

**WEST VIRGINIA
SECRETARY OF STATE
NATALIE E. TENNANT
ADMINISTRATIVE LAW DIVISION**

Form #6

Do Not Mark In this Box
FILED
2015 APR 24 P 1:23
OFFICE WEST VIRGINIA
SECRETARY OF STATE

**NOTICE OF FINAL FILING AND ADOPTION OF A LEGISLATIVE RULE
AUTHORIZED BY THE WEST VIRGINIA LEGISLATURE.**

AGENCY: Insurance Commissioner TITLE NUMBER: 114

AMENDMENT TO AN EXISTING RULE: YES NO

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 45

TITLE OF RULE BEING AMENDED: Recognizing Annuity Mortality Tables For Use In Determining Reserve
Liabilities For Annuities

IF NO, SERIES NUMBER OF RULE BEING PROPOSED: _____

TITLE OF RULE BEING PROPOSED: _____

THE ABOVE RULE HAS BEEN AUTHORIZED BY THE WEST VIRGINIA LEGISLATURE.

AUTHORIZATION IS CITED IN (house or senate bill number) Senate Bill No. 187

SECTION 64-7-3, PASSED ON February 28, 2015

THIS RULE IS FILED WITH THE SECRETARY OF STATE. THIS RULE BECOMES EFFECTIVE ON THE
FOLLOWING DATE: July 23, 2015



Authorized Signature

**TITLE 114
LEGISLATIVE RULE
INSURANCE COMMISSIONER**

**SERIES 45
RECOGNIZING ANNUITY MORTALITY TABLES
FOR USE IN DETERMINING RESERVE LIABILITIES FOR ANNUITIES**

Section.

- 114-45-1. General.
- 114-45-2. Purpose.
- 114-45-3. Definitions.
- 114-45-4. Individual Annuity or Pure Endowment Contracts.
- 114-45-5. Application of the 2012 IAR Table.
- 114-45-6. Group Annuity or Pure Endowment Contracts.
- 114-45-7. Application of the 1994 GAR Table.
- Appendix I. 2012 IAM Period Table; Female, Age Nearest Birthday.
- Appendix II. 2012 IAM Period Table; Male, Age Nearest Birthday.
- Appendix III. Projection Scale G2; Female, Age Nearest Birthday.
- Appendix IV. Projection Scale G2; Male, Age Nearest Birthday.

**TITLE 114
LEGISLATIVE RULE
INSURANCE COMMISSIONER**

**SERIES 45
RECOGNIZING ANNUITY MORTALITY TABLES
FOR USE IN DETERMINING RESERVE LIABILITIES FOR ANNUITIES**

§114-45-1. General.

1.1. Scope. -- This Legislative rule 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 which are authorized to reinsure life insurance, annuities or accident and health insurance business in this State. This rule is based upon the National Association of Insurance Commissioners' "Model Rule For Recognizing a New Annuity Mortality Table For Use In Determining Reserve Liabilities For Annuities (Model 821)," as amended in 2012.

1.2. Authority. -- W. Va. Code §§ 33-2-10, 33-7-9a and 33-7-9(e)(2),(3) and (5).

1.3. Filing Date. -- April 24, 2015.

1.4. Effective Date. -- July 23, 2015.

§114-45-2. Purpose.

The purpose of this rule 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.

§114-45-3. Definitions.

3.1. As used in this rule, "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.

3.2. As used in this rule, "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.

3.3. As used in this rule, "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).

3.4. As used in this rule, "Annuity 2000 Mortality Table" means that mortality table developed by the Society of Actuaries Committee on Life Insurance Research and shown on page 240 of Volume XLVII of the *Transactions of the Society of Actuaries* (1995).

3.5. As used in this rule, "Period table" means a table of mortality rates applicable to a given calendar year (the Period).

3.6. As used in this rule, "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.

3.7. As used in this rule "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.

3.8. 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 I-II.

3.9. 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 III-IV.

§114-45-4. Individual Annuity or Pure Endowment Contracts.

4.1. Except as provided in subsections 4.2 and 4.3 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 life insurance company or fraternal benefit society, 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 6, 1977.

4.2. Except as provided in subsection 4.3 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, 1997.

4.3. Except as provided in subsection 4.4 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 April 1, 1999.

4.4. Except as provided in subsection 4.5 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 August 1, 2015.

4.5. 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 April 1, 1999, solely when the contract is based on life contingencies and is issued to fund periodic benefits arising from:

4.5.a. Settlements of various forms of claims pertaining to court settlements or out of court settlements from tort actions;

4.5.b. Settlements involving similar actions such as worker's compensation claims;
or

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

§114-45-5. Application of the 2012 IAR Mortality Table.

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

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

5.2. 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.

5.3. For example, for a male age 30, $q_x^{2012} = 0.741$.

$$q_x^{2013} = 0.741 * (1 - 0.010) ^ 1 = 0.73359, \text{ which is rounded to } 0.734.$$

$$q_x^{2014} = 0.741 * (1 - 0.010) ^ 2 = 0.7262541, \text{ which is rounded to } 0.726.$$

5.4. A method leading to incorrect rounding would be to calculate q_x^{2014} as $q_x^{2013} * (1 - 0.010)$, or $0.734 * 0.99 = 0.727$.

5.5. It is incorrect to use the already rounded q_x^{2013} to calculate q_x^{2014} .

§114-45-6. Group Annuity or Pure Endowment Contracts.

6.1. Except as provided in subsections 6.2 and 6.3 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 life insurance company or fraternal benefit society, any one of these tables may be used for purposes of valuation for any annuity or pure endowment purchased on or after April 6, 1977 under a group annuity or pure endowment contract.

6.2. Except as provided in subsection 6.3 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, 1997 under a group annuity or pure endowment contract.

6.3. The 1994 GAR Table shall be used for determining the minimum standard of valuation for any annuity or pure endowment purchased on or after April 1, 1999 under a group annuity or pure endowment contract.

§114-45-7. Application of the 1994 GAR Table.

7.1. 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 s 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 | 1.308 | 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 |

APPENDIX II

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 |