## SUBCHAPTER 11F - ACTUARIAL

## SECTION .0100 - GENERAL PROVISIONS

**11 NCAC 11F .0101 GENERAL NATURE**

*History Note:* *Authority G.S. 58-9;*
*Eff. February 1, 1976;*
*Readopted Eff. February 28, 1978;*
*Repealed Eff. July 1, 1988.*

**11 NCAC 11F .0102 RESERVES ON CREDIT LIFE INSURANCE**
**11 NCAC 11F .0103 RESERVES ON CREDIT ACCIDENT AND HEALTH INSURANCE**
**11 NCAC 11F .0104 AUDIT TRAILS ON RESERVES REQUIRED**

*History Note:* *Authority G.S. 58-9(1); 58-143;*
*Eff. February 1, 1976;*
*Readopted Eff. February 28, 1978;*
*Repealed Eff. April 1, 1993.*

**11 NCAC 11F .0105 RESERVES FOR ANNUITIES**

*History Note:* *Authority G.S. 58-9(1); 58-201.1;*
*Eff. February 1, 1976;*
*Readopted Eff. February 28, 1978;*
*Repealed Eff. December 1, 1985.*

**11 NCAC 11F .0106 RESERVES FOR PRESENT VALUE OF FUTURE BENEFITS REQUIRED**

*History Note:* *Authority G.S. 58-9;*
*Eff. February 1, 1976;*
*Readopted Eff. February 28, 1978;*
*Repealed Eff. April 1, 1993.*

**11 NCAC 11F .0107 PURPOSE**
**11 NCAC 11F .0108 DEFINITIONS**
**11 NCAC 11F .0109 INDIVIDUAL ANNUITY OR PURE ENDOWMENT CONTRACTS**
**11 NCAC 11F .0110 GROUP ANNUITY OR PURE ENDOWMENT CONTRACTS**

*History Note:* *Authority G.S. 58-9; 58-201.1;*
*Eff. December 1, 1985;*
*Repealed Eff. April 1, 1993.*

## SECTION .0200 - HEALTH INSURANCE MINIMUM RESERVE STANDARDS

**11 NCAC 11F .0201 DEFINITIONS**

As used in this section and in the Statement of Actuarial Opinion required by the NAIC Annual Statement Instructions pursuant to G.S. 58-2-165:

(1) "Annual claim cost" means the net annual cost per unit of benefit before the addition of expenses, including claim settlement expenses, and a margin for profit or contingencies. For example, the annual claim cost for a one hundred dollar ($100.00) monthly disability benefit, for a maximum disability benefit period of one year, with an elimination period of one week, with respect to a male at age 35, in a certain occupation might be twelve dollars ($12.00), while the gross premium for this benefit might be eighteen dollars ($18.00). The additional six dollars ($6.00) would cover expenses and profit or contingencies.

(2) "Claims accrued" means that portion of claims incurred on or before the valuation date that result in liability of the insurer for the payment of benefits for medical services that have been rendered on or before the valuation date, and for the payment of benefits for days of hospitalization and days of disability that have occurred on or before the valuation date, that the insurer has not paid as of the valuation date, but for which it is liable, and will have to pay after the valuation date. This liability is sometimes referred to as a liability for "accrued" benefits. A claim reserve, which represents an estimate of this accrued claim liability, must be established.

(3) "Claims reported" means when an insurer has been informed that a claim has been incurred, if the date reported is on or before the valuation date, the claim is considered as a reported claim for annual statement purposes.

(4) "Claims unaccrued" means that portion of claims incurred on or before the valuation date that result in liability of the insurer for the payment of benefits for medical services expected to be rendered after the valuation date, and for benefits expected to be payable for days of hospitalization and days of disability occurring after the valuation date. This liability is sometimes referred to as a liability for "unaccrued" benefits. A claim reserve, which represents an estimate of the unaccrued claim payments expected to be made (that may or may not be discounted with interest), must be established.

(5) "Claims unreported" means when an insurer has not been informed, on or before the valuation date, concerning a claim that has been incurred on or before the valuation date, the claim is considered as an unreported claim for annual statement purposes.

(6) "Date of disablement" means the earliest date the insured is considered as being disabled under the definition of disability in the contract, based on a doctor's evaluation or other evidence. Normally this date will coincide with the start of any elimination period.

(7) "Elimination period" means a specified number of days, weeks, or months starting at the beginning of each period of loss, during which no benefits are payable.

(8) "Gross premium" means the amount of premium charged by the insurer. It includes the net premium (based on claim-cost) for the risk, together with any loading for expenses, profit or contingencies.

(9) "Group insurance" means blanket insurance and franchise insurance and any other forms of group insurance.

(10) "Level premium" means a premium calculated to remain unchanged throughout either the lifetime of the policy, or for some shorter projected period of years. The premium need not be guaranteed; in which case, although it is calculated to remain level, it may be changed if any of the assumptions on which it was based are revised at a later time. Generally, the annual claim costs are expected to increase each year and the insurer, instead of charging premiums that correspondingly increase each year, charges a premium calculated to remain level for a period of years or for the lifetime of the contract. In this case the benefit portion of the premium is more than needed to provide for the cost of benefits during the earlier years of the policy and less than the actual cost in the later years. The building of a prospective contract reserve is a natural result of level premiums.

(11) "Long-term care insurance" has the same meaning as in G.S. 58-55-20(4); and also means a policy or certificate that provides for payment of benefits based upon cognitive impairment or the loss of functional capacity.

(12) "Modal premium" means the premium paid on a contract based on a premium term that could be annual, semi-annual, quarterly, monthly, or weekly. Thus if the annual premium is one hundred dollars ($100.00) and if, instead, monthly premiums of nine dollars ($9.00) are paid then the modal premium is nine dollars ($9.00).

(13) "Negative reserve" means a terminal reserve that has a value of less than zero resulting from benefits that decrease with advancing age or duration.

(14) "Preliminary term reserve method" means the method of valuation under which the valuation net premium for each year falling within the preliminary term period is exactly sufficient to cover the expected incurred claims of that year, so that the terminal reserves will be zero at the end of the year. As of the end of the preliminary term period, a new constant valuation net premium (or stream of changing valuation premiums) becomes applicable such that the present value of all such premiums is equal to the present value of all claims expected to be incurred following the end of the preliminary term period.

(15) "Qualified Actuary" means an individual who:

(a) is a member in good standing of the American Academy of Actuaries; and

(b) is qualified to sign statements of actuarial opinion for life and health insurance company annual statements in accordance with the American Academy of Actuaries qualification standards for actuaries signing such statements; and

(c) is familiar with the valuation requirements applicable to life and health insurance companies; and

(d) has not been found by the Commissioner (or if so found has subsequently been reinstated as a qualified actuary), following appropriate notice and hearing to have:

(i) violated any provision of, or any obligation imposed by, the insurance law or other law in the course of his or her dealings as a qualified actuary; or

(ii) been found guilty of fraudulent or dishonest practices; or

(iii) demonstrated his or her incompetency, lack of cooperation, or untrustworthiness to act as a qualified actuary; or

(iv) submitted to the Commissioner during the past five years, pursuant to this rule, an actuarial opinion or memorandum that the Commissioner rejected because it did not meet the provisions of this rule including standards set by the Actuarial Standards Board; or

(v) resigned or been removed as an actuary within the past five years as a result of acts or omissions indicated in any adverse report on examination or as a result of failure to adhere to generally acceptable actuarial standards; and

(e) has not failed to notify the Commissioner of any action taken by any commissioner of any other state similar to that under Sub-item (15)(d) of this Paragraph.

(16) "Rating block" means a grouping of contracts determined by the valuation actuary based on common characteristics filed with the Commissioner, such as a policy form or forms having similar designs.

(17) "Reserve" means all items of benefit liability, whether in the nature of incurred claim liability or in the nature of contract liability relating to future periods of coverage, and whether the liability is accrued or unaccrued. An insurer under its contracts promises benefits that result in:

(a) Claims that have been incurred, that is, for which the insurer has become obligated to make payment, on or before the valuation date. On these claims, payments expected to be made after the valuation date for accrued and unaccrued benefits are liabilities of the insurer that should be provided for by establishing claim reserves; or

(b) Claims that are expected to be incurred after the valuation date. Any present liability of the insurer for these future claims should be provided for by the establishment of contract reserves and unearned premium reserves.

(18) "Terminal reserve" means the reserve at the end of a contract year, and is defined as the present value of benefits expected to be incurred after that contract year minus the present value of future valuation net premiums.

(19) "Unearned premium reserve" means the value of that portion of the premium paid or due to the insurer that is applicable to the period of coverage extending beyond the valuation date. Thus if an annual premium of one hundred twenty dollars ($120.00) was paid on November 1, twenty dollars ($20.00) would be earned as of December 31 and the remaining one hundred dollars ($100.00) would be unearned. The unearned premium reserve could be on a gross basis as in this example, or on a valuation net premium basis.

(20) "Valuation net modal premium" means the modal fraction of the valuation net annual premium that corresponds to the gross modal premium in effect on any contract to which contract reserves apply. Thus if the mode of payment in effect is quarterly, the valuation net modal premium is the quarterly equivalent of the valuation net annual premium.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k);*
*Temporary Adoption Eff. January 21, 1994 for a period of 180 days or until the Permanent Rule becomes effective, whichever is sooner;*
*Eff. April 1, 1994;*
*Amended Eff. August 1, 2004;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0202 GENERAL**

(a) This Section applies to all accident and health insurance coverages under G.S. 58, Articles 50 through 55.

(b) When an insurer determines that adequacy of its insurance reserves requires reserves in excess of the minimum standards specified in this Section, such increased reserves shall be held and shall be considered the minimum reserves for that insurer.
(c) With respect to any block of contracts, or with respect to an insurer's accident and health business as a whole, a prospective gross premium valuation is the ultimate test of reserve adequacy as of a given valuation date. Such a gross premium valuation shall take into account, for contracts in force, in a claims status, or in a continuation of benefits status on the valuation date, the present value as of the valuation date of: all expected benefits unpaid, all expected expenses unpaid, and all unearned or expected premiums, adjusted for future premium increases reasonably expected to be put into effect. Such a gross premium valuation shall be performed whenever a significant doubt exists as to reserve adequacy with respect to any major block of contracts or with respect to the insurer's accident and health business as a whole. If inadequacy is found to exist, immediate loss recognition shall be made and the reserves restored to adequacy. Adequate reserves (inclusive of claim, premium, and contract reserves, if any) shall be held with respect to all contracts, regardless of whether contract reserves are required for such contracts under this Section.
(d) Whenever minimum reserves, as specified in this Section, exceed reserve requirements as determined by a prospective gross premium valuation, such minimum reserves remain the minimum requirement under this Section.
(e) Adequacy of an insurer's accident and health insurance reserves shall be determined on the basis of claim reserves, premium reserves, and contract reserves, as required in 11 NCAC 11F .0203 through 11 NCAC 11F .0205, combined.

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*Statutory Authority G.S. 58-2-40; 58-58-50(k);*
*Eff. April 1, 1994;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0203 CLAIM RESERVES**

(a) General:
- (1) Claim reserves are required for all incurred but unpaid claims on all accident and health insurance contracts.
- (2) Appropriate claim expense reserves are required with respect to the estimated expense of settlement of all incurred but unpaid claims.
- (3) All such reserves for prior valuation years shall be tested for adequacy and reasonableness along the lines of claim runoff schedules in accordance with the statutory financial statement including consideration of any residual unpaid liability.

(b) Minimum Standards for Claim Reserves:
- (1) Disability Income:
  - (A) The maximum interest rate for claim reserves is specified in 11 NCAC 11F .0207.
  - (B) Minimum standards with respect to morbidity are those specified in 11 NCAC 11F .0207; except that, at the option of the insurer:
    - (i) For claims with a duration from date of disablement of less than two years, reserves may be based on the insurer's experience, if such experience is considered credible, or upon other assumptions designed to place a sound value on the liabilities.
    - (ii) For group disability income claims with a duration from date of disablement of more than two years but less than five years, reserves may, with the approval of the Commissioner, be based on the insurer's experience for which the insurer maintains underwriting and claim administration control. The request for such approval of a plan of modification to the reserve basis must include:
      - (I) An analysis of the credibility of the experience;
      - (II) A description of how all the insurer's experience is proposed to be used in setting reserves;
      - (III) A description and quantification of the margins to be included;
      - (IV) A summary of the financial impact that the proposed plan of modification would have had on the insurer's last filed annual statement; and
      - (V) A copy of the approval of the proposed plan of modification by the Commissioner of the state of domicile.

(C) For contracts with an elimination period, the duration of disablement shall be measured as dating from the time that benefits would have begun to accrue had there been no elimination period.

(2) All Other Benefits:

(A) The maximum interest rate for claim reserves is specified in 11 NCAC 11F .0207.

(B) The reserve, with respect to morbidity or other contingency, shall be based on the insurer's experience, if such experience is considered credible, or upon other assumptions designed to place a sound value on the liabilities.

(c) Any generally accepted or reasonable actuarial method or combination of methods may be used to estimate all claim liabilities. The methods used for estimating liabilities may be aggregate methods; or various reserve items may be separately valued. Approximations based on groupings and averages may also be employed. Adequacy of the claim reserves, however, shall be determined in the aggregate.

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*Statutory Authority G.S. 58-2-40; 58-58-50(k);*
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*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0204 PREMIUM RESERVES**

(a) General:

(1) Unearned premium reserves are required for all contracts with respect to the period of coverage for which premiums, other than premiums paid in advance, have been paid beyond the date of valuation.

(2) If premiums due and unpaid are carried as an asset, such premiums must be treated as premiums in force, subject to unearned premium reserve determination. The value of unpaid commissions, premium taxes, and the cost of collection associated with due and unpaid premiums must be carried as an offsetting liability.

(3) The gross premiums paid in advance for a period of coverage commencing after the next premium due date that follows the date of valuation may be appropriately discounted to the valuation date and shall be held either as a separate liability or as an addition to the unearned premium reserve that would otherwise be required as a minimum.

(b) Minimum Standards for Unearned Premium Reserves:

(1) The minimum unearned premium reserve with respect to any contract is the pro rata unearned modal premium that applies to the premium period beyond the valuation date, with such premium determined on the basis of:

(A) The valuation net modal premium on the contract reserve basis applying to the contract; or

(B) The gross modal premium for the contract if no contract reserve applies.

(2) However, in no event may the sum of the unearned premium and contract reserves for all contracts of the insurer subject to contract reserve requirements be less than the gross modal unearned premium reserve on all such contracts, as of the date of valuation. Such reserve shall never be less than the expected claims for the period beyond the valuation date represented by such unearned premium reserve, to the extent not provided for elsewhere.

(c) The insurer may employ suitable approximations and estimates, including groupings, averages, and aggregate estimation, in computing premium reserves. Such approximations or estimates shall be tested periodically to determine their continuing adequacy and reliability.

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*Statutory Authority G.S. 58-2-40; 58-58-50(k)*
*Eff. April 1, 1994;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0205 CONTRACT RESERVES**

(a) General:

(1) Contract reserves are required, unless otherwise specified in this Rule for:

(A) All individual and group contracts with which level premiums are used; or

(B) All individual and group contracts with respect to which, due to the gross premium pricing structure at issue, the value of the future benefits at any time exceeds the value of any appropriate future valuation net premiums at that time. This evaluation may be applied on a rating block basis if the total premiums for the block were developed to support the total risk assumed and expected expenses for the block each year, and a qualified actuary certifies the premium development. The actuary shall state in the certification that premiums for the rating block were developed such that each year's premium was intended to cover that year's costs without any prefunding. If the premium is also intended to recover costs for any prior years, the actuary shall also disclose the reasons for and magnitude of such recovery. The values specified in this Subparagraph shall be determined on the basis specified in 11 NCAC 11F .0205(b).

(2) Contracts not requiring a contract reserve are:

(A) Contracts that cannot be continued after one year from issue; or

(B) Contracts already in force on the effective date of these standards for which no contract reserve was required under the immediately preceding standards.

(3) The contract reserve is in addition to claim reserves and premium reserves.

(4) The methods and procedures for contract reserves shall be consistent with those for claim reserves for any contract, or else appropriate adjustment must be made when necessary to assure provision for the aggregate liability. The definition of the date of incurral must be the same in both determinations.

(b) Minimum Standards for Contract Reserves:

(1) Basis:

(A) Minimum standards with respect to morbidity are those set forth in 11 NCAC 11F .0207. Valuation net premiums used under each contract must have a structure consistent with the gross premium structure at issue of the contract as this relates to advancing age of insured, contract duration and period for which gross premiums have been calculated. Contracts for which tabular morbidity standards are not specified in 11 NCAC 11F .0207 shall be valued using tables established for reserve purposes by a qualified actuary and acceptable to the Commissioner.

(B) The maximum interest rate is specified in 11 NCAC 11F .0207.

(C) Termination rates used in the computation of reserves shall be on the basis of a mortality table as specified in 11 NCAC 11F .0207 except as noted in Subparagraphs (b)(1)(C)(i) and (ii) of this Rule.

(i) Under contracts for which premium rates are not guaranteed, and where the effects of insurer underwriting are specifically used by contract duration in the valuation morbidity standard, or for return of premium or other deferred cash benefits, total termination rates may be used at ages and durations where these exceed specified mortality table rates, but not in excess of the lesser of:

(I) 80 percent of the total termination rate used in the calculation of the gross premiums; or

(II) Eight percent.

(ii) For long-term care individual policies or group certificates issued after August 1, 2004, the contract reserve may be established on a basis of separate mortality and other terminations, where the other terminations are not to exceed:

(I) For policy years one through four, the lesser of 80 percent of the voluntary lapse rate used in the calculation of gross premiums and eight percent;

(II) For policy years five and later, the lesser of 100 percent of the voluntary lapse rate used in the calculation of gross premiums and four percent.

Where a morbidity standard specified in 11 NCAC 11F .0207 is on an aggregate basis, such morbidity standard may be adjusted to reflect the effect of insurer underwriting by contract duration. The adjustments must be appropriate to the underwriting.

(2) Reserve Method:

(A) For insurance except long-term care and return of premium or other deferred cash benefits, the minimum reserve is the reserve calculated on the two-year full preliminary term method; that is, under which the terminal reserve is zero at the first and also the second contract anniversary.

(B) For long-term care insurance, the minimum reserve is the reserve calculated on the one-year full preliminary term method.

(C) For return of premium or other deferred cash benefits, the minimum reserve is the reserve calculated as follows:

(i) On the one-year preliminary term method if such benefits are provided at any time before the 20th anniversary;

(ii) On the two-year preliminary term method if such benefits are only provided on or after the 20th anniversary.

(D) The preliminary term method may be applied only in relation to the date of issue of a contract. Reserve adjustments introduced later, as a result of rate increases, revisions in assumptions (e.g., projected inflation rates) or for other reasons, are to be applied immediately as of the effective date of adoption of the adjusted basis.

(3) Negative reserves on any benefit may be offset against positive reserves for other benefits in the same contract, but the total contract reserve with respect to all benefits combined may not be less than zero.

(4) For long-term care insurance with nonforfeiture benefits, the contract reserve on a policy basis shall not be less than the net single premium for the nonforfeiture benefits at the appropriate policy duration, where the net single premium is computed according to the standards specified in this Rule.

(c) Provided the contract reserve on all contracts to which an alternative method or basis is applied is not less in the aggregate than the amount determined according to the applicable standards specified in this Rule, an insurer may use any reasonable assumptions as to interest rates, termination or mortality rates, and rates of morbidity or other contingency. Also, subject to the preceding condition, the insurer may employ methods other than the methods stated in this rule in determining a sound value of its liabilities under such contracts, including, but not limited to the following:

(1) the net level premium method;

(2) the one-year full preliminary term method;

(3) prospective valuation on the basis of actual gross premiums with reasonable allowance for future expenses;

(4) the use of approximations such as those involving age groupings, groupings of several years of issue, average amounts of indemnity, grouping of similar contract forms;

(5) the computation of the reserve for one contract benefit as a percentage of, or by other relation to, the aggregated contract reserves exclusive of the benefit or benefits so valued; and

(6) the use of a composite annual claim cost for all or any combination of the benefits included in the contracts valued.

(d) Annually, a review shall be made of the insurer's prospective contract liabilities on contracts valued by tabular reserves, to determine the continuing adequacy and reasonableness of the tabular reserves giving consideration to future gross premiums. The insurer shall make appropriate increments to such tabular reserves if such tests indicated that the basis of such reserves is no longer adequate; subject, however, to the minimum standards of 11 NCAC 11F .0205(b). If an insurer has a contract or a group of related similar contracts, for which future gross premiums will be restricted by contract, insurance department rules, or for other reasons, such that the future gross premiums reduced by expenses for administration, commissions and taxes will be insufficient to cover future claims, the insurer shall establish contract reserves for such shortfall in the aggregate.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k);*
*Temporary Adoption Eff. January 21, 1994 for a period of 180 days or until the Permanent Rule becomes effective, whichever is sooner;*
*Eff. April 1, 1994;*
*Amended Eff. August 1, 2004;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0206 REINSURANCE**

Increases to, or credits against reserves carried, arising because of reinsurance assumed or reinsurance ceded, must be determined in a manner consistent with the minimum reserve standards set out in 11 NCAC 11F .0200 and with all applicable provisions of the reinsurance contracts that affect the insurer's liabilities.

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**11 NCAC 11F .0207 SPECIFIC STANDARDS FOR MORBIDITY, INTEREST AND MORTALITY**

(a) Minimum standard morbidity tables for valuation of specified individual contract accident and health insurance benefits are as follows:

(1) Disability Income Benefits Due to Accident or Sickness.

(A) Contract Reserves:

(i) Contracts issued on or after January 1, 1965 and before January 1, 1986: The 1964 Commissioners Disability Table (64 CDT).

(ii) Contracts issued on or after January 1, 1994: The 1985 Commissioners Individual Disability Tables A (85CIDA); or The 1985 Commissioners Individual Disability Tables B (85CIDB).

(iii) Contracts issued during the years 1986 through 1993:
Optional use of either the 1964 or the 1985 Tables.

(iv) Each insurer shall elect, with respect to all individual contracts issued in any one statement year, whether it will use Tables A or Tables B as the minimum standard. The insurer may, however, elect to use the other tables with respect to any subsequent statement year.

(B) Claim Reserves:

(i) For claims incurred on or after August 1, 2004:
The 1985 Commissioners Individual Disability Tables A (85CIDA) with claim termination rates multiplied by the following adjustment factors:

| Duration | Adjustment Factor | Adjusted Termination Rates* |
|---|---|---|
| Week 1 | 0.366 | 0.04831 |
| Week 2 | 0.366 | 0.04172 |
| Week 3 | 0.366 | 0.04063 |
| Week4 | 0.366 | 0.04355 |
| Week 5 | 0.365 | 0.04088 |
| Week 6 | 0.365 | 0.04271 |
| Week 7 | 0.365 | 0.04380 |
| Week 8 | 0.365 | 0.04344 |
| Week 9 | 0.370 | 0.04292 |
| Week 10 | 0.370 | 0.04107 |
| Week 11 | 0.370 | 0.03848 |
| Week 12 | 0.370 | 0.03478 |
| Week 13 | 0.370 | 0.03034 |
| Month 4 | 0.391 | 0.08758 |
| Month 5 | 0.371 | 0.07346 |
| Month 6 | 0.435 | 0.07531 |
| Month 7 | 0.500 | 0.07245 |
| Month 8 | 0.564 | 0.06655 |
| Month 9 | 0.613 | 0.05520 |
| Month 10 | 0.663 | 0.04705 |
| Month 11 | 0.712 | 0.04486 |
| Month 12 | 0.756 | 0.04309 |
| Month 13 | 0.800 | 0.04080 |
| Month 14 | 0.844 | 0.03882 |
| Month 15 | 0.888 | 0.03730 |
| Month 16 | 0.932 | 0.03448 |
| Month 17 | 0.976 | 0.03026 |
| Month 18 | 1.020 | 0.02856 |
| Month 19 | 1.049 | 0.02518 |

| | | |
|---|---|---|
| Month 20 | 1.078 | 0.02264 |
| Month 21 | 1.107 | 0.02104 |
| Month 22 | 1.136 | 0.01932 |
| Month 23 | 1.165 | 0.01865 |
| Month 24 | 1.195 | 0.01792 |
| | | |
| Year 3 | 1.369 | 0.16839 |
| Year 4 | 1.204 | 0.10114 |
| Year 5 | 1.199 | 0.07434 |
| Year 6 & later | 1.000 | ** |

* The adjusted termination rates derived from the application of the adjustment factors to the DTS Valuation Table termination rates shown in Exhibits 3a, 3b, 3c, 4, and 5 of *Transactions of the Society of Actuaries (TSA) XXXVII*, pp. 457-463) are displayed. The adjustment factors for age, elimination period, class, sex, and cause displayed in Exhibits 3a, 3b, 3c, and 4 shall be applied to the adjusted termination rates shown in this table.

**Applicable DTS Valuation Table duration rate from exhibits 3c and 4 (TSA XXXVII, pp. 462-463).

The 85 CIDA table so adjusted for the computation of claim reserves shall be known as 85 CIDC (The 1985 Commissioners individual disability Table C).

(ii) For claims incurred prior to August 1, 2004:

Each insurer may elect which of the following to use as the minimum standard for claims incurred prior to August 1, 2004:

(I) The minimum morbidity standard in effect for contract reserves on currently issued contracts, as of the date the claim is incurred, or

(II) The standard as defined in Subparagraph (a)(1)(B)(i) of this Rule, applied to all open claims.

(III) Once an insurer elects to calculate reserves for all open claims on the standard defined in Subparagraph (a)(1)(B)(i) of this Rule, all future valuations must be on that basis.

(2) Hospital Benefits, Surgical Benefits and Maternity Benefits (Scheduled benefits or fixed time period benefits only).

(A) Contract Reserves:

(i) Contracts issued on or after January 1, 1955, and before January 1, 1982: The 1956 Intercompany Hospital-Surgical Tables.

(ii) Contracts issued on or after January 1, 1982: The 1974 Medical Expense Tables, Table A.

(B) Claim Reserves: See 11 NCAC 11F .0207(a)(5).

(3) Cancer Expense Benefits (Scheduled benefits or fixed time period benefits only).

(A) Contract Reserves: Contracts issued on or after January 1, 1986: The 1985 NAIC Cancer Claim Cost Tables.

(B) Claim Reserves: See 11 NCAC 11F .0207(a)(5).

(4) Accidental Death Benefits.

(A) Contract Reserves: Contracts issued on or after January 1, 1965: The 1959 Accident Death Benefits Table.

(B) Claim Reserves: Actual amount incurred.

(5) Single Premium Credit Disability

(A) Contract Reserves:

(i) For contracts issued on or after August 1, 2004:

(I) For plans having less than a 30 day elimination period, the 1985 Commissioners Individual Disability Table A (85 CIDA) with claim incidence rates increased by 12 percent.

(II) For plans having a 30 day and greater elimination period, the 85 CIDA for a 14 day elimination period with the adjustment in Subparagraph (a)(5)(A)(i)(I) of this Rule.

(ii) For contracts issued prior to August 1, 2004, each insurer may elect either Subparagraph (a)(5)(A)(ii)(I) or Subparagraph (a)(5)(A)(ii)(II) of this Rule to use as the minimum standard. Once an insurer elects to calculate reserves for all contracts on the standard defined in Subparagraph (a)(5)(A)(i) of this Rule, all future valuations must be on that basis.

(I) The minimum morbidity standard in effect for contract reserves on currently issued contracts, as of the date the contract was issued, or

(II) The standard as defined in Subparagraph (a)(5)(A)(i) of this Rule, applied to all contracts.

(B) Claim Reserves: Claim reserves are to be determined as provided in 11 NCAC 11F .0203.

(6) Other Individual Contract Benefits.

(A) Contract Reserves: For all other individual contract benefits, morbidity assumptions are to be determined which will produce contract reserves that place a sound value on the liabilities of each such benefit.

(B) Claim Reserves: For all benefits other than disability, claim reserves are to be determined as provided in the standards as set out in this rule.

(b) Minimum standard morbidity tables for valuation of specified group contract accident and health insurance benefits are as follows:

(1) Disability Income Benefits Due to Accident or Sickness.

(A) Contract Reserves:

(i) Contracts issued before January 1, 1994: The same basis, if any, as that employed by the insurer as of December 31, 1993.

(ii) Contracts issued on or after January 1, 1994: The 1987 Commissioners Group Disability Income Table (87CGDT).

(B) Claim Reserves:

(i) For claims incurred on or after January 1, 1994: The 1987 Commissioners Group Disability Income Table (87CGDT);

(ii) For claims incurred before January 1, 1994: See 11 NCAC 11F .0207(b)(2).

(2) Single Premium Credit Disability

(A) Contract Reserves:

(i) For contracts issued on or after August 1, 2004:

(I) For plans having less than a 30 day elimination period, the 1985 Commissioners Individual Disability Table A (85 CIDA) with claim incidence rates increased by 12 percent.

(II) For plans having a thirty-day and greater elimination period, the 85 CIDA for a 14 day elimination period with the adjustment in Subparagraph (b)(2)(A)(i)(I) of this Rule.

(ii) For contracts issued prior to August 1, 2004, each insurer may elect either Subparagraph (b)(2)(A)(ii)(I) or Subparagraph (b)(2)(A)(ii)(II) of this Rule to use as the minimum standard. Once an insurer elects to calculate reserves for all contracts on the standard defined in Subparagraph (b)(2)(A)(i) of this Rule, all future valuations must be on that basis.

(I) The minimum morbidity standard in effect for contract reserves on currently issued contracts, as of the date the contract was issued, or

(II) The standard as defined in Subparagraph (b)(2)(A)(i) of this Rule, applied to all contracts.

(B) Claim Reserves: Claim reserves are to be determined as provided in 11 NCAC 11F .0203.

(3) Other Group Contract Benefits.

(A) Contract Reserves: For all other group contract benefits, morbidity assumptions are to be determined which will produce contract reserves that place a sound actuarial value on the liabilities of each such benefit.

(B) Claim Reserves: For all benefits other than disability, claim reserves are to be determined as provided in the standards as set out in this Rule.

(c) Maximum interest rate standards for valuation of accident and health insurance benefits are as follows:

(1) For contract reserves the maximum interest rate is the maximum rate permitted by law in the valuation of whole life insurance issued on the same date as the accident and health insurance contract.

(2) For claim reserves on contracts that require contract reserves, the maximum interest rate is the maximum rate permitted by law in the valuation of whole life insurance issued on the same date as the claim incurral date.

(3) For claim reserves on contracts not requiring contract reserves, the maximum interest rate is the maximum rate permitted by law in the valuation of single premium immediate annuities issued on the same date as the claim incurral date, reduced by one hundred basis points.

(d) Minimum standard mortality tables for valuation of accident and health insurance benefits are as follows:

(1) Except as provided for in 11 NCAC 11F .0207(d)(2) or (3), the mortality basis used for all policies except long-term care individual policies and group certificates issued after August 1, 2004, shall be according to a table (but without use of selection factors) permitted by law for the valuation of whole life insurance issued on the same date as the accident and health insurance contract. For long-term care insurance individual policies or group certificates issued on or after August 1, 2004, the mortality basis used shall be the 1983 Group Annuity Mortality Table without projection.

(2) Other mortality tables adopted by the NAIC and promulgated by the Commissioner in accordance with G.S. 150B may be used in the calculation of the minimum reserves if appropriate for the type of benefits and if requested by a qualified actuary. The request must include the proposed mortality table and the reason that the standard specified in 11 NCAC 11F .0207(d)(1) is inappropriate.

(3) For single premium credit insurance using the 85 CIDA table, no separate mortality shall be assumed.

(e) The tables referenced in 11 NCAC 11F .0207 may be found as follows:

(1) The 1964 Commissioners Disability Table, 1965 Proceedings of the National Association of Insurance Commissioners, Vol. I, pgs. 78-80;

(2) The 1985 Commissioners Individual Disability Tables A, 1986 Proceedings of the National Association of Insurance Commissioners, Vol. I, pgs. 574-589;

(3) The 1985 Commissioners Individual Disability Tables B, 1985 Proceedings of the National Association of Insurance Commissioners, Vol. I, pgs. 486-540;

(4) The 1956 Intercompany Hospital-Surgical Tables, 1957 Proceedings of the National Association of Insurance Commissioners, Vol. I, pgs. 83-85;

(5) The 1974 Medical Expense Tables, Table A, Transactions of the Society of Actuaries, Vol. XXX, pg. 63. Refer to the paper (in the same volume, page 9), to which this table is appended, including its discussions for methods of adjustment for benefits not directly valued in Table A: "Development of the 1974 Medical Expense Benefits", Houghton and Wolf;

(6) The 1985 NAIC Cancer Claim Cost Tables, 1986 Proceedings of the National Association of Insurance Commissioners, Vol. I, pgs. 609-623;

(7) The 1959 Accident Death Benefit Tables, Transactions of the Society of Actuaries, Vol. XI, pg. 754; and

(8) The 1987 Commissioners Group Disability Income Table, 1987 Proceedings of the National Association of Insurance Commissioners, Vol. II, pgs. 557-619.

(9) The 1983 Group Annuity Mortality Table, Transactions of the Society of Actuaries, Vol. XXXV, pgs. 880-881.

Copies of the above-referenced tables can be obtained at a cost prescribed in G.S. 58-6-5(3) from the Actuarial Service Division of the North Carolina Department of Insurance, P.O. Box 26387, Raleigh, N.C. 27611. The above-referenced tables are hereby incorporated by reference and do not incorporate any amendments or editions.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k);*
*Temporary Adoption Eff. January 21, 1994 for a period of 180 days or until the Permanent Rule becomes effective, whichever is sooner;*
*Eff. April 1, 1994;*
*Amended Eff. August 1, 2004;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0208 RESERVES FOR WAIVER OF PREMIUM**

(a) Tabular reserves using the 1964 CDT, 1985 CIDA or 1985 CIDB tables, i.e. disability valuation tables based on exposures that include contracts on premium waiver as in-force contracts, shall value reserves on the following basis:

(1) Claim reserves shall include reserves for premiums expected to be waived, valuing as a minimum the valuation net premium being waived.
(2) Premium reserves shall include contracts on premium waiver as in-force contracts, valuing as a minimum the unearned modal valuation net premium being waived.
(3) Contract reserves shall include recognition of the waiver of premium benefit in addition to other contract benefits provided for, valuing as a minimum the valuation net premium to be waived.

(b) If an insurer is valuing reserves on what is truly an active life table, or if a specific valuation table is not being used but the insurer's gross premiums are calculated on a basis that includes in the projected exposure only those contracts for which premiums are being paid, then it shall still be necessary to provide specifically for waiver of premium reserves.

*History Note:* *Filed as a Temporary Adoption Eff. January 21, 1994, For a Period of 180 Days or Until the Permanent Rule Becomes Effective, Whichever is Sooner;*
*Statutory Authority G.S. 58-2-40; 58-58-50(k);*
*Eff. April 1, 1994;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

## SECTION .0300 - ACTUARIAL OPINION AND MEMORANDUM

### 11 NCAC 11F .0301 APPLICABILITY AND SCOPE

(a) This Section applies to all life insurance companies and fraternal benefit societies doing business in this State and to all life insurance companies and fraternal benefit societies that are authorized to reinsure life insurance, annuities, or accident and health insurance business in this State. This Section shall be applied in a manner that allows the appointed actuary to utilize his or her professional judgment in performing the asset analysis and developing the actuarial opinion and supporting memoranda, consistent with relevant Actuarial Standards of Practice. However, the Commissioner may require specific methods of actuarial analysis and actuarial assumptions when these specifications are necessary for an acceptable opinion to be rendered relative to the adequacy of reserves and related items. All cross references to rule numbers are to rules within this Section.

(b) This Section applies to all annual statements filed with the Commissioner after December 31, 2004. A statement of opinion on the adequacy of the reserves and related actuarial items based on an asset adequacy analysis in accordance with Rule .0306 of this Section and a supporting memorandum in accordance with Rule .0307 of this Section are required each year.

*History Note:* *Authority G.S. 58-2-40; 58-24-120; 58-58-50(i); 58-58-50(j);*
*Eff. December 1, 1994;*
*Amended Eff. August 1, 2004;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

### 11 NCAC 11F .0302 DEFINITIONS

(a) "Annual statement" means that statement required to be filed each year under G.S. 58-2-165.

(b) "Appointed actuary" means any individual who is appointed or retained in accordance with Rule .0303(c) of this Section to provide the actuarial opinion and supporting memorandum as required by G.S. 58-58-50(i) and this Section.

(c) "Asset adequacy analysis" means an analysis that meets the standards and other requirements referred to in Rule .0303(d) of this Section.

(d) "Board" means the Actuarial Standards Board established by the American Academy of Actuaries to develop and promulgate standards of actuarial practice, and its successors.

(e) "Company" means a life insurance company, fraternal benefit society, or reinsurer subject to this Section.

(f) "Opinion" means the statement of actuarial opinion of an appointed actuary regarding the adequacy of the reserves and related actuarial items based on an asset adequacy analysis in accordance with Rule .0306 of this Section and with applicable actuarial standards of practice.

(g) "Qualified actuary" means any individual who meets the requirements set forth in Rule .0303(b) of this Section.

*History Note:* *Authority G.S. 58-2-40; 58-24-120; 58-58-50(i); 58-58-50(j);*
*Eff. December 1, 1994;*

*Amended Eff. August 1, 2004;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0303 GENERAL REQUIREMENTS**

(a) Submission of Opinion:

(1) There shall be included on or attached to page 1 of the annual statement for each year beginning with calendar year 2004, the statement of an appointed actuary, entitled "Statement of Actuarial Opinion," setting forth an opinion relating to reserves and related actuarial items held in support of policies and contracts, in accordance with Rule .0306 of this Section.

(2) Upon written request by the company the Commissioner shall grant a 45-day extension of the date for submission of the opinion. In the written request, the company shall state the reason that such extension is needed.

(b) A "qualified actuary" is an individual who:

(1) Is a member in good standing of the American Academy of Actuaries;

(2) Is qualified to sign opinions for life and health insurance company annual statements in accordance with the American Academy of Actuaries qualification standards for actuaries signing such opinions;

(3) Is familiar with the valuation requirements applicable to life and health insurance companies;

(4) Has not been found by the Commissioner (or if so found has subsequently been reinstated as a qualified actuary), to have:

(A) Violated any provision of, or any obligation imposed by, any law or rule in the course of his or her dealings as a qualified actuary;

(B) Been found by a court of competent jurisdiction to be guilty of a fraudulent or dishonest practice;

(C) Failed to comply with the Code of Professional Conduct as published by the Board;

(D) Submitted to the Commissioner during the past five years, under this Section, an opinion or memorandum that the Commissioner rejected because it did not meet the provisions of this Section, including standards set by the Board; or

(E) Resigned or been removed as an actuary within the past five years as a result of acts or omissions indicated in any adverse report on an examination or as a result of failure to adhere to generally acceptable actuarial standards; and

(5) Has not failed to notify the Commissioner of any action taken by any insurance regulator of any other state similar to that under Subparagraph (b)(4) of this Rule.

(c) An "appointed actuary" is a qualified actuary who is appointed or retained to prepare the opinion required by this Section, either directly by or by the authority of the board of directors through an executive officer of the company. The company shall, within 45 days after the date of the appointment, give the Commissioner written notice of the name, title (and, in the case of a consulting actuary, the name of the firm), and manner of appointment or retention of each person appointed or retained by the company as an appointed actuary and shall state in such notice that the person meets the requirements of Paragraph (b) of this Rule. Once notice is furnished, no further notice is required for the actuary, provided that the company gives the Commissioner written notice if the actuary ceases to be appointed or retained as an appointed actuary or no longer meets the requirements of Paragraph (b) of this Rule. If any person appointed or retained as an appointed actuary replaces a previously appointed actuary, the notice shall so state and give the reasons for replacement.

(d) The asset adequacy analysis required by this Section:

(1) Shall conform to the standards of practice as promulgated from time to time by the Board and on any additional standards under this Section, which standards are to form the basis of the opinion in accordance with Rule .0306 of this Section; and

(2) Shall be based on methods of analysis that are consistent with Actuarial Standards of Practice adopted by the Board.

(e) Liabilities to be Covered:

(1) The opinion shall apply to all in force business on the annual statement date regardless of when or where issued, e.g., aggregate reserves for life insurance and annuity policies and contracts, aggregate reserves for accident and health contracts, aggregate reserves for deposit-type contracts, and policy and contract claims liabilities for life and accident and health policies and contracts, and equivalent items in the separate account statement or statements.

(2) If the appointed actuary determines as the result of asset adequacy analysis that a reserve should be held in addition to the aggregate reserve held by the company and calculated in accordance with methods set forth

in G.S. 58-58-50(d), 58-58-50(d-1), 58-58-50(g), 58-58-50(h), and 58-58-50(k), the company shall establish such additional reserve.

(3) Additional reserves established under Subparagraph (e)(2) of this Rule and deemed by a qualified actuary to be unnecessary in later years may be released. Any amounts released must be disclosed in the opinion for the applicable year. The release of such reserves is not an adoption of a lower standard of valuation.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(i); 58-58-50(j);*
*Eff. December 1, 1994;*
*Amended Eff. August 1, 2004;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0304 REQUIRED OPINIONS**
**11 NCAC 11F .0305 OPINION WITHOUT ASSET ADEQUACY ANALYSIS**

*History Note:* *Authority G.S. 58-2-40; 58-58-50(i); 58-58-50(j);*
*Eff. December 1, 1994;*
*Repealed Eff. August 1, 2004.*

**11 NCAC 11F .0306 OPINION BASED ON ASSET ADEQUACY ANALYSIS**

(a) The opinion submitted in accordance with this Rule shall consist of:

(1) A paragraph identifying the appointed actuary and his or her qualifications as prescribed by Subparagraph (b)(1) of this Rule;

(2) A scope paragraph identifying the subjects on which an opinion is to be expressed and describing the scope of the appointed actuary's work, including a tabulation delineating the reserves and related actuarial items that have been analyzed for asset adequacy and the method of analysis, as prescribed by Subparagraph (b)(2) of this Rule and identifying the reserves and related actuarial items covered by the opinion that have not been so analyzed;

(3) A reliance paragraph describing those areas, if any, where the appointed actuary has deferred to other experts in developing data, procedures or assumptions, (for example, anticipated cash flows from currently owned assets, including variation in cash flows according to economic scenarios as prescribed by Subparagraph (b)(3) of this Rule), supported by a statement of each such expert in the form prescribed by Paragraph (e) of this Rule; and

(4) An opinion paragraph expressing the appointed actuary's opinion with respect to the adequacy of the supporting assets to mature the liabilities as prescribed by Subparagraph (b)(6) of this Rule;

(5) One or more additional paragraphs shall be needed in individual company cases if the appointed actuary:

(A) Considers it necessary to state a qualification of his or her opinion;

(B) Must disclose an inconsistency in the method of analysis or basis of asset allocation used at the prior opinion date with that used for this opinion.

(C) Must disclose whether additional reserves of the prior opinion date are released as of this opinion date, and the extent of the release.

(D) Chooses to add a paragraph briefly describing the assumptions that form the basis for the actuarial opinion.

(b) The following paragraphs are to be included in the opinion in accordance with this Rule. The appointed actuary shall use language that expresses his or her own professional judgement. The opinion shall retain all pertinent aspects of the language provided in this Section.

(1) The opening paragraph shall indicate the appointed actuary's relationship to the company and his or her qualifications to sign the opinion.

(A) For a company actuary, the opening paragraph of the actuarial opinion shall read as follows: "I [name], am [title] of [insurance company name] and a member of the American Academy of Actuaries. I was appointed by, or by the authority of, the Board of Directors of the insurer to render this opinion as stated in the letter to the Commissioner dated [insert date]. I meet the Academy qualification standards for rendering the opinion and am familiar with the valuation requirements applicable to life and health insurance companies."

(B) For a consulting actuary, the opening paragraph shall contain a sentence similar to the following:

"I, [name], a member of the American Academy of Actuaries, am associated with the firm of [name of consulting firm]. I have been appointed by, or by the authority of, the Board of Directors of [name of company] to render this opinion as stated in the letter to the Commissioner dated [insert date]. I meet the Academy qualification standards for rendering the opinion and am familiar with the valuation requirements applicable to life and health insurance companies."

(2) The scope paragraph shall include a statement similar to the following:

"I have examined the actuarial assumptions and actuarial methods used in determining reserves and related actuarial items listed below, as shown in the annual statement of the company, as prepared for filing with state regulatory officials, as of December 31, [year]. Tabulated below are those reserves and related actuarial items that have been subjected to asset adequacy analysis.

(Include reserves and related actuarial items that correspond to the Asset Adequacy Tested Amounts Reserves and Liabilities Table listed in the NAIC Model Regulation titled, "Actuarial Opinion and Memorandum Regulation," and any subsequent amendments and editions. A copy of the Table may be obtained from the North Carolina Department of Insurance at a cost prescribed in G.S. 58-6-5(3)).

(3) If the appointed actuary has relied on other experts to develop certain portions of the analysis, the reliance paragraph shall include a statement similar to one of the following:

(A) "I have relied on [name], [title] for [e.g., anticipated cash flows from currently owned assets, including variations in cash flows according to economic scenarios] as certified in the attached statement. I have reviewed the information relied upon for reasonableness....", or

(B) "I have relied on personnel as cited in the supporting memorandum for certain critical aspects of the analysis in reference to the accompanying statement. I have reviewed the information relied upon for reasonableness."

Such a statement of reliance on other experts shall be accompanied by a statement by each of such experts of the form prescribed by Paragraph (e) of this Rule.

(4) If the appointed actuary has examined the underlying asset and liability records, the reliance paragraph shall also include the following:

"My examination included such review of the actuarial assumptions and actuarial methods and of the underlying basic asset and liability records and such tests of the actuarial calculations as I considered necessary. I also reconciled the underlying basic asset and liability records to [exhibits and schedules listed as applicable] of the company's current annual statement. "

(5) If the appointed actuary has not examined the underlying records, but has relied upon data (e.g., listings and summaries of policies in force or asset records) prepared by the company or a third party, the reliance paragraph shall include a statement similar to the following:

"In forming my opinion on [specify types of reserves] I relied upon data prepared by [name and title of company officer certifying in-force records or other data] as certified in the attached statement. I evaluated that data for reasonableness and consistency. I also reconciled that data to [exhibits and schedules to be listed as applicable] of the company's current annual statement. In other respects my examination included such review of the actuarial assumptions and actuarial methods used and such tests of the actuarial calculations as I considered necessary."

Such a sentence must be accompanied by a statement by each person relied upon of the form prescribed by Paragraph (e) of this Rule.

(6) The opinion paragraph of an unqualified opinion shall include the following:

(A) "In my opinion the reserves and related actuarial values concerning the statement items identified above:

1. Are computed in accordance with presently accepted actuarial standards consistently applied and are fairly stated, in accordance with sound actuarial principles;

2. Are based on actuarial assumptions that produce reserves at least as great as those called for in any contract provision as to reserve basis and method, and are in accordance with all other contract provisions;

3. Meet the requirements of the insurance laws and rules of the state of [state of domicile] and are at least as great as the minimum aggregate amounts required by the state in which this statement is filed;

4. Are computed on the basis of assumptions consistent with those used in computing the corresponding items in the annual statement of the preceding year-end (with any exceptions noted below); and

5. Include provision for all actuarial reserves and related statement items that ought to be established.

The reserves and related items, when considered in light of the assets held by the company with respect to such reserves and related actuarial items including, but not limited to, the investment earnings on such assets, and the considerations anticipated to be received and retained under such policies and contracts, make adequate provision, according to presently accepted actuarial standards of practice, for the anticipated cash flows required by the contractual obligations and related expenses of the company.

The actuarial methods, considerations and analyses used in forming my opinion conform to the appropriate Standards of Practice as promulgated by the Actuarial Standards Board, which standards form the basis of this statement of opinion."

(B) Select one of the following two paragraphs:

(i) "This opinion is updated annually as required by law. To the best of my knowledge, there have been no material changes from the applicable date of the annual statement to the date of the rendering of this opinion that should be considered in reviewing this opinion;" or

(ii) "The following material change(s) that occurred between the date of the statement for which this opinion is applicable and the date of this opinion should be considered in reviewing this opinion." (Describe the change or changes.)

(C) "The effect of unanticipated events after the date of this opinion is beyond the scope of this opinion. The analysis of asset adequacy portion of this opinion should be viewed recognizing that the company's future experience may not follow all the assumptions used in the analysis.

_____
Signature of Appointed Actuary

_____
Address of Appointed Actuary

_____
Telephone Number of Appointed Actuary

_____
Date"

(c) The adoption for new issues or new claims or other new liabilities of an actuarial assumption that differs from a corresponding assumption used for prior new issues or new claims or other new liabilities is not a change in actuarial assumptions within the meaning of this Rule.

(d) If the appointed actuary is unable to form an opinion, then he or she shall refuse to issue an opinion. If the appointed actuary's opinion is adverse or qualified, then he or she shall issue an adverse or qualified opinion explicitly stating the reason or reasons for such opinion. This statement shall follow the scope paragraph and precede the opinion paragraph. If the appointed actuary's opinion is adverse or qualified, the appointed actuary shall modify the language prescribed in Rule .0306(b)(6) of this Section as made necessary by the reason or reasons for the qualified opinion, and shall label the opinion paragraph with the words "Qualified Opinion."

(e) If the appointed actuary relies on the certification of others on matters concerning the accuracy or completeness of any data underlying the opinion, or the appropriateness of any other information used by the appointed actuary in forming the opinion, the opinion shall so indicate the persons the actuary is relying upon and a precise identification of the items subject to reliance. In addition, the persons on whom the appointed actuary relies shall provide a certification that precisely identifies the items on which the person is providing information and a statement as to the accuracy, completeness or reasonableness, as applicable, of the items. This certification shall include the signature, title, company, address, and telephone number of the person rendering the certification, as well as the date on which it is signed.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(i); 58-58-50(j);*
*Eff. December 1, 1994;*
*Amended Eff. August 1, 2004;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0307 ACTUARIAL MEMORANDUM WITH ASSET ADEQUACY ANALYSIS**

(a) General:

(1) In accordance with G.S. 58-58-50(i) and (j), the appointed actuary shall prepare a memorandum to the company describing the analysis done in support of his or her opinion regarding the reserves under an opinion prescribed by Rule .0306 of this Section. The memorandum shall be made available for examination by the Commissioner upon request and shall be returned to the company after the examination and shall not be subject to automatic filing with the Commissioner.

(2) In preparing the memorandum, the appointed actuary may rely on, and include as a part of his or her own memorandum, memoranda prepared and signed by other actuaries who are qualified within the meaning of Rule .0303(b) of this Section, with respect to the areas covered in such memoranda, and so state in their memoranda.

(3) If the Commissioner requests a memorandum and no such memorandum exists or if the Commissioner finds that the analysis described in the memorandum fails to meet the standards of the Board or the standards and requirements of this Section, the Commissioner shall designate a qualified actuary to review the opinion and prepare such supporting memorandum as is required for review. The reasonable and necessary expense of the independent review shall be paid by the company but shall be directed and controlled by the Commissioner.

(4) The reviewing actuary shall have the same status as an examiner for purposes of obtaining data from the company and the work papers and documentation of the reviewing actuary shall be retained by the Commissioner; provided, however, that any information provided by the company to the reviewing actuary and included in the work papers shall be considered as material provided by the company to the Commissioner and shall be kept confidential to the same extent as is prescribed by law with respect to other material provided by the company to the Commissioner under G.S. 58-58-50(j). The reviewing actuary shall not be an employee of a consulting firm involved with the preparation of any prior memorandum or opinion for the company under this Section for any one of the current year or the preceding three years.

(5) In accordance with G.S. 58-58-50(j), the appointed actuary shall prepare a regulatory asset adequacy issues summary, the contents of which are specified in Paragraph (c) of this Rule. The regulatory asset adequacy issues summary shall be submitted no later than March 15 of the year following the year for which a statement of actuarial opinion based on asset adequacy is required. The regulatory asset adequacy issues summary shall be kept confidential to the same extent and under the same conditions as the actuarial memorandum.

(b) When an actuarial opinion under Rule .0306 of this Section is provided, the memorandum shall demonstrate that the analysis has been done in accordance with the standards for asset adequacy referred to in Rule .0303(d) of this Section and any additional standards under this Section. It shall specify:

(1) For reserves:

(A) Product descriptions, including market description, underwriting, and other aspects of a risk profile, and the specific risks the appointed actuary deems to be significant;

(B) Source of liability in force;

(C) Reserve method and basis;

(D) Investment reserves;

(E) Reinsurance arrangements;

(F) Identification of any explicit or implied guarantees made by the general account in support of benefits provided through a separate account or under a separate account policy or contract and the methods used by the appointed actuary to provide for the guarantees in the asset adequacy analysis;

(G) Documentation of assumptions to test reserves for the following:

(i) Lapse rates (both base and excess);

(ii) Interest crediting rate strategy;

(iii) Mortality;
(iv) Policyholder dividend strategy;
(v) Competitor or market interest rate;
(vi) Annuitization rates;
(vii) Commissions and expenses; and
(viii) Morbidity.

The documentation of assumptions shall be such that an actuary reviewing the actuarial memorandum could form a conclusion as to the reasonableness of the assumptions.

(2) For assets:

(A) Portfolio descriptions, including a risk profile disclosing the quality, distribution, and types of assets;

(B) Investment and disinvestment assumptions;

(C) Source of asset data;

(D) Asset valuation bases; and

(E) Documentation of assumptions made for:

(i) Default costs;
(ii) Bond call function;
(iii) Mortgage prepayment function;
(iv) Determining market value for assets sold due to disinvestment strategy; and
(v) Determining yield on assets acquired through the investment strategy.

The documentation of the assumptions shall be such that an actuary reviewing the actuarial memorandum could form a conclusion as to the reasonableness of the assumptions.

(3) For the analysis basis:

(A) Methodology;

(B) Rationale for inclusion or exclusion of different blocks of business and how pertinent risks were analyzed;

(C) Rationale for degree of rigor in analyzing different blocks of business (including in the rationale the level of "materiality" that was used in determining how rigorously to analyze different blocks of business);

(D) Criteria for determining asset adequacy (including in the criteria the precise basis for determining if assets are adequate to cover reserves under "moderately adverse conditions" or other conditions as specified in relevant actuarial standards of practice); and

(E) Effect of federal income taxes, reinsurance, and other actuarially or financially relevant factors.

(4) Summary of any changes in methods, procedures, or assumptions from the prior year's asset adequacy analysis which the appointed actuary considers to be material.

(5) Summary of results.

(6) Conclusions.

(c) The regulatory asset adequacy issues summary shall include:

(1) Descriptions of the scenarios tested (including whether those scenarios are stochastic or deterministic) and the sensitivity testing done relative to those scenarios. If negative ending surplus results under any tests in the aggregate, the actuary shall describe those tests and the amount of additional reserve as of the valuation date that, if held, would eliminate the negative aggregate surplus values. Ending surplus values shall be determined by either extending the projection period until the in force and associated assets and liabilities at the end of the projection period are considered by the appointed actuary to be immaterial or by adjusting the surplus amount at the end of the projection period by an amount that appropriately estimates the value that can reasonably be expected to arise from the assets and liabilities remaining in force;

(2) The extent to which the appointed actuary uses assumptions in the asset adequacy analysis that are considered by the appointed actuary to be materially different than the assumptions used in the previous asset adequacy analysis;

(3) The amount of reserves and the identity of the product lines that had been subjected to asset adequacy analysis in the prior opinion but were not subject to analysis for the current opinion;

(4) Comments on any interim results that may be of concern to the appointed actuary, such as the effect of the insufficiency of assets to support the payment of benefits and expenses and the establishment of statutory reserves during one or more interim periods;

(5) The methods used by the actuary to recognize the impact of reinsurance on the company's cash flows, including both assets and liabilities, under each of the scenarios tested; and

(6) Whether the actuary has been satisfied that all options whether explicit or embedded, in any asset or liability (including those affecting cash flows embedded in fixed income securities) and equity-like features in any investments have been appropriately considered in the asset adequacy analysis.

(d) The regulatory asset adequacy issues summary shall contain the name of the company for which the regulatory asset adequacy issues summary is being supplied, and shall be signed and dated by the appointed actuary rendering the actuarial opinion.

(e) The memorandum shall include a statement:

"Actuarial methods, considerations and analyses used in the preparation of this memorandum conform to the appropriate Standards of Practice as promulgated by the Actuarial Standards Board, which standards form the basis for this memorandum."

(f) An appropriate allocation of assets in the amount of the interest maintenance reserve (IMR), whether positive or negative, shall be used in any asset adequacy analysis. Analysis of risks regarding asset default may include an appropriate allocation of assets supporting the asset valuation reserve (AVR); these AVR assets may not be applied for any other risks with respect to reserve adequacy. Analysis of these and other risks may include assets supporting other mandatory or voluntary reserves available to the extent not used for risk analysis and reserve support. The amount of the assets used for the AVR shall be disclosed in the table of reserves and liabilities of the opinion and in the memorandum. The method used for selecting particular assets or allocated portions of assets shall be disclosed in the memorandum.

(g) The appointed actuary shall retain on file, for at least seven years, all documentation necessary to determine the procedures followed, the analyses performed, the bases for the assumptions, and the results obtained.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(i); 58-58-50(j);*
*Eff. December 1, 1994;*
*Amended Eff. March 1, 2010; August 1, 2004;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0308 ADDITIONAL CONSIDERATIONS FOR ANALYSIS**

*History Note:* *Authority G.S. 58-2-40; 58-58-50(i); 58-58-50(j);*
*Eff. December 1, 1994;*
*Repealed Eff. August 1, 2004.*

## SECTION .0400 – COMMISSIONER'S RESERVE VALUATION METHOD

**11 NCAC 11F .0401 APPLICABILITY**

(a) This Section does not apply to:

(1) Any individual life insurance policy issued on or after January 1, 2000, if the policy is issued in accordance with and as a result of the exercise of a reentry provision contained in the original life insurance policy of the same or greater face amount, issued before January 1, 2000, that guarantees the premium rates of the new policy; nor to subsequent policies issued as a result of the exercise of such a provision, or a derivation of the provision, in the new policy;

(2) Any universal life policy that meets all the following requirements:

(A) The secondary guarantee period, if any, is five years or less.

(B) The specified premium for the secondary guarantee period is not less than the net level reserve premium for the secondary guarantee period based on the CSO valuation tables as defined in 11 NCAC 11F .0402(6) and the applicable valuation interest rate.

(C) The initial surrender charge is not less than 100% of the first year annualized specified premium for the secondary guarantee period.

(3) Any variable life insurance policy that provides for life insurance, the amount or duration of which varies according to the investment experience of any separate account or accounts;

(4) Any variable universal life insurance policy that provides for life insurance, the amount or duration of which varies according to the investment experience of any separate account or accounts; and

(5) A group life insurance certificate unless the certificate provides for a stated or implied schedule of maximum gross premiums required in order to continue coverage in force for a period in excess of one year.

(b) Calculation of the minimum valuation standard for policies with guaranteed nonlevel gross premiums or guaranteed nonlevel benefits (other than universal life policies), or both, shall be in accordance with 11 NCAC 11F .0404.

(c) Calculation of the minimum valuation standard for flexible premium and fixed premium universal life insurance policies that contain provisions resulting in the ability of a policyholder to keep a policy in force over a secondary guarantee period shall be in accordance with 11 NCAC 11F .0405.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(d); 58-58-50(k);*
*Eff. January 1, 1998;*
*Temporary Amendment Eff. January 1, 2000;*
*Amended Eff. July 1, 2000;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0402 DEFINITIONS**

As used in this Section:

(1) "Basic reserves" means reserves calculated in accordance with G.S. 58-58-50(d).

(2) "Contract segmentation method" means the method of dividing the period from issue to mandatory expiration of a policy into successive segments, with the length of each segment being defined as the period from the end of the prior segment (from policy inception, for the first segment) to the end of the latest policy year as determined below. All calculations are made using the 1980 CSO valuation tables, as defined in 11 NCAC 11F .0402(6) (or any other valuation mortality table adopted by the NAIC after January 1, 2000, and adopted as a rule by the Commissioner for this purpose), and, if elected, the optional minimum mortality standard for deficiency reserves stipulated in 11 NCAC 11F .0403(b).

The length of a particular contract segment shall be set equal to the minimum of the value t for which Gt is greater than Rt (if Gt never exceeds Rt the segment length is deemed to be the number of years from the beginning of the segment to the mandatory expiration date of the policy), where Gt and Rt are defined as follows:

$$Gt = \frac{GP_{x+k+t}}{GP_{x+k+t-1}}$$

where:

x = original issue age;

k = the number of years from the date of issue to the beginning of the segment;

t = 1, 2, . . .; t is reset to 1 at the beginning of each segment;

$GP_{x+k+t-1}$ = Guaranteed gross premium per thousand of face amount, for year t of the segment, ignoring policy fees only if level for the premium paying period of the policy.

$$Rt = \frac{q_{x+k+t}}{q_{x+k+t-1}}$$

However, Rt may be increased or decreased by one percent in any policy year, at the company's option, but Rt shall not be less than one;

where:

x, k and t are as defined above, and

$q_{x+k+t-1}$ = valuation mortality rate for deficiency reserves in policy year k+t, but using the mortality of 11 NCAC 11F .0403(b)(2) if 11 NCAC 11F .0403(b)(3) is elected for deficiency reserves.

However, if $GP_{x+k+t}$ is greater than zero (0) and $GP_{x+k+t-1}$ is equal to zero (0), Gt shall be deemed to be one thousand (1,000). If $GP_{x+k+t}$ and $GP_{x+k+t-1}$ are both equal to zero (0), Gt shall be deemed to be zero (0).

(3) "Deficiency reserves" means the excess, if greater than zero, of minimum reserves calculated in accordance with G.S. 58-58-50(g) over basic reserves.

(4) "Guaranteed gross premiums" means the premiums under a policy of life insurance that are guaranteed and determined at issue.

(5) "Maximum valuation interest rates" means the interest rates specified in G.S. 58-58-50(c)(4) that are to be used in determining the minimum standard for the valuation of life insurance policies.

(6) "1980 CSO valuation tables" means the Commissioners' 1980 Standard Ordinary Mortality Table (1980 CSO Table) without ten-year selection factors, incorporated into the 1980 amendments to the NAIC Standard Valuation Law, and variations of the 1980 CSO Table approved by the NAIC, such as the smoker and nonsmoker versions approved in December 1983.

(7) "Scheduled gross premium" means the smallest illustrated gross premium at issue for other than universal life insurance policies. For universal life insurance policies, scheduled gross premium means the smallest specified premium described in 11 NCAC 11F .0405(a)(3), if any, or else the minimum premium described in 11 NCAC 11F .0405(a)(4).

(8) "Segmented reserves" means reserves, calculated using segments produced by the contract segmentation method, equal to the present value of all future guaranteed benefits less the present value of all future net premiums to the mandatory expiration of a policy, where the net premiums within each segment are a uniform percentage of the respective guaranteed gross premiums within the segment.

(a) The uniform percentage for each segment is such that, at the beginning of the segment, the present value of the net premiums within the segment equals:

(i) The present value of the death benefits within the segment, plus;

(ii) The present value of any unusual guaranteed cash value (see 11 NCAC 11F .0404(d)) occurring at the end of the segment, less;

(iii) Any unusual guaranteed cash value occurring at the start of the segment, plus; and

(iv) For the first segment only, the excess of the Item (A) over Item (B), as follows:

(A) A net level annual premium equal to the present value, at the date of issue, of the benefits provided for in the first segment after the first policy year, divided by the present value, at the date of issue, of an annuity of one per year payable on the first and each subsequent anniversary within the first segment on which a premium falls due. However, the net level annual premium shall not exceed the net level annual premium on the nineteen-year premium whole life plan of insurance of the same renewal year equivalent level amount at an age one year higher than the age at issue of the policy; and

(B) A net one-year term premium for the benefits provided for in the first policy year.

(b) The length of each segment is determined by the contract segmentation method.

(c) The interest rates used in the present value calculations for any policy may not exceed the maximum valuation interest rate, determined with a guarantee duration equal to the sum of the lengths of all segments of the policy.

(d) For both basic reserves and deficiency reserves computed by the segmented method, present values shall include future benefits and net premiums in the current segment and in all subsequent segments.

(9) "Tabular cost of insurance" means the net single premium at the beginning of a policy year for one-year term insurance in the amount of the guaranteed death benefit in that policy year.

(10) "Ten-year select factors" means the select factors adopted with the 1980 amendments to the NAIC Standard Valuation Law.

(11) "Unitary reserves" means the present value of all future guaranteed benefits less the present value of all future modified net premiums, where:

(a) Guaranteed benefits and modified net premiums are considered to the mandatory expiration of the policy;

(b) Modified net premiums are a uniform percentage of the respective guaranteed gross premiums, where the uniform percentage is such that, at issue, the present value of the net premiums equals the present value of all death benefits and pure endowments, plus the excess of Item (i) over Item (ii):

(i) A net level annual premium equal to the present value, at the date of issue, of the benefits provided for after the first policy year, divided by the present value, at the date of issue, of an annuity of one per year payable on the first and each subsequent anniversary of the policy on which a premium falls due. However, the net level annual premium shall not exceed the net level annual premium on the nineteen-year premium

whole life plan of insurance of the same renewal year equivalent level amount at an age one year higher than the age at issue of the policy.

(ii) A net one-year term premium for the benefits provided for in the first policy year; and

(c) The interest rates used in the present value calculations for any policy may not exceed the maximum valuation interest rate, determined with a guarantee duration equal to the length from issue to the mandatory expiration of the policy.

(12) "Universal life insurance policy" means any individual life insurance policy under the provisions of which separately identified interest credits (other than in connection with dividend accumulations, premium deposit funds, or other supplementary accounts) and mortality or expense charges are made to the policy.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(d); 58-58-50(k);*
*Eff. January 1, 1998;*
*Temporary Amendment Eff. January 1, 2000;*
*Amended Eff. July 1, 2000;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0403 BASIC AND PREMIUM DEFICIENCY RESERVES**

(a) At the election of the company for any one or more specified plans of life insurance, the minimum mortality standard for basic reserves may be calculated using the 1980 CSO valuation tables with select mortality factors (or any other valuation mortality table adopted by the NAIC after January 1, 2000, and adopted as a rule by the Commissioner for this purpose). If select mortality factors are elected, they may be:

(1) The ten-year select mortality factors incorporated into the 1980 amendments to the NAIC Standard Valuation Law;

(2) The select mortality factors in the NAIC Model Regulation entitled "Valuation of Life Insurance Policies Model Regulation"; or

(3) Any other table of select mortality factors adopted by the NAIC after January 1, 2000, and adopted as a rule by the Commissioner for the purpose of calculating basic reserves.

(b) Deficiency reserves, if any, are calculated for each policy as the excess, if greater than zero, of the quantity A over the basic reserve. The quantity A is obtained by recalculating the basic reserve for the policy using guaranteed gross premiums instead of net premiums when the guaranteed gross premiums are less than the corresponding net premiums. At the election of the company for any one or more specified plans of insurance, the quantity A and the corresponding net premiums used in the determination of quantity A may be based upon the 1980 CSO valuation tables with select mortality factors (or any other valuation mortality table adopted by the NAIC after January 1, 2000, and adopted as a rule by the Commissioner). If select mortality factors are elected, they may be any of the following:

(1) The ten-year select mortality factors incorporated into the 1980 amendments to the NAIC Standard Valuation Law;

(2) The select mortality factors in the NAIC Model Regulation entitled "Valuation of Life Insurance Policies Model Regulation";

(3) For durations in the first segment, X percent of the select mortality factors in the NAIC Model Regulation entitled "Valuation of Life Insurance Policies Model Regulation," subject to the following:

(A) X may vary by policy year, policy form, underwriting classification, issue age, or any other policy factor expected to affect mortality experience;

(B) X is such that, when using the valuation interest rate used for basic reserves, Item (i) is greater than or equal to Item (ii):

(i) The actuarial present value of future death benefits calculated using the mortality rates resulting from the application of X;

(ii) The actuarial present value of future death benefits calculated using anticipated mortality experience without recognition of mortality improvement beyond the valuation date;

(C) X is such that the mortality rates resulting from the application of X are at least as great as the anticipated mortality experience, without recognition of mortality improvement beyond the valuation date, in each of the first five years after the valuation date;

(D) The appointed actuary shall increase X at any valuation date where it is necessary to continue to meet all requirements of this Rule;

(E) The appointed actuary may decrease X at any valuation date as long as X continues to meet all the requirements of this Rule;

(F) The appointed actuary shall take into account the adverse effect on expected mortality and lapsation of any anticipated or actual increase in gross premiums; and

(G) If X is less than 100 percent at any duration for any policy, the following requirements shall be met:

(i) The appointed actuary shall annually prepare an actuarial opinion and memorandum for the company in conformance with the requirements of 11 NCAC 11F .0300;

(ii) The appointed actuary shall disclose, in the Regulatory Asset Adequacy Issues Summary, the effect of the insufficiency of assets to support the payment of benefits and expenses and the establishment of statutory reserves during one or more interim periods; and

(iii) The appointed actuary shall annually opine for all policies subject to this Section as to whether the mortality rates resulting from the application of X meet the requirements of this Rule. This opinion shall be supported by an actuarial report, subject to appropriate Actuarial Standards of Practice promulgated by the Actuarial Standards Board of the American Academy of Actuaries. The X factors shall reflect anticipated future mortality, without recognition of mortality improvement beyond the valuation date, taking into account relevant emerging experience;

(4) Any other table of select mortality factors adopted by the NAIC after January 1, 2000, and adopted as a rule by the Commissioner for the purpose of calculating deficiency reserves.

(c) This Rule applies to both basic reserves and deficiency reserves. Any set of select mortality factors may be used only for the first segment. However, if the first segment is less than 10 years, the appropriate 10-year select mortality factors, incorporated into the 1980 amendments to the NAIC Standard Valuation Law, may be used thereafter through the tenth policy year from the date of issue.

(d) In determining basic reserves or deficiency reserves, guaranteed gross premiums without policy fees may be used where the calculation involves the guaranteed gross premium, but only if the policy fee is a level dollar amount after the first policy year. In determining deficiency reserves, policy fees may be included in guaranteed gross premiums even if they are not included in the actual calculation of basic reserves.

(e) Reserves for policies that have changes to guaranteed gross premiums, guaranteed benefits, guaranteed charges, or guaranteed credits that are unilaterally made by the insurer after issue and that are effective for more than one year after the date of the change shall be the greatest of the following:

(1) Reserves calculated ignoring the guarantee;

(2) Reserves assuming the guarantee was made at issue; or

(3) Reserves assuming that the policy was issued on the date of the guarantee.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(d); 58-58-50(k);*
*Eff. January 1, 1998;*
*Temporary Amended Eff. January 1, 2000;*
*Amended Eff. March 1, 2010; July 1, 2000;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0404 CALCULATION OF 11 NCAC 11F .0401(b)**

(a) Basic reserves shall be calculated as the greater of the segmented reserves and the unitary reserves. Both the segmented reserves and the unitary reserves for any policy shall use the same valuation mortality table and selection factors. At the option of the insurer, in calculating segmented reserves and net premiums, either of the following adjustments may be made:

(1) Treat the unitary reserve, if greater than zero, applicable at the end of each segment as a pure endowment; and subtract the unitary reserve, if greater than zero, applicable at the beginning of each segment from the present value of guaranteed life insurance and endowment benefits for each segment; or

(2) Treat the guaranteed cash surrender value, if greater than zero, applicable at the end of each segment as a pure endowment; and subtract the guaranteed cash surrender value, if greater than zero, applicable at the beginning of each segment from the present value of guaranteed life insurance and endowment benefits for each segment.

(b) Deficiency Reserves:

(1) The deficiency reserve at any duration shall be calculated:
    (A) On a unitary basis if the corresponding basic reserve determined by 11 NCAC 11F .0404(a) is unitary;
    (B) On a segmented basis if the corresponding basic reserve determined by 11 NCAC 11F .0404(a) is segmented; or
    (C) On the segmented basis if the corresponding basic reserve determined by 11 NCAC 11F .0404(a) is equal to both the segmented reserve and the unitary reserve.
(2) 11 NCAC 11F .0404(b) shall apply to any policy for which the guaranteed gross premium at any duration is less than the corresponding modified net premium calculated by the method used in determining the basic reserves, but using the minimum valuation standards of mortality (specified in 11 NCAC 11F .0403 (b)) and rate of interest.
(3) Deficiency reserves, if any, shall be calculated for each policy as the excess if greater than zero, for the current and all remaining periods, of the quantity A over the basic reserve, where A is obtained as indicated in 11 NCAC 11F .0403(b).
(4) For deficiency reserves determined on a segmented basis, the quantity A is determined using segment lengths equal to those determined for segmented basic reserves.

(c) Minimum Value - Basic reserves may not be less than the tabular cost of insurance for the balance of the policy year, if mean reserves are used. Basic reserves may not be less than the tabular cost of insurance for the balance of the current modal period or to the paid-to-date, if later, but not beyond the next policy anniversary, if mid-terminal reserves are used. The tabular cost of insurance shall use the same valuation mortality table and interest rates as those that are used for the calculation of the segmented reserves. However, if select mortality factors are used, they shall be the 10-year select factors incorporated into the 1980 amendments of the NAIC Standard Valuation Model Law. In no case may total reserves (including basic reserves, deficiency reserves and any reserves held for supplemental benefits that would expire upon contract termination) be less than the amount that the policyowner would receive (including the cash surrender value of the supplemental benefits, if any, referred to above), exclusive of any deduction for policy loans, upon termination of the policy.

(d) Unusual Pattern of Guaranteed Cash Surrender Values:
(1) For any policy with an unusual pattern of guaranteed cash surrender values, the reserves actually held prior to the first unusual guaranteed cash surrender value shall not be less than the reserves calculated by treating the first unusual guaranteed cash surrender value as a pure endowment and treating the policy as an n-year policy providing term insurance plus a pure endowment equal to the unusual cash surrender value, where n is the number of years from the date of issue to the date the unusual cash surrender value is scheduled.
(2) The reserves actually held subsequent to any unusual guaranteed cash surrender value shall not be less than the reserves calculated by treating the policy as an n-year policy providing term insurance plus a pure endowment equal to the next unusual guaranteed cash surrender value, and treating any unusual guaranteed cash surrender value at the end of the prior segment as a net single premium, where:
    (A) n is the number of years from the date of the last unusual guaranteed cash surrender value prior to the valuation date to the earlier of:
        (i) The date of the next unusual guaranteed cash surrender value, if any, that is scheduled after the valuation date; or
        (ii) The mandatory expiration date of the policy;
    (B) The net premium for a given year during the n-year period is equal to the product of the net to gross ratio and the respective gross premium; and
    (C) The net to gross ratio is equal to Item (i) divided by Item (ii):
        (i) The present value, at the beginning of the n-year period, of death benefits payable during the n-year period plus the present value, at the beginning of the n-year period, of the next unusual guaranteed cash surrender value, if any, minus the amount of the last unusual guaranteed cash surrender value, if any, scheduled at the beginning of the n-year period.
        (ii) The present value, at the beginning of the n-year period, of the scheduled gross premiums payable during the n-year period.
(3) For the purposes of 11 NCAC 11F .0404(d) a policy is considered to have an unusual pattern of guaranteed cash surrender values if any future guaranteed cash surrender value exceeds the prior year's guaranteed cash surrender value by more than the sum of:
    (A) One hundred ten percent (110%) of the scheduled gross premium for that year;

(B) One hundred ten percent (110%) of one year's accrued interest on the sum of the prior year's guaranteed cash surrender value and the scheduled gross premium using the nonforfeiture interest rate used for calculating policy guaranteed cash surrender values; and

(C) Five percent (5%) of the first policy year surrender charge, if any.

(e) Optional Exemption for Yearly Renewable Term Reinsurance - At the option of the company, the following approach for reserves on YRT reinsurance may be used:

(1) Calculate the valuation net premium for each future policy year as the tabular cost of insurance for that future year;

(2) Basic reserves shall never be less than the tabular cost of insurance for the appropriate period, as defined in 11 NCAC 11F .0404(c);

(3) Deficiency reserves:

(A) For each policy year, calculate the excess, if greater than zero, of the valuation net premium over the respective maximum guaranteed gross premium.

(B) Deficiency reserves shall never be less than the sum of the present values, at the date of valuation, of the excesses determined in accordance with Part (A) of this Subparagraph.

(4) For purposes of 11 NCAC 11F .0404(e), the calculations use the maximum valuation interest rate and the 1980 CSO mortality tables with or without ten-year select mortality factors, or any other table adopted after January 1, 2000, by the NAIC and adopted as a rule by the Commissioner for this purpose;

(5) A reinsurance agreement shall be considered YRT reinsurance for purposes of this Rule if only the mortality risk is reinsured.

(6) If the assuming company chooses this optional exemption, the ceding company's reinsurance reserve credit shall be limited to the amount of reserve held by the assuming company for the affected policies.

(f) Optional Exemption for Attained-Age-Based Yearly Renewable Term Life Insurance Policies - At the option of the company, the following approach for reserves for attained-age-based YRT life insurance policies may be used:

(1) Calculate the valuation net premium for each future policy year as the tabular cost of insurance for that future year;

(2) Basic reserves shall never be less than the tabular cost of insurance for the appropriate period, as defined in 11 NCAC 11F.0404(c);

(3) Deficiency reserves:

(A) For each policy year, calculate the excess, if greater than zero, of the valuation net premium over the respective maximum guaranteed gross premium.

(B) Deficiency reserves shall never be less than the sum of the present values, at the date of valuation, of the excesses determined in accordance with Part (A) of this Subparagraph;

(4) For purposes of 11 NCAC 11F .0404(f), the calculations use the maximum valuation interest rate and the 1980 CSO valuation tables with or without 10-year select mortality factors, or any other table adopted after January 1, 2000, by the NAIC and adopted as a rule by the Commissioner for this purpose;

(5) A policy shall be considered an attained-age-based YRT life insurance policy for purposes of this Rule if:

(A) The premium rates (on both the initial current premium scale and the guaranteed maximum premium scale) are based upon the attained age of the insured such that the rate for any given policy at a given attained age of the insured is independent of the year the policy was issued; and

(B) The premium rates (on both the initial current premium scale and the guaranteed maximum premium scale) are the same as the premium rates for policies covering all insureds of the same sex, risk class, plan of insurance and attained age;

(6) For policies that become attained-age-based YRT policies after an initial period of coverage, the approach of this Rule may be used after the initial period if:

(A) The initial period is constant for all insureds of the same sex, risk class and plan of insurance; or

(B) The initial period runs to a common attained age for all insureds of the same sex, risk class and plan of insurance; and

(C) After the initial period of coverage, the policy meets the conditions of Subparagraph (f)(5) of this Rule;

(7) If this election is made, this approach shall be applied in determining reserves for all attained-age-based YRT life insurance policies issued on or after January 1, 2000.

(g) Exemption from Unitary Reserves for Certain n-Year Renewable Term Life Insurance Policies - Unitary basic reserves and unitary deficiency reserves need not be calculated for a policy if the following conditions are met:

(1) The policy consists of a series of n-year periods, including the first period and all renewal periods, where n is the same for each period, except that for the final renewal period, n may be truncated or extended to reach the expiry age, provided that this final renewal period is less than 10 years and less than twice the size of the earlier n-year periods, and for each period, the premium rates on both the initial current premium scale and the guaranteed maximum premium scale are level;

(2) The guaranteed gross premiums in all n-year periods are not less than the corresponding net premiums based upon the 1980 CSO Table with or without the 10-year select mortality factors; and

(3) There are no cash surrender values in any policy year.

(h) Exemption from Unitary Reserves for Certain Juvenile Policies - Unitary basic reserves and unitary deficiency reserves need not be calculated for a policy if the following conditions are met, based upon the initial current premium scale at issue:

(1) At issue, the insured is age 24 or younger;

(2) Until the insured reaches the end of the juvenile period, which shall occur at or before age 25, the gross premiums and death benefits are level, and there are no cash surrender values; and

(3) After the end of the juvenile period, gross premiums are level for the remainder of the premium paying period, and death benefits are level for the remainder of the life of the policy.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(d); 58-58-50(k);*
*Eff. January 1, 1998;*
*Temporary Amendment Eff. January 1, 2000;*
*Amended Eff. July 1, 2000;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0405 CALCULATION OF 11 NCAC 11F .0401(c)**

(a) General

(1) Policies with a secondary guarantee include:

(A) A policy with a guarantee that the policy will remain in force at the original schedule of benefits, subject only to the payment of specified premiums;

(B) A policy in which the minimum premium at any duration is less than the corresponding one- year valuation premium, calculated using the maximum valuation interest rate and the 1980 CSO valuation tables with or without ten-year select mortality factors, or any other table adopted after January 1, 2000, by the NAIC and adopted as a rule by the Commissioner for this purpose; or

(C) A policy with any combination of Parts (A) and (B).

(2) A secondary guarantee period is the period for which the policy is guaranteed to remain in force subject only to a secondary guarantee. When a policy contains more than one secondary guarantee, the minimum reserve shall be the greatest of the respective minimum reserves at that valuation date of each unexpired secondary guarantee, ignoring all other secondary guarantees. Secondary guarantees that are unilaterally changed by the insurer after issue shall be considered to have been made at issue. Reserves described in Paragraphs (b) and (c) of this Rule shall be recalculated from issue to reflect these changes.

(3) Specified premiums mean the premiums specified in the policy, the payment of which guarantees that the policy will remain in force at the original schedule of benefits, but which otherwise would be insufficient to keep the policy in force in the absence of the guarantee if maximum mortality and expense charges and minimum interest credits were made and any applicable surrender charges were assessed.

(4) For purposes of this Rule, the minimum premium for any policy year is the premium that, when paid into a policy with a zero account value at the beginning of the policy year, produces a zero account value at the end of the policy year. The minimum premium calculation shall use the policy cost factors (including mortality charges, loads and expense charges) and the interest crediting rate, which are all guaranteed at issue.

(5) The one-year valuation premium means the net one-year premium based upon the original schedule of benefits for a given policy year. The one-year valuation premiums for all policy years are calculated at issue. The select mortality factors defined in 11 NCAC 11F .0403(b)(2), .0403(b)(3), and .0403(b)(4) may not be used to calculate the one-year valuation premiums.

(6) The one-year valuation premium shall reflect the frequency of fund processing, as well as the distribution of deaths assumption employed in the calculation of the monthly mortality charges to the fund.

(b) Basic reserves for the secondary guarantees shall be the segmented reserves for the secondary guarantee period. In calculating the segments and the segmented reserves, the gross premiums shall be set equal to the specified premiums, if any, or otherwise to the minimum premiums, that keep the policy in force and the segments will be determined according to the contract segmentation method as defined in 11 NCAC 11F .0402(2).
(c) Deficiency reserves, if any, for the secondary guarantees shall be calculated for the secondary guarantee period in the same manner as described in 11 NCAC 11F .0404(b) with gross premiums set equal to the specified premiums, if any, or otherwise to the minimum premiums that keep the policy in force.
(d) The minimum reserves during the secondary guarantee period are the greater of:

(1) The basic reserves for the secondary guarantee plus the deficiency reserve, if any, for the secondary guarantees; or
(2) The minimum reserves required by other rules or regulations governing universal life plans.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(d); 58-58-50(k);*
*Eff. January 1, 1998;*
*Temporary Amendment Eff. January 1, 2000;*
*Amended Eff. July 1, 2000;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0406 LIMITED USE OF ANTICIPATED WITHDRAWAL RATES**

(a) This Rule applies to universal life insurance policies and certificates issued after December 31, 2006, and before January 1, 2014, that contain a secondary guarantee that the death benefits will remain in effect as long as the accumulation of premiums paid satisfies the secondary guarantee requirement stated in the policy or certificate.
(b) For purposes of applying 11 NCAC 11F .0405(b) and 11 NCAC 11F .0405(c), a withdrawal rate of no more than two percent per year for the first five policy years, followed by no more than one percent per year to the policy anniversary specified in the following table, and zero percent thereafter shall be used. If the duration determined by reference to the table is less than five policy years, a withdrawal rate of no more than two percent per year shall be used through that duration, with zero percent per year used thereafter.

| Issue Age | Duration |
|---|---|
| 0-50 | Policy Duration 30 years. |
| 51-60 | Duration at which policyholder reaches attained age 80. |
| 61-70 | Policy Duration 20 years. |
| 71-89 | Duration at which policyholder reaches attained age 90. |
| 90 and over | No withdrawal rate assumption allowed. |

*History Note:* *Authority G.S. 58-2-40; 58-58-50(b); 58-58-50(l);*
*Eff. December 1, 2007;*
*Amended Eff. March 1, 2011;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

## SECTION .0500 – NEW ANNUITY VALUATION MORTALITY TABLES

**11 NCAC 11F .0501 DEFINITIONS**
**11 NCAC 11F .0502 INDIVIDUAL ANNUITY OR PURE ENDOWMENT CONTRACTS**
**11 NCAC 11F .0503 GROUP ANNUITY OR PURE ENDOWMENT CONTRACTS**
**11 NCAC 11F .0504 APPLICATION OF THE 1994 GAR TABLE**

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k);*
*Temporary Adoption Eff. December 1, 1999;*
*Eff. July 1, 2000;*
*Repealed Eff. January 1, 2015.*

**11 NCAC 11F .0505 MODEL RULE FOR RECOGNIZING A NEW ANNUITY MORTALITY TABLE FOR USE IN DETERMINING RESERVE LIABILITIES FOR ANNUITIES**

(a) The North Carolina Department of Insurance incorporates by reference, including subsequent amendments and editions, the National Association of Insurance Commissioners Model No. 821, NAIC Model Rule (Regulation) for Recognizing a New Annuity Mortality Table for Use in Determining Reserve Liabilities for Annuities. Copies of Model No. 821 may be obtained from: The National Association of Insurance Commissioners, 1100 Walnut Street, Suite 1500, Kansas City, MO 64106-2197; the North Carolina Department of Insurance, Actuarial Services Division, 1201 Mail Service Center, Raleigh, NC 27699-1201; and from the Department of Insurance web page at http://www.ncdoi.com/.

(b) For purposes of this Rule, Subsection A of Section 4 of Model No. 821 shall read as follows:

Except as provided in Subsections B and C of this section, the 1983 Table "a" is recognized and approved as an individual annuity mortality table for valuation and, at the option of the company, may be used for purposes of determining the minimum standard of valuation for any individual annuity or pure endowment contract issued on or after April 19, 1979.

(c) For purposes of this Rule, Subsection B of Section 4 of Model No. 821 shall read as follows:

Except as provided in Subsection C of this section, either the 1983 Table "a" or the Annuity 2000 Mortality Table shall be used for determining the minimum standard of valuation for any individual annuity or pure endowment contract issued on or after January 1, 1987.

(d) For purposes of this Rule, Subsection C of Section 4 of Model No. 821 shall read as follows:

Except as provided in Subsection D of this section, the Annuity 2000 Mortality Table shall be used for determining the minimum standard of valuation for any individual annuity or pure endowment contract issued on or after January 1, 2000.

(e) For purposes of this Rule, Subsection D of Section 4 of Model No. 821 shall read as follows:

Except as provided in Subsection E of this section, the 2012 IAR Mortality Table shall be used for determining the minimum standard of valuation for any individual annuity or pure endowment contract issued on or after January 1, 2015.

(f) For purposes of this Rule, Subsection E of Section 4 of Model No. 821 shall read as follows:

The 1983 Table "a" without projection is to be used for determining the minimum standards of valuation for an individual annuity or pure endowment contract issued on or after January 1, 2000, solely when the contract is based on life contingencies and is issued to fund periodic benefits arising from:

(1) Settlements of various forms of claims pertaining to court settlements or out of court settlements from tort actions;

(2) Settlements involving similar actions such as worker's compensation claims; or

(3) Settlements of long term disability claims where a temporary or life annuity has been used in lieu of continuing disability payments.

(g) For purposes of this Rule, Subsection A of Section 6 of Model No. 821 shall read as follows:

Except as provided in Subsections B and C of this section, the 1983 GAM Table, the 1983 Table "a" and the 1994 GAR Table are recognized and approved as group annuity mortality tables for valuation and, at the option of the company, any one of these tables may be used for purposes of valuation for an annuity or pure endowment purchased on or after April 19, 1979, under a group annuity or pure endowment contract.

(h) For purposes of this Rule, Subsection B of Section 6 of Model No. 821 shall read as follows:

Except as provided in Subsection C of this section, either the 1983 GAM Table or the 1994 GAR Table shall be used for determining the minimum standard of valuation for any annuity or pure endowment purchased on or after January 1, 1987, under a group annuity or pure endowment contract.

(i) For purposes of this Rule, Subsection C of Section 6 of Model No. 821 shall read as follows:

The 1994 GAR Table shall be used for determining the minimum standard of valuation for any annuity or pure endowment purchased on or after January 1, 2000, under a group annuity or pure endowment contract.

(j) For purposes of this Rule, Section 1, Section 8, and Section 9 of Model No. 821 are not applicable.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k);*
*Eff. January 1, 2015.*

## SECTION .0600 – RECOGNITION OF THE 2001 CSO MORTALITY TABLE FOR USE IN DETERMINING MINIMUM RESERVE LIABILITIES AND NONFORFEITURE BENEFITS

### 11 NCAC 11F .0601 DEFINITIONS

As used in this Section:

(1) "2001 CSO Mortality Table" means that mortality table, consisting of separate rates of mortality for male and female lives, developed by the American Academy of Actuaries CSO Task Force from the Valuation Basic Mortality Table developed by the Society of Actuaries Individual Life Insurance Valuation Mortality Task Force, and adopted by the NAIC in December 2002. The 2001 CSO Mortality Table is included in the *Proceedings of the NAIC (2nd Quarter 2002).* Unless the context indicates otherwise, the "2001 CSO Mortality Table" includes both the ultimate form of that table and the select and ultimate form of that table and includes both the smoker and nonsmoker mortality tables and the composite mortality tables. It also includes both the age-nearest-birthday and age-last-birthday bases of the mortality tables.

(2) "2001 CSO Mortality Table (F)" means that mortality table consisting of the rates of mortality for female lives from the 2001 CSO Mortality Table.

(3) "2001 CSO Mortality Table (M)" means that mortality table consisting of the rates of mortality for male lives from the 2001 CSO Mortality Table.

(4) "Composite mortality tables" means mortality tables with rates of mortality that do not distinguish between smokers and nonsmokers.

(5) "Preneed life insurance" means a life insurance policy which, whether by assignment or otherwise, has for a purpose the funding of a preneed funeral contract or an insurance-funded funeral or burial prearrangement, the insured being the person for whose service the funds were paid.

(6) "Smoker and nonsmoker mortality tables" means mortality tables with separate rates of mortality for smokers and nonsmokers.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k); 58-58-50(l); 58-58-55(e);*
*Eff. March 1, 2004;*
*Amended Eff. December 1, 2008;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0602 2001 CSO MORTALITY TABLE AS MINIMUM STANDARD**

(a) At the election of the company for any one or more specified plans of insurance and subject to the conditions stated in this Section, the 2001 CSO Mortality Table may be used as the minimum standard for policies issued on or after January 1, 2005, and before the date specified in Paragraph (b) of this Rule to which G.S. 58-58-50(c)(2)(a), G.S. 58-58-55(e)(4)h.6, 11 NCAC 11F .0403(a) or 11 NCAC 11F .0403(b) are applicable. If the company elects to use the 2001 CSO Mortality Table, it shall do so for both valuation and nonforfeiture purposes.

(b) Subject to the conditions stated in this rule, the 2001 CSO Mortality Table shall be used in determining minimum standards for policies issued on or after January 1, 2009, to which G.S. 58-58-50(c)(2)(a), G.S. 58-58-55(e)(4)h.6, 11 NCAC 11F.0403(a) or 11 NCAC 11F.0403(b) are applicable, except for preneed life insurance as specified in 11 NCAC 11F .0606.

(c) The 2001 CSO Mortality Table shall be the basis for computation of minimum values related to extended term benefits for policies for which the 2001 CSO Mortality Table is the minimum standard for valuation and nonforfeiture purposes.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k); 58-58-50(l); 58-58-55(e);*
*Eff. March 1, 2004;*
*Amended Eff. December 1, 2008;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0603 CONDITIONS**

(a) For each plan of insurance with separate rates for smokers and nonsmokers an insurer shall use one of the following:

(1) Composite mortality tables to determine minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits;

(2) Smoker and nonsmoker mortality tables to determine the valuation net premiums and additional minimum reserves, if any, required by G.S. 58-58-50(g) and use composite mortality tables to determine the basic minimum reserves, minimum cash surrender values and amounts of paid-up nonforfeiture benefits; or

(3) Smoker and nonsmoker mortality to determine minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits.

(b) For plans of insurance without separate rates for smokers and nonsmokers the composite mortality tables shall be used.

(c) When the 2001 CSO Mortality Table is used for the purpose of determining minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits, it may, at the option of the company for each plan of insurance, be used in its ultimate or select and ultimate form, subject to the restrictions of 11 NCAC 11F .0604 and 11 NCAC 11F .0400, relative to use of the select and ultimate form.
(d) When the 2001 CSO Mortality Table is the minimum reserve standard for any plan for a company, the actuarial opinion in the annual statement filed with the Commissioner shall be based on an asset adequacy analysis as specified in 11 NCAC 11F .0303.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k); 58-58-50(l); 58-58-55(e);*
*Eff. March 1, 2004;*
*Amended Eff. December 1, 2008;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0604 APPLICABILITY OF THE 2001 CSO MORTALITY TABLE TO 11 NCAC 11F .0400**

(a) For policies for which the 2001 CSO Mortality Table is the minimum standard for valuation and nonforfeiture purposes, 11F .0400 shall be applied in the following manner:

(1) To comply with 11 NCAC 11F .0401(a)(2)(B), the net level reserve premium shall be based on the ultimate mortality rates in the 2001 CSO Mortality Table;

(2) To comply with 11 NCAC 11F .0402(2), all calculations shall be made using the 2001 CSO Mortality Rate, and, if elected, the optional minimum mortality standard for deficiency reserves stipulated in Subparagraph (a)(4) of this Rule; The value of "$q_{x+k+t-1}$" is the valuation mortality rate for deficiency reserves in policy year k+t, but using the unmodified select mortality rates if modified select mortality rates are used in the computation of deficiency reserves.

(3) To comply with 11 NCAC 11F .0403(a), the 2001 CSO Mortality Table shall be the minimum standard for basic reserves;

(4) To comply with 11 NCAC 11F .0403(b), the 2001 CSO Mortality Table shall be the minimum standard for deficiency reserves. If select mortality rates are used, they may be multiplied by X percent for durations in the first segment, subject to the conditions specified in 11 NCAC 11F .0403(b)(3). In demonstrating compliance with those conditions, the demonstrations may not combine the results of tests that utilize the 1980 CSO Mortality Table with those tests that utilize the 2001 CSO Mortality Table, unless the combination is explicitly required by rule or necessary to be in compliance with relevant Actuarial Standards of Practice;

(5) To comply with 11 NCAC 11F .0404(c), the valuation mortality table used in determining the tabular cost of insurance shall be the ultimate mortality rates in the 2001 CSO Mortality Table;

(6) To comply with 11 NCAC 11F .0404(e)(4), the calculations specified in 11 NCAC 11F .0404(e) shall use the ultimate mortality rates in the 2001 CSO Mortality Table;

(7) To comply with 11 NCAC 11F .0404(f)(4), the calculations specified in 11 NCAC 11F .0404(f) shall use the ultimate rates in the 2001 CSO Mortality Table;

(8) To comply with 11 NCAC 11F .0404(g)(2), the calculations specified in 11 NCAC 11F .0404(g) shall use the ultimate mortality rates in the 2001 CSO Mortality Table; and

(9) To comply with 11 NCAC 11F .0405(a)(1)(B), the one-year valuation premium shall be calculated using the ultimate mortality rates in the 2001 CSO Mortality Table.

(b) Nothing in this Rule shall be construed to expand the applicability of 11 NCAC 11F .0400 to include life insurance policies exempted under 11 NCAC 11F .0401(a).

*History Note* *Authority G.S. 58-2-40; 58-58-50(k); 58-58-50(l); 58-58-55(e);*
*Eff. March 1, 2004;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0605 GENDER-BLENDED TABLES**

(a) For any ordinary life insurance policy delivered or issued for delivery in this state on or after January 1, 2005 that utilizes the same premium rates and charges for male and female lives or is issued in circumstances where applicable law does not permit distinctions on the basis of gender, a mortality table that is a blend of the 2001 CSO Mortality Table (M) and the 2001

CSO Mortality Table (F) may, at the option of the company for each plan of insurance, be substituted for the 2001 CSO Mortality Table for use in determining minimum cash surrender values and amounts of paid-up nonforfeiture benefits, except for preneed life insurance policies issued after December 31, 2008, as provided in 11 NCAC 11F .0606. Notwithstanding this rule, the 2001 CSO Mortality Table, consisting of separate rates of mortality for male and female lives, shall be the minimum valuation standard even if blended tables are used in determining minimum cash surrender values and nonforfeiture benefits.
(b) When using a gender-blended table based on the 2001 CSO Mortality Table for determining minimum cash surrender values and amounts of paid-up nonforfeiture benefits, the company shall choose from among the blended tables developed by the American Academy of Actuaries CSO Task Force and adopted by the NAIC in December 2002.
(c) An insurer's issuance of the same kind of policy of life insurance on both a sex-distinct and a sex-neutral basis shall not solely constitute a violation of Article 63 of Chapter 58 of the North Carolina General Statutes.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k); 58-58-50(l); 58-58-55(e);*
*Eff. March 1, 2004;*
*Amended Eff. December 1, 2008;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**11 NCAC 11F .0606 MINIMUM STANDARDS FOR PRENEED LIFE INSURANCE**

(a) For preneed life insurance, the minimum mortality standard for determining reserve liabilities and nonforfeiture values for policies issued after December 31, 2008, shall be the Commissioners' 1980 Standard Ordinary Life Valuation Mortality Tables (1980 CSO), without ten-year selection factors, incorporated into the 1980 amendments to the NAIC Standard Valuation Law approved in December 1983. If the policy utilizes the same premium rates and charges for male and female lives or is issued in circumstances where applicable law does not permit distinctions on the basis of gender, a table that is a blend of the 1980 CSO Table (M) and the 1980 CSO Table (F), without ten-year selection factors may, at the option of the insurer, be substituted for the 1980 CSO Table to determine minimum cash surrender values and nonforfeiture benefits. For the Commissioners' 1980 Extended Term Insurance Table (1980 CET), a mortality table which is the same blend of the 1980 CET Table (M) and 1980 CET Table (F) may be substituted. The blended tables must be selected from those published in the 1984 Proceedings of the NAIC, Vol. I., or in the 1987 Proceedings of the NAIC, Volume I.
(b) Notwithstanding 11 NCAC 11F .0606(a), for preneed life insurance policies issued after December 31, 2008 and before January 1, 2012, the 2001 CSO Mortality Table may be used as the minimum standard for reserves and nonforfeiture values. If an insurer elects to use the 2001 CSO Mortality Table as a minimum standard for any preneed life insurance policy issued after December 31, 2008 and before January 1, 2012, the insurer shall provide, as a part of the actuarial memorandum submitted in support of the insurer's asset adequacy testing, an annual written notification to the domiciliary commissioner. The notification shall include:

(1) A complete list of all preneed policy forms that use the 2001 CSO Mortality Table as a minimum standard;
(2) A certification signed by the appointed actuary stating that the reserve methodology employed by the insurer in determining reserves for the preneed life insurance policies issued after December 31, 2008 and using the 2001 CSO Mortality Table as a minimum standard, develops adequate reserves for these policies without being aggregated with any other policies; and
(3) Supporting information regarding the adequacy of reserves for preneed life insurance policies issued after December 31, 2008 and using the 2001 CSO Mortality Table as a minimum standard for reserves. The supporting information shall include documentation of the actuarial assumptions and methods used in testing these reserves for adequacy.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k); 58-58-50(l); 58-58-55(e);*
*Eff. December 1, 2008;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

**SECTION .0700 – DETERMINING MINIMUM RESERVE LIABILITIES FOR CREDIT LIFE INSURANCE**

**11 NCAC 11F .0701 DETERMINING RESERVE LIABILITIES FOR CREDIT LIFE INSURANCE MODEL REGULATION**

(a) The North Carolina Department of Insurance incorporates by reference, including subsequent amendments and editions, the National Association of Insurance Commissioners Model No. 818, Determining Reserve Liabilities for Credit Life

Insurance Model Regulation. Copies of Model No. 818 may be obtained from: The National Association of Insurance Commissioners, 2301 McGee Street, Kansas City, MO 64108-1662; the North Carolina Department of Insurance, Actuarial Services Division, 1201 Mail Service Center, Raleigh, NC 27699-1201; and from the Department of Insurance web page at http://www.ncdoi.com/.

(b) For purposes of this Rule, Section 4.C. of Model No. 818 shall read as follows:
"Credit life insurance" means insurance on the life of a debtor pursuant to or in connection with a specific loan or other credit transaction as defined in G.S. 58-58-10.

(c) For purposes of this Rule, Section 6.A. of Model No. 818 shall read as follows:
11 NCAC 11F .0400 shall not apply to credit life insurance.

(d) For purposes of this Rule, Section 6.B. of Model No. 818 shall read as follows:
The interest rates used in determining the minimum standard for valuation shall be the calendar year statutory valuation interest rates as defined in G.S. 58-58-50(c)(4).

(e) For purposes of this Rule, Section 6.C. of Model No. 818 shall read as follows:
The method used in determining the minimum standard for valuation shall be the Commissioner's Reserve Valuation Method as defined in G.S. 58-58-50(d).

(f) This Rule applies to credit life insurance policies and certificates issued on or after January 1, 2006. For credit life insurance policies and certificates issued prior to January 1, 2006, the minimum standard mortality tables and interest rates shall be those provided by the statutes and rules in effect as of the issue date of those policies and certificates.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k);*
*Eff. September 1, 2005;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*

## SECTION .0800 - PREFERRED CLASS STRUCTURE MORTALITY TABLE

### 11 NCAC 11F .0801 MODEL REGULATION PERMITTING THE RECOGNITION OF PREFERRED MORTALITY TABLES FOR USE IN DETERMINING MINIMUM RESERVE LIABILITIES

(a) The North Carolina Department of Insurance incorporates by reference, including subsequent amendments and editions, the National Association of Insurance Commissioners Model No. 815, Model Regulation Permitting the Recognition of Preferred Mortality Tables for Use in Determining Minimum Reserve Liabilities. Copies of Model No. 815 may be obtained from: The National Association of Insurance Commissioners, 2301 McGee Street, Kansas City, MO 64108-1662; the North Carolina Department of Insurance, Actuarial Services Division, 1201 Mail Service Center, Raleigh, NC 27699-1201; and from the Department of Insurance web page at http://www.ncdoi.com/.

(b) For purposes of this Rule, Section 2 of Model No. 815 shall read as follows:
The purpose of this regulation is to recognize, permit and prescribe the use of mortality tables that reflect differences in mortality between Preferred and Standard lives in determining minimum reserve liabilities in accordance with G.S. 58-58-50 (c)(2)(a), 11 NCAC 11F .0403(a), and 11 NCAC 11F .0403(b).

(c) For purposes of this Rule, Section 4 of Model No. 815 shall read as follows:
At the election of the company, for each calendar year of issue, for any one or more specified plans of insurance and subject to satisfying the conditions stated in this regulation, the 2001 CSO Preferred Class Structure Mortality Table may be substituted in place of the 2001 CSO Smoker or Nonsmoker Mortality Table as the minimum valuation standard for policies issued on or after January 1, 2007. For policies issued on or after January 1, 2005 and before January 1, 2007, these tables may be substituted with the consent of the Commissioner and subject to the conditions of Section 5. In determining such consent, the Commissioner shall consider the consent of the insurance regulator of the company's state of domicile. No such election shall be made until the company demonstrates that at least 20% of the business to be valued on this table is in one or more of the preferred classes. A table from the 2001 CSO Preferred Class Structure Mortality Table used in place of a 2001 CSO Mortality Table, pursuant to the requirements of this regulation, shall be treated as part of the 2001 CSO Mortality Table only for purposes of reserve valuation pursuant to the requirements of 11 NCAC 11F .0601, 11 NCAC 11F .0602, 11 NCAC 11F .0603, and 11 NCAC 11F .0604.

(d) For purposes of this Rule, Paragraph C of Section 3, and Paragraph C of Section 5 of Model No. 815 are not applicable.

(e) For purposes of this Rule, Sections 1 and 7 of Model No. 815 are not applicable.

*History Note:* *Authority G.S. 58-2-40; 58-58-50(k);*
*Eff. April 1, 2007;*
*Amended Eff. March 1, 2010;*
*Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. December 20, 2015.*