

Virginia Retirement System (VRS) – Appendix to the June 30, 2023 Annual Actuarial Valuation Reports

Plan Benefits, Assumptions and Methods
Applicable To:

1. Pension
2. Group Life Insurance
3. Health Insurance Credit
4. Virginia Sickness and Disability Program
5. Virginia Local Disability Program
6. Line of Duty Act Fund



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Introduction

Under the umbrella of the Virginia Retirement System, Pension, Other Postemployment, and Line of Duty Benefits are provided to hundreds of thousands of plan members. This Appendix provides descriptions of actuarial assumptions, serving as a companion to the following actuarial valuations:

- Line of Duty Act Fund
- Virginia Retirement System – Political Subdivisions (individual valuations)
- Virginia Retirement System – State, Teachers, VaLORS, SPORS, JRS
- Virginia Retirement System – Other Postemployment Benefits (Group Life Insurance, Health Insurance Credit Program, Virginia Local Disability Program, Virginia State Disability Program)
- Virginia Retirement System – Other Postemployment Benefits – Political Subdivisions (Health Insurance Credit Program)

An actuarial valuation is the mathematical model that estimates plan liabilities and employer contribution requirements for purposes of funding the plans and for determining plan costs for Governmental Accounting Standards Board (GASB) purposes. This model is updated annually to adjust the liabilities and contribution requirements for changes in member census and plan features and to reflect actual plan experience in the process.

Each annual actuarial valuation uses current membership and financial data. In addition, an actuarial valuation requires the use of a series of assumptions regarding uncertain future events. The assumptions and methods used in the June 30, 2023 Actuarial Valuations were adopted by the Retirement Board on April 20, 2021. The economic assumptions used in the valuations are a 6.75% investment rate of return and a 2.50% inflation assumption. The demographic assumptions used in the valuations are based on the results of a study of plan experience that covered the period from July 1, 2016 through June 30, 2020. All actuarial assumptions are estimates of future experience. The rationale for the assumptions is described in this Appendix as well as the most recent experience study report.

The current economic and demographic assumptions are reasonable for the purposes of the June 30, 2023 annual actuarial valuations.

There have been no changes in the actuarial cost method, under which normal cost amounts are developed as a level percentage of projected payroll. The Board of Trustees updated the Funding Policy most recently on October 19, 2023. The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA) who meets the U.S. Qualification Standards to render the actuarial opinions in the valuation.

Details regarding actuarial assumptions and actuarial methodology follow this section.



Summary of Plan Provisions

The benefits summarized in this section are intended only as general information regarding the Virginia Retirement System as reflected in the valuation. They are not a substitute for the Code of Virginia or VRS administrative procedures. If any conflict occurs between the information in this summary and the Code of Virginia or VRS administrative procedures, the Code of Virginia and VRS administrative procedures govern.



Summary of Plan Provisions

Virginia Retirement System

Statute	Code of Virginia, Title 51.1, Pension, Benefits, and Retirement. Chapter 1, Virginia Retirement System §§ 51.1-100 through 51.1-169. Chapter 2, State Police Officers' Retirement System (SPORS) §§ 51.1-200 through 51.1-210 Chapter 2.1, Virginia Law Officers' Retirement System (VaLORS) §§ 51.1-211 through 51.1-221 Chapter 3, Judicial Retirement System (JRS) §§ 51.1-300 through 51.1-309
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Benefit Provisions applicable to all VRS pension plans unless otherwise specified

Employee	Any teacher, state employee, officer, or employee of a locality participating in the Retirement System. Covered employment is a full-time permanent, salaried position with an employer that participates in VRS. Some part-time permanent (typically more than 80% of the hours of comparable full-time permanent positions), salaried state positions are also covered.
Member	Any person included in the membership of the Retirement System
Plan 1	Members hired before July 1, 2010 with at least 60 months of creditable service as of January 1, 2013.
Plan 2	Members hired on or after July 1, 2010, or members hired prior to July 1, 2010 and not having at least 60 months of creditable service as of January 1, 2013.
Hybrid	Members hired (or Judges appointed to an original term) on or after January 1, 2014 or by irrevocable participant election prior to April 30, 2014. There is no Hybrid Plan for members of SPORS, VaLORS, and certain optional retirement plans.
Creditable Service	Service as an employee rendered while a contributing member of the Retirement System (membership service). Service also includes prior service, certain purchased service or service credit for accumulated sick leave. § 51.1-142.2
Creditable Compensation	The full compensation payable annually to an employee working full time in a covered position.



Summary of Plan Provisions

Virginia Retirement System

Average Final Compensation (AFC)

Plan 1: The average annual creditable compensation of a member during the 36 highest consecutive months of creditable service.

Plan 2 and Hybrid: The average annual creditable compensation of a member during the 60 highest consecutive months of creditable service or during the entire period of creditable service if less than 60 months.

There are certain limitations based on increases in the last four years of employment. § 51.1-152

Forms of Payment Upon Retirement

Monthly benefits are payable for the life of the retiree. 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.

Member Contributions

Plan 1 and Plan 2: 5% of creditable compensation.

Hybrid: Defined Benefit plan: 4% of creditable compensation

Defined Contribution plan: 1% of creditable compensation required.

Additional voluntary member contributions up to 4% of creditable compensation may be made. The employer makes a mandatory 1% contribution to the defined contribution component, and matches 50% of additional voluntary contributions, resulting in a total employer match of up to 2.5%.



Summary of Plan Provisions

State Employees

Normal Retirement

Plan 1

Eligibility: Age 65 with 5 or more years of creditable service.

Annual Benefit: 1.70% of average final compensation times years of creditable service.

Plan 2

Eligibility: Social Security Normal Retirement Age with 5 or more years of creditable service.

Annual Benefit: 1.70% of average final compensation times years of creditable service up to January 1, 2013 plus 1.65% of average final compensation times years of creditable service on or after January 1, 2013.

Hybrid

Eligibility: Social Security Normal Retirement Age with 5 or more years of creditable service.

Annual Benefit: 1.00% of average final compensation times years of creditable service.

Early Retirement

Plan 1

Eligibility: Age 50 with 10 or more years of creditable service, or age 55 with 5 or more years of creditable service.

Annual Benefit: Determined in the same manner as normal retirement benefit. A reduction applies if the member does not meet age 50 with 30 or more years of service at retirement.

Plan 2 and Hybrid

Eligibility: Age 60 with 5 or more years of creditable service.

Annual Benefit: Determined in the same manner as normal retirement benefit. A reduction applies if the member does not meet 30 or more years of service at retirement or if the member meets 30 or more years of service at retirement, but the sum of age at retirement plus creditable service at retirement is less than 90.



Summary of Plan Provisions

State Employees

Disability Retirement (Non-VSDP)

Eligibility: Permanently disabled state employees hired before January 1, 1999, who did not elect the Virginia Sickness and Disability Program (VSDP) and who are not covered by the Hybrid program.

Annual Benefit: For members with less than 5 years of service credit, the Minimum Guaranteed Benefit. A member who has 5 or more years of creditable service shall receive an annual retirement allowance during his lifetime and continued disability equal to the greater of the Minimum Guaranteed Benefit and 1.70 (1.65 for eligible Plan 2 members) percent of average final compensation multiplied by the lessor of (i) twice the amount of creditable service or (ii) the amount of creditable service the member would have completed at age 60. If a member has already attained age 60, the amount of creditable service at his date of retirement shall be used.

Minimum Guaranteed Benefit (Non-Work Related):

Not Eligible for Social Security Disability Benefits: 33-1/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Minimum Guaranteed Benefit (Work Related):

Not Eligible for Social Security Disability Benefits: 66-2/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Disability benefits commence immediately upon disability retirement and cease upon recovery or reemployment. Benefits are offset by Workers Compensation (if applicable). In addition, a refund of the member's contribution account is paid for a work-related disability.

Disability Retirement (VSDP)

Eligibility: Permanently disabled state employees who elected or are covered by the Virginia Sickness and Disability Program (VSDP) may receive a benefit payable from the VSDP plan until eligible for service retirement. A benefit payable commencing upon service retirement is payable from this plan.

Annual Benefit: An allowance equal to the normal retirement benefit based on creditable service including periods during which the employee received supplemental disability benefits for long-term disability from VSDP, and Average Final Compensation will reflect increases in the cost of living between date of disability and the date of retirement.



Summary of Plan Provisions

State Employees

Deferred Benefit

Eligibility: A member who terminates after 5 or more years of creditable service for which contributions have not been withdrawn.

Annual Benefit: Computed as regular retirement but based upon service and average final compensation at time of termination. Benefits may commence unreduced at age 65 (Social Security Normal Retirement Age for Plan 2 and Hybrid) or at age 50 with at least 30 years of service (age plus service greater than or equal 90 for Plan 2 and Hybrid). Reduced benefits may commence at or after age 55 (age 60 for Plan 2 and Hybrid) with more than 5 years of service or age 50 with at least 10 years of service.

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: A member who ceases to be an employee other than by death, retirement, or involuntary separation.

Benefit: Accumulated contributions with interest.

Death Benefit

Eligibility: Death while 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 (age 60 for Plan 2 and Hybrid), the member is assumed to be 55 (age 60 for Plan 2 and Hybrid) for benefit calculation purposes. The qualifying survivor may elect to receive a refund of the contributions plus interest in lieu of the monthly benefit.

Work-Related Death Benefit: Upon death in service from a cause compensable under the Virginia Workers' Compensation Act, the qualifying survivor would receive 50% of AFC if beneficiary does not qualify for Social Security survivor benefits and 33 1/3% 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.



Summary of Plan Provisions

State Employees

Cost-of-Living Increase

Plan 1: Members qualify for cost-of-living increases 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%, with the maximum cost-of-living increase of 5%.

Plan 2 and Hybrid: Members qualify for cost-of-living increases 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 4%, with the maximum cost-of-living increase of 3%.

Plans 1, 2, and Hybrid: The COLA is deferred for one full calendar year after the member reaches unreduced retirement age. The deferred COLA does not apply to employees within 5 years of eligibility for unreduced retirement as of January 1, 2013 and to members who retire with 20 or more years of service.

Summary of Plan Provisions

Teachers

Normal Retirement

Plan 1

Eligibility: Age 65 with 5 or more years of creditable service.

Annual Benefit: 1.70% of average final compensation times years of creditable service.

Plan 2

Eligibility: Social Security Normal Retirement Age with 5 or more years of creditable service.

Annual Benefit: 1.70% of average final compensation times years of creditable service up to January 1, 2013 plus 1.65% of average final compensation times years of creditable service on or after January 1, 2013.

Hybrid

Eligibility: Social Security Normal Retirement Age with 5 or more years of creditable service.

Annual Benefit: 1.00% of average final compensation times years of creditable service.

Early Retirement

Plan 1

Eligibility: Age 50 with 10 or more years of creditable service, or age 55 with 5 or more years of creditable service.

Annual Benefit: Determined in the same manner as normal retirement benefit. A reduction applies if the member does not meet 30 or more years of service at retirement.

Plan 2 and Hybrid

Eligibility: Age 60 with 5 or more years of creditable service.

Annual Benefit: Determined in the same manner as normal retirement benefit. A reduction applies if the member does not meet 30 or more years of service at retirement or if the member meets 30 or more years of service at retirement, but the sum of age at retirement plus creditable service at retirement is less than 90.



Summary of Plan Provisions

Teachers

Disability Retirement (Plan 1 and Plan 2)

Eligibility: Permanently disabled members who are not covered by the Hybrid program, the Virginia Local Disability Program (VLDP), or a comparable program provided by the member's employer. A member is eligible from first day of employment.

Annual Benefit: For members with less than 5 years of service credit, the Minimum Guaranteed Benefit. A member who has 5 or more years of creditable service shall receive an annual retirement allowance during his lifetime and continued disability equal to the greater of the Minimum Guaranteed Benefit and 1.70 (1.65 for eligible Plan 2 members) percent of average final compensation multiplied by the lessor of (i) twice the amount of creditable service or (ii) the amount of creditable service the member would have completed at age 60. If a member has already attained age 60, the amount of creditable service at his date of retirement shall be used.

Minimum Guaranteed Benefit (Non-Work Related):

Not Eligible for Social Security Disability Benefits: 33-1/3% of AFC
Eligible for Social Security Disability Benefits: 50% of AFC

Minimum Guaranteed Benefit (Work Related):

Not Eligible for Social Security Disability Benefits: 66-2/3% of AFC
Eligible for Social Security Disability Benefits: 50% of AFC

Disability benefits commence immediately upon disability retirement and cease upon recovery or reemployment. Benefits are offset by Workers Compensation (if applicable). In addition, a refund of the member's contribution account is paid for a work-related disability.

Disability Retirement (Hybrid Plan Members - VLDP)

Eligibility: Permanently disabled employees who elected or are covered by the Virginia Local Disability Program (VLDP) may receive a benefit payable from the VLDP plan until eligible for service retirement. A benefit payable commencing upon service retirement is payable from this plan.

Annual Benefit: An allowance equal to the normal retirement benefit based on creditable service including periods during which the employee received supplemental disability benefits for long-term disability from VLDP, and Average Final Compensation will reflect increases in the cost of living between date of disability and date of retirement.



Summary of Plan Provisions

Teachers

Deferred Retirement

Eligibility: A member who terminates after 5 or more years of creditable service for which contributions have not been withdrawn.

Annual Benefit: Computed as regular retirement but based upon service and average final compensation at time of termination. Benefits may commence unreduced at age 65 (Social Security Normal Retirement Age for Plan 2 and Hybrid) or at age 50 with at least 30 years of service (age plus service greater than or equal 90 for Plan 2 and Hybrid). Reduced benefits may commence at or after age 55 (age 60 for Plan 2 and Hybrid) with more than 5 years of service or age 50 with at least 10 years of service.

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: A member who ceases to be an employee other than by death, retirement, or involuntary separation.

Benefit: Accumulated contributions with interest.

Death Benefit

Eligibility: Death while 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 (age 60 for Plan 2 and Hybrid), the member is assumed to be 55 (age 60 for Plan 2 and Hybrid) for benefit calculation purposes. The qualifying survivor may elect to receive a refund of the contributions plus interest in lieu of the monthly benefit.

Work-Related Death Benefit: Upon death in service from a cause compensable under the Virginia Workers' Compensation Act, the qualifying survivor would receive 50% of AFC if beneficiary does not qualify for Social Security survivor benefits and 33 1/3% 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.



Summary of Plan Provisions

Teachers

Cost-of-Living Increase

Plan 1: Members qualify for cost-of-living increases 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%, with the maximum cost-of-living increase of 5%.

Plan 2 and Hybrid: Members qualify for cost-of-living increases 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 4%, with the maximum cost-of-living increase of 3%.

Plans 1, 2, and Hybrid: The COLA is deferred for one full calendar year after the member reaches unreduced retirement age. The deferred COLA does not apply to employees within 5 years of eligibility for unreduced retirement as of January 1, 2013 and to members who retire with 20 or more years of service.

Summary of Plan Provisions

State Police

Normal Retirement

Eligibility: Age 60 with 5 or more years of creditable service. The mandatory retirement age for police is age 70.

Annual Benefit: 1.85% of average final compensation times years of creditable service. Benefit multiplier of 1.70% of AFC times years of creditable service for retirements prior to July 1, 2007.

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 \$16,884 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.

Early Retirement

Eligibility: Age 50 with 5 or more years of creditable service.

Annual Benefit: Determined in the same manner as normal retirement benefit. A reduction applies if the member has less than 25 years of service at retirement.

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 \$16,884 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.

Summary of Plan Provisions

State Police

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.

Annual Benefit: For members with less than 5 years of service credit, the Minimum Guaranteed Benefit. A member who has 5 or more years of creditable service shall receive an annual retirement allowance during his lifetime and continued disability equal to the greater of the Minimum Guaranteed Benefit and 1.70 (1.65 for eligible Plan 2 members) percent of average final compensation multiplied by the lessor of (i) twice the amount of creditable service or (ii) the amount of creditable service the member would have completed at age 60. If a member has already attained age 60, the amount of creditable service at his date of retirement shall be used.

Minimum Guaranteed Benefit (Non-Work Related):

Not Eligible for Social Security Disability Benefits: 33-1/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Minimum Guaranteed Benefit (Work Related):

Not Eligible for Social Security Disability Benefits: 66-2/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Disability benefits commence immediately upon disability retirement and cease upon recovery or reemployment. Benefits are offset by Workers Compensation (if applicable). In addition, a refund of the member's contribution account is paid for a work-related disability.

Disability Retirement (VSDP)

Eligibility: Permanently disabled state employees who elected or are covered by the Virginia Sickness and Disability Program (VSDP) may receive a benefit payable from the VSDP plan until eligible for service retirement. A benefit payable commencing upon service retirement is payable from this plan.

Annual Benefit: An allowance equal to the normal retirement benefit based on creditable service including periods during which the employee received supplemental disability benefits for long-term disability from VSDP, and Average Final Compensation will reflect increases in the cost of living between date of disability and the date of retirement.



Summary of Plan Provisions

State Police

Deferred Retirement

Eligibility: A member who terminates after 5 or more years of creditable service for which contributions have not been withdrawn.

Annual Benefit: Computed as regular retirement but based upon service and average final compensation at time of termination. 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 with more than 5 years of service or age 50 with at least 10 years of service.

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: A member who ceases to be an employee other than by death, retirement, or involuntary separation.

Benefit: Accumulated contributions with interest.

Death Benefit

Eligibility: Death while 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 age 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.

Work-Related Death Benefit: Upon death in service from a cause compensable under the Virginia Workers' Compensation Act, the qualifying survivor would receive 50% of AFC if beneficiary does not qualify for Social Security survivor benefits and 33 1/3% 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: Members qualify for cost-of-living increases 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%, with the maximum cost-of-living increase of 5%.



Summary of Plan Provisions

State Police

***Cost-of-Living Increase
(Continued)***

Plan 2: Members qualify for cost-of-living increases 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 4%, with the maximum cost-of-living increase of 3%.

Summary of Plan Provisions

Judicial

Creditable Service

Appointed or elected prior to July 1, 2010: Judges receive creditable service multiplied by a weighting factor as follows:

Date Appointed or Elected to Original Term	Weighted Years of Service Factor
Before January 1, 1995	3.5
On or after January 1, 1995	2.5

Appointed or elected on and after July 1, 2010: Judges receive creditable service multiplied by an age-weighted weighting factor as follows:

Age at Appointment or Election to Original Term	Weighted Years of Service Factor
Less than 45 years old	1.5
At least 45 years old, less than 55	2.0
At least 55 years old	2.5

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.

Qualifying service under provisions of VRS, SPORS and VaLORS are included as creditable service under JRS. § 51.1-303 Service purchased shall not be considered in determining the actuarial equivalent for early retirement nor considered twice in determining disability allowances.

Normal Retirement

Eligibility: Age 65 with 5 or more years of creditable service. The mandatory retirement age for judges is age 73.

Annual Benefit: 1.70% of average final compensation (AFC) times years of service, not to exceed 78% of AFC. For members appointed or elected on or after January 1, 2013, the benefit multiplier is 1.65% and for members appointed or elected on or after January 1, 2014, the benefit multiplier is 1.00%.

Summary of Plan Provisions

Judicial

Early Retirement

Eligibility: Age 55 with 5 or more years of creditable service.

Annual Benefit: Determined in the same manner as normal retirement benefit. A reduction applies if the member is less than age 60 or has less than 30 years of service at retirement.

Disability Retirement

Eligibility: A member is eligible from the first day of employment.

Annual Benefit: For members with less than 5 years of service credit, the Minimum Guaranteed Benefit. A member who has 5 or more years of creditable service shall receive an annual retirement allowance during his lifetime and continued disability equal to the greater of the Minimum Guaranteed Benefit and 1.70 (1.65 for eligible Plan 2 members, 1.00 for eligible Hybrid members) percent of average final compensation multiplied by the lessor of (i) twice the amount of creditable service or (ii) the amount of creditable service the member would have completed at age 60. If a member has already attained age 60, the amount of creditable service at his date of retirement shall be used.

Minimum Guaranteed Benefit (Non-Work Related):

Not Eligible for Social Security Disability Benefits: 33-1/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Minimum Guaranteed Benefit (Work Related):

Not Eligible for Social Security Disability Benefits: 66-2/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Disability benefits commence immediately upon disability retirement and cease upon recovery or reemployment. Benefits are offset by Workers Compensation (if applicable). In addition, a refund of the member's contribution account is paid for a work-related disability.

Deferred Retirement

Eligibility: A member who terminates after 5 or more years of creditable service for which contributions have not been withdrawn.

Annual Benefit: Computed as regular retirement but based upon service and average final compensation at time of termination. 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.

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.



Summary of Plan Provisions

Judicial

Withdrawal (Refund) Benefit

Eligibility: A member who ceases to be an employee other than by death, retirement, or involuntary separation.

Benefit: Accumulated contributions with interest.

Death Benefit

Eligibility: Death while 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.

Work-related Benefit: Upon death in service from a cause compensable under the Virginia Workers' Compensation Act, the qualifying survivor would receive 50% of AFC if beneficiary does not qualify for Social Security survivor benefits and 33 1/3% 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: Members qualify for cost-of-living increases 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%, with the maximum cost-of-living increase of 5%.

Plan 2 and Hybrid: Members qualify for cost-of-living increases 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 4%, with the maximum cost-of-living increase of 3%.

Plans 1, 2 and Hybrid: The COLA is deferred for one full calendar year after the member reaches unreduced retirement age. The deferred COLA does not apply to employees within 5 years of eligibility for unreduced retirement as of January 1, 2013 and to members who retire with 20 or more years of service.



Summary of Plan Provisions

Virginia Law Officers

Normal Retirement

Eligibility: Age 60 with 5 or more years of creditable service.

Annual Benefit: For all employees hired on or after July 1, 2001, the benefit is calculated as 2.00% of average final compensation (AFC) times years of creditable service.

Employees hired before July 1, 2001, must make a one-time election to receive benefits under (i) or (ii) below:

- (i) 1.70% of average final compensation (AFC) times years of creditable service plus the temporary supplement.
- (ii) 2.00% of average final compensation (AFC) times years of creditable service and no 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 \$16,884 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 this supplement.

Early Retirement

Eligibility: Age 50 with 10 or more years of creditable service.

Annual Benefit: Determined in the same manner as normal retirement benefit. A reduction applies if the member has less than 25 years of service at retirement.

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 receive an additional annual retirement allowance of \$16,884 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.



Summary of Plan Provisions

Virginia Law Officers

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.

Annual Benefit: For members with less than 5 years of service credit, the Minimum Guaranteed Benefit. A member who has 5 or more years of creditable service shall receive an annual retirement allowance during his lifetime and continued disability equal to the greater of the Minimum Guaranteed Benefit and 1.70 (1.65 for eligible Plan 2 members) percent of average final compensation multiplied by the lessor of (i) twice the amount of creditable service or (ii) the amount of creditable service the member would have completed at age 60. If a member has already attained age 60, the amount of creditable service at his date of retirement shall be used.

Minimum Guaranteed Benefit (Non-Work Related):

Not Eligible for Social Security Disability Benefits: 33-1/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Minimum Guaranteed Benefit (Work Related):

Not Eligible for Social Security Disability Benefits: 66-2/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Disability benefits commence immediately upon disability retirement and cease upon recovery or reemployment. Benefits are offset by Workers Compensation (if applicable). In addition, a refund of the member's contribution account is paid for a work-related disability.

Disability Retirement (VSDP)

Eligibility: Permanently disabled state employees who elected or are covered by the Virginia Sickness and Disability Program (VSDP) may receive a benefit payable from the VSDP plan until eligible for service retirement. A benefit payable commencing upon service retirement is payable from this plan.

Annual Benefit: An allowance equal to the normal retirement benefit based on creditable service including periods during which the employee received supplemental disability benefits for long-term disability from VSDP, and Average Final Compensation will reflect increases in the cost of living between date of disability and date of retirement.



Summary of Plan Provisions

Virginia Law Officers

Deferred Retirement

Eligibility: A member who terminates after 5 or more years of creditable service for which contributions have not been withdrawn.

Annual Benefit: Computed as regular retirement but based upon service and average final compensation at time of termination. 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.

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: A member who ceases to be an employee other than by death, retirement, or involuntary separation.

Benefit: Accumulated contributions with interest.

Death Benefit

Eligibility: Death while 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.

Work-related Death Benefit: Upon death in service from a cause compensable under the Virginia Workers' Compensation Act, the qualifying survivor would receive 50% of AFC if beneficiary does not qualify for Social Security survivor benefits and 33 1/3% of AFC if beneficiary qualifies for Social Security survivor benefits. This benefit is reduced by Worker's Compensation.



Summary of Plan Provisions

Virginia Law Officers

Cost-of-Living Increase

Plan 1: Members qualify for cost-of-living increases 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%, with the maximum cost-of-living increase of 5%.

Plan 2: Members qualify for cost-of-living increases 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 4%, with the maximum cost-of-living increase of 3%.

Summary of Plan Provisions

Participating Political Subdivisions – General

Normal Retirement

Plan 1

Eligibility: Age 65 with 5 or more years of creditable service.

Annual Benefit: 1.70% of average final compensation times years of creditable service.

Plan 2

Eligibility: Social Security Normal Retirement Age with 5 or more years of creditable service.

Annual Benefit: 1.70% of average final compensation times years of creditable service up to January 1, 2013 plus 1.65% of average final compensation times years of creditable service on or after January 1, 2013.

Hybrid

Eligibility: Social Security Normal Retirement Age with 5 or more years of creditable service.

Annual Benefit: 1.00% of average final compensation times years of creditable service.

Early Retirement

Plan 1

Eligibility: Age 50 with 10 or more years of creditable service, or age 55 with 5 or more years of creditable service.

Annual Benefit: Determined in the same manner as normal retirement benefit. A reduction applies if the member does not meet age 50 with 30 or more years of service at retirement.

Plan 2 and Hybrid

Eligibility: Age 60 with 5 or more years of creditable service or upon the sum of age and service being 90.

Annual Benefit: Determined in the same manner as normal retirement benefit. A reduction applies if the member does not meet age 30 or more years of service at retirement or if the member meets 30 or more years of service at retirement, but the sum of age at retirement plus creditable service at retirement is less than 90.



Summary of Plan Provisions

Participating Political Subdivisions – General

Disability Retirement (Plan 1 and Plan 2)

Eligibility: Effective the first day of employment.

Annual Benefit: For members with less than 5 years of service credit, the Minimum Guaranteed Benefit. A member who has 5 or more years of creditable service shall receive an annual retirement allowance during his lifetime and continued disability equal to the greater of the Minimum Guaranteed Benefit and 1.70 (1.65 for eligible Plan 2 members) percent of average final compensation multiplied by the lessor of (i) twice the amount of creditable service or (ii) the amount of creditable service the member would have completed at age 60. If a member has already attained age 60, the amount of creditable service at his date of retirement shall be used.

Minimum Guaranteed Benefit (Non-Work Related):

Not Eligible for Social Security Disability Benefits: 33-1/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Minimum Guaranteed Benefit (Work Related):

Not Eligible for Social Security Disability Benefits: 66-2/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Disability benefits commence immediately upon disability retirement and cease upon recovery or reemployment. Benefits are offset by Workers Compensation (if applicable). In addition, a refund of the member's contribution account is paid for a work-related disability.

Disability Retirement (Hybrid Plan Members - VLDP)

Eligibility: Permanently disabled employees who elected or are covered by the Virginia Local Disability Program (VLDP) may receive a benefit payable from the VLDP plan until eligible for service retirement. A benefit payable commencing upon service retirement is payable from this plan.

Annual Benefit: An allowance equal to the normal retirement benefit based on creditable service including periods during which the employee received supplemental disability benefits for long-term disability from VLDP, and Average Final Compensation will reflect increases in the cost of living between date of disability and date of retirement.

Summary of Plan Provisions

Participating Political Subdivisions – General

Deferred Benefit

Eligibility: A member who terminates after 5 or more years of creditable service for which contributions have not been withdrawn.

Annual Benefit: Computed as regular retirement but based upon service and average final compensation at time of termination. Benefits may commence unreduced at age 65 (Social Security Normal Retirement Age for Plan 2 and Hybrid) or at age 50 with at least 30 years of service (age plus service greater than or equal 90 for Plan 2 and Hybrid). Reduced benefits may commence at or after age 55 (age 60 for Plan 2 and Hybrid) with more than 5 years of service or age 50 with at least 10 years of service.

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: A member who ceases to be an employee other than by death, retirement, or involuntary separation.

Benefit: Accumulated contributions with interest.

Death Benefit

Eligibility: Death while 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 (age 60 for Plan 2 and Hybrid), the member is assumed to be 55 (age 60 for Plan 2 and Hybrid) for benefit calculation purposes. The qualifying survivor may elect to receive a refund of the contributions plus interest in lieu of the monthly benefit.

Summary of Plan Provisions

Participating Political Subdivisions – General

***Death Benefit
(Continued)***

Work-Related Death Benefit: Upon death in service from a cause compensable under the Virginia Workers' Compensation Act, the qualifying survivor would receive 50% of AFC if beneficiary does not qualify for Social Security survivor benefits and 33 1/3% 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: Members qualify for cost-of-living increases 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%, with the maximum cost-of-living increase of 5%.

Plan 2 and Hybrid: Members qualify for cost-of-living increases 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 4%, with the maximum cost-of-living increase of 3%.

Plans 1, 2, and Hybrid: The COLA is deferred for one full calendar year after the member reaches unreduced retirement age. The deferred COLA does not apply to employees within 5 years of eligibility for unreduced retirement as of January 1, 2013 and to members who retire with 20 or more years of service.

Summary of Plan Provisions

Participating Political Subdivisions – Enhanced Hazardous Duty

Normal Retirement

Eligibility: Age 60 with 5 or more years of creditable service. The mandatory retirement age for police is age 70.

Annual Benefit: Benefit multiplier as specified in the individual employer report times years of creditable service. Benefit multiplier of 1.70% of AFC times years of creditable service for retirements prior to July 1, 2007.

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 shall receive an additional annual retirement allowance of \$16,884 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.

Early Retirement

Eligibility: Age 50 with 5 or more years of creditable service.

Annual Benefit: Determined in the same manner as normal retirement benefit. A reduction applies if the member has less than 25 years of service at retirement.

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 shall receive an additional annual retirement allowance of \$16,884 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: Effective the first day of employment.

Annual Benefit: For members with less than 5 years of service credit, the Minimum Guaranteed Benefit. A member who has 5 or more years of creditable service shall receive an annual retirement allowance during his lifetime and continued disability equal to the greater of the Minimum Guaranteed Benefit and 1.70 (1.65 for eligible Plan 2 members) percent of average final compensation multiplied by the lessor of (i) twice the amount of creditable service or (ii) the amount of creditable service the member would have completed at age 60. If a member has already attained age 60, the amount of creditable service at his date of retirement shall be used.



Summary of Plan Provisions

Participating Political Subdivisions – Enhanced Hazardous Duty

***Disability Retirement
(Non-VSDP)
(Continued)***

Minimum Guaranteed Benefit (Non-Work Related):

Not Eligible for Social Security Disability Benefits: 33-1/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Minimum Guaranteed Benefit (Work Related):

Not Eligible for Social Security Disability Benefits: 66-2/3% of AFC

Eligible for Social Security Disability Benefits: 50% of AFC

Disability benefits commence immediately upon disability retirement and cease upon recovery or reemployment. Benefits are offset by Workers Compensation (if applicable). In addition, a refund of the member's contribution account is paid for a work-related disability.

Deferred Retirement

Eligibility: A member who terminates after 5 or more years of creditable service for which contributions have not been withdrawn.

Annual Benefit: Computed as regular retirement but based upon service and average final compensation at time of termination. 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. For valuation purposes, it is assumed that this benefit will commence at age 60 with five years of service.

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: A member who ceases to be an employee other than by death, retirement, or involuntary separation.

Benefit: Accumulated contributions with interest.



Summary of Plan Provisions

Participating Political Subdivisions – Enhanced Hazardous Duty

Death Benefit

Eligibility: Death while 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 age 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.

Work-Related Death Benefit: Upon death in service from a cause compensable under the Virginia Workers' Compensation Act, the qualifying survivor would receive 50% of AFC if beneficiary does not qualify for Social Security survivor benefits and 33 1/3% 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: Members qualify for cost-of-living increases 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%, with the maximum cost-of-living increase of 5%.

Plan 2: Members qualify for cost-of-living increases 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 4%, with the maximum cost-of-living increase of 3%.

Summary of Plan Provisions

Group Life Insurance Program (GLI)

Statute

Code of Virginia, Title 51.1, Pensions, Benefits, and Retirement, Chapter 5. Group Insurance Program, §§ 51.1-500 to §51.1-514.

Eligibility Requirements

The following persons are eligible to participate in the group insurance program:

1. Teachers
2. State Employees
3. Members of the State Police Officers' Retirement System
4. Members of the Judicial Retirement System
5. Members of the Virginia Law Officers' Retirement System
6. Regular full-time employees of a political subdivision participating in the Virginia Retirement System, subject to Board approval
7. Regular full-time employees of a local school board who participate in the retirement system of a local government which provides group life insurance
8. Certain employees of teaching hospitals, other than the University of Virginia Medical Center
9. Certain employees of the Virginia Port Authority

No person shall have more than one coverage under the group insurance program.

Political subdivisions may request coverage for eligible employees, but shall not participate in this group insurance program while other group life insurance is in effect.

§§ 51.1-502 through 51.1-504

Summary of Plan Provisions

Group Life Insurance Program (GLI)

Group Insurance Benefits

Each employee shall be eligible for an amount of group life insurance of twice the amount of annual salary. If annual salary is not an even multiple of \$1,000, the annual salary is rounded up to the next \$1,000, without regard for the date of qualification for a retirement allowance.

The amount of life insurance for an employee who retires under normal retirement for service on an immediate retirement allowance or on postponed receipt of allowance shall be the amount of active life insurance described in the preceding paragraph. The life insurance amount is reduced by 25% on the January 1 following the first full year from the date the employee is separated from service and each January 1 thereafter to a minimum of 25% of the initial insurance amount. The amount of life insurance for an employee who retires for disability on an immediate retirement allowance shall be the amount of active life insurance described in the preceding paragraph. The life insurance amount is reduced 25% on the January 1 following the first full year from the date the employee attains his normal retirement date and each January 1 thereafter to a minimum of 25% of the initial insurance amount.

The amount of life insurance for an employee who is retired for disability on an immediate retirement allowance who has also attained age 55 shall have an insurance amount reduced as described above with the reduction beginning the January 1 following the first full year from the date the employee elects a service retirement allowance. § 51.1-505

The initial minimum benefit shall not be less than \$8,000 for employees with 30 years of creditable service. This amount is indexed each year in accordance with post-retirement supplement increases calculated for employees hired on or after July 1, 2010. Effective June 30, 2023, the indexed benefit minimum is \$9,254.

Any employee who was denied membership because of having attained age 60 at the time of being employed or reemployed and who has five or more years of service immediately prior to separation from service shall retain the life insurance coverage as though retiring immediately.

Any employee who has 20 years of creditable service at any time shall have insurance based on twice the highest annual salary.

Summary of Plan Provisions

Group Life Insurance Program (GLI)

Group Insurance Benefits (Continued)

Accidental Death and Dismemberment – Each employee shall be eligible for an amount of group accidental death and dismemberment insurance of twice the amount of annual salary. If annual salary is not an even multiple of \$1,000, the annual salary is rounded up to the next \$1,000. Accidental death and dismemberment insurance ceases upon separation from service or retirement and is not reflected in this valuation. § 51.1-505 through 51.1-505.01

Optional Life Insurance – The Board shall make available optional life, accidental death, and dismemberment insurance in incremental amounts not to exceed a maximum amount set by the Board. Optional life insurance benefits are not reflected in this valuation. § 51.1-512

Optional Life Insurance for Spouse and Minor Dependents – The Board shall make available optional life, accidental death, and dismemberment insurance on the employee’s spouse and minor dependents. Optional life insurance benefits are not reflected in this valuation. § 51.1-512.1

Funding

Each insured employee shall contribute an amount determined by the Board not to exceed the rate of \$0.70 per month for each \$1,000 of annual salary. Employers may assume employee contributions in whole or in part. Employees retired for service or disability shall not be required to contribute to the cost of their life insurance. §51.1-506.

Employers, other than the Commonwealth, shall pay the percentage of premiums or charges not paid for by employee contributions. Employees paid from special funds shall have their employer contributions paid from such funds. §51.1-508.

Administrative Procedures

The Board of Trustees of the Virginia Retirement System is authorized to purchase group insurance policies to insure eligible members. §51.1-501



Summary of Plan Provisions

Health Insurance Credit Program (HIC)

Statute Code of Virginia, Title 51.1, Pensions, Benefits, and Retirement, Chapter 14. Health Insurance Credits for Certain Retirees, §§51.1-1400 to 51.1-1405.

Eligibility Requirements **Retired State Employees** – The Commonwealth shall provide a credit toward the cost of health insurance coverage for any former state employees who retired under the Virginia Retirement System, State Police Officers’ Retirement System, Judicial Retirement System, Virginia Law Officers’ Retirement System, or any retirement system authorized; including, certain employees of institutions of higher education, teaching hospitals, the University of Virginia Medical Center, the Virginia Port Authority, the defined contribution plan, the Virginia Outdoors Foundation, or hybrid retirement program, and who (i) rendered at least 15 years of total creditable service under the Retirement System or (ii) rendered service as a temporary employee of the General Assembly in 1972 and became a member of the retirement system from 1972 to 1985 immediately following such temporary service. A state retiree shall be eligible to participate in the retiree health benefits program. Additionally, those whose retirement was for disability, a participant receiving long-term disability, and select members who defer retirement, are also eligible. §51.1-1400.

Retired Teachers – A teacher retired under the Virginia Retirement System, including the hybrid retirement program, who rendered at least 15 years of total creditable service under the System or plan shall receive a health insurance credit. Additionally, those whose retirement was for disability, a participant receiving long-term disability, and select members who defer retirement, are also eligible. §51.1-1401.

Retired Local Government Employees – Retired local government employees, whose localities have elected to participate in the Virginia Retirement System, including the hybrid retirement program, who rendered at least 15 years of total creditable service under the System shall receive a health insurance credit. Additionally, those whose retirement was for disability, a participant receiving long-term disability, and select members who defer retirement, are also eligible. §51.1-1402.

Summary of Plan Provisions

Health Insurance Credit Program (HIC)

Eligibility Requirements (Continued)

Retired School Division Employees Other than Teachers – Employees of a local school division who are not teachers who retired under the Virginia Retirement System, including the hybrid retirement program who rendered at least 15 years of total creditable service under the System shall receive a health insurance credit. Additionally, those whose retirement was for disability, a participant receiving long-term disability, and select members who defer retirement, are also eligible. §51.1-1402.1

Retired Constitutional Officers, Employees of Constitutional Officers, General Registrars, Employees of General Registrars, and Local Social Service Employees – A local officer, general registrar, employee of a general registrar, or an employee of a local social services board, retired under the Virginia Retirement System, including the hybrid retirement program, who rendered at least 15 years of total creditable service under the System or plan shall receive a health insurance credit. Additionally, those whose retirement was for disability, a participant receiving long-term disability, and select members who defer retirement, are also eligible. §51.1-1403.

Health Insurance Credit¹

State Employees – The amount of each monthly health insurance credit shall be \$4 per year of creditable service (beginning July 1, 2024, \$4.25 per year of creditable service) credited to any retired state employee participating in the state retiree health benefits program or an alternative personal health insurance plan, not to exceed the health insurance premium for retiree-only coverage.

Any former member receiving long-term disability or disability retirement shall receive a maximum monthly credit which is the greater of \$120 or \$4 (beginning July 1, 2024, \$4.25) per year of creditable service at the time of disability retirement or eligibility for long-term disability.

Any employee who rendered at least 15 year of total creditable service as a state employee and after terminating was employed by a local government that does not elect to provide a health insurance credit under §51.1-1401 or §51.1-1402 shall be eligible for a credit based upon the amount of state service or service as a teacher, whichever is greater.

¹ Due to working across multiple employers, a participant may be subject to different health insurance credit accruals and monthly maximums than described above.

Summary of Plan Provisions

Health Insurance Credit Program (HIC)

Health Insurance Credit¹ (Continued) The Virginia Commonwealth University Health System Authority shall pay the cost of coverage for those who retired under the Virginia Retirement System or other authorized system, were employed by the Authority prior to July 1, 1998, and were not subsequently rehired on or after July 1, 1998, and served no less than 15 years of creditable service as regularly employed full-time employees of such Authority or the Commonwealth. §51.1-1400.

Teachers – The amount of each monthly health insurance credit shall be \$4 per year of creditable service credited applied to reduce the retired member’s health insurance premium cost.

Any former member receiving long-term disability or disability retirement shall receive a health insurance credit of \$4 multiplied by the smaller of twice the amount of creditable service or the amount of creditable service he or she would have completed at age 60 if the individual had remained in service until that age.

Any employee who rendered at least 15 year of total creditable service as a teacher and after terminating was employed by a local government that does not elect to provide a health insurance credit under §51.1-1402 shall be eligible for a credit based upon the amount of state service or service as a teacher, whichever is greater. §51.1-1401.

Local Government Employees – The amount of each monthly health insurance credit shall be \$1.50 per year of creditable service credited, not to exceed a maximum monthly credit of \$45, applied to reduce the retired member’s health insurance premium cost, provided the retiree’s employer elects to participate in the credit program.

Any former member receiving long-term disability or disability retirement shall receive a monthly credit of \$45.

The amount of credit received shall be the lessor of the amount of credit described above or the amount of premium paid for the personal health insurance policy.

¹ Due to working across multiple employers, a participant may be subject to different health insurance credit accruals and monthly maximums than described above.

Summary of Plan Provisions

Health Insurance Credit Program (HIC)

Health Insurance Credit¹ (Continued) Any employee who terminates after meeting the 15 years of total creditable service requirement, and subsequently retires shall be entitled to receive this credit upon retirement. §51.1-1402.

School Division Employees Other than Teachers – The amount of each monthly health insurance credit shall be \$1.50 per year of creditable service credited applied to reduce the retired member's health insurance premium cost. In addition, localities may elect to provide an additional credit of \$1 per month per year of creditable service.

Any former member receiving long-term disability or disability retirement shall receive a health insurance credit of \$1.50 multiplied by the smaller of twice the amount of creditable service or the amount of creditable service he or she would have completed at age 60 if the individual had remained in service until that age.

The amount of credit received shall be the lessor of the amount of credit described above or the amount of premium paid for the personal health insurance policy.

Any employee who terminates after receiving five or more years of creditable service, meets the 15 years of total creditable service requirement, and subsequently retires shall be entitled to receive this credit upon retirement. §51.1-1402.1

Retired Constitutional Officers, Employees of Constitutional Officers, General Registrars, Employees of General Registrars, and Local Social Service Employees – The amount of each monthly health insurance credit shall be borne by the Commonwealth, and is described in a separate report. The amount of each monthly health insurance credit shall be \$1.50 per year of creditable service credited, not to exceed a maximum of \$45, (beginning July 1, 2024 for retired constitutional officers the amount of each monthly health insurance credit shall be \$1.75 per year of creditable service not to exceed a maximum of \$52.50) applied to reduce the retired member's health insurance premium cost. In addition, localities may elect to provide an additional credit of \$1 per month per year of creditable service, not to exceed a maximum monthly credit of \$30. The cost of this additional \$1 credit shall be borne by the locality.

Any former member receiving long-term disability or disability retirement shall receive a monthly credit of \$45 (\$52.50 beginning July 1, 2024 for retired constitutional officers).

¹ Due to working across multiple employers, a participant may be subject to different health insurance credit accruals and monthly maximums than described above.

Summary of Plan Provisions

Health Insurance Credit Program (HIC)

**Health Insurance Credit¹
(Continued)** Any employee who terminates after receiving five or more years of creditable service and subsequently retires shall be entitled to receive this credit upon retirement. §51.1-1403.

¹ Due to working across multiple employers, a participant may be subject to different health insurance credit accruals and monthly maximums than described above.

**Administrative
Procedures** The Virginia Retirement System shall actuarially determine the amount necessary to fund all credits through employer contributions. The costs associated with the administration of the health insurance credit shall be recovered from the Health Insurance Credit trust fund, §§51.1-1400 to 51.1-1403.

**Participation in State
Retiree Health Benefits
Program** Certain retired state employees are eligible to participate in the retiree health benefits program for retired state employees. This valuation does not reflect any benefits or implicit subsidies associated with that program. §51.1-1405.

Summary of Plan Provisions

Virginia Sickness and Disability Program (VSDP)

Statute Code of Virginia, Title 51.1, Pension, Benefits, and Retirement. Chapter 11, §§ 51.1-1100 through 51.1-1140.

Eligibility Requirements **Eligible Employee** – Eligible employee means:

- (i) A state employee who is a member of the retirement system, including the hybrid retirement program
- (ii) A state police officer
- (iii) A member of the Capitol Police Force, campus police officer appointed, conservation police officer in the Department of Wildlife Resources, special agent of the Virginia Alcoholic Beverage Control Authority, law-enforcement officer employed by the Virginia Marine Resources Commission, correctional officer including correctional officers employed at a juvenile correction facility, any parole officer, and any commercial vehicle enforcement officer employed by the Department of State Police
- (iv) A qualifying part-time employee

Any person participating in an optional retirement plan, certain employees of teaching hospitals, employees of the Virginia Port Authority, and eligible defined contribution plan members shall not be considered eligible employees. Select employees of the University of Virginia Medical Center shall not be considered eligible employees unless the University of Virginia Board of Visitors purchases such insurance policies from the Virginia Retirement System. § 51.1-1100

Participation in the Program – All eligible employees commencing employment or who are reemployed on or after January 1, 1999 shall participate in the program except those employed by an institution of higher education in a faculty position performing teaching, research or administrative duties. All eligible employees not participating in the program prior to October 1, 2002 shall participate in the program effective January 10, 2003, unless such employee elects not to participate in writing before January 1, 2003. If an institute of higher education has established its own sickness and disability program, an eligible employee shall participate in that program.

Summary of Plan Provisions

Virginia Sickness and Disability Program (VSDP)

Eligibility Requirements (Continued) No participating employee commencing employment or who are reemployed on or after July 1, 2009 shall receive non-work-related benefits until completing one continuous year of employment. § 51.1-1103

Participants of the VSDP program are automatically covered under the VSDP Long Term Care Plan.

Benefits **Sickness and Disability Program** – The Board shall develop, implement, and administer sick-leave, short-term disability, and long-term disability programs.

The VRS Board may self-insure long-term disability benefits. This valuation does not include sick-leave or short-term disability. § 51.1-1101

Long-term disability benefits shall provide income replacement of 60% (80% for catastrophic disability) of creditable compensation upon the expiration of short-term disability benefits. Creditable compensation excludes salary increases awarded during disability and are increased annually by the Board. An employee's disability credits shall be used to extend the period of income replacement of 100% of creditable compensation. Long-term disability shall only be paid during total disability or partial disability. To be eligible for benefits, the employee must apply for Social Security disability benefits. An employee who is approved for disability benefits within five years of normal retirement shall be eligible for five years of disability benefits before being required to retire under service retirement. Members in receipt of long-term disability for greater than one year receive a COLA increase on their VSDP benefit. §§ 51.1-1112, 1123, 1131

Disability benefits shall be offset by:

- (1) During the first 12 months of disability an amount equal to the employee's wage and salary from any employment times the creditable compensation replacement percentage;
- (2) After the first 12 months of disability, an amount equal to 70% of the employee's wages and salary from any employment;
- (3) Disability payments from the Social Security Administration, local government disability benefits, federal or civil service disability benefits, or other similar government disability program benefits;
- (4) Benefits from any other group insurance contract provided by the Commonwealth for the purpose of providing income replacement;



Summary of Plan Provisions

Virginia Sickness and Disability Program (VSDP)

**Benefits
(Continued)**

- (5) Benefits paid under any compulsory benefits law; and
- (6) A settlement in lieu of periodic payments for disability, if applicable. § 51.1-1114, 1125

Disability benefits shall cease upon the first to occur:

- (1) The end of the period of disability coverage.
- (2) The death of the participating employee;
- (3) The participating employee's normal retirement date or age 65 if not a member of the retirement system; and
- (4) Service retirement. § 51.1-1117, 1127

Survivor benefits shall be payable to the extent provided under death before retirement from the retirement system. § 51.1-1118, 1129

The Board is authorized to develop, implement and administer a long-term care insurance program for participating employees that includes, among other elements, provisions under which a person may purchase continuing coverage if he or she ceases to be a participating employee. §51.1-1135.2.

No person shall have more than one coverage under a disability benefit program. § 51.1-1136

Long-Term Care (LTC) Plan - The VSDP Long-Term Care Plan assists with the cost of:

- Care in a nursing home or hospice facility
- Assisted living facility care
- Community-based care
- Home healthcare services
- Informal care-giving
- Alternative or transitional care

Summary of Plan Provisions

Virginia Sickness and Disability Program (VSDP)

Benefits (Continued)

Participants may be eligible for LTC benefits if, in addition to satisfying a 90 calendar-day waiting period, a licensed healthcare professional certifies that the participant:

- Is unable to perform at least two of six activities of daily living; or
- Has a severe cognitive impairment requiring substantial supervision.

The maximum daily benefit amount is \$96 with a lifetime maximum of \$70,080.

Administrative Procedures

For an insurance product, the accounting shall include (i) the amounts of premiums actually accrued under the policy during the policy year, (ii) the total amount of all claim charges incurred during the policy year, and (iii) the amount of fees accrued under the policy during the year plus the total amount of all claim charges incurred during the policy year.

For a self-insured product, the accounting shall include the total amount of all claim charges incurred during the product year, the total amount of third-party administrator expenses, and the total amount of other charges for administrative services. § 51.1-1139

State agencies shall pay to the Board contributions amounts to provide such funds as required to obtain and maintain long-term disability insurance and the long-term care insurance program. § 51.1-1140

Summary of Plan Provisions

Virginia Local Disability Program (VLDP)

Statute	Code of Virginia, Title 51.1, Pension, Benefits, and Retirement. Chapter 11.1, §§ 51.1-1150 through 51.1-1183.
Eligibility Requirements	<p>Eligible Employee – Eligible employee means any person who is not eligible for VSDP and is participating in the hybrid retirement program for Teachers and Political Subdivisions. § 51.1-1150</p> <p>Participation in the Program – All eligible employees shall become participants in this program unless the employer has elected in writing on or before January 1, 2014 to establish and maintain comparable disability coverage.</p> <p>No participating employee commencing employment shall receive benefits until completing one continuous year of employment. § 51.1-1153</p> <p>Participants of the VLDP program are automatically covered under the VLDP Long Term Care Plan.</p>
Benefits	<p>Sickness and Disability Program – The Board shall develop, implement, and administer sick-leave, short-term disability, and long-term disability programs.</p> <p>The VRS Board may self-insure long-term disability benefits. This valuation does not include sick-leave or short-term disability. § 51.1-1151</p> <p>Long-term disability benefits shall provide income replacement of 60% (80% for catastrophic disability) of creditable compensation upon the expiration of short-term disability benefits. Creditable compensation excludes salary increases awarded during disability. An employee's disability credits shall be used to extend the period of income replacement of 100% of creditable compensation. Long-term disability shall only be paid during total disability or partial disability. To be eligible for benefits, the employee must apply for Social Security disability benefits. An employee who is approved for disability benefits (i) at age 60 through 64 shall be eligible for five years of disability benefits, (ii) at age 65 through 68 shall be eligible for disability benefits to age 70, and (iii) at age 69 or older shall be eligible for disability benefits for one year. §§ 51.1-1157, 1161, 1171</p>

Summary of Plan Provisions

Virginia Local Disability Program (VLDP)

Benefits (Continued)

Disability benefits shall be offset by:

- (1) During the first 12 months of disability an amount equal to the employee's wage and salary from any employment times the creditable compensation replacement percentage;
- (2) After the first 12 months of disability, an amount equal to 70% of the employee's wages and salary from any employment;
- (3) Disability payments from the Social Security Administration, local government disability benefits, federal or civil service disability benefits, or other similar government disability program benefits;
- (4) Benefits from any other group insurance contract provided by the Commonwealth for the purpose of providing income replacement; and
- (5) Benefits paid under any compulsory benefits law. § 51.1-1159, 1167

Disability benefits shall cease upon the first to occur:

- (1) The death of the participating employee;
- (2) The participating employee's normal retirement date or age 65 if not a member of the retirement system; and
- (3) Service retirement. § 51.1- 1161, 1169

The Board is authorized to develop, implement and administer a long-term care insurance program for participating employees that includes, among other elements, provisions under which a person may purchase continuing coverage if he or she ceases to be a participating employee. §51.1-1178.

No person shall have more than one coverage under a disability benefit program. § 51.1-1179

Long-Term Care (LTC) Plan - The VLDP Long-Term Care Plan assists with the cost of:

- Care in a nursing home or hospice facility
- Assisted living facility care
- Community-based care
- Home healthcare services
- Informal care-giving
- Alternative or transitional care

Summary of Plan Provisions

Virginia Local Disability Program (VLDP)

Benefits (Continued)

Participants may be eligible for LTC benefits if, in addition to satisfying a 90 calendar-day waiting period, a licensed healthcare professional certifies that the participant:

- Is unable to perform at least two of six activities of daily living; or
- Has a severe cognitive impairment requiring substantial supervision.

The maximum daily benefit amount is \$96 with a lifetime maximum of \$70,080.

Administrative Procedures

For an insurance product, the accounting shall include (i) the amounts of premiums actually accrued under the policy during the policy year, (ii) the total amount of all claim charges incurred during the policy year, and (iii) the amount of fees accrued under the policy during the year plus the total amount of all claim charges incurred during the policy year.

For a self-insured product, the accounting shall include the total amount of all claim charges incurred during the product year, the total amount of third-party administrator expenses, and the total amount of other charges for administrative services. § 51.1-1182

Employers of participating employees shall pay to the Board contributions amounts to provide such funds as required to obtain and maintain long-term disability insurance and the long-term care insurance program. § 51.1-1183

Actuarial Assumptions

To calculate VRS contribution requirements, plan accounting costs, and reporting requirements, assumptions are made about future events that could affect the amount and timing of expected benefits to be paid and the assets to be accumulated. The economic and demographic assumptions include:

- An investment return assumption that is used to discount liabilities and project expected earnings on plan assets.
- A mortality assumption projecting the number of members expected to die before retirement and the duration of benefit payments after retirement.
- Assumed retirement rates projecting when members are expected to retire and commence receiving retirement benefits.
- A set of withdrawal and disability rates to estimate the number of members expected to leave the work force before retirement.
- Assumed rates of pay increase to project expected member compensation in future years.

The actuarial assumptions currently used are summarized below and on the following pages. The actuarial assumptions used for the VRS valuations, including the assumed rate of investment return, are reasonable for purposes of the measurement.

Assumptions that Apply to All VRS Plans

Interest Rate: Funding plan benefits involves the accumulation of assets to pay benefits in the future. The net rate of investment earnings on assets is a significant factor in determining the contributions required to support the ultimate cost of benefits. For the 2023 actuarial valuations, the long-term investment return is assumed to be 6.75% annually, net of administrative and investment expenses.

Inflation: The long-term annual rate of price inflation is 2.5% annually.

Payroll Growth: The number of active members is projected to remain constant, and the total payroll is projected to increase 3.00% annually.

Administrative Expenses: Anticipated noninvestment expenses are based on actual prior year experience.



Mortality Assumptions by Group

The mortality rates are based upon the Pub-2010 Amount-Weighted tables, in conjunction with 75% of the MP-2020 Projection Scale on a fully generational basis, with adjustments for each plan. **Pre-Retirement, Post-Retirement, Post-Disablement, and Beneficiary & Survivor** tables follow – note that base rates are shown, and mortality improvement is anticipated as projected with a modified MP-2020 Improvement Scale.

Pre-Retirement Mortality Rate Adjustments

Plan	Job Classification	% of Male Table	% of Female Table	Male Set Forward/(Back)	Female Set Forward/(Back)	Service-Related Deaths
State	General	100%	100%	None	2 years	25%
Teachers	Teachers	110%	100%	None	None	5%
VaLORS	Safety	95%	105%	None	2 years	35%
SPORS	Safety	95%	105%	None	2 years	85%
Judicial	General	100%	100%	2 years	none	5%
Locals – Top 10, Non-Hazardous Duty	General	100%	105%	2 years	3 years	20%
Locals – Non-Top 10, Non-Hazardous Duty	General	100%	105%	2 years	3 years	15%
Locals – Top 10, Hazardous Duty	Safety	95%	105%	None	2 years	70%
Locals – Non-Top 10, Hazardous Duty	Safety	95%	105%	None	2 years	45%

Pre-Retirement Base Mortality Rates

Attained Age	State		Teachers		VaLORS		SPORS		JRS		Political Subdivisions			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Hazardous Duty		Non-Hazardous Duty	
											Male	Female	Male	Female
20	0.000370	0.000110	0.000374	0.000130	0.000390	0.000179	0.000390	0.000179	0.000330	0.000130	0.000390	0.000179	0.000330	0.000105
25	0.000280	0.000110	0.000176	0.000090	0.000352	0.000231	0.000352	0.000231	0.000310	0.000090	0.000352	0.000231	0.000310	0.000126
30	0.000360	0.000180	0.000242	0.000140	0.000390	0.000315	0.000390	0.000315	0.000400	0.000150	0.000390	0.000315	0.000400	0.000200
35	0.000470	0.000280	0.000330	0.000200	0.000447	0.000431	0.000447	0.000431	0.000530	0.000230	0.000447	0.000431	0.000530	0.000315
40	0.000660	0.000430	0.000462	0.000310	0.000561	0.000588	0.000561	0.000588	0.000770	0.000360	0.000561	0.000588	0.000770	0.000494
45	0.000980	0.000660	0.000737	0.000480	0.000779	0.000798	0.000779	0.000798	0.001160	0.000560	0.000779	0.000798	0.001160	0.000746
50	0.001490	0.000970	0.001221	0.000730	0.001140	0.001082	0.001140	0.001082	0.001750	0.000830	0.001140	0.001082	0.001750	0.001103
55	0.002190	0.001440	0.001892	0.001070	0.001663	0.001470	0.001663	0.001470	0.002550	0.001230	0.001663	0.001470	0.002550	0.001638
60	0.003190	0.002220	0.002904	0.001610	0.002508	0.001995	0.002508	0.001995	0.003710	0.001860	0.002508	0.001995	0.003710	0.002562
65	0.004680	0.003620	0.004785	0.002700	0.003895	0.003150	0.003895	0.003150	0.005480	0.002960	0.003895	0.003150	0.005480	0.004200
70	0.007030	0.005980	0.007799	0.004850	0.007277	0.006279	0.007277	0.006279	0.008370	0.004890	0.007277	0.006279	0.008370	0.006941
75	0.010960	0.009860	0.011847	0.009210	0.013604	0.012485	0.013604	0.012485	0.013150	0.008080	0.013604	0.012485	0.013150	0.011445
80	0.017300	0.042760	0.023430	0.018260	0.025413	0.051765	0.025413	0.051765	0.060520	0.013300	0.025413	0.051765	0.060520	0.050757



Mortality Assumptions by Group

Healthy Post-Retirement Mortality Rate Adjustments

Plan	Job Classification	% of Male Table	% of Female Table	Male Set Forward/(Back)	Female Set Forward/(Back)
State	General	100%	110%	None	None
Teachers	Teachers	100%	105%	1 year	None
VaLORS	Safety	110%	105%	None	3 years
SPORS	Safety	110%	105%	None	3 years
Judicial	General	95%	95%	(2 years)	(2 years)
Locals – Top 10, Non-Hazardous Duty	General	95%	95%	2 years	1 year
Locals – Non-Top 10, Non-Hazardous Duty	General	95%	95%	2 years	1 year
Locals – Top 10, Hazardous Duty	Safety	110%	105%	None	3 years
Locals – Non-Top 10, Hazardous Duty	Safety	110%	105%	None	3 years

Healthy Post-Retirement Base Mortality Rates

Attained Age	State		Teachers		VaLORS		SPORS		JRS		Political Subdivisions			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Hazardous Duty		Non-Hazardous Duty	
											Male	Female	Male	Female
20	0.000370	0.000143	0.000300	0.000137	0.000451	0.000189	0.000451	0.000189	0.000342	0.000124	0.000451	0.000189	0.000314	0.000114
25	0.000280	0.000099	0.000170	0.000095	0.000407	0.000252	0.000407	0.000252	0.000295	0.000095	0.000407	0.000252	0.000295	0.000095
30	0.000360	0.000165	0.000240	0.000147	0.000451	0.000336	0.000451	0.000336	0.000314	0.000114	0.000451	0.000336	0.000380	0.000152
35	0.000470	0.000253	0.000320	0.000210	0.000517	0.000452	0.000517	0.000452	0.000399	0.000181	0.000517	0.000452	0.000504	0.000238
40	0.000660	0.000396	0.000460	0.000326	0.000649	0.000620	0.000649	0.000620	0.000542	0.000285	0.000649	0.000620	0.000732	0.000380
45	0.000980	0.000616	0.000740	0.000504	0.001342	0.001260	0.001342	0.001260	0.000789	0.000447	0.001342	0.001260	0.001102	0.000580
50	0.002980	0.002442	0.001220	0.000767	0.002112	0.002174	0.002112	0.002174	0.001207	0.000675	0.002112	0.002174	0.003287	0.002214
55	0.004310	0.003146	0.002450	0.002027	0.003366	0.003759	0.003366	0.003759	0.003534	0.002461	0.003366	0.003759	0.004722	0.002860
60	0.006150	0.004224	0.003930	0.003014	0.005588	0.006489	0.005588	0.006489	0.005064	0.003192	0.005588	0.006489	0.006774	0.003952
65	0.009130	0.006743	0.006620	0.004683	0.009691	0.011214	0.009691	0.011214	0.007315	0.004750	0.009691	0.011214	0.010526	0.006479
70	0.015260	0.011693	0.012140	0.008085	0.017248	0.019362	0.017248	0.019362	0.011676	0.008066	0.017248	0.019362	0.018088	0.011315
75	0.026710	0.020713	0.023120	0.015341	0.031086	0.033443	0.031086	0.033443	0.020226	0.014222	0.031086	0.033443	0.031930	0.020055
80	0.047740	0.036960	0.043630	0.029589	0.056133	0.057740	0.056133	0.057740	0.035863	0.025251	0.056133	0.057740	0.057494	0.035977
85	0.085910	0.068255	0.081980	0.056553	0.100485	0.099708	0.100485	0.099708	0.064705	0.045923	0.100485	0.099708	0.101964	0.066890
90	0.146720	0.126357	0.148590	0.105935	0.174460	0.167150	0.174460	0.167150	0.113497	0.085937	0.174460	0.167150	0.168578	0.121914



Mortality Assumptions by Group

Disabled Post-Retirement Mortality Rate Adjustments

Plan	Job Classification	% of Male Disabled Table	% of Female Disabled Table	Male Set Forward/(Back)	Female Set Forward/(Back)
State	General	100%	100%	3 years	3 years
Teachers	Teachers	110%	110%	None	None
VaLORS	General	95%	90%	(3 years)	(3 years)
SPORS	General	95%	90%	(3 years)	(3 years)
Judicial	General	100%	100%	None	None
Locals – Top 10, Non-Hazardous Duty	General	110%	110%	3 years	2 years
Locals – Non-Top 10, Non-Hazardous Duty	General	110%	110%	3 years	2 years
Locals – Top 10, Hazardous Duty	General	95%	90%	(3 years)	(3 years)
Locals – Non-Top 10, Hazardous Duty	General	95%	90%	(3 years)	(3 years)

Disabled Post-Retirement Base Mortality Rates

Attained Age	State		Teachers		VaLORS		SPORS		JRS		Political Subdivisions			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Hazardous Duty		Non-Hazardous Duty	
											Male	Female	Male	Female
20	0.003160	0.001760	0.004532	0.002563	0.000295	0.000108	0.000295	0.000108	0.004120	0.002330	0.000295	0.000108	0.003476	0.002134
25	0.003210	0.002150	0.003058	0.001804	0.003344	0.001746	0.003344	0.001746	0.002780	0.001640	0.003344	0.001746	0.003531	0.002156
30	0.004110	0.003360	0.003894	0.002827	0.002907	0.001764	0.002907	0.001764	0.003540	0.002570	0.002907	0.001764	0.004521	0.003377
35	0.005550	0.005240	0.005038	0.004411	0.003715	0.002763	0.003715	0.002763	0.004580	0.004010	0.003715	0.002763	0.006105	0.005269
40	0.008340	0.008250	0.007095	0.006919	0.004921	0.004311	0.004921	0.004311	0.006450	0.006290	0.004921	0.004311	0.009174	0.008294
45	0.013420	0.012670	0.011077	0.010835	0.007249	0.006786	0.007249	0.006786	0.010070	0.009850	0.007249	0.006786	0.014762	0.012837
50	0.019210	0.016400	0.017655	0.016313	0.011600	0.010503	0.011600	0.010503	0.016050	0.014830	0.011600	0.010503	0.021131	0.017457
55	0.023550	0.018740	0.023254	0.019162	0.017271	0.014283	0.017271	0.014283	0.021140	0.017420	0.017271	0.014283	0.025905	0.020163
60	0.027850	0.021100	0.027533	0.021516	0.021660	0.016497	0.021660	0.016497	0.025030	0.019560	0.021660	0.016497	0.030635	0.022561
65	0.035240	0.025690	0.033484	0.024816	0.025432	0.018459	0.025432	0.018459	0.030440	0.022560	0.025432	0.018459	0.038764	0.026950
70	0.045990	0.034640	0.042911	0.031482	0.031854	0.022050	0.031854	0.022050	0.039010	0.028620	0.031854	0.022050	0.050589	0.035629
75	0.063470	0.050750	0.057112	0.044033	0.041268	0.029151	0.041268	0.029151	0.051920	0.040030	0.041268	0.029151	0.069817	0.051458
80	0.092590	0.078110	0.080828	0.066077	0.056250	0.042102	0.056250	0.042102	0.073480	0.060070	0.056250	0.042102	0.101849	0.078650
85	0.136030	0.118780	0.118965	0.102641	0.081368	0.064350	0.081368	0.064350	0.108150	0.093310	0.081368	0.064350	0.149633	0.121154
90	0.205880	0.167400	0.178783	0.150315	0.119748	0.099126	0.119748	0.099126	0.162530	0.136650	0.119748	0.099126	0.226468	0.171985



Mortality Assumptions by Group

Beneficiary & Survivor Mortality Rate Adjustments

Plan	Job Classification	% of Male Contingent Table	% of Female Contingent Table	Male Set Forward/(Back)	Female Set Forward/(Back)
State	General	110%	110%	None	None
Teachers	Teachers	100%	100%	None	None
VaLORS	Safety	110%	110%	2 years	2 years
SPORS	Safety	110%	110%	2 years	2 years
Judicial	General	100%	100%	None	None
Locals – Top 10, Non-Hazardous Duty	General	100%	100%	None	None
Locals – Non-Top 10, Non-Hazardous Duty	General	100%	100%	None	None
Locals – Top 10, Hazardous Duty	Safety	110%	110%	2 years	2 years
Locals – Non-Top 10, Hazardous Duty	Safety	110%	110%	2 years	2 years

Beneficiary & Survivor Post-Retirement Base Mortality Rates

Attained Age	State		Teachers		VaLORS		SPORS		JRS		Political Subdivisions			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Hazardous Duty		Non-Hazardous Duty	
											Male	Female	Male	Female
20	0.000407	0.000143	0.000340	0.000130	0.000440	0.000187	0.000440	0.000187	0.000370	0.000130	0.000440	0.000187	0.000370	0.000130
25	0.000308	0.000099	0.000160	0.000090	0.000429	0.000242	0.000429	0.000242	0.000280	0.000090	0.000429	0.000242	0.000280	0.000090
30	0.000396	0.000165	0.000220	0.000140	0.000473	0.000330	0.000473	0.000330	0.000360	0.000150	0.000473	0.000330	0.000360	0.000150
35	0.000517	0.000253	0.000300	0.000200	0.000550	0.000451	0.000550	0.000451	0.000470	0.000230	0.000550	0.000451	0.000470	0.000230
40	0.000726	0.000396	0.000420	0.000310	0.000737	0.000616	0.000737	0.000616	0.000660	0.000360	0.000737	0.000616	0.000660	0.000360
45	0.006039	0.002882	0.005490	0.002620	0.006556	0.003124	0.006556	0.003124	0.005490	0.002620	0.006556	0.003124	0.005490	0.002620
50	0.007711	0.003520	0.007010	0.003200	0.008217	0.004026	0.008217	0.004026	0.007010	0.003200	0.008217	0.004026	0.007010	0.003200
55	0.009064	0.004906	0.008240	0.004460	0.009757	0.005588	0.009757	0.005588	0.008240	0.004460	0.009757	0.005588	0.008240	0.004460
60	0.011132	0.006842	0.010120	0.006220	0.012430	0.007887	0.012430	0.007887	0.010120	0.006220	0.012430	0.007887	0.010120	0.006220
65	0.015224	0.009889	0.013840	0.008990	0.017908	0.011583	0.017908	0.011583	0.013840	0.008990	0.017908	0.011583	0.013840	0.008990
70	0.023419	0.014883	0.021290	0.013530	0.028182	0.017809	0.028182	0.017809	0.021290	0.013530	0.028182	0.017809	0.021290	0.013530
75	0.037202	0.023661	0.033820	0.021510	0.044660	0.028809	0.044660	0.028809	0.033820	0.021510	0.044660	0.028809	0.033820	0.021510
80	0.058960	0.039303	0.053600	0.035730	0.071478	0.049005	0.071478	0.049005	0.053600	0.035730	0.071478	0.049005	0.053600	0.035730
85	0.096173	0.069476	0.087430	0.063160	0.117315	0.088330	0.117315	0.088330	0.087430	0.063160	0.117315	0.088330	0.087430	0.063160
90	0.158598	0.124619	0.144180	0.113290	0.193105	0.153472	0.193105	0.153472	0.144180	0.113290	0.193105	0.153472	0.144180	0.113290



State Employees

Retirement Rates

Plan 1 Members

Attained Age	State - Plan 1													
	Male							Female						
	Years of Service							Years of Service						
	0-4	5	6-9	10	11-29	30	31+	0-4	5	6-9	10	11-29	30	31+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.03250	0.03250	0.125	0.125	0.000	0.000	0.000	0.040	0.040	0.075	0.075
51	0.000	0.000	0.000	0.03250	0.030	0.080	0.090	0.000	0.000	0.000	0.040	0.030	0.075	0.060
52	0.000	0.000	0.000	0.03250	0.030	0.080	0.090	0.000	0.000	0.000	0.040	0.035	0.075	0.060
53	0.000	0.000	0.000	0.03250	0.030	0.080	0.090	0.000	0.000	0.000	0.050	0.035	0.075	0.080
54	0.000	0.000	0.000	0.03250	0.030	0.080	0.090	0.000	0.000	0.000	0.050	0.035	0.075	0.080
55	0.000	0.045	0.045	0.045	0.035	0.080	0.090	0.000	0.050	0.050	0.050	0.040	0.075	0.080
56	0.000	0.045	0.040	0.040	0.040	0.080	0.090	0.000	0.050	0.040	0.040	0.040	0.075	0.080
57	0.000	0.045	0.040	0.040	0.040	0.080	0.090	0.000	0.050	0.040	0.040	0.040	0.100	0.090
58	0.000	0.045	0.040	0.040	0.040	0.100	0.090	0.000	0.050	0.045	0.045	0.045	0.100	0.090
59	0.000	0.045	0.040	0.040	0.040	0.100	0.090	0.000	0.050	0.050	0.050	0.050	0.120	0.090
60	0.000	0.045	0.050	0.050	0.050	0.115	0.090	0.000	0.050	0.055	0.055	0.055	0.120	0.125
61	0.000	0.150	0.075	0.075	0.075	0.170	0.150	0.000	0.075	0.080	0.080	0.080	0.120	0.160
62	0.000	0.150	0.100	0.100	0.100	0.170	0.200	0.000	0.100	0.120	0.120	0.120	0.225	0.200
63	0.000	0.150	0.100	0.100	0.100	0.170	0.175	0.000	0.175	0.120	0.120	0.120	0.225	0.175
64	0.000	0.150	0.135	0.135	0.135	0.170	0.175	0.000	0.175	0.150	0.150	0.150	0.225	0.175
65	0.000	0.250	0.250	0.250	0.250	0.250	0.250	0.000	0.275	0.275	0.275	0.275	0.275	0.300
66	0.000	0.275	0.250	0.250	0.250	0.250	0.250	0.000	0.300	0.300	0.300	0.300	0.300	0.300
67	0.000	0.275	0.220	0.220	0.220	0.220	0.220	0.000	0.300	0.250	0.250	0.250	0.250	0.250
68	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.250	0.250	0.250	0.250	0.250
69	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.270	0.270	0.270	0.270	0.270
70	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.270	0.270	0.270	0.270	0.270
71	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.250	0.250	0.250	0.250	0.250
72	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.250	0.250	0.250	0.250	0.250
73	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.250	0.250	0.250	0.250	0.250
74	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.250	0.250	0.250	0.250	0.250
75	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.250	0.250	0.250	0.250	0.250
76	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.250	0.250	0.250	0.250	0.250
77	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.250	0.250	0.250	0.250	0.250
78	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.250	0.250	0.250	0.250	0.250
79	0.000	0.200	0.220	0.220	0.220	0.220	0.220	0.000	0.250	0.250	0.250	0.250	0.250	0.250
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000



State Employees

Retirement Rates

Plan 2 and Hybrid Members – Male

Attained Age	State - Plan 2/Hybrid - Male																	
	Years of Service																	
	0-4	5	6-25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
60	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
61	0.000	0.080	0.075	0.075	0.075	0.080	0.080	0.080	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075
62	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
63	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
64	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
65	0.000	0.200	0.200	0.200	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
66	0.000	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
67	0.000	0.230	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
68	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
69	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
70	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
71	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
72	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
73	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
74	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
75	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
76	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
77	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
78	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
79	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000



State Employees

Retirement Rates

Plan 2 and Hybrid Members – Female

Attained Age	State - Plan 2/Hybrid - Female																	
	Years of Service																	
	0-4	5	6-25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
60	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
61	0.000	0.080	0.075	0.075	0.075	0.080	0.080	0.080	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075
62	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
63	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
64	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
65	0.000	0.200	0.200	0.200	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
66	0.000	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
67	0.000	0.230	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
68	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
69	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
70	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
71	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
72	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
73	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
74	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
75	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
76	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
77	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
78	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
79	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000



State Employees

Termination Rates

Male

Attained Age	State Termination Rates - Male										
	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.27455	0.24436	0.21876	0.19618	0.17376	0.15141	0.13019	0.11442	0.10694	0.11166	0.13006
25	0.23974	0.21579	0.19409	0.17424	0.15524	0.13693	0.11975	0.10595	0.09746	0.09732	0.10701
30	0.19848	0.17836	0.15985	0.14343	0.12952	0.11720	0.10578	0.09487	0.08505	0.07808	0.07539
35	0.17716	0.15218	0.13247	0.11805	0.10829	0.10087	0.09383	0.08541	0.07535	0.06447	0.05388
40	0.16592	0.13267	0.10974	0.09619	0.08963	0.08644	0.08292	0.07677	0.06737	0.05473	0.03929
45	0.15975	0.11918	0.09302	0.07949	0.07467	0.07461	0.07339	0.06905	0.06126	0.04945	0.03331
50	0.15528	0.11158	0.08401	0.07030	0.06578	0.06661	0.06592	0.06272	0.05733	0.04934	0.03819
55	0.15197	0.11087	0.08483	0.07159	0.06658	0.06381	0.06149	0.05872	0.05613	0.05509	0.05439
60	0.15091	0.11838	0.09735	0.08612	0.08094	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.15304	0.13450	0.12193	0.11472	0.11037	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.16014	0.16414	0.16565	0.16590	0.16406	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Female

Attained Age	State Termination Rates - Female										
	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.31051	0.30337	0.28078	0.24487	0.20381	0.16715	0.14191	0.11957	0.10836	0.11872	0.15981
25	0.27376	0.26249	0.24118	0.21199	0.18029	0.15160	0.13004	0.11112	0.09997	0.10375	0.12876
30	0.23050	0.21033	0.18887	0.16746	0.14755	0.12956	0.11392	0.10015	0.08933	0.08403	0.08671
35	0.20766	0.17777	0.15365	0.13514	0.12123	0.10996	0.09994	0.09070	0.08104	0.07066	0.05980
40	0.19406	0.15556	0.12786	0.10975	0.09881	0.09213	0.08715	0.08194	0.07420	0.06178	0.04364
45	0.18340	0.13974	0.10951	0.09110	0.08142	0.07776	0.07634	0.07404	0.06888	0.05803	0.04010
50	0.17198	0.12790	0.09781	0.08001	0.07116	0.06882	0.06860	0.06763	0.06550	0.06030	0.05125
55	0.16001	0.12044	0.09383	0.07856	0.07120	0.06731	0.06491	0.06383	0.06463	0.06942	0.07765
60	0.14937	0.11902	0.09937	0.08896	0.08486	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.14142	0.12453	0.11513	0.11187	0.11326	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.13651	0.14019	0.14662	0.15441	0.16495	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

State Employees

Disability Rates

Note that 25% of disability cases are assumed to be service related.

Attained Age	State	
	Male	Female
20	0.000390	0.000331
25	0.000717	0.001000
30	0.000906	0.002109
35	0.001288	0.002812
40	0.002120	0.003537
45	0.003428	0.004743
50	0.004967	0.006288
55	0.006286	0.007416
60	0.006899	0.007354
65	0.006574	0.006532
70	0.005723	0.008409

Salary Increase Rates

Note that the rates below include wage inflation of 3.5% per year.

Years of Service	State
0	5.35%
1	5.35%
2	5.35%
3	4.75%
4	4.45%
5	4.45%
6	4.45%
7	4.35%
8	4.25%
9	4.00%
10	4.00%
11-19	3.65%
20+	3.50%

Teachers

Retirement Rates

Plan 1 – Male & Female

Attained Age	Teachers - Plan 1													
	Male							Female						
	Years of Service							Years of Service						
	0-4	5	6-9	10	11-29	30	31+	0-4	5	6-9	10	11-29	30	31+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.025	0.025	0.150	0.150	0.000	0.000	0.000	0.030	0.030	0.150	0.150
51	0.000	0.000	0.000	0.070	0.035	0.150	0.100	0.000	0.000	0.000	0.045	0.030	0.150	0.100
52	0.000	0.000	0.000	0.070	0.035	0.150	0.100	0.000	0.000	0.000	0.045	0.040	0.150	0.100
53	0.000	0.000	0.000	0.040	0.035	0.150	0.100	0.000	0.000	0.000	0.045	0.040	0.150	0.100
54	0.000	0.000	0.000	0.040	0.040	0.150	0.100	0.000	0.000	0.000	0.045	0.045	0.150	0.120
55	0.000	0.070	0.070	0.070	0.050	0.225	0.150	0.000	0.045	0.045	0.045	0.050	0.225	0.160
56	0.000	0.070	0.050	0.050	0.050	0.225	0.150	0.000	0.060	0.055	0.055	0.055	0.225	0.160
57	0.000	0.070	0.050	0.050	0.050	0.225	0.150	0.000	0.060	0.055	0.055	0.055	0.225	0.160
58	0.000	0.070	0.050	0.050	0.050	0.225	0.150	0.000	0.070	0.055	0.055	0.055	0.225	0.160
59	0.000	0.100	0.070	0.070	0.070	0.225	0.150	0.000	0.080	0.070	0.070	0.070	0.225	0.170
60	0.000	0.100	0.075	0.075	0.075	0.225	0.170	0.000	0.090	0.085	0.085	0.085	0.300	0.200
61	0.000	0.110	0.120	0.120	0.120	0.350	0.230	0.000	0.250	0.110	0.110	0.110	0.300	0.250
62	0.000	0.170	0.150	0.150	0.150	0.350	0.300	0.000	0.250	0.150	0.150	0.150	0.350	0.300
63	0.000	0.140	0.150	0.150	0.150	0.350	0.250	0.000	0.250	0.150	0.150	0.150	0.350	0.280
64	0.000	0.180	0.150	0.150	0.150	0.350	0.250	0.000	0.250	0.200	0.200	0.200	0.350	0.280
65	0.000	0.300	0.300	0.300	0.300	0.300	0.340	0.000	0.350	0.350	0.350	0.350	0.350	0.400
66	0.000	0.275	0.340	0.340	0.340	0.340	0.340	0.000	0.300	0.400	0.400	0.400	0.400	0.400
67	0.000	0.300	0.340	0.340	0.340	0.340	0.340	0.000	0.300	0.320	0.320	0.320	0.320	0.320
68	0.000	0.300	0.300	0.300	0.300	0.300	0.300	0.000	0.300	0.320	0.320	0.320	0.320	0.320
69	0.000	0.300	0.300	0.300	0.300	0.300	0.300	0.000	0.300	0.320	0.320	0.320	0.320	0.320
70	0.000	0.300	0.300	0.300	0.300	0.300	0.300	0.000	0.300	0.320	0.320	0.320	0.320	0.320
71	0.000	0.300	0.300	0.300	0.300	0.300	0.300	0.000	0.300	0.275	0.275	0.275	0.275	0.275
72	0.000	0.300	0.250	0.250	0.250	0.250	0.250	0.000	0.300	0.275	0.275	0.275	0.275	0.275
73	0.000	0.300	0.250	0.250	0.250	0.250	0.250	0.000	0.300	0.275	0.275	0.275	0.275	0.275
74	0.000	0.300	0.250	0.250	0.250	0.250	0.250	0.000	0.300	0.275	0.275	0.275	0.275	0.275
75	0.000	0.300	0.250	0.250	0.250	0.250	0.250	0.000	0.300	0.275	0.275	0.275	0.275	0.275
76	0.000	0.300	0.250	0.250	0.250	0.250	0.250	0.000	0.300	0.275	0.275	0.275	0.275	0.275
77	0.000	0.300	0.250	0.250	0.250	0.250	0.250	0.000	0.300	0.275	0.275	0.275	0.275	0.275
78	0.000	0.300	0.250	0.250	0.250	0.250	0.250	0.000	0.300	0.275	0.275	0.275	0.275	0.275
79	0.000	0.300	0.250	0.250	0.250	0.250	0.250	0.000	0.300	0.275	0.275	0.275	0.275	0.275
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000



Teachers

Retirement Rates

Plan 2 and Hybrid Members – Male

Attained Age	Teachers - Plan 2/Hybrid - Male																		
	Years of Service																		
	0-4	5	6-24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
60	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
61	0.000	0.140	0.100	0.100	0.100	0.100	0.140	0.140	0.140	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
62	0.000	0.150	0.130	0.130	0.130	0.150	0.150	0.150	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130
63	0.000	0.150	0.130	0.130	0.150	0.150	0.150	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130
64	0.000	0.150	0.140	0.150	0.150	0.150	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140
65	0.000	0.300	0.300	0.300	0.300	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
66	0.000	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
67	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
68	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
69	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
70	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
71	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
72	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
73	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
74	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
75	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
76	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
77	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
78	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
79	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000



Teachers

Retirement Rates

Plan 2 and Hybrid Members – Female

Attained Age	Teachers - Plan 2/Hybrid - Female																		
	Years of Service																		
	0-4	5	6-24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
60	0.000	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
61	0.000	0.140	0.100	0.100	0.100	0.100	0.140	0.140	0.140	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
62	0.000	0.150	0.130	0.130	0.130	0.150	0.150	0.150	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130
63	0.000	0.150	0.130	0.130	0.150	0.150	0.150	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130
64	0.000	0.150	0.140	0.150	0.150	0.150	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140
65	0.000	0.300	0.300	0.300	0.300	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
66	0.000	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300	0.300
67	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
68	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
69	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
70	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
71	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
72	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
73	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
74	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
75	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
76	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
77	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
78	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
79	0.000	0.300	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000



Teachers

Termination Rates

Male

Attained Age	Teacher Termination Rates - Male										
	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.21024	0.18133	0.15388	0.13077	0.11441	0.10289	0.09263	0.08171	0.07520	0.08410	0.10256
25	0.19207	0.16728	0.14515	0.12651	0.11200	0.10027	0.08948	0.07865	0.07114	0.07386	0.08326
30	0.17373	0.15296	0.13619	0.12212	0.10955	0.09763	0.08634	0.07569	0.06663	0.06067	0.05704
35	0.16839	0.14734	0.13071	0.11712	0.10510	0.09374	0.08315	0.07322	0.06329	0.05217	0.04003
40	0.17192	0.14706	0.12722	0.11176	0.09935	0.08902	0.07978	0.07098	0.06080	0.04704	0.02932
45	0.18182	0.15046	0.12547	0.10682	0.09330	0.08397	0.07608	0.06863	0.05924	0.04581	0.02657
50	0.19523	0.15641	0.12587	0.10367	0.08850	0.07924	0.07216	0.06603	0.05883	0.04925	0.02260
55	0.21008	0.16464	0.12933	0.10382	0.08670	0.07536	0.06833	0.06318	0.05973	0.05790	0.02260
60	0.22536	0.17534	0.13667	0.10856	0.08958	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.24063	0.18847	0.14805	0.11831	0.09792	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.25778	0.20650	0.16623	0.13612	0.11494	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Female

Attained Age	Teacher Termination Rates - Female										
	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.18402	0.15181	0.13307	0.12138	0.10696	0.09610	0.08820	0.08060	0.06604	0.06553	0.08772
25	0.18376	0.15481	0.13758	0.12581	0.11260	0.10133	0.09186	0.08253	0.06911	0.06524	0.07704
30	0.18401	0.15920	0.14307	0.13106	0.11916	0.10734	0.09622	0.08548	0.07393	0.06510	0.06148
35	0.17757	0.15500	0.13863	0.12610	0.11452	0.10307	0.09292	0.08399	0.07473	0.06273	0.04807
40	0.16719	0.14495	0.12771	0.11411	0.10233	0.09214	0.08464	0.07905	0.07207	0.05823	0.03499
45	0.15616	0.13289	0.11458	0.10011	0.08846	0.07999	0.07497	0.07203	0.06668	0.05362	0.02476
50	0.14917	0.12446	0.10550	0.09113	0.08036	0.07318	0.06863	0.06593	0.06167	0.05381	0.02476
55	0.15060	0.12499	0.10614	0.09285	0.08348	0.07597	0.06925	0.06342	0.06066	0.06295	0.02476
60	0.16342	0.13817	0.12008	0.10819	0.10045	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.18831	0.16489	0.14798	0.13739	0.13130	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.23251	0.21308	0.19795	0.18856	0.18426	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000



Teachers

Disability Rates

Note that 5% of disability cases are assumed to be service related.

Attained Age	Teachers	
	Male	Female
20	0.000005	0.000003
25	0.000005	0.000023
30	0.000064	0.000081
35	0.000135	0.000196
40	0.000325	0.000481
45	0.000725	0.000792
50	0.001444	0.001609
55	0.002443	0.002521
60	0.003395	0.003321
65	0.003773	0.003509
70	0.003773	0.003509

Salary Increase Rates

Note that the rates below include wage inflation of 3.5% per year.

Years of Service	Teachers
0	5.95%
1	5.95%
2	5.85%
3	5.85%
4	5.45%
5	5.45%
6	5.45%
7	5.35%
8	5.35%
9	5.35%
10	4.85%
11	4.85%
12	4.85%
13	4.75%
14	4.75%
15	4.65%
16	4.65%
17	4.55%
18	4.45%
19	4.45%
20+	3.50%

State Police

Retirement Rates

Male & Female

Attained Age	SPORS			
	Years of Service			
	0-4	5-24	25	26+
<=49	0.000	0.000	0.000	0.000
50	0.000	0.100	0.100	0.100
51	0.000	0.030	0.100	0.100
52	0.000	0.030	0.100	0.100
53	0.000	0.030	0.100	0.100
54	0.000	0.030	0.100	0.100
55	0.000	0.060	0.100	0.200
56	0.000	0.060	0.100	0.130
57	0.000	0.060	0.100	0.130
58	0.000	0.100	0.100	0.130
59	0.000	0.100	0.100	0.130
60	0.000	0.100	0.100	0.130
61	0.000	0.100	0.100	0.130
62	0.000	0.200	0.200	0.200
63	0.000	0.200	0.200	0.300
64	0.000	0.200	0.200	0.300
65	0.000	0.200	0.200	0.500
66	0.000	0.200	0.200	0.500
67	0.000	0.200	0.200	0.500
68	0.000	0.200	0.200	0.500
69	0.000	0.200	0.200	0.500
70+	0.000	1.000	1.000	1.000

State Police

Termination Rates

Male & Female

SPORS	
Years of Service	Rate
0	0.08000
1	0.06000
2	0.06000
3	0.06000
4	0.06000
5	0.06000
6	0.06000
7	0.03000
8	0.03000
9	0.03000
10+	0.01750

Disability Rates

Note that 85% of disability cases are assumed to be service related.

Male & Female

Attained Age	SPORS
	Rate
20	0.001938
25	0.001938
30	0.001938
35	0.001938
40	0.001938
45	0.002331
50	0.004807
55	0.007697
60	0.008967
65	0.011075
70	0.013680

State Police

Salary Increase Rates

Note that the rates below include wage inflation of 3.5% per year.

Years of Service	SPORS
0	4.75%
1	4.75%
2	4.75%
3	4.75%
4	4.75%
5	4.65%
6	4.40%
7	4.40%
8	4.40%
9	4.40%
10	4.00%
11-19	4.00%
20+	3.50%

Virginia Law Officers

Retirement Rates

Male & Female

Attained Age	VaLORS									
	Male					Female				
	Years of Service					Years of Service				
	0-4	5	6-24	25	26+	0-4	5	6-24	25	26+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.150	0.150	0.450	0.450	0.000	0.150	0.150	0.375	0.375
51	0.000	0.100	0.080	0.300	0.300	0.000	0.100	0.100	0.250	0.200
52	0.000	0.100	0.080	0.300	0.300	0.000	0.100	0.090	0.250	0.200
53	0.000	0.100	0.080	0.300	0.250	0.000	0.100	0.090	0.250	0.225
54	0.000	0.100	0.080	0.240	0.250	0.000	0.100	0.090	0.250	0.300
55	0.000	0.100	0.080	0.180	0.250	0.000	0.100	0.090	0.250	0.300
56	0.000	0.100	0.090	0.180	0.250	0.000	0.100	0.100	0.250	0.300
57	0.000	0.100	0.100	0.180	0.200	0.000	0.100	0.130	0.250	0.180
58	0.000	0.100	0.100	0.180	0.200	0.000	0.100	0.130	0.400	0.180
59	0.000	0.100	0.120	0.180	0.200	0.000	0.100	0.130	0.300	0.200
60	0.000	0.180	0.180	0.180	0.300	0.000	0.200	0.200	0.200	0.200
61	0.000	0.180	0.200	0.200	0.200	0.000	0.200	0.200	0.200	0.200
62	0.000	0.180	0.300	0.300	0.300	0.000	0.200	0.350	0.350	0.350
63	0.000	0.400	0.250	0.250	0.250	0.000	0.200	0.250	0.250	0.250
64	0.000	0.150	0.250	0.250	0.250	0.000	0.200	0.250	0.250	0.250
65	0.000	0.150	0.300	0.300	0.300	0.000	0.200	0.500	0.500	0.500
66	0.000	0.150	0.300	0.300	0.300	0.000	0.200	0.300	0.300	0.300
67	0.000	0.150	0.300	0.300	0.300	0.000	0.200	0.300	0.300	0.300
68	0.000	0.150	0.300	0.300	0.300	0.000	0.200	0.300	0.300	0.300
69	0.000	0.150	0.300	0.300	0.300	0.000	0.200	0.300	0.300	0.300
70+	0.000	1.000	1.000	1.000	1.000	0.000	1.000	1.000	1.000	1.000



Virginia Law Officers

Termination Rates

Male

Attained Age	VaLORS Termination Rates - Male										
	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.39130	0.29901	0.23922	0.21072	0.20801	0.21063	0.20749	0.19800	0.19643	0.19065	0.21396
25	0.36285	0.28479	0.23294	0.20555	0.19714	0.19438	0.18892	0.17882	0.17232	0.16314	0.17288
30	0.32624	0.26656	0.22474	0.19872	0.18316	0.17349	0.16486	0.15375	0.14058	0.12618	0.11671
35	0.29590	0.24719	0.21139	0.18685	0.16890	0.15650	0.14654	0.13513	0.11884	0.10094	0.07962
40	0.26990	0.22715	0.19453	0.17109	0.15383	0.14157	0.13160	0.12059	0.10400	0.08381	0.05579
45	0.24947	0.20776	0.17527	0.15163	0.13800	0.12852	0.11960	0.10962	0.09617	0.07511	0.04653
50	0.23564	0.19022	0.15449	0.12845	0.12136	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
55	0.22917	0.17523	0.13271	0.10157	0.10390	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
60	0.23045	0.16307	0.11015	0.07107	0.08562	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.23923	0.15385	0.08724	0.03755	0.06679	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.25880	0.14725	0.06100	0.00455	0.04490	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Female

Attained Age	VaLORS Termination Rates - Female										
	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.47177	0.35733	0.28556	0.25386	0.26029	0.28130	0.30657	0.32166	0.31215	0.30524	0.22840
25	0.43786	0.33985	0.27627	0.24458	0.24051	0.24937	0.26238	0.26963	0.25996	0.24867	0.18991
30	0.39363	0.31781	0.26502	0.23302	0.21502	0.20767	0.20420	0.20042	0.18976	0.17234	0.13686
35	0.35591	0.29532	0.25008	0.21852	0.19421	0.17876	0.16674	0.15620	0.14391	0.12349	0.09981
40	0.32307	0.27240	0.23204	0.20097	0.17622	0.15870	0.14410	0.12972	0.11499	0.09385	0.07347
45	0.29713	0.25007	0.21104	0.17970	0.16112	0.14777	0.13695	0.12161	0.10324	0.08381	0.04500
50	0.27965	0.22915	0.18712	0.15384	0.14876	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
55	0.27168	0.21009	0.16023	0.12279	0.13911	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
60	0.27367	0.19304	0.13033	0.08631	0.13217	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.28529	0.17815	0.09796	0.04508	0.12790	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.31084	0.16417	0.05830	0.00350	0.12656	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000



Virginia Law Officers

Disability Rates

Note that 35% of disability cases are assumed to be service related.

Attained Age	VaLORS	
	Male	Female
20	0.001426	0.005426
25	0.003218	0.005814
30	0.005842	0.006594
35	0.007195	0.007691
40	0.007929	0.010013
45	0.009130	0.013814
50	0.011649	0.018214
55	0.015013	0.022774
60	0.017821	0.029010
65	0.019159	0.038645
70	0.019200	0.054994

Salary Increase Rates

Note that the rates below include wage inflation of 3.5% per year.

Years of Service	VaLORS
0	4.75%
1	4.75%
2	4.75%
3	4.75%
4	4.75%
5	4.65%
6	4.40%
7	4.40%
8	4.40%
9	4.40%
10	4.00%
11-19	4.00%
20+	3.50%

Judicial

Retirement Rates

Male & Female

Attained Age	JRS Rate
<=59	0.000
60	0.100
61	0.100
62	0.100
63	0.100
64	0.100
65	0.100
66	0.100
67	0.150
68	0.150
69	0.150
70	0.250
71	0.250
72	0.250
73+	1.000

Disability and Termination Rates

There are no assumed rates of disability nor of withdrawal prior to service retirement for causes other than death or retirement.

Salary Increase Rates

Salary increase rates are 4.0% per year.

Locals: Top 10, Non-Hazardous Duty

Retirement Rates

Plan 1 Male with 50/30 Eligibility

Attained Age	Top 10 Non-Hazardous Duty, Plan 1 Male with 50/30 Eligibility						
	Years of Service						
	0-4	5	6-9	10	11-29	30	31+
<=49	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0650	0.0650	0.1000	0.1000
51	0.0000	0.0000	0.0000	0.0650	0.0400	0.1000	0.0900
52	0.0000	0.0000	0.0000	0.0650	0.0500	0.1000	0.0900
53	0.0000	0.0000	0.0000	0.0650	0.0600	0.1000	0.0900
54	0.0000	0.0000	0.0000	0.0650	0.0350	0.1000	0.0900
55	0.0000	0.0650	0.0650	0.0650	0.0500	0.1000	0.0900
56	0.0000	0.0650	0.0500	0.0500	0.0500	0.1000	0.1000
57	0.0000	0.0650	0.0400	0.0400	0.0400	0.1000	0.1000
58	0.0000	0.0650	0.0400	0.0400	0.0400	0.1000	0.1000
59	0.0000	0.0650	0.0400	0.0400	0.0400	0.1000	0.1500
60	0.0000	0.0650	0.0600	0.0600	0.0600	0.1000	0.1500
61	0.0000	0.0650	0.0900	0.0900	0.0900	0.1000	0.1500
62	0.0000	0.0650	0.0900	0.0900	0.0900	0.2500	0.2250
63	0.0000	0.0650	0.0900	0.0900	0.0900	0.2500	0.2250
64	0.0000	0.0650	0.1500	0.1500	0.1500	0.2500	0.2250
65	0.0000	0.2500	0.2500	0.2500	0.2500	0.2500	0.2700
66	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
67	0.0000	0.1500	0.2500	0.2500	0.2500	0.2500	0.2500
68	0.0000	0.1500	0.2000	0.2000	0.2000	0.2000	0.2000
69	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
70	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
71	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
72	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
73	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
74	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
75	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
76	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
77	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
78	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
79	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
80+	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Locals: Top 10, Non-Hazardous Duty

Retirement Rates

Plan 1 Female with 50/30 Eligibility

Attained Age	Top 10 Non-Hazardous Duty, Plan 1 Female with 50/30 Eligibility						
	Years of Service						
	0-4	5	6-9	10	11-29	30	31+
<=49	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0500	0.0500	0.1600	0.1600
51	0.0000	0.0000	0.0000	0.0700	0.0400	0.1100	0.0850
52	0.0000	0.0000	0.0000	0.0700	0.0400	0.1200	0.0850
53	0.0000	0.0000	0.0000	0.0700	0.0500	0.1750	0.0850
54	0.0000	0.0000	0.0000	0.0700	0.0700	0.2200	0.0850
55	0.0000	0.0700	0.0700	0.0700	0.0550	0.2200	0.1500
56	0.0000	0.1050	0.0550	0.0550	0.0550	0.2200	0.1500
57	0.0000	0.1050	0.0500	0.0500	0.0500	0.2200	0.1500
58	0.0000	0.1050	0.0500	0.0500	0.0500	0.1650	0.1600
59	0.0000	0.1050	0.0650	0.0650	0.0650	0.2200	0.1600
60	0.0000	0.1050	0.0650	0.0650	0.0650	0.2200	0.1600
61	0.0000	0.1050	0.0650	0.0650	0.0650	0.2200	0.1600
62	0.0000	0.1050	0.1300	0.1300	0.1300	0.3450	0.2500
63	0.0000	0.1050	0.1200	0.1200	0.1200	0.2400	0.1800
64	0.0000	0.1050	0.1700	0.1700	0.1700	0.2400	0.2750
65	0.0000	0.2800	0.2800	0.2800	0.2800	0.2800	0.2750
66	0.0000	0.2000	0.3000	0.3000	0.3000	0.3000	0.3000
67	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
68	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
69	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
70	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
71	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
72	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
73	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
74	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
75	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
76	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
77	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
78	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
79	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
80+	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Locals: Top 10, Non-Hazardous Duty

Retirement Rates

Plan 1 Male with 55/30 Eligibility

Attained Age	Top 10 Non-Hazardous Duty, Plan 1 Male with 55/30 Eligibility						
	Years of Service						
	0-4	5	6-9	10	11-29	30	31+
<=49	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0650	0.0650	0.0650	0.0650
51	0.0000	0.0000	0.0000	0.0650	0.0400	0.0400	0.0400
52	0.0000	0.0000	0.0000	0.0650	0.0500	0.0500	0.0500
53	0.0000	0.0000	0.0000	0.0650	0.0600	0.0600	0.0600
54	0.0000	0.0000	0.0000	0.0650	0.0350	0.0350	0.0350
55	0.0000	0.0650	0.0650	0.0650	0.0500	0.1000	0.1000
56	0.0000	0.0650	0.0500	0.0500	0.0500	0.1000	0.1000
57	0.0000	0.0650	0.0400	0.0400	0.0400	0.1000	0.1000
58	0.0000	0.0650	0.0400	0.0400	0.0400	0.1000	0.1000
59	0.0000	0.0650	0.0400	0.0400	0.0400	0.1000	0.1500
60	0.0000	0.0650	0.0600	0.0600	0.0600	0.1000	0.1500
61	0.0000	0.0650	0.0900	0.0900	0.0900	0.1000	0.1500
62	0.0000	0.0650	0.0900	0.0900	0.0900	0.2500	0.2250
63	0.0000	0.0650	0.0900	0.0900	0.0900	0.2500	0.2250
64	0.0000	0.0650	0.1500	0.1500	0.1500	0.2500	0.2250
65	0.0000	0.2500	0.2500	0.2500	0.2500	0.2500	0.2700
66	0.0000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
67	0.0000	0.1500	0.2500	0.2500	0.2500	0.2500	0.2500
68	0.0000	0.1500	0.2000	0.2000	0.2000	0.2000	0.2000
69	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
70	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
71	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
72	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
73	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
74	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
75	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
76	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
77	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
78	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
79	0.0000	0.2750	0.2000	0.2000	0.2000	0.2000	0.2000
80+	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Locals: Top 10, Non-Hazardous Duty

Retirement Rates

Plan 1 Female with 55/30 Eligibility

Attained Age	Top 10 Non-Hazardous Duty, Plan 1 Female with 55/30 Eligibility						
	Years of Service						
	0-4	5	6-9	10	11-29	30	31+
<=49	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0000	0.0000	0.0500	0.0500	0.0500	0.0500
51	0.0000	0.0000	0.0000	0.0700	0.0400	0.0400	0.0400
52	0.0000	0.0000	0.0000	0.0700	0.0400	0.0400	0.0400
53	0.0000	0.0000	0.0000	0.0700	0.0500	0.0500	0.0500
54	0.0000	0.0000	0.0000	0.0700	0.0700	0.0700	0.0700
55	0.0000	0.0700	0.0700	0.0700	0.0550	0.2200	0.2200
56	0.0000	0.1050	0.0550	0.0550	0.0550	0.2200	0.1500
57	0.0000	0.1050	0.0500	0.0500	0.0500	0.2200	0.1500
58	0.0000	0.1050	0.0500	0.0500	0.0500	0.1650	0.1600
59	0.0000	0.1050	0.0650	0.0650	0.0650	0.2200	0.1600
60	0.0000	0.1050	0.0650	0.0650	0.0650	0.2200	0.1600
61	0.0000	0.1050	0.0650	0.0650	0.0650	0.2200	0.1600
62	0.0000	0.1050	0.1300	0.1300	0.1300	0.3450	0.2500
63	0.0000	0.1050	0.1200	0.1200	0.1200	0.2400	0.1800
64	0.0000	0.1050	0.1700	0.1700	0.1700	0.2400	0.2750
65	0.0000	0.2800	0.2800	0.2800	0.2800	0.2800	0.2750
66	0.0000	0.2000	0.3000	0.3000	0.3000	0.3000	0.3000
67	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
68	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
69	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
70	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
71	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
72	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
73	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
74	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
75	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
76	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
77	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
78	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
79	0.0000	0.1500	0.2750	0.2750	0.2750	0.2750	0.2750
80+	0.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000



Locals: Top 10, Non-Hazardous Duty

Retirement Rates

Plan 2 and Hybrid Male

Attained Age	Political Subdivisions - Top 10 - Non-Hazardous Duty - Plan 2/Hybrid - Male																		
	Years of Service																		
	0-4	5	6-24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
60	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
61	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
62	0.000	0.200	0.150	0.150	0.150	0.200	0.200	0.200	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150
63	0.000	0.100	0.150	0.150	0.100	0.100	0.100	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150
64	0.000	0.100	0.130	0.100	0.100	0.100	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130
65	0.000	0.250	0.250	0.250	0.250	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210
66	0.000	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
67	0.000	0.150	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
68	0.000	0.150	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
69	0.000	0.150	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
70	0.000	0.150	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
71	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
72	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
73	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
74	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
75	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
76	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
77	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
78	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
79	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000



Locals: Top 10, Non-Hazardous Duty

Retirement Rates

Plan 2 and Hybrid Female

Attained Age	Political Subdivisions - Top 10 - Non-Hazardous Duty - Plan 2/Hybrid - Female																		
	Years of Service																		
	0-4	5	6-24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
60	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
61	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
62	0.000	0.200	0.150	0.150	0.150	0.200	0.200	0.200	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150
63	0.000	0.100	0.150	0.150	0.100	0.100	0.100	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150
64	0.000	0.100	0.130	0.100	0.100	0.100	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130	0.130
65	0.000	0.250	0.250	0.250	0.250	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210
66	0.000	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
67	0.000	0.150	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
68	0.000	0.150	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
69	0.000	0.150	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
70	0.000	0.150	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
71	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
72	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
73	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
74	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
75	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
76	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
77	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
78	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
79	0.000	0.300	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000



Locals: Top 10, Non-Hazardous Duty

Termination Rates

Male

Attained Age	Top 10 Non-Hazardous Duty, Male										
	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.325428	0.310420	0.302078	0.300720	0.304270	0.308268	0.306431	0.298134	0.279323	0.244441	0.186515
25	0.289893	0.274323	0.265262	0.262424	0.263750	0.265584	0.262974	0.254579	0.237341	0.207005	0.158660
30	0.244543	0.226941	0.215722	0.209973	0.207702	0.206195	0.202248	0.193762	0.178911	0.155293	0.120670
35	0.214150	0.193778	0.179629	0.170758	0.165381	0.161211	0.156151	0.148081	0.135727	0.118005	0.093967
40	0.192939	0.169445	0.152019	0.139925	0.131674	0.125217	0.119291	0.112042	0.102363	0.090145	0.057808
45	0.178942	0.152674	0.132301	0.117373	0.106752	0.098647	0.092322	0.086265	0.079326	0.071920	0.052961
50	0.169342	0.141413	0.119100	0.102227	0.090038	0.081329	0.075248	0.070684	0.066523	0.062899	0.046053
55	0.161670	0.133844	0.111151	0.093629	0.080922	0.073114	0.068004	0.065122	0.063871	0.062636	0.046053
60	0.154282	0.128738	0.107577	0.090967	0.078950	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.146536	0.125456	0.107786	0.093719	0.083667	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.137048	0.123837	0.112685	0.103671	0.097579	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Female

Attained Age	Top 10 Non-Hazardous Duty, Female										
	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.296056	0.276003	0.268717	0.268279	0.267942	0.260678	0.251844	0.240031	0.226384	0.211272	0.196134
25	0.269481	0.248638	0.238695	0.235844	0.235000	0.230434	0.223829	0.213506	0.199682	0.182300	0.162409
30	0.237473	0.212812	0.198014	0.191502	0.189895	0.188759	0.185245	0.177015	0.162970	0.142479	0.116001
35	0.216974	0.186436	0.167122	0.157895	0.155648	0.156092	0.154579	0.148021	0.134512	0.113143	0.083919
40	0.203025	0.166314	0.142811	0.131192	0.128100	0.128961	0.128669	0.123517	0.111162	0.090637	0.061528
45	0.193149	0.151963	0.125341	0.111695	0.107424	0.107764	0.107853	0.103808	0.093249	0.075353	0.049357
50	0.184592	0.142120	0.114135	0.099016	0.093291	0.092470	0.092129	0.088910	0.080861	0.067349	0.047685
55	0.175441	0.135522	0.108355	0.092577	0.085361	0.083027	0.081487	0.078850	0.074143	0.066677	0.056734
60	0.164770	0.131247	0.107232	0.091871	0.083435	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.152522	0.128797	0.110155	0.096447	0.087278	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.136634	0.128210	0.118494	0.108375	0.099104	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000



Locals: Top 10, Non-Hazardous Duty

Disability Rates

Note that 20% of disability cases are assumed to be service related.

Attained Age	Political Subdivisions	
	Top 10 Non-Hazardous Duty	
	Male	Female
20	0.000048	0.000011
25	0.000048	0.000049
30	0.000071	0.000230
35	0.000497	0.000619
40	0.001392	0.001338
45	0.002516	0.002286
50	0.003835	0.003298
55	0.005905	0.004423
60	0.008081	0.005296
65	0.009424	0.005459
70	0.010219	0.005459

Salary Increase Rates

Note that the rates below include wage inflation of 3.5% per year.

Years of Service	Political Subdivisions
	Non-Hazardous Duty
0	5.35%
1	5.35%
2	5.35%
3	4.75%
4	4.45%
5	4.45%
6	4.45%
7	4.35%
8	4.25%
9	4.00%
10	4.00%
11-19	3.65%
20+	3.50%

Locals: Non-Top 10, Non-Hazardous Duty

Retirement Rates

Plan 1 Male with 50/30 Eligibility

Attained Age	Non-Top 10 Non-Hazardous Duty - Plan 1 Male with 50/30 Eligibility						
	Years of Service						
	0-4	5	6-9	10	11-29	30	31+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.060	0.060	0.150	0.150
51	0.000	0.000	0.000	0.125	0.050	0.100	0.080
52	0.000	0.000	0.000	0.125	0.050	0.150	0.100
53	0.000	0.000	0.000	0.100	0.050	0.150	0.100
54	0.000	0.000	0.000	0.100	0.050	0.150	0.110
55	0.000	0.100	0.100	0.100	0.060	0.150	0.110
56	0.000	0.100	0.060	0.060	0.060	0.150	0.100
57	0.000	0.100	0.055	0.055	0.055	0.110	0.100
58	0.000	0.100	0.060	0.060	0.060	0.110	0.100
59	0.000	0.100	0.055	0.055	0.055	0.160	0.100
60	0.000	0.100	0.050	0.050	0.050	0.160	0.120
61	0.000	0.100	0.085	0.085	0.085	0.160	0.160
62	0.000	0.100	0.150	0.150	0.150	0.270	0.220
63	0.000	0.100	0.150	0.150	0.150	0.270	0.180
64	0.000	0.100	0.150	0.150	0.150	0.270	0.180
65	0.000	0.300	0.300	0.300	0.300	0.300	0.300
66	0.000	0.300	0.320	0.320	0.320	0.320	0.320
67	0.000	0.300	0.220	0.220	0.220	0.220	0.220
68	0.000	0.300	0.220	0.220	0.220	0.220	0.220
69	0.000	0.300	0.220	0.220	0.220	0.220	0.220
70	0.000	0.300	0.220	0.220	0.220	0.220	0.220
71	0.000	0.300	0.220	0.220	0.220	0.220	0.220
72	0.000	0.300	0.220	0.220	0.220	0.220	0.220
73	0.000	0.300	0.220	0.220	0.220	0.220	0.220
74	0.000	0.300	0.220	0.220	0.220	0.220	0.220
75	0.000	0.300	0.220	0.220	0.220	0.220	0.220
76	0.000	0.300	0.220	0.220	0.220	0.220	0.220
77	0.000	0.300	0.220	0.220	0.220	0.220	0.220
78	0.000	0.300	0.220	0.220	0.220	0.220	0.220
79	0.000	0.300	0.220	0.220	0.220	0.220	0.220
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000

Locals: Non-Top 10, Non-Hazardous Duty

Retirement Rates

Plan 1 Female with 50/30 Eligibility

Attained Age	Non-Top 10 Non-Hazardous Duty - Plan 1 Female with 50/30 Eligibility						
	Years of Service						
	0-4	5	6-9	10	11-29	30	31+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.050	0.050	0.100	0.100
51	0.000	0.000	0.000	0.055	0.050	0.100	0.075
52	0.000	0.000	0.000	0.060	0.050	0.100	0.075
53	0.000	0.000	0.000	0.070	0.060	0.120	0.100
54	0.000	0.000	0.000	0.070	0.060	0.120	0.100
55	0.000	0.070	0.070	0.070	0.060	0.120	0.100
56	0.000	0.060	0.055	0.055	0.055	0.100	0.100
57	0.000	0.060	0.055	0.055	0.055	0.100	0.100
58	0.000	0.060	0.055	0.055	0.055	0.100	0.100
59	0.000	0.060	0.055	0.055	0.055	0.100	0.100
60	0.000	0.060	0.065	0.065	0.065	0.150	0.100
61	0.000	0.060	0.095	0.095	0.095	0.200	0.165
62	0.000	0.060	0.145	0.145	0.145	0.200	0.200
63	0.000	0.060	0.145	0.145	0.145	0.200	0.200
64	0.000	0.060	0.145	0.145	0.145	0.350	0.200
65	0.000	0.280	0.280	0.280	0.280	0.280	0.350
66	0.000	0.280	0.280	0.280	0.280	0.280	0.280
67	0.000	0.280	0.220	0.220	0.220	0.220	0.220
68	0.000	0.280	0.220	0.220	0.220	0.220	0.220
69	0.000	0.280	0.220	0.220	0.220	0.220	0.220
70	0.000	0.280	0.220	0.220	0.220	0.220	0.220
71	0.000	0.280	0.170	0.170	0.170	0.170	0.170
72	0.000	0.280	0.170	0.170	0.170	0.170	0.170
73	0.000	0.280	0.200	0.200	0.200	0.200	0.200
74	0.000	0.280	0.200	0.200	0.200	0.200	0.200
75	0.000	0.280	0.200	0.200	0.200	0.200	0.200
76	0.000	0.280	0.200	0.200	0.200	0.200	0.200
77	0.000	0.280	0.200	0.200	0.200	0.200	0.200
78	0.000	0.280	0.200	0.200	0.200	0.200	0.200
79	0.000	0.280	0.200	0.200	0.200	0.200	0.200
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000

Locals: Non-Top 10, Non-Hazardous Duty

Retirement Rates

Plan 1 Male with 55/30 Eligibility

Attained Age	Non-Top 10 Non-Hazardous Duty - Plan 1 Male with 55/30 Eligibility						
	Years of Service						
	0-4	5	6-9	10	11-29	30	31+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.060	0.060	0.060	0.060
51	0.000	0.000	0.000	0.125	0.050	0.050	0.050
52	0.000	0.000	0.000	0.125	0.050	0.050	0.050
53	0.000	0.000	0.000	0.100	0.050	0.050	0.050
54	0.000	0.000	0.000	0.100	0.050	0.050	0.050
55	0.000	0.100	0.100	0.100	0.060	0.150	0.150
56	0.000	0.100	0.060	0.060	0.060	0.150	0.100
57	0.000	0.100	0.055	0.055	0.055	0.110	0.100
58	0.000	0.100	0.060	0.060	0.060	0.110	0.100
59	0.000	0.100	0.055	0.055	0.055	0.160	0.100
60	0.000	0.100	0.050	0.050	0.050	0.160	0.120
61	0.000	0.100	0.085	0.085	0.085	0.160	0.160
62	0.000	0.100	0.150	0.150	0.150	0.270	0.220
63	0.000	0.100	0.150	0.150	0.150	0.270	0.180
64	0.000	0.100	0.150	0.150	0.150	0.270	0.180
65	0.000	0.300	0.300	0.300	0.300	0.300	0.300
66	0.000	0.300	0.320	0.320	0.320	0.320	0.320
67	0.000	0.300	0.220	0.220	0.220	0.220	0.220
68	0.000	0.300	0.220	0.220	0.220	0.220	0.220
69	0.000	0.300	0.220	0.220	0.220	0.220	0.220
70	0.000	0.300	0.220	0.220	0.220	0.220	0.220
71	0.000	0.300	0.220	0.220	0.220	0.220	0.220
72	0.000	0.300	0.220	0.220	0.220	0.220	0.220
73	0.000	0.300	0.220	0.220	0.220	0.220	0.220
74	0.000	0.300	0.220	0.220	0.220	0.220	0.220
75	0.000	0.300	0.220	0.220	0.220	0.220	0.220
76	0.000	0.300	0.220	0.220	0.220	0.220	0.220
77	0.000	0.300	0.220	0.220	0.220	0.220	0.220
78	0.000	0.300	0.220	0.220	0.220	0.220	0.220
79	0.000	0.300	0.220	0.220	0.220	0.220	0.220
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000

Locals: Non-Top 10, Non-Hazardous Duty

Retirement Rates

Plan 1 Female with 55/30 Eligibility

Attained Age	Non-Top 10 Non-Hazardous Duty - Plan 1 Female with 55/30 Eligibility						
	Years of Service						
	0-4	5	6-9	10	11-29	30	31+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.050	0.050	0.050	0.050
51	0.000	0.000	0.000	0.055	0.050	0.050	0.050
52	0.000	0.000	0.000	0.060	0.050	0.050	0.050
53	0.000	0.000	0.000	0.070	0.060	0.060	0.060
54	0.000	0.000	0.000	0.070	0.060	0.060	0.060
55	0.000	0.070	0.070	0.070	0.060	0.120	0.120
56	0.000	0.060	0.055	0.055	0.055	0.100	0.100
57	0.000	0.060	0.055	0.055	0.055	0.100	0.100
58	0.000	0.060	0.055	0.055	0.055	0.100	0.100
59	0.000	0.060	0.055	0.055	0.055	0.100	0.100
60	0.000	0.060	0.065	0.065	0.065	0.150	0.100
61	0.000	0.060	0.095	0.095	0.095	0.200	0.165
62	0.000	0.060	0.145	0.145	0.145	0.200	0.200
63	0.000	0.060	0.145	0.145	0.145	0.200	0.200
64	0.000	0.060	0.145	0.145	0.145	0.350	0.200
65	0.000	0.280	0.280	0.280	0.280	0.280	0.350
66	0.000	0.280	0.280	0.280	0.280	0.280	0.280
67	0.000	0.280	0.220	0.220	0.220	0.220	0.220
68	0.000	0.280	0.220	0.220	0.220	0.220	0.220
69	0.000	0.280	0.220	0.220	0.220	0.220	0.220
70	0.000	0.280	0.220	0.220	0.220	0.220	0.220
71	0.000	0.280	0.170	0.170	0.170	0.170	0.170
72	0.000	0.280	0.170	0.170	0.170	0.170	0.170
73	0.000	0.280	0.200	0.200	0.200	0.200	0.200
74	0.000	0.280	0.200	0.200	0.200	0.200	0.200
75	0.000	0.280	0.200	0.200	0.200	0.200	0.200
76	0.000	0.280	0.200	0.200	0.200	0.200	0.200
77	0.000	0.280	0.200	0.200	0.200	0.200	0.200
78	0.000	0.280	0.200	0.200	0.200	0.200	0.200
79	0.000	0.280	0.200	0.200	0.200	0.200	0.200
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000

Locals: Non-Top 10, Non-Hazardous Duty

Retirement Rates

Plan 2 and Hybrid Male

Attained Age	Political Subdivisions - Non-Top 10 - Non-Hazardous Duty - Plan 2/Hybrid - Male																		
	Years of Service																		
	0-4	5	6-24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
60	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
61	0.000	0.110	0.090	0.090	0.090	0.090	0.110	0.110	0.110	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
62	0.000	0.150	0.110	0.110	0.110	0.150	0.150	0.150	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110
63	0.000	0.150	0.110	0.110	0.150	0.150	0.150	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110
64	0.000	0.130	0.140	0.130	0.130	0.130	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140
65	0.000	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
66	0.000	0.220	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
67	0.000	0.220	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150
68	0.000	0.100	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
69	0.000	0.160	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
70	0.000	0.160	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
71	0.000	0.160	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
72	0.000	0.160	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
73	0.000	0.160	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
74	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
75	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
76	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
77	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
78	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
79	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000



Locals: Non-Top 10, Non-Hazardous Duty

Retirement Rates

Plan 2 and Hybrid Female

Attained Age	Political Subdivisions - Non-Top 10 - Non-Hazardous Duty - Plan 2/Hybrid - Female																		
	Years of Service																		
	0-4	5	6-24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
60	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
61	0.000	0.110	0.090	0.090	0.090	0.090	0.110	0.110	0.110	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090	0.090
62	0.000	0.150	0.110	0.110	0.110	0.150	0.150	0.150	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110
63	0.000	0.150	0.110	0.110	0.150	0.150	0.150	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110	0.110
64	0.000	0.130	0.140	0.130	0.130	0.130	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140
65	0.000	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
66	0.000	0.220	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
67	0.000	0.220	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150	0.150
68	0.000	0.100	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
69	0.000	0.160	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
70	0.000	0.160	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
71	0.000	0.160	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
72	0.000	0.160	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
73	0.000	0.160	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135	0.135
74	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
75	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
76	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
77	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
78	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
79	0.000	0.160	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180	0.180
80+	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000



Locals: Non-Top 10, Non-Hazardous Duty

Termination Rates

Male

Attained Age	Non-Top 10 - Non-Hazardous Duty, Male										
	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.386263	0.340202	0.304463	0.279762	0.265527	0.259447	0.253188	0.242561	0.229420	0.215420	0.198291
25	0.345824	0.308787	0.279709	0.258718	0.245009	0.236675	0.228560	0.217581	0.204233	0.189227	0.171599
30	0.294987	0.266796	0.244583	0.227689	0.214775	0.204182	0.194209	0.183113	0.169795	0.153695	0.135328
35	0.261033	0.232996	0.211686	0.196036	0.184133	0.174012	0.164670	0.154784	0.142719	0.127273	0.109208
40	0.236077	0.203947	0.180478	0.164436	0.153463	0.145099	0.137813	0.130102	0.120266	0.106938	0.089843
45	0.216908	0.180016	0.153638	0.136559	0.126264	0.119972	0.115213	0.110130	0.103322	0.093732	0.079328
50	0.200770	0.161594	0.133682	0.115972	0.106142	0.101461	0.098802	0.096273	0.093102	0.088845	0.080862
55	0.186779	0.149340	0.122426	0.105203	0.095863	0.091848	0.090421	0.090220	0.091228	0.093364	0.095550
60	0.175549	0.143903	0.120728	0.105475	0.097020	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.168009	0.145400	0.128359	0.116670	0.109848	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.164945	0.156202	0.148949	0.143451	0.139730	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Female

Attained Age	Non-Top 10 - Non-Hazardous Duty, Female										
	Years of Service										
	0	1	2	3	4	5	6	7	8	9	10+
20	0.357674	0.336687	0.308461	0.275269	0.245259	0.227038	0.224223	0.221757	0.218162	0.215676	0.212934
25	0.325076	0.301309	0.275093	0.248357	0.225909	0.211988	0.207677	0.203258	0.196261	0.187405	0.175818
30	0.285067	0.256054	0.231672	0.212638	0.199278	0.190553	0.184585	0.177647	0.166370	0.149397	0.126290
35	0.257924	0.224744	0.200624	0.184787	0.175088	0.168476	0.162275	0.154564	0.142150	0.122540	0.095097
40	0.236809	0.201004	0.176358	0.161233	0.152297	0.146053	0.140023	0.132633	0.121316	0.103198	0.076747
45	0.218508	0.182367	0.157461	0.142012	0.132482	0.125729	0.119693	0.113099	0.104590	0.091939	0.072825
50	0.201475	0.167146	0.143021	0.127501	0.117416	0.110050	0.103556	0.097702	0.093087	0.089374	0.084929
55	0.187088	0.155901	0.133513	0.118574	0.108618	0.100681	0.093325	0.088245	0.088245	0.088245	0.088245
60	0.178154	0.150523	0.130208	0.116263	0.107119	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
65	0.176555	0.152228	0.133871	0.121214	0.113337	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
70	0.185303	0.163976	0.147531	0.136876	0.130896	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000



Locals: Non-Top 10, Non-Hazardous Duty

Disability Rates

Note that 15% of disability cases are assumed to be service related.

Attained Age	Political Subdivisions	
	Non-Top 10 Non-Hazardous Duty	
	Male	Female
20	0.000048	0.000009
25	0.000086	0.000009
30	0.000215	0.000009
35	0.000524	0.000240
40	0.001297	0.000579
45	0.002713	0.001270
50	0.004292	0.002739
55	0.005846	0.004830
60	0.006564	0.006403
65	0.006564	0.006558
70	0.006564	0.006558

Salary Increase Rates

Note that the rates below include wage inflation of 3.5% per year.

Years of Service	Political Subdivisions
	Non-Hazardous Duty
0	5.35%
1	5.35%
2	5.35%
3	4.75%
4	4.45%
5	4.45%
6	4.45%
7	4.35%
8	4.25%
9	4.00%
10	4.00%
11-19	3.65%
20+	3.50%

Locals: Top 10, Hazardous Duty

Retirement Rates

Attained Age	Political Subdivisions - Top 10 - Hazardous Duty									
	Male					Female				
	Years of Service					Years of Service				
	0-4	5	6-24	25	26+	0-4	5	6-24	25	26+
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.065	0.065	0.200	0.200	0.000	0.060	0.060	0.250	0.250
51	0.000	0.065	0.060	0.250	0.200	0.000	0.060	0.0875	0.250	0.300
52	0.000	0.065	0.060	0.250	0.200	0.000	0.060	0.075	0.250	0.300
53	0.000	0.065	0.060	0.250	0.240	0.000	0.060	0.075	0.250	0.300
54	0.000	0.065	0.060	0.250	0.240	0.000	0.060	0.075	0.250	0.300
55	0.000	0.065	0.060	0.250	0.240	0.000	0.060	0.075	0.250	0.400
56	0.000	0.065	0.060	0.210	0.200	0.000	0.060	0.140	0.250	0.400
57	0.000	0.065	0.060	0.210	0.200	0.000	0.060	0.140	0.250	0.250
58	0.000	0.065	0.060	0.210	0.200	0.000	0.060	0.140	0.250	0.250
59	0.000	0.065	0.100	0.210	0.200	0.000	0.060	0.140	0.250	0.250
60	0.000	0.210	0.210	0.210	0.230	0.000	0.150	0.150	0.150	0.250
61	0.000	0.375	0.230	0.230	0.230	0.000	0.150	0.150	0.150	0.150
62	0.000	0.375	0.270	0.270	0.270	0.000	0.150	0.150	0.150	0.150
63	0.000	0.375	0.270	0.270	0.270	0.000	0.150	0.150	0.150	0.150
64	0.000	0.375	0.270	0.270	0.270	0.000	0.150	0.300	0.300	0.300
65	0.000	0.375	0.350	0.350	0.350	0.000	0.150	0.300	0.300	0.300
66	0.000	0.375	0.350	0.350	0.350	0.000	0.150	0.300	0.300	0.300
67	0.000	0.375	0.350	0.350	0.350	0.000	0.150	0.300	0.300	0.300
68	0.000	0.375	0.350	0.350	0.350	0.000	0.150	0.300	0.300	0.300
69	0.000	0.375	0.350	0.350	0.350	0.000	0.150	0.300	0.300	0.300
70+	0.000	1.000	1.000	1.000	1.000	0.000	1.000	1.000	1.000	1.000



Locals: Top 10, Hazardous Duty

Termination Rates

Political Subdivisions		
Top 10 - Hazardous Duty		
Years of Service	Male	Female
0	0.05500	0.07000
1	0.04000	0.07000
2	0.04000	0.07000
3	0.04000	0.05000
4	0.04000	0.05000
5	0.03000	0.05000
6	0.02500	0.03000
7	0.02500	0.03000
8	0.02500	0.03500
9	0.01500	0.01500
10	0.01000	0.01500
11	0.01000	0.01500
12	0.01000	0.01500
13	0.01000	0.01500
14+	0.00800	0.01500

Disability Rates

Note that 70% of disability cases are assumed to be service related.

Attained Age	Political Subdivisions	
	Top 10 Hazardous Duty	
	Male	Female
20	0.000187	0.000121
25	0.000220	0.002475
30	0.000523	0.005583
35	0.001327	0.007045
40	0.002668	0.007943
45	0.004050	0.009058
50	0.004997	0.010903
55	0.006568	0.013763
60	0.010554	0.017878
65	0.017864	0.023272
70	0.030846	0.031046

Locals: Top 10, Hazardous Duty

Salary Increase Rates

Note that the rates below include wage inflation of 3.5% per year.

Years of Service	Political Subdivisions
	Hazardous Duty
0	4.75%
1	4.75%
2	4.75%
3	4.75%
4	4.75%
5	4.65%
6	4.40%
7	4.40%
8	4.40%
9	4.40%
10	4.00%
11-19	4.00%
20+	3.50%

Locals: Non-Top 10, Hazardous Duty

Retirement Rates

Attained Age	Political Subdivisions - Non-Top 10 - Hazardous Duty									
	Male					Female				
	Years of Service					Years of Service				
	0-4	5	6-24	25	26+	0-4	5	6-24	25	26+
<=49	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0900	0.0900	0.2750	0.2750	0.0000	0.0600	0.0600	0.3000	0.3000
51	0.0000	0.0700	0.0750	0.2000	0.2000	0.0000	0.1000	0.0900	0.2000	0.2000
52	0.0000	0.0700	0.0750	0.2000	0.2000	0.0000	0.1000	0.0900	0.2000	0.2000
53	0.0000	0.0700	0.0750	0.2000	0.2000	0.0000	0.1000	0.0900	0.2000	0.2000
54	0.0000	0.0700	0.0750	0.2000	0.2000	0.0000	0.1000	0.0900	0.2000	0.3000
55	0.0000	0.0700	0.0750	0.2000	0.2000	0.0000	0.1000	0.0900	0.2000	0.3000
56	0.0000	0.0700	0.0750	0.2000	0.2000	0.0000	0.1000	0.1200	0.2000	0.3000
57	0.0000	0.0700	0.0750	0.2000	0.2000	0.0000	0.1000	0.1200	0.2000	0.2500
58	0.0000	0.0700	0.0800	0.2000	0.1650	0.0000	0.1000	0.1200	0.2000	0.2500
59	0.0000	0.0700	0.1200	0.2000	0.2400	0.0000	0.1000	0.1200	0.2000	0.2500
60	0.0000	0.1500	0.1500	0.1500	0.2400	0.0000	0.1500	0.1500	0.1500	0.2500
61	0.0000	0.2000	0.2400	0.2400	0.2400	0.0000	0.1500	0.2500	0.2500	0.2500
62	0.0000	0.2000	0.2750	0.2750	0.2750	0.0000	0.1500	0.2500	0.2500	0.2500
63	0.0000	0.2000	0.2750	0.2750	0.2750	0.0000	0.1500	0.2500	0.2500	0.2500
64	0.0000	0.2000	0.2750	0.2750	0.2750	0.0000	0.1500	0.2500	0.2500	0.2500
65	0.0000	0.5000	0.2750	0.2750	0.2750	0.0000	0.1500	0.4000	0.4000	0.4000
66	0.0000	0.5000	0.5000	0.5000	0.5000	0.0000	0.1500	0.4000	0.4000	0.4000
67	0.0000	0.5000	0.5000	0.5000	0.5000	0.0000	0.1500	0.4000	0.4000	0.4000
68	0.0000	0.5000	0.5000	0.5000	0.5000	0.0000	0.1500	0.4000	0.4000	0.4000
69	0.0000	0.5000	0.5000	0.5000	0.5000	0.0000	0.1500	0.4000	0.4000	0.4000
70+	0.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	1.0000



Locals: Non-Top 10, Hazardous Duty

Termination Rates

Political Subdivisions		
Non-Top 10 - Hazardous Duty		
Years of Service	Male	Female
0	0.11000	0.20000
1	0.11000	0.15000
2	0.09500	0.10000
3	0.08500	0.08500
4	0.07500	0.07000
5	0.06500	0.07000
6	0.06500	0.07000
7	0.04000	0.07000
8	0.04000	0.07000
9	0.04000	0.06000
10	0.02500	0.03500
11	0.02500	0.03500
12	0.02500	0.03500
13	0.02500	0.03500
14	0.02500	0.03500
15+	0.02000	0.03500

Disability Rates

Note that 45% of disability cases are assumed to be service related.

Attained Age	Political Subdivisions	
	Non-Top 10 Hazardous Duty	
	Male	Female
20	0.000014	0.000050
25	0.000161	0.000670
30	0.000575	0.001568
35	0.001208	0.001891
40	0.002182	0.002007
45	0.003304	0.002443
50	0.004161	0.004127
55	0.004958	0.008312
60	0.005745	0.016052
65	0.006296	0.027465
70	0.006593	0.045086

Locals: Non-Top 10, Hazardous Duty

Salary Increase Rates

Note that the rates below include wage inflation of 3.5% per year.

Years of Service	Political Subdivisions
	Hazardous Duty
0	4.75%
1	4.75%
2	4.75%
3	4.75%
4	4.75%
5	4.65%
6	4.40%
7	4.40%
8	4.40%
9	4.40%
10	4.00%
11-19	4.00%
20+	3.50%

Assumptions by Plan

Pension

Interest on Member Contributions: 4% per annum.

Cost-of-Living Increases: 2.50% per year compounded annually for Plan 1 members receiving benefits or vested as of January 1, 2013 and 2.25% compounded annually for all other members. The temporary supplement for SPORS and VaLORS members is assumed to be adjusted biennially based on increases of 2.50% per annum compounded annually.

Percent Electing a Deferred Termination Benefit: Terminating members are assumed to elect a return of contributions or a deferred annuity, whichever is the most valuable benefit at the time of termination. Termination benefits are assumed to commence at normal retirement age.

Deferred Benefit Commencement: For valuation purposes, it is assumed that benefits will commence at Normal Retirement.

Assumed Payment Form: Modified cash refund annuity, in which the total benefit received by a member and his or her estate cannot be less than the total contributions made by the member while he or she was an active participant plus interest. For members in pay status, the modified cash refund was estimated to be in effect for two years after retirement for Judicial members and three years for all others.

Marriage Assumption: 100% of active employees are assumed to be married, with males two years older than females.

Service-Related Disability: The service-related disability benefits do not include an adjustment for Social Security or Worker's Compensation benefits.

Hazardous Duty Service: The valuations of SPORS, VaLORS and Locals (having Hazardous Duty benefits) assume that all VRS service is hazardous duty service for purposes of determining eligibility for the temporary supplement.

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.

Salary Increase for Disabled Members: 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 benefits payable from the System.



Pension

Political Subdivisions

Employer Groups: The Top 10 group consists of: City of Virginia Beach, Henrico County, Prince William County, Chesterfield County, City of Chesapeake, City of Alexandria, City of Hampton, Loudoun County, City of Lynchburg, and the City of Portsmouth.

The Non-Top 10 all other political subdivisions are those not included in the Top 10 group.

Additional Funding Charge: The contribution rate needed, if necessary, to allow the local system to use the Investment Return Rate as its Single Equivalent Interest Rate (SEIR) – also known as the Single Discount Rate -- under GASB Statement No. 68. To determine the SEIR, the Plan Fiduciary Net Position (PFNP) must be projected into the future for as long as there are anticipated benefits payable under the plan's provision applicable to the membership and beneficiaries of the system on the Measurement Date. If the PFNP is projected to not be depleted at any point in the future, the long term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR. If the PFNP is projected to be depleted, an Additional Funding Charge is developed to avoid depletion.

Plan Surcharge: The additional contribution rate applied to plans below 75% funded in order to maintain a total employer contribution at the same level as the previous rate setting actuarial valuation. Political subdivision plans identified as potentially "at-risk" may require an additional surcharge above the level necessary to maintain the level from the previous rate setting actuarial valuation.

Group Life Insurance Program

Minimum Benefit: Effective July 1, 2015, in no event will the death benefit be less than \$8,000 for members who retire with at least 30 years of creditable service. This minimum is indexed at the same rate as the post-retirement supplement for retirees hired on or after July 1, 2010. Beginning on the valuation date, this minimum is assumed to increase annually, effective July 1, by 2.25% (the same assumed annual increase percentage for any annual postretirement supplement for retirees, as calculated for employees hired on or after July 1, 2010).

“Life Insurance Only” Retirees: Select groups with eligible persons do not provide retiree census data. Valuation results include an estimate of retiree liability for such groups. The estimation assumptions have been continued at the levels previously determined by the prior actuary. In particular:

The Life Only group includes an estimated retiree liability equal to 1.618% of the inactive accrued liability of non-Life Only groups.

The Optional Retirement Program (ORP) group includes an estimated retiree liability equal to 10% of the active ORP liability multiplied by the ratio of the average non-ORP/Life Only retiree accrued liability to the average non-ORP/Life Only active accrued liability.

Health Insurance Credit Program

Statewide Plans

Participation Rates: 95% of eligible future service retirees from active status are assumed to utilize the benefit plan. Eligible future service retirees from deferred vested status are assumed to utilize the benefit plan at 95%. Eligible future disabled benefit recipients from active status are assumed to utilize the benefit plan as follows:

System	Participation
State/JRS	95%
Teachers	90%
SPORS/VaLORS	80%

Percentage Not Utilizing the Maximum Benefit: The percentage of eligible future benefit recipients assumed to utilize the benefit plan, but not receive the maximum benefit for which they are eligible are as follows:

System	Percentage
State/JRS	5%
Teachers	15%
SPORS/VaLORS	10%

Percentage of Maximum Benefit Received: Eligible future benefit recipients assumed to utilize the benefit plan, but not receive the maximum benefit for which they are eligible are assumed to initially receive 70% of the maximum benefit for which they are eligible.

Annual Increase in Benefit for Those Not Receiving the Maximum Benefit: Benefit recipients assumed to utilize the benefit plan, but not receiving the maximum benefit for which they are eligible are assumed to have their benefit increase at the following rates:

Duration Since Retirement	Annual Increase in HIC Benefit
1 Year	4.50%
2 - 3 Years	4.25%
4 or More Years	3.00%

Health Insurance Credit Program

Statewide Plans (Concluded)

Percentage of Future Eligible Deferred Vested Members Electing to Withdraw from VRS:

System	Percentage	
	Under Age 50	Age 50 and Over
State/JRS	75%	35%
Teachers	75%	35%
SPORS/ValORS	90%	55%

Deferred Vested Deferral Period: Eligible deferred vested members are assumed to begin receiving benefits at the following ages:

System	Age Initial Benefit Receipt
State/Teachers/JRS	
Plan 1	60
Plan 2 & Hybrid	
DOB before 1938	60
1937 < DOB < 1960	61
DOB > 1959	62
SPORS/ValORS	
Members with < 25 YOS	55
Members with >= 25 YOS	50

ORP and UVA Deferred Vested Members: Results include an estimate of deferred vested liability for those groups providing limited deferred vested census data. The estimate is derived from a ratio of retired to vested liabilities for the other HIC Plans.

Political Subdivision & Special Coverage Groups

Participation Rates: 85% of eligible future service retirees from active status are assumed to utilize the benefit plan. Eligible future service retirees from deferred vested status are assumed to utilize the benefit plan at 85%. 50% of eligible future disability retirees are assumed to utilize the benefit.

Percentage Not Utilizing the Maximum Benefit: 5% of eligible future benefit recipients are assumed to utilize the benefit plan, but not receive the maximum benefit for which they are eligible.

Percentage of Maximum Benefit Received: Eligible future benefit recipients assumed to utilize the benefit plan, but not receive the maximum benefit for which they are eligible are assumed to initially receive 70% of the maximum benefit for which they are eligible.



Health Insurance Credit Program

Political Subdivision & Special Coverage Groups (Continued)

Annual Increase in Benefit for Those Not Receiving Maximum Benefit: Benefit recipients assumed to utilize the benefit plan, but not receiving the maximum benefit for which they are eligible are assumed to have their benefit increase at the following rates:

Duration Since Retirement	Annual Increase in HIC Benefit
1 Year	4.50%
2 - 3 Years	4.25%
4 or More Years	3.00%

Percentage of Future Eligible Deferred Vested Members Electing to Withdraw from VRS:

Percentage	
Under Age 50	Age 50 and Over
85%	50%

Deferred Vested Deferral Period: Eligible deferred vested members with Enhanced Hazardous Duty Pension Benefit Coverage are assumed to receive benefits at age 55 (if the member has less than 25 years of service at retirement) and at age 50 (if the member has 25 or more years of service at retirement). Eligible deferred vested members with General Employee Pension Benefit Coverage are assumed to receive benefits as follows:

Political Subdivisions and Special Coverage Groups	Age Initial Benefit Receipt
Plan 1	60
Plan 2 & Hybrid	
DOB before 1938	60
1937 < DOB <1960	61
DOB > 1959	62

Employer Groups: The Top 10 group consists of: City of Virginia Beach, Henrico County, Prince William County, Chesterfield County, City of Chesapeake, City of Alexandria, City of Hampton, Loudoun County, City of Lynchburg, and the City of Portsmouth.

The Non-Top 10 all other political subdivisions are those not included in the Top 10 group.

Health Insurance Credit Program

Political Subdivision & Special Coverage Groups (Concluded)

Additional Funding Charge: The contribution rate needed, if necessary, to allow the local system to use the Investment Return Rate as its Single Equivalent Interest Rate (SEIR) – also known as the Single Discount Rate -- under GASB Statement No. 75. To determine the SEIR, the Plan Fiduciary Net Position (PFNP) must be projected into the future for as long as there are anticipated benefits payable under the plan's provision applicable to the membership and beneficiaries of the system on the Measurement Date. If the PFNP is projected to not be depleted at any point in the future, the long term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR. If the PFNP is projected to be depleted, an Additional Funding Charge is developed to avoid depletion.

Plan Surcharge: The additional contribution rate applied to plans below 75% funded in order to maintain a total employer contribution at the same level as the previous rate setting actuarial valuation.

Virginia Sickness and Disability Program (VSDP) and Virginia Local Disability Program (VLDP)

Long-Term Disability Benefits

Cost-of-Living Increase:

VSDP (Plan 1): 2.50% per year, compounded annually.
 VSDP (Plan 2/Hybrid): 2.25% per year, compounded annually.
 VLDP: 0.00% per year.

Income Replacement for Future Disabled Members: 62% of member’s pre-disability income.

Members with 1% Employer Contribution: 65% of Hybrid Plan members are assumed to meet the Social Security definition of Disability and become eligible to receive a one percent employer contribution to their defined contribution account.

Offsets for Active Members: The following benefit adjustments are assumed for the expected future monthly benefits to be paid to future disabled members.

Year of Long-Term Disability	Benefit Adjustment Factor
1	71%
2	57%
3	52%
4	49%
5	42%
6	36%
7	36%
8	36%
9	36%
10	43%
11	43%
12	43%
13	43%
14	45%
15+	51%



Virginia Sickness and Disability Program (VSDP) and Virginia Local Disability Program (VLDP)

Offsets for Disabled Members: It is assumed that the offset amounts reported by the administrator will continue to apply to each member’s benefit until the benefit expires. For members with less than eight years of disability and no current benefit offsets, benefit amounts are adjusted to reflect future offsets as follows:

Year of Long-Term Disability	Percentage Receiving Offsets in the Next Year if Currently Not in Receipt	Average Percentage of Full Benefit Paid if in Receipt of Offsets
1	36%	27%
2	27%	26%
3	23%	26%
4	16%	26%
5	14%	26%
6	9%	26%
7	4%	26%
8+	0%	30%

Rates of Termination of Benefits Due to Death or Recovery: 2012 Group Long Term Disability Valuation Table (2012 GLTD) as proposed by the Society of Actuaries’ Group Disability Experience Committee for use by the National Association of Insurance Commissioners. Used as a basis for those rates applicable to plans with a six-month elimination period, “Own Occupation” definition of disability in the first twenty-four months and “Any Occupation” definition of disability for the twenty-fifth month onward, initial maximum guaranteed benefit of \$1,900, “No Diagnosis” cause of disability, 15% margin for recovery, 28% margin for deaths, and adjusted for prior five years of VRS experience with the following adjustment factors:

Month of Disability	Male	Female
4 - 24	0.852	0.803
25 - 60	0.811	0.821
61 - 120	1.164	1.184
121 and over	1.073	1.126

Liability Assumed for Disabled Members in Waiting Period: The liability associated for those disabled and not yet eligible to receive benefits is implicitly modeled by applying the disability incidence rates to all current active records, as part of the regular valuation, including those records in a short-term disability status, in order to reflect the total expected disability benefit streams and associated liability.

Virginia Sickness and Disability Program (VSDP) and Virginia Local Disability Program (VLDP)

Long-Term Care Benefits

Daily Benefit Amount: Assumed to be the maximum \$96 per day for service in a nursing home. The daily assumed benefit for home health care coverage is \$48.

Daily Benefit Amount Increases: The valuation does not include a provision for increases (i.e., 5% compound increase every five years). If the benefit policy is to provide increases at regular intervals, the resulting liability will be materially greater than the results presented (i.e., inflation increases are not assumed to be prefunded).

Benefit Maximums: Lifetime maximum benefits in the valuation are capped at \$70,080, which reflects a two-year maximum coverage period based upon a \$96 per day indemnity benefit.

Morbidity: For actively employed and ported members, the following claim incidence rates are used.

Unadjusted Claim Incidence Rates				
Attained	Nursing Facility		Home Health	
Age	Male	Female	Male	Female
25	0.00001	0.00001	0.00008	0.00008
30	0.00003	0.00002	0.00010	0.00010
35	0.00008	0.00005	0.00012	0.00013
40	0.00013	0.00009	0.00018	0.00015
45	0.00021	0.00014	0.00028	0.00017
50	0.00031	0.00020	0.00039	0.00029
55	0.00047	0.00029	0.00053	0.00047
60	0.00060	0.00065	0.00085	0.00092
65	0.00100	0.00107	0.00150	0.00162
70	0.00210	0.00191	0.00249	0.00295
75	0.00480	0.00507	0.00482	0.00541
80	0.01023	0.01327	0.00895	0.00917
85	0.02155	0.03171	0.01541	0.01511
90	0.04111	0.06180	0.02249	0.02042
95	0.05844	0.08370	0.02522	0.02190
100	0.07276	0.09756	0.02598	0.02198
105	0.09059	0.11372	0.02677	0.02206
110+	0.11279	0.13255	0.02758	0.02213

Virginia Sickness and Disability Program (VSDP) and Virginia Local Disability Program (VLDP)

Morbidity (continued): For actively employed members, the unadjusted claim incidence rates are adjusted by the following selection factors.

Claim Incidence Selection Factors			
Actively Employed Members			
Years of Membership	Entry Age		
	<50	50-64	65+
1	0.133	0.138	0.164
2	0.217	0.222	0.256
3	0.284	0.289	0.342
4	0.334	0.341	0.438
5	0.367	0.375	0.520
6	0.439	0.447	0.547
7	0.473	0.482	0.573
8	0.500	0.511	0.593
9	0.527	0.538	0.612
10	0.561	0.573	0.634
11	0.599	0.612	0.673
12	0.643	0.658	0.719
13	0.702	0.718	0.755
14	0.769	0.787	0.797
15	0.836	0.836	0.840
16	0.851	0.851	0.855
17	0.869	0.869	0.872
18	0.890	0.890	0.893
19	0.915	0.915	0.918
20+	0.945	0.945	0.947

Morbidity (continued): For ported members, the unadjusted claim incidence rates are adjusted based upon the likelihood of porting and the number of years since porting.

Claim Incidence Selection Factors		
Ported Members		
Porting Rate	Initial Year of Porting	Ultimate Rate*
0%	2.35	1.19
5%	2.29	1.18
10%	2.22	1.18
15%	2.16	1.17
20%	2.09	1.16
25%	2.03	1.16
30%	1.96	1.15
35%	1.90	1.14
40%	1.83	1.13
45%	1.77	1.13
50%	1.70	1.12
55%	1.64	1.11
60%	1.57	1.11
65%	1.51	1.10
70%	1.44	1.09
75%	1.38	1.09
80%	1.31	1.08
85%	1.25	1.07
90%	1.18	1.06
95%	1.12	1.06
100%	1.05	1.05

* The selection factors are assumed to decrease linearly over a 10-year period.



Virginia Sickness and Disability Program (VSDP) and Virginia Local Disability Program (VLDP)

Morbidity (concluded): Claim duration is based on the attained age at incidence, gender, and type of claim.

Attained Age	Length of Stay (Months)			
	Nursing Facility		Home Health	
	Male	Female	Male	Female
25	11.15	13.96	19.14	12.54
30	11.60	14.42	18.81	12.47
35	12.04	14.98	18.67	12.45
40	12.29	14.87	16.77	13.48
45	12.50	14.77	14.99	14.56
50	12.90	14.16	15.36	13.78
55	13.30	13.52	15.77	13.02
60	12.99	14.12	15.15	12.40
65	13.36	14.30	12.84	12.80
70	14.00	14.32	11.80	13.53
75	13.99	15.09	11.50	13.50
80	13.76	15.61	10.90	13.18
85	13.62	15.90	10.05	12.86
90	13.09	16.19	8.78	12.70
95	12.30	16.51	8.23	12.66
100	11.32	16.10	8.70	13.34
105	9.84	14.77	9.56	14.60
110+	8.31	13.32	9.33	14.89

Disabled Life Reserve: The liability associated for those participants assumed to be in a current benefit period were developed based on completion factors from benefit start date for closed cases and applied to current members based on individual durations and payment levels.

Incurred But Not Reported Reserve: The liability associated for those participants with claims that have been incurred but not reported (IBNR), as of the valuation date, to the administrator was based upon an average of 3 months of actual benefit payments for the most recent year of experience.

Virginia Sickness and Disability Program (VSDP) and Virginia Local Disability Program (VLDP)

Porting Rates: Porting rate assumptions are based upon experience over the first five years of the program, with substantial increases over the life of the program. Because actuarial experience (gains)/losses have fluctuated over the past several years, we made no modifications. Porting rates by age of entry and length of membership are provided in the following table.

Entry Age	Years of Membership										
	0	5	10	15	20	25	30	35	40	45	50+
25	0.1000	0.1010	0.1144	0.1313	0.1739	0.2555	0.3693	0.5263	0.6812	0.8874	1.0000
30	0.1000	0.1019	0.1234	0.1534	0.2185	0.3194	0.4537	0.5822	0.7574	0.9609	1.0000
35	0.1000	0.1021	0.1303	0.1778	0.2683	0.3935	0.5001	0.6454	0.8406	1.0000	1.0000
40	0.1000	0.1063	0.1608	0.2383	0.3423	0.4320	0.5526	0.7169	0.9230	1.0000	1.0000
45	0.1001	0.1177	0.2001	0.2931	0.3754	0.4755	0.6119	0.7978	0.9983	1.0000	1.0000
50	0.1027	0.1304	0.2244	0.3262	0.4116	0.5247	0.6790	0.8833	1.0000	1.0000	1.0000
55	0.1072	0.1410	0.2422	0.3585	0.4524	0.5804	0.7549	0.9624	1.0000	1.0000	1.0000
60	0.1162	0.1596	0.2667	0.3924	0.4986	0.6434	0.8407	1.0000	1.0000	1.0000	1.0000
65	0.1329	0.1887	0.2999	0.4307	0.5508	0.7146	0.9257	1.0000	1.0000	1.0000	1.0000
70	0.1485	0.2129	0.3308	0.4741	0.6099	0.7952	0.9985	1.0000	1.0000	1.0000	1.0000
75	0.1700	0.2444	0.3693	0.5231	0.6768	0.8863	1.0000	1.0000	1.0000	1.0000	1.0000
80	0.1875	0.2682	0.4043	0.5786	0.7524	0.9645	1.0000	1.0000	1.0000	1.0000	1.0000
85	0.1941	0.2770	0.4310	0.6413	0.8379	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
90	0.2012	0.2863	0.4601	0.7123	0.9347	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
95	0.2088	0.2960	0.4917	0.7925	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100	0.2171	0.3063	0.5261	0.8833	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
105	0.2259	0.3171	0.5635	0.9860	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
110	0.2354	0.3284	0.6042	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
115	0.2457	0.3404	0.6485	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
120	0.2567	0.3529	0.6966	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000



Virginia Sickness and Disability Program (VSDP) and Virginia Local Disability Program (VLDP)

Porting Premiums: While actively employed or receiving LTD benefits, a member receives coverage in the amount currently in place for the entire actively employed group. Upon termination of employment, a member has the option to port the amount of current coverage for the group by paying a premium.

Monthly Porting Premium Rates Per \$1 of Daily Benefit Amount							
Entry Age	Rate	Entry Age	Rate	Entry Age	Rate	Entry Age	Rate
20	0.018	38	0.070	56	0.233	74	1.212
21	0.019	39	0.075	57	0.255	75	1.331
22	0.020	40	0.078	58	0.278	76	1.466
23	0.022	41	0.084	59	0.305	77	1.619
24	0.023	42	0.089	60	0.335	78	1.786
25	0.025	43	0.095	61	0.368	79	1.968
26	0.028	44	0.100	62	0.406	80	2.153
27	0.030	45	0.106	63	0.448	81	2.329
28	0.033	46	0.112	64	0.497	82	2.503
29	0.035	47	0.121	65	0.539	83	2.676
30	0.038	48	0.128	66	0.596	84	2.835
31	0.041	49	0.136	67	0.662	85	2.971
32	0.046	50	0.144	68	0.717	86	3.134
33	0.050	51	0.155	69	0.777	87	3.277
34	0.053	52	0.166	70	0.845	88	3.405
35	0.057	53	0.180	71	0.922	89	3.522
36	0.061	54	0.196	72	1.007	90	3.610
37	0.065	55	0.213	73	1.105		



Actuarial Funding Method

Actuarial Funding Method: The Board has adopted funding policies for the Virginia Retirement System to achieve the following major objectives:

- Develop level required contribution rates as a percentage of payroll;
- Finance benefits earned by present employees on a current basis;
- Accumulate assets to enhance members' benefit security;
- Produce investment earnings on accumulated assets to help meet future benefit costs;
- Estimate the long-term actuarial cost of proposed amendments to Plan provisions; and
- Assist in maintaining the VRS' long-term financial viability.

The basic funding objective is a level pattern of cost as a percentage of pay throughout each member's working lifetime.

The funding method used in the actuarial valuations – the entry age normal cost method – intends to: (i) meet this funding objective; and (ii) result in a relatively level long-term contribution requirement as a percentage of pay.

Under the entry age normal cost method, the total actuarially-determined contribution requirement is equal to the sum of the normal cost plus the payment required to fund the unfunded actuarial accrued liability over a period of years. Funding or amortizing the unfunded actuarial accrued liability includes a payment toward the liability (principal) plus a payment to reflect the time value of money (interest).

Normal Cost: The cost of benefit rights accruing on the basis of current service. Technically, the normal cost rate is the level percentage-of-pay contribution required each year, with respect to each member, to accumulate over their projected working lifetime the reserves needed to meet the cost of earned benefits. The normal cost represents the ultimate cost of the plan, if the unfunded liability is paid up and the actual experience of the Program conforms to the assumptions. For purposes of Plan funding, the normal cost for each member is calculated based on the prospective benefit formula for that member (referred to as the replacement life method), with entry based upon benefit service (eligibility service if the participant is reported with a frozen benefit). For accounting purposes, the normal cost for each member is calculated as the level contribution over the member's entire career which is anticipated to accumulate to the value of benefits at the end of the career.

Actuarial Accrued Liability: The total actuarial present value of future benefits is computed using the valuation's actuarial assumptions. Subtracting the present value of future normal costs results in the actuarial accrued liability.

The total actuarial accrued liability essentially represents the amount that would have been accumulated as of a given valuation date, if:

- (i) Contributions sufficient to meet the normal costs of the plan had been made each year in the past;
- (ii) Benefit provisions had always been the same as current benefit provisions; and
- (iii) Actual past experience had always conformed to current actuarial assumptions. If assets equaled the total accrued liability, there would be no unfunded liability and future contribution requirements would consist solely of the calculated normal cost rates, absent other funding policy parameters.



Actuarial Funding Method

Amortization of Unfunded Actuarial Accrued Liability: The “legacy” unfunded actuarial accrued liability (“legacy UAAL”), equaling the unfunded actuarial accrued liability as of June 30, 2013, is amortized over a closed 30-year period beginning June 30, 2013. The amortization period of the legacy UAAL will decrease by one in each subsequent valuation until reaching 0 years. Actuarial gains and losses and other changes in the UAAL due to benefit and actuarial assumption and method changes for each valuation subsequent to the June 30, 2013 valuation are amortized over layered 20-year closed periods. The amortization of the UAAL assumes that payroll will increase by 3% annually and the amortization period will decrease by one year until reaching 0 years.

On October 19, 2023, the VRS Board adopted a change to the VRS Funding Policy Statement which generally reset the amortization period to 20 years for the total unfunded accrued liability as of June 30, 2023. Any political subdivision unfunded liabilities which were originally amortized over 10 years, associated with the implementation of coverage or enhancement of coverage, were not reset as part of the October 19, 2023 change. Subsequent valuation gains and losses will resume 20-year layering. See the Amortization Schedule in each report for additional detail.

The amortization payment includes an adjustment of 1.018041 to account for the passage of time from the valuation date to the date the contribution is made.

Valuation Assets – For Special Coverage Groups and Political Subdivisions providing HIC Benefits:

The actuarial value of assets equals the market value of assets.

Valuation Assets – All Other Plans: The actuarial value of assets are determined on the basis of a method that calculates expected investment income at the valuation rate of return and adds a portion of the difference between the expected investment income and actual investment income earned on a market value basis. The difference in investment income between expected return and market return is recognized over a 5-year period at the rate of 20% per year. The resulting actuarial value of assets cannot be less than 80% or more than 120% of the market value of assets.

For Political Subdivision pension plans, the actuarial value of assets is determined in aggregate for all plans, with a corresponding aggregate ratio of actuarial value to market value. The aggregate ratio is then applied to the market value of each Political Subdivision plan to determine the actuarial value of assets each individual Political Subdivision plan.

