | JUDICIAL | VIRGINIA LAW OFFICERS | POLITICAL SUBDIVISIONS | TOTAL |
| Service: |  |  |  |  |  |  |  |
| Number | 43,392 | 64,494 | 919 | 317 | 2,382 | 36,195 | 147,699 |
| Annual Benefits | \$795,508 | \$1,387,360 | \$35,348 | \$24,337 | \$53,140 | \$457,447 | \$2,753,140 |
| Disability: |  |  |  |  |  |  |  |
| Number | 4,604 | 4,154 | 198 | 1 | 202 | 7,424 | 16,583 |
| Annual Benefits | \$67,083 | \$83,751 | \$5,795 | \$99 | \$2,791 | \$101,253 | \$260,772 |
| Survivors: |  |  |  |  |  |  |  |
| Number | 4,484 | 2,362 | 172 | 141 | 146 | 3,246 | 10,551 |
| Annual Benefits | \$50,404 | \$30,538 | \$2,625 | \$6,123 | \$1,099 | \$26,597 | \$117,386 |
| Total: |  |  |  |  |  |  |  |
| Number | 52,480 | 71,010 | 1,289 | 459 | 2,730 | 46,865 | 174,833 |
| Annual Benefits | \$912,995 | \$1,501,649 | \$43,768 | \$30,559 | \$57,030 | \$585,297 | \$3,131,298 |

4. The five tables of Schedule G, which can be found at the end of this document, show the distribution by age and service of the number and average annual compensation of active members for each division included in the valuation.

## Section III - Assets

1. Schedule $C$, appearing on pages 40 to 45 , shows the additions and deductions to the assets of VRS for the year preceding the valuation date and a reconciliation of the fund balances at market value. As of June 30, 2011, the market value of assets used to determine the actuarial value of assets for each division is shown below:

TABLE 4

## COMPARISON OF MARKET VALUE OF ASSETS (\$ IN THOUSANDS)

| DIVISION | JUNE 30, 2011 MARKET | JUNE 30, 2010 MARKET |
| :--- | ---: | ---: |
| VALUE | VALUE |  |
| State Employees | $\$ 13,992,901$ | $\$ 12,384,638$ |
| Teachers | $24,520,362$ | $21,517,178$ |
| State Police | 598,686 | 533,962 |
| Judicial | 361,401 | 314,794 |
| Virginia Law Officers | 910,666 | 792,429 |
| Political Subdivisions | $12,767,072$ | $10,744,000$ |
| Total Market Value of Assets | $\$ 53,151,088$ | $\$ 46,287,001$ |

2. Schedule B shows the development of the actuarial value of assets as of June 30, 2011. The following table shows the actuarial value of assets allocated among all divisions.

TABLE 5
COMPARISON OF ACTUARIAL VALUE OF ASSETS (\$ IN THOUSANDS)

| DIVISION | JUNE 30, 2011 <br> ACTUARIAL VALUE | JUNE 30, 2010 <br> ACTUARIAL VALUE |
| :--- | :---: | :---: |
| State Employees | $\$ 14,406,275$ | $\$ 14,700,854$ |
| Teachers | $25,166,124$ | $25,447,677$ |
| State Police | 616,603 | 633,415 |
| Judicial | 371,051 | 372,096 |
| Virginia Law Officers | 926,082 | 925,443 |
| Political Subdivisions | $12,986,598$ | $12,580,044$ |
| Total Actuarial Value of Assets | $\$ 54,472,733$ | $\$ 54,659,529$ |

## State Employees

1. The total valuation balance sheet on account of benefits as of June 30, 2011 shows that the State Employees plan has total prospective benefit liabilities of $\$ 22,570,009,259$, of which $\$ 9,977,569,049$ is for the prospective benefits payable on account of present retired members and survivors of deceased members, $\$ 866,594,678$ is for the prospective benefits payable on account of present inactive members, and $\$ 11,725,845,532$ is for the prospective benefits payable on account of present active members. Against these benefit liabilities the State Employees plan has a total present actuarial value of assets of $\$ 14,406,275,000$ as of June 30, 2011. The difference of $\$ 8,163,734,259$ between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of benefits. Of this amount, $\$ 1,375,653,210$ is the present value of future contributions expected to be made by members (at the rate of $5 \%$ of salary), and the balance of $\$ 6,788,081,049$ represents the present value of future contributions payable by the employers.
2. The employers' contributions to the State Employees plan on account of retirement benefits consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of $3.55 \%$ of salary are required. This is net of the $5 \%$ employee contribution.
3. Prospective employer normal contributions at the above rate have a present value of $\$ 786,398,410$. When this amount is subtracted from $\$ 6,788,081,049$, which is the present value of the total future contributions to be made by the employers, there remains $\$ 6,001,682,639$ as the amount of future accrued liability contributions.
4. It is recommended that the accrued liability contribution rate payable by employers on account of retirement benefits be set at $9.52 \%$ of salary. This rate is sufficient to liquidate the unfunded accrued liability of $\$ 6,001,682,639$ over a closed 10 -year period as level-dollar amounts with respect to the deferred contributions and over 30 years for the balance of the unfunded accrued liability, on the assumption that the aggregate payroll for State employees will increase by $3 \%$ each year.

## Teachers

1. The total valuation balance sheet on account of benefits as of June 30, 2011 shows that the Teachers plan has total prospective benefit liabilities of $\$ 44,015,632,402$, of which $\$ 18,261,203,780$ is for the prospective benefits payable on account of present retired members and survivors of deceased members, $\$ 805,067,929$ is for the prospective benefits payable on account of present inactive members, and $\$ 24,949,360,693$ is for the prospective benefits payable on account of present active members. Against these benefit liabilities the Teachers plan has a total present actuarial value of assets of $\$ 25,166,124,000$ as of June 30, 2011. The difference of $\$ 18,849,508,402$ between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of benefits. Of this amount, $\$ 3,085,249,191$ is the present value of future contributions expected to be made by members (at the rate of $5 \%$ of salary), and the balance of $\$ 15,764,259,211$ represents the present value of future contributions payable by the employers.
2. The employers' contributions to the Teachers plan on account of retirement benefits consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of $5.93 \%$ of salary are required. This is net of the $5 \%$ employee contribution.
3. Prospective employer normal contributions at the above rate have a present value of $\$ 3,158,650,808$. When this amount is subtracted from $\$ 15,764,259,211$, which is the present value of the total future contributions to be made by the employers, there remains $\$ 12,605,608,403$ as the amount of future accrued liability contributions.
4. It is recommended that the accrued liability contribution rate payable by the employers on account of retirement benefits be set at $10.84 \%$ of salary. This rate is sufficient to liquidate the unfunded accrued liability of $\$ 12,605,608,403$ over a closed 10 -year period as level-dollar amounts with respect to the deferred contributions and over 30 years for the balance of the unfunded accrued liability, on the assumption that the aggregate payroll for Teachers will increase by $3 \%$ each year.

## State Police (SPORS)

1. The total valuation balance sheet on account of benefits as of June 30, 2011 shows that the SPORS plan has total prospective benefit liabilities of $\$ 1,120,372,498$, of which $\$ 524,833,318$ is for the prospective benefits payable on account of present retired members and survivors of deceased members, $\$ 15,263,720$ is for the prospective benefits payable on account of present inactive members, and $\$ 580,275,461$ is for the prospective benefits payable on account of present active members. Against these benefit liabilities SPORS has a total present actuarial value of assets of $\$ 616,603,000$ as of June 30, 2011. The difference of $\$ 503,769,498$ between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of benefits. Of this amount, $\$ 43,202,068$ is the present value of future contributions expected to be made by members (at the rate of $5 \%$ of salary), and the balance of $\$ 460,567,430$ represents the present value of future contributions payable by the employers.
2. The employers' contributions to SPORS on account of retirement benefits consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of $10.49 \%$ of salary are required. This is net of the $5 \%$ employee contribution.
3. Prospective employer normal contributions at the above rate have a present value of $\$ 91,466,708$. When this amount is subtracted from $\$ 460,567,430$, which is the present value of the total future contributions to be made by the employers, there remains $\$ 369,100,722$ as the amount of future accrued liability contributions.
4. It is recommended that the accrued liability contribution rate payable by the employers on account of retirement benefits be set at $22.13 \%$ of salary. This rate is sufficient to liquidate the unfunded accrued liability of $\$ 369,100,722$ over a closed 10 -year period as level-dollar amounts with respect to the deferred contributions and over 30 years for the balance of the unfunded accrued liability, on the assumption that the aggregate payroll for SPORS employees will increase by $3 \%$ each year.

## Judicial

1. The total valuation balance sheet on account of benefits as of June 30, 2011 shows that the Judicial plan has total prospective benefit liabilities of $\$ 701,928,041$, of which $\$ 308,341,453$ is for the prospective benefits payable on account of present retired members and survivors of deceased members, $\$ 4,081,323$ is for the prospective benefits payable on account of present inactive members, and $\$ 389,505,265$ is for the prospective benefits payable on account of present active members. Against these benefit liabilities the Judicial plan has a total present actuarial value of assets of $\$ 371,051,000$ as of June 30, 2011. The difference of $\$ 330,877,041$ between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of benefits. Of this amount, $\$ 18,100,203$ is the present value of future contributions expected to be made by members (at the rate of $5 \%$ of salary), and the balance of $\$ 312,776,838$ represents the present value of future contributions payable by the employers.
2. The employers' contributions to the Judicial plan on account of retirement benefits consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of $33.69 \%$ of salary are required. This is net of the $5 \%$ employee contribution.
3. Prospective employer normal contributions at the above rate have a present value of $\$ 114,333,472$. When this amount is subtracted from $\$ 312,776,838$, which is the present value of the total future contributions to be made by the employers, there remains $\$ 198,443,366$ as the amount of future accrued liability contributions.
4. It is recommended that the accrued liability contribution rate payable by employers on account of retirement benefits be set at $20.42 \%$ of salary. This rate is sufficient to liquidate the unfunded accrued liability of $\$ 198,443,366$ over a closed 10-year period as level-dollar amounts with respect to the deferred contributions and over 30 years for the balance of the unfunded accrued liability, on the assumption that the aggregate payroll for Judicial employees will increase by 3\% each year.

## Virginia Law Officers (VaLORS)

1. The total valuation balance sheet on account of benefits as of June 30, 2011 shows that VaLORS has total prospective benefit liabilities of $\$ 1,942,669,933$, of which $\$ 681,105,350$ is for the prospective benefits payable on account of present retired members and survivors of deceased members, $\$ 82,525,736$ is for the prospective benefits payable on account of present inactive members, and $\$ 1,179,038,847$ is for the prospective benefits payable on account of present active members. Against these benefit liabilities VaLORS has a total present actuarial value of assets of $\$ 926,082,000$ as of June 30, 2011. The difference of $\$ 1,016,587,933$ between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of benefits. Of this amount, $\$ 121,282,122$ is the present value of future contributions expected to be made by members (at the rate of $5 \%$ of salary), and the balance of $\$ 895,305,811$ represents the present value of future contributions payable by the employers.
2. The employers' contributions to VaLORS on account of retirement benefits consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of $6.80 \%$ of salary are required. This is net of the $5 \%$ employee contribution.
3. Prospective employer normal contributions at the above rate have a present value of $\$ 138,196,844$. When this amount is subtracted from $\$ 895,305,811$, which is the present value of the total future contributions to be made by the employers, there remains $\$ 757,108,967$ as the amount of future accrued liability contributions.
4. It is recommended that the accrued liability contribution rate payable by employers on account of retirement benefits be set at $12.72 \%$ of salary. This rate is sufficient to liquidate the unfunded accrued liability of $\$ 757,108,967$ over a closed 10 -year period as level-dollar amounts with respect to the deferred contributions and over 30 years for the balance of the unfunded accrued liability, on the assumption that the aggregate payroll for VaLORS employees will increase by 3\% each year.

## Section V-Contribution Rates

1. The actuarially determined employer contribution rates for each division based on the June 30, 2011 actuarial valuation are shown in the following table:

TABLE 6

| Division | Employer Contribution Rate |
| :--- | :---: |
| State Employees | $13.07 \%$ |
| Teachers | 16.77 |
| State Police | 32.62 |
| Judicial | 54.11 |
| Virginia Law Officers | 19.52 |

The rates shown are net of 5\% member contributions.
2. The table below shows the development of the normal contribution rate, the unfunded accrued liability (UAL), amortization period and the actuarially recommended contribution rate for each division as of June 30, 2011.

TABLE 7
EMPLOYER CONTRIBUTION RATE expressed as percent of active member payroll

|  | State Employees | Teachers | State <br> Police | Judicial | Virginia Law Officers |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Contribution for |  |  |  |  |  |
| Normal Cost |  |  |  |  |  |
| Service Retirement Benefits | 6.63\% | 9.01\% | 12.46\% | 33.89\% | 8.40\% |
| Disability Benefits | 0.67\% | 0.65\% | 1.07\% | 2.91\% | 0.51\% |
| Survivor Benefits | 0.41\% | 0.30\% | 0.71\% | 1.89\% | 0.56\% |
| Separation Benefits | 0.84\% | 0.97\% | 1.25\% | 0.00\% | 2.33\% |
| Total | 8.55\% | 10.93\% | 15.49\% | 38.69\% | 11.80\% |
| Member Current Contributions | 5.00\% | 5.00\% | 5.00\% | 5.00\% | 5.00\% |
| Employer Normal Cost | 3.55\% | 5.93\% | 10.49\% | 33.69\% | 6.80\% |
| Amortization of UAAL (net of deferred contributions) * | 1.00\% | 1.43\% | 3.08\% | 3.29\% | 1.80\% |
| Amortization of Deferred Contributions * | 8.52\% | 9.41\% | 19.05\% | 17.13\% | 10.92\% |
| Actuarially Recommended Employer Contribution Rate to pay Normal Cost and amortize UAAL | 13.07\% | 16.77\% | 32.62\% | 54.11\% | 19.52\% |

* The amortization period of the unfunded less the deferred contribution begins at 30 years on June 30, 2011 and will decrease by one each year until reaching the minimum period of 20 years. The deferred contribution, as defined under HB30, is to be amortized using a level-dollar, closed, 10 year period.


## Section VI - Accounting Information

1. Governmental Accounting Standards Board Statements 25 and 27 set forth certain items of required supplementary information to be disclosed in the financial statements of VRS and the employer. One such item is a distribution of the number of members by type of membership, as follows:

NUMBER OF ALL MEMBERS
AS OF June 30, 2011

| GROUP | COUNT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | State <br> Employees | Teachers | State <br> Police | Judicial | Virginia Law Officers | Political Subdivisions |
| Active Members | 75,820 | 146,152 | 1,738 | 394 | 9,631 | 104,385 |
| LTD | 2,087 | 0 | 8 | 0 | 525 | 0 |
| Total Active Members | 77,907 | 146,152 | 1,746 | 394 | 10,156 | 104,385 |
| Inactive Members |  |  |  |  |  |  |
| Vested | 10,195 | 17,146 | 93 | 8 | 569 | 12,148 |
| Non-Vested | 19,739 | 27,342 | 120 | 0 | 2,932 | 29,132 |
| Active Elsewhere in VRS | 9,363 | 5,304 | 210 | 4 | 1,927 | 26,613 |
| Total Inactive Members | 39,297 | 49,792 | 423 | 12 | 5428 | 67,893 |
| Retirees |  |  |  |  |  |  |
| Service | 43,392 | 64,494 | 919 | 317 | 2,382 | 28,374 |
| Disabled | 4,604 | 4,154 | 198 | 1 | 202 | 6,450 |
| Beneficiaries | 4,484 | 2,362 | 172 | 141 | 146 | 2,728 |
| Total Retirees | 52,480 | 71,010 | 1,289 | 459 | 2730 | 37,552 |
| Totals | 169,684 | 266,954 | 3,458 | 865 | 18,314 | 209,830 |

Section VI - Accounting Information
2. Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS
(\$ IN THOUSANDS)

| Actuarial Valuation Date | Actuarial Value of Plan Assets ( a) | Actuarial Accrued Liability (AAL) Entry Age (b) | Unfunded <br> AAL <br> (UAAL) <br> (b-a) |  | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ( (b-a)/c) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| STATE EMPLOYEES |  |  |  |  |  |  |
| 6/30/2011 | \$14,406,275 | \$20,407,958 | \$6,001,683 | 70.6 \% | \$3,686,259 | 162.8 \% |
| 6/30/2010 | 14,700,854 | 19,539,453 | 4,838,599 | 75.2 \% | 3,514,396 | 137.7 \% |
| 6/30/2009 | 15,049,901 | 17,925,879 | 2,875,978 | 84.0 \% | 3,619,478 | 79.5 \% |
| 6/30/2008 | 15,046,348 | 17,096,942 | 2,050,594 | 88.0 \% | 3,640,692 | 56.3 \% |
| 6/30/2007 | 13,857,342 | 16,279,781 | 2,422,439 | 85.1 \% | 3,467,388 | 69.9 \% |
| 6/30/2006 | 12,542,390 | 15,064,062 | 2,521,672 | 83.3 \% | 3,301,286 | 76.4 \% |
| TEACHERS |  |  |  |  |  |  |
| 6/30/2011 | \$25,166,124 | \$37,771,732 | \$12,605,608 | 66.6 \% | \$6,922,130 | 182.1 \% |
| 6/30/2010 | 25,447,677 | 37,088,576 | 11,640,899 | 68.6 \% | 7,119,889 | 163.5 \% |
| 6/30/2009 | 25,764,665 | 33,860,514 | 8,095,849 | 76.1 \% | 7,160,842 | 113.1 \% |
| 6/30/2008 | 25,502,482 | 31,958,321 | 6,455,839 | 79.8 \% | 6,896,432 | 93.6 \% |
| 6/30/2007 | 23,204,871 | 29,669,838 | 6,464,967 | 78.2 \% | 6,604,643 | 97.9 \% |
| 6/30/2006 | 20,731,192 | 27,274,064 | 6,542,872 | 76.0 \% | 6,195,421 | 105.6\% |
| STATE POLICE |  |  |  |  |  |  |
| 6/30/2011 | \$616,603 | \$985,704 | \$369,101 | 62.6 \% | \$99,669 | 370.3 \% |
| 6/30/2010 | 633,415 | 948,892 | 315,477 | 66.8 \% | 97,601 | 323.2 \% |
| 6/30/2009 | 646,960 | 879,180 | 232,220 | 73.6 \% | 100,974 | 230.0 \% |
| 6/30/2008 | 646,277 | 844,195 | 197,918 | 76.6 \% | 102,466 | 193.2 \% |
| 6/30/2007 | 594,985 | 806,028 | 211,043 | 73.8 \% | 100,785 | 209.4 \% |
| 6/30/2006 | 538,646 | 729,927 | 191,281 | 73.8 \% | 93,742 | 204.1 \% |
| JUDICIAL |  |  |  |  |  |  |
| 6/30/2011 | \$371,051 | \$569,494 | \$198,443 | 65.2 \% | \$58,919 | 336.8 \% |
| 6/30/2010 | 372,096 | 559,920 | 187,824 | 66.5 \% | 61,021 | 307.8 \% |
| 6/30/2009 | 378,212 | 521,463 | 143,251 | 72.5 \% | 62,709 | 228.4 \% |
| 6/30/2008 | 373,850 | 494,768 | 120,918 | 75.6 \% | 60,486 | 199.9 \% |
| 6/30/2007 | 340,200 | 442,498 | 102,298 | 76.9 \% | 57,687 | 177.3 \% |
| 6/30/2006 | 302,734 | 424,398 | 121,664 | 71.3 \% | 54,289 | 224.1 \% |
| VIRGINIA LAW OFFICERS |  |  |  |  |  |  |
| 6/30/2011 | \$926,082 | \$1,683,191 | \$757,109 | 55.0 \% | \$356,240 | 212.5 \% |
| 6/30/2010 | 925,443 | 1,579,321 | 653,878 | 58.6 \% | 346,040 | 189.0 \% |
| 6/30/2009 | 912,922 | 1,411,844 | 498,922 | 64.7 \% | 359,070 | 138.9 \% |
| 6/30/2008 | 873,473 | 1,281,477 | 408,004 | 68.2 \% | 368,255 | 110.8 \% |
| 6/30/2007 | 766,243 | 1,165,979 | 399,736 | 65.7 \% | 341,035 | 117.2 \% |
| 6/30/2006 | 656,668 | 1,096,368 | 439,700 | 59.9 \% | 320,869 | 137.0 \% |
| POLITICAL SUBDIVISIONS |  |  |  |  |  |  |
| 6/30/2011 | \$ 12,986,598 | \$ 17,005,070 | \$4,018,472 | 76.4 \% | \$ 4,100,470 | 98.0 \% |

3. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2011.


* For non political subdivisions:

The amortization period of the unfunded less the deferred contribution begins at 30 years on June 30, 2011 and will decrease by one each year until reaching the minimum period of 20 years. The deferred contribution, as defined under HB30, is to be amortized using a level-dollar, closed, 10 year period.

For political subdivisions:
The amortization period of the unfunded begins at 30 years on June 30, 2011 and will decrease by one each year until reaching the minimum period of 20 years
** Includes inflation at 2.50\%.

Section VI - Accounting Information
SCHEDULE OF ADOPTED EMPLOYER CONTRIBUTIONS

| Fiscal Year Ending | Annual Required Contribution (ARC)* | Percent of ARC Contributed |
| :---: | :---: | :---: |
| State Employees |  |  |
| 2011 | $2.13 \%$ | $100 \%$ |
| 2010 | 6.26 \% | $100 \%$ |
| 2009 | 6.23 \% | 100 \% |
| 2008 | 5.74 \% | $100 \%$ |
| 2007 | 5.74 \% | 100 \% |
| Teachers |  |  |
| 2011 | $3.93 \%$ | $100 \%$ |
| 2010 | 8.81 \% | 100 \% |
| 2009 | 8.81 \% | 100 \% |
| 2008 | 9.20 \% | $100 \%$ |
| 2007 | 9.20 \% | $100 \%$ |
| State Police |  |  |
| 2011 | 7.76 \% | $100 \%$ |
| 2010 | 20.05 \% | 100 \% |
| 2009 | 20.05 \% | 100 \% |
| 2008 | 16.71 \% | $100 \%$ |
| 2007 | 16.71 \% | $100 \%$ |
| Judicial |  |  |
| 2011 | 28.81 \% | $100 \%$ |
| 2010 | 34.51 \% | 100 \% |
| 2009 | 34.51 \% | 100 \% |
| 2008 | 36.47 \% | 100 \% |
| 2007 | 36.47 \% | 100 \% |
| Virginia Law Officers |  |  |
| 2011 | 5.12 \% | $100 \%$ |
| 2010 | 14.23 \% | 100 \% |
| 2009 | 14.23 \% | $100 \%$ |
| 2008 | 14.96 \% | $100 \%$ |
| 2007 | 14.96 \% | $100 \%$ |

* Reported in the Comprehensive Annual Financial Report as a percentage of Covered Payroll, including revisions adopted by the General Assembly of the actuarially determined rates.


## CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITIES (UAAL) DURING FISCAL YEAR 2011 (\$ IN THOUSANDS)



* Required Employer Contributions are based on the Annual Required Contribution (ARC) as of the previous valuation date. The ARC is based on amortizing the UAAL over 20 years. Local Agencies does not include Political Subdivisions with no active members in VRS.


## GAINS \& LOSSES

DURING FISCAL YEAR 2011 (\$ IN MILLIONS)

| Type of Activity | State Employees | Teachers | State Police | Judges | Virginia Law Officers |
| :--- | ---: | ---: | ---: | :---: | :---: |

## STATE EMPLOYEES

## As Of June 30, 2011

| PRESENT AND PROSPECTIVE ASSETS |  |  |  |
| :---: | :---: | :---: | :---: |
| Actuarial Value of Assets |  | \$ | 14,406,275,000 |
| Present value of future members' contributions |  |  | 1,375,653,210 |
| Present value of future employer contributions |  |  |  |
| Normal contributions | \$ 786,398,410 |  |  |
| Unfunded accrued liability contributions | 6,001,682,639 |  |  |
| Total prospective employer contributions |  |  | 6,788,081,049 |
| Total Present and Prospective Assets |  | \$ | 22,570,009,259 |
| ACTUARIAL LIABILITIES |  |  |  |
| Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits |  | \$ | 9,977,569,049 |
| Present value of prospective benefits payable on account of inactive members |  |  | 866,594,678 |
| Present value of prospective benefits payable on account of present active members: |  |  |  |
| Service retirement benefits | \$10,587,061,817 |  |  |
| Disability retirement benefits | 459,122,585 |  |  |
| Survivor benefits | 422,361,453 |  |  |
| Separation benefits | 257,299,677 |  |  |
| Total |  |  | 11,725,845,532 |
| Total Actuarial Liabilities |  | \$ | 22,570,009,259 |

## TEACHERS

As Of June 30, 2011

## PRESENT AND PROSPECTIVE ASSETS

| Actuarial Value of Assets |  |  | \$ | 25,166,124,000 |
| :---: | :---: | :---: | :---: | :---: |
| Present value of future members' contributions |  |  |  | 3,085,249,191 |
| Present value of future employer contributions |  |  |  |  |
| Normal contributions | \$ | 3,158,650,808 |  |  |
| Unfunded accrued liability contributions |  | 12,605,608,403 |  |  |
| Total prospective employer contributions |  |  |  | 15,764,259,211 |
| Total Present and Prospective Assets |  |  | \$ | 44,015,632,402 |

## ACTUARIAL LIABILITIES

Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits $\quad \$ \quad 18,261,203,780$

Present value of prospective benefits payable on account of inactive members

805,067,929
Present value of prospective benefits payable on account of present active members:

| Service retirement benefits | $\$ 22,876,350,917$ |
| :--- | ---: | ---: |
| Disability retirement benefits | $812,603,459$ |
| Survivor benefits | $563,302,533$ |
| Separation benefits | $697,103,784$ |

Total
24,949,360,693
Total Actuarial Liabilities
\$ 44,015,632,402

## STATE POLICE

## As Of June 30, 2011

| PRESENT AND PROSPECTIVE ASSETS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Actuarial Value of Assets |  |  | \$ | 616,603,000 |
| Present value of future members' contributions |  |  |  | 43,202,068 |
| Present value of future employer contributions |  |  |  |  |
| Normal contributions |  | 91,466,708 |  |  |
| Unfunded accrued liability contributions |  | 369,100,722 |  |  |
| Total prospective employer contributions |  |  |  | 460,567,430 |
| Total Present and Prospective Assets |  |  | \$ | 1,120,372,498 |
| ACTUARIAL LIABILITIES |  |  |  |  |
| Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits$\$ \quad 524,833,318$ |  |  |  |  |
| Present value of prospective benefits payable on account of inactive members |  |  |  | 15,263,720 |
| Present value of prospective benefits payable on account of present active members: |  |  |  |  |
| Service retirement benefits |  | 517,929,679 |  |  |
| Disability retirement benefits |  | 24,454,267 |  |  |
| Survivor benefits |  | 14,686,086 |  |  |
| Separation benefits |  | 23,205,429 |  |  |
| Total |  |  |  | 580,275,461 |
| Total Actuarial Liabilities |  |  | \$ | 1,120,372,499 |

## JUDICIAL

## As Of June 30, 2011

## PRESENT AND PROSPECTIVE ASSETS

| Actuarial Value of Assets |  |  | \$ | 371,051,000 |
| :---: | :---: | :---: | :---: | :---: |
| Present value of future members' contributions |  |  |  | 18,100,203 |
| Present value of future employer contributions |  |  |  |  |
| Normal contributions | \$ | 114,333,472 |  |  |
| Unfunded accrued liability contributions |  | 198,443,366 |  |  |
| Total prospective employer contributions |  |  |  | 312,776,838 |
| Total Present and Prospective Assets |  |  | \$ | 701,928,041 |
| ACTUARIAL LIABILITIES |  |  |  |  |
| Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits |  |  | \$ | 308,341,453 |
| Present value of prospective benefits payable on account of inactive members |  |  |  | 4,081,323 |
| Present value of prospective benefits payable on account of present active members: |  |  |  |  |
| Service retirement benefits | \$ | 360,319,395 |  |  |
| Disability retirement benefits |  | 13,966,721 |  |  |
| Survivor benefits |  | 15,219,149 |  |  |
| Separation benefits |  | - |  |  |
| Total |  |  |  | 389,505,265 |
| Total Actuarial Liabilities |  |  | \$ | 701,928,041 |

## VIRGINIA LAW OFFICERS <br> As Of June 30, 2011

| PRESENT AND PROSPECTIVE ASSETS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Actuarial Value of Assets |  |  | \$ | 926,082,000 |
| Present value of future members' contributions |  |  |  | 121,282,122 |
| Present value of future employer contributions |  |  |  |  |
| Normal contributions |  | 138,196,844 |  |  |
| Unfunded accrued liability contributions |  | 757,108,967 |  |  |
| Total prospective employer contributions |  |  |  | 895,305,811 |
| Total Present and Prospective Assets |  |  | \$ | 1,942,669,933 |
| ACTUARIAL LIABILITIES |  |  |  |  |
| Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits |  |  | \$ | 681,105,350 |
| Present value of prospective benefits payable on account of inactive members |  |  |  | 82,525,736 |
| Present value of prospective benefits payable on account of present active members: |  |  |  |  |
| Service retirement benefits | \$ | 983,606,877 |  |  |
| Disability retirement benefits |  | 31,435,012 |  |  |
| Survivor benefits |  | 32,349,208 |  |  |
| Separation benefits |  | 131,647,750 |  |  |
| Total |  |  |  | 1,179,038,847 |
| Total Actuarial Liabilities |  |  | \$ | 1,942,669,933 |

## POLITICAL SUBDIVISIONS

As Of June 30, 2011

## PRESENT AND PROSPECTIVE ASSETS

| Actuarial Value of Assets |  | \$ | 12,986,597,804 |
| :---: | :---: | :---: | :---: |
| Present value of future members' contributions |  |  | 1,639,636,894 |
| Present value of future employer contributions |  |  |  |
| Normal contributions | \$ 2,076,574,046 |  |  |
| Unfunded accrued liability contributions | 4,018,472,250 |  |  |
| Total prospective employer contributions |  |  | 6,095,046,296 |
| Total Present and Prospective Assets |  | \$ | 20,721,280,994 |

## ACTUARIAL LIABILITIES

Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits

Present value of prospective benefits payable on account of inactive members

Present value of prospective benefits payable on account of present active members:

Service retirement benefits
Disability retirement benefits
Survivor benefits
Separation benefits
Total
Total Actuarial Liabilities

954,677,014
\$11,023,744,589
1,083,660,131 430,443,373
554,347,892
\$ 6,674,407,995

$$
304,341,092
$$




13,092,195,985
$\$ \quad 20,721,280,994$

## SOLVENCY TEST

Virginia Retirement System (State Employees, Teachers, and Political Subdivisions)
(\$ in thousands)

|  |  | Aggregate Accrued Liabilities For |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## State Employees Retirement System <br> (\$ in thousands)

|  | Aggregate Accrued Liabilities For |  |  |  |  | Portion of Accrued <br> Liabilities Covered by Actuarial Value of Assets |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation Date | (1) Active Member Contributions | (2) Retirees, Survivors and Inactive Members | (3) Active Members (Employer Financed Portion) | Total | Actuarial Value of Assets | (1) | (2) | (3) |
| 6/30/2011 | \$2,475,123 | \$10,844,164 | \$7,088,671 | \$20,407,958 | \$14,406,275 | 100.00\% | 100.00\% | 15.33\% |
| 6/30/2010 | 2,511,650 | 10,279,653 | 6,748,150 | 19,539,453 | 14,700,854 | 100.00 | 100.00 | 28.30 |
| 6/30/2009 | 2,501,163 | 9,024,592 | 6,400,124 | 17,925,879 | 15,049,901 | 100.00 | 100.00 | 55.06 |
| 6/30/2008 | 2,398,033 | 8,411,441 | 6,287,468 | 17,096,942 | 15,046,348 | 100.00 | 100.00 | 67.39 |
| 6/30/2007 | 2,361,187 | 7,707,539 | 6,211,055 | 16,279,781 | 13,857,242 | 100.00 | 100.00 | 61.00 |

## Teachers Retirement System (\$ in thousands)

| Valuation Date | Aggregate Accrued Liabilities For |  |  |  |  | Portion of Accrued Liabilities Covered by Actuarial Value of Assets |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (1) Active Member Contributions | (2) Retirees, Survivors and Inactive Members | (3) Active Members (Employer Financed Portion) | Total | Actuarial Value of Assets | (1) | (2) | (3) |
| 6/30/2011 | \$4,394,657 | \$19,066,272 | \$14,310,803 | \$37,771,732 | \$25,166,124 | 100.00\% | 100.00\% | 11.92\% |
| 6/30/2010 | 4,376,385 | 17,935,907 | 14,776,284 | 37,088,576 | 25,447,677 | 100.00 | 100.00 | 21.22 |
| 6/30/2009 | 4,155,034 | 16,383,311 | 13,322,169 | 33,860,514 | 25,764,665 | 100.00 | 100.00 | 39.23 |
| 6/30/2008 | 3,922,647 | 15,181,246 | 12,854,428 | 31,958,321 | 25,502,482 | 100.00 | 100.00 | 49.78 |
| 6/30/2007 | 3,826,300 | 13,670,111 | 12,173,427 | 29,669,838 | 23,204,871 | 100.00 | 100.00 | 46.89 |

Political Subdivisions Retirement System (\$ in thousands)

|  | Aggregate Accrued Liabilities For |  |  |  |  | Portion of Accrued Liabilities Covered by Actuarial Value of Assets |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation Date | (1) Active Member Contributions | (2) Retirees, Survivors and Inactive Members | (3) Active Members (Employer Financed Portion) | Total | Actuarial Value of Assets | (1) | (2) | (3) |
| 6/30/2011 | \$2,246,882 | \$7,629,103 | \$7,129,103 | \$17,005,088 | \$12,986,598 | 100.00\% | 100.00\% | 43.63\% |
| 6/30/2010 | 2,358,386 | 6,902,355 | 6,911,631 | 16,172,372 | 12,580,044 | 100.00 | 100.00 | 48.02 |
| 6/30/2009 | 2,220,367 | 6,181,844 | 6,134,406 | 14,536,617 | 12,370,467 | 100.00 | 100.00 | 64.69 |
| 6/30/2008 | 2,069,093 | 5,632,966 | 5,797,158 | 13,499,217 | 11,999,545 | 100.00 | 100.00 | 74.13 |
| 6/30/2007 | 1,966,559 | 4,961,736 | 5,238,559 | 12,166,854 | 10,753,337 | 100.00 | 100.00 | 73.02 |

## State Police Retirement System (\$ in thousands)

|  |  | Aggregate Acc | ued Liabilities For |  |  | Portion of Accrued Liabilities Covered by Actuarial Value of Assets |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation Date | (1) Active Member Contributions | (2) Retirees, Survivors and Inactive Members | (3) Active Members (Employer Financed Portion) | Total | Actuarial Value of Assets | (1) | (2) | (3) |
| 6/30/2011 | \$74,943 | \$540,097 | \$370,664 | \$985,704 | \$616,603 | 100.00\% | 100.00\% | 0.42\% |
| 6/30/2010 | 77,759 | 510,491 | 360,642 | 948,892 | 633,415 | 100.00 | 100.00 | 12.52 |
| 6/30/2009 | 74,662 | 474,622 | 329,896 | 879,180 | 646,960 | 100.00 | 100.00 | 29.61 |
| 6/30/2008 | 71,160 | 444,025 | 329,010 | 844,195 | 646,277 | 100.00 | 100.00 | 39.84 |
| 6/30/2007 | 70,796 | 408,085 | 327,147 | 806,028 | 594,985 | 100.00 | 100.00 | 35.49 |

## Judicial Retirement System (\$ in thousands)

| Aggregate Accrued Liabilities For |  |  |  |  |  | Portion of Accrued Liabilities Covered by Actuarial Value of Assets |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation Date | (1) Active Member Contributions | (2) Retirees, Survivors and Inactive Members | (3) Active Members (Employer Financed Portion) | Total | Actuarial Value of Assets | (1) | (2) | (3) |
| 6/30/2011 | \$37,981 | \$312,423 | \$219,091 | \$569,494 | \$371,051 | 100.00\% | 100.00\% | 9.42\% |
| 6/30/2010 | 43,217 | 310,305 | 206,398 | 559,920 | 372,096 | 100.00 | 100.00 | 9.00 |
| 6/30/2009 | 41,793 | 287,543 | 192,127 | 521,463 | 378,212 | 100.00 | 100.00 | 25.44 |
| 6/30/2008 | 38,785 | 271,276 | 184,707 | 494,768 | 373,850 | 100.00 | 100.00 | 34.54 |
| 6/30/2007 | 38,675 | 242,825 | 160,998 | 442,498 | 340,200 | 100.00 | 100.00 | 36.46 |

## Virginia Law Officers Retirement System (\$ in thousands)

|  | Aggregate Accrued Liabilities For |  |  |  |  | Portion of Accrued Liabilities Covered by Actuarial Value of Assets |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation Date | (1) Active Member Contributions | (2) Retirees, Survivors and Inactive Members | (3) Active Members (Employer Financed Portion) | Total | Actuarial Value of Assets | (1) | (2) | (3) |
| 6/30/2011 | \$174,963 | \$763,631 | \$744,597 | \$1,683,191 | \$926,082 | 100.00\% | 98.40\% | 0.00\% |
| 6/30/2010 | 186,792 | 682,378 | 710,151 | 1,579,321 | 925,443 | 100.00 | 100.00 | 7.92 |
| 6/30/2009 | 181,760 | 581,887 | 648,197 | 1,411,844 | 912,922 | 100.00 | 100.00 | 23.03 |
| 6/30/2008 | 173,039 | 510,878 | 597,560 | 1,281,477 | 873,473 | 100.00 | 100.00 | 31.72 |
| 6/30/2007 | 169,393 | 458,383 | 538,203 | 1,165,979 | 766,243 | 100.00 | 100.00 | 25.73 |

## All Retirement Systems Combined (\$ in thousands)

|  | Aggregate Accrued Liabilities For |  |  |  |  | Portion of Accrued <br> Liabilities Covered by Actuarial Value of Assets |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation Date | (1) Active Member Contributions | (2) Retirees, <br> Survivors and Inactive Members | (3) Active Members (Employer Financed Portion) | Total | Actuarial Value of Assets | (1) | (2) | (3) |
| 6/30/2011 | \$9,404,549 | \$39,155,690 | \$29,862,929 | \$78,423,167 | \$54,472,733 | 100.00\% | 100.00\% | 19.80\% |
| 6/30/2010 | 9,554,189 | 36,621,088 | 29,713,256 | 75,888,534 | 54,659,529 | 100.00 | 100.00 | 28.55 |
| 6/30/2009 | 9,174,779 | 32,933,799 | 27,026,919 | 69,135,497 | 55,123,127 | 100.00 | 100.00 | 48.15 |
| 6/30/2008 | 8,672,757 | 30,451,831 | 26,050,331 | 65,174,919 | 54,441,975 | 100.00 | 100.00 | 58.80 |
| 6/30/2007 | 8,432,910 | 27,448,679 | 24,649,389 | 60,530,978 | 49,516,878 | 100.00 | 100.00 | 55.32 |

STATE EMPLOYEES
FOR THE YEAR ENDING June 30, 2011
(\$ IN THOUSANDS)

| (1) | Actuarial Value Beginning of Year | \$ | 14,700,854 |
| :---: | :---: | :---: | :---: |
| (2) | Market Value End of Year | \$ | 13,992,901 |
| (3) | Market Value Beginning of Year | \$ | 12,384,638 |
| (4) | Cash Flow |  |  |
|  | a. Contributions | \$ | 252,107 |
|  | b. Benefit Payments |  | $(958,210)$ |
|  | c. Administrative Expenses |  | $(11,522)$ |
|  | d. Net Transfers |  | (131) |
|  | e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d] | \$ | $(717,756)$ |
| (5) | Investment Income |  |  |
|  | a. Market total: $(2)-(3)-(4) e$ | \$ | 2,326,019 |
|  | b. Assumed Rate |  | 7.00\% |
|  | c. Amount of Immediate Recognition $[(3) \times(5) b]+[[(4) e-(4) c] \times(5) b \times 0.5]-(4) c$ | \$ | 853,729 |
|  | d. Amount for Phased-in Recognition: (5)a - (5)c | \$ | 1,472,290 |
| (6) | Phased-In Recognition of Investment Income |  |  |
|  | a. Current Year: $0.20 \times(5) \mathrm{d}$ | \$ | 294,458 |
|  | b. First Prior Year |  | 174,123 |
|  | c. Second Prior Year |  | $(860,345)$ |
|  | d. Third Prior Year |  | $(392,887)$ |
|  | e. Fourth Prior Year |  | 354,099 |
|  | f. Total Recognized Investment Gain | \$ | $(430,552)$ |
| (7) | Actuarial Value End of Year: [(1) + (4) + (5)c + (6)f] | \$ | 14,406,275 |

## TEACHERS

FOR THE YEAR ENDING June 30, 2011
(\$ IN THOUSANDS)

|  | Actuarial Value Beginning of Year | \$ | 25,447,677 |
| :---: | :---: | :---: | :---: |
| (2) | Market Value End of Year | \$ | 24,520,362 |
| (3) | Market Value Beginning of Year | \$ | 21,517,178 |
| (4) | Cash Flow |  |  |
|  | a. Contributions | \$ | 622,907 |
|  | b. Benefit Payments |  | $(1,635,790)$ |
|  | c. Administrative Expenses |  | $(19,638)$ |
|  | d. Net Transfers |  | 1 |
|  | e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d] | \$ | (1,032,520) |
| (5) | Investment Income |  |  |
|  | a. Market total: $(2)-(3)-(4) \mathrm{e}$ | \$ | 4,035,704 |
|  | b. Assumed Rate |  | 7.00\% |
|  | c. Amount of Immediate Recognition |  |  |
|  | [(3) $\times$ (5)b] + [[(4)e- (4)c] $\times(5) \mathrm{b} \times 0.5]-(4) \mathrm{c}$ | \$ | 1,490,389 |
|  | d. Amount for Phased-in Recognition: (5)a - (5)c | \$ | 2,545,315 |
| (6) | Phased-In Recognition of Investment Income |  |  |
|  | a. Current Year: $0.20 \times(5) \mathrm{d}$ | \$ | 509,063 |
|  | b. First Prior Year |  | 293,625 |
|  | c. Second Prior Year |  | $(1,451,149)$ |
|  | d. Third Prior Year |  | $(660,590)$ |
|  | e. Fourth Prior Year |  | 569,629 |
|  | f. Total Recognized Investment Gain | \$ | $(739,422)$ |
| (7) | Actuarial Value End of Year: [(1) + (4) + (5)c + (6)f] | \$ | 25,166,124 |

STATE POLICE
FOR THE YEAR ENDING June 30, 2011 (\$ IN THOUSANDS)

| (1) | Actuarial Value Beginning of Year | \$ | 633,415 |
| :---: | :---: | :---: | :---: |
| (2) | Market Value End of Year | \$ | 598,686 |
| (3) | Market Value Beginning of Year | \$ | 533,962 |
| (4) | Cash Flow |  |  |
|  | a. Contributions | \$ | 12,343 |
|  | b. Benefit Payments |  | $(46,538)$ |
|  | c. Administrative Expenses |  | (413) |
|  | d. Net Transfers |  | - |
|  | e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d] | \$ | $(34,608)$ |
| (5) | Investment Income |  |  |
|  | a. Market total: $(2)-(3)-(4) \mathrm{e}$ | \$ | 99,332 |
|  | b. Assumed Rate |  | 7.00\% |
|  | c. Amount of Immediate Recognition |  |  |
|  | [(3) $\times(5) \mathrm{b}]+[[(4) \mathrm{e}-(4) \mathrm{c}] \times(5) \mathrm{b} \times 0.5]-$ (4)c | \$ | 36,593 |
|  | d. Amount for Phased-in Recognition: (5)a - (5)c | \$ | 62,739 |
| (6) | Phased-In Recognition of Investment Income |  |  |
|  | a. Current Year: $0.20 \times(5) \mathrm{d}$ | \$ | 12,548 |
|  | b. First Prior Year |  | 7,368 |
|  | c. Second Prior Year |  | $(36,662)$ |
|  | d. Third Prior Year |  | $(16,888)$ |
|  | e. Fourth Prior Year |  | 14,837 |
|  | f. Total Recognized Investment Gain | \$ | $(18,797)$ |
| (7) | Actuarial Value End of Year: [(1) + (4) + (5)c + (6)f] | \$ | 616,603 |

## JUDICIAL

FOR THE YEAR ENDING June 30, 2011
(\$ IN THOUSANDS)

| (1) | Actuarial Value Beginning of Year | \$ | 372,096 |
| :---: | :---: | :---: | :---: |
| (2) | Market Value End of Year | \$ | 361,401 |
| (3) | Market Value Beginning of Year | \$ | 314,794 |
| (4) | Cash Flow |  |  |
|  | a. Contributions | \$ | 20,338 |
|  | b. Benefit Payments |  | $(32,120)$ |
|  | c. Administrative Expenses |  | (271) |
|  | d. Net Transfers |  |  |
|  | e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d] | \$ | $(12,053)$ |
| (5) | Investment Income |  |  |
|  | a. Market total: $(2)-(3)-(4) e$ | \$ | 58,660 |
|  | b. Assumed Rate |  | 7.00\% |
|  | c. Amount of Immediate Recognition |  |  |
|  | [(3) $\times$ (5)b] + [[(4)e - (4)c] $\times$ (5) $\mathrm{b} \times 0.5]-(4) \mathrm{c}$ | \$ | 21,895 |
|  | d. Amount for Phased-in Recognition: (5)a - (5)c | \$ | 36,765 |
| (6) | Phased-In Recognition of Investment Income |  |  |
|  | a. Current Year: $0.20 \times(5) \mathrm{d}$ | \$ | 7,353 |
|  | b. First Prior Year |  | 4,277 |
|  | c. Second Prior Year |  | $(21,088)$ |
|  | d. Third Prior Year |  | $(9,717)$ |
|  | e. Fourth Prior Year |  | 8,288 |
|  | f. Total Recognized Investment Gain | \$ | $(10,887)$ |
|  | Actuarial Value End of Year: [(1) + (4) + (5)c + (6)f] | \$ | 371,051 |

## VIRGINIA LAW OFFICERS

FOR THE YEAR ENDING June 30, 2011 (\$ IN THOUSANDS)

| (1) | Actuarial Value Beginning of Year | \$ | 925,443 |
| :---: | :---: | :---: | :---: |
| (2) | Market Value End of Year | \$ | 910,666 |
| (3) | Market Value Beginning of Year | \$ | 792,429 |
| (4) | Cash Flow |  |  |
|  | a. Contributions | \$ | 34,423 |
|  | b. Benefit Payments |  | $(63,800)$ |
|  | c. Administrative Expenses |  | (681) |
|  | d. Net Transfers |  | 130 |
|  | e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d] | \$ | $(29,928)$ |
| (5) | Investment Income |  |  |
|  | a. Market total: $(2)-(3)-(4) \mathrm{e}$ | \$ | 148,165 |
|  | b. Assumed Rate |  | 7.00\% |
|  | c. Amount of Immediate Recognition |  |  |
|  | [(3) $\times$ (5)b] + [[(4)e-(4)c] $\times$ (5)b $\times 0.5]-(4) \mathrm{c}$ | \$ | 55,127 |
|  | d. Amount for Phased-in Recognition: (5)a - (5)c | \$ | 93,038 |
| (6) | Phased-In Recognition of Investment Income |  |  |
|  | a. Current Year: $0.20 \times(5) \mathrm{d}$ | \$ | 18,608 |
|  | b. First Prior Year |  | 10,260 |
|  | c. Second Prior Year |  | $(49,227)$ |
|  | d. Third Prior Year |  | $(22,173)$ |
|  | e. Fourth Prior Year |  | 17,972 |
|  | f. Total Recognized Investment Gain | \$ | $(24,560)$ |
| (7) | Actuarial Value End of Year: [(1) + (4) + (5)c + (6)f] | \$ | 926,082 |

## POLITICAL SUBDIVISIONS

## FOR THE YEAR ENDING June 30, 2011

 (\$ IN THOUSANDS)|  | Actuarial Value Beginning of Year | \$ | 12,580,044 |
| :---: | :---: | :---: | :---: |
| (2) | Market Value End of Year | \$ | 12,767,072 |
| (3) | Market Value Beginning of Year | \$ | 10,744,000 |
| (4) | Cash Flow |  |  |
|  | a. Contributions | \$ | 605,908 |
|  | b. Benefit Payments |  | $(627,981)$ |
|  | c. Administrative Expenses |  | $(9,421)$ |
|  | d. Net Transfers |  |  |
|  | e. Net Cash Flow: [(4)a + (4)b + (4)c + (4)d] | \$ | $(31,494)$ |
| (5) | Investment Income |  |  |
|  | a. Market total: $(2)-(3)-(4) e$ | \$ | 2,054,566 |
|  | b. Assumed Rate |  | 7.00\% |
|  | c. Amount of Immediate Recognition |  |  |
|  | [(3) $\times(5) b]+[[(4) e-(4) c] \times(5) b \times 0.5]-(4) c$ | \$ | 760,728 |
|  | d. Amount for Phased-in Recognition: (5)a - (5)c | \$ | 1,293,838 |
| (6) | Phased-In Recognition of Investment Income |  |  |
|  | a. Current Year: $0.20 \times(5) \mathrm{d}$ | \$ | 258,768 |
|  | b. First Prior Year |  | 140,754 |
|  | c. Second Prior Year |  | $(684,826)$ |
|  | d. Third Prior Year |  | $(307,323)$ |
|  | e. Fourth Prior Year |  | 269,947 |
|  | f. Total Recognized Investment Gain | \$ | $(322,680)$ |
|  | Actuarial Value End of Year: [(1) + (4) + (5)c + (6)f] | \$ | 12,986,598 |

## STATE EMPLOYEES

## FOR THE YEAR ENDING June 30, 2011

(\$ IN THOUSANDS)

| Additions for the Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Contributions: |  |  |  |  |
| Members | \$ | 10,916 |  |  |
| Members (paid by employer) |  | 168,306 |  |  |
| Employers |  | 72,885 |  |  |
| Total |  |  | \$ | 252,107 |
| Miscellaneous Revenue |  |  |  | - |
| Net Investment Income |  |  |  | 2,326,019 |
| TOTAL |  |  | \$ | 2,578,126 |
| Deductions for the Year |  |  |  |  |
| Benefit Payments | \$ | 931,893 |  |  |
| Refunds |  | 26,317 |  |  |
| Transfers |  | 131 |  |  |
| Administrative Expenses |  | 11,522 |  |  |
| TOTAL |  |  | \$ | 969,863 |
| Excess of Additions Over Deductions |  |  | \$ | 1,608,263 |
| Reconciliation of Asset Balances |  |  |  |  |
| Market Value of Assets as of 6/30/2010 |  |  | \$ | 12,384,638 |
| Excess of Additions over Deductions |  |  |  | 1,608,263 |
| Market Value of Assets as of 6/30/2011* |  |  | \$ | 13,992,901 |

*The Market Value of Assets shown above is used in the determination of the Actuarial Value of Assets (Schedule B).

## TEACHERS

## FOR THE YEAR ENDING June 30, 2011

 (\$ IN THOUSANDS)| Additions for the Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Contributions: |  |  |  |  |
| Members | \$ | 6,581 |  |  |
| Members (paid by employer) |  | 344,549 |  |  |
| Employers |  | 271,777 |  |  |
| Total |  |  | \$ | 622,907 |
| Miscellaneous Revenue |  |  |  | - |
| Net Investment Income |  |  |  | 4,035,704 |
| TOTAL |  |  | \$ | 4,658,611 |
| Deductions for the Year |  |  |  |  |
| Benefit Payments | \$ | 1,599,208 |  |  |
| Refunds |  | 36,582 |  |  |
| Transfers |  | (1) |  |  |
| Administrative Expenses |  | 19,638 |  |  |
| TOTAL |  |  | \$ | 1,655,427 |
| Excess of Additions Over Deductions |  |  | \$ | 3,003,184 |
| Reconciliation of Asset Balances |  |  |  |  |
| Market Value of Assets as of 6/30/2010 |  |  | \$ | 21,517,178 |
| Excess of Additions over Deductions |  |  |  | 3,003,184 |
| Market Value of Assets as of 6/30/2011* |  |  | \$ | 24,520,362 |

*The Market Value of Assets shown above is used in the determination of the Actuarial Value of Assets (Schedule B).

## STATE POLICE

## FOR THE YEAR ENDING June 30, 2011

 (\$ IN THOUSANDS)| Additions for the Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Contributions: |  |  |  |  |
| Members | \$ | 121 |  |  |
| Members (paid by employer) |  | 4,742 |  |  |
| Employers |  | 7,480 |  |  |
| Total |  |  | \$ | 12,343 |
| Miscellaneous Revenue |  |  |  | - |
| Net Investment Income |  |  |  | 99,332 |
| TOTAL |  |  | \$ | 111,675 |
| Deductions for the Year |  |  |  |  |
| Benefit Payments | \$ | 46,259 |  |  |
| Refunds |  | 279 |  |  |
| Transfers |  | - |  |  |
| Administrative Expenses |  | 413 |  |  |
| TOTAL |  |  | \$ | 46,951 |
| Excess of Additions Over Deductions |  |  | \$ | 64,724 |
| Reconciliation of Asset Balances |  |  |  |  |
| Market Value of Assets as of 6/30/2010 |  |  | \$ | 533,962 |
| Excess of Additions over Deductions |  |  |  | 64,724 |
| Market Value of Assets as of 6/30/2011* |  |  | \$ | 598,686 |

*The Market Value of Assets shown above is used in the determination of the Actuarial Value of Assets (Schedule B).

| Additions for the Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Contributions: |  |  |  |  |
| Members | \$ | 32 |  |  |
| Members (paid by employer) |  | 3,003 |  |  |
| Employers |  | 17,303 |  |  |
| Total |  |  | \$ | 20,338 |
| Miscellaneous Revenue |  |  |  | - |
| Net Investment Income |  |  |  | 58,660 |
| TOTAL |  |  | \$ | 78,998 |
| Deductions for the Year |  |  |  |  |
| Benefit Payments | \$ | 32,115 |  |  |
| Refunds |  | 5 |  |  |
| Transfers |  | - |  |  |
| Administrative Expenses |  | 271 |  |  |
| TOTAL |  |  | \$ | 32,391 |
| Excess of Additions Over Deductions |  |  | \$ | 46,607 |
| Reconciliation of Asset Balances |  |  |  |  |
| Market Value of Assets as of 6/30/2010 |  |  | \$ | 314,794 |
| Excess of Additions over Deductions |  |  |  | 46,607 |
| Market Value of Assets as of 6/30/2011* |  |  | \$ | 361,401 |

*The Market Value of Assets shown above is used in the determination of the Actuarial Value of Assets (Schedule B).

VIRGINIA LAW OFFICERS
FOR THE YEAR ENDING June 30, 2011 (\$ IN THOUSANDS)

| Additions for the Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Contributions: |  |  |  |  |
| Members | \$ | 941 |  |  |
| Members (paid by employer) |  | 16,102 |  |  |
| Employers |  | 17,380 |  |  |
| Total |  |  | \$ | 34,423 |
| Miscellaneous Revenue |  |  |  | - |
| Net Investment Income |  |  |  | 148,165 |
| TOTAL |  |  | \$ | 182,588 |
| Deductions for the Year |  |  |  |  |
| Benefit Payments | \$ | 59,749 |  |  |
| Refunds |  | 4,051 |  |  |
| Transfers |  | (130) |  |  |
| Administrative Expenses |  | 681 |  |  |
| TOTAL |  |  | \$ | 64,351 |
| Excess of Additions Over Deductions |  |  | \$ | 118,237 |
| $\underline{\text { Reconciliation of Asset Balances }}$ |  |  |  |  |
| Market Value of Assets as of 6/30/2010 |  |  | \$ | 792,429 |
| Excess of Additions over Deductions |  |  |  | 118,237 |
| Market Value of Assets as of 6/302011* |  |  | \$ | 910,666 |

*The Market Value of Assets shown above is used in the determination of the Actuarial Value of Assets (Schedule B).

## POLITICAL SUBDIVISIONS

## FOR THE YEAR ENDING June 30, 2011

(\$ IN THOUSANDS)

| Additions for the Year |  |  |  |
| :---: | :---: | :---: | :---: |
| Contributions: |  |  |  |
| Members | \$ | 9,032 |  |
| Members (paid by employer) |  | 199,705 |  |
| Employers |  | 397,171 |  |
| Total |  | \$ | 605,908 |
| Miscellaneous Revenue |  |  | - |
| Net Investment Income |  |  | 2,054,566 |
| TOTAL |  | \$ | 2,660,474 |

Deductions for the Year

Benefit Payments
Refunds
Transfers
Administrative Expenses

TOTAL

## Excess of Additions Over Deductions

\$ 637,402
\$ 2,023,072

Reconciliation of Asset Balances

Market Value of Assets as of 6/30/2010
Excess of Additions over Deductions
Market Value of Assets as of 6/302011*
*The Market Value of Assets shown above is used in the determination of the Actuarial Value of Assets (Schedule B).

## Assumptions and Methods which apply to all VRS Plans

Investment Return Rate:

Inflation Assumption:
Actuarial Cost Method:

Funding Period:

## Payroll Growth Rate:

Asset Valuation Method:

Cost-of-living Increase:

## Percent Electing a

Deferred Termination Benefit:

## Marriage Assumption:

7.00\% per annum, compounded annually (net of administrative expenses).
2.50\% per year.

Entry age normal cost method. Actuarial gains and losses are reflected in the unfunded actuarial accrued liability. See Section $E$ for a detailed explanation.

30 years from valuation date. The amortization period of the unfunded less the deferred contribution, will decrease by one each year until reaching the minimum period of 20 years. The deferred contribution, as defined under HB30, is to be amortized using a level-dollar, closed, 10 year period.
$3 \%$ per annum.
The method of valuing assets is intended to recognize a "smoothed" market value of assets. Under this method, the difference between actual return on market value from investment experience and the expected return on market value is recognized over a five-year period. The resulting actuarial value of assets cannot be less than $80 \%$ or more than $120 \%$ of the market value of assets.
2.5\% per year compounded annually. The temporary supplement for SPORS and VaLORS members is assumed to be adjusted biennially based on increases of $2.5 \%$ per annum compounded annually.

Terminating members are assumed to elect a return of contributions or a deferred annuity, whichever is most valuable benefit at the time of termination. Termination benefits are assumed to commence at normal retirement age.
$100 \%$ of active employees are assumed to be married, with spouses the same age as participants.

## STATE EMPLOYEES

## Plan Specific Assumptions and Methods

## MORTALITY RATES:

Pre-Retirement:
1994 Group Annuity Mortality Tables for males and females with a one year setback in age for males and females.

Post-Retirement:
1994 Group Annuity Mortality Tables for males and females with a one year setback in age for males and females.

Post-Disablement:
70\% of PBGC Disabled Mortality Table 5a for Males.
$90 \%$ of PBGC Disabled Mortality Table 6a for Females.

| Mortality Rates |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Age | Male |  | Female |  |
|  | Pre- and Post-retirement | Post-disablement | Pre- and Post-retirement | Post-disablement |
| 20 | 0.0484\% | 3.3810\% | 0.0280\% | 2.3670\% |
| 25 | 0.0624 | 3.3810 | 0.0291 | 2.3670 |
| 30 | 0.0779 | 2.5340 | 0.0331 | 2.1330 |
| 35 | 0.0849 | 1.9460 | 0.0449 | 1.9260 |
| 40 | 0.0999 | 1.9740 | 0.0652 | 1.8810 |
| 45 | 0.1458 | 2.2540 | 0.0923 | 2.0160 |
| 50 | 0.2326 | 2.6810 | 0.1310 | 2.3130 |
| 55 | 0.3979 | 3.3740 | 0.2084 | 2.6550 |
| 60 | 0.7090 | 4.2210 | 0.3863 | 2.9790 |
| 65 | 1.2940 | 4.7460 | 0.7621 | 3.3300 |
| 70 | 2.1729 | 5.1730 | 1.2709 | 3.6990 |
| 75 | 3.4051 | 5.8940 | 2.0381 | 4.4280 |
| 80 | 5.5861 | 7.8960 | 3.5362 | 6.7140 |
| 85 | 8.9613 | 11.7740 | 6.0979 | 10.1520 |
| 90 | 13.9452 | 17.6750 | 10.4594 | 15.1380 |

$14 \%$ of pre-retirement deaths are assumed to be service related.

Schedule D - State Employees' Actuarial Assumptions and Methods
RETIREMENT RATES: The following rates of retirement are assumed for members eligible to retire from Plan 1.

| Age | Separations from Active Service due to Retirement Percentage of Members Separating within the Next Year |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male |  | Female |  |
|  | Less than 30 Years of Service | More than 30 Years of Service | Less than 30 Years of Service | More than 30 Years of Service |
| <=49 | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 50 | 3.00 | 10.00 | 3.22 | 10.00 |
| 51 | 3.00 | 10.00 | 3.07 | 10.00 |
| 52 | 3.00 | 10.00 | 3.00 | 10.00 |
| 53 | 3.00 | 10.00 | 3.00 | 10.00 |
| 54 | 3.00 | 10.00 | 3.50 | 10.00 |
| 55 | 5.00 | 10.00 | 5.00 | 10.00 |
| 56 | 5.00 | 10.00 | 5.00 | 10.00 |
| 57 | 4.50 | 10.00 | 4.50 | 10.00 |
| 58 | 4.00 | 10.00 | 5.50 | 10.00 |
| 59 | 5.00 | 10.00 | 5.50 | 10.00 |
| 60 | 5.00 | 10.00 | 5.50 | 15.00 |
| 61 | 10.00 | 15.00 | 10.00 | 20.00 |
| 62 | 15.00 | 25.00 | 15.00 | 30.00 |
| 63 | 15.00 | 20.00 | 15.00 | 20.00 |
| 64 | 15.00 | 20.00 | 15.00 | 20.00 |
| 65 | 40.00 | 30.00 | 40.00 | 40.00 |
| 66 | 40.00 | 25.00 | 40.00 | 30.00 |
| 67 | 40.00 | 25.00 | 40.00 | 25.00 |
| 68 | 40.00 | 20.00 | 40.00 | 25.00 |
| 69 | 40.00 | 20.00 | 40.00 | 20.00 |
| >=70 | 100.00 | 100.00 | 100.00 | 100.00 |

Schedule D - State Employees' Actuarial Assumptions and Methods
RETIREMENT RATES: The following rates of retirement are assumed for members eligible to retire from Plan 2.

| Age | Separations from Active Service due to Retirement Percentage of Members Separating within the Next Year |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male |  | Female |  |
|  | Reduced Retirement | Unreduced Retirement | Reduced Retirement | Unreduced Retirement |
| <=49 | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 50 | 0.00 | 10.00 | 0.00 | 10.00 |
| 51 | 0.00 | 10.00 | 0.00 | 10.00 |
| 52 | 0.00 | 10.00 | 0.00 | 10.00 |
| 53 | 0.00 | 10.00 | 0.00 | 10.00 |
| 54 | 0.00 | 10.00 | 0.00 | 10.00 |
| 55 | 0.00 | 10.00 | 0.00 | 10.00 |
| 56 | 0.00 | 10.00 | 0.00 | 10.00 |
| 57 | 0.00 | 10.00 | 0.00 | 10.00 |
| 58 | 0.00 | 10.00 | 0.00 | 10.00 |
| 59 | 0.00 | 10.00 | 0.00 | 10.00 |
| 60 | 5.00 | 10.00 | 5.50 | 15.00 |
| 61 | 10.00 | 15.00 | 10.00 | 20.00 |
| 62 | 15.00 | 25.00 | 15.00 | 30.00 |
| 63 | 15.00 | 20.00 | 15.00 | 20.00 |
| 64 | 15.00 | 20.00 | 15.00 | 20.00 |
| 65 | 40.00 | 30.00 | 40.00 | 40.00 |
| 66 | 40.00 | 25.00 | 40.00 | 30.00 |
| 67 | 40.00 | 25.00 | 40.00 | 25.00 |
| 68 | 40.00 | 20.00 | 40.00 | 25.00 |
| 69 | 40.00 | 20.00 | 40.00 | 20.00 |
| $>=70$ | 100.00 | 100.00 | 100.00 | 100.00 |

Schedule D - State Employees' Actuarial Assumptions and Methods
DISABILITY RATES: As shown below for selected ages. $14 \%$ of disability cases are assumed to be service related.

| $\begin{array}{c}\text { Separations from Active Service due to Disability } \\ \text { Percentage of Members Separating within the Next Year } \\ \text { Age }\end{array}$ |  | Male |
| :---: | :---: | :---: |$]$| Female |  |  |
| :---: | :---: | :---: |
| 20 | $0.1000 \%$ | $0.0100 \%$ |
| 25 | 0.1000 | 0.1000 |
| 30 | 0.2000 | 0.1500 |
| 35 | 0.2000 | 0.2500 |
| 40 | 0.2000 | 0.2900 |
|  |  |  |
| 45 | 0.4000 | 0.3400 |
| 50 | 0.5000 | 0.5500 |
| 55 | 0.6000 | 0.8100 |
| 60 | 0.8000 | 1.0000 |
| 65 | 0.7000 | 0.9000 |

## Schedule D - State Employees' Actuarial Assumptions and Methods

TERMINATION RATES: The following withdrawal rates for members of Plan 1 are used based on age and years of service. (For causes other than death, disability, or retirement)

| Separations from Active Service due to Termination Percentage of Male Members Separating within the Next Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  | Year | of Ser | ice |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | $>=10$ |
| 20 | 26.0\% | 26.0\% | 26.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 0.0\% |
| 25 | 22.0 | 22.0 | 22.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 0.0 |
| 30 | 20.0 | 20.0 | 20.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 5.0 |
| 35 | 17.0 | 17.0 | 17.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 4.5 |
| 40 | 15.0 | 15.0 | 15.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 3.4 |
| 45 | 14.0 | 14.0 | 14.0 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 2.3 |
| 50 | 12.0 | 12.0 | 12.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 2.0 |
| 55 | 10.0 | 10.0 | 10.0 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 0.0 |
| 60 | 12.0 | 12.0 | 12.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 0.0 |
| 65 | 12.0 | 12.0 | 12.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 0.0 |


| Separations from Active Service due to Termination Percentage of Female Members Separating within the Next Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  | Year | of Ser | ice |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | $>=10$ |
| 20 | 30.0\% | 30.0\% | 30.0\% | 22.0\% | 22.0\% | 22.0\% | 22.0\% | 22.0\% | 22.0\% | 22.0\% | 0.0\% |
| 25 | 25.5 | 25.5 | 25.5 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 0.0 |
| 30 | 22.5 | 22.5 | 22.5 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 6.0 |
| 35 | 19.0 | 19.0 | 19.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 5.0 |
| 40 | 16.5 | 16.5 | 16.5 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 3.6 |
| 45 | 14.0 | 14.0 | 14.0 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 2.5 |
| 50 | 13.5 | 13.5 | 13.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 2.0 |
| 55 | 12.0 | 12.0 | 12.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 0.0 |
| 60 | 12.5 | 12.5 | 12.5 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 0.0 |
| 65 | 13.0 | 13.0 | 13.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 0.0 |

## Schedule D - State Employees' Actuarial Assumptions and Methods

TERMINATION RATES: The following withdrawal rates for members of Plan 2 are used based on age and years of service. (For causes other than death, disability, or retirement)

| Separations from Active Service due to Termination Percentage of Male Members Separating within the Next Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  | Year | of Ser | ice |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | $>=10$ |
| 20 | 26.0\% | 26.0\% | 26.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 0.0\% |
| 25 | 22.0 | 22.0 | 22.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 0.0 |
| 30 | 20.0 | 20.0 | 20.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 5.0 |
| 35 | 17.0 | 17.0 | 17.0 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 9.5 | 4.5 |
| 40 | 15.0 | 15.0 | 15.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 3.4 |
| 45 | 14.0 | 14.0 | 14.0 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 2.3 |
| 50 | 12.0 | 12.0 | 12.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 2.0 |
| 55 | 10.0 | 10.0 | 10.0 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 0.4 |
| 60 | 12.0 | 12.0 | 12.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 0.0 |
| 65 | 12.0 | 12.0 | 12.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 0.0 |


| Separations from Active Service due to Termination Percentage of Female Members Separating within the Next Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  | Year | of Ser | ice |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | $>=10$ |
| 20 | 30.0\% | 30.0\% | 30.0\% | 22.0\% | 22.0\% | 22.0\% | 22.0\% | 22.0\% | 22.0\% | 22.0\% | 0.0\% |
| 25 | 25.5 | 25.5 | 25.5 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 0.0 |
| 30 | 22.5 | 22.5 | 22.5 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 14.0 | 6.0 |
| 35 | 19.0 | 19.0 | 19.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 5.0 |
| 40 | 16.5 | 16.5 | 16.5 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 3.6 |
| 45 | 14.0 | 14.0 | 14.0 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 2.5 |
| 50 | 13.5 | 13.5 | 13.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 2.0 |
| 55 | 12.0 | 12.0 | 12.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 0.4 |
| 60 | 12.5 | 12.5 | 12.5 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 6.0 | 0.0 |
| 65 | 13.0 | 13.0 | 13.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 0.0 |

## Schedule D - State Employees' Actuarial Assumptions and Methods

SALARY INCREASE RATES: The following salary increase rates are used. Inflation rate of $2.50 \%$ plus productivity component of $1.25 \%$ plus step-rate/promotional component as shown:

| Pay Increase Assumptions <br> for an Individual Member |  |  |  |
| :---: | :---: | :---: | :---: |
| Years <br> of <br> Service | Step Rale/ <br> Promotional <br> Rates |  <br> Productivity <br> (Economy) |  | |  |
| :---: |
| 1 |
| Increase |
| (Next Year) |$|$|  |  |  |  |
| :---: | :---: | :---: | :---: |
| 2 | $1.85 \%$ | $3.75 \%$ | $5.60 \%$ |
| 3 | 1.85 | 3.75 | 5.60 |
| 4 | 1.25 | 3.75 | 5.00 |
| 5 | 0.95 | 3.75 | 4.70 |
| 6 | 0.95 | 3.75 | 4.70 |
| 7 | 0.95 | 3.75 | 4.70 |
| 8 | 0.85 | 3.75 | 4.60 |
| 9 | 0.75 | 3.75 | 4.50 |
| 10 | 0.50 | 3.75 | 4.25 |
| $11-19$ | 0.50 | 3.75 | 4.25 |
| 20 or more | 0.15 | 3.75 | 3.90 |

DISABILITY ELECTION: All active members hired on or after January 1, 1999 will enter the Virginia Sickness and Disability Program (VSDP) and will not be eligible to receive non-VSDP disability benefits. For members hired before January 1, 1999 we measure the liabilities based upon the member's actual election contained in the valuation data.

Schedule D - Teachers' Actuarial Assumptions and Methods

## TEACHERS

## Plan Specific Assumptions and Methods

## MORTALITY RATES:

Pre-Retirement:
1994 Group Annuity Mortality Tables for males and females with a one year setback in age for males and females.

Post-Retirement:
1994 Group Annuity Mortality Tables for males and females with a three year setback in age for males and females.

Post-Disablement:
$70 \%$ of PBGC Disabled Mortality Table 5a for Males. $90 \%$ of PBGC Disabled Mortality Table 6a for Females.

|  | Mortality Rates |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | Pre- <br> retirement | Male <br> Petirement | Post- <br> disablement | Pre- <br> retirement | Female <br> Petirement | Post- <br> disablement |
| 20 | $0.0484 \%$ | $0.0430 \%$ | $3.3810 \%$ | $0.0280 \%$ | $0.0262 \%$ | $2.3670 \%$ |
| 25 | 0.0624 | 0.0556 | 3.3810 | 0.0291 | 0.0289 | 2.3670 |
| 30 | 0.0779 | 0.0727 | 2.5340 | 0.0331 | 0.0302 | 2.1330 |
| 35 | 0.0849 | 0.0839 | 1.9460 | 0.0449 | 0.0397 | 1.9260 |
| 40 | 0.0999 | 0.0891 | 1.9740 | 0.0652 | 0.0551 | 1.8810 |
|  |  |  |  |  |  |  |
| 45 | 0.1458 | 0.1252 | 2.2540 | 0.0923 | 0.0825 | 2.0160 |
| 50 | 0.2326 | 0.1899 | 2.6810 | 0.1310 | 0.1112 | 2.3130 |
| 55 | 0.3979 | 0.3213 | 3.3740 | 0.2084 | 0.1734 | 2.6550 |
| 60 | 0.7090 | 0.5581 | 4.2210 | 0.3863 | 0.2919 | 2.9790 |
| 65 | 1.2940 | 1.0147 | 4.7460 | 0.7621 | 0.5832 | 3.3300 |
|  |  |  |  |  |  |  |
| 70 | 2.1729 | 1.8034 | 5.1730 | 1.2709 | 1.0764 | 3.6990 |
| 75 | 3.4051 | 2.8481 | 5.8940 | 2.0381 | 1.6506 | 4.4280 |
| 80 | 5.5861 | 4.5171 | 7.8960 | 3.5362 | 2.8366 | 6.7140 |
| 85 | 8.9613 | 7.5532 | 11.7740 | 6.0979 | 4.9153 | 10.1520 |
| 90 | 13.9452 | 11.5671 | 17.6750 | 10.4594 | 8.4023 | 15.1380 |

$5 \%$ of pre-retirement deaths are assumed to be service related.

RETIREMENT RATES: The following rates of retirement are assumed for members eligible to retire from Plan 1.

| Separations from Active Service due to Retirement Percentage of Members Separating within the Next Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male |  | Female |  |
| Age | Less than 30 Years of Service | More than 30 Years of Service | Less than 30 Years of Service | More than 30 Years of Service |
| <=49 | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 50 | 2.00 | 17.50 | 2.00 | 15.00 |
| 51 | 2.00 | 17.50 | 2.40 | 15.00 |
| 52 | 2.00 | 17.50 | 2.70 | 15.00 |
| 53 | 2.30 | 17.50 | 2.40 | 15.00 |
| 54 | 4.00 | 17.50 | 3.70 | 15.00 |
| 55 | 5.70 | 22.50 | 6.10 | 22.50 |
| 56 | 4.60 | 22.50 | 5.40 | 22.50 |
| 57 | 4.50 | 22.50 | 5.70 | 22.50 |
| 58 | 6.60 | 22.50 | 6.20 | 22.50 |
| 59 | 7.00 | 22.50 | 7.50 | 22.50 |
| 60 | 7.50 | 22.50 | 8.50 | 22.50 |
| 61 | 11.00 | 30.00 | 12.00 | 30.00 |
| 62 | 17.00 | 35.00 | 17.00 | 40.00 |
| 63 | 14.00 | 35.00 | 16.00 | 35.00 |
| 64 | 18.00 | 30.00 | 16.50 | 25.00 |
| 65 | 40.00 | 40.00 | 40.00 | 40.00 |
| 66 | 40.00 | 35.00 | 40.00 | 35.00 |
| 67 | 40.00 | 20.00 | 40.00 | 30.00 |
| 68 | 40.00 | 20.00 | 40.00 | 25.00 |
| 69 | 40.00 | 20.00 | 40.00 | 20.00 |
| >=70 | 100.00 | 100.00 | 100.00 | 100.00 |

Schedule D - Teachers' Actuarial Assumptions and Methods
RETIREMENT RATES: The following rates of retirement are assumed for members eligible to retire from Plan 2.

| Age | Separations from Active Service due to Retirement Percentage of Members Separating within the Next Year |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male |  | Female |  |
|  | Reduced Retirement | Unreduced Retirement | Reduced Retirement | Unreduced Retirement |
| <=49 | 0.00\% | 0.00\% | 0.00\% | 0.00\% |
| 50 | 0.00 | 17.50 | 0.00 | 15.00 |
| 51 | 0.00 | 17.50 | 0.00 | 15.00 |
| 52 | 0.00 | 17.50 | 0.00 | 15.00 |
| 53 | 0.00 | 17.50 | 0.00 | 15.00 |
| 54 | 0.00 | 17.50 | 0.00 | 15.00 |
| 55 | 0.00 | 22.50 | 0.00 | 22.50 |
| 56 | 0.00 | 22.50 | 0.00 | 22.50 |
| 57 | 0.00 | 22.50 | 0.00 | 22.50 |
| 58 | 0.00 | 22.50 | 0.00 | 22.50 |
| 59 | 0.00 | 22.50 | 0.00 | 22.50 |
| 60 | 7.50 | 22.50 | 8.50 | 22.50 |
| 61 | 11.00 | 30.00 | 12.00 | 30.00 |
| 62 | 17.00 | 35.00 | 17.00 | 40.00 |
| 63 | 14.00 | 35.00 | 16.00 | 35.00 |
| 64 | 18.00 | 30.00 | 16.50 | 25.00 |
| 65 | 40.00 | 40.00 | 40.00 | 40.00 |
| 66 | 40.00 | 35.00 | 40.00 | 35.00 |
| 67 | 40.00 | 20.00 | 40.00 | 30.00 |
| 68 | 40.00 | 20.00 | 40.00 | 25.00 |
| 69 | 40.00 | 20.00 | 40.00 | 20.00 |
| $>=70$ | 100.00 | 100.00 | 100.00 | 100.00 |

DISABILITY RATES: As shown below for selected ages. $5 \%$ of disability cases are assumed to be service related.

| Separations from Active Service due to Disability <br> Percentage of Members Separating within the Next Year <br> Age | Male | Female |
| :---: | :---: | :---: |
| 20 | $0.0000 \%$ | $0.0000 \%$ |
| 25 | 0.0120 | 0.0070 |
| 30 | 0.0150 | 0.0170 |
| 35 | 0.0270 | 0.0500 |
| 40 | 0.0320 | 0.0600 |
|  |  |  |
| 45 | 0.1530 | 0.0700 |
| 50 | 0.2040 | 0.1500 |
| 55 | 0.3000 | 0.3400 |
| 60 | 0.4740 | 0.4000 |
| 65 | 0.4250 | 0.5500 |

Schedule D - Teachers' Actuarial Assumptions and Methods
TERMINATION RATES: The following withdrawal rates are used based on age and years of service. (For causes other than death, disability, or retirement)

| Separations from Active Service due to Termination Percentage of Male Members Separating within the Next Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  | Year | of Serv |  |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | $>=10$ |
| 20 | 20.0\% | 20.0\% | 20.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 0.8\% |
| 25 | 15.0 | 15.0 | 15.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 0.8 |
| 30 | 15.0 | 15.0 | 15.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 4.0 |
| 35 | 14.0 | 14.0 | 14.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 3.2 |
| 40 | 14.0 | 14.0 | 14.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 2.5 |
| 45 | 15.0 | 15.0 | 15.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 1.9 |
| 50 | 13.5 | 13.5 | 13.5 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 1.5 |
| 55 | 14.0 | 14.0 | 14.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 0.0 |
| 60 | 17.0 | 17.0 | 17.0 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 0.0 |
| >=65 | 17.0 | 17.0 | 17.0 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 8.3 | 0.0 |


| Separations from Active Service due to Termination Percentage of Female Members Separating within the Next Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  | Year | of Servis |  |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | >=10 |
| 20 | 17.0\% | 17.0\% | 17.0\% | 18.0\% | 18.0\% | 18.0\% | 18.0\% | 18.0\% | 18.0\% | 18.0\% | 0.0\% |
| 25 | 14.0 | 14.0 | 14.0 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 15.0 |
| 30 | 17.0 | 17.0 | 17.0 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 11.5 | 5.0 |
| 35 | 15.0 | 15.0 | 15.0 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 4.0 |
| 40 | 12.5 | 12.5 | 12.5 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 2.8 |
| 45 | 11.5 | 11.5 | 11.5 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 2.0 |
| 50 | 11.8 | 11.8 | 11.8 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 1.7 |
| 55 | 12.5 | 12.5 | 12.5 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 5.7 | 0.0 |
| 60 | 13.0 | 13.0 | 13.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 0.0 |
| >=65 | 13.0 | 13.0 | 13.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 0.0 |

SALARY INCREASE RATES: The following salary increase rates are used. Inflation rate of $2.50 \%$ plus productivity component of $1.25 \%$ plus step-rate/promotional component as shown:

| Pay Increase Assumptions for an Individual Member |  |  |  |
| :---: | :---: | :---: | :---: |
| Years of | Annual Step Rate/ Promotional Rates |  <br> Productivity <br> (Economy) | Total Increase (Next Year) |
| 1 | 2.45\% | 3.75\% | 6.20\% |
| 2 | 2.35 | 3.75 | 6.10 |
| 3 | 2.35 | 3.75 | 6.10 |
| 4 | 1.95 | 3.75 | 5.70 |
| 5 | 1.95 | 3.75 | 5.70 |
| 6 | 1.95 | 3.75 | 5.70 |
| 7 | 1.85 | 3.75 | 5.60 |
| 8 | 1.85 | 3.75 | 5.60 |
| 9 | 1.85 | 3.75 | 5.60 |
| 10 | 1.35 | 3.75 | 5.10 |
| 11 | 1.35 | 3.75 | 5.10 |
| 12 | 1.35 | 3.75 | 5.10 |
| 13 | 1.25 | 3.75 | 5.00 |
| 14 | 1.25 | 3.75 | 5.00 |
| 15 | 1.15 | 3.75 | 4.90 |
| 16 | 1.15 | 3.75 | 4.90 |
| 17 | 1.05 | 3.75 | 4.80 |
| 18 | 0.95 | 3.75 | 4.70 |
| 19 | 0.95 | 3.75 | 4.70 |
| 20 or more | 0 | 3.75 | 3.75 |

STATE POLICE
Plan Specific Assumptions and Methods

## MORTALITY RATES:

Pre-Retirement:

1994 Group Annuity Mortality Tables for males and females with a one year setback in age for males and females.

Schedule D - State Police Actuarial Assumptions and Methods

Post-Retirement:
1994 Group Annuity Mortality Tables for males and females with a four year setback in age for males and females.

Post-Disablement:
$70 \%$ of PBGC Disabled Mortality Table 5a for Males.
$90 \%$ of PBGC Disabled Mortality Table 6a for Females.

| Mortality Rates |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male |  |  | Female |  |  |
| Age | Preretirement | Postretirement | Postdisablement | Preretirement | Postretirement | Postdisablement |
| 20 | 0.0484\% | 0.0391\% | 3.3810\% | 0.0280\% | 0.0242\% | 2.3670\% |
| 25 | 0.0624 | 0.0530 | 3.3810 | 0.0291 | 0.0286 | 2.3670 |
| 30 | 0.0779 | 0.0696 | 2.5340 | 0.0331 | 0.0294 | 2.1330 |
| 35 | 0.0849 | 0.0821 | 1.9460 | 0.0449 | 0.0373 | 1.9260 |
| 40 | 0.0999 | 0.0862 | 1.9740 | 0.0652 | 0.0512 | 1.8810 |
| 45 | 0.1458 | 0.1156 | 2.2540 | 0.0923 | 0.0768 | 2.0160 |
| 50 | 0.2326 | 0.1722 | 2.6810 | 0.1310 | 0.1033 | 2.3130 |
| 55 | 0.3979 | 0.2872 | 3.3740 | 0.2084 | 0.1568 | 2.6550 |
| 60 | 0.7090 | 0.4949 | 4.2210 | 0.3863 | 0.2563 | 2.9790 |
| 65 | 1.2940 | 0.8986 | 4.7460 | 0.7621 | 0.5093 | 3.3300 |
| 70 | 2.1729 | 1.6239 | 5.1730 | 1.2709 | 0.9694 | 3.6990 |
| 75 | 3.4051 | 2.5951 | 5.8940 | 2.0381 | 1.4953 | 4.4280 |
| 80 | 5.5861 | 4.0858 | 7.8960 | 3.5362 | 2.5325 | 6.7140 |
| 85 | 8.9613 | 6.8615 | 11.7740 | 6.0979 | 4.3952 | 10.1520 |
| 90 | 13.9452 | 10.5792 | 17.6750 | 10.4594 | 7.5347 | 15.1380 |

$60 \%$ of pre-retirement deaths are assumed to be service related.

RETIREMENT RATES: The following rates of retirement are assumed for members eligible to retire.

| Separations from Active Service due to Retirement Percentage of Members Separating within the Next Year |  |  |
| :---: | :---: | :---: |
|  |  |  |
| Age | Less than 25 Years of Service | More than 25 Years of Service |
| <=49 | 0.00\% | 0.00\% |
| 50 | 10.00 | 15.00 |
| 51 | 10.00 | 15.00 |
| 52 | 10.00 | 15.00 |
| 53 | 10.00 | 15.00 |
| 54 | 10.00 | 10.00 |
| 55 | 10.00 | 15.00 |
| 56 | 10.00 | 15.00 |
| 57 | 10.00 | 15.00 |
| 58 | 12.00 | 20.00 |
| 59 | 12.00 | 20.00 |
| 60 | 25.00 | 40.00 |
| 61 | 35.00 | 40.00 |
| 62 | 50.00 | 100.00 |
| 63 | 50.00 | 100.00 |
| >=64 | 100.00 | 100.00 |

DISABILITY RATES: As shown below for selected ages. $60 \%$ of disability cases are assumed to be service related.

| Separations from Active Service due to Disability <br> Percentage of Members Separating within the Next Year <br> Age |  |
| :---: | :---: |
| $<=29$ | $0.0000 \%$ |
| 30 | 0.0281 |
| 35 | 0.1341 |
| 40 | 0.2100 |
|  |  |
| 45 | 0.4106 |
| 50 | 0.6750 |
| 55 | 1.0013 |
| $>=60$ | 0.0000 |

## Schedule D - State Police Actuarial Assumptions and Methods

TERMINATION RATES: The following withdrawal rates are used based on age and years of service.
(For causes other than death, disability, or retirement)

| Separations from Active Service due to Termination Percentage of Male Members Separating within the Next Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | Years of Service |  |  |  |  |  |  |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | >=10 |
| 20 | 7.5\% | 7.5\% | 7.5\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 21.0\% | 3.0\% |
| 25 | 7.5 | 7.5 | 7.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 3.0 |
| 30 | 7.5 | 7.5 | 7.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 3.0 |
| 35 | 7.5 | 7.5 | 7.5 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 2.4 |
| 40 | 7.5 | 7.5 | 7.5 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 1.8 |
| 45 | 10.0 | 10.0 | 10.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 1.4 |
| 50 | 10.0 | 10.0 | 10.0 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 1.2 |
| 55 | 10.0 | 10.0 | 10.0 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 | 1.2 |
| 60 | 10.0 | 10.0 | 10.0 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 1.2 |
| 65 | 10.0 | 10.0 | 10.0 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 1.2 |


| Separations from Active Service due to Termination Percentage of Female Members Separating within the Next Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  | Yea | of Ser |  |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | >=10 |
| 20 | 18.4\% | 12.5\% | 10.1\% | 10.8\% | 11.6\% | 12.2\% | 12.3\% | 9.6\% | 7.0\% | 5.3\% | 3.6\% |
| 25 | 18.3 | 13.3 | 10.8 | 10.5 | 10.4 | 10.5 | 10.2 | 8.3 | 6.6 | 5.4 | 4.4 |
| 30 | 18.1 | 14.4 | 11.9 | 10.2 | 9.1 | 8.4 | 7.8 | 6.9 | 6.2 | 5.7 | 5.5 |
| 35 | 17.0 | 14.4 | 12.1 | 10.0 | 8.5 | 7.4 | 6.7 | 6.3 | 6.2 | 6.0 | 6.1 |
| 40 | 15.2 | 13.5 | 11.7 | 9.8 | 8.4 | 7.4 | 6.7 | 6.5 | 6.4 | 6.2 | 6.2 |
| 45 | 12.7 | 11.7 | 10.8 | 9.8 | 9.0 | 8.2 | 7.7 | 7.5 | 6.8 | 6.4 | 5.9 |
| 50 | 9.4 | 9.1 | 9.3 | 10.0 | 10.1 | 10.0 | 9.8 | 9.2 | 7.5 | 6.6 | 5.2 |
| 55 | 5.2 | 5.7 | 7.4 | 10.2 | 11.9 | 12.6 | 12.9 | 11.8 | 8.4 | 6.7 | 4.1 |
| 60 | 1.0 | 1.3 | 4.9 | 10.6 | 14.2 | 16.2 | 17.1 | 15.1 | 9.6 | 6.8 | 2.6 |
| 65 | 0.0 | 0.0 | 1.5 | 11.1 | 17.1 | 20.5 | 22.2 | 19.1 | 11.0 | 6.9 | 0.6 |

## Schedule D - State Police Actuarial Assumptions and Methods

SALARY INCREASE RATES: The following salary increase rates are used. Inflation rate of $2.50 \%$ plus productivity component of $1.00 \%$ plus step-rate/promotional component as shown:

| Pay Increase Assumptions <br> for an Individual Member <br> Annual |  |  |  |
| :---: | :---: | :---: | :---: |
| Years <br> of <br> Service | Step Rate/ <br> Promotional <br> Rates |  <br> Productivity <br> (Economy) | Total <br> Increase <br> (Next Year) |
| 1 | $1.25 \%$ | $3.50 \%$ | $4.75 \%$ |
| 2 | 1.25 | 3.50 | 4.75 |
| 3 | 1.25 | 3.50 | 4.75 |
| 4 | 1.25 | 3.50 | 4.75 |
| 5 | 1.15 | 3.50 | 4.65 |
| $6-9$ | 0.90 | 3.50 | 4.40 |
| $10-19$ | 0.50 | 3.50 | 4.00 |
| 20 or more | 0.00 | 3.50 | 3.50 |

It is assumed members covered under VSDP receive a $3.50 \%$ annual increase in pay while disabled and this adjusted pay is used to determine deferred benefits payable from the System.

DISABILITY ELECTION: All active members hired on or after January 1, 1999 will enter the Virginia Sickness and Disability Program (VSDP) and will not be eligible to receive non-VSDP disability benefits. For members hired before January 1, 1999 we measure the liabilities based upon the member's actual election contained in the valuation data.

JUDICIAL
Plan Specific Assumptions and Methods

## MORTALITY RATES:

Pre-Retirement:
1994 Group Annuity Mortality Tables for males and females with a one year setback in age for males and females.

Post-Retirement:
1994 Group Annuity Mortality Tables for males and females with a one year setback in age for males and females.

Post-Disablement:
$70 \%$ of PBGC Disabled Mortality Table 5a for Males. $90 \%$ of PBGC Disabled Mortality Table 6a for Females.

| Mortality Rates |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Male |  | Female |  |
| Age | Pre- and Post-retirement | Post-disablement | Pre- and Post-retirement | Post-disablement |
| 20 | 0.0484\% | 3.3810\% | 0.0280\% | 2.3670\% |
| 25 | 0.0624 | 3.3810 | 0.0291 | 2.3670 |
| 30 | 0.0779 | 2.5340 | 0.0331 | 2.1330 |
| 35 | 0.0849 | 1.9460 | 0.0449 | 1.9260 |
| 40 | 0.0999 | 1.9740 | 0.0652 | 1.8810 |
| 45 | 0.1458 | 2.2540 | 0.0923 | 2.0160 |
| 50 | 0.2326 | 2.6810 | 0.1310 | 2.3130 |
| 55 | 0.3979 | 3.3740 | 0.2084 | 2.6550 |
| 60 | 0.7090 | 4.2210 | 0.3863 | 2.9790 |
| 65 | 1.2940 | 4.7460 | 0.7621 | 3.3300 |
| 70 | 2.1729 | 5.1730 | 1.2709 | 3.6990 |
| 75 | 3.4051 | 5.8940 | 2.0381 | 4.4280 |
| 80 | 5.5861 | 7.8960 | 3.5362 | 6.7140 |
| 85 | 8.9613 | 11.7740 | 6.0979 | 10.1520 |
| 90 | 13.9452 | 17.6750 | 10.4594 | 15.1380 |

$5 \%$ of pre-retirement deaths are assumed to be service related.

Schedule D - Judicial Actuarial Assumptions and Methods
RETIREMENT RATES: The following rates of retirement are assumed for members eligible to retire with an unreduced retirement benefit.

| Separations from Active Service due to Retirement Percentage of Members Separating within the Next Year |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | Service Multiplier = 2.5 <br> Years of Service |  |  |  | Service Multiplier = 3.5 <br> Years of Service |  |  |  |
|  | <=1 | 2-11 | 12 | $>=13$ | <1 | 1-8 | 9 | >=10 |
| <=59 | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% | 0\% |
| 60 | 0 | 0 | 50 | 50 | 0 | 0 | 50 | 50 |
| 61 | 0 | 0 | 50 | 15 | 0 | 0 | 50 | 15 |
| 62 | 0 | 0 | 50 | 15 | 0 | 0 | 50 | 15 |
| 63 | 0 | 0 | 50 | 15 | 0 | 0 | 50 | 15 |
| 64 | 0 | 0 | 50 | 15 | 0 | 0 | 50 | 15 |
| 65 | 0 | 50 | 15 | 15 | 0 | 50 | 50 | 15 |
| 66 | 0 | 15 | 15 | 15 | 0 | 15 | 15 | 15 |
| 67 | 0 | 15 | 15 | 15 | 0 | 15 | 15 | 15 |
| 68 | 0 | 15 | 15 | 15 | 0 | 15 | 15 | 15 |
| 69 | 0 | 15 | 15 | 15 | 0 | 15 | 15 | 15 |
| $>=70$ | 0 | 100 | 100 | 100 | 0 | 100 | 100 | 100 |

DISABILITY RATES: As shown below for selected ages. 5\% of disability cases are assumed to be service related.

| Separations from Active Service due to Disability <br> Percentage of <br> Agembers Separating within the Next Year |  |  |
| :---: | :---: | :---: |
| $<=29$ | $0.0000 \%$ | Female |
| 30 | 0.0070 | $0.0000 \%$ |
| 35 | 0.0370 | 0.0450 |
| 40 | 0.1420 | 0.0900 |
|  |  |  |
| 45 | 0.2920 | 0.2100 |
| 50 | 0.4800 | 0.3970 |
| 55 | 0.7120 | 0.6000 |
| $>=60$ | 0.0000 | 0.0000 |

Schedule D- Judicial Actuarial Assumptions and Methods
TERMINATION RATES: There are no assumed rates of withdrawal prior to service retirement. (For causes other than death, disability, or retirement).

SALARY INCREASE RATES: Salary increase rates are 4.5\%.

## VIRGINIA LAW OFFICERS

## Plan Specific Assumptions and Methods

## MORTALITY RATES:

Pre-Retirement:
1994 Group Annuity Mortality Tables for males and females with a one year setback in age for males and females.

Post-Retirement:
1994 Group Annuity Mortality Tables for males and females with a four year setback in age for males and females.

Post-Disablement:
$70 \%$ of PBGC Disabled Mortality Table 5a for Males. $90 \%$ of PBGC Disabled Mortality Table 6a for Females.

|  | Mortality Rates |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | Pre- <br> retirement | Male <br> retirement | Post- <br> disablement | Pre- <br> retirement | Female <br> Petirement | Post- <br> disablement |
| 20 | $0.0484 \%$ | $0.0391 \%$ | $3.3810 \%$ | $0.0280 \%$ | $0.0242 \%$ | $2.3670 \%$ |
| 25 | 0.0624 | 0.0530 | 3.3810 | 0.0291 | 0.0286 | 2.3670 |
| 30 | 0.0779 | 0.0696 | 2.5340 | 0.0331 | 0.0294 | 2.1330 |
| 35 | 0.0849 | 0.0821 | 1.9460 | 0.0449 | 0.0373 | 1.9260 |
| 40 | 0.0999 | 0.0862 | 1.9740 | 0.0652 | 0.0512 | 1.8810 |
|  |  |  |  |  |  |  |
| 45 | 0.1458 | 0.1156 | 2.2540 | 0.0923 | 0.0768 | 2.0160 |
| 50 | 0.2326 | 0.1722 | 2.6810 | 0.1310 | 0.1033 | 2.3130 |
| 55 | 0.3979 | 0.2872 | 3.3740 | 0.2084 | 0.1568 | 2.6550 |
| 60 | 0.7090 | 0.4949 | 4.2210 | 0.3863 | 0.2563 | 2.9790 |
| 65 | 1.2940 | 0.8986 | 4.7460 | 0.7621 | 0.5093 | 3.3300 |
|  |  |  |  |  |  |  |
| 70 | 2.1729 | 1.6239 | 5.1730 | 1.2709 | 0.9694 | 3.6990 |
| 75 | 3.4051 | 2.5951 | 5.8940 | 2.0381 | 1.4953 | 4.4280 |
| 80 | 5.5861 | 4.0858 | 7.8960 | 3.5362 | 2.5325 | 6.7140 |
| 85 | 8.9613 | 6.8615 | 11.7740 | 6.0979 | 4.3952 | 10.1520 |
| 90 | 13.9452 | 10.5792 | 17.6750 | 10.4594 | 7.5347 | 15.1380 |

$60 \%$ of pre-retirement deaths are assumed to be service related.

RETIREMENT RATES: The following rates of retirement are assumed for members eligible to retire.

| Separations from Active Service due to Retirement Percentage of Members Separating within the Next Year Unisex |  |  |
| :---: | :---: | :---: |
| Age | Less than 25 Years of Service | More than 25 Years of Service |
| <=49 | 0.00\% | 0.00\% |
| 50 | 9.20 | 25.00 |
| 51 | 9.00 | 15.00 |
| 52 | 9.00 | 15.00 |
| 53 | 9.00 | 15.00 |
| 54 | 10.00 | 15.00 |
| 55 | 9.50 | 20.00 |
| 56 | 9.00 | 20.00 |
| 57 | 12.00 | 20.00 |
| 58 | 10.00 | 25.00 |
| 59 | 12.00 | 25.00 |
| 60 | 20.00 | 40.00 |
| 61 | 26.00 | 50.00 |
| 62 | 40.00 | 100.00 |
| 63 | 20.00 | 100.00 |
| 64 | 20.00 | 100.00 |
| >=65 | 100.00 | 100.00 |

DISABILITY RATES: As shown below for selected ages. $60 \%$ of disability cases are assumed to be service related.

| Separations from Active Service due to Disability <br> Percentage of Members Separating within the Next Year <br> Age |  |
| :---: | :---: |
| $<=27$ | $0.0000 \%$ |
| 28 | 0.0250 |
| 29 | 0.0250 |
| 30 | 0.0250 |
|  |  |
| 35 | 0.1140 |
| 40 | 0.1810 |
| 45 | 0.2690 |
| 50 | 0.4740 |
| 55 | 0.7820 |
|  |  |
| 60 | 0.6200 |
| 61 | 0.6200 |
| 62 | 0.6200 |
| $>=63$ | 0.0000 |

## Schedule D - Virginia Law Officers' Actuarial Assumptions and Methods

TERMINATION RATES: The following withdrawal rates are used based on age and years of service.
(For causes other than death, disability, or retirement)

| Separations from Active Service due to Termination Percentage of Male Members Separating within the Next Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age | Years of Service |  |  |  |  |  |  |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | >=10 |
| 20 | 25.0\% | 25.0\% | 25.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 5.0\% |
| 25 | 20.0 | 20.0 | 20.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 5.0 |
| 30 | 20.0 | 20.0 | 20.0 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 5.0 |
| 35 | 20.0 | 20.0 | 20.0 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 5.0 |
| 40 | 15.0 | 15.0 | 15.0 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 4.0 |
| 45 | 15.0 | 15.0 | 15.0 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 4.0 |
| 50 | 15.0 | 15.0 | 15.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 4.0 |
| 55 | 12.0 | 12.0 | 12.0 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 6.5 | 4.0 |
| 60 | 12.5 | 12.5 | 12.5 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 4.0 |
| 65 | 15.0 | 15.0 | 15.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 4.0 |


| Separations from Active Service due to Termination <br> Percentage of Female Members Separating within the Next Year |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age |  |  |  |  | Years | Servic |  |  |  |  |  |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | >=10 |
| 20 | 20.0\% | 20.0\% | 20.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 15.0\% | 7.5\% |
| 25 | 20.0 | 20.0 | 20.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | 7.5 |
| 30 | 20.0 | 20.0 | 20.0 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 7.5 |
| 35 | 20.0 | 20.0 | 20.0 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 12.5 | 7.5 |
| 40 | 17.5 | 17.5 | 17.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 10.5 | 6.2 |
| 45 | 17.5 | 17.5 | 17.5 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 5.9 |
| 50 | 17.5 | 17.5 | 17.5 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 6.0 |
| 55 | 10.0 | 10.0 | 10.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 6.0 |
| 60 | 10.0 | 10.0 | 10.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 6.0 |
| 65 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 6.0 |

## Schedule D - Virginia Law Officers' Actuarial Assumptions and Methods

SALARY INCREASE RATES: The following salary increase rates are used. Inflation rate of $2.50 \%$ plus productivity component of $1.00 \%$ plus step-rate/promotional component as shown:

| Pay Increase Assumptions <br> for an Individual Member <br> Annual <br> Years <br> of <br> Service |  |  |  |
| :---: | :---: | :---: | :---: |
| Step Rate/ <br> Promotional <br> Rates |  <br> Productivity <br> (Economy) | Total <br> Increase <br> (Next Year) |  |
| 2 | $1.25 \%$ | $3.50 \%$ | $4.75 \%$ |
| 3 | 1.25 | 3.50 | 4.75 |
| 4 | 1.25 | 3.50 | 4.75 |
| 5 | 1.25 | 3.50 | 4.75 |
| 6 | 1.15 | 3.50 | 4.65 |
| $6-9$ | 0.90 | 3.50 | 4.40 |
| $10-19$ | 0.50 | 3.50 | 4.00 |
| 20 or more | 0.00 | 3.50 | 3.50 |

It is assumed members covered under VSDP receive a $3.50 \%$ annual increase in pay while disabled and this adjusted pay is used to determine deferred benefits payable from the System.

DISABILITY ELECTION: All active members hired on or after January 1, 1999 will enter the Virginia Sickness and Disability Program (VSDP) and will not be eligible to receive non-VSDP disability benefits. For members hired before January 1, 1999 we measure the liabilities based upon the member's actual election contained in the valuation data.

## Schedule D - Summary of Actuarial Assumption and Method Changes

## 2009 Valuation

1. Changes to the actuarial assumptions as a result of the experience study for the four-year period ending June 30, 2008 are stated below.

| SYSTEM | ASSUMPTION CHANGE |
| :--- | :--- |
| State | Increase rates of withdrawals <br> Increase rates of disability retirement up to age 52, females <br> Decrease rates of disability retirement after age 52, all members <br> Decrease rates of service retirement |
| Teachers | Increase rates of withdrawals <br> Increase rates of disability retirement <br> Decrease rates of service retirement |
| SPORS | Decrease rates of withdrawals, males <br> Decrease rates of service retirement |
| VaLORS | Increase rates of withdrawals <br> Decrease rates of disability retirement <br> Change rates of service retirement |
| Judicial | Increase rates of salary increases |

2. For the June 30, 2009 valuation the Board suspended application of the $80 \% / 120 \%$ market value of assets corridor on the actuarial value of assets.

## 2010 Valuation

The investment return rate was decreased from $7.50 \%$ per annum to $7.00 \%$ per annum.

## 2011 Valuation

The amortization period of the unfunded less the deferred contribution begins at 30 years on June 30, 2011 and will decrease by one each year until reaching the minimum period of 20 years. The deferred contribution, as defined under HB30, is to be amortized using a level-dollar, closed,10 year period.

## ACTUARIAL COST METHOD

1. The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability, termination from service or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently $7.00 \%$ ). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.
2. The employer contributions required to support the benefits of VRS are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for pension benefits to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
4. The unfunded accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from the VRS. The accrued liability contribution amortizes the balance of the unfunded accrued liability over a period of years from the valuation date.

## Benefit Provisions which apply to all VRS Plans

Plan Year:

## Administration:

## Employee Contributions:

## Creditable Compensation:

Optional Forms of Payment:

Twelve-month period ending June 30th.
All plans are administered by the Board of Trustees of the Virginia Retirement System.

All active members contribute $5.00 \%$ of their creditable compensation per year. The employer may "pick-up" the member's assessments under the provisions of Internal Revenue Code Section 414(h).

Annual salary minus any overtime pay, payments of a temporary nature, or payments for extra duties.

There are optional forms of payment available on an actuarially equivalent basis, as follows:

100\% Survivor Option:
Payable for the member's life. Upon the member's death, $100 \%$ of the benefit continues to the contingent annuitant.

50\% Survivor Option:
Upon the member's death, $50 \%$ of the benefit continues to the contingent annuitant.

Leveling Option:
A temporarily increased retirement allowance payable to a date specified by the member and a reduced retirement allowance (on an actuarially equivalent basis) payable after the specified date for the member's remaining lifetime.

Partial Lump Sum Option:
The member may elect to receive a lump sum payment equal to the sum of 12,24 , or 36 payments of the standard monthly life annuity. The member's monthly benefit will be actuarially reduced to reflect the lump sum payment. The member may then elect to receive the reduced monthly annuity under any of the other optional forms of payment.

Actuarial equivalence is based on tables adopted by the Board of Trustees.

STATE EMPLOYEES Plan Specific Benefit Provisions

## Effective Date:

Plan 1:
Plan 2:
March 1, 1952
New members on or after July 1, 2010

Type of Plan:
VRS is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is considered an agent multiple-employer PERS with separate cost-sharing pools for state employees and teachers.

## Eligibility:

Plan 1:

Plan 2:

## Service:

## Average Final Compensation:

Plan 1:

Plan 2:

Employees receive credit of one month of service for each month a contribution is made on their behalf to VRS. A member may also purchase credit for certain periods, such as time spent in the military, by paying a purchase rate ( 5 or 15 percent of the larger of current creditable compensation or final average compensation times the number of years to be purchased). Special rules and limits govern the purchase of additional service.
All full-time, salaried, permanent employees of the Commonwealth of Virginia or of any participating Virginia city, county, town or political subdivision or of any local Virginia school boards hired before July 1, 2010 are eligible to become members of VRS. This summary covers the provisions relating to state employees.

All full-time, salaried, permanent employees of the Commonwealth of Virginia or of any participating Virginia city, county, town or political subdivision or of any local Virginia school boards hired on or after July 1, 2010 are eligible to become members of VRS. This summary covers the provisions relating to state employees.
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The average of the member's highest 36 consecutive months of salary.

The average of the member's highest 60 consecutive months of salary.

## Schedule F - State Employees' Plan Provisions

## Normal Retirement:

Plan 1:

Plan 2:
Eligibility:
A member may retire upon Normal Retirement after reaching Social Security normal retirement age plus five years of service.

Annual Benefit:
$1.7 \%$ of average final compensation (AFC) times years of service.

Payment Form:
Benefits are paid as a monthly life annuity, with a guarantee that if the payments do not exceed the member's contributions plus interest, determined as of the date at retirement, the balance will be paid in a lump sum to the member's beneficiary. Optional forms of payment are available.

## Early Retirement:

Plan 1:

Plan 2:

Eligibility:
A member may retire early after reaching age 50 with at least ten years of service credit, or age 55 with credit for at least five years of service.

Annual Benefit:
Calculated the same as the normal retirement benefit, using actual service at retirement and multiplied by a reduction factor. No reduction applies if the member has credit for thirty years of service at retirement and is at least age 50 . For members at least age 55 , the reduction is $0.5 \%$ per month for the first 60 months and $0.4 \%$ per month for the next 60 months. This reduction is applied for each month that the retirement age precedes 65 , or if more favorable, for each month the service at retirement is less than 30 . For members younger than 55 at retirement, the reduction factor determined as though the member were 55 is further reduced by multiplying it by a second factor, to reflect a $0.6 \%$ reduction for each month retirement precedes age 55.

## Payment Form:

Same as for Normal Retirement above.

Eligibility:
A member may retire early after reaching age 60 with five years of service, or upon the sum of their age and their service being 90 (Rule of 90 ).

Annual Benefit:
Calculated the same as the normal retirement benefit, using actual service at retirement and multiplied by a reduction factor. The reduction is an actuarially equivalent factor. No reduction is applied if the sum of the member's age and service is equal to 90 .

Payment Form:
Same as for Normal Retirement above.

A member hired prior to 1/1/1999 and who has declined VSDP coverage is eligible from the first day of employment.

Annual Benefit:
For members with less than five years of service credit, the minimum guaranteed benefit. For members with greater than five years of service credit, the greater of the minimum guaranteed benefit and $1.7 \%$ of AFC times service credit. Benefit is reduced by Worker's Compensation (if any).

Minimum Guaranteed Benefit:

- Workers Compensation Guarantee:
$662 / 3 \%$ of AFC if member does not qualify for primary Social Security and $50 \%$ of AFC if member qualifies for primary Social Security.
- Special Retirement Allowance Guarantee:
$50 \%$ of AFC if member does not qualify for primary Social Security and $331 / 3 \%$ of AFC if member qualifies for primary Social Security.

Service Credit:
If disability occurs before age 60 , service is the smaller of 1) twice actual service, and 2) rendered service plus the number of years remaining between age at disability and age 60.

## Payment Form:

The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity with a guarantee that, at the member's death, the sum of the member's contributions plus interest as of the date of retirement will be paid in a lump sum to the member's beneficiary. $100 \%$ and $50 \%$ Survivor Options are also permitted for disability retirement. (A refund of the member's contribution account is paid out for a work-related disability.)

Disability Retirement - VSDP:
Provisions applying to members entering in 1999 or later and continuing members who have elected this benefit: In lieu of the above benefits, these members will be covered by the Virginia Sickness and Disability Program (VSDP). Under VSDP, these members will receive a deferred benefit payable at age 65 from this plan. The deferred benefit will be computed like a normal retirement benefit. For this calculation, a member's creditable service will include the period of disability, and the Average Final Compensation will be adjusted to reflect increases in the cost-ofliving between the date of disability and age 65. If the member dies while disabled before age 65, a death benefit will be determined as though the employee were an active member.

## Deferred Termination Benefit:

Plan 1:
Eligibility:
A member with at least five years of service who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit.

Annual Benefit:
Same as normal retirement benefit, but both AFC and service are determined at the time the member leaves active employment. Benefits may commence unreduced at age 65 or at age 50 with at least 30 years of service. Reduced benefits may commence at or after age 55 with more than 5 years of service or age 50 with at least 10 years of service.

Payment Form:
Same as for Normal Retirement above.
Death Benefit:
The beneficiary of a member who dies after leaving active service but before retiring is entitled to receive a lump sum distribution of the deceased member's contribution account.

## Schedule F-State Employees' Plan Provisions

Plan 2: Eligibility:
A member with at least five years of service who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit.

Annual Benefit:
Same as normal retirement benefit, but both AFC and service are determined at the time the member leaves active employment. Benefits commence unreduced at Social Security Normal Retirement Age. Reduced benefits may commence on or after age 60 with five years of service.

Payment Form:
Same as for Normal Retirement above.
Death Benefit:
The beneficiary of a member who dies after leaving active service but before retiring is entitled to receive a lump sum distribution of the deceased member's contribution account.

Withdrawal (Refund) Benefit:

## Death Benefit:

Eligibility:
All members leaving covered employment with less than five years of service are eligible. Optionally, vested members (those with five or more years of service) may withdraw their contributions plus interest in lieu of the deferred benefits otherwise due.

Benefit:
The member who withdraws receives a lump-sum payment of his/her employee contributions, plus the interest credited on these contributions. Interest is credited at $4 \%$.

Eligibility:
Death must have occurred while an active or inactive, non-retired member.

Benefit:
Upon the death of a non-vested member, a refund of the member's contributions and interest is paid. Upon the death of a vested member, if death occurs while in active service the qualifying survivor of the member is entitled to receive a benefit determined as though the member retired, elected the $100 \%$ Survivor Option, then died. If the member dies before reaching age 55 , the member is assumed to be 55 for benefit calculation purposes. The qualifying survivor may elect to receive a refund of the contributions plus interest in lieu of the monthly benefit. If the death occurs while inactive, benefits payable are described in Section 9(d).

## Work-Related Death:

Qualifying survivor would receive $50 \%$ of AFC if beneficiary does not qualify for Social Security survivor benefits and $331 / 3 \%$ of AFC if beneficiary qualifies for Social Security survivor benefits. This benefit is reduced by Worker's Compensation. In addition, a refund of the member's contribution account is paid to the beneficiary.

## Cost-of-Living Increase:

Plan 1:

Plan 2:

Members qualify for cost-of-living increased on July 1 of the second calendar year after retirement. Automatic cost-of-living increases are calculated as the first $3 \%$ of the Consumer Price Index increase plus half of each percentage increase from 3\% to $7 \%$.

Members qualify for cost-of-living increased on July 1 of the second calendar year after retirement. Automatic cost-of-living increases are calculated as the first $2 \%$ increase of the Consumer Price Index plus half of each percent from 2\% to 10\%, with the maximum cost-of-living increase of $6 \%$.

## TEACHERS

 Plan Specific Benefit Provisions
## Effective Date:

Plan 1:
March 1, 1952
Plan 2:
New members on or after July 1, 2010

Type of Plan:

## Eligibility:

Plan 1:

Plan 2:

## Service:

## Average Final Compensation:

Plan 1:

Plan 2:

Employees receive credit of one month of service for each month a contribution is made on their behalf to VRS. A member may also purchase credit for certain periods, such as time spent in the military, by paying a purchase rate ( 5 or 15 percent of the larger of current creditable compensation or final average larger of current creditable compensation or final average
compensation times the number of years to be purchased). Special rules and limits govern the purchase of additional service.
All full-time, salaried, permanent employees of the Commonwealth of Virginia or of any participating Virginia city, county, town or political subdivision or of any local Virginia school boards hired before July 1, 2010 are eligible to become members of VRS. This summary covers the provisions relating to teachers.

All full-time, salaried, permanent employees of the Commonwealth of Virginia or of any participating Virginia city, county, town or political subdivision or of any local Virginia school boards hired on or after July 1, 2010 are eligible to become members of VRS. This summary covers the provisions relating to teachers.
VRS is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is considered an agent multiple-employer PERS with separate cost-sharing pools for state employees and teachers.
relating to teachers.
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The average of the member's highest 36 consecutive months of salary.

The average of the member's highest 60 consecutive months of salary.

## Schedule F - Teachers' Plan Provisions

## Normal Retirement:

Plan 1:

Plan 2:
Eligibility:
A member may retire upon Normal Retirement after reaching Social Security normal retirement age plus five years of service.

Annual Benefit:
$1.7 \%$ of average final compensation (AFC) times years of service.

Payment Form:
Benefits are paid as a monthly life annuity, with a guarantee that if the payments do not exceed the member's contributions plus interest, determined as of the date at retirement, the balance will be paid in a lump sum to the member's beneficiary. Optional forms of payment are available.

## Early Retirement:

Plan 1:

Plan 2:

Eligibility:
A member may retire early after reaching age 50 with at least ten years of service credit, or age 55 with credit for at least five years of service.

Annual Benefit:
Calculated the same as the normal retirement benefit, using actual service at retirement and multiplied by a reduction factor. No reduction applies if the member has credit for thirty years of service at retirement and is at least age 50 . For members at least age 55 , the reduction is $0.5 \%$ per month for the first 60 months and $0.4 \%$ per month for the next 60 months. This reduction is applied for each month that the retirement age precedes 65 , or if more favorable, for each month the service at retirement is less than 30 . For members younger than 55 at retirement, the reduction factor determined as though the member were 55 is further reduced by multiplying it by a second factor, to reflect a $0.6 \%$ reduction for each month retirement precedes age 55.

## Payment Form:

Same as for Normal Retirement above.

Eligibility:
A member may retire early after reaching age 60 with five years of service or upon the sum of their age and their service being 90 (Rule of 90 ).

Annual Benefit:
Calculated the same as the normal retirement benefit, using actual service at retirement and multiplied by a reduction factor. The reduction is an actuarially equivalent factor. No reduction is applied if the sum of the member's age and service is equal to 90 .

Payment Form:
Same as for Normal Retirement above.

Eligibility:
A member is eligible from the first day of employment.
Annual Benefit:
For members with less than five years of service credit, the minimum guaranteed benefit. For members with greater than five years of service credit, the greater of the minimum guaranteed benefit and $1.7 \%$ of AFC times service credit. Benefit is reduced by Worker's Compensation (if any).

Minimum Guaranteed Benefit:

- Workers Compensation Guarantee:
$662 / 3 \%$ of AFC if member does not qualify for primary Social Security and $50 \%$ of AFC if member qualifies for primary Social Security.
- Special Retirement Allowance Guarantee:
$50 \%$ of AFC if member does not qualify for primary Social Security and $331 / 3 \%$ of AFC if member qualifies for primary Social Security.

Service Credit:
If disability occurs before age 60 , service is the smaller of 1) twice actual service, and 2) rendered service plus the number of years remaining between age at disability and age 60.

Payment Form:
The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity with a guarantee that, at the member's death, the sum of the member's contributions plus interest as of the date of retirement will be paid in a lump sum to the member's beneficiary. $100 \%$ and $50 \%$ Survivor Options are also permitted for disability retirement. (A refund of the member's contribution account is paid out for a work-related disability.)

## Schedule F - Teachers' Plan Provisions

## Deferred Termination Benefit:

Plan 1:

Plan 2:

Eligibility:
A member with at least five years of service who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit.

Annual Benefit:
Same as normal retirement benefit, but both AFC and service are determined at the time the member leaves active employment. Benefits may commence unreduced at age 65 or at age 50 with at least 30 years of service. Reduced benefits may commence at or after age 55 with more than 5 years of service or age 50 with at least 10 years of service.

Payment Form:
Same as for Normal Retirement above.
Death Benefit:
The beneficiary of a member who dies after leaving active service but before retiring is entitled to receive a lump sum distribution of the deceased member's contribution account.

Eligibility:
A member with at least five years of service who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit.

Annual Benefit:
Same as normal retirement benefit, but both AFC and service are determined at the time the member leaves active employment. Benefits commence unreduced at Social Security Normal Retirement Age. Reduced benefits may commence on or after age 60 with five years of service.

Payment Form:
Same as for Normal Retirement above.

The beneficiary of a member who dies after leaving active service but before retiring is entitled to receive a lump sum distribution of the deceased member's contribution account.

## Withdrawal (Refund) Benefit:

## Death Benefit:

Eligibility:
All members leaving covered employment with less than five years of service are eligible. Optionally, vested members (those with five or more years of service) may withdraw their contributions plus interest in lieu of the deferred benefits otherwise due.

Benefit:
The member who withdraws receives a lump-sum payment of his/her employee contributions, plus the interest credited on these contributions. Interest is credited at $4 \%$.

Eligibility:
Death must have occurred while an active or inactive, non-retired member.

Benefit:
Upon the death of a non-vested member, a refund of the member's contributions and interest is paid. Upon the death of a vested member, if death occurs while in active service the qualifying survivor of the member is entitled to receive a benefit determined as though the member retired, elected the $100 \%$ Survivor Option, then died. If the member dies before reaching age 55 , the member is assumed to be 55 for benefit calculation purposes. The qualifying survivor may elect to receive a refund of the contributions plus interest in lieu of the monthly benefit. If the death occurs while inactive, benefits payable are described in Section 9(d).

## Work-Related Death:

Qualifying survivor would receive $50 \%$ of AFC if beneficiary does not qualify for Social Security survivor benefits and $331 / 3 \%$ of AFC if beneficiary qualifies for Social Security survivor benefits. This benefit is reduced by Worker's Compensation. In addition, a refund of the member's contribution account is paid to the beneficiary.

## Cost-of-Living Increase:

Plan 1:

Plan 2:
Members qualify for cost-of-living increased on July 1 of the second calendar year after retirement. Automatic cost-of-living increases are calculated as the first $3 \%$ of the Consumer Price Index increase plus half of each percentage increase from $3 \%$ to $7 \%$.

Members qualify for cost-of-living increased on July 1 of the second calendar year after retirement. Automatic cost-of-living increases are calculated as the first $2 \%$ increase of the Consumer Price Index plus half of each percent from $2 \%$ to $10 \%$, with the maximum cost-of-living increase of $6 \%$.

## STATE POLICE

 Plan Specific Benefit Provisions
## Effective Date:

Plan 1:
Plan 2:
Type of Plan:

## Eligibility:

Plan 1:

Plan 2:

## Service:

July 1, 1950
New members on or after July 1, 2010
SPORS is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is considered a single-employer PERS.

All state police officers of the Commonwealth of Virginia hired before July 1, 2010.

All state police officers of the Commonwealth of Virginia hired on or after July 1, 2010.

Employees receive credit of one month of service for each month a contribution is made on their behalf to SPORS. A member may also purchase credit for certain periods, such as time spent in the military, by paying a purchase rate ( 5 or 15 percent of the larger of current creditable compensation or final average compensation times the number of years to be purchased). Special rules and limits govern the purchase of additional service.

## Average Final Compensation:

Plan 1:

Plan 2:

The average of the member's highest 36 consecutive months of salary.

The average of the member's highest 60 consecutive months of salary.

Normal Retirement:

## Early Retirement:

Eligibility:
A member may retire upon Normal Retirement on or after age 60 with credit for 5 years of service.

Annual Benefit:
$1.85 \%$ of average final compensation (AFC) times years of service. (Previously $1.7 \%$ of AFC times years of service.)

Payment Form:
Benefits are paid as a monthly life annuity, with a guarantee that if the payments do not exceed the member's contributions plus interest, determined as of the date at retirement, the balance will be paid in a lump sum to the member's beneficiary. Optional forms of payment are available.

Temporary supplement:
A member hired on or after July 1, 1974 who has 20 or more years of hazardous service at retirement or a member hired before July 1, 1974 who is vested under SPORS/VaLORS benefits shall receive an additional annual retirement allowance of $\$ 12,456$ payable from the date of retirement to their Social Security normal retirement age. This amount is adjusted biennially based upon increases in Social Security benefits during the interim period.

Eligibility:
A member may retire early after reaching age 50 with at least five years of service.

Annual Benefit:
Calculated the same as the normal retirement benefit, using actual service at retirement and reduced by $1 / 2 \%$ for the first 60 months and $4 / 10 \%$ for any additional months of early retirement. This reduction is applied for each month that the retirement age precedes 60 , or if more favorable, for each month the service at retirement is less than 25 . No reduction applies if the member has credit for 25 years of service at retirement.

Payment Form:
Same as for Normal Retirement above.

Temporary Supplement:
A member hired on or after July 1, 1974 who has 20 or more years of hazardous service at retirement or a member hired before July 1, 1974 who is vested under SPORS/VaLORS benefits shall receive an additional annual retirement allowance of $\$ 12,456$ payable from the date of retirement to their Social Security normal retirement age. This amount is adjusted biennially based upon increases in Social Security benefits during the interim period.

Disability Retirement - Non-VSDP:
Eligibility:
A member hired prior to $1 / 1 / 1999$ and who has declined VSDP coverage is eligible from the first day of employment.

Monthly Benefit:
For members with less than five years of service credit, the minimum guaranteed benefit. For members with greater than five years of service credit, the greater of the minimum guaranteed benefit and $1.7 \%$ of AFC times service credit. Benefit is reduced by Worker's Compensation (if any).

Minimum Guaranteed Benefit:

- Workers Compensation Guarantee:
$662 / 3 \%$ of AFC if member does not qualify for primary Social Security and $50 \%$ of AFC if member qualifies for primary Social Security.
- Special Retirement Allowance Guarantee:
$50 \%$ of AFC if member does not qualify for primary Social Security and $331 / 3 \%$ of AFC if member qualifies for primary Social Security.


## Service Credit:

If disability occurs before age 60 , service is the smaller of 1) twice actual service, and 2) rendered service plus the number of years remaining between age at disability and age 60.

## Payment Form:

The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity with a guarantee that, at the member's death, the sum of the member's contributions plus interest as of the date of retirement will be paid in a lump sum to the member's beneficiary. $100 \%$ and $50 \%$ Survivor Options are also permitted for disability retirement. (A refund of the member's contribution account is paid out for a work-related disability.)

## Disability Retirement - VSDP:

Deferred Termination Benefit:

Provisions applying to members entering in 1999 or later and continuing members who have elected this benefit: In lieu of the above benefits, these members will be covered by the Virginia Sickness and Disability Program (VSDP). Under VSDP, these members will receive a deferred benefit payable at age 60 from this plan. The deferred benefit will be computed like a normal retirement benefit. For this calculation, a member's creditable service will include the period of disability, and the Average Final Compensation will be adjusted to reflect increases in the cost-ofliving between the date of disability and age 60 . If the member dies while disabled before age 60, a death benefit will be determined as though the employee were an active member.

Eligibility:
A member with at least five years of service who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit.

Annual Benefit:
Same as normal retirement benefit, but both AFC and service are determined at the time the member leaves active employment. Benefits may commence unreduced at age 60 or at age 50 with at least 25 years of service. Reduced benefits may commence at or after age 50 if the member is not eligible for an unreduced benefit.

Payment Form:
The form of payment is the same as for Normal Retirement above.

Death Benefit:
The beneficiary of a member who dies after leaving active service but before retiring is entitled to receive a lump sum distribution of the deceased member's contribution account.

## Withdrawal (Refund) Benefit:

## Death Benefit

Eligibility:
All members leaving covered employment with less than five years of service are eligible. Optionally, vested members (those with five or more years of service) may withdraw their contributions plus interest in lieu of the deferred benefits otherwise due.

Benefit:
The member who withdraws receives a lump-sum payment of his/her employee contributions, plus the interest credited on these contributions. Interest is credited at $4 \%$.

Eligibility:
Death must have occurred while an active, non-retired member.

Benefit:
Upon the death of a non-vested member, a refund of the member's contributions and interest is paid. Upon the death of a vested member, if death occurs while in active service the qualifying survivor of the member is entitled to receive a benefit determined as though the member retired, elected the $100 \%$ Survivor Option, then died. If the member dies before reaching age 50 , the member is assumed to be 50 for benefit calculation purposes. The qualifying survivor may elect to receive a refund of the contributions plus interest in lieu of the monthly benefit. If the death occurs while inactive, benefits payable are described in Section 9(d).

## Work-Related Death:

Qualifying survivor would receive $50 \%$ of AFC if beneficiary does not qualify for Social Security survivor benefits and $331 / 3 \%$ of AFC if beneficiary qualifies for Social Security survivor benefits. This benefit is reduced by Worker's Compensation. In addition, a refund of the member's contribution account is paid to the beneficiary.

## Cost-of-Living Increase:

Plan 1

Plan 2:

Members qualify for cost-of-living increased on July 1 of the second calendar year after retirement. Automatic cost-of-living increases are calculated as the first $3 \%$ of the Consumer Price Index increase plus half of each percentage increase from $3 \%$ to $7 \%$.

Members qualify for cost-of-living increased on July 1 of the second calendar year after retirement. Automatic cost-of-living increases are calculated as the first $2 \%$ increase of the Consumer Price Index plus half of each percent from $2 \%$ to $10 \%$, with the maximum cost-of-living increase of $6 \%$.

## JUDICIAL

Plan Specific Benefit Provisions

## Effective Date:

Plan 1:
Plan 2:
Type of Plan:

## Eligibility:

Plan 1:

Plan 2:

## Service:

Plan 1:

Plan 2:

July 1, 1970
New members on or after July 1, 2010
JRS is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is considered a single-employer PERS.

All judges of the Commonwealth of Virginia hired before July 1, 2010.

All judges of the Commonwealth of Virginia hired on or after July 1, 2010.

Employees receive credit of one month of service multiplied by a weighting factor of 3.5 ( 2.5 for judges entering JRS on or after January 1, 1995) for each month a contribution is made on their behalf to JRS. This weighted service is used for all purposes under this plan, including determining a member's vested status, determining whether a member is eligible for retirement, computing early retirement reductions, and computing the amount of the benefit. A member may also purchase credit for certain periods, such as time spent in the military, by paying a purchase rate ( 5 or 15 percent of the larger of current creditable compensation or final average compensation times the number of years to be purchased). Special rules and limits govern the purchase of additional service.

Employees receive credit of one month of service multiplied by a tiered weighting factor for each month a contribution is made on their behalf to JRS. First term judges under age 45 use a weighing factor of 1.5 , judges age $45-54$ use a weighing factor of 2.0 , and judges age 55 and above use a weighing factor of 2.5. This weighted service is used for all purposes under this plan, including determining a member's vested status, determining whether a member is eligible for retirement, computing early retirement reductions, and computing the amount of the benefit. A member may also purchase credit for certain periods, such as time spent in the military, by paying a purchase rate ( 5 or 15 percent of the larger of current creditable compensation or final average compensation times the number of years to be purchased). Special rules and limits govern the purchase of additional service.

## Average Final Compensation:

Plan 1:

Plan 2:

Normal Retirement

Early Retirement

The average of the member's highest 36 consecutive months of salary.

The average of the member's highest 60 consecutive months of salary.

Eligibility:
A member may retire upon Normal Retirement on or after age 65 with credit for 5 years of service.

Annual Benefit:
$1.7 \%$ of average final compensation (AFC) times years of service, not to exceed $78 \%$ of AFC.

## Payment Form:

Benefits are paid as a monthly life annuity, with a guarantee that if the payments do not exceed the member's contributions plus interest, determined as of the date at retirement, the balance will be paid in a lump sum to the member's beneficiary. Optional forms of payment are available.

Eligibility:
A member may retire early after reaching age 55 with credit for five years of service.

Annual Benefit:
Calculated the same as the normal retirement benefit, using actual service at retirement and multiplied by a reduction factor. No reduction applies if the member has reached age 60 and has credit for 30 or more years of creditable service. For other members, the reduction is $0.5 \%$ per month for the first 60 months and $0.4 \%$ per month for the next 60 months. This reduction is measured from the later of age 60 and the point at which the member would have earned 30 years of service, or if more favorable, from age 65.

Payment Form:
Same as for Normal Retirement above.

Eligibility:
A member is eligible from the first day of employment.
Annual Benefit:
For members with less than five years of service credit, the minimum guaranteed benefit. For members with greater than five years of service credit, the greater of the minimum guaranteed benefit and $1.7 \%$ of AFC times service credit. Benefit is reduced by Worker's Compensation (if any).

Minimum Guaranteed Benefit:

- Workers Compensation Guarantee:
$662 / 3 \%$ of AFC if member does not qualify for primary Social Security and $50 \%$ of AFC if member qualifies for primary Social Security.
- $\quad$ Special Retirement Allowance Guarantee
$50 \%$ of AFC if member does not qualify for primary Social Security and $331 / 3 \%$ of AFC if member qualifies for primary Social Security.


## Service Credit:

If disability occurs before age 60 , service is the smaller of 1) twice actual service, and 2) rendered service plus the number of years remaining between age at disability and age 60.

Payment Form:
The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity with a guarantee that, at the member's death, the sum of the member's contributions plus interest as of the date of retirement will be paid in a lump sum to the member's beneficiary. $100 \%$ and $50 \%$ Survivor Options are also permitted for disability retirement. (A refund of the member's contribution account is paid out for a work-related disability.)

Deferred Termination Benefit Eligibility:
A member with at least five years of service who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit

Annual Benefit:
Same as normal retirement benefit, but both AFC and service are determined at the time the member leaves active employment. Benefits may commence unreduced at age 65 or at age 60 with at least 30 years of service. Reduced benefits may commence at or after age 55 if the member is not eligible for an unreduced benefit.

Payment Form:
The form of payment is the same as for Normal Retirement above.

Death Benefit:
The beneficiary of a member who dies after leaving active service but before retiring is entitled to receive a lump sum distribution of the deceased member's contribution account.

Withdrawal (Refund) Benefit
Eligibility:
All members leaving covered employment with less than five years of service are eligible. Optionally, vested members (those with five or more years of service) may withdraw their contributions plus interest in lieu of the deferred benefits otherwise due.

Benefit:
The member who withdraws receives a lump-sum payment of his/her employee contributions, plus the interest credited on these contributions. Interest is credited at $4 \%$.

## Death Benefit

Eligibility:
Death must have occurred while an active, non-retired member.

Benefit:
Upon the death of a non-vested member, a refund of the member's contributions and interest is paid. Upon the death of a vested member, if death occurs while in active service the qualifying survivor of the member is entitled to receive a benefit determined as though the member retired, elected the $100 \%$ Survivor Option, then died. If the member dies before reaching age 55 , the member is assumed to be 55 for benefit calculation purposes. The qualifying survivor may elect to receive a refund of the contributions plus interest in lieu of the monthly benefit. If the death occurs while inactive, benefits payable are described in Section 8(d).

Work-Related Death:
Qualifying survivor would receive $50 \%$ of AFC if beneficiary does not qualify for Social Security survivor benefits, and $331 / 3 \%$ of AFC if beneficiary qualifies for Social Security survivor benefits. This benefit is reduced by Worker's Compensation. In addition, a refund of the member's contribution account is paid to the beneficiary.

## Cost-of-Living Increase:

Plan 1:

Plan 2:
Members qualify for cost-of-living increased on July 1 of the second calendar year after retirement. Automatic cost-of-living second calendar year after retirement. Automatic cost-of-living
increases are calculated as the first $2 \%$ increase of the Consumer Price Index plus half of each percent from 2\% to 10\%, with the maximum cost-of-living increase of $6 \%$.
Members qualify for cost-of-living increased on July 1 of the second calendar year after retirement. Automatic cost-of-living increases are calculated as the first $3 \%$ of the Consumer Price Index increase plus half of each percentage increase from $3 \%$ to $7 \%$.

## Schedule F-Virginia Law Officers' Plan Provisions

VIRGINIA LAW OFFICERS
Plan Specific Benefit Provisions

## Effective Date:

Plan 1
Plan 2:
Type of Plan:

## Eligibility:

Plan 1

Plan 2:

## Service:

## Average Final Compensation:

Plan 1:

Plan 2

October 1, 1999
New members on or after July 1, 2010
VaLORS is a qualified governmental defined benefit retirement plan. For Governmental Accounting Standards Board purposes, it is considered a single-employer PERS.

All full-time, salaried, permanent employees of the Capitol Police Force, campus police officers, game wardens, special agents of the Department of Alcoholic Beverage Control, law enforcement officers employed by the Virginia Marine Resources Commission, correctional officers, and commercial vehicle enforcement officers employed by the Department of State Police hired before July 1, 2010.

All full-time, salaried, permanent employees of the Capitol Police Force, campus police officers, game wardens, special agents of the Department of Alcoholic Beverage Control, law enforcement officers employed by the Virginia Marine Resources Commission, correctional officers, and commercial vehicle enforcement officers employed by the Department of State Police hired on or after July 1, 2010.

Employees receive credit of one month of service for each month a contribution is made on their behalf to VaLORS. A member may also purchase credit for certain periods, such as time spent in the military, by paying a purchase rate (5 or 15 percent of the larger of current creditable compensation or final average compensation times the number of years to be purchased). Special rules and limits govern the purchase of additional service.

The average of the member's highest 36 consecutive months of salary.

The average of the member's highest 60 consecutive months of salary.

Normal Retirement:

Early Retirement:

Eligibility:
A member may retire upon Normal Retirement on or after age 60 with credit for 5 years of service.

Annual Benefit:
For all employees hired on or after July 1, 2001, the benefit is calculated as $2.0 \%$ of average final compensation (AFC) times years of service.

Employees hired before July 1, 2001, must make a onetime election to receive benefits under (i) or (ii) below:
(i) $1.7 \%$ of average final compensation (AFC) times years of service plus the temporary supplement described in 5 (d).
(ii) $2.0 \%$ of average final compensation (AFC) times years of service and no temporary supplement.

Payment Form:
Benefits are paid as a monthly life annuity, with a guarantee that if the payments do not exceed the member's contributions plus interest, determined as of the date at retirement, the balance will be paid in a lump sum to the member's beneficiary. Optional forms of payment are available.

Temporary supplement:
Temporary Supplement: A member who is hired before July 1, 2001, and who was either (i) hired on or after July 1, 1974 who has 20 or more years of hazardous service at retirement or (ii) a member hired before July 1, 1974 who is vested under SPORS/VaLORS benefits shall be eligible to receive an additional annual retirement allowance of $\$ 12,456$ payable from the date of retirement to age 65 . This amount is adjusted biennially based upon increases in Social Security benefits during the interim period. The eligible employee must have made a one-time election to receive benefits under b (i) to receive this supplement.

Eligibility:
A member may retire early after reaching age 50 with credit for five years of service.

Annual Benefit:
Calculated the same as the normal retirement benefit, using actual service at retirement and reduced by $0.5 \%$ per month for the first 60 months and $0.4 \%$ per month for any additional months of early retirement. This reduction is applied for each month that the retirement age precedes 60, or if more favorable, for each month the service at retirement is less than 25 . No reduction applies if the member has credit for 25 years of service at retirement.

## Payment Form:

Same as for Normal Retirement above.
Temporary Supplement:
Temporary Supplement: A member who is hired before July 1, 2001, and who was either (i) hired on or after July 1, 1974 who has 20 or more years of hazardous service at retirement or (ii) a member hired before July 1, 1974 who is vested under SPORS/VaLORS benefits shall be eligible to receive an additional annual retirement allowance or $\$ 12,456$ payable from the date of retirement to age 65. This amount is adjusted biennially based upon increases in Social Security benefits during the interim period. The eligible employee must have made a one-time election to receive benefits under 5(b)(i) to receive this supplement.

Disability Retirement - Non-VSDP:
Eligibility:
A member hired prior to 1/1/1999 and who has declined VSDP coverage is eligible from the first day of employment.

Monthly Benefit:
For members with less than five years of service credit, the minimum guaranteed benefit. For members with greater than five years of service credit, the greater of the minimum guaranteed benefit and $1.7 \%$ of AFC times service credit. Benefit is reduced by Worker's Compensation (if any).

Minimum Guaranteed Benefit:

- Workers Compensation Guarantee:
$662 / 3 \%$ of AFC if member does not qualify for primary Social Security and $50 \%$ of AFC if member qualifies for primary Social Security.
- Special Retirement Allowance Guarantee:
$50 \%$ of AFC if member does not qualify for primary Social Security and $331 / 3 \%$ of AFC if member qualifies for primary Social Security.
Service Credit:
If disability occurs before age 60, service is the smaller of 1) twice actual service, and 2) rendered service plus the number of years remaining between age at disability and age 60 .

Payment Form:
The disability benefit commences immediately upon the member's retirement. Benefits cease upon recovery or reemployment. Disability benefits are payable as a monthly life annuity with a guarantee that, at the member's death, the sum of the member's contributions plus interest as of the date of retirement will be paid in a lump sum to the member's beneficiary. $100 \%$ and $50 \%$ Survivor Options are also permitted for disability retirement. (A refund of the member's contribution account is paid out for a work-related disability.

Disability Retirement - VSDP:
Provisions applying to members entering in 1999 or later and continuing members who have elected this benefit: In lieu of the above benefits, these members will be covered by the Virginia Sickness and Disability Program (VSDP). Under VSDP, these members will receive a deferred benefit payable at age 60 from this plan. The deferred benefit will be computed like a normal retirement benefit. For this calculation, a member's creditable service will include the period of disability, and the Average Final Compensation will be adjusted to reflect increases in the cost-ofliving between the date of disability and age 60 . If the member dies while disabled before age 60 , a death benefit will be determined as though the employee were an active member.

A member with at least five years of service who does not withdraw his/her contributions from the fund is eligible for a deferred termination benefit.

Annual Benefit:
Same as normal retirement benefit, but both AFC and service are determined at the time the member leaves active employment. Benefits may commence unreduced at age 60 or at age 50 with at least 25 years of service. Reduced benefits may commence at or after age 50 if the member is not eligible for an unreduced benefit.

Payment Form:
The form of payment is the same as for Normal Retirement above.

Death Benefit:
The beneficiary of a member who dies after leaving active service but before retiring is entitled to receive a lump sum distribution of the deceased member's contribution account.

Withdrawal (Refund) Benefit:
Eligibility:
All members leaving covered employment with less than five years of service are eligible. Optionally, vested members (those with five or more years of service) may withdraw their contributions plus interest in lieu of the deferred benefits otherwise due.

Benefit:
The member who withdraws receives a lump-sum payment of his/her employee contributions, plus the interest credited on these contributions. Interest is credited at $4 \%$.

## Death Benefit:

## Cost-of-Living Increase:

Plan 1:

Plan 2:

Plan

Plan 2.

Eligibility:
Death must have occurred while an active or inactive, non-retired member.

Benefit:
Upon the death of a non-vested member, a refund of the member's contributions and interest is paid. Upon the death of a vested member, if death occurs while in active service the qualifying survivor of the member is entitled to receive a benefit determined as though the member retired, elected the $100 \%$ Survivor Option, then died. If the member dies before reaching age 50 , the member is assumed to be 50 for benefit calculation purposes. The qualifying survivor may elect to receive a refund of the contributions plus interest in lieu of the monthly benefit. If the death occurs while inactive, benefits payable are described in Section 9(d).

Work-Related Death:
Qualifying survivor would receive $50 \%$ of AFC if beneficiary does not qualify for Social Security survivor benefits and $331 / 3 \%$ of AFC if beneficiary qualifies for Social Security survivor benefits. This benefit is reduced by Worker's Compensation. In addition, a refund of the member's contribution account is paid to the beneficiary.

Members qualify for cost-of-living increased on July 1 of the second calendar year after retirement. Automatic cost-of-living increases are calculated as the first $3 \%$ of the Consumer Price Index increase plus half of each percentage increase from $3 \%$ to $7 \%$.

Members qualify for cost-of-living increased on July 1 of the second calendar year after retirement. Automatic cost-of-living increases are calculated as the first $2 \%$ increase of the Consumer Price Index plus half of each percent from 2\% to 10\%, with the maximum cost-of-living increase of $6 \%$.

## Summary of Plan Changes

## 1996 Valuation

1. Any member with at least 25 years of service may purchase prior service credit for a) active duty military service in the armed forces of the United States, b) certified creditable service in the retirement system of another state, or c) both at the rate of $5 \%$ of current compensation or average final compensation, if greater, times years of service purchased.
2. VRS may enter into an agreement with any political subdivision of the Commonwealth of Virginia which has a defined benefit plan that is not supplemental to VRS to permit portability of service credit on a cost-neutral basis.
3. Early retirement is allowed at age 50 with 10 years of service. The early retirement benefit is determined as if the member is age 55 (but using actual service and AFC) reduced by $0.6 \%$ for each month the member is younger than age 55. This benefit can be no smaller than the value of the member's contributions and interest paid in monthly installments over the member's lifetime.
4. The service multiplier for judges entering the Retirement System after January 1, 1995 is 2.5 .
5. Effective $7 / 1 / 98$, a health credit of $\$ 1.50$ per month per year of service (up to 30 years) is automatically provided to teachers in VRS who retire with at least 15 years of service. An additional credit of $\$ 1.00$ per month per year of service (up to 30 years) can be provided.

## 1998 Valuation

1. Effective January 1, 1999, the retirement benefit became $1.7 \%$ of average final pay times years of service. The $3 \%$ benefit adjustment was eliminated for future retirees. A $1.6 \%$ ad hoc benefit increase was provided for all retirees and beneficiaries receiving benefits as of December 31, 1999.
2. On January 1, 1999, the Virginia Sickness and Disability Program became effective. All future new members will be covered by this program, and will only receive a deferred retirement benefit from VRS. Members joining before 1999 were allowed to make a one-time irrevocable election to join this program. (Applies to State Employees and State Police.)
3. Effective July 1, 1999, state employees, teachers and employees of participating local units that had not elected out of this benefit may retire with an unreduced benefit if they are at least 50 years old and they have earned at least 30 years of service.

## 1999 Valuation

1. $100 \%$ Joint and Survivor Option is payable in the case of death of a member who dies while in active service.
2. $100 \%$ Joint and Survivor Option is payable for disability retirement.

## Schedule F - Summary of Plan Changes

## 2000 Valuation

1. On October 1, 1999, the Virginia Law Officers' Retirement System became effective.
2. On November 15, 2000 the VRS Board of Trustees adopted the recommended economic and demographic assumptions proposed by the actuary as a result of the June 2000 actuarial experience.
3. The Board of Trustees adopted the use of a "pooled" contribution rate for State Employees and Teachers.

## 2001 Valuation

1. The State Police System had their temporary supplement starting at retirement extended from age 65 to their Social Security retirement age.
2. The Virginia Law Officers System has changed their benefit multiplier from $1.7 \%$ to $2.0 \%$ of pay with no temporary supplement for all new hires and rehires after July 1, 2001 as well as for current participants who have made an election to change formulas.
3. The Partial Lump Sum Option was added as an additional optional form of payment. This option provides the retiring member with a lump sum payment equal to the sum of 12, 24, or 36 payments of the standard monthly life annuity. The member's monthly annuity is actuarially reduced to reflect the lump sum payment.

## 2002 Valuation

No material changes were made to the plan provisions.

## 2003 Valuation

No actuarially material changes were made to the plan provisions. Listed below are the two minor changes of note.

1. School superintendents with five years of service may now purchase an additional ten years of out-of-state service. The superintendent must not be eligible for an out-of-state benefit.
2. The leveling option was restored as an optional form of payment. Benefits may be leveled to age 62 or older, and the benefit cannot reduce more than $50 \%$. Any COLAs are calculated on the basic benefit amount.

## 2004 Valuation

No material changes were made to the plan provisions.

## Schedule F - Summary of Plan Changes

## 2005 Valuation

No material changes were made to the plan provisions.

## 2006 Valuation

No material changes were made to the plan provisions.

## 2007 Valuation

The State Police changed their benefit multiplier from $1.7 \%$ to $1.85 \%$ of pay.

## 2008 Valuation

No material changes were made to the plan provisions.

## 2009 Valuation

The temporary retirement supplement for SPORS and VaLORS changed from $\$ 11,508$ to $\$ 12,456$.

## 2010 Valuation

No material changes were made to the plan provisions.

## 2011 Valuation

In 2010, VRS adopted a second retirement plan. All employees hired on or after July 1, 2010 are automatically enrolled in this plan. The differences between Plan 1 and Plan 2 are listed below:

1. The Average Final Compensation is now based on the highest 60 consecutive months of service.
2. The Cost of Living Adjustment was adjusted to be the first $2 \%$ increase of the Consumer Price Index plus half of each percent from $2 \%$ to $10 \%$, with the maximum cost-of-living increases of 6\%.
3. The Normal Retirement Age is Social Security normal retirement age plus five years of service. A member is eligible for unreduced early retirement when the sum of his or her age plus years of service is 90 (Rule of 90). Eligibility for reduced early retirement is at age 60 with five years of service.
4. Judges service weight has been changed. For first term judges less than age 45 the service weight is 1.5 ; for judges age $45-54$ the service weight is 2.0 ; finally, for judges age 55 and above the service weight is 2.5 .

The State Employees Plan and the Teachers Plan adopted changes 1, 2, and 3 listed above. The State Police Plan and the Virginia Law Officers Plan adopted changes 1 and 2 listed above. The Judicial Plan adopted changes 1, 2, and 4

Schedule G - Schedule of Active Member Data
STATE EMPLOYEES
AS OF June 30, 2011

| Attained Age | Completed Years of Service |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 5 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30+ | Total |  | Payroll |
| Under 20 | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | \$ | 958,981 |
| 20 to 24 | 1,640 | 31 | 0 | 0 | 0 | 0 | 0 | 1,671 | \$ | 48,184,541 |
| 25 to 29 | 3,998 | 901 | 8 | 0 | 0 | 0 | 0 | 4,907 | \$ | 175,900,771 |
| 30 to 34 | 3,604 | 2,009 | 520 | 14 | 0 | 0 | 0 | 6,147 | \$ | 257,434,542 |
| 35 to 39 | 3,028 | 2,093 | 1,290 | 300 | 9 | 0 | 0 | 6,720 | \$ | 308,375,204 |
| 40 to 44 | 2,933 | 2,347 | 1,699 | 1,048 | 587 | 37 | 0 | 8,651 | \$ | 409,010,698 |
| 45 to 49 | 2,738 | 2,185 | 1,975 | 1,312 | 1,662 | 874 | 82 | 10,828 | \$ | 518,598,679 |
| 50 to 54 | 2,434 | 2,223 | 1,962 | 1,320 | 1,808 | 1,588 | 1,539 | 12,874 | \$ | 641,562,058 |
| 55 to 59 | 1,770 | 1,833 | 1,768 | 1,382 | 1,512 | 1,406 | 2,747 | 12,418 | \$ | 654,781,006 |
| 60 | 259 | 292 | 320 | 239 | 300 | 237 | 515 | 2,162 | \$ | 117,852,724 |
| 61 | 195 | 292 | 290 | 233 | 232 | 213 | 502 | 1,957 | \$ | 108,171,141 |
| 62 | 170 | 228 | 232 | 188 | 207 | 193 | 396 | 1,614 | \$ | 92,858,325 |
| 63 | 155 | 186 | 231 | 167 | 201 | 161 | 388 | 1,489 | \$ | 87,052,596 |
| 64 | 123 | 165 | 207 | 158 | 179 | 154 | 365 | 1,351 | \$ | 77,850,255 |
| 65 | 61 | 104 | 122 | 78 | 105 | 92 | 205 | 767 | \$ | 47,236,250 |
| 66 | 48 | 71 | 73 | 52 | 73 | 58 | 170 | 545 | \$ | 33,257,500 |
| 67 | 33 | 66 | 55 | 52 | 37 | 41 | 159 | 443 | \$ | 29,015,584 |
| 68 | 30 | 33 | 38 | 30 | 36 | 28 | 121 | 316 | \$ | 20,766,005 |
| 69 | 12 | 27 | 33 | 23 | 16 | 29 | 71 | 211 | \$ | 12,911,197 |
| 70 \& Over | 32 | 75 | 105 | 83 | 101 | 74 | 233 | 703 | \$ | 44,480,482 |
| Total | 23,309 | 15,161 | 10,928 | 6,679 | 7,065 | 5,185 | 7,493 | 75,820 | \$ | 3,686,258,539 |

Average Age: 48.01
Average Service: 12.86

System

Schedule G - Schedule of Active Member Data

## TEACHERS

AS OF June 30, 2011

| Attained Age | Completed Years of Service |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 5 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30+ | Total |  | Payroll |
| Under 20 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | \$ | 294,600 |
| 20 to 24 | 2,991 | 14 | 0 | 0 | 0 | 0 | 0 | 3,005 | \$ | 106,748,262 |
| 25 to 29 | 10,517 | 4,660 | 9 | 0 | 0 | 0 | 0 | 15,186 | \$ | 608,287,491 |
| 30 to 34 | 5,025 | 9,248 | 2,503 | 8 | 0 | 0 | 0 | 16,784 | \$ | 735,080,671 |
| 35 to 39 | 3,928 | 5,296 | 5,891 | 1,381 | 3 | 0 | 0 | 16,499 | \$ | 759,670,975 |
| 40 to 44 | 4,354 | 5,225 | 4,417 | 4,089 | 1,250 | 11 | 0 | 19,346 | \$ | 905,659,158 |
| 45 to 49 | 3,853 | 5,207 | 3,940 | 2,363 | 2,824 | 1,179 | 13 | 19,379 | \$ | 892,363,496 |
| 50 to 54 | 2,862 | 4,547 | 4,379 | 2,555 | 2,259 | 2,856 | 1,681 | 21,139 | \$ | 1,030,754,073 |
| 55 to 59 | 1,627 | 3,126 | 3,594 | 2,842 | 2,525 | 2,019 | 3,900 | 19,633 | \$ | 1,050,846,336 |
| 60 | 219 | 473 | 519 | 478 | 443 | 352 | 657 | 3,141 | \$ | 172,524,988 |
| 61 | 209 | 383 | 441 | 445 | 446 | 379 | 546 | 2,849 | \$ | 158,394,012 |
| 62 | 138 | 341 | 406 | 367 | 404 | 327 | 412 | 2,395 | \$ | 133,311,014 |
| 63 | 129 | 261 | 316 | 281 | 333 | 270 | 348 | 1,938 | \$ | 107,837,016 |
| 64 | 101 | 254 | 267 | 248 | 294 | 241 | 299 | 1,704 | \$ | 95,166,869 |
| 65 | 50 | 120 | 155 | 148 | 161 | 121 | 184 | 939 | \$ | 52,339,392 |
| 66 | 47 | 90 | 118 | 95 | 91 | 88 | 137 | 666 | \$ | 37,349,749 |
| 67 | 21 | 72 | 73 | 52 | 50 | 47 | 95 | 410 | \$ | 22,181,897 |
| 68 | 17 | 38 | 58 | 43 | 49 | 37 | 90 | 332 | \$ | 17,521,826 |
| 69 | 16 | 31 | 38 | 28 | 36 | 23 | 48 | 220 | \$ | 10,841,880 |
| 70 \& Over | 46 | 86 | 96 | 68 | 61 | 61 | 155 | 573 | \$ | 24,956,232 |
| Total | 36,164 | 39,472 | 27,220 | 15,491 | 11,229 | 8,011 | 8,565 | 146,152 | \$ | 6,922,129,937 |

Average Age:
45.16

Average Service: 11.79

Schedule G - Schedule of Active Member Data
STATE POLICE
AS OF June 30, 2011

| Attained Age | Completed Years of Service |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 5 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30+ | Total |  | Payroll |
| Under 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$ | - |
| 20 to 24 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | \$ | 844,771 |
| 25 to 29 | 123 | 112 | 0 | 0 | 0 | 0 | 0 | 235 | \$ | 10,584,775 |
| 30 to 34 | 40 | 175 | 46 | 0 | 0 | 0 | 0 | 261 | \$ | 12,262,247 |
| 35 to 39 | 25 | 83 | 140 | 30 | 0 | 0 | 0 | 278 | \$ | 14,257,883 |
| 40 to 44 | 17 | 57 | 72 | 93 | 51 | 3 | 0 | 293 | \$ | 16,426,792 |
| 45 to 49 | 19 | 19 | 20 | 51 | 139 | 57 | 0 | 305 | \$ | 19,544,228 |
| 50 to 54 | 3 | 8 | 19 | 12 | 39 | 90 | 34 | 205 | \$ | 14,544,087 |
| 55 to 59 | 0 | 5 | 5 | 2 | 2 | 15 | 58 | 87 | \$ | 6,841,112 |
| 60 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | 12 | \$ | 1,002,302 |
| 61 | 0 | 0 | 1 | 0 | 1 | 3 | 7 | 12 | \$ | 1,032,957 |
| 62 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 6 | \$ | 451,523 |
| 63 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | 6 | \$ | 543,567 |
| 64 | 0 | 1 | 0 | 1 | 0 | 0 | 6 | 8 | \$ | 664,958 |
| 65 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | \$ | 236,404 |
| 66 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | \$ | 347,881 |
| 67 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | \$ | 83,147 |
| 68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$ | - |
| 69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$ | - |
| 70 \& Over | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$ | - |
| Total | 250 | 460 | 303 | 191 | 234 | 169 | 131 | 1,738 | \$ | 99,668,633 |

Average Age: $\quad 41.37$
Average Service: 14.82

System

Schedule G - Schedule of Active Member Data
JUDICIAL
AS OF June 30, 2011

| Attained Age | Completed Years of Service |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 5 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30+ | Total |  | Payroll |
| Under 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$ | - |
| 20 to 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$ | - |
| 25 to 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$ | - |
| 30 to 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | \$ | - |
| 35 to 39 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | \$ | 426,987 |
| 40 to 44 | 10 | 4 | 1 | 0 | 0 | 0 | 0 | 15 | \$ | 2,165,011 |
| 45 to 49 | 14 | 14 | 4 | 0 | 0 | 0 | 0 | 32 | \$ | 4,685,020 |
| 50 to 54 | 15 | 23 | 14 | 14 | 0 | 0 | 0 | 66 | \$ | 9,883,416 |
| 55 to 59 | 14 | 27 | 26 | 16 | 11 | 1 | 0 | 95 | \$ | 14,297,083 |
| 60 | 5 | 3 | 8 | 9 | 2 | 0 | 0 | 27 | \$ | 3,985,751 |
| 61 | 1 | 3 | 3 | 4 | 3 | 2 | 0 | 16 | \$ | 2,449,785 |
| 62 | 2 | 2 | 6 | 4 | 6 | 0 | 0 | 20 | \$ | 3,030,335 |
| 63 | 3 | 4 | 7 | 9 | 4 | 2 | 0 | 29 | \$ | 4,279,974 |
| 64 | 1 | 6 | 9 | 7 | 3 | 1 | 0 | 27 | \$ | 4,048,348 |
| 65 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 8 | \$ | 1,233,462 |
| 66 | 1 | 4 | 7 | 4 | 1 | 2 | 1 | 20 | \$ | 2,986,269 |
| 67 | 0 | 2 | 3 | 0 | 2 | 3 | 1 | 11 | \$ | 1,702,247 |
| 68 | 0 | 0 | 4 | 1 | 1 | 1 | 0 | 7 | \$ | 1,038,101 |
| 69 | 0 | 3 | 3 | 2 | 2 | 3 | 0 | 13 | \$ | 1,932,620 |
| 70 \& Over | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 5 | \$ | 774,865 |
| Total | 69 | 95 | 97 | 73 | 38 | 20 | 2 | 394 | \$ | 58,919,274 |

## Average Age: <br> 58.48

Average Service: 12.04

System

Schedule G - Schedule of Active Member Data

## VIRGINIA LAW OFFICERS <br> AS OF June 30, 2011

| Attained Age | Completed Years of Service |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 5 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30+ | Total |  | Payroll |
| Under 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | \$ | 557,343 |
| 20 to 24 | 645 | 13 | 0 | 0 | 0 | 0 | 0 | 658 | \$ | 20,110,483 |
| 25 to 29 | 956 | 246 | 1 | 0 | 0 | 0 | 0 | 1,203 | \$ | 39,712,297 |
| 30 to 34 | 607 | 359 | 165 | 3 | 0 | 0 | 0 | 1,134 | \$ | 38,979,180 |
| 35 to 39 | 494 | 338 | 334 | 146 | 4 | 0 | 0 | 1,316 | \$ | 47,273,760 |
| 40 to 44 | 413 | 348 | 323 | 284 | 107 | 2 | 0 | 1,477 | \$ | 55,377,333 |
| 45 to 49 | 325 | 301 | 271 | 273 | 250 | 112 | 3 | 1,535 | \$ | 60,635,109 |
| 50 to 54 | 243 | 205 | 250 | 182 | 126 | 98 | 23 | 1,127 | \$ | 45,181,897 |
| 55 to 59 | 116 | 160 | 173 | 144 | 85 | 51 | 49 | 778 | \$ | 32,032,365 |
| 60 | 16 | 17 | 19 | 16 | 12 | 7 | 8 | 95 | \$ | 4,093,339 |
| 61 | 11 | 17 | 13 | 16 | 13 | 5 | 4 | 79 | \$ | 3,247,646 |
| 62 | 7 | 14 | 13 | 14 | 4 | 3 | 4 | 59 | \$ | 2,487,396 |
| 63 | 9 | 6 | 13 | 9 | 6 | 5 | 6 | 54 | \$ | 2,381,706 |
| 64 | 4 | 7 | 12 | 8 | 3 | 2 | 1 | 37 | \$ | 1,555,783 |
| 65 | 2 | 2 | 1 | 6 | 1 | 0 | 0 | 12 | \$ | 451,307 |
| 66 | 1 | 0 | 2 | 4 | 3 | 0 | 1 | 11 | \$ | 490,503 |
| 67 | 1 | 0 | 1 | 2 | 3 | 0 | 0 | 7 | \$ | 310,517 |
| 68 | 2 | 1 | 1 | 2 | 0 | 1 | 3 | 10 | \$ | 520,141 |
| 69 | 3 | 2 | 2 | 2 | 2 | 0 | 0 | 11 | \$ | 476,316 |
| 70 \& Over | 0 | 3 | 1 | 1 | 2 | 0 | 1 | 8 | \$ | 365,519 |
| Total | 3,875 | 2,039 | 1,595 | 1,112 | 621 | 286 | 103 | 9,631 | \$ | 356,239,941 |

[^1]Average Service: 9.12

Schedule H - Schedule of Retiree and Beneficiary Data

## RETIREE AND BENEFICIARY DATA AS OF June 30, 2011

| Employer | Prior Year Total Retirees and Beneficiaries | Retirees and Beneficiaries |  | Current Year <br> Total Retirees and <br> Beneficiaries | Current <br> Annual Allowances (000s) | Prior Annual Allowances (000s) | Annualized \% Increase in Annual Allowances |  | erage nual wances |  | or Year verage nnual wances | \% Increase <br> in Average Annual Allowances |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State | 46,064 | 2,994 | 1,564 | 47,494 | \$ 912,995 | \$ 861,362 | 6.0\% | \$ | 19,223 | \$ | 18,699 | 2.8\% |
| Teacher | 63,758 | 5,291 | 1,433 | 67,616 | 1,501,649 | 1,393,163 | 7.8\% |  | 22,208 |  | 21,851 | 1.6\% |
| Political | 35,447 | 3,345 | 1,213 | 37,579 | 585,297 | 528,610 | 10.7\% |  | 15,575 |  | 14,913 | 4.4\% |
| Total VRS | 145,269 | 11,630 | 4,210 | 152,689 | \$ 2,999,941 | \$ 2,783,135 | 7.8\% | \$ | 19,647 | \$ | 19,158 | 2.6\% |
| State Police | 1,122 | 68 | 24 | 1,166 | 43,768 | 41,226 | 6.2\% |  | 37,537 |  | 36,743 | 2.2\% |
| VaLORS | 2,318 | 316 | 33 | 2,601 | 57,030 | 51,498 | 10.7\% |  | 21,926 |  | 22,217 | -1.3\% |
| Judicial | 451 | 25 | 30 | 446 | 30,559 | 30,356 | 0.7\% |  | 68,518 |  | 67,308 | 1.8\% |
| Totals | 149,160 | 12,039 | 4,297 | 156,902 | \$ 3,131,298 | \$ 2,906,215 | 7.7\% | \$ | 19,957 | \$ | 19,484 | 2.4\% |

CHANGE IN ALLOWANCES FOR RETIREES AND BENEFICIARIES AS OF June 30, 2011

|  | Prior Year Annual <br> Allowances |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Current Year Annual |  |  |  |  |  |  |
| Allowances |  |  |  |  |  |  |$|$


[^0]:    *Average of rates adopted for all of FY 2011 and 2012

[^1]:    Average Age: $\quad 41.41$

