# VERMONT DEPARTMENT OF FINANCIAL REGULATION

## REGULATION 88-4 (REVISED)

## MORTALITY TABLES FOR LIFE INSURANCE AND ANNUITIES

**Table of Contents**

**PART A.    Annuity Mortality Tables**

**Section 1.    Authority**

Part A of Regulation I-88-4 is promulgated by the Commissioner of the Vermont Department of Financial Regulation pursuant to 8 V.S.A., Section 3784, of the Vermont Insurance Statutes.

**Section 2.    Purpose**

The purpose of Part A is to recognize the following mortality tables for use in determining the minimum standard of valuation for annuity and pure endowment contracts: the 1983 Table "a," the 1983 Group Annuity Mortality (1983 GAM) Table, the Annuity 2000 Mortality Table, the 2012 Individual Annuity Reserving (2012 IAR) Table, and the 1994 Group Annuity Reserving (1994 GAR) Table.

**Section 3.    Definitions**

A.    As used in Part A, "1983 Table 'a'" means that mortality table developed by the Society of Actuaries Committee to Recommend a New Mortality Basis for Individual Annuity Valuation and adopted as a recognized mortality table for annuities in June 1982 by the National Association of Insurance Commissioners.

B.    As used in Part A, "1983 GAM Table" means that mortality table developed by the Society of Actuaries Committee on Annuities and adopted as a recognized mortality table for annuities in December 1983 by the National Association of Insurance Commissioners.

C.    As used in Part A, "1994 GAR Table" means that mortality table developed by the Society of Actuaries Group Annuity Valuation Table Task Force and shown on pages 866-867 of Volume XLVII of the Transactions of the Society of Actuaries (1995).

D.    As used in Part A, "Annuity 2000 Mortality Table" means that mortality table developed by the Society of Actuaries Committee on Life Insurance Research and shown on pages 240 of Volume XLVII of the Transactions of the Society of Actuaries (1995).

E.    As used in Part A, "Period table" means a table of mortality rates applicable to a given calendar year (the Period).

F.    As used in Part A, "Generational mortality table" means a mortality table containing a set of mortality rates that decrease for a given age from one year to the next based on a combination of a Period table and a projection scale containing rates of mortality improvement.

G.    As used in Part A, "2012 IAR Table" means that Generational mortality table developed by the Society of Actuaries Committee on Life Insurance Research and containing rates, $q_x^{2012+n}$, derived from a combination of the 2012 IAM Period Table and Projection Scale G2, using the methodology stated in Section 5.

H. As used in this rule, "2012 Individual Annuity Mortality Period Life (2012 IAM Period) Table" means the Period table containing loaded mortality rates for calendar year 2012. This table contains rates, $q_x^{2012}$, developed by the Society of Actuaries Committee on Life Insurance Research and is shown in Appendices 1-2.

I. As used in this rule, "Projection Scale G2 (Scale G2)" is a table of annual rates, $G2_x$, of mortality improvement by age for projecting future mortality rates beyond calendar year 2012. This table was developed by the Society of Actuaries Committee on Life Insurance Research and is shown in Appendices 3-4.

**Section 4.      Individual Annuity or Pure Endowment Contracts**

A. 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 January 1, 1980.

B. 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 December 31, 1985.

C. Except as provided in Subsections D and E 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.

D. 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.

E. The 1983 Table "a" without projection shall 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.

## Section 5.    Application of the 2012 IAR Mortality Table

In using the 2012 IAR Mortality Table, the mortality rate for a person age x in year (2012 + n) is calculated as follows:

$$q_x^{2012+n} - q_x^{2012}(1 - G2_x)^n$$

The resulting $q_x^{2012+n}$ shall be rounded to three decimal places per 1,000, e.g., 0.741 deaths per 1,000. Also, the rounding shall occur according to the formula above, starting at the 2012 period table rate.

For example, for a male age 30, $q_x^{2012} = 0.741$.
$q_x^{2013} = 0.741 * (1 - 0.010) \wedge 1 = 0.73359$, which is rounded to 0.734.
$q_x^{2014} = 0.741 * (1 - 0.010) \wedge 2 = 0.7262541$, which is rounded to 0.726.
A method leading to incorrect rounding would be to calculate $q_x^{2014}$ as $q_x^{2013} * (1 - 0.010)$, or
0.734 * 0.99 = 0.727.
It is incorrect to use the already rounded $q_x^{2013}$ to calculate $q_x^{2014}$.

## Section 6.    Group Annuity of Pure Endowment Contracts

A.    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 January 1, 1980, under a group annuity or pure endowment contract.

B.    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 December 31, 1985, under a group annuity or pure endowment contract.

C.    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.

## Section 7.    Application of the 1994 GAR Table

In using the 1994 GAR Table, the mortality rate for a person age x in year (1994 + n) is calculated as follows:

$$q_x^{1994+n} - q_x^{1994}(1-AA_x)^n$$

where the $q_x^{1994}$ and $AA_x$ are as specified in the 1994 GAR Table.

# APPENDIX I

### 2012 IAM Period Table
### Female, Age Nearest Birthday

| AGE | $1000 \cdot q_x^{2012}$ | AGE | $1000 \cdot q_x^{2012}$ | AGE | $1000 \cdot q_x^{2012}$ | AGE | $1000 \cdot q_x^{2012}$ |
|---|---|---|---|---|---|---|---|
| 0 | 1.621 | 30 | 0.300 | 60 | 3.460 | 90 | 88.377 |
| 1 | 0.405 | 31 | 0.321 | 61 | 3.916 | 91 | 97.491 |
| 2 | 0.259 | 32 | 0.338 | 62 | 4.409 | 92 | 107.269 |
| 3 | 0.179 | 33 | 0.351 | 63 | 4.933 | 93 | 118.201 |
| 4 | 0.137 | 34 | 0.365 | 64 | 5.507 | 94 | 130.969 |
| 5 | 0.125 | 35 | 0.381 | 65 | 6.146 | 95 | 146.449 |
| 6 | 0.117 | 36 | 0.402 | 66 | 6.551 | 96 | 163.908 |
| 7 | 0.110 | 37 | 0.429 | 67 | 7.039 | 97 | 179.695 |
| 8 | 0.095 | 38 | 0.463 | 68 | 7.628 | 98 | 196.151 |
| 9 | 0.088 | 39 | 0.504 | 69 | 8.311 | 99 | 213.150 |
| 10 | 0.085 | 40 | 0.552 | 70 | 9.074 | 100 | 230.722 |
| 11 | 0.086 | 41 | 0.600 | 71 | 9.910 | 101 | 251.505 |
| 12 | 0.094 | 42 | 0.650 | 72 | 10.827 | 102 | 273.007 |
| 13 | 0.108 | 43 | 0.697 | 73 | 11.839 | 103 | 295.086 |
| 14 | 0.131 | 44 | 0.740 | 74 | 12.974 | 104 | 317.591 |
| 15 | 0.156 | 45 | 0.780 | 75 | 14.282 | 105 | 340.362 |
| 16 | 0.179 | 46 | 0.825 | 76 | 15.799 | 106 | 362.371 |
| 17 | 0.198 | 47 | 0.885 | 77 | 17.550 | 107 | 384.113 |
| 18 | 0.211 | 48 | 0.964 | 78 | 19.582 | 108 | 400.000 |
| 19 | 0.221 | 49 | 1.051 | 79 | 21.970 | 109 | 400.000 |
| 20 | 0.228 | 50 | 1.161 | 80 | 24.821 | 110 | 400.000 |
| 21 | 0.234 | 51 | 1.308 | 81 | 28.351 | 111 | 400.000 |
| 22 | 0.240 | 52 | 1.460 | 82 | 32.509 | 112 | 400.000 |
| 23 | 0.245 | 53 | 1.613 | 83 | 37.329 | 113 | 400.000 |
| 24 | 0.247 | 54 | 1.774 | 84 | 42.830 | 114 | 400.000 |
| 25 | 0.250 | 55 | 1.950 | 85 | 48.997 | 115 | 400.000 |
| 26 | 0.256 | 56 | 2.154 | 86 | 55.774 | 116 | 400.000 |
| 27 | 0.261 | 57 | 2.399 | 87 | 63.140 | 117 | 400.000 |
| 28 | 0.270 | 58 | 2.700 | 88 | 71.066 | 118 | 400.000 |
| 29 | 0.281 | 59 | 3.054 | 89 | 79.502 | 119 | 400.000 |
|  |  |  |  |  |  | 120 | 1000.000 |

## 2012 IAM Period Table
### Male, Age Nearest Birthday

| AGE | $1000 \cdot q_x^{2012}$ | AGE | $1000 \cdot q_x^{2012}$ | AGE | $1000 \cdot q_x^{2012}$ | AGE | $1000 \cdot q_x^{2012}$ |
|---|---|---|---|---|---|---|---|
| 0 | 1.605 | 30 | 0.741 | 60 | 5.096 | 90 | 109.993 |
| 1 | 0.401 | 31 | 0.751 | 61 | 5.614 | 91 | 123.119 |
| 2 | 0.275 | 32 | 0.754 | 62 | 6.169 | 92 | 137.168 |
| 3 | 0.229 | 33 | 0.756 | 63 | 6.759 | 93 | 152.171 |
| 4 | 0.174 | 34 | 0.756 | 64 | 7.398 | 94 | 168.194 |
| 5 | 0.168 | 35 | 0.756 | 65 | 8.106 | 95 | 185.260 |
| 6 | 0.165 | 36 | 0.756 | 66 | 8.548 | 96 | 197.322 |
| 7 | 0.159 | 37 | 0.756 | 67 | 9.076 | 97 | 214.751 |
| 8 | 0.143 | 38 | 0.756 | 68 | 9.708 | 98 | 232.507 |
| 9 | 0.129 | 39 | 0.800 | 69 | 10.463 | 99 | 250.397 |
| 10 | 0.113 | 40 | 0.859 | 70 | 11.357 | 100 | 268.607 |
| 11 | 0.111 | 41 | 0.926 | 71 | 12.418 | 101 | 290.016 |
| 12 | 0.132 | 42 | 0.999 | 72 | 13.675 | 102 | 311.849 |
| 13 | 0.169 | 43 | 1.069 | 73 | 15.150 | 103 | 333.962 |
| 14 | 0.213 | 44 | 1.142 | 74 | 16.860 | 104 | 356.207 |
| 15 | 0.254 | 45 | 1.219 | 75 | 18.815 | 105 | 380.000 |
| 16 | 0.293 | 46 | 1.318 | 76 | 21.031 | 106 | 400.000 |
| 17 | 0.328 | 47 | 1.454 | 77 | 23.540 | 107 | 400.000 |
| 18 | 0.359 | 48 | 1.627 | 78 | 26.375 | 108 | 400.000 |
| 19 | 0.387 | 49 | 1.829 | 79 | 29.572 | 109 | 400.000 |
| 20 | 0.414 | 50 | 2.057 | 80 | 33.234 | 110 | 400.000 |
| 21 | 0.443 | 51 | 2.302 | 81 | 37.533 | 111 | 400.000 |
| 22 | 0.473 | 52 | 2.545 | 82 | 42.261 | 112 | 400.000 |
| 23 | 0.513 | 53 | 2.779 | 83 | 47.441 | 113 | 400.000 |
| 24 | 0.554 | 54 | 3.011 | 84 | 53.233 | 114 | 400.000 |
| 25 | 0.602 | 55 | 3.254 | 85 | 59.855 | 115 | 400.000 |
| 26 | 0.655 | 56 | 3.529 | 86 | 67.514 | 116 | 400.000 |
| 27 | 0.688 | 57 | 3.845 | 87 | 76.340 | 117 | 400.000 |
| 28 | 0.710 | 58 | 4.213 | 88 | 86.388 | 118 | 400.000 |
| 29 | 0.727 | 59 | 4.631 | 89 | 97.634 | 119 | 400.000 |
| | | | | | | 120 | 1000.000 |

# APPENDIX III

### Projection Scale G2
### Female. Age Nearest Birthday

| AGE | $G2_x$ | AGE | $G2_x$ | AGE | $G2_x$ | AGE | $G2_x$ |
|---|---|---|---|---|---|---|---|
| 0 | 0.010 | 30 | 0.010 | 60 | 0.013 | 90 | 0.006 |
| 1 | 0.010 | 31 | 0.010 | 61 | 0.013 | 91 | 0.006 |
| 2 | 0.010 | 32 | 0.010 | 62 | 0.013 | 92 | 0.005 |
| 3 | 0.010 | 33 | 0.010 | 63 | 0.013 | 93 | 0.005 |
| 4 | 0.010 | 34 | 0.010 | 64 | 0.013 | 94 | 0.004 |
| 5 | 0.010 | 35 | 0.010 | 65 | 0.013 | 95 | 0.004 |
| 6 | 0.010 | 36 | 0.010 | 66 | 0.013 | 96 | 0.004 |
| 7 | 0.010 | 37 | 0.010 | 67 | 0.013 | 97 | 0.003 |
| 8 | 0.010 | 38 | 0.010 | 68 | 0.013 | 98 | 0.003 |
| 9 | 0.010 | 39 | 0.010 | 69 | 0.013 | 99 | 0.002 |
| 10 | 0.010 | 40 | 0.010 | 70 | 0.013 | 100 | 0.002 |
| 11 | 0.010 | 41 | 0.010 | 71 | 0.013 | 101 | 0.002 |
| 12 | 0.010 | 42 | 0.010 | 72 | 0.013 | 102 | 0.001 |
| 13 | 0.010 | 43 | 0.010 | 73. | 0.013 | 103 | 0.001 |
| 14 | 0.010 | 44 | 0.010 | 74 | 0.013 | 104 | 0.000 |
| 15 | 0.010 | 45 | 0.010 | 75 | 0.013 | 105 | 0.000 |
| 16 | 0.010 | 46 | 0.010 | 76 | 0.013 | 106 | 0.000 |
| 17 | 0.010 | 47 | 0.010 | 77 | 0.013 | 107 | 0.000 |
| 18 | 0.010 | 48 | 0.010 | 78 | 0.013 | 108 | 0.000 |
| 19 | 0.010 | 49 | 0.010 | 79 | 0.013 | 109 | 0.000 |
| 20 | 0.010 | 50 | 0.010 | 80 | 0.013 | 110 | 0.000 |
| 21 | 0.010 | 51 | 0.010 | 81 | 0.012 | 111 | 0.000 |
| 22 | 0.010 | 52 | 0.011 | 82 | 0.012 | 112 | 0.000 |
| 23 | 0.010 | 53 | 0.011 | 83 | 0.011 | 113 | 0.000 |
| 24 | 0.010 | 54 | 0.011 | 84 | 0.010 | 114 | 0.000 |
| 25 | 0.010 | 55 | 0.012 | 85 | 0.010 | 115 | 0.000 |
| 26 | 0.010 | 56 | 0.012 | 86 | 0.009 | 116 | 0.000 |
| 27 | 0.010 | 57 | 0.012 | 87 | 0.008 | . 117 | 0.000 |
| 28 | 0.010 | 58 | 0.012 | 88 | 0.007 | 118 | 0.000 |
| 29 | 0.010 | 59 | 0.013 | 89 | 0.007 | 119 | 0.000 |
| | | | | | | 120 | 0.000 |

# APPENDIX IV

## Projection Scale G2
### Male, Age Nearest Birthday

| AGE | $G2_x$ | AGE | $G2_x$ | AGE | $G2_x$ | AGE | $G2_x$ |
|---|---|---|---|---|---|---|---|
| 0 | 0.010 | 30 | 0.010 | 60 | 0.015 | 90 | 0.007 |
| 1 | 0.010 | 31 | 0.010 | 61 | 0.015 | 91 | 0.007 |
| 2 | 0.010 | 32 | 0.010 | 62 | 0.015 | 92 | 0.006 |
| 3 | 0.010 | 33 | 0.010 | 63 | 0.015 | 93 | 0.005 |
| 4 | 0.010 | 34 | 0.010 | 64 | 0.015 | 94 | 0.005 |
| 5 | 0.010 | 35 | 0.010 | 65 | 0.015 | 95 | 0.004 |
| 6 | 0.010 | 36 | 0.010 | 66 | 0.015 | 96 | 0.004 |
| 7 | 0.010 | 37 | 0.010 | 67 | 0.015 | 97 | 0.003 |
| 8 | 0.010 | 38 | 0.010 | 68 | 0.015 | 98 | 0.003 |
| 9 | 0.010 | 39 | 0.010 | 69 | 0.015 | 99 | 0.002 |
| 10 | 0.010 | 40 | 0.010 | 70 | 0.015 | 100 | 0.002 |
| 11 | 0.010 | 41 | 0.010 | 71 | 0.015 | 101 | 0.002 |
| 12 | 0.010 | 42 | 0.010 | 72 | 0.015 | 102 | 0.001 |
| 13 | 0.010 | 43 | 0.010 | 73 | 0.015 | 103 | 0.001 |
| 14 | 0.010 | 44 | 0.010 | 74 | 0.015 | 104 | 0.000 |
| 15 | 0.010 | 45 | 0.010 | 75 | 0.015 | 105 | 0.000 |
| 16 | 0.010 | 46 | 0.010 | 76 | 0.015 | 106 | 0.000 |
| 17 | 0.010 | 47 | 0.010 | 77 | 0.015 | 107 | 0.000 |
| 18 | 0.010 | 48 | 0.010 | 78 | 0.015 | 108 | 0.000 |
| 19 | 0.010 | 49 | 0.010 | 79 | 0.015 | 109 | 0.000 |
| 20 | 0.010 | 50 | 0.010 | 80 | 0.015 | 110 | 0.000 |
| 21 | 0.010 | 51 | 0.011 | 81 | 0.014 | 111 | 0.000 |
| 22 | 0.010 | 52 | 0.011 | 82 | 0.013 | 112 | 0.000 |
| 23 | 0.010 | 53 | 0.012 | 83 | 0.013 | 113 | 0.000 |
| 24 | 0.010 | 54 | 0.012 | 84 | 0.012 | 114 | 0.000 |
| 25 | 0.010 | 55 | 0.013 | 85 | 0.011 | 115 | 0.000 |
| 26 | 0.010 | 56 | 0.013 | 86 | 0.010 | 116 | 0.000 |
| 27 | 0.010 | 57 | 0.014 | 87 | 0.009 | 117 | 0.000 |
| 28 | 0.010 | 58 | 0.014 | 88 | 0.009 | 118 | 0.000 |
| 29 | 0.010 | 59 | 0.015 | 89 | 0.008 | 119 | 0.000 |
| | | | | | | 120 | 0.000 |

## PART B.    Smoker and Non-Smoker Mortality Tables

### Section 1.    Authority

Part B of Regulation I-88-4 is promulgated by the Commissioner of the Vermont Department of Financial Regulation pursuant to 8 V.S.A., Section 3747(a) and 8 V.S.A., Section 3784 of the Vermont Insurance Statutes.

### Section 2.    Purpose

The purpose of Part B is to permit the use of mortality tables that reflect differences in mortality between smokers and non-smokers in determining minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits for plans of insurance with separate premium rates for smokers and non-smokers.

### Section 3.    Definitions

A.    As used in Part B, "1980 CSO Table, with or without Ten-Year Select Mortality Factors" means that mortality table, consisting of separate rates of mortality for male and female lives, developed by the Society of Actuaries Committee to Recommend New Mortality Tables for Valuation of Standard Individual Ordinary Life Insurance, incorporated in the 1980 NAIC Amendments to the model Standard Valuation Law and Standard Nonforfeiture Law for Life Insurance, and referred to in those models as the Commissioners 1980 Standard Ordinary Mortality Table, with or without Ten-Year Select Mortality Factors.  The same select factors will be used for both smokers and non-smokers tables.

B.    As used in Part B, "1980 CET Table" means that mortality table consisting of separate rates of mortality for male and female lives, developed by the Society of Actuaries Committee to Recommend New Mortality Tables for Valuation of Standard Individual Ordinary Life Insurance, incorporated in the 1980 NAIC Amendments to the Model Standard Nonforfeiture Law for Life Insurance, and referred to in those models as the Commissioners 1980 Extended Term Insurance Table.

C.    As used in Part B, "1958 CSO Table" means that mortality table developed by the Society of Actuaries Special Committee on New Mortality Tables, incorporated in the NAIC Model Standard Nonforfeiture Law for Life Insurance, and referred to in that model as the Commissioners 1958 Standard Ordinary Mortality Table.

D.    As used in Part B, "1958 CET Table" means that mortality table developed by the Society of Actuaries Special Committee on New Mortality Tables, incorporated in the NAIC Model Standard Nonforfeiture law for Life Insurance, and referred to in that model as the Commissioners 1958 Extended Term Insurance Table.

E.    As used in Part B, the phrase "smoker and non-smoker mortality tables" refers to the mortality tables with separate rates of mortality for smokers and non-smokers derived

from the tables defined in A through D of this section, which were developed by the Society of Actuaries Task Force on Smoker/Non-Smoker Mortality and the California Insurance Department staff and recommended on the NAIC Technical Staff Actuarial Group.

F.      As used in Part B, the phrase "composite mortality tables" refers to the mortality tables defined in A through D of this section as they were originally published with rates of mortality that do not distinguish between smokers and non-smokers.

## Section 4.      Alternate Tables

A.      For any policy of insurance delivered or issued for delivery in this state after the operative date for 8 V.S.A., Section 3747a (k) for that policy form and before January 1, 1989, at the option of the company and subject to the conditions stated in Section 5 of Part B:

   (i)     the 1958 CSO Smoker and Non-Smoker Mortality Tables may be substituted for the 1980 CSO Table, with or without Ten-Year Select Mortality Factors, and

   (ii)    the 1958 CET Smoker and Non-Smoker Mortality Tables may be substituted for the 1980 CET Table for use in determining minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits. Provided that for any category of insurance issued on female lives with minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits determined using the 1958 CSO or 1958 CET Smoker and Non-Smoker Mortality Tables, such minimum values may be calculated according to an age not more than six years younger than the actual age of the insured.

   Provided further that the substitution of the 1958 CSO or 1958 CET Smoker and Non-Smoker Mortality Tables is available only if made for each policy of insurance on a policy form delivered or issued for delivery on or after the operative date for that policy form and before a date not later than January 1, 1989.

B.      For any policy of insurance delivered or issued for delivery in this state after the operative date for 8 V.S.A., Section 3747a (k) for that policy form, at the option of the company and subject to the conditions stated in Section 5 of Part B:

   (i)     the 1980 CSO Smoker and Non-Smoker Mortality Tables, with or without Ten-Year Select Mortality factors, may be substituted for the 1980 CSO Table, with or without Ten-Year Select Mortality Factors, and

   (ii)    the 1980 CET Smoker and Non-Smoker Mortality Tables may be substituted for the 1980 CET Table for use in determining minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits.

## Section 5. Conditions

For each plan of insurance with separate rates for smokers and non-smokers an insurer may:

(i) use composite mortality tables to determine minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits,

(ii) use smoker and non-smoker mortality tables to determine the valuation net premiums and additional minimum reserves, if any, required by 8 V.S.A., Section 3788 and use composite mortality tables to determine the basic minimum reserves, minimum cash surrender values and amounts of paid-up nonforfeiture benefits, or

(iii) use smoker and non-smoker mortality tables to determine minimum reserve liabilities and minimum cash surrender values and amounts of paid-up nonforfeiture benefits.

## PART C.   Mixed-Gender Mortality Tables

## Section 1.   Authority

Part C of Regulation I-88-4 is promulgated by the Commissioner of the Vermont Department of Financial Regulation pursuant to 8 V.S.A., Section 3747a of the Vermont Insurance Laws.

## Section 2.   Purpose

The purpose of Part C is to permit individual life insurance policies to provide the same cash surrender values and paid-up nonforfeiture benefits to both men and women. No change in minimum valuation standards is implied by this rule.

## Section 3.   Definitions

A.     As used in Part C, "1980 CSO Table, with or without Ten-Year Select Mortality Factors" means that mortality table, consisting of separate rates of mortality for male and female lives, developed by the Society of Actuaries Committee to Recommend New Mortality Tables for Valuation of Standard Individual Ordinary Life Insurance, incorporated in the 1980 NAIC Amendments to the Model Standard Valuation Law and Standard Nonforfeiture Law for Life Insurance, and referred to in those models as the Commissioners 1980 Standard Ordinary Mortality Table, with or without Ten-Year Select Mortality Factors.

B.     As used in Part C, "1980 CSO Table (M), with or without Ten-Year Select Mortality Factors" means that mortality table consisting of the rates of mortality for male lives from the 1980 CSO Table, with or without Ten-Year Select Mortality Factors.

C.	As used in Part C, "1980 CSO Table (F), with or without Ten-Year Select Mortality Factors" means that mortality table consisting of rates of mortality for female lives from the 1980 CSO Table, with or without Ten-Year Select Mortality Factors.

D.	As used in Part C, "1980 CET Table" means that mortality table consisting of separate rates of mortality for male and female lives, developed by the Society of Actuaries Committee to Recommend New Mortality Tables for Valuation of Standard Individual Ordinary Life Insurance, incorporated in the 1980 NAIC Amendments to the Model Standard Valuation Law and Standard Nonforfeiture Law for Life Insurance, and referred to in those models as the Commissioners 1980 Extended Term Insurance Table.

E.	As used in Part C, "1980 CET Table (M)" means that mortality table consisting of the rates of mortality for male lives from the 1980 CET Table.

F.	As used in Part C, "1980 CET Table (F)" means that mortality table consisting of the rates of mortality for female lives from the 1980 CET Table.

G.	As used in Part C, "1980 CSO and 1980 CET Smoker and Non-Smoker Mortality Tables" means the mortality with separate rates of mortality for smokers and non-smokers derived from the 1980 CSO and 1980 CET Mortality Tables by the Society of Actuaries Task Force on Smoker/Non-Smoker Mortality and adopted by the NAIC in December 1983.

**Section 4.	Rule**

For any policy of insurance on the life of either a male or female insured delivered or issued for delivery in this state after the operative date for 8 V.S.A., Section 3747a (k) for that policy form,

(i)	a mortality table which is a blend of the 1980 CSO Table (M) and the 1980 CSO Table (F) with or without Ten-Year Select Mortality Factors may at the option of the company be substituted for the 1980 CSO Table, with or without Ten-Year Mortality Factors, and

(ii)	a mortality table which is of the same blend as used in (i) but applied to form a blend of the 1980 CET Table (M) and the 1980 CET Table (F) may at the option of the company be substituted for the 1980 CET Table, for use in determining minimum cash surrender values and amounts of paid up nonforfeiture benefits.

The following tables will be considered as the basis for acceptable tables:

A.	100% Male 0% Female for tables to be designated as the "1980 CSO-A" and "1980 CET-A" tables.

B.	80% Male 20% Female for tables to be designated as "1980 CSO-B" and "1980 CET-B" tables.

C.      60% Male 40% Female for tables to be designated as the "1980 CSO-C" and "1980 CET-C" tables

D.      50% Male 50% Female for tables to be designated as the "1980 CSO-D" and "1980 CET-D" tables

E.      40% Male 60% Female for tables to be designated as the "1980 CSO-E" and "1980 CET-E" tables

F.      20% Male 80% Female for tables to be designated as the "1980 CSO-F" and "1980 CET-F" tables

G.      0% Male 100% Female for tables to be designated as the "1980 CSO-G" and "1980 CET-G" tables

Tables A and G are not to be used with respect to policies issued on or after January 1, 1986, except where the proportion of persons insured is anticipated to be 90% or more of one sex or the other. The method by which selection factors may be obtained is given in the NAIC Proceedings of 1984, Volume 1, page 457. Table A is the same as the 1980 CSO Table (M) and the 1980 CET Table (M) and Table G is the same as the 1980 CSO Table (F) and the 1980 CET Table (F).

## Section 4a.    Alternate Rule

In determining minimum cash surrender values and amounts of paid-up nonforfeiture benefits for any policy of insurance on the life of either a male or female insured on a form of insurance with separate rates for smokers and non-smokers delivered or issued for delivery in this state after the operative date of 8 V.S.A., Section 3747a for that policy form, in addition to the mortality tables that may be used according to Part 4,

      (i)      a mortality table which is a blend of the male and female rates of mortality according to the 1980 CSO Smoker Mortality Table, in the case of lives classified as smokers, or the 1980 CSO Non-smoker Mortality Table, in the case of lives classified as non-smokers, with or without Ten-Year Select Mortality Factors, may at the option of the company be substituted for the 1980 CSO Table, with or without Ten-Year Select Mortality Factors, and

      (ii)      a mortality table which is of the same blend as used in (i) but applied to form a blend of the male and female rates of mortality according to the corresponding 1980 CET Smoker Mortality Table or 1980 CET Nonsmoker Mortality Table may at the option of the company be substituted for the 1980 CET Table.

The following blended mortality tables will be considered applicable:

SA:      100% Male 0% Female smoker tables designated as "1980 CSO-SA" and 1980 CET-SA" Tables

SB:   80% Male 20% Female smoker tables designated as "1980 CSO-SB" and "1980 CET-SB" Tables

SC:   60% Male 40% Female smoker tables designated as "1980 CSO-SC" and "1980 CET-SC" Tables

SD:   50% Male 50% Female smoker tables designated as "1980 CSO-SD" and "1980 CET-SD" Tables

SE:   40% Male 60% Female smoker tables designated as "1980 CSO-SE" and "1980 CET-SE" Tables

SF:   20% Male 80% Female smoker tables designated as "1980 CSO-SF" and "1980 CET-SF" Tables

SG:   0% Male 100% Female smoker tables designated as "1980 CSO-SG" and "1980 CET-SG" Tables

NA:   100% Male 0% Female nonsmoker tables designated as "1980 CSO-NA" and 1980 CET-NA" Tables

NB:   80% Male 20% Female nonsmoker tables designated as "1980 CSO-NB" and "1980 CET-NB" Tables

NC:   60% Male 40% Female nonsmoker tables designated as "1980 CSO-NC" and "1980 CET-NC" Tables

ND:   50% Male 50% Female nonsmoker tables designated as "1980 CSO-ND" and "1980 CET-ND" Tables

NE:   40% Male 60% Female nonsmoker tables designated as "1980 CSO-NE" and "1980 CET-NE" Tables

NF:   20% Male 80% Female nonsmoker tables designated as "1980 CSO-NF" and "1980 CET-NF" Tables

NG:   0% Male 100% Female nonsmoker tables designated as "1980 CSO-NG" and "1980 CET-NG" Tables

Tables SA, SG, NA and NG are not acceptable as blended tables unless the proportion of persons insured is anticipated to be 90% or more of one sex or the other.

### Section 5.   Unfair Discrimination

It shall not be a violation of 8 V.S.A., Section 3701 for an insurer to issue the same kind of policy of life insurance on both a gender-distinct and gender-neutral basis.

## PART D.    Separability and Effective Date

### Section 1.    Separability

If any provision of this regulation or the application thereof to any person or circumstance is for any reason held to be invalid, the remainder of the regulation and the application of such provisions to other persons or circumstances shall not be affected thereby.

### Section 2.    Effective Date

The effective date of this regulation is January 1, 2015.