



August 18, 2022

Honorable Mike Causey
Commissioner of Insurance
North Carolina Department of Insurance
325 N. Salisbury Street
Raleigh, NC 27603

Re: Revision of Dwelling Insurance Rates

Dear Commissioner Causey:

Enclosed herewith for filing on behalf of all member companies of the North Carolina Rate Bureau are revised premium rates and relativities for dwelling insurance subject to the jurisdiction of the North Carolina Rate Bureau.

The enclosed memoranda and exhibits set forth and explain the calculations for needed rate level changes totaling an overall filed statewide average rate level change of +42.6% for dwelling insurance, proposed to be implemented over a two year period by an overall statewide average rate level change of +19.6% for dwelling insurance effective 4/1/2023 (+7.4% for Fire and +23.1% for Extended Coverage) and an overall statewide rate level change of 19.2% for dwelling insurance effective 4/1/2024 (no change for Fire and +24.1% for Extended Coverage). The filing shows revised rate levels varying by territory, revised windstorm and hail exclusion credits, and revised wind mitigation credits.

The foregoing changes were calculated based on rates currently in force and reflect consideration, duly given, to data for the experience period set forth herein. In preparing this filing, due consideration has been given to the factors specified in G.S. 58-36-10(2).

Information and statistical data required pursuant to G.S. 58-36-15 and 11 NCAC 10.1105 are shown and referenced in Section E. Additionally, the prefiled testimony of (a) Joanna Biliouris, General Manager; b) Paul Ericksen, ISO; (c) Minchong Mao, Aon; (d) Paul Anderson, Milliman; and (e) Dr. George Zanjani, University of Alabama are submitted herewith.

We propose that the revised rates and territory definitions become effective over a two year period according to the following rule of application:

The Year 1 changes are applicable to all new and renewal policies becoming effective on or after April 1, 2023. The Year 2 changes are applicable to all new and renewal policies becoming effective on or after April 1, 2024.

Your approval of these changes is respectfully requested.

Sincerely,

Jarred Chappell
Chief Operating Officer

Enclosure

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

SECTION A - SUMMARY OF REVISION

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NORTH CAROLINA
DWELLING PROPERTY INSURANCE
STATEWIDE RATE LEVEL CHANGES

<u>Coverage</u>	<u>Latest-Year Earned Premium</u> ^(a)	<u>Indicated Change</u>	<u>Year 1 Rate Level Change: Effective 4/1/2023</u> ^(b)	<u>Year 2 Rate Level Change: Effective 4/1/2024</u> ^(b)
Fire	\$71,710,360	+7.4%	+7.4%	--
Extended Coverage	\$246,871,993	+52.8%	+23.1%	+24.1%
Combined	\$318,582,353	+42.6%	+19.6%	+19.2%

^(a) Year-ended 12/31/2020 Aggregate Calculated Earned Premiums at Current Level. These values also appear on pages A-3-4.

^(b) The indicated rate level changes are being implemented in two stages: Year 1 and Year 2. The proposed effective date for Year 1 is 4/1/2023 and 4/1/2024 for Year 2. The statewide changes are the result of weighting the territory changes shown on pages A-3-4.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

RATE LEVEL CHANGES BY TERRITORY

FIRE

<u>Territory</u>	Latest-Year Earned Premium	Indicated Rate Level Change		Year 1 Rate Level Change ^(b)	
		<u>Buildings</u>	<u>Contents</u>	<u>Buildings</u>	<u>Contents</u>
110	2,148,884	+7.0%	-2.8%	+7.0%	-2.8%
120	2,224,727	+7.5%	-2.3%	+7.5%	-2.3%
130	863,172	+4.5%	-5.1%	+4.5%	-5.1%
140	4,203,133	+3.3%	-6.2%	+3.3%	-6.2%
150	2,703,853	+24.9%	+13.5%	+24.9%	+13.5%
160	2,748,605	+7.9%	-2.0%	+7.9%	-2.0%
170	468,965	+8.8%	-1.2%	+8.8%	-1.2%
180	3,655,743	+2.1%	-7.3%	+2.1%	-7.3%
190	1,329,852	+20.3%	+9.3%	+20.3%	+9.3%
200	1,071,262	+8.0%	-1.9%	+8.0%	-1.9%
210	996,638	+27.3%	+15.7%	+27.3%	+15.7%
220	4,912,598	+4.8%	-4.8%	+4.8%	-4.8%
230	2,289,996	+17.3%	+6.5%	+17.3%	+6.5%
240	3,072,199	+21.1%	+10.0%	+21.1%	+10.0%
250	2,457,371	+2.9%	-6.6%	+2.9%	-6.6%
260	2,064,809	+5.6%	-4.1%	+5.6%	-4.1%
270	5,022,414	-5.7%	-14.3%	-5.7%	-14.3%
280	846,574	+1.5%	-7.8%	+1.5%	-7.8%
290	1,077,185	+0.5%	-8.7%	+0.5%	-8.7%
300	1,450,397	+13.3%	+3.0%	+13.3%	+3.0%
310	6,970,701	+2.6%	-6.8%	+2.6%	-6.8%
320	2,937,830	+18.7%	+7.8%	+18.7%	+7.8%
330	239,902	+13.5%	+3.1%	+13.5%	+3.1%
340	6,192,245	+6.0%	-3.7%	+6.0%	-3.7%
350	2,784,005	+18.9%	+8.0%	+18.9%	+8.0%
360	4,733,856	+8.4%	-1.5%	+8.4%	-1.5%
370	348,289	+8.2%	-1.7%	+8.2%	-1.7%
380	960,965	+12.4%	+2.1%	+12.4%	+2.1%
390	934,190	+9.4%	-0.6%	+9.4%	-0.6%
Statewide ^(a)	71,710,360	+8.1%	-1.8%	+8.1%	-1.8%

^(a) The statewide change is the result of weighting the territory changes. The territory weights are the year-ending 12/31/2020 Aggregate Calculated Earned Premiums at Current Level.

^(b) For Fire, the full indicated territory rate level changes are being implemented in Year 1.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

RATE LEVEL CHANGES BY TERRITORY
EXTENDED COVERAGE

<u>Territory</u>	<u>Latest-Year Earned Premium</u>	<u>Indicated Rate Level Change</u>		<u>Year 1 Rate Level Change^(b)</u>		<u>Year 2 Rate Level Change^(b)</u>	
		<u>Buildings</u>	<u>Contents</u>	<u>Buildings</u>	<u>Contents</u>	<u>Buildings</u>	<u>Contents</u>
110	30,440,645	+77.0%	+48.4%	+33.0%	+21.8%	+33.0%	+21.8%
120	36,183,931	+87.9%	+57.5%	+37.1%	+25.5%	+37.1%	+25.5%
130	4,724,953	+52.1%	+27.5%	+23.3%	+12.9%	+23.3%	+12.9%
140	32,326,932	+82.9%	+53.4%	+35.2%	+23.9%	+35.2%	+23.9%
150	15,055,413	+11.9%	-6.2%	+5.8%	-3.1%	+5.8%	-3.1%
160	14,951,302	+23.7%	+3.7%	+11.2%	+1.8%	+11.2%	+1.8%
170	897,149	+38.4%	+16.1%	+17.6%	+7.7%	+17.6%	+7.7%
180	9,371,455	+50.1%	+25.8%	+22.5%	+12.2%	+22.5%	+12.2%
190	3,220,509	+93.6%	+62.3%	+39.1%	+27.4%	+39.1%	+27.4%
200	2,014,242	+88.4%	+57.9%	+37.3%	+25.7%	+37.3%	+25.7%
210	2,274,329	+54.5%	+29.5%	+24.3%	+13.8%	+24.3%	+13.8%
220	12,306,266	+37.9%	+15.6%	+17.4%	+7.5%	+17.4%	+7.5%
230	4,123,948	+66.6%	+39.6%	+29.1%	+18.2%	+29.1%	+18.2%
240	5,936,137	+59.8%	+34.0%	+26.4%	+15.8%	+26.4%	+15.8%
250	6,066,897	+24.8%	+4.6%	+11.7%	+2.3%	+11.7%	+2.3%
260	3,491,616	+15.7%	-3.0%	+7.6%	-1.5%	+7.6%	-1.5%
270	12,355,735	+27.1%	+6.5%	+12.7%	+3.2%	+12.7%	+3.2%
280	2,027,991	+31.6%	+10.3%	+14.7%	+5.0%	+14.7%	+5.0%
290	2,532,772	+17.9%	-1.1%	+8.6%	-0.6%	+8.6%	-0.6%
300	2,145,111	+43.5%	+20.3%	+19.8%	+9.7%	+19.8%	+9.7%
310	11,506,292	+32.5%	+11.1%	+15.1%	+5.4%	+15.1%	+5.4%
320	5,394,692	+31.0%	+9.8%	+14.5%	+4.8%	+14.5%	+4.8%
330	364,622	+36.1%	+14.1%	+16.7%	+6.8%	+16.7%	+6.8%
340	11,581,976	+24.6%	+4.4%	+11.6%	+2.2%	+11.6%	+2.2%
350	4,236,027	+28.9%	+8.1%	+13.5%	+4.0%	+13.5%	+4.0%
360	8,245,507	+26.3%	+5.9%	+12.4%	+2.9%	+12.4%	+2.9%
370	481,592	+32.5%	+11.1%	+15.1%	+5.4%	+15.1%	+5.4%
380	1,348,883	+37.6%	+15.4%	+17.3%	+7.4%	+17.3%	+7.4%
390	1,265,069	+36.6%	+14.5%	+16.9%	+7.0%	+16.9%	+7.0%
Statewide ^(a)	246,871,993	+53.6%	+28.7%	+23.4%	+13.0%	+24.4%	+13.9%

^(a) The statewide change is the result of weighting the territory changes. The territory weights are the year-ending 12/31/2020 Aggregate Calculated Earned Premiums at Current Level. The weights underlying the statewide changes for Year 2 reflect the changes in Year 1.

^(b) For Extended Coverage, the rate level changes for Year 1 and Year 2 were calculated by taking the square root of the indicated rate level change in factor form.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CURRENT AND FILED BASE RATES

FIRE

Territory	(1)		(2)		(3)	
	Current Manual Base Rate ^(a)		Year 1 Rate Level Change ^(b)		= (1) x (2) Year 1 Filed Base Rate	
	<u>Buildings</u>	<u>Contents</u>	<u>Buildings</u>	<u>Contents</u>	<u>Buildings</u>	<u>Contents</u>
110	\$17	\$4	1.070	0.972	\$18	\$4
120	\$17	\$4	1.075	0.977	\$18	\$4
130	\$32	\$9	1.045	0.949	\$33	\$9
140	\$29	\$9	1.033	0.938	\$30	\$8
150	\$29	\$9	1.249	1.135	\$36	\$10
160	\$33	\$11	1.079	0.980	\$36	\$11
170	\$44	\$13	1.088	0.988	\$48	\$13
180	\$45	\$14	1.021	0.927	\$46	\$13
190	\$46	\$14	1.203	1.093	\$55	\$15
200	\$62	\$16	1.080	0.981	\$67	\$16
210	\$41	\$13	1.273	1.157	\$52	\$15
220	\$41	\$12	1.048	0.952	\$43	\$11
230	\$64	\$17	1.173	1.065	\$75	\$18
240	\$42	\$13	1.211	1.100	\$51	\$14
250	\$39	\$12	1.029	0.934	\$40	\$11
260	\$47	\$13	1.056	0.959	\$50	\$12
270	\$31	\$10	0.943	0.857	\$29	\$9
280	\$28	\$9	1.015	0.922	\$28	\$8
290	\$36	\$11	1.005	0.913	\$36	\$10
300	\$47	\$15	1.133	1.030	\$53	\$15
310	\$35	\$11	1.026	0.932	\$36	\$10
320	\$34	\$11	1.187	1.078	\$40	\$12
330	\$36	\$12	1.135	1.031	\$41	\$12
340	\$31	\$9	1.060	0.963	\$33	\$9
350	\$35	\$11	1.189	1.080	\$42	\$12
360	\$29	\$9	1.084	0.985	\$31	\$9
370	\$32	\$10	1.082	0.983	\$35	\$10
380	\$29	\$9	1.124	1.021	\$33	\$9
390	\$30	\$10	1.094	0.994	\$33	\$10
Statewide	\$34.87	\$10.34	1.081	0.982	\$37.69	\$10.15

^(a) The current Base Class is Protection Class 5 with Frame construction; \$15,000 Coverage A, \$6,000 Coverage C.

^(b) For Fire, the full indicated territory rate level changes are being filed in Year 1.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CURRENT AND FILED BASE RATES
EXTENDED COVERAGE

Territory	(1) Current Manual Base Rate ^(a)		(2) Year 1 Rate Level Change ^(b)		(3) = (1) x (2) Year 1 Filed Base Rate		(4) Year 2 Rate Level Change ^(b)		(5) = (3) x (4) Year 2 Filed Base Rate	
	Buildings	Contents	Buildings	Contents	Buildings	Contents	Buildings	Contents	Buildings	Contents
	110	\$191	\$26	1.330	1.218	\$254	\$32	1.330	1.218	\$338
120	\$214	\$31	1.371	1.255	\$293	\$39	1.371	1.255	\$402	\$49
130	\$154	\$23	1.233	1.129	\$190	\$26	1.233	1.129	\$234	\$29
140	\$167	\$23	1.352	1.239	\$226	\$28	1.352	1.239	\$306	\$35
150	\$140	\$11	1.058	0.969	\$148	\$11	1.058	0.969	\$157	\$11
160	\$145	\$15	1.112	1.018	\$161	\$15	1.112	1.018	\$179	\$15
170	\$69	\$6	1.176	1.077	\$81	\$6	1.176	1.077	\$95	\$6
180	\$75	\$7	1.225	1.122	\$92	\$8	1.225	1.122	\$113	\$9
190	\$77	\$9	1.391	1.274	\$107	\$11	1.391	1.274	\$149	\$14
200	\$97	\$12	1.373	1.257	\$133	\$15	1.373	1.257	\$183	\$19
210	\$63	\$4	1.243	1.138	\$78	\$5	1.243	1.138	\$97	\$6
220	\$56	\$3	1.174	1.075	\$66	\$3	1.174	1.075	\$77	\$3
230	\$89	\$10	1.291	1.182	\$115	\$12	1.291	1.182	\$148	\$14
240	\$57	\$3	1.264	1.158	\$72	\$3	1.264	1.158	\$91	\$3
250	\$59	\$3	1.117	1.023	\$66	\$3	1.117	1.023	\$74	\$3
260	\$55	\$2	1.076	0.985	\$59	\$2	1.076	0.985	\$63	\$2
270	\$42	\$2	1.127	1.032	\$47	\$2	1.127	1.032	\$53	\$2
280	\$41	\$2	1.147	1.050	\$47	\$2	1.147	1.050	\$54	\$2
290	\$52	\$2	1.086	0.994	\$56	\$2	1.086	0.994	\$61	\$2
300	\$47	\$4	1.198	1.097	\$56	\$4	1.198	1.097	\$67	\$4
310	\$34	\$1	1.151	1.054	\$39	\$1	1.151	1.054	\$45	\$1
320	\$38	\$1	1.145	1.048	\$44	\$1	1.145	1.048	\$50	\$1
330	\$41	\$1	1.167	1.068	\$48	\$1	1.167	1.068	\$56	\$1
340	\$32	\$1	1.116	1.022	\$36	\$1	1.116	1.022	\$40	\$1
350	\$33	\$1	1.135	1.040	\$37	\$1	1.135	1.040	\$42	\$1
360	\$32	\$2	1.124	1.029	\$36	\$2	1.124	1.029	\$40	\$2
370	\$34	\$2	1.151	1.054	\$39	\$2	1.151	1.054	\$45	\$2
380	\$30	\$1	1.173	1.074	\$35	\$1	1.173	1.074	\$41	\$1
390	\$30	\$1	1.169	1.070	\$35	\$1	1.169	1.070	\$41	\$1
Statewide	\$76.20	\$8.96	1.234	1.130	\$94.03	\$10.12	1.244	1.139	\$116.97	\$11.53

^(a) The current Base Class is Form DP-001; \$15,000 Coverage A, \$6,000 Coverage C.

^(b) For Extended Coverage, the rate level changes for Year 1 and Year 2 were calculated by taking the square root of the indicated rate level change in factor form.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DETERMINATION OF RATES TO BE CHARGED INDIVIDUAL INSUREDS

The filed base rates by territory are shown on pages A-5-6. These are the filed manual rates for the classification carrying a unity differential. The revised rates for the remaining classifications are determined by applying the established classification rate differentials to the base rates by territory.

NORTH CAROLINA
DWELLING PROPERTY INSURANCE

SECTION B - MATERIAL TO BE IMPLEMENTED

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NORTH CAROLINA

DWELLING PROPERTY INSURANCE

REVISED RULES

1. The base rates underlying the Rule 301 Key Premium tables have been revised to reflect the filed rate level changes. See pages B-3-4 for the filed base rates.
2. The Windstorm or Hail Exclusion Credits have been revised to reflect the filed rates. See pages B-5-6 for the Windstorm or Hail Exclusion Credits.
3. The Windstorm Loss Mitigation Credits have been revised to reflect the filed rates. See pages B-7-10 for the Windstorm Loss Mitigation Credits.

NORTH CAROLINA
DWELLING PROPERTY INSURANCE
FILED TERRITORY BASE RATES

<u>Territory</u>	Year 1 Filed Base Rate			
	<u>Fire</u> ^(a)		<u>Extended Coverage</u> ^(b)	
	<u>Buildings</u>	<u>Contents</u>	<u>Buildings</u>	<u>Contents</u>
110	\$18	\$4	\$254	\$32
120	\$18	\$4	\$293	\$39
130	\$33	\$9	\$190	\$26
140	\$30	\$8	\$226	\$28
150	\$36	\$10	\$148	\$11
160	\$36	\$11	\$161	\$15
170	\$48	\$13	\$81	\$6
180	\$46	\$13	\$92	\$8
190	\$55	\$15	\$107	\$11
200	\$67	\$16	\$133	\$15
210	\$52	\$15	\$78	\$5
220	\$43	\$11	\$66	\$3
230	\$75	\$18	\$115	\$12
240	\$51	\$14	\$72	\$3
250	\$40	\$11	\$66	\$3
260	\$50	\$12	\$59	\$2
270	\$29	\$9	\$47	\$2
280	\$28	\$8	\$47	\$2
290	\$36	\$10	\$56	\$2
300	\$53	\$15	\$56	\$4
310	\$36	\$10	\$39	\$1
320	\$40	\$12	\$44	\$1
330	\$41	\$12	\$48	\$1
340	\$33	\$9	\$36	\$1
350	\$42	\$12	\$37	\$1
360	\$31	\$9	\$36	\$2
370	\$35	\$10	\$39	\$2
380	\$33	\$9	\$35	\$1
390	\$33	\$10	\$35	\$1

^(a) The Base Class is Protection Class 5 with Frame construction; \$15,000 Coverage A, \$6,000 Coverage C.

^(b) The Base Class is Form DP-001; \$15,000 Coverage A, \$6,000 Coverage C.

NORTH CAROLINA
DWELLING PROPERTY INSURANCE
FILED TERRITORY BASE RATES

<u>Territory</u>	Year 2 Filed Base Rate			
	<u>Fire</u> ^(a)		<u>Extended Coverage</u> ^(b)	
	<u>Buildings</u>	<u>Contents</u>	<u>Buildings</u>	<u>Contents</u>
110	\$18	\$4	\$338	\$39
120	\$18	\$4	\$402	\$49
130	\$33	\$9	\$234	\$29
140	\$30	\$8	\$306	\$35
150	\$36	\$10	\$157	\$11
160	\$36	\$11	\$179	\$15
170	\$48	\$13	\$95	\$6
180	\$46	\$13	\$113	\$9
190	\$55	\$15	\$149	\$14
200	\$67	\$16	\$183	\$19
210	\$52	\$15	\$97	\$6
220	\$43	\$11	\$77	\$3
230	\$75	\$18	\$148	\$14
240	\$51	\$14	\$91	\$3
250	\$40	\$11	\$74	\$3
260	\$50	\$12	\$63	\$2
270	\$29	\$9	\$53	\$2
280	\$28	\$8	\$54	\$2
290	\$36	\$10	\$61	\$2
300	\$53	\$15	\$67	\$4
310	\$36	\$10	\$45	\$1
320	\$40	\$12	\$50	\$1
330	\$41	\$12	\$56	\$1
340	\$33	\$9	\$40	\$1
350	\$42	\$12	\$42	\$1
360	\$31	\$9	\$40	\$2
370	\$35	\$10	\$45	\$2
380	\$33	\$9	\$41	\$1
390	\$33	\$10	\$41	\$1

^(a) The Base Class is Protection Class 5 with Frame construction; \$15,000 Coverage A, \$6,000 Coverage C.

^(b) The Base Class is Form DP-001; \$15,000 Coverage A, \$6,000 Coverage C.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**DWELLING POLICY PROGRAM MANUAL CHANGES
WINDSTORM OR HAIL EXCLUSION CREDITS**

Year 1:

RULE A3.

WINDSTORM OR HAIL EXCLUSION – TERRITORIES 110, 120, 130, 140, 150 AND 160 ONLY

Territory	Const.*	Building Credit	Contents Credit
110	M	\$ 213	\$ 25
	F	224	26
	MH	280	33
120	M	255	34
	F	268	36
	MH	335	45
130	M	154	22
	F	162	23
	MH	203	29
140	M	184	23
	F	194	24
	MH	243	30
150	M	112	9
	F	118	9
	MH	148	11
160	M	121	11
	F	127	12
	MH	159	15

* M = Masonry, F = Frame. MH = Mobile Homes.
Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table A3.B.2.(R) Windstorm Or Hail Exclusion – Territories 110, 120, 130, 140, 150 and 160 Only

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DWELLING POLICY PROGRAM MANUAL CHANGES WINDSTORM OR HAIL EXCLUSION CREDITS

Year 2:

RULE A3.**WINDSTORM OR HAIL EXCLUSION – TERRITORIES 110, 120, 130, 140, 150 AND 160 ONLY**

Territory	Const.*	Building Credit	Contents Credit
110	M	\$ 293	\$ 31
	F	308	33
	MH	385	41
120	M	358	44
	F	377	46
	MH	471	58
130	M	196	25
	F	206	26
	MH	258	33
140	M	260	29
	F	274	31
	MH	343	39
150	M	121	9
	F	127	9
	MH	159	11
160	M	138	11
	F	145	12
	MH	181	15

* M = Masonry, F = Frame. MH = Mobile Homes.
Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

**Table A3.B.2.(R) Windstorm Or Hail Exclusion –
Territories 110, 120, 130, 140, 150 and 160 Only**

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**DWELLING POLICY PROGRAM MANUAL CHANGES
WINDSTORM LOSS MITIGATION CREDITS**

Year 1:

**RULE A9.
WINDSTORM MITIGATION PROGRAM**

Mitigation Feature	Const.	Territory 110	Territory 120	Territory 130	Territory 140	Territory 150	Territory 160
Total Hip Roof	M	\$ 11	\$ 12	\$ 9	\$ 9	\$ 6	\$ 5
	F	12	13	9	9	6	5
Opening Protection	M	11	12	9	9	6	5
	F	12	13	9	9	6	5
Total Hip Roof and Opening Protection	M	24	26	15	16	11	11
	F	25	27	16	17	12	12
IBHS Designation prior to March 31, 2019: <i>Hurricane Fortified for Safer Living®</i>	M	38	47	16	32	14	20
	F	40	49	17	34	15	21
<i>Hurricane Fortified for Existing Homes® Bronze Option 1</i>	M	9	10	4	5	4	3
	F	9	10	4	5	4	3
<i>Hurricane Fortified for Existing Homes® Bronze Option 2</i>	M	14	15	9	11	6	7
	F	15	16	9	12	6	7
<i>Hurricane Fortified for Existing Homes® Silver Option 1</i>	M	24	29	10	20	7	12
	F	25	31	11	21	7	13
<i>Hurricane Fortified for Existing Homes® Silver Option 2</i>	M	29	34	12	23	10	14
	F	31	36	13	24	10	15
<i>Hurricane Fortified for Existing Homes® Gold Option 1</i>	M	29	34	15	23	11	14
	F	31	36	16	24	12	15
<i>Hurricane Fortified for Existing Homes® Gold Option 2</i>	M	32	39	16	30	12	19
	F	34	41	17	32	13	20
IBHS Designation on or after March 31, 2019: <i>FORTIFIED for Safer Living®</i>	M	38	47	16	32	14	20
	F	40	49	17	34	15	21
FORTIFIED Roof – Hurricane – Existing Roof	M	9	10	4	5	4	3
	F	9	10	4	5	4	3
FORTIFIED Roof – Hurricane – New Roof	M	14	15	9	11	6	7
	F	15	16	9	12	6	7
FORTIFIED Home – Hurricane – Silver – Existing Roof	M	24	29	10	20	7	12
	F	25	31	11	21	7	13
FORTIFIED Home – Hurricane – Silver – New Roof	M	29	34	12	23	10	14
	F	31	36	13	24	10	15
FORTIFIED Home – Hurricane – Gold – Existing Roof	M	29	34	15	23	11	14
	F	31	36	16	24	12	15
FORTIFIED Home – Hurricane – Gold – New Roof	M	32	39	16	30	12	19
	F	34	41	17	32	13	20

Table A9.E.#1(R) – Windstorm Loss Mitigation Credit – Coverage A – Dwelling

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**DWELLING POLICY PROGRAM MANUAL CHANGES
WINDSTORM LOSS MITIGATION CREDITS**

Year 1:

**RULE A9.
WINDSTORM MITIGATION PROGRAM**

Mitigation Feature	Const.	Territory 110	Territory 120	Territory 130	Territory 140	Territory 150	Territory 160
Total Hip Roof	M	\$ 1	\$ 3	\$ 2	\$ 1	\$ 1	\$ 1
	F	1	3	2	1	1	1
Opening Protection	M	1	3	2	1	1	1
	F	1	3	2	1	1	1
Total Hip Roof and Opening Protection	M	1	4	2	1	1	1
	F	1	4	2	1	1	1
IBHS Designation prior to March 31, 2019: <i>Hurricane Fortified for Safer Living®</i>	M	6	9	3	6	2	3
	F	6	9	3	6	2	3
<i>Hurricane Fortified for Existing Homes® Bronze Option 1</i>	M	1	3	2	1	1	1
	F	1	3	2	1	1	1
<i>Hurricane Fortified for Existing Homes® Bronze Option 2</i>	M	1	4	2	1	1	1
	F	1	4	2	1	1	1
<i>Hurricane Fortified for Existing Homes® Silver Option 1</i>	M	3	4	2	4	1	2
	F	3	4	2	4	1	2
<i>Hurricane Fortified for Existing Homes® Silver Option 2</i>	M	3	7	2	4	1	2
	F	3	7	2	4	1	2
<i>Hurricane Fortified for Existing Homes® Gold Option 1</i>	M	4	7	2	4	1	2
	F	4	7	2	4	1	2
<i>Hurricane Fortified for Existing Homes® Gold Option 2</i>	M	4	7	3	4	2	2
	F	4	7	3	4	2	2
IBHS Designation on or after March 31, 2019: <i>FORTIFIED for Safer Living®</i>	M	6	9	3	6	2	3
	F	6	9	3	6	2	3
FORTIFIED Roof – Hurricane – Existing Roof	M	1	3	2	1	1	1
	F	1	3	2	1	1	1
FORTIFIED Roof – Hurricane – New Roof	M	1	4	2	1	1	1
	F	1	4	2	1	1	1
FORTIFIED Home – Hurricane – Silver – Existing Roof	M	3	4	2	4	1	2
	F	3	4	2	4	1	2
FORTIFIED Home – Hurricane – Silver – New Roof	M	3	7	2	4	1	2
	F	3	7	2	4	1	2
FORTIFIED Home – Hurricane – Gold – Existing Roof	M	4	7	2	4	1	2
	F	4	7	2	4	1	2
FORTIFIED Home – Hurricane – Gold – New Roof	M	4	7	3	4	2	2
	F	4	7	3	4	2	2

Table A9.E.#2(R) – Windstorm Loss Mitigation Credit – Coverage C – Personal Property

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**DWELLING POLICY PROGRAM MANUAL CHANGES
WINDSTORM LOSS MITIGATION CREDITS**

Year 2:

**RULE A9.
WINDSTORM MITIGATION PROGRAM**

Mitigation Feature	Const.	Territory 110	Territory 120	Territory 130	Territory 140	Territory 150	Territory 160
Total Hip Roof	M	\$ 16	\$ 17	\$ 10	\$ 12	\$ 6	\$ 6
	F	17	18	11	13	6	6
Opening Protection	M	16	17	10	12	6	6
	F	17	18	11	13	6	6
Total Hip Roof and Opening Protection	M	32	36	19	23	12	13
	F	34	38	20	24	13	14
IBHS Designation prior to March 31, 2019: <i>Hurricane Fortified for Safer Living®</i>	M	52	66	21	46	15	23
	F	55	69	22	48	16	24
<i>Hurricane Fortified for Existing Homes® Bronze Option 1</i>	M	11	13	5	7	4	3
	F	12	14	5	7	4	3
<i>Hurricane Fortified for Existing Homes® Bronze Option 2</i>	M	20	22	10	16	6	8
	F	21	23	11	17	6	8
<i>Hurricane Fortified for Existing Homes® Silver Option 1</i>	M	32	42	13	29	8	14
	F	34	44	14	30	8	15
<i>Hurricane Fortified for Existing Homes® Silver Option 2</i>	M	41	48	16	32	10	16
	F	43	51	17	34	11	17
<i>Hurricane Fortified for Existing Homes® Gold Option 1</i>	M	41	48	19	32	12	16
	F	43	51	20	34	13	17
<i>Hurricane Fortified for Existing Homes® Gold Option 2</i>	M	45	55	21	43	13	22
	F	47	58	22	45	14	23
IBHS Designation on or after March 31, 2019: <i>FORTIFIED for Safer Living®</i>	M	52	66	21	46	15	23
	F	55	69	22	48	16	24
FORTIFIED Roof – Hurricane – Existing Roof	M	11	13	5	7	4	3
	F	12	14	5	7	4	3
FORTIFIED Roof – Hurricane – New Roof	M	20	22	10	16	6	8
	F	21	23	11	17	6	8
FORTIFIED Home – Hurricane – Silver – Existing Roof	M	32	42	13	29	8	14
	F	34	44	14	30	8	15
FORTIFIED Home – Hurricane – Silver – New Roof	M	41	48	16	32	10	16
	F	43	51	17	34	11	17
FORTIFIED Home – Hurricane – Gold – Existing Roof	M	41	48	19	32	12	16
	F	43	51	20	34	13	17
FORTIFIED Home – Hurricane – Gold – New Roof	M	45	55	21	43	13	22
	F	47	58	22	45	14	23

Table A9.E.#1(R) – Windstorm Loss Mitigation Credit – Coverage A – Dwelling

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**DWELLING POLICY PROGRAM MANUAL CHANGES
WINDSTORM LOSS MITIGATION CREDITS**

Year 2:

**RULE A9.
WINDSTORM MITIGATION PROGRAM**

Mitigation Feature	Const.	Territory 110	Territory 120	Territory 130	Territory 140	Territory 150	Territory 160
Total Hip Roof	M	\$ 1	\$ 4	\$ 2	\$ 1	\$ 1	\$ 1
	F	1	4	2	1	1	1
Opening Protection	M	1	4	2	1	1	1
	F	1	4	2	1	1	1
Total Hip Roof and Opening Protection	M	1	5	2	1	1	1
	F	1	5	2	1	1	1
IBHS Designation prior to March 31, 2019: <i>Hurricane Fortified for Safer Living®</i>	M	8	11	3	8	2	3
	F	8	12	3	8	2	3
<i>Hurricane Fortified for Existing Homes® Bronze Option 1</i>	M	1	4	2	1	1	1
	F	1	4	2	1	1	1
<i>Hurricane Fortified for Existing Homes® Bronze Option 2</i>	M	1	5	2	1	1	1
	F	1	5	2	1	1	1
<i>Hurricane Fortified for Existing Homes® Silver Option 1</i>	M	4	5	2	5	1	2
	F	4	5	2	5	1	2
<i>Hurricane Fortified for Existing Homes® Silver Option 2</i>	M	4	9	2	5	1	2
	F	4	9	2	5	1	2
<i>Hurricane Fortified for Existing Homes® Gold Option 1</i>	M	5	9	2	5	1	2
	F	5	9	2	5	1	2
<i>Hurricane Fortified for Existing Homes® Gold Option 2</i>	M	5	9	3	5	2	2
	F	5	9	3	5	2	2
IBHS Designation on or after March 31, 2019: <i>FORTIFIED for Safer Living®</i>	M	8	11	3	8	2	3
	F	8	12	3	8	2	3
FORTIFIED Roof – Hurricane – Existing Roof	M	1	4	2	1	1	1
	F	1	4	2	1	1	1
FORTIFIED Roof – Hurricane – New Roof	M	1	5	2	1	1	1
	F	1	5	2	1	1	1
FORTIFIED Home – Hurricane – Silver – Existing Roof	M	4	5	2	5	1	2
	F	4	5	2	5	1	2
FORTIFIED Home – Hurricane – Silver – New Roof	M	4	9	2	5	1	2
	F	4	9	2	5	1	2
FORTIFIED Home – Hurricane – Gold – Existing Roof	M	5	9	2	5	1	2
	F	5	9	2	5	1	2
FORTIFIED Home – Hurricane – Gold – New Roof	M	5	9	3	5	2	2
	F	5	9	3	5	2	2

Table A9.E.#2(R) – Windstorm Loss Mitigation Credit – Coverage C – Personal Property

NORTH CAROLINA
DWELLING PROPERTY INSURANCE

SECTION C - SUPPORTING MATERIAL

Calculation of Indicated Statewide Rate Level Change	C-2-6
Fire	C-2-3
Extended Coverage	C-4-6
Calculation of Indicated Class Rate Level Changes	C-7-8
Fire	C-7
Extended Coverage	C-8
Calculation of Indicated Territory Rate Level Changes	C-9-12
Fire	C-9-10
Extended Coverage	C-11-12
Calculation of Filed Territory Base Class Rates	C-13-17
Year 1	C-14-15
Buildings	C-14
Contents	C-15
Year 2	C-16-17
Buildings	C-16
Contents	C-17
Derivation of Wind Exclusion Credits	C-18-19
Derivation of Windstorm Loss Mitigation Credits	C-20-24
Year 1	C-20-21
Buildings	C-20
Contents	C-21
Year 2	C-22-23
Buildings	C-22
Contents	C-23

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF INDICATED STATEWIDE RATE LEVEL CHANGE

FIRE

Year	(1) Adjusted Incurred Losses ^(a)	(2) Adjusted Incurred Losses Including LAE ^(b)	(3) Loss Trend Factor ^(c)	(4) Earned House Years	(5) Premium Trend Factor ^(d)
2016	46,108,379	50,073,700	1.253	628,719	1.240
2017	37,883,568	41,141,555	1.253	631,514	1.230
2018	42,671,325	46,341,059	1.253	632,088	1.217
2019	45,737,761	49,671,208	1.253	634,050	1.204
2020	39,253,532	42,629,336	1.253	635,114	1.191

Year	(6) Trended Loss Cost <u>[(2)×(3)] / [(4)×(5)]</u>	(7) Average Rating Factor ^(e)	(8) Trended Base Class Loss Cost <u>(6) / (7)</u>	(9) Accident Year Weights
2016	80.48	4.229	19.03	0.10
2017	66.37	4.249	15.62	0.15
2018	75.48	4.282	17.63	0.20
2019	81.53	4.318	18.88	0.25
2020	70.61	4.339	16.27	0.30

(10)	Weighted Trended Base Class Loss Cost ^(f)	17.37
(11)	Credibility (3,161,485 House Years) ^(g)	1.00
(12)	Trended Fixed Expense per Policy ^(h)	3.62
(13)	Base Class Loss Cost with Fixed Expense, (10) + (12)	20.99
(14)	Expected Loss and Fixed Expense Ratio ⁽ⁱ⁾	0.761
(15)	Base Class Rate Excluding Comp. for Assess. Risk & Dev., (13) / (14)	27.58
(16)	Compensation for Assessment Risk per Policy ^(j)	0.49
(17)	Base Class Rate Excluding Deviations, (15) + (16)	28.07
(18)	Selected Deviation ^(k)	0.0000
(19)	Deviation Amount per Policy, [(17) / (1.0 - (18))] - (17)	0.00
(20)	Required Base Class Rate per Policy, (17) + (19)	28.07
(21)	Current Average Base Class Rate	26.14
(22)	Indicated Rate Level Change ^(l) , (20) / (21) - 1	+7.4%

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF INDICATED STATEWIDE RATE LEVEL CHANGE
FIRE

- (a) Incurred losses have been adjusted by the following loss development factors:

<u>Accident Year Ending</u>	<u>Loss Development Factor</u>
12/31/2016	1.000
12/31/2017	1.000
12/31/2018	0.997
12/31/2019	0.993
12/31/2020	0.955

- (b) The trended loss adjustment expenses have been calculated to be 8.6% of the incurred losses for Fire. This factor is developed on pages D-24 and D-28.
- (c) The development of the Loss Trend Factors is shown on page D-16.
- (d) The development of the Premium Trend Factors is shown on page D-18.
- (e) The calculation of the Average Rating Factors is shown on pages D-32-41.
- (f) The Weighted Trended Base Class Loss Cost is the sum of the products, by year, of the Trended Base Class Loss Costs and the accident year weights.
- (g) The standard for full credibility is 500,000 house years for Fire. This review is fully credible. The statewide credibility procedure is based on the "frequency with severity modification" model discussed in "Credibility of the Pure Premium" by Mayerson, Bowers and Jones. The full credibility standard is based on a normal distribution with a 90% probability of meeting the test and a 10% maximum departure from the expected value, translated to house year standards. Partial credibility (Z_p) is calculated as follows:
- $$Z_p = \sqrt{\frac{\text{Five-Year House Years}}{\text{Full Credibility Standard}}} \text{ (truncated to the nearest tenth)}$$
- (h) The development of the Trended Fixed Expense per Policy is shown on page D-28.
- (i) The development of the Expected Loss and Fixed Expense Ratio is shown on page D-22.
- (j) The Compensation for Assessment Risk loading is 1.6% of premium and is based on an analysis done by P. Anderson. The provision per policy is calculated as $(0.016 \times \text{Current Average Base Class Rate}) / (1 - \text{Provisions for Commission \& Taxes})$. The commission and tax provisions are those shown on page D-22 for Fire.
- (k) A 0% deviation loading was selected by the North Carolina Rate Bureau.
- (l) The full indicated rate level change is being implemented in Year 1.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF INDICATED STATEWIDE RATE LEVEL CHANGE
EXTENDED COVERAGE

Year	(1) Non-Modeled Adjusted Incurred Losses ^{(a) *}	(2) Non-Modeled Adjusted Excess Losses ^(b)	(3) Losses Including LAE Adjusted for Excess [(1)-(2)] × LAE × Excess Factor ^{(c)(d)}	(4) Loss Trend Factor ^(e)	(5) Earned House Years
2016	46,847,347	0	54,667,481	1.549	628,094
2017	54,944,767	0	64,116,587	1.475	627,486
2018	64,413,371	0	75,165,766	1.405	624,605
2019	60,685,669	0	70,815,806	1.338	625,133
2020	82,943,870	0	96,789,524	1.274	622,453

Year	(6) Premium Trend Factor ^(f)	(7) Trended Loss Cost [(3)×(4)] / [(5)×(6)]	(8) Average Rating Factor ^(g)	(9) Trended Base Class Loss Cost (7) / (8)	(10) Accident Year Weights
2016	1.247	108.12	7.487	14.44	0.20
2017	1.232	122.33	7.562	16.18	0.20
2018	1.214	139.27	7.610	18.30	0.20
2019	1.202	126.10	7.650	16.48	0.20
2020	1.191	166.33	7.694	21.62	0.20

(11)	Weighted Trended Non-Hurricane Base Class Loss Cost ^(h)	17.40
(12)	Credibility (3,127,771 House Years) ⁽ⁱ⁾	1.00
(13)	Trended Modeled Hurricane Base Class Loss Cost ⁽ⁱ⁾	16.81
(14)	Total Base Class Loss Cost (11) + (13)	34.21
(15)	Trended Fixed Expense per Policy ^(k)	6.03
(16)	Base Class Loss Cost with Fixed Expense, (14) + (15)	40.24
(17)	Expected Loss and Fixed Expense Ratio ^(l)	0.784
(18)	Base Rate Excluding Comp. for Assess. Risk, Net Reins. & Dev., (16) / (17)	51.33
(19)	Compensation for Assessment Risk per Policy ^(m)	0.96
(20)	Net Cost of Reinsurance per Policy ⁽ⁿ⁾	28.24
(21)	Base Class Rate Excluding Deviations, (18) + (19) + (20)	80.53
(22)	Selected Deviation ^(o)	0.000
(23)	Deviation Amount per Policy, [(21) / (1.0 - (22))] - (21)	0.00
(24)	Required Base Class Rate per Policy, (21) + (23)	80.53
(25)	Current Average Base Class Rate	52.72
(26)	Indicated Rate Level Change ^(p) , (24) / (25) - 1	+52.8%

* Actual Hurricane losses of \$64,400,529 were removed from 2016, \$264,976 were removed from 2017, \$577,649,889 were removed from 2018, \$27,038,100 were removed from 2019, and \$30,051,099 were removed from 2020.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF INDICATED STATEWIDE RATE LEVEL CHANGE
EXTENDED COVERAGE

- (a) Incurred losses excluding hurricanes have been adjusted by the following loss development factors:

<u>Accident Year Ending</u>	<u>Loss Development Factor</u>
12/31/2016	1.000
12/31/2017	1.000
12/31/2018	1.001
12/31/2019	1.004
12/31/2020	1.034

The excluded hurricane losses can be found on pages D-54-58.

- (b) Excess losses are calculated on pages D-47-48.
- (c) The trended loss adjustment expenses have been calculated to be 10.4% of the non-hurricane incurred losses for Extended Coverage. This factor is developed on pages D-27 and D-28.
- (d) The excess factor is calculated on page D-47.
- (e) The development of the Loss Trend Factors is shown on page D-16.
- (f) The development of the Premium Trend Factors is shown on page D-18.
- (g) The calculation of the Average Rating Factors is shown on pages D-63-72.
- (h) The Weighted Trended Non-Hurricane Base Class Loss Cost is the sum of the products, by year, of the Trended Base Class Loss Costs and the accident year weights.
- (i) The standard for full credibility is 330,000 house years for Extended Coverage. This review is fully credible. The statewide credibility procedure is based on the "frequency with severity modification" model discussed in "Credibility of the Pure Premium" by Mayerson, Bowers and Jones. The full credibility standard is based on a normal distribution with a 90% probability of meeting the test and a 10% maximum departure from the expected value, translated to house year standards. Partial credibility (Z_p) is calculated as follows:
- $$Z_p = \sqrt{\frac{\text{Five-Year House Years}}{\text{Full Credibility Standard}}} \text{ (truncated to the nearest tenth)}$$
- (j) The modeled hurricane base-class loss cost is calculated by dividing modeled losses of \$95,900,346 by the product of the trended Average Rating Factor and Earned House Years for the latest year. Using the trended latest-year exposures, Aon developed modeled losses by blending the results of the AIR and RMS hurricane models. The resulting losses were adjusted by Aon to include a loading for LAE of 6.0%. The development of the Modeled Hurricane Base Class Loss Cost is shown on page D-79.
- (k) The development of the Trended Fixed Expense per Policy is shown on page D-28.
- (l) The development of the Expected Loss and Fixed Expense Ratio is shown on page D-25.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF INDICATED STATEWIDE RATE LEVEL CHANGE **EXTENDED COVERAGE**

- (m) The Compensation for Assessment Risk loading is 1.6% of premium and is based on an analysis done by P. Anderson. The provision per policy is calculated as $(0.016 \times \text{Current Average Base Class Rate}) / (1 - \text{Provisions for Commission \& Taxes})$. The commission and tax provisions are those shown on page D-25 for Extended Coverage.
- (n) The derivation of the statewide Net Cost of Reinsurance per Policy provision is provided on page D-80. This loading is based on an analysis done by Aon.
- (o) A 0% deviation loading was selected by the North Carolina Rate Bureau.
- (p) The cumulative rate level change over Years 1 and 2 is equal to the indicated rate level change.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF INDICATED CLASS RATE LEVEL CHANGES

FIRE

<u>Class</u>	(1) Trended Adjusted <u>Incurred Losses</u>	(2) Five-Year Earned <u>House Years</u>	(3) Trended Average <u>Rating Factor</u>	(4) Base Class Loss Cost <u>(1) / [(2) × (3)]</u>	(5) <u>Credibility</u>	(6) Credibility- Weighted <u>Loss Cost</u>
Buildings	268,898,103	2,036,502	5.613	23.52	1.00	23.52
Contents	19,112,541	1,124,983	2.744	6.19	1.00	6.19
Total	288,010,644	3,161,485	5.210	17.49		17.49
<u>Class</u>	(7) Indicated Base Class <u>Loss Cost</u> ^(a)	(8) Current Latest- Year Average <u>Base Class Rate</u>	(9) Expected Loss and Fixed <u>Expense Ratio</u>	(10) Indicated Base Class <u>Rate</u> ^(b)	(11) Compensation for Assessment <u>Risk per Policy</u>	(12) Base Class Rate Excluding Deviations <u>(10) + (11)</u>
Buildings	23.36	35.06	0.761	37.10	0.65	37.75
Contents	6.15	10.42	0.761	9.98	0.19	10.17
Total	17.37	26.02	0.761	27.58	0.49	28.07
<u>Class</u>	(13) Selected <u>Deviation</u>	(14) Deviation Amount per Policy <u>(12) / [1.0 - (13)] - (12)</u>	(15) Required Base Class Rate <u>(12) + (14)</u>	(16) Current Five- Year Average <u>Base Class Rate</u>	(17) Indicated Base Class Rate Change <u>(15) / (16) - 1</u>	(18) Indicated Rate Change Balanced to <u>Statewide Level</u> ^(c)
Buildings	0.000	0.00	37.75	34.87	+8.3%	+8.1%
Contents	0.000	0.00	10.17	10.34	-1.6%	-1.8%
Total	0.000	0.00		26.14	+7.6%	+7.4%

^(a) Column (7) = (6) / Total (6) × Statewide Indication page row (10)

^(b) Column (10) = [(7) + (8) × Trended fixed expense ratio] / (9). The trended fixed expense ratio is shown in on page D-28.

^(c) Column (18) = [1 + (17)] / [1 + (17) total] × (1 + Statewide indicated rate level change) - 1

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DWELLING PROPERTY INSURANCE

CALCULATION OF INDICATED CLASS RATE LEVEL CHANGES
EXTENDED COVERAGE

Class	(1) Trended Adjusted Incurred Non-Modeled Losses	(2) Five-Year Earned House Years	(3) Trended Average Rating Factor	(4) Base Class Loss Cost = (1) / [(2) × (3)]	(5) Credibility	(6) Credibility- Weighted Loss Cost
Buildings	466,344,919	2,035,600	9.539	24.02	1.00	24.02
Contents	9,455,646	1,092,171	4.681	1.85	1.00	1.85
Total	475,800,565	3,127,771	9.250	16.45		16.45

Class	(7) Modeled Base Class Loss Cost	(8) Total Base Class Loss Cost	(9) Indicated Base Class Loss Cost ^(a)	(10) Current Latest- Year Average Base Class Rate	(11) Expected Loss and Fixed Expense Ratio
Buildings	24.73	48.75	49.78	75.63	0.784
Contents	2.60	4.45	4.54	8.69	0.784
Total	16.81	33.50	34.21	51.55	0.784

Class	(12) Indicated Net Base Class Rate ^(b)	(13) Compensation for Assessment Risk per Policy	(14) Net Cost of Reinsurance per Policy	(15) Base Class Rate Excluding Deviations (12)+(13)+(14)	(16) Selected Deviation
Buildings	74.78	1.38	41.54	117.70	0.000
Contents	7.09	0.16	4.35	11.60	0.000
Total	51.33	0.96	28.24	80.53	0.000

Class	(17) Deviation Amount per Policy (15) / [1.0 - (16)] - (15)	(18) Required Base Class Rate (15) + (17)	(19) Current Five- Year Average Base Class Rate	(20) Indicated Base Class Rate Change (18) / (19) - 1	(21) Indicated Rate Change Balanced to Statewide Level ^(c)
Buildings	0.00	117.70	76.20	+54.5%	+53.5%
Contents	0.00	11.60	8.96	+29.5%	+28.7%
Total	0.00		52.72	+53.7%	+52.8%

^(a) Column (9) = (8) / Total (8) × Statewide Indication page row (14).

^(b) Column (12) = [(9) + (10) × Trended fixed expense ratio] / (11). The trended fixed expense ratio is shown on page D-28.

^(c) Column (21) = [1 + (20)] / [1 + (20) total] × (1 + Statewide indicated rate level change) - 1

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF INDICATED TERRITORY RATE LEVEL CHANGES

FIRE

Territory	(1) Latest-Year Aggregate Calculated Earned Premium at Current Level	(2) Current Average Base Class Rate	(3) Five-Year Experience Base Class Loss Cost	(4) Five-Year Earned House Years	(5) Credibility	(6) Five-Year Average Rating Factor	(7) Credibility- Weighted Base Class Loss Cost ^(a)	(8) Indicated Relativity (7) / SW (7)	(9) Indicated Base Class Loss Cost (8) × 17.37 ^(b)	(10) Trended Fixed Expense per Policy ^(c)	(11) Trended Loss and Fixed Expense (9) + (10)
110	2,148,884	10.91	6.66	107,815	0.40	12.139	7.04	0.406	7.05	1.62	8.67
120	2,224,727	11.02	6.04	143,381	0.50	9.342	6.71	0.387	6.72	2.07	8.79
130	863,172	22.91	10.80	40,100	0.20	5.810	14.42	0.831	14.43	3.32	17.75
140	4,203,133	21.13	11.45	253,099	0.70	4.897	12.26	0.706	12.26	3.93	16.19
150	2,703,853	21.56	17.87	154,622	0.50	4.972	16.15	0.930	16.15	3.89	20.04
160	2,748,605	24.80	15.68	138,941	0.50	5.158	16.14	0.930	16.15	3.72	19.87
170	468,965	31.89	23.45	18,361	0.10	4.443	21.55	1.241	21.56	4.19	25.75
180	3,655,743	33.69	19.44	149,933	0.50	4.218	20.99	1.209	21.00	4.49	25.49
190	1,329,852	34.24	30.96	62,640	0.30	3.677	25.32	1.459	25.34	5.28	30.62
200	1,071,262	42.72	32.37	38,385	0.20	3.884	29.34	1.690	29.36	4.89	34.25
210	996,638	31.81	33.93	47,705	0.30	3.686	25.08	1.445	25.10	5.06	30.16
220	4,912,598	30.76	20.85	163,741	0.50	5.823	20.72	1.194	20.74	3.16	23.90
230	2,289,996	45.32	38.06	99,210	0.40	3.054	33.42	1.925	33.44	6.05	39.49
240	3,072,199	32.13	26.87	139,729	0.50	4.015	24.18	1.393	24.20	4.73	28.93
250	2,457,371	29.49	18.42	85,001	0.40	5.646	19.21	1.107	19.23	3.26	22.49
260	2,064,809	36.89	25.16	65,050	0.30	4.426	24.83	1.430	24.84	4.05	28.89
270	5,022,414	23.32	11.80	176,671	0.50	7.090	13.70	0.789	13.70	2.57	16.27
280	846,574	20.89	7.76	37,517	0.20	6.363	12.73	0.733	12.73	2.98	15.71
290	1,077,185	27.03	13.99	45,116	0.30	5.937	16.86	0.971	16.87	3.26	20.13
300	1,450,397	35.93	29.09	54,816	0.30	3.714	25.56	1.472	25.57	4.69	30.26
310	6,970,701	27.90	17.16	285,201	0.70	5.113	17.61	1.014	17.61	3.61	21.22
320	2,937,830	27.65	22.55	134,388	0.50	5.038	20.53	1.183	20.55	3.83	24.38
330	239,902	27.88	20.31	12,540	0.10	4.146	18.82	1.084	18.83	4.68	23.51
340	6,192,245	23.85	15.77	247,753	0.70	6.371	15.83	0.912	15.84	2.91	18.75
350	2,784,005	28.69	24.76	122,839	0.40	4.760	21.42	1.234	21.43	3.92	25.35
360	4,733,856	21.96	13.94	238,036	0.60	5.436	14.24	0.820	14.24	3.43	17.67
370	348,289	23.58	12.67	15,754	0.10	5.437	15.47	0.891	15.48	3.46	18.94
380	960,965	21.73	17.50	41,994	0.20	6.221	15.13	0.872	15.15	2.99	18.14
390	934,190	22.47	15.79	41,147	0.20	6.348	15.19	0.875	15.20	3.05	18.25
Statewide	71,710,360	26.14	17.49	3,161,485	1.00	5.210	17.36	1.000	17.37	3.62	20.99

^(a) Column (7) = (5) × (3) + [1.00 - (5)] × Statewide (3) × (2) / Statewide (2)

^(b) Column (9) = (8) × Indicated Statewide Base Class Loss Cost

^(c) The derivation of the territory Trended Fixed Expense per Policy is on page D-29.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF INDICATED TERRITORY RATE LEVEL CHANGES

FIRE

Territory	(12) Expected Loss and Fixed Expense Ratio	(13) Indicated Net Base Class Rate (11) / (12)	(14) Compensation of Assessment Risk per Policy	(15) Base Class Rate Excluding Deviations (13) + (14)	(16) Selected Deviations	(17) Deviation Amount per Policy (15) / (1.0 - (16)) - (15)	(18) Indicated Required Base Class Rate (15) + (17)	(19) Indicated Rate Level Change (18) / (2) - 1	(20) Indicated Rate Level Change Balanced to Statewide Indicated Level ^(d)	(21) Indicated Buildings Rate Level Change ^(e)	(22) Indicated Contents Rate Level Change ^(f)
110	0.761	11.39	0.20	11.59	0.000	0.00	11.59	+6.2%	+6.3%	+7.0%	-2.8%
120	0.761	11.55	0.21	11.76	0.000	0.00	11.76	+6.7%	+6.8%	+7.5%	-2.3%
130	0.761	23.32	0.43	23.75	0.000	0.00	23.75	+3.7%	+3.8%	+4.5%	-5.1%
140	0.761	21.27	0.39	21.66	0.000	0.00	21.66	+2.5%	+2.6%	+3.3%	-6.2%
150	0.761	26.33	0.40	26.73	0.000	0.00	26.73	+24.0%	+24.1%	+24.9%	+13.5%
160	0.761	26.11	0.46	26.57	0.000	0.00	26.57	+7.1%	+7.2%	+7.9%	-2.0%
170	0.761	33.84	0.60	34.44	0.000	0.00	34.44	+8.0%	+8.1%	+8.8%	-1.2%
180	0.761	33.50	0.63	34.13	0.000	0.00	34.13	+1.3%	+1.4%	+2.1%	-7.3%
190	0.761	40.24	0.64	40.88	0.000	0.00	40.88	+19.4%	+19.5%	+20.3%	+9.3%
200	0.761	45.01	0.80	45.81	0.000	0.00	45.81	+7.2%	+7.3%	+8.0%	-1.9%
210	0.761	39.63	0.59	40.22	0.000	0.00	40.22	+26.4%	+26.5%	+27.3%	+15.7%
220	0.761	31.41	0.57	31.98	0.000	0.00	31.98	+4.0%	+4.1%	+4.8%	-4.8%
230	0.761	51.89	0.85	52.74	0.000	0.00	52.74	+16.4%	+16.5%	+17.3%	+6.5%
240	0.761	38.02	0.60	38.62	0.000	0.00	38.62	+20.2%	+20.3%	+21.1%	+10.0%
250	0.761	29.55	0.55	30.10	0.000	0.00	30.10	+2.1%	+2.2%	+2.9%	-6.6%
260	0.761	37.96	0.69	38.65	0.000	0.00	38.65	+4.8%	+4.9%	+5.6%	-4.1%
270	0.761	21.38	0.44	21.82	0.000	0.00	21.82	-6.4%	-6.3%	-5.7%	-14.3%
280	0.761	20.64	0.39	21.03	0.000	0.00	21.03	+0.7%	+0.8%	+1.5%	-7.8%
290	0.761	26.45	0.51	26.96	0.000	0.00	26.96	-0.3%	-0.2%	+0.5%	-8.7%
300	0.761	39.76	0.67	40.43	0.000	0.00	40.43	+12.5%	+12.6%	+13.3%	+3.0%
310	0.761	27.88	0.52	28.40	0.000	0.00	28.40	+1.8%	+1.9%	+2.6%	-6.8%
320	0.761	32.04	0.52	32.56	0.000	0.00	32.56	+17.8%	+17.9%	+18.7%	+7.8%
330	0.761	30.89	0.52	31.41	0.000	0.00	31.41	+12.7%	+12.8%	+13.5%	+3.1%
340	0.761	24.64	0.45	25.09	0.000	0.00	25.09	+5.2%	+5.3%	+6.0%	-3.7%
350	0.761	33.31	0.54	33.85	0.000	0.00	33.85	+18.0%	+18.1%	+18.9%	+8.0%
360	0.761	23.22	0.41	23.63	0.000	0.00	23.63	+7.6%	+7.7%	+8.4%	-1.5%
370	0.761	24.89	0.44	25.33	0.000	0.00	25.33	+7.4%	+7.5%	+8.2%	-1.7%
380	0.761	23.84	0.41	24.25	0.000	0.00	24.25	+11.6%	+11.7%	+12.4%	+2.1%
390	0.761	23.98	0.42	24.40	0.000	0.00	24.40	+8.6%	+8.7%	+9.4%	-0.6%
Statewide	0.761	27.58	0.49	28.07	0.000	0.00	28.07	+7.3%	+7.4%	+8.1%	-1.8%

^(d) Column (20) = [1 + (19)] / [1 + Statewide (19)] × (1 + Statewide indicated rate level change) - 1

^(e) Column (21) = [1 + (20)] × [1 + Class page Buildings (18)] / [1 + Class page Total (18)] - 1

^(f) Column (22) = [1 + (20)] × [1 + Class page Contents (18)] / [1 + Class page Total (18)] - 1

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF INDICATED TERRITORY RATE LEVEL CHANGES
EXTENDED COVERAGE

Territory	(1) Latest-Year Aggregate Calculated Earned Premium at Current Level	(2) Current Average Base Class Rate	(3) Five-Year Non-Hurricane Experience Base Class Loss Cost	(4) Five-Year Earned House Years	(5) Credibility	(6) Five-Year Average Rating Factor	(7) Credibility- Weighted Base Class Loss Cost ^(a)	(8) Modeled Hurricane Base Class Loss Cost	(9) Total Base Class Loss Cost (7) + (8)	(10) Indicated Relativity (9) / SW (9)	(11) Indicated Base Class Loss Cost (10) × 34.21 ^(b)	(12) Trended Fixed Expense per Policy ^(c)	(13) Trended Loss and Fixed Expense (11) + (12)
110	30,440,645	113.57	10.76	106,326	0.50	16.394	12.30	63.49	75.79	2.421	82.82	3.51	86.33
120	36,183,931	129.71	9.14	142,660	0.60	12.964	11.02	69.84	80.86	2.583	88.36	4.42	92.78
130	4,724,953	102.10	12.43	39,599	0.30	6.998	13.41	42.56	55.97	1.788	61.17	7.86	69.03
140	32,326,932	110.30	12.51	253,870	0.80	7.259	12.77	55.41	68.18	2.178	74.51	7.82	82.33
150	15,055,413	91.69	14.65	153,088	0.60	6.562	14.32	22.67	36.99	1.182	40.44	8.59	49.03
160	14,951,302	96.60	14.10	139,851	0.60	7.207	13.99	26.77	40.76	1.302	44.54	7.77	52.31
170	897,149	44.42	18.22	18,355	0.20	6.019	14.71	9.49	24.20	0.773	26.44	8.97	35.41
180	9,371,455	50.29	16.25	149,879	0.60	7.165	15.28	13.46	28.74	0.918	31.40	7.66	39.06
190	3,220,509	52.15	14.12	62,662	0.40	5.704	13.95	20.83	34.78	1.111	38.01	9.76	47.77
200	2,014,242	61.41	13.76	38,288	0.30	4.964	13.81	24.85	38.66	1.235	42.25	10.93	53.18
210	2,274,329	43.70	16.28	47,765	0.30	6.095	14.57	10.76	25.33	0.809	27.68	8.95	36.63
220	12,306,266	38.99	18.83	155,845	0.60	12.181	16.83	7.13	23.96	0.765	26.17	4.48	30.65
230	4,123,948	57.66	13.36	98,876	0.50	4.272	13.60	18.73	32.33	1.033	35.34	12.51	47.85
240	5,936,137	38.70	18.14	139,540	0.60	6.487	16.42	8.45	24.87	0.795	27.20	8.52	35.72
250	6,066,897	39.37	17.60	85,046	0.50	10.380	15.72	6.09	21.81	0.697	23.84	5.10	28.94
260	3,491,616	39.31	15.44	64,172	0.40	6.686	14.47	4.74	19.21	0.614	21.00	7.37	28.37
270	12,355,735	27.93	14.79	172,612	0.70	14.998	14.50	3.09	17.59	0.562	19.23	3.52	22.75
280	2,027,991	26.83	12.93	36,725	0.30	12.076	13.56	3.10	16.66	0.532	18.20	4.57	22.77
290	2,532,772	34.25	12.59	44,717	0.30	11.314	13.46	4.43	17.89	0.572	19.57	5.04	24.61
300	2,145,111	32.17	14.03	54,691	0.40	5.748	13.91	4.97	18.88	0.603	20.63	8.38	29.01
310	11,506,292	24.65	13.12	279,924	0.90	9.643	13.19	2.10	15.29	0.488	16.69	5.55	22.24
320	5,394,692	28.18	15.07	131,575	0.60	9.291	14.57	2.74	17.31	0.553	18.92	6.00	24.92
330	364,622	27.68	13.56	12,463	0.10	6.050	13.80	2.25	16.05	0.513	17.55	8.83	26.38
340	11,581,976	22.54	11.56	244,119	0.80	13.015	12.01	1.93	13.94	0.445	15.22	4.19	19.41
350	4,236,027	24.97	13.32	121,736	0.60	8.387	13.52	1.82	15.34	0.490	16.76	6.38	23.14
360	8,245,507	21.59	11.94	235,655	0.80	9.646	12.32	1.03	13.35	0.427	14.61	5.55	20.16
370	481,592	21.83	9.91	15,577	0.20	8.214	13.05	0.80	13.85	0.442	15.12	6.59	21.71
380	1,348,883	19.61	11.48	41,491	0.30	9.758	13.13	0.61	13.74	0.439	15.02	5.55	20.57
390	1,265,069	19.18	10.32	40,664	0.30	10.118	12.78	0.55	13.33	0.426	14.57	5.51	20.08
Statewide	246,871,993	52.72	13.83	3,127,771	1.00	9.250	13.88	16.81	31.30	1.000	34.21	6.03	40.24

^(a) Column (7) = (5) × (3) + [1.00 - (5)] × Statewide (3)

^(b) Column (11) = (10) × Indicated Statewide Base Loss Cost

^(c) The derivation of the territory Trended Fixed Expense per Policy is on page D-30.

NORTH CAROLINA
DWELLING PROPERTY INSURANCE

CALCULATION OF INDICATED TERRITORY RATE LEVEL CHANGES
EXTENDED COVERAGE

Territory	(14) Expected Loss and Fixed Expense Ratio	(15) Indicated Net Base Class Rate (13) / (14)	(16) Compensation for Assessment Risk per Policy	(17) Net Cost of Reinsurance per Policy	(18) Base Class Rate Excluding Deviations (15) + (16) + (17)	(19) Selected Deviation	(20) Deviation Amount per Policy (18) / (1.0 - (19)) - (18)	(21) Indicated Required Base Class Rate (18) + (20)	(22) Indicated Rate Level Change (21) / (2) - 1	(23) Indicated Rate Level Change Balanced to Statewide Indicated Level ^(d)	(24) Indicated Buildings Rate Level Change ^(e)	(25) Indicated Contents Rate Level Change ^(f)
110	0.784	110.11	2.06	88.76	200.93	0.000	0.00	200.93	+76.9%	+76.2%	+77.0%	+48.4%
120	0.784	118.34	2.35	122.78	243.47	0.000	0.00	243.47	+87.7%	+87.0%	+87.9%	+57.5%
130	0.784	88.05	1.85	65.33	155.23	0.000	0.00	155.23	+52.0%	+51.4%	+52.1%	+27.5%
140	0.784	105.01	2.00	94.59	201.60	0.000	0.00	201.60	+82.8%	+82.1%	+82.9%	+53.4%
150	0.784	62.54	1.66	38.33	102.53	0.000	0.00	102.53	+11.8%	+11.4%	+11.9%	-6.2%
160	0.784	66.72	1.75	50.90	119.37	0.000	0.00	119.37	+23.6%	+23.1%	+23.7%	+3.7%
170	0.784	45.17	0.81	15.46	61.44	0.000	0.00	61.44	+38.3%	+37.8%	+38.4%	+16.1%
180	0.784	49.82	0.91	24.71	75.44	0.000	0.00	75.44	+50.0%	+49.4%	+50.1%	+25.8%
190	0.784	60.93	0.95	39.03	100.91	0.000	0.00	100.91	+93.5%	+92.7%	+93.6%	+62.3%
200	0.784	67.83	1.11	46.63	115.57	0.000	0.00	115.57	+88.2%	+87.5%	+88.4%	+57.9%
210	0.784	46.72	0.79	19.96	67.47	0.000	0.00	67.47	+54.4%	+53.8%	+54.5%	+29.5%
220	0.784	39.09	0.71	13.96	53.76	0.000	0.00	53.76	+37.9%	+37.3%	+37.9%	+15.6%
230	0.784	61.03	1.05	33.89	95.97	0.000	0.00	95.97	+66.4%	+65.8%	+66.6%	+39.6%
240	0.784	45.56	0.70	15.56	61.82	0.000	0.00	61.82	+59.7%	+59.1%	+59.8%	+34.0%
250	0.784	36.91	0.71	11.45	49.07	0.000	0.00	49.07	+24.6%	+24.2%	+24.8%	+4.6%
260	0.784	36.19	0.71	8.55	45.45	0.000	0.00	45.45	+15.6%	+15.2%	+15.7%	-3.0%
270	0.784	29.02	0.51	5.94	35.47	0.000	0.00	35.47	+27.0%	+26.5%	+27.1%	+6.5%
280	0.784	29.04	0.49	5.76	35.29	0.000	0.00	35.29	+31.5%	+31.0%	+31.6%	+10.3%
290	0.784	31.39	0.62	8.35	40.36	0.000	0.00	40.36	+17.8%	+17.4%	+17.9%	-1.1%
300	0.784	37.00	0.58	8.53	46.11	0.000	0.00	46.11	+43.3%	+42.8%	+43.5%	+20.3%
310	0.784	28.37	0.45	3.83	32.65	0.000	0.00	32.65	+32.5%	+31.9%	+32.5%	+11.1%
320	0.784	31.79	0.51	4.58	36.88	0.000	0.00	36.88	+30.9%	+30.4%	+31.0%	+9.8%
330	0.784	33.65	0.50	3.50	37.65	0.000	0.00	37.65	+36.0%	+35.5%	+36.1%	+14.1%
340	0.784	24.76	0.41	2.89	28.06	0.000	0.00	28.06	+24.5%	+24.0%	+24.6%	+4.4%
350	0.784	29.52	0.45	2.19	32.16	0.000	0.00	32.16	+28.8%	+28.3%	+28.9%	+8.1%
360	0.784	25.71	0.39	1.14	27.24	0.000	0.00	27.24	+26.2%	+25.7%	+26.3%	+5.9%
370	0.784	27.69	0.40	0.82	28.91	0.000	0.00	28.91	+32.4%	+31.9%	+32.5%	+11.1%
380	0.784	26.24	0.36	0.37	26.97	0.000	0.00	26.97	+37.5%	+37.0%	+37.6%	+15.4%
390	0.784	25.61	0.35	0.23	26.19	0.000	0.00	26.19	+36.5%	+36.0%	+36.6%	+14.5%
Statewide	0.784	51.33	0.96	28.24	80.53	0.000	0.00	80.53	+53.4%	+52.9%	+53.6%	+28.7%

^(d) Column (23) = [1 + (22)] / [1 + Statewide (22)] × (1 + Statewide indicated rate level change) - 1

^(e) Column (24) = [1 + (23)] × [1 + Class page Buildings (21)] / [1 + Class page Total (21)] - 1

^(f) Column (25) = [1 + (23)] × [1 + Class page Contents (21)] / [1 + Class page Total (21)] - 1

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF FILED TERRITORY BASE CLASS RATES

In order to mitigate the effects of large rate changes on policyholders, the Governing Committee selected to spread the indicated rate level changes over a two-year period, for both Fire and Extended Coverage. Filed rate level changes are as follows:

- For Fire, the full indicated rate level change of +7.4% is being filed in Year 1.
- For Extended Coverage, the indicated rate level change of +52.8% is being spread over two years, resulting in filed changes of +23.1% in Year 1 and +24.1% in Year 2.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF FILED TERRITORY BASE CLASS RATES
BUILDINGS - YEAR 1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Fire					Extended Coverage					Combined
	Latest-Year Aggregate Calculated Earned Premium at Current Level	Current Base Class Rate	Indicated Buildings Rate Level Change	Year 1 Selected Rate Level Change	Year 1 Filed Base Class Rate	Latest-Year Aggregate Calculated Earned Premium at Current Level	Current Base Class Rate	Indicated Buildings Rate Level Change	Year 1 Selected Rate Level Change	Year 1 Filed Base Class Rate	Year 1 Filed Rate Level Change ^(a)
Territory											
110	2,148,884	\$17	+7.0%	+7.0%	\$18	30,440,645	\$191	+77.0%	+33.0%	\$254	+31.3%
120	2,224,727	\$17	+7.5%	+7.5%	\$18	36,183,931	\$214	+87.9%	+37.1%	\$293	+35.4%
130	863,172	\$32	+4.5%	+4.5%	\$33	4,724,953	\$154	+52.1%	+23.3%	\$190	+20.4%
140	4,203,133	\$29	+3.3%	+3.3%	\$30	32,326,932	\$167	+82.9%	+35.2%	\$226	+31.5%
150	2,703,853	\$29	+24.9%	+24.9%	\$36	15,055,413	\$140	+11.9%	+5.8%	\$148	+8.7%
160	2,748,605	\$33	+7.9%	+7.9%	\$36	14,951,302	\$145	+23.7%	+11.2%	\$161	+10.7%
170	468,965	\$44	+8.8%	+8.8%	\$48	897,149	\$69	+38.4%	+17.6%	\$81	+14.6%
180	3,655,743	\$45	+2.1%	+2.1%	\$46	9,371,455	\$75	+50.1%	+22.5%	\$92	+16.8%
190	1,329,852	\$46	+20.3%	+20.3%	\$55	3,220,509	\$77	+93.6%	+39.1%	\$107	+33.6%
200	1,071,262	\$62	+8.0%	+8.0%	\$67	2,014,242	\$97	+88.4%	+37.3%	\$133	+27.1%
210	996,638	\$41	+27.3%	+27.3%	\$52	2,274,329	\$63	+54.5%	+24.3%	\$78	+25.2%
220	4,912,598	\$41	+4.8%	+4.8%	\$43	12,306,266	\$56	+37.9%	+17.4%	\$66	+13.8%
230	2,289,996	\$64	+17.3%	+17.3%	\$75	4,123,948	\$89	+66.6%	+29.1%	\$115	+24.9%
240	3,072,199	\$42	+21.1%	+21.1%	\$51	5,936,137	\$57	+59.8%	+26.4%	\$72	+24.6%
250	2,457,371	\$39	+2.9%	+2.9%	\$40	6,066,897	\$59	+24.8%	+11.7%	\$66	+9.2%
260	2,064,809	\$47	+5.6%	+5.6%	\$50	3,491,616	\$55	+15.7%	+7.6%	\$59	+6.9%
270	5,022,414	\$31	-5.7%	-5.7%	\$29	12,355,735	\$42	+27.1%	+12.7%	\$47	+7.4%
280	846,574	\$28	+1.5%	+1.5%	\$28	2,027,991	\$41	+31.6%	+14.7%	\$47	+10.8%
290	1,077,185	\$36	+0.5%	+0.5%	\$36	2,532,772	\$52	+17.9%	+8.6%	\$56	+6.2%
300	1,450,397	\$47	+13.3%	+13.3%	\$53	2,145,111	\$47	+43.5%	+19.8%	\$56	+17.2%
310	6,970,701	\$35	+2.6%	+2.6%	\$36	11,506,292	\$34	+32.5%	+15.1%	\$39	+10.4%
320	2,937,830	\$34	+18.7%	+18.7%	\$40	5,394,692	\$38	+31.0%	+14.5%	\$44	+16.0%
330	239,902	\$36	+13.5%	+13.5%	\$41	364,622	\$41	+36.1%	+16.7%	\$48	+15.4%
340	6,192,245	\$31	+6.0%	+6.0%	\$33	11,581,976	\$32	+24.6%	+11.6%	\$36	+9.6%
350	2,784,005	\$35	+18.9%	+18.9%	\$42	4,236,027	\$33	+28.9%	+13.5%	\$37	+15.6%
360	4,733,856	\$29	+8.4%	+8.4%	\$31	8,245,507	\$32	+26.3%	+12.4%	\$36	+10.9%
370	348,289	\$32	+8.2%	+8.2%	\$35	481,592	\$34	+32.5%	+15.1%	\$39	+12.2%
380	960,965	\$29	+12.4%	+12.4%	\$33	1,348,883	\$30	+37.6%	+17.3%	\$35	+15.3%
390	934,190	\$30	+9.4%	+9.4%	\$33	1,265,069	\$30	+36.6%	+16.9%	\$35	+13.7%
Statewide	71,710,360	\$34.87	+8.1%	+8.1%	\$37.69	246,871,993	\$76.20	+53.6%	+23.4%	\$94.03	+20.0%

^(a) Column (11) = [(1) × (4) + (6) × (9)] / [(1) + (6)]

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF FILED TERRITORY BASE CLASS RATES

CONTENTS - YEAR 1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Fire					Extended Coverage					Combined
	Latest-Year Aggregate Calculated Earned Premium at Current Level	Current Base Class Rate	Indicated Contents Rate Level Change	Year 1 Selected Rate Level Change	Year 1 Filed Base Class Rate	Latest-Year Aggregate Calculated Earned Premium at Current Level	Current Base Class Rate	Indicated Contents Rate Level Change	Year 1 Selected Rate Level Change	Year 1 Filed Base Class Rate	Year 1 Filed Rate Level Change ^(a)
Territory											
110	2,148,884	\$4	-2.8%	-2.8%	\$4	30,440,645	\$26	+48.4%	+21.8%	\$32	+20.2%
120	2,224,727	\$4	-2.3%	-2.3%	\$4	36,183,931	\$31	+57.5%	+25.5%	\$39	+23.9%
130	863,172	\$9	-5.1%	-5.1%	\$9	4,724,953	\$23	+27.5%	+12.9%	\$26	+10.1%
140	4,203,133	\$9	-6.2%	-6.2%	\$8	32,326,932	\$23	+53.4%	+23.9%	\$28	+20.4%
150	2,703,853	\$9	+13.5%	+13.5%	\$10	15,055,413	\$11	-6.2%	-3.1%	\$11	-0.6%
160	2,748,605	\$11	-2.0%	-2.0%	\$11	14,951,302	\$15	+3.7%	+1.8%	\$15	+1.2%
170	468,965	\$13	-1.2%	-1.2%	\$13	897,149	\$6	+16.1%	+7.7%	\$6	+4.6%
180	3,655,743	\$14	-7.3%	-7.3%	\$13	9,371,455	\$7	+25.8%	+12.2%	\$8	+6.7%
190	1,329,852	\$14	+9.3%	+9.3%	\$15	3,220,509	\$9	+62.3%	+27.4%	\$11	+22.1%
200	1,071,262	\$16	-1.9%	-1.9%	\$16	2,014,242	\$12	+57.9%	+25.7%	\$15	+16.1%
210	996,638	\$13	+15.7%	+15.7%	\$15	2,274,329	\$4	+29.5%	+13.8%	\$5	+14.4%
220	4,912,598	\$12	-4.8%	-4.8%	\$11	12,306,266	\$3	+15.6%	+7.5%	\$3	+4.0%
230	2,289,996	\$17	+6.5%	+6.5%	\$18	4,123,948	\$10	+39.6%	+18.2%	\$12	+14.0%
240	3,072,199	\$13	+10.0%	+10.0%	\$14	5,936,137	\$3	+34.0%	+15.8%	\$3	+13.8%
250	2,457,371	\$12	-6.6%	-6.6%	\$11	6,066,897	\$3	+4.6%	+2.3%	\$3	-0.3%
260	2,064,809	\$13	-4.1%	-4.1%	\$12	3,491,616	\$2	-3.0%	-1.5%	\$2	-2.5%
270	5,022,414	\$10	-14.3%	-14.3%	\$9	12,355,735	\$2	+6.5%	+3.2%	\$2	-1.9%
280	846,574	\$9	-7.8%	-7.8%	\$8	2,027,991	\$2	+10.3%	+5.0%	\$2	+1.2%
290	1,077,185	\$11	-8.7%	-8.7%	\$10	2,532,772	\$2	-1.1%	-0.6%	\$2	-3.0%
300	1,450,397	\$15	+3.0%	+3.0%	\$15	2,145,111	\$4	+20.3%	+9.7%	\$4	+7.0%
310	6,970,701	\$11	-6.8%	-6.8%	\$10	11,506,292	\$1	+11.1%	+5.4%	\$1	+0.8%
320	2,937,830	\$11	+7.8%	+7.8%	\$12	5,394,692	\$1	+9.8%	+4.8%	\$1	+5.9%
330	239,902	\$12	+3.1%	+3.1%	\$12	364,622	\$1	+14.1%	+6.8%	\$1	+5.3%
340	6,192,245	\$9	-3.7%	-3.7%	\$9	11,581,976	\$1	+4.4%	+2.2%	\$1	+0.1%
350	2,784,005	\$11	+8.0%	+8.0%	\$12	4,236,027	\$1	+8.1%	+4.0%	\$1	+5.6%
360	4,733,856	\$9	-1.5%	-1.5%	\$9	8,245,507	\$2	+5.9%	+2.9%	\$2	+1.3%
370	348,289	\$10	-1.7%	-1.7%	\$10	481,592	\$2	+11.1%	+5.4%	\$2	+2.4%
380	960,965	\$9	+2.1%	+2.1%	\$9	1,348,883	\$1	+15.4%	+7.4%	\$1	+5.2%
390	934,190	\$10	-0.6%	-0.6%	\$10	1,265,069	\$1	+14.5%	+7.0%	\$1	+3.8%
Statewide	71,710,360	\$10.34	-1.8%	-1.8%	\$10.15	246,871,993	\$8.96	+28.7%	+13.0%	\$10.12	+9.7%

^(a) Column (11) = [(1) × (4) + (6) × (9)] / [(1) + (6)]

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF FILED TERRITORY BASE CLASS RATES
BUILDINGS - YEAR 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Fire					Extended Coverage					Combined
Territory	Year 1 Aggregate Calculated Earned Premium at Current Level	Year 1 Base Class Rate	Indicated Residual Buildings Rate Level Change	Year 2 Selected Rate Level Change	Year 2 Filed Base Class Rate	Year 1 Aggregate Calculated Earned Premium at Current Level	Year 1 Base Class Rate	Indicated Residual Buildings Rate Level Change	Year 2 Selected Rate Level Change	Year 2 Filed Base Class Rate	Year 2 Filed Rate Level Change ^(a)
110	2,284,264	\$18	0.0%	0.0%	\$18	40,394,736	\$254	+33.0%	+33.0%	\$338	+31.2%
120	2,376,008	\$18	0.0%	0.0%	\$18	49,463,434	\$293	+37.1%	+37.1%	\$402	+35.4%
130	895,973	\$33	0.0%	0.0%	\$33	5,811,692	\$190	+23.3%	+23.3%	\$234	+20.2%
140	4,312,414	\$30	0.0%	0.0%	\$30	43,609,031	\$226	+35.2%	+35.2%	\$306	+32.0%
150	3,355,482	\$36	0.0%	0.0%	\$36	15,883,461	\$148	+5.8%	+5.8%	\$157	+4.8%
160	2,946,505	\$36	0.0%	0.0%	\$36	16,595,945	\$161	+11.2%	+11.2%	\$179	+9.5%
170	506,951	\$48	0.0%	0.0%	\$48	1,053,253	\$81	+17.6%	+17.6%	\$95	+11.9%
180	3,706,923	\$46	0.0%	0.0%	\$46	11,451,918	\$92	+22.5%	+22.5%	\$113	+17.0%
190	1,589,173	\$55	0.0%	0.0%	\$55	4,470,066	\$107	+39.1%	+39.1%	\$149	+28.8%
200	1,149,464	\$67	0.0%	0.0%	\$67	2,757,497	\$133	+37.3%	+37.3%	\$183	+26.3%
210	1,260,747	\$52	0.0%	0.0%	\$52	2,820,168	\$78	+24.3%	+24.3%	\$97	+16.8%
220	5,114,015	\$43	0.0%	0.0%	\$43	14,422,944	\$66	+17.4%	+17.4%	\$77	+12.8%
230	2,667,845	\$75	0.0%	0.0%	\$75	5,311,645	\$115	+29.1%	+29.1%	\$148	+19.4%
240	3,695,855	\$51	0.0%	0.0%	\$51	7,485,469	\$72	+26.4%	+26.4%	\$91	+17.7%
250	2,511,433	\$40	0.0%	0.0%	\$40	6,758,523	\$66	+11.7%	+11.7%	\$74	+8.5%
260	2,165,985	\$50	0.0%	0.0%	\$50	3,746,504	\$59	+7.6%	+7.6%	\$63	+4.8%
270	4,706,002	\$29	0.0%	0.0%	\$29	13,900,202	\$47	+12.7%	+12.7%	\$53	+9.5%
280	853,347	\$28	0.0%	0.0%	\$28	2,322,050	\$47	+14.7%	+14.7%	\$54	+10.7%
290	1,075,031	\$36	0.0%	0.0%	\$36	2,745,525	\$56	+8.6%	+8.6%	\$61	+6.2%
300	1,633,147	\$53	0.0%	0.0%	\$53	2,563,408	\$56	+19.8%	+19.8%	\$67	+12.1%
310	7,103,144	\$36	0.0%	0.0%	\$36	13,209,223	\$39	+15.1%	+15.1%	\$45	+9.8%
320	3,463,702	\$40	0.0%	0.0%	\$40	6,160,738	\$44	+14.5%	+14.5%	\$50	+9.3%
330	270,609	\$41	0.0%	0.0%	\$41	424,420	\$48	+16.7%	+16.7%	\$56	+10.2%
340	6,520,434	\$33	0.0%	0.0%	\$33	12,902,321	\$36	+11.6%	+11.6%	\$40	+7.7%
350	3,287,910	\$42	0.0%	0.0%	\$42	4,799,419	\$37	+13.5%	+13.5%	\$42	+8.0%
360	5,098,363	\$31	0.0%	0.0%	\$31	9,243,213	\$36	+12.4%	+12.4%	\$40	+8.0%
370	374,411	\$35	0.0%	0.0%	\$35	552,868	\$39	+15.1%	+15.1%	\$45	+9.0%
380	1,073,398	\$33	0.0%	0.0%	\$33	1,578,193	\$35	+17.3%	+17.3%	\$41	+10.3%
390	1,015,465	\$33	0.0%	0.0%	\$33	1,475,070	\$35	+16.9%	+16.9%	\$41	+10.0%
Statewide	77,014,000	\$37.69	0.0%	0.0%	\$37.69	303,912,936	\$94.03	+24.4%	+24.4%	\$116.97	+19.5%

^(a) Column (11) = [(1) × (4) + (6) × (9)] / [(1) + (6)]

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF FILED TERRITORY BASE CLASS RATES

CONTENTS - YEAR 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Fire					Extended Coverage					Combined
	Year 1 Aggregate Calculated Earned Premium at Current Level	Year 1 Base Class Rate	Indicated Residual Contents Rate Level Change	Year 2 Selected Rate Level Change	Year 2 Filed Base Class Rate	Year 1 Aggregate Calculated Earned Premium at Current Level	Year 1 Base Class Rate	Indicated Residual Contents Rate Level Change	Year 2 Selected Rate Level Change	Year 2 Filed Base Class Rate	Year 2 Filed Rate Level Change ^(a)
Territory											
110	2,284,264	\$4	0.0%	0.0%	\$4	40,394,736	\$32	+21.8%	+21.8%	\$39	+20.6%
120	2,376,008	\$4	0.0%	0.0%	\$4	49,463,434	\$39	+25.5%	+25.5%	\$49	+24.3%
130	895,973	\$9	0.0%	0.0%	\$9	5,811,692	\$26	+12.9%	+12.9%	\$29	+11.2%
140	4,312,414	\$8	0.0%	0.0%	\$8	43,609,031	\$28	+23.9%	+23.9%	\$35	+21.7%
150	3,355,482	\$10	0.0%	0.0%	\$10	15,883,461	\$11	-3.1%	-3.1%	\$11	-2.6%
160	2,946,505	\$11	0.0%	0.0%	\$11	16,595,945	\$15	+1.8%	+1.8%	\$15	+1.5%
170	506,951	\$13	0.0%	0.0%	\$13	1,053,253	\$6	+7.7%	+7.7%	\$6	+5.2%
180	3,706,923	\$13	0.0%	0.0%	\$13	11,451,918	\$8	+12.2%	+12.2%	\$9	+9.2%
190	1,589,173	\$15	0.0%	0.0%	\$15	4,470,066	\$11	+27.4%	+27.4%	\$14	+20.2%
200	1,149,464	\$16	0.0%	0.0%	\$16	2,757,497	\$15	+25.7%	+25.7%	\$19	+18.1%
210	1,260,747	\$15	0.0%	0.0%	\$15	2,820,168	\$5	+13.8%	+13.8%	\$6	+9.5%
220	5,114,015	\$11	0.0%	0.0%	\$11	14,422,944	\$3	+7.5%	+7.5%	\$3	+5.5%
230	2,667,845	\$18	0.0%	0.0%	\$18	5,311,645	\$12	+18.2%	+18.2%	\$14	+12.1%
240	3,695,855	\$14	0.0%	0.0%	\$14	7,485,469	\$3	+15.8%	+15.8%	\$3	+10.6%
250	2,511,433	\$11	0.0%	0.0%	\$11	6,758,523	\$3	+2.3%	+2.3%	\$3	+1.7%
260	2,165,985	\$12	0.0%	0.0%	\$12	3,746,504	\$2	-1.5%	-1.5%	\$2	-1.0%
270	4,706,002	\$9	0.0%	0.0%	\$9	13,900,202	\$2	+3.2%	+3.2%	\$2	+2.4%
280	853,347	\$8	0.0%	0.0%	\$8	2,322,050	\$2	+5.0%	+5.0%	\$2	+3.7%
290	1,075,031	\$10	0.0%	0.0%	\$10	2,745,525	\$2	-0.6%	-0.6%	\$2	-0.4%
300	1,633,147	\$15	0.0%	0.0%	\$15	2,563,408	\$4	+9.7%	+9.7%	\$4	+5.9%
310	7,103,144	\$10	0.0%	0.0%	\$10	13,209,223	\$1	+5.4%	+5.4%	\$1	+3.5%
320	3,463,702	\$12	0.0%	0.0%	\$12	6,160,738	\$1	+4.8%	+4.8%	\$1	+3.1%
330	270,609	\$12	0.0%	0.0%	\$12	424,420	\$1	+6.8%	+6.8%	\$1	+4.2%
340	6,520,434	\$9	0.0%	0.0%	\$9	12,902,321	\$1	+2.2%	+2.2%	\$1	+1.5%
350	3,287,910	\$12	0.0%	0.0%	\$12	4,799,419	\$1	+4.0%	+4.0%	\$1	+2.4%
360	5,098,363	\$9	0.0%	0.0%	\$9	9,243,213	\$2	+2.9%	+2.9%	\$2	+1.9%
370	374,411	\$10	0.0%	0.0%	\$10	552,868	\$2	+5.4%	+5.4%	\$2	+3.2%
380	1,073,398	\$9	0.0%	0.0%	\$9	1,578,193	\$1	+7.4%	+7.4%	\$1	+4.4%
390	1,015,465	\$10	0.0%	0.0%	\$10	1,475,070	\$1	+7.0%	+7.0%	\$1	+4.1%
Statewide	77,014,000	\$10.15	0.0%	0.0%	\$10.15	303,912,936	\$10.12	+13.9%	+13.9%	\$11.53	+11.1%

^(a) Column (11) = [(1) × (4) + (6) × (9)] / [(1) + (6)]

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF WIND EXCLUSION CREDITS

The filed wind exclusion credits on pages B-5-6 are based on the following formula:

$$C_x = \left[I - \frac{\frac{Ldi' + Fi}{(1 - V)} + d'R + dB}{(1 - D)} \right] * r_x$$

C_x = Indicated credit for construction type x (Frame, Masonry or Mobile Home)

I = Indicated rate

F = Provision in filed rates for fixed expenses (territory trended fixed expense ratio divided by the filed territory buildings or contents rate level change)

V = Provision in filed rates for variable expenses

L = Provision in filed rates for losses and loss adjustment expenses = 1.0-V-F

d = Percentage of losses remaining after wind losses are excluded

i = Indicated rate excluding compensation for assessment risk and deviations

i' = Indicated rate excluding compensation for assessment risk, deviations and the net cost of reinsurance

B = Compensation for assessment risk provision

D = Deviation provision

d' = The portion of the net cost of reinsurance attributable to non-wind related perils

R = Net cost of reinsurance provision

r_x = The construction relativity (Frame = 1.00, Masonry = 0.95, Mobile Homes = 1.25)

The d value is calculated as:

$$\frac{N}{N + X + Y}$$

Where N = 5-year average annual non-wind losses; X = latest-year modeled hurricane losses and Y = 5-year average annual non-hurricane wind losses.

The d' value is calculated as:

$$\frac{W}{W + O + H}$$

Where each variable represents the net cost of reinsurance attributable to a particular peril (W = Winter Storm, O = Other Wind, and H = Hurricane Wind).

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF WIND EXCLUSION CREDITS FOR EXTENDED COVERAGE

The following displays the variables described above and the indicated credit, C:

	Territory 110		Territory 120		Territory 130		Territory 140		Territory 150		Territory 160	
	Buildings	Contents	Buildings	Contents	Buildings	Contents	Buildings	Contents	Buildings	Contents	Buildings	Contents
C	\$308.11	\$33.36	\$377.04	\$45.71	\$205.91	\$26.39	\$273.38	\$30.68	\$126.82	\$8.09	\$145.17	\$13.41
I	\$338	\$39	\$402	\$49	\$234	\$29	\$305	\$35	\$157	\$10	\$179	\$16
F	0.018	0.021	0.018	0.022	0.051	0.061	0.039	0.047	0.085	0.101	0.066	0.079
V	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216	0.216
L	0.766	0.763	0.766	0.762	0.733	0.723	0.745	0.737	0.699	0.683	0.718	0.705
d	0.120	0.232	0.081	0.085	0.102	0.023	0.107	0.128	0.153	0.114	0.199	0.144
i	\$334.00	\$38.00	\$398.00	\$48.00	\$231.00	\$29.00	\$302.00	\$35.00	\$154.00	\$10.00	\$177.00	\$15.00
i'	\$186.00	\$20.00	\$196.00	\$23.00	\$134.00	\$16.00	\$160.00	\$18.00	\$96.00	\$6.00	\$101.00	\$8.00
B	\$3.46	\$0.47	\$3.88	\$0.56	\$2.79	\$0.42	\$3.03	\$0.42	\$2.54	\$0.20	\$2.63	\$0.27
D	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
d'	0.000014	0.000014	0.000006	0.000006	0.000014	0.000012	0.000009	0.000010	0.000018	0.000018	0.000013	0.000014
R	\$148.00	\$18.00	\$202.00	\$25.00	\$97.00	\$13.00	\$142.00	\$17.00	\$58.00	\$4.00	\$76.00	\$7.00
N	2,797,876	173,896	2,078,381	75,189	303,108	1,816	2,508,091	100,705	1,107,711	17,007	1,527,686	20,540
X	19,739,678	572,867	22,376,593	782,079	2,302,000	74,360	18,961,916	680,924	4,382,173	112,919	4,918,939	115,130
Y	714,626	2,289	1,144,145	26,075	365,077	1,924	1,883,104	6,269	1,727,521	19,194	1,218,303	7,421
W	304	9	184	5	39	1	226	7	106	3	92	3
O	74,933	2,159	35,015	1,009	771	22	21,945	632	21,708	625	37,168	1,071
H	21,565,550	621,230	30,992,017	892,774	2,779,281	80,062	25,529,783	735,426	5,771,033	166,244	7,255,310	209,001

In order to derive the filed dollar credit, the indicated percentage credit is applied to the filed base rate.

	Territory 110		Territory 120		Territory 130		Territory 140		Territory 150		Territory 160	
	Buildings	Contents	Buildings	Contents	Buildings	Contents	Buildings	Contents	Buildings	Contents	Buildings	Contents
(1) Indicated Frame Credit	\$308	\$33	\$377	\$46	\$206	\$26	\$273	\$31	\$127	\$8	\$145	\$13
(2) Indicated Frame Base Rate	\$338	\$39	\$402	\$49	\$234	\$29	\$305	\$35	\$157	\$10	\$179	\$16
(3) Indicated Non-Wind Frame Base Rate = (2) - (1)	\$30	\$6	\$25	\$3	\$28	\$3	\$32	\$4	\$30	\$2	\$34	\$3
Year 1:												
(4) Filed Frame Base Rate	\$254	\$32	\$293	\$39	\$190	\$26	\$226	\$28	\$148	\$11	\$161	\$15
(5) Filed Frame Credit = (4) - (3)	\$224	\$26	\$268	\$36	\$162	\$23	\$194	\$24	\$118	\$9	\$127	\$12
(6) Filed Masonry Credit = (5) * 0.95	\$213	\$25	\$255	\$34	\$154	\$22	\$184	\$23	\$112	\$9	\$121	\$11
(7) Filed Mobile Home Credit = (5) * 1.25	\$280	\$33	\$335	\$45	\$203	\$29	\$243	\$30	\$148	\$11	\$159	\$15
Year 2:												
(8) Filed Frame Base Rate	\$338	\$39	\$402	\$49	\$234	\$29	\$306	\$35	\$157	\$11	\$179	\$15
(9) Filed Frame Credit = (8) - (3)	\$308	\$33	\$377	\$46	\$206	\$26	\$274	\$31	\$127	\$9	\$145	\$12
(10) Filed Masonry Credit = (9) * 0.95	\$293	\$31	\$358	\$44	\$196	\$25	\$260	\$29	\$121	\$9	\$138	\$11
(11) Filed Mobile Home Credit = (9) * 1.25	\$385	\$41	\$471	\$58	\$258	\$33	\$343	\$39	\$159	\$11	\$181	\$15

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF WINDSTORM LOSS MITIGATION CREDITS

BUILDINGS - YEAR 1

	Territory					
	110	120	130	140	150	160
(1) Current Wind Exclusion Credit	153	181	113	127	107	109
(2) Year 1 Filed Wind Exclusion Credit	224	268	162	194	118	127
(3) Ratio of Filed and Current Wind Credits = (2)/(1)	1.464	1.481	1.434	1.528	1.103	1.165
(4) Current Windstorm Loss Mitigation Credits - Frame						
Total Hip Roof	8	9	6	6	5	4
Opening Protection	8	9	6	6	5	4
Total Hip Roof and Opening Protection	17	18	11	11	11	10
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	27	33	12	22	14	18
FORTIFIED Roof - Hurricane - Existing Roof	6	7	3	3	4	3
FORTIFIED Roof - Hurricane - New Roof	10	11	6	8	5	6
FORTIFIED Home - Hurricane - Silver - Existing Roof	17	21	8	14	6	11
FORTIFIED Home - Hurricane - Silver - New Roof	21	24	9	16	9	13
FORTIFIED Home - Hurricane - Gold - Existing Roof	21	24	11	16	11	13
FORTIFIED Home - Hurricane - Gold - New Roof	23	28	12	21	12	17
(5) Year 1 Revised Windstorm Loss Mitigation Credits - Frame = (4)×(3)						
Total Hip Roof	12	13	9	9	6	5
Opening Protection	12	13	9	9	6	5
Total Hip Roof and Opening Protection	25	27	16	17	12	12
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	40	49	17	34	15	21
FORTIFIED Roof - Hurricane - Existing Roof	9	10	4	5	4	3
FORTIFIED Roof - Hurricane - New Roof	15	16	9	12	6	7
FORTIFIED Home - Hurricane - Silver - Existing Roof	25	31	11	21	7	13
FORTIFIED Home - Hurricane - Silver - New Roof	31	36	13	24	10	15
FORTIFIED Home - Hurricane - Gold - Existing Roof	31	36	16	24	12	15
FORTIFIED Home - Hurricane - Gold - New Roof	34	41	17	32	13	20
(6) Year 1 Revised Windstorm Loss Mitigation Credits - Masonry = (5)×0.95						
Total Hip Roof	11	12	9	9	6	5
Opening Protection	11	12	9	9	6	5
Total Hip Roof and Opening Protection	24	26	15	16	11	11
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	38	47	16	32	14	20
FORTIFIED Roof - Hurricane - Existing Roof	9	10	4	5	4	3
FORTIFIED Roof - Hurricane - New Roof	14	15	9	11	6	7
FORTIFIED Home - Hurricane - Silver - Existing Roof	24	29	10	20	7	12
FORTIFIED Home - Hurricane - Silver - New Roof	29	34	12	23	10	14
FORTIFIED Home - Hurricane - Gold - Existing Roof	29	34	15	23	11	14
FORTIFIED Home - Hurricane - Gold - New Roof	32	39	16	30	12	19

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF WINDSTORM LOSS MITIGATION CREDITS

CONTENTS - YEAR 1

	Territory					
	110	120	130	140	150	160
(1) Current Wind Exclusion Credit	18	25	20	17	8	11
(2) Year 1 Filed Wind Exclusion Credit	26	36	23	24	9	12
(3) Ratio of Filed and Current Wind Credits = (2)/(1)	1.444	1.440	1.150	1.412	1.125	1.091
(4) Current Windstorm Loss Mitigation Credits - Frame						
Total Hip Roof	1	2	2	1	1	1
Opening Protection	1	2	2	1	1	1
Total Hip Roof and Opening Protection	1	3	2	1	1	1
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	4	6	3	4	2	3
FORTIFIED Roof - Hurricane - Existing Roof	1	2	2	1	1	1
FORTIFIED Roof - Hurricane - New Roof	1	3	2	1	1	1
FORTIFIED Home - Hurricane - Silver - Existing Roof	2	3	2	3	1	2
FORTIFIED Home - Hurricane - Silver - New Roof	2	5	2	3	1	2
FORTIFIED Home - Hurricane - Gold - Existing Roof	3	5	2	3	1	2
FORTIFIED Home - Hurricane - Gold - New Roof	3	5	3	3	2	2
(5) Year 1 Revised Windstorm Loss Mitigation Credits - Frame = (4)×(3)						
Total Hip Roof	1	3	2	1	1	1
Opening Protection	1	3	2	1	1	1
Total Hip Roof and Opening Protection	1	4	2	1	1	1
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	6	9	3	6	2	3
FORTIFIED Roof - Hurricane - Existing Roof	1	3	2	1	1	1
FORTIFIED Roof - Hurricane - New Roof	1	4	2	1	1	1
FORTIFIED Home - Hurricane - Silver - Existing Roof	3	4	2	4	1	2
FORTIFIED Home - Hurricane - Silver - New Roof	3	7	2	4	1	2
FORTIFIED Home - Hurricane - Gold - Existing Roof	4	7	2	4	1	2
FORTIFIED Home - Hurricane - Gold - New Roof	4	7	3	4	2	2
(6) Year 1 Revised Windstorm Loss Mitigation Credits - Masonry = (5)×0.95						
Total Hip Roof	1	3	2	1	1	1
Opening Protection	1	3	2	1	1	1
Total Hip Roof and Opening Protection	1	4	2	1	1	1
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	6	9	3	6	2	3
FORTIFIED Roof - Hurricane - Existing Roof	1	3	2	1	1	1
FORTIFIED Roof - Hurricane - New Roof	1	4	2	1	1	1
FORTIFIED Home - Hurricane - Silver - Existing Roof	3	4	2	4	1	2
FORTIFIED Home - Hurricane - Silver - New Roof	3	7	2	4	1	2
FORTIFIED Home - Hurricane - Gold - Existing Roof	4	7	2	4	1	2
FORTIFIED Home - Hurricane - Gold - New Roof	4	7	3	4	2	2

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF WINDSTORM LOSS MITIGATION CREDITS

BUILDINGS - YEAR 2

	Territory					
	110	120	130	140	150	160
(1) Year 1 Wind Exclusion Credit	224	268	162	194	118	127
(2) Year 2 Filed Wind Exclusion Credit	308	377	206	274	127	145
(3) Ratio of Filed and Current Wind Credits = (2)/(1)	1.375	1.407	1.272	1.412	1.076	1.142
(4) Year 1 Windstorm Loss Mitigation Credits - Frame						
Total Hip Roof	12	13	9	9	6	5
Opening Protection	12	13	9	9	6	5
Total Hip Roof and Opening Protection	25	27	16	17	12	12
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	40	49	17	34	15	21
FORTIFIED Roof - Hurricane - Existing Roof	9	10	4	5	4	3
FORTIFIED Roof - Hurricane - New Roof	15	16	9	12	6	7
FORTIFIED Home - Hurricane - Silver - Existing Roof	25	31	11	21	7	13
FORTIFIED Home - Hurricane - Silver - New Roof	31	36	13	24	10	15
FORTIFIED Home - Hurricane - Gold - Existing Roof	31	36	16	24	12	15
FORTIFIED Home - Hurricane - Gold - New Roof	34	41	17	32	13	20
(5) Year 2 Revised Windstorm Loss Mitigation Credits - Frame = (4)×(3)						
Total Hip Roof	17	18	11	13	6	6
Opening Protection	17	18	11	13	6	6
Total Hip Roof and Opening Protection	34	38	20	24	13	14
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	55	69	22	48	16	24
FORTIFIED Roof - Hurricane - Existing Roof	12	14	5	7	4	3
FORTIFIED Roof - Hurricane - New Roof	21	23	11	17	6	8
FORTIFIED Home - Hurricane - Silver - Existing Roof	34	44	14	30	8	15
FORTIFIED Home - Hurricane - Silver - New Roof	43	51	17	34	11	17
FORTIFIED Home - Hurricane - Gold - Existing Roof	43	51	20	34	13	17
FORTIFIED Home - Hurricane - Gold - New Roof	47	58	22	45	14	23
(6) Year 2 Revised Windstorm Loss Mitigation Credits - Masonry = (5)×0.95						
Total Hip Roof	16	17	10	12	6	6
Opening Protection	16	17	10	12	6	6
Total Hip Roof and Opening Protection	32	36	19	23	12	13
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	52	66	21	46	15	23
FORTIFIED Roof - Hurricane - Existing Roof	11	13	5	7	4	3
FORTIFIED Roof - Hurricane - New Roof	20	22	10	16	6	8
FORTIFIED Home - Hurricane - Silver - Existing Roof	32	42	13	29	8	14
FORTIFIED Home - Hurricane - Silver - New Roof	41	48	16	32	10	16
FORTIFIED Home - Hurricane - Gold - Existing Roof	41	48	19	32	12	16
FORTIFIED Home - Hurricane - Gold - New Roof	45	55	21	43	13	22

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF WINDSTORM LOSS MITIGATION CREDITS

CONTENTS - YEAR 2

	Territory					
	110	120	130	140	150	160
(1) Year 1 Wind Exclusion Credit	26	36	23	24	9	12
(2) Year 2 Filed Wind Exclusion Credit	33	46	26	31	9	12
(3) Ratio of Filed and Current Wind Credits = (2)/(1)	1.269	1.278	1.130	1.292	1.000	1.000
(4) Year 1 Windstorm Loss Mitigation Credits - Frame						
Total Hip Roof	1	3	2	1	1	1
Opening Protection	1	3	2	1	1	1
Total Hip Roof and Opening Protection	1	4	2	1	1	1
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	6	9	3	6	2	3
FORTIFIED Roof - Hurricane - Existing Roof	1	3	2	1	1	1
FORTIFIED Roof - Hurricane - New Roof	1	4	2	1	1	1
FORTIFIED Home - Hurricane - Silver - Existing Roof	3	4	2	4	1	2
FORTIFIED Home - Hurricane - Silver - New Roof	3	7	2	4	1	2
FORTIFIED Home - Hurricane - Gold - Existing Roof	4	7	2	4	1	2
FORTIFIED Home - Hurricane - Gold - New Roof	4	7	3	4	2	2
(5) Year 2 Revised Windstorm Loss Mitigation Credits - Frame = (4)×(3)						
Total Hip Roof	1	4	2	1	1	1
Opening Protection	1	4	2	1	1	1
Total Hip Roof and Opening Protection	1	5	2	1	1	1
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	8	12	3	8	2	3
FORTIFIED Roof - Hurricane - Existing Roof	1	4	2	1	1	1
FORTIFIED Roof - Hurricane - New Roof	1	5	2	1	1	1
FORTIFIED Home - Hurricane - Silver - Existing Roof	4	5	2	5	1	2
FORTIFIED Home - Hurricane - Silver - New Roof	4	9	2	5	1	2
FORTIFIED Home - Hurricane - Gold - Existing Roof	5	9	2	5	1	2
FORTIFIED Home - Hurricane - Gold - New Roof	5	9	3	5	2	2
(6) Year 2 Revised Windstorm Loss Mitigation Credits - Masonry = (5)×0.95						
Total Hip Roof	1	4	2	1	1	1
Opening Protection	1	4	2	1	1	1
Total Hip Roof and Opening Protection	1	5	2	1	1	1
<u>IBHS Designation:</u>						
FORTIFIED for Safer Living®	8	11	3	8	2	3
FORTIFIED Roof - Hurricane - Existing Roof	1	4	2	1	1	1
FORTIFIED Roof - Hurricane - New Roof	1	5	2	1	1	1
FORTIFIED Home - Hurricane - Silver - Existing Roof	4	5	2	5	1	2
FORTIFIED Home - Hurricane - Silver - New Roof	4	9	2	5	1	2
FORTIFIED Home - Hurricane - Gold - Existing Roof	5	9	2	5	1	2
FORTIFIED Home - Hurricane - Gold - New Roof	5	9	3	5	2	2

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF WINDSTORM LOSS MITIGATION CREDITS

The filed credits displayed on pages C-20-23 apply to the current IBHS designations effective on or after March 31, 2019. The same filed credits apply to the previous IBHS designations according to the following mappings:

Current IBHS Designation:

FORTIFIED for Safer Living®
FORTIFIED Roof - Hurricane - Existing Roof
FORTIFIED Roof - Hurricane - New Roof
FORTIFIED Home - Hurricane - Silver - Existing Roof
FORTIFIED Home - Hurricane - Silver - New Roof
FORTIFIED Home - Hurricane - Gold - Existing Roof
FORTIFIED Home - Hurricane - Gold - New Roof

Previous IBHS Designation:

Hurricane Fortified for Safer Living®
Hurricane Fortified for Existing Homes® Bronze Option 1
Hurricane Fortified for Existing Homes® Bronze Option 2
Hurricane Fortified for Existing Homes® Silver Option 1
Hurricane Fortified for Existing Homes® Silver Option 2
Hurricane Fortified for Existing Homes® Gold Option 1
Hurricane Fortified for Existing Homes® Gold Option 2

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

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DWELLING PROPERTY INSURANCE

EXPLANATORY MEMORANDUM

This memorandum supplements the filing letter and supporting exhibits setting forth a revision of dwelling insurance rates in the State of North Carolina. It is the purpose of this memorandum to describe the source data used and to set forth in detail the insurance ratemaking procedures reflected in the filing. Certain pages in the filing and accompanying material contain a notation "all carriers" or other similar wording. This indicates that the data are combined ISO and ISS data. Data for certain companies are not included, as noted in Section E.

Premium and Loss Experience

This revision is based upon the combined premium and loss experience of all licensed companies writing residential dwelling insurance in this State, except as noted in Section E. In order to have this experience available in all detail necessary for rate review and ratemaking in accordance with accepted standards, all such companies are required to file each year their total dwelling insurance experience with the official statistical agents. Experience is recorded pursuant to the officially approved statistical plans and reported by the companies in accordance with instructions issued by the statistical agents under the Official Calls for Experience.

The Commissioner appointed the following statistical agents for the collection of dwelling insurance experience in North Carolina: Insurance Services Office (ISO), Independent Statistical Service, Inc. (ISS), American Association of Insurance Services, Inc. (AAIS), and National Independent Statistical Service (NISS). At the direction of the North Carolina Rate Bureau, tabulations of experience reported to ISS, AAIS and NISS are provided to ISO so that ISO may aggregate the experience and develop the analysis included in this filing.

Experience utilized in the filing was collected under the Personal Lines Statistical Plan (Other Than Automobile), Personal Lines Statistical Agent Plan (Other Than Automobile) and the Official Statistical Programs of ISO, and the Personal Lines Statistical Plan and the Statistical Programs of ISS. In substance, the statistical plans of all statistical agents are similar in North Carolina and provide for the recording and reporting of the experience in the detail required for ratemaking and in such form that the experience of all companies can be combined. The experience collected by AAIS and in the ISO Statistical Agent Plan is collected in lesser detail and has not been used in this review. The experience collected by NISS was also excluded from this review because over 98% of its reported premium is not written using the Rate Bureau's policy program.

The licensing of an organization and its appointment as a statistical agent in North Carolina are predicated upon demonstration by the organization of its ability to perform this function. Moreover, the performance of the statistical agents is reviewed periodically through examination by personnel of state insurance departments under the convention examinations of the National Association of Insurance Commissioners. From time to time, such organizations are called upon by Insurance Department examiners to verify, and do verify, the data they consolidate as statistical agents.

The insurance companies likewise are subject to a variety of checks and controls. Effective controls are maintained within the company over the activities of company employees connected with the company's statistics. Companies are required by statute to submit directly to the Insurance Department statistical and accounting information to be found in the Annual Statement and the Insurance Expense Exhibit. These documents are scrutinized by experienced Insurance Department personnel throughout the country. The insurance companies are also subject to examination by the Insurance Department, which examinations include the statistical records of the companies.

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Statewide Rate Level Exhibits (pages C-2-6)

1. Experience

Dwelling insurance experience was compiled on a calendar accident year basis for the years ended December 31, 2020, 2019, 2018, 2017, and 2016. For any twelve-month period, the accident year experience compiles the losses resulting from accidents occurring during that period with the premiums and number of dwellings “earned” during the same period. Since this filing utilizes catastrophe models to estimate the average annual losses attributable to hurricanes, actual hurricane losses have been removed from the ratemaking experience.

2. Average Rating Factors

The earned premiums at present manual rates for the dwelling insurance coverages are calculated by multiplying the number of insured exposures earned during the experience period by the base rates and rating factors in effect at the time of review. The earned premiums at present rates are then used to determine average rating factors. The average rating factor is the ratio of the average rate (earned premium at manual level divided by corresponding house-years) and the current manual base rate. The average rating factor is used to convert the pure-premiums incurred during the experience period to the base-class level. This calculation is shown on pages D-32-41 for Fire and pages D-63-72 for Extended Coverage.

3. Losses

Losses compiled for any accident year include paid losses as well as loss reserves. The amounts that will ultimately be required as payments of claims on open cases are carefully determined by the claim departments of the companies, and experience has shown that these determinations are highly accurate in the aggregate. Since, however, there are differences between the total incurred losses so determined and the amounts ultimately paid, the ratemaking procedure provides for a “development” of the incurred losses to a basis which, for all practical purposes, can be considered as the ultimate basis. This development is accomplished as follows:

Each year the experience is compiled for the latest five years, all valued as of three months after the close of the latest accident year period. Thus, the experience is reported for the latest year as of 15 months, the preceding year as of 27 months, the next preceding year as of 39 months, the third preceding year as of 51 months and the fourth preceding year as of 63 months all measured from the beginning of each accident year respectively.

From reports of prior years, similarly aged experience was obtained so that there are available five successive reports for the earliest year, four successive reports for the next earliest year, three successive reports for the middle year and two successive reports for the second most recent year.

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Dwelling claims generally are settled, and are therefore sufficiently matured, as of 87 months, by which time nearly all incurred losses have been paid. From a comparison of the incurred losses for each year at successive valuation dates, it is determined what the rate of development has been in the past in order to calculate the development of less mature losses. This development is reflected in the incurred losses for the less mature years by the application of loss development factors. In this filing, loss development factors have been calculated based on the statewide experience of companies reporting to ISO, and are as follows:

<u>Accident Year Ending</u>	<u>Factor to Develop to 87 Months</u>	
	<u>Fire</u>	<u>Extended Coverage</u>
December 31, 2016	1.000	1.000
December 31, 2017	1.000	1.000
December 31, 2018	0.997	1.001
December 31, 2019	0.993	1.004
December 31, 2020	0.955	1.034

The derivation of the factors shown above is shown on pages D-12 and D-13. By applying these factors, the reported incurred losses have been adjusted to the amounts at which it is believed they will ultimately be settled.

In order to increase stability in rate levels while maintaining adequacy in the event of wide swings in hurricane and other losses, an excess procedure and hurricane loss models have been utilized for Extended Coverage. Hence, inordinate shifts in rate level (both upward and downward), which might result from reflecting large hurricane and other losses only in the year in which they occur will be reduced. The incurred non-modeled excess losses are those losses which result from unusually severe loss activity (other than hurricane). They are removed from the experience used in developing rates. In order to reflect the impact of excess losses (that are not related to hurricanes and not accounted for in the hurricane models) on a long-term basis, the non-modeled losses are multiplied by an excess factor of 1.057. The derivation of the excess factor is shown on page D-47. The derivation of the excess non-modeled losses is shown on page D-48. The modeled losses used in this filing are based on analysis performed by Aon on behalf of the North Carolina Rate Bureau and are displayed on page D-79.

4. Loss Adjustment Expense

The dwelling loss adjustment expenses, prior to trend considerations, are determined as an average percentage of the North Carolina incurred losses for calendar accident years 2016-2020 for Fire and Extended Coverage, based on a North Carolina expense call. The high and low years are excluded from the average. See pages D-24 and D-27.

A separate Loss Adjustment Expense factor was used for modeled hurricane losses. (See testimony of M. Mao.)

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5. Fixed Expense

The fixed expense (general expenses and other acquisition expenses) loading is determined as an average percentage of North Carolina earned premiums for calendar accident years 2018-2020, based on a North Carolina expense call. See pages D-22 and D-25. The development of trended fixed expense per policy is shown on page D-28.

6. Loss Trend

Loss trends are selected using the information provided by the observed growth in frequencies, severities, and pure premiums that occurred during the historical experience period. This procedure is displayed on pages D-14-16.

First, the frequencies, severities, and pure premiums are calculated by subline group, cause-of-loss group (i.e., wind-related, water-related, etc.), and year. Hurricane losses are excluded from the loss experience. Then average annual rates of change are calculated by fitting exponential curves to the data for three time periods: the latest five years, the latest four years, and the latest three years. Based on these average annual rates of change, historical annual rates of change are selected to trend the historical loss experience to the average occurrence date of the latest year (July 1, 2020) and prospective annual rates of change are selected to trend the losses from the latest year to one year beyond the assumed effective date (February 1, 2024). The historical and prospective annual rates of change that are selected for the pure premiums are used to trend the losses and are based on the selections for frequency and severity. The selected historical annual pure premium changes are 0.0% for Fire and +5.0% for Extended Coverage. The selected prospective annual pure premium changes are +6.5% for Fire and +7.0% for Extended Coverage.

7. Premium Trend

The premium trend procedure is based on the observed growth in yearly average policy amount relativities. This procedure is displayed on pages D-17-18.

First, the Current Amount Factors are calculated by subline group, class and year. The Current Amount Factor trends the average policy amount relativity (and, therefore, the Average Rating Factor used in the derivation of the statewide, class and territory rate level indications) from a given historical year to the average date of writing for the latest year of the review (January 1, 2020). Then, a least-squares fitted annual change is calculated for the historical average relativities. Based on the calculated value, a selection for the annual change is made. (The selected annual changes reflect consideration of the calculated value and the overall pattern in average relativity growth observed during the experience period.) The selected annual changes are used to trend the average policy size relativity from the latest year to six months beyond the assumed effective date (August 1, 2023). The selected annual changes are:

	<u>Fire</u>	<u>Extended Coverage</u>
Buildings	+5.0%	+5.0%
Contents	+5.0%	+5.0%

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8. Exposure Trend

The exposure trend procedure is based on the observed growth in yearly average policy amounts for Extended Coverage. This procedure is displayed on page D-19.

First, the average policy amounts are calculated by class and year. Then average annual rates of change are calculated by fitting exponential curves to the data for three time periods: the latest five years, the latest four years, and the latest three years. Based on these average annual rates of change, annual rates of change are selected to trend the latest-year exposures used to calculate the modeled hurricane losses to six months beyond the assumed effective date (August 1, 2023). The selected annual changes are +5.0% for Buildings and +5.0% for Contents.

9. Expense Trend

The selected annual change to be applied to general expense, other acquisition expense and loss adjustment expense costs is based on the observed growth in the All Items Consumer Price Index and the Compensation Cost Index. The selected annual change is +4.0% based on analysis and review of the index data, which are displayed on pages D-20-21.

10. Trend Periods

The effective date assumed in this filing is February 1, 2023¹ for new and renewal policies. Given this effective date, the trend periods for premiums, losses and expenses are as follows:

- premiums are trended from January 1 of the given year to August 1, 2023.
- losses are trended from July 1 of the given year to February 1, 2024.
- general expense and other acquisition expense percentages, since they are based on 2018-2020 data, are trended from July 1, 2019 to August 1, 2023.
- loss adjustment expense percentages, since they are based on 2016-2020 data, are trended from July 1, 2018 to February 1, 2024.

11. Expected Loss and Fixed Expense Ratio

These quantities represent the portion of the premium income available for losses, loss adjustment expenses, general expenses and other acquisition expenses. They are determined from special calls for North Carolina expense experience and reflect the 2018, 2019, and 2020 results as reported by all companies licensed in North Carolina during those years. The breakdown of the expected loss and fixed expense ratios is set forth on page D-22 for Fire and page D-25 for Extended Coverage.

¹ The effective date of implementation of these rates may differ from the trend effective date.

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12. Net Cost of Reinsurance per Policy

The provision for the net cost of reinsurance is based on an analysis provided by Aon. This analysis generates the total dollars required by territory based on latest-year house years. The conversion to the required base-class level is shown on page D-80. (See testimony of M. Mao.)

Class Rate Level Exhibits - Fire and Extended Coverage (pages C-7 and C-8)

1. Trended Adjusted Incurred Losses (column 1)

Incurred losses for the latest five years, trended and loaded for LAE. For Extended Coverage, the excess loss procedure is incorporated into the indication through column (21).

2. Trended Average Rating Factor (column 3)

The calculation of the Trended Average Rating Factors is shown on pages D-32-41 for Fire and D-63-72 for Extended Coverage.

3. Credibility (column 5)

The five-year loss cost by class is assigned a credibility value based on the number of house years underlying this loss cost. The standard for full credibility is 500,000 house years for Fire and 330,000 house years for Extended Coverage, with partial credibility equal to

$$\sqrt{\text{five year house years} / \text{full credibility standard}}$$

truncated to the nearest tenth. The complement of credibility is assigned to the statewide five-year base loss cost adjusted by the ratio of the class' current base rate and the statewide average current base rate.

4. Modeled Base Class Loss Cost (column 7 - Extended Coverage)

The modeled hurricane base-class loss cost is derived by dividing the modeled hurricane losses by the product of the latest-year trended average rating factor and latest-year house-years.

5. Indicated Base Class Loss Cost (column 7 - Fire, column 9 - Extended Coverage)

The indicated base-class loss cost by class is the statewide base-class loss cost (computed on the statewide indications pages) adjusted by the class relativity indicated by the credibility-weighted loss cost (ratio of class to statewide of column 6 for Fire or column 8 for Extended Coverage).

6. Indicated Net Base Class Rate (column 10 - Fire, column 12 - Extended Coverage)

The indicated net base-class rate is the sum of the loss cost and fixed expense divided by the expected loss and fixed expense ratio derived on page D-22 for Fire and page D-25 for Extended Coverage. The fixed expense is calculated as the average current base-class rate multiplied by the fixed expense ratio developed on page D-28.

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7. Compensation for Assessment Risk per Policy (column 11 - Fire, column 13 - Extended Coverage)

The compensation for assessment risk is reflected as a percentage of the base-class rate by class and is loaded for the effects of taxes and commission. (See testimony of P. Anderson.)

8. Net Cost of Reinsurance per Policy (column 14 - Extended Coverage)

The net cost of reinsurance was allocated to class in proportion to modeled hurricane losses.

9. Indicated Base Class Rate Change (column 17 - Fire, column 20 - Extended Coverage)

The indicated base-class rate level change is the ratio of required base-class rate and current base-class rate, minus 1.

10. Indicated Rate Change Balanced to Statewide (column 18 - Fire, column 21 - Extended Coverage)

These are indicated base-class rate level changes adjusted to balance to the statewide indicated change.

Territory Rate Level Exhibits - Fire (pages C-9-10)

1. Latest-Year Earned Premium at Current Level (column 1)

Earned premium for the latest year (2020), adjusted to the manual rate level currently in effect.

2. Five-Year Experience Base Class Loss Cost (column 3)

A five-year experience base-class loss cost by territory is derived by dividing five-year trended territory losses and LAE by the product of the five-year trended average rating factor and five-year house years. This calculation is shown on pages D-42-46.

3. Credibility (column 5)

The five-year loss cost is assigned a credibility value based upon the number of house years underlying this loss cost. The standard for full credibility is 500,000 house years, with partial credibility equal to

$$\sqrt{\text{five year house years} / \text{full credibility standard}}$$

truncated to the nearest tenth. The complement of credibility is assigned to the statewide five-year experience base-class loss cost adjusted by the ratio of the territory's current base-class rate and the statewide average current base-class rate.

4. Indicated Base Class Loss Cost (column 9)

The Indicated Base Class loss cost for each territory is the indicated statewide base-class loss cost (row 9 from the statewide indication) multiplied by each territory's indicated relativity (column 7).

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5. Trended Fixed Expense per Policy (column 10)

The trended fixed expense per policy by territory is calculated by first distributing the statewide trended fixed expense ratio to territory. This is accomplished by multiplying the statewide trended fixed expense ratio by the ratio of the statewide latest-year average rate to the territory latest-year average rate. Finally, the trended fixed expense per policy by territory is calculated as the product of the territory trended fixed expense ratio and the latest-year average territory base rate. This calculation can be found on page D-29.

6. Expected Loss and Fixed Expense Ratio (column 12)

These quantities represent the portion of the premium income available for losses, loss adjustment expenses, general expenses and other acquisition expenses.

7. Compensation for Assessment Risk Cost per Policy (column 14)

The compensation for assessment risk is reflected as a percentage of the base-class rate by class and is loaded for the effects of taxes and commission. (See testimony of P. Anderson.)

8. Indicated Rate Level Change (column 19)

The indicated rate level change is the ratio of required base-class rate and current base-class rate, minus 1.

9. Indicated Rate Level Change Balanced to Statewide (column 20)

These are indicated base-class rate level changes adjusted to balance to the statewide indicated change.

10. Indicated Buildings Rate Level Change (column 21)

The indicated buildings rate level change is the product of the indicated rate level change balanced to statewide and the class relativity embedded in the indicated buildings base rate change balanced to statewide (column 18) on the class indications page.

11. Indicated Contents Rate Level Change (column 22)

The indicated contents rate level change is the product of the indicated rate level change balanced to statewide and the class relativity embedded in the indicated contents base rate change balanced to statewide (column 18) on the class indications page.

Territory Rate Level Exhibits - Extended Coverage (pages C-11-12)

1. Latest-Year Earned Premium at Current Level (column 1)

Earned premium for the latest year (2020), adjusted to the manual rate level currently in effect.

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2. Five-Year Non-Hurricane Experience Base Class Loss Cost (column 3)

A five-year experience base-class loss cost by territory is derived by dividing five-year trended territory losses and LAE by the product of the five-year trended average rating factor and five-year house years. The territory losses exclude hurricane losses and include an excess loss provision. This calculation is shown on pages D-73-78.

3. Credibility (column 5)

The five-year loss cost is assigned a credibility value based upon the number of house years underlying this loss cost. The standard for full credibility is 330,000 house years, with partial credibility equal to

$$\sqrt{\text{five year house years} / \text{full credibility standard}}$$

truncated to the nearest tenth. The complement of credibility is assigned to the statewide five-year non-modeled experience base-class loss cost.

4. Modeled Hurricane Base Class Loss Cost (column 8)

The modeled hurricane base-class loss cost is derived by dividing modeled hurricane territory losses by the product of the trended average rating factor and house years for the latest year. The development of these costs is presented on page D-79.

5. Indicated Base Class Loss Cost (column 11)

The Indicated Base Class loss cost for each territory is the indicated statewide base-class loss cost (row 13 from the statewide indication) multiplied by each territory's indicated relativity (column 10).

6. Trended Fixed Expense per Policy (column 12)

The trended fixed expense per policy by territory is calculated by first distributing the statewide trended fixed expense ratio to territory. This is accomplished by multiplying the statewide trended fixed expense ratio by the ratio of the statewide latest-year average rate to the territory latest-year average rate. Finally, the trended fixed expense per policy by territory is calculated as the product of the territory trended fixed expense ratio and the latest-year average territory base rate. This calculation can be found on page D-30.

7. Expected Loss and Fixed Expense Ratio (column 14)

These quantities represent the portion of the premium income available for losses, loss adjustment expenses, general expenses and other acquisition expenses.

8. Compensation for Assessment Risk Cost per Policy (column 16)

The compensation for assessment risk is reflected as a percentage of the base-class rate by class and is loaded for the effects of taxes and commission. (See testimony of P. Anderson.)

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9. Net Cost of Reinsurance per Policy (column 17)

The provisions for the net cost of reinsurance are based on analysis provided by Aon. This analysis generates the total dollars required by policy form to cover the cost of the expense and profit components of the reinsurance premium paid by the primary insurers. The development of these provisions is presented on page D-80. (See testimony of M. Mao.)

10. Indicated Rate Level Change (column 22)

The indicated rate level change is the ratio of required base-class rate and current base-class rate, minus 1.

11. Indicated Rate Level Change Balanced to Statewide (column 23)

These are indicated base-class rate level changes adjusted to balance to the statewide indicated change.

12. Indicated Buildings Rate Level Change (column 24)

The indicated buildings rate level change is the product of the indicated rate level change balanced to statewide and the class relativity embedded in the indicated buildings base rate change balanced to statewide (column 21) on the class indications page.

13. Indicated Contents Rate Level Change (column 25)

The indicated contents rate level change is the product of the indicated rate level change balanced to statewide and the class relativity embedded in the indicated contents base rate change balanced to statewide (column 21) on the class indications page.

Credibility Factor Determination

Credibility considerations enter into the dwelling insurance ratemaking formulas.

The credibility procedure is based on the 'frequency with severity modification' model discussed in "Credibility of the Pure Premium" by Mayerson, Bowers and Jones. The full credibility standard is based on a normal distribution with a 90% probability of meeting the test and a 10% maximum departure from the expected value, translated to house year standards. Partial credibility (Z_p) is calculated as follows:

$$Z_p = \sqrt{\text{five year house years} / \text{full credibility standard}} \quad (\text{truncated to the nearest tenth})$$

The full credibility standards are 500,000 house years for Fire and 330,000 house years for Extended Coverage.

On a statewide and class basis, both Fire and Extended Coverage are fully credible. On a territory basis, partial credibility may be employed. In that case, the calculation of the rate level indication incorporates credibility as follows: credibility is applied to the five-year (non-hurricane for Extended Coverage) territory loss costs and (1 - credibility) to the complement of credibility.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSS DEVELOPMENT
FIRE

Incurred Losses as of:

Accident							
<u>Year</u>	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>	<u>75 Months</u>	<u>87 Months</u>
2009	9,770,159	9,391,512	9,346,475	9,321,551	9,321,551	9,321,551	9,321,551
2010	10,796,690	10,538,060	10,621,955	10,625,291	10,624,141	10,624,141	10,624,161
2011	10,044,574	9,798,490	9,793,574	9,827,405	9,827,405	9,827,405	9,827,405
2012	10,399,350	10,017,055	9,788,627	9,787,337	9,787,336	9,787,336	9,787,336
2013	10,045,404	9,724,252	9,772,227	9,744,951	9,759,155	9,759,155	9,759,155
2014	8,246,761	8,065,190	8,057,322	8,060,090	8,060,090	8,060,090	8,060,090
2015	8,740,834	8,492,225	8,533,162	8,349,724	8,349,724	8,349,724	
2016	11,975,398	11,674,797	11,567,531	11,529,440	11,529,440		
2017	10,289,328	9,593,011	9,592,752	9,599,661			
2018	9,912,831	9,182,392	9,035,732				
2019	10,123,860	9,658,748					
2020	9,107,443						

Link Ratios

Accident						
<u>Year</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>	<u>75:63</u>	<u>87:75</u>
2009	0.961	0.995	0.997	1.000	1.000	1.000
2010	0.976	1.008	1.000	1.000	1.000	1.000
2011	0.976	0.999	1.003	1.000	1.000	1.000
2012	0.963	0.977	1.000	1.000	1.000	1.000
2013	0.968	1.005	0.997	1.001	1.000	1.000
2014	0.978	0.999	1.000	1.000	1.000	1.000
2015	0.972	1.005	0.979	1.000	1.000	
2016	0.975	0.991	0.997	1.000		
2017	0.932	1.000	1.001			
2018	0.926	0.984				
2019	0.954					
Average	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>	<u>75:63</u>	<u>87:75</u>
	0.962	0.996	0.997	1.000	1.000	1.000
Selected Link Ratio	0.962	0.996	0.997	1.000	1.000	1.000

Selected Loss Development Factors

Fire	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
	1.000	1.000	0.997	0.993	0.955

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSS DEVELOPMENT
EXTENDED COVERAGE

Incurred Losses as of:

Accident							
<u>Year</u>	<u>15 Months</u>	<u>27 Months</u>	<u>39 Months</u>	<u>51 Months</u>	<u>63 Months</u>	<u>75 Months</u>	<u>87 Months</u>
2009	10,190,564	10,408,383	10,353,494	10,329,789	10,333,822	10,334,012	10,334,012
2010	12,917,888	13,029,507	13,122,571	13,126,440	13,121,030	13,118,530	13,121,451
2011	45,036,303	45,191,210	45,198,702	45,241,159	45,245,867	45,245,867	45,249,704
2012	16,465,118	17,458,582	17,684,184	17,726,549	17,729,642	17,733,270	17,733,270
2013	14,857,760	15,159,003	15,174,974	15,174,902	15,189,259	15,189,259	15,189,259
2014	18,671,578	19,110,992	19,248,948	19,259,335	19,259,896	19,262,823	19,264,337
2015	18,987,995	19,308,930	19,381,935	19,379,997	19,389,274	19,389,274	
2016	28,459,328	30,017,752	30,175,996	30,228,639	30,231,695		
2017	21,618,276	22,385,128	22,359,739	22,422,816			
2018	58,846,070	61,795,412	61,763,842				
2019	20,803,719	21,624,566					
2020	27,853,785						

Link Ratios

Accident						
<u>Year</u>	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>	<u>75:63</u>	<u>87:75</u>
2009	1.021	0.995	0.998	1.000	1.000	1.000
2010	1.009	1.007	1.000	1.000	1.000	1.000
2011	1.003	1.000	1.001	1.000	1.000	1.000
2012	1.060	1.013	1.002	1.000	1.000	1.000
2013	1.020	1.001	1.000	1.001	1.000	1.000
2014	1.024	1.007	1.001	1.000	1.000	1.000
2015	1.017	1.004	1.000	1.000	1.000	
2016	1.055	1.005	1.002	1.000		
2017	1.035	0.999	1.003			
2018	1.050	0.999				
2019	1.039					
	<u>27:15</u>	<u>39:27</u>	<u>51:39</u>	<u>63:51</u>	<u>75:63</u>	<u>87:75</u>
Average	1.030	1.003	1.001	1.000	1.000	1.000
Selected	1.030	1.003	1.001	1.000	1.000	1.000
Link Ratio						

Selected Loss Development Factors

<u>EC</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
	1.000	1.000	1.001	1.004	1.034

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

FREQUENCY, SEVERITY, AND PURE PREMIUM RATES OF CHANGE

FIRE

<u>Year</u>	<u>Frequency</u>	<u>Severity</u>	<u>Pure Premium</u>
2016	0.3383%	21,678	73.34
2017	0.3104%	19,328	59.99
2018	0.3164%	21,336	67.51
2019	0.2863%	25,200	72.14
2020	0.2820%	21,917	61.81
 Annual Rate of Change			
5-Year Average (2016 - 2020)	-4.4%	+2.9%	-1.6%
4-Year Average (2017 - 2020)	-3.8%	+5.6%	+1.6%
3-Year Average (2018 - 2020)	-5.6%	+1.4%	-4.3%
 Selected Annual Rate of Change			
Historical Time Period	-4.0%	+4.0%	0.0%
Prospective Time Period	0.0%	+6.5%	+6.5%

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

FREQUENCY, SEVERITY, AND PURE PREMIUM RATES OF CHANGE
EXTENDED COVERAGE

FREQUENCY

<u>Year</u>	<u>Wind</u>	<u>Water</u>	<u>Other Physical Damage</u>	<u>V&MM</u>	<u>Non-Wind</u>	<u>Total</u>
2016	0.8768%	0.3246%	0.2479%	0.0328%	0.6053%	1.4821%
2017	0.7959%	0.3361%	0.2387%	0.0301%	0.6049%	1.4008%
2018	0.7778%	0.4143%	0.2590%	0.0365%	0.7098%	1.4876%
2019	0.7986%	0.3100%	0.2161%	0.0342%	0.5603%	1.3589%
2020	1.2721%	0.3812%	0.2278%	0.0329%	0.6419%	1.9140%
Annual Rate of Change						
5-Year Average (2016 - 2020)	+7.8%	+2.4%	-2.7%	+1.3%	+0.4%	+4.9%
4-Year Average (2017 - 2020)	+15.4%	+0.9%	-3.2%	+2.0%	-0.6%	+8.8%
3-Year Average (2018 - 2020)	+27.9%	-4.1%	-6.2%	-5.1%	-4.9%	+13.4%
Selected Annual Rate of Change						
Historical Time Period						0.0%
Prospective Time Period						0.0%

SEVERITY

<u>Year</u>	<u>Wind</u>	<u>Water</u>	<u>Other Physical Damage</u>	<u>V&MM</u>	<u>Non-Wind</u>	<u>Total</u>
2016	4,468	6,533	5,074	4,960	5,852	5,033
2017	5,549	8,257	6,016	4,255	7,173	6,251
2018	6,192	8,818	6,386	5,173	7,744	6,933
2019	6,790	8,108	7,227	6,142	7,649	7,144
2020	6,568	8,347	6,748	7,609	7,743	6,962
Annual Rate of Change						
5-Year Average (2016 - 2020)	+10.2%	+4.8%	+7.8%	+13.0%	+6.4%	+8.1%
4-Year Average (2017 - 2020)	+6.2%	-0.5%	+4.8%	+21.1%	+2.2%	+3.6%
3-Year Average (2018 - 2020)	+3.0%	-2.7%	+2.8%	+21.3%	0.0%	+0.2%
Selected Annual Rate of Change						
Historical Time Period						+5.0%
Prospective Time Period						+7.0%

PURE PREMIUM

<u>Year</u>	<u>Wind</u>	<u>Water</u>	<u>Other Physical Damage</u>	<u>V&MM</u>	<u>Non-Wind</u>	<u>Total</u>
2016	39.17	21.21	12.58	1.63	35.42	74.59
2017	44.17	27.75	14.36	1.28	43.39	87.56
2018	48.16	36.54	16.54	1.89	54.97	103.13
2019	54.22	25.14	15.62	2.10	42.86	97.08
2020	83.55	31.82	15.37	2.51	49.70	133.25
Annual Rate of Change						
5-Year Average (2016 - 2020)	+18.8%	+7.4%	+5.0%	+14.6%	+6.9%	+13.5%
4-Year Average (2017 - 2020)	+22.5%	+0.4%	+1.5%	+23.7%	+1.6%	+12.7%
3-Year Average (2018 - 2020)	+31.7%	-6.7%	-3.6%	+15.2%	-4.9%	+13.7%
Selected Annual Rate of Change						
Historical Time Period						+5.0%
Prospective Time Period						+7.0%

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF LOSS TREND FACTORS

FIRE

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Year</u>	<u>Average Date of Occurrence</u> ^(a)	<u>Number of Years of Historical Loss Trend</u> ^(b)	<u>Historical Annual Loss Trend</u>	<u>Number of Prospective Loss Trend</u> ^(c)	<u>Prospective Annual Loss Trend</u>	<u>Loss Trend Factors</u> ^(d)
2016	7/1/2016	4.0	0.0%	3.5833	+6.5%	1.253
2017	7/1/2017	3.0	0.0%	3.5833	+6.5%	1.253
2018	7/1/2018	2.0	0.0%	3.5833	+6.5%	1.253
2019	7/1/2019	1.0	0.0%	3.5833	+6.5%	1.253
2020	7/1/2020	0.0	0.0%	3.5833	+6.5%	1.253

EXTENDED COVERAGE

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Year</u>	<u>Average Date of Occurrence</u> ^(a)	<u>Number of Years of Historical Loss Trend</u> ^(b)	<u>Historical Annual Loss Trend</u>	<u>Number of Prospective Loss Trend</u> ^(c)	<u>Prospective Annual Loss Trend</u>	<u>Loss Trend Factors</u> ^(d)
2016	7/1/2016	4.0	+5.0%	3.5833	+7.0%	1.549
2017	7/1/2017	3.0	+5.0%	3.5833	+7.0%	1.475
2018	7/1/2018	2.0	+5.0%	3.5833	+7.0%	1.405
2019	7/1/2019	1.0	+5.0%	3.5833	+7.0%	1.338
2020	7/1/2020	0.0	+5.0%	3.5833	+7.0%	1.274

^(a) Average date of occurrence for the accident year shown in Column (1).

^(b) Number of years between Column (2) and 7/1/2020, the average date of occurrence for the latest year.

^(c) Number of years between 7/1/2020 and 2/1/2024, one year beyond the assumed effective date of 2/1/2023.

^(d) Column (7) = [1 + (4)]⁽³⁾ × [1 + (6)]⁽⁵⁾

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

AVERAGE POLICY SIZE RELATIVITY ANNUAL RATE OF CHANGE

FIRE

Average Policy Size Relativity

<u>Year</u>	<u>Buildings</u>	<u>Contents</u>
2016	5.091	2.235
2017	5.133	2.265
2018	5.186	2.297
2019	5.240	2.339
2020	5.287	2.420
Fitted Annual Rate of Change	+1.0%	+1.9%
Selected Annual Rate of Change	+5.0%	+5.0%

EXTENDED COVERAGE

Average Policy Size Relativity

<u>Year</u>	<u>Buildings</u>	<u>Contents</u>
2016	6.126	2.637
2017	6.202	2.692
2018	6.292	2.744
2019	6.356	2.797
2020	6.404	2.925
Fitted Annual Rate of Change	+1.1%	+2.5%
Selected Annual Rate of Change	+5.0%	+5.0%

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF PREMIUM TREND FACTORS

FIRE						
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Year</u>	<u>Average Policy Size Relativity</u>	<u>Current Amount Factor</u> ^(a)	<u>Number of Years of Prospective Premium Trend</u> ^(b)	<u>Prospective Annual Premium Trend</u>	<u>Premium Trend Factors</u> ^{(c)(d)}	<u>Latest-Year Premium Distribution</u>
Buildings						
2016	5.091	1.038	3.5833	+5.0%	1.236	0.9223
2017	5.133	1.030	3.5833	+5.0%	1.227	0.9223
2018	5.186	1.019	3.5833	+5.0%	1.214	0.9223
2019	5.240	1.009	3.5833	+5.0%	1.202	0.9223
2020	5.287	1.000	3.5833	+5.0%	1.191	0.9223
Contents						
2016	2.235	1.083	3.5833	+5.0%	1.290	0.0777
2017	2.265	1.068	3.5833	+5.0%	1.272	0.0777
2018	2.297	1.054	3.5833	+5.0%	1.255	0.0777
2019	2.339	1.035	3.5833	+5.0%	1.233	0.0777
2020	2.420	1.000	3.5833	+5.0%	1.191	0.0777
Total						
2016					1.240	
2017					1.230	
2018					1.217	
2019					1.204	
2020					1.191	

EXTENDED COVERAGE

(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Year</u>	<u>Average Policy Size Relativity</u>	<u>Current Amount Factor</u> ^(a)	<u>Number of Years of Prospective Premium Trend</u> ^(b)	<u>Prospective Annual Premium Trend</u>	<u>Premium Trend Factors</u> ^{(c)(d)}	<u>Latest-Year Premium Distribution</u>
Buildings						
2016	6.126	1.045	3.5833	+5.0%	1.245	0.9694
2017	6.202	1.033	3.5833	+5.0%	1.230	0.9694
2018	6.292	1.018	3.5833	+5.0%	1.212	0.9694
2019	6.356	1.008	3.5833	+5.0%	1.201	0.9694
2020	6.404	1.000	3.5833	+5.0%	1.191	0.9694
Contents						
2016	2.637	1.109	3.5833	+5.0%	1.321	0.0306
2017	2.692	1.087	3.5833	+5.0%	1.295	0.0306
2018	2.744	1.066	3.5833	+5.0%	1.270	0.0306
2019	2.797	1.046	3.5833	+5.0%	1.246	0.0306
2020	2.925	1.000	3.5833	+5.0%	1.191	0.0306
Total						
2016					1.247	
2017					1.232	
2018					1.214	
2019					1.202	
2020					1.191	

^(a) Column (3) = Latest Year Column (2) / Column (2)

^(b) Number of years between 1/1/2020 and 8/1/2023, six months beyond the assumed effective date of 2/1/2023.

^(c) Column (6) = (3) × [1 + (5)]⁽⁴⁾

^(d) Total Column (6) = [Buildings (6) × Buildings (7)] + [Contents (6) × Contents (7)]

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF EXPOSURE TREND
EXTENDED COVERAGE

Average Exposure Per Policy

<u>Year</u>	<u>Buildings</u> <u>(Coverage A)</u>	<u>Contents</u> <u>(Coverage C)</u>
2016	116,874	15,720
2017	118,381	16,046
2018	120,187	16,355
2019	121,461	16,671
2020	122,406	17,427

Annual Rate of Change

5-Year Average (2016 - 2020)	+1.2%	+2.5%
4-Year Average (2017 - 2020)	+1.1%	+2.7%
3-Year Average (2018 - 2020)	+0.9%	+3.2%
Selected Annual Rate of Change	+5.0%	+5.0%

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DETERMINATION OF TREND FOR EXPENSES

<u>Month</u>	<u>All Items CPI Index</u> ^(a)	<u>All Items (Less Energy) CPI Index</u> ^(b)	<u>Compensation Cost Index</u> ^(c)
Apr-18	250.5	255.8	
May-18	251.6	256.1	136.3
Jun-18	252.0	256.3	
Jul-18	252.0	256.5	
Aug-18	252.1	256.7	135.9
Sep-18	252.4	257.1	
Oct-18	252.9	257.7	
Nov-18	252.0	257.7	135.7
Dec-18	251.2	257.8	
Jan-19	251.7	258.9	
Feb-19	252.8	259.8	137.8
Mar-19	254.2	260.5	
Apr-19	255.5	260.9	
May-19	256.1	261.2	139.1
Jun-19	256.1	261.7	
Jul-19	256.6	262.1	
Aug-19	256.6	262.6	139.6
Sep-19	256.8	263.0	
Oct-19	257.3	263.5	
Nov-19	257.2	263.5	139.6
Dec-19	257.0	263.5	
Jan-20	258.0	264.5	
Feb-20	258.7	265.7	140.6
Mar-20	258.1	265.9	
Apr-20	256.4	265.5	
May-20	256.4	265.5	142.5
Jun-20	257.8	266.1	
Jul-20	259.1	267.1	
Aug-20	259.9	268.1	142.7
Sep-20	260.3	268.3	
Oct-20	260.4	268.7	
Nov-20	260.2	268.7	143.0
Dec-20	260.5	268.6	
Jan-21	261.6	269.2	
Feb-21	263.0	270.1	144.6
Mar-21	264.9	271.0	
Apr-21	267.1	273.1	
May-21	269.2	274.9	145.6
Jun-21	271.7	277.2	
Jul-21	273.0	278.2	
Aug-21	273.6	278.7	146.4
Sep-21	274.3	279.4	
Oct-21	276.6	281.2	
Nov-21	277.9	282.4	147.1
Dec-21	278.8	283.6	
Jan-22	281.1	285.8	
Feb-22	283.7	288.0	150.1
Mar-22	287.5	289.5	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DETERMINATION OF TREND FOR EXPENSES

	All Items <u>CPI Index</u> ^(a)	All Items (Less Energy) <u>CPI Index</u> ^(b)	Compensation <u>Cost Index</u> ^(c)	<u>Combined</u> ^(d)
(1) Annual Change in indices based on exponential curve of best fit for the latest 48 points (or 16 quarters)	2.90%	2.84%	2.55%	2.71%
(2) Annual Change in indices based on exponential curve of best fit for the latest 36 points (or 12 quarters)	3.68%	3.33%	2.64%	3.07%
(3) Annual Change in indices based on exponential curve of best fit for the latest 24 points (or 8 quarters)	5.94%	4.63%	2.86%	4.07%
(4) Annual Change in indices based on exponential curve of best fit for the latest 12 points (or 4 quarters)	7.30%	6.12%	3.92%	5.32%

(5) Average Annual Index ^(e)

<u>Year Ended</u>	All Items <u>CPI Index</u> ^(a)	All Items (Less Energy) <u>CPI Index</u> ^(b)	Compensation <u>Cost Index</u> ^(c)
09/30/2019	254.4	260.3	138.1
03/31/2020	257.0	263.2	139.7
09/30/2020	258.0	265.6	141.4
03/31/2021	260.0	268.1	143.2
09/30/2021	266.6	273.2	144.9
03/31/2022	276.2	281.0	147.3

(6) Current Cost Factor (Latest Index Value Divided by Average Annual Index)

<u>Year Ended</u>	All Items <u>CPI Index</u> ^(a)	All Items (Less Energy) <u>CPI Index</u> ^(b)	Compensation <u>Cost Index</u> ^(c)	<u>Combined</u> ^(d)
09/30/2019	1.130	1.112	1.087	1.104
03/31/2020	1.119	1.100	1.074	1.092
09/30/2020	1.114	1.090	1.062	1.082
03/31/2021	1.106	1.080	1.048	1.071
09/30/2021	1.078	1.060	1.036	1.053
03/31/2022	1.041	1.030	1.019	1.027

(7) Selected Annual Change = **+4.0%** (based on Comp. Cost Index and CPI with and without energy)

^(a) CPI - All Urban Consumers - All Items. Source: Bureau of Labor Statistics (Series ID: CUUR0000SA0).

^(b) CPI - All Urban Consumers - All Items Less Energy. Source: Bureau of Labor Statistics (Series ID: CUUR0000SA0LE).

^(c) Total Compensation Cost Index - Insurance Carriers, Agent Brokers, and Service. Source: Bureau of Labor Statistics (Series ID: CIU20152400000001).

^(d) Weighted average determined as .25 (All Items) + .25 (All Items - Less Energy) + .50 (CCI).

^(e) Average year ended index for period shown.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

EXPENSE, DIVIDENDS, PROFIT AND CONTINGENCIES

FIRE

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>3-Year Average</u>	<u>Selected</u>
Commission and Brokerage	5,256,786	5,305,706	5,078,242	4,411,114	4,045,059		
Written Premium Including Deviations	49,448,623	49,021,465	47,007,135	36,103,745	34,899,565		
Ratio	0.106	0.108	0.108	0.122	0.116	0.115	0.115
Other Acquisition Expense	3,433,552	3,661,942	3,613,525	2,940,990	2,498,329		
Earned Premium at Current Manual Level ^(a)	40,344,528	38,430,514	38,320,113	35,855,905	35,093,727		
Ratio	0.085	0.095	0.094	0.082	0.071	0.082	0.085
General Expense	2,333,769	2,302,910	2,043,207	1,816,090	2,367,664		
Earned Premium at Current Manual Level ^(a)	40,344,528	38,430,514	38,320,113	35,855,905	35,093,727		
Ratio	0.058	0.060	0.053	0.051	0.067	0.057	0.057
Taxes, Licenses and Fees	1,403,800	1,347,953	1,259,356	1,025,159	1,065,572		
Written Premium Including Deviations	49,448,623	49,021,465	47,007,135	36,103,745	34,899,565		
Ratio	0.028	0.027	0.027	0.028	0.031	0.029	0.029
<u>Fire (AS Line 1) Data</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>5-Year Average</u>	<u>Selected</u>
Direct Written Premium (Statutory Page 14)	227,432,348	210,227,630	222,876,329	231,818,710	252,840,202		
Total Dividends	942,866	1,025,053	1,137,689	1,456,325	858,765		
Ratio of Dividends to Direct Written Premium	0.4%	0.5%	0.5%	0.6%	0.3%	0.5%	0.5%

Expected Loss and Fixed Expense Ratio

Commission and Brokerage	11.5%
Taxes, Licenses and Fees	2.9%
Dividends	0.5%
Contingencies	1.0%
Profit	8.0%
Total	23.9%
1 - Variable Expense	76.1%

^(a) The calculation of the on-leveling factors used to adjust the Earned Premium to the current manual level is found on page D-23.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF EARNED PREMIUM AT CURRENT MANUAL LEVEL

FIRE

(A) Calculation of On-leveling Factors

Rate Filing Effective Date	Implemented Overall Rate Change	Cumulative Overall Rate Change	Portion of Earned Premium Based on Implemented Rates					
			<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	
4/1/2014	1.000	1.000	0.031250					
4/1/2015	1.000	1.000	0.968750	1.000000	1.000000	0.579861	0.003472	
2/1/2019	0.792	0.792				0.420139	0.871528	
7/1/2020	1.000	0.792					0.125000	
11/1/2021	1.000	0.792						
Average Cumulative Rate Change			1.0000	1.0000	1.0000	0.9126	0.7927	
On-leveling Factor ^(a)			0.7920	0.7920	0.7920	0.8679	0.9991	

(B) Calculation of Earned Premium at Current Level

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
(1) Earned Premium Excluding Deviations	50,940,060	48,523,376	48,383,981	41,313,406	35,125,340
(2) On-leveling Factor	0.7920	0.7920	0.7920	0.8679	0.9991
(3) Earned Premium at Current Manual Level ^(b)	40,344,528	38,430,514	38,320,113	35,855,905	35,093,727

^(a) The On-leveling Factor is calculated as the Total Cumulative Overall Rate Change divided by the Average Cumulative Rate Change for the accident year.

^(b) (3) = (1) x (2)

NORTH CAROLINA
DWELLING PROPERTY INSURANCE
LOSS ADJUSTMENT EXPENSE
FIRE

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>5-Year Average</u>
Allocated LAE	347,819	119,012	286,556	135,670	185,890	
Unallocated LAE	1,785,761	1,304,713	1,156,488	1,298,001	1,172,325	
Total LAE	2,133,580	1,423,725	1,443,044	1,433,671	1,358,215	
Incurred Losses	24,378,203	15,419,622	20,790,454	16,757,376	15,352,234	
Ratio: LAE/I.L.	0.088	0.092	0.069	0.086	0.088	0.085
				Selected LAE Ratio ^(a) :		0.087

^(a) The selection of 0.087 is based on the average LAE ratio excluding the high and low years (2017 and 2018).

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

EXPENSE, DIVIDENDS, PROFIT AND CONTINGENCIES
EXTENDED COVERAGE

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>3-Year Average</u>	<u>Selected</u>
Commission and Brokerage	6,425,057	5,517,605	5,513,146	6,948,268	7,248,127		
Written Premium Including Deviations	67,210,898	59,674,255	61,689,897	74,822,388	76,537,561		
Ratio	0.096	0.092	0.089	0.093	0.095	0.092	0.092
Other Acquisition Expense	4,877,455	4,772,787	5,111,239	6,641,840	6,656,168		
Earned Premium at Current Manual Level ^(a)	97,915,243	85,711,570	82,858,040	84,808,198	86,648,829		
Ratio	0.050	0.056	0.062	0.078	0.077	0.072	0.075
General Expense	2,913,560	2,753,309	2,826,058	3,754,681	4,758,852		
Earned Premium at Current Manual Level ^(a)	97,915,243	85,711,570	82,858,040	84,808,198	86,648,829		
Ratio	0.030	0.032	0.034	0.044	0.055	0.044	0.045
Taxes, Licenses and Fees	1,815,109	1,596,397	1,473,951	1,931,649	2,129,671		
Written Premium Including Deviations	67,210,898	59,674,255	61,689,897	74,822,388	76,537,561		
Ratio	0.027	0.027	0.024	0.026	0.028	0.026	0.026
<u>Allied Lines (AS Line 2) Data</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>5-Year Average</u>	<u>Selected</u>
Direct Written Premium (Statutory Page 14)	251,274,419	247,355,349	268,843,429	306,405,628	330,404,765		
Total Dividends	1,972,015	2,076,235	1,981,600	2,575,133	2,402,443		
Ratio of Dividends to Direct Written Premium	0.8%	0.8%	0.7%	0.8%	0.7%	0.8%	0.8%
<u>Expected Loss and Fixed Expense Ratio</u>							
Commission and Brokerage	9.2%						
Taxes, Licenses and Fees	2.6%						
Dividends	0.8%						
Contingencies	1.0%						
Profit	8.0%						
Total	21.6%						
1 - Variable Expense	78.4%						

^(a) The calculation of the on-leveling factors used to adjust the Earned Premium to the current manual level is found on page D-26.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF EARNED PREMIUM AT CURRENT MANUAL LEVEL
EXTENDED COVERAGE

(A) Calculation of On-leveling Factors

Rate Filing Effective Date	Implemented Overall Rate Change	Cumulative Overall Rate Change	Portion of Earned Premium Based on Implemented Rates					
			<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	
4/1/2014	1.083	1.083	0.031250					
4/1/2015	1.034	1.120	0.968750	1.000000	1.000000	0.579861	0.003472	
2/1/2019	1.187	1.329				0.420139	0.871528	
7/1/2020	1.053	1.400					0.125000	
11/1/2021	1.100	1.540						
Average Cumulative Rate Change			1.1188	1.1200	1.1200	1.2078	1.3371	
On-leveling Factor ^(a)			1.3765	1.3750	1.3750	1.2750	1.1517	

(B) Calculation of Earned Premium at Current Level

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
(1) Earned Premium Excluding Deviations	71,133,486	62,335,687	60,260,393	66,516,234	75,235,590
(2) On-leveling Factor	1.3765	1.3750	1.3750	1.2750	1.1517
(3) Earned Premium at Current Manual Level ^(b)	97,915,243	85,711,570	82,858,040	84,808,198	86,648,829

^(a) The On-leveling Factor is calculated as the Total Cumulative Overall Rate Change divided by the Average Cumulative Rate Change for the accident year.

^(b) (3) = (1) x (2)

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSS ADJUSTMENT EXPENSE
EXTENDED COVERAGE

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>5-Year Average</u>
Allocated LAE	386,211	258,772	869,932	218,089	664,361	
Unallocated LAE	5,228,606	4,414,708	9,264,936	3,932,717	5,568,666	
Total LAE	5,614,817	4,673,480	10,134,868	4,150,806	6,233,027	
Incurred Losses	50,486,998	36,329,762	98,254,049	36,968,335	46,864,778	
Ratio: LAE/I.L.	0.111	0.129	0.103	0.112	0.133	0.118
				Selected LAE Ratio ^(a) :		0.117

^(a) The selection of 0.117 is based on the average LAE ratio excluding the high and low years (2018 and 2020).

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED EXPENSE PROVISIONS

Trended Loss Adjustment Expense Factor

	<u>Fire</u>	<u>EC</u>
(1) Selected Loss Adjustment Expense Ratio	0.087	0.117
(2) Expense Trend Factor, 1.040 ^(67/12) (a)	1.245	1.245
(3) 2018 Loss Trend Factor	1.253	1.405
(4) Trended Loss Adjustment Expense Factor, $1.0 + \{(1) \times [(2) / (3)]\}$	1.086	1.104

Trended Fixed Expense per Policy

	<u>Fire</u>	<u>EC</u>
(5) Selected Other Acquisition Expense Ratio	0.085	0.075
(6) Selected General Expense Ratio	0.057	0.045
(7) Expense Trend Factor, 1.040 ^(49/12) (b)	1.174	1.174
(8) 2019 Premium Trend Factor	1.204	1.202
(9) Trended Other Acquisition Expense Ratio, $(5) \times [(7) / (8)]$	0.083	0.073
(10) Trended General Expense Ratio, $(6) \times [(7) / (8)]$	0.056	0.044
(11) Latest-Year Average Base Class Rate	26.02	51.55
(12) Trended Fixed Expense per Policy, $[(9) + (10)] \times (11)$	3.62	6.03

^(a) Loss adjustment expense percentages, since they are based on 2016-2020 data, are trended from July 1, 2018 to February 1, 2024 (67 months).

^(b) General expense and other acquisition expense percentages, since they are based on 2018-2020 data, are trended from July 1, 2019 to August 1, 2023 (49 months).

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF TERRITORY FIXED EXPENSE PER POLICY

FIRE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Latest-Year Aggregate Calculated Earned Premium at Current Level	Latest-Year Earned House Years	Statewide Average Relativity to Territory ={Statewide[(1)/(2)]/(1)/(2)}	Statewide Trended Fixed Expense Ratio	Territory Trended Fixed Expense Ratio =(4) x (3)	Latest-Year Average Base Class Rate	Trended Fixed Expense per Policy
110	2,148,884	20,319	1.068	0.139	0.148	10.92	1.62
120	2,224,727	26,531	1.347	0.139	0.187	11.06	2.07
130	863,172	8,016	1.049	0.139	0.146	22.72	3.32
140	4,203,133	50,360	1.353	0.139	0.188	20.91	3.93
150	2,703,853	31,277	1.306	0.139	0.182	21.36	3.89
160	2,748,605	26,658	1.095	0.139	0.152	24.49	3.72
170	468,965	3,987	0.960	0.139	0.133	31.54	4.19
180	3,655,743	31,139	0.962	0.139	0.134	33.54	4.49
190	1,329,852	13,215	1.122	0.139	0.156	33.85	5.28
200	1,071,262	7,821	0.824	0.139	0.115	42.53	4.89
210	996,638	10,181	1.153	0.139	0.160	31.62	5.06
220	4,912,598	32,629	0.750	0.139	0.104	30.34	3.16
230	2,289,996	19,736	0.973	0.139	0.135	44.83	6.05
240	3,072,199	29,146	1.071	0.139	0.149	31.73	4.73
250	2,457,371	17,477	0.803	0.139	0.112	29.12	3.26
260	2,064,809	14,306	0.782	0.139	0.109	37.19	4.05
270	5,022,414	36,074	0.811	0.139	0.113	22.73	2.57
280	846,574	7,832	1.045	0.139	0.145	20.52	2.98
290	1,077,185	8,412	0.882	0.139	0.123	26.53	3.26
300	1,450,397	11,953	0.931	0.139	0.129	36.32	4.69
310	6,970,701	57,580	0.933	0.139	0.130	27.76	3.61
320	2,937,830	26,313	1.011	0.139	0.141	27.15	3.83
330	239,902	2,580	1.214	0.139	0.169	27.67	4.68
340	6,192,245	49,080	0.895	0.139	0.124	23.47	2.91
350	2,784,005	24,585	0.997	0.139	0.139	28.23	3.92
360	4,733,856	47,830	1.141	0.139	0.159	21.57	3.43
370	348,289	3,275	1.062	0.139	0.148	23.37	3.46
380	960,965	8,593	1.010	0.139	0.140	21.35	2.99
390	934,190	8,209	0.992	0.139	0.138	22.11	3.05
Statewide	71,710,360	635,114			0.139	26.02	3.62

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF TERRITORY FIXED EXPENSE PER POLICY
EXTENDED COVERAGE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Latest-Year Aggregate Calculated Earned Premium at Current Level	Latest-Year Earned House Years	Statewide Average Relativity to Territory ={Statewide[(1)/(2)]/(1)/(2)}	Statewide Trended Fixed Expense Ratio	Territory Trended Fixed Expense Ratio =(4) x (3)	Latest-Year Average Base Class Rate	Trended Fixed Expense per Policy
110	30,440,645	20,032	0.261	0.117	0.031	113.32	3.51
120	36,183,931	26,463	0.290	0.117	0.034	129.96	4.42
130	4,724,953	7,907	0.664	0.117	0.078	100.78	7.86
140	32,326,932	49,986	0.613	0.117	0.072	108.60	7.82
150	15,055,413	30,853	0.813	0.117	0.095	90.42	8.59
160	14,951,302	26,456	0.702	0.117	0.082	94.70	7.77
170	897,149	3,972	1.756	0.117	0.205	43.77	8.97
180	9,371,455	30,884	1.307	0.117	0.153	50.06	7.66
190	3,220,509	13,152	1.620	0.117	0.190	51.37	9.76
200	2,014,242	7,773	1.531	0.117	0.179	61.07	10.93
210	2,274,329	10,097	1.761	0.117	0.206	43.43	8.95
220	12,306,266	32,273	1.040	0.117	0.122	36.72	4.48
230	4,123,948	19,567	1.882	0.117	0.220	56.86	12.51
240	5,936,137	28,684	1.916	0.117	0.224	38.03	8.52
250	6,066,897	17,264	1.129	0.117	0.132	38.66	5.10
260	3,491,616	13,948	1.584	0.117	0.185	39.85	7.37
270	12,355,735	35,151	1.128	0.117	0.132	26.67	3.52
280	2,027,991	7,630	1.492	0.117	0.175	26.09	4.57
290	2,532,772	8,205	1.285	0.117	0.150	33.62	5.04
300	2,145,111	11,843	2.190	0.117	0.256	32.74	8.38
310	11,506,292	55,492	1.913	0.117	0.224	24.77	5.55
320	5,394,692	24,918	1.832	0.117	0.214	28.03	6.00
330	364,622	2,510	2.730	0.117	0.319	27.69	8.83
340	11,581,976	47,181	1.616	0.117	0.189	22.17	4.19
350	4,236,027	23,502	2.200	0.117	0.257	24.82	6.38
360	8,245,507	47,142	2.268	0.117	0.265	20.95	5.55
370	481,592	3,188	2.625	0.117	0.307	21.46	6.59
380	1,348,883	8,394	2.468	0.117	0.289	19.20	5.55
390	1,265,069	7,986	2.504	0.117	0.293	18.80	5.51
Statewide	246,871,993	622,453			0.117	51.55	6.03

NORTH CAROLINA
DWELLING PROPERTY INSURANCE

DEVIATIONS

FIRE

<u>Year</u>	FPBP		FPBP		<u>Average Deviation</u>
	<u>Written Premium Adjusted to Manual</u>	<u>Written Premium Adjusted to Manual</u>	<u>Direct Written Premium</u>	<u>Direct Written Premium</u>	
2016	35,765,031	49,856,014	35,765,031	49,448,623	0.48%
2017	38,046,712	49,447,003	38,046,712	49,021,465	0.49%
2018	39,868,055	46,897,199	39,868,055	47,007,135	-0.13%
2019	33,809,005	36,088,299	33,809,005	36,103,745	-0.02%
2020	36,711,081	34,845,680	36,711,081	34,899,565	-0.08%
5-Year Average					0.15%
Selection					0.00%

EXTENDED COVERAGE

<u>Year</u>	FPBP		FPBP		<u>Average Deviation</u>
	<u>Written Premium Adjusted to Manual</u>	<u>Written Premium Adjusted to Manual</u>	<u>Direct Written Premium</u>	<u>Direct Written Premium</u>	
2016	106,871,624	70,151,902	107,801,914	67,210,898	1.14%
2017	111,619,219	59,496,328	112,554,787	59,674,255	-0.65%
2018	113,296,922	61,190,184	114,248,724	61,689,897	-0.83%
2019	125,504,415	74,226,657	126,424,852	74,822,388	-0.76%
2020	137,879,871	75,320,165	138,858,511	76,537,561	-1.03%
5-Year Average					-0.43%
Selection					0.00%

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED AVERAGE RATING FACTORS

FIRE

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			Earned House Years	Current Manual Base Rate ^(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate	Average Rating Factor	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level	Trended Average Rating Factor
						(3) / (1)	(3) / [(1)x(2)]		(3) x (6)	(7) / [(1)x(2)]
110	Buildings	2016	12,116	17	2,341,342	193.24	11.367	1.236	2,893,899	14.050
		2017	11,811	17	2,285,940	193.54	11.385	1.227	2,804,848	13.969
		2018	11,453	17	2,180,248	190.36	11.198	1.214	2,646,821	13.594
		2019	11,105	17	2,070,265	186.43	10.966	1.202	2,488,459	13.181
		<u>2020</u>	<u>10,812</u>	<u>17</u>	<u>1,978,960</u>	<u>183.03</u>	<u>10.767</u>	<u>1.191</u>	<u>2,356,941</u>	<u>12.823</u>
	Total	57,297	17	10,856,755	189.48	11.146		13,190,968	13.542	
	Contents	2016	10,687	4	178,196	16.67	4.169	1.290	229,873	5.377
		2017	10,431	4	177,235	16.99	4.248	1.272	225,443	5.403
		2018	10,084	4	173,522	17.21	4.302	1.255	217,770	5.399
		2019	9,809	4	171,994	17.53	4.384	1.233	212,069	5.405
		<u>2020</u>	<u>9,507</u>	<u>4</u>	<u>169,924</u>	<u>17.87</u>	<u>4.468</u>	<u>1.191</u>	<u>202,379</u>	<u>5.322</u>
	Total	50,518	4	870,871	17.24	4.310		1,087,534	5.382	
	Total	2016	22,803	10.91	2,519,538	110.49	10.128		3,123,772	12.556
		2017	22,242	10.90	2,463,175	110.74	10.160		3,030,291	12.499
		2018	21,537	10.91	2,353,770	109.29	10.017		2,864,591	12.191
2019		20,914	10.90	2,242,259	107.21	9.836		2,700,528	11.846	
<u>2020</u>		<u>20,319</u>	<u>10.92</u>	<u>2,148,884</u>	<u>105.76</u>	<u>9.685</u>		<u>2,559,320</u>	<u>11.535</u>	
Total	107,815	10.91	11,727,626	108.78	9.970		14,278,502	12.139		
120	Buildings	2016	16,558	17	2,405,303	145.27	8.545	1.236	2,972,955	10.562
		2017	16,165	17	2,367,693	146.47	8.616	1.227	2,905,159	10.572
		2018	15,412	17	2,216,602	143.82	8.460	1.214	2,690,955	10.271
		2019	14,875	17	2,113,624	142.09	8.358	1.202	2,540,576	10.047
		<u>2020</u>	<u>14,412</u>	<u>17</u>	<u>2,043,183</u>	<u>141.77</u>	<u>8.339</u>	<u>1.191</u>	<u>2,433,431</u>	<u>9.932</u>
	Total	77,422	17	11,146,405	143.97	8.469		13,543,076	10.290	
	Contents	2016	14,094	4	206,491	14.65	3.663	1.290	266,373	4.725
		2017	13,892	4	206,548	14.87	3.717	1.272	262,729	4.728
		2018	13,200	4	193,917	14.69	3.673	1.255	243,366	4.609
		2019	12,654	4	185,807	14.68	3.671	1.233	229,100	4.526
		<u>2020</u>	<u>12,119</u>	<u>4</u>	<u>181,544</u>	<u>14.98</u>	<u>3.745</u>	<u>1.191</u>	<u>216,219</u>	<u>4.460</u>
	Total	65,959	4	974,307	14.77	3.693		1,217,787	4.616	
	Total	2016	30,652	11.02	2,611,794	85.21	7.732		3,239,328	9.590
		2017	30,057	10.99	2,574,241	85.65	7.793		3,167,888	9.590
		2018	28,612	11.00	2,410,519	84.25	7.659		2,934,321	9.323
2019		27,529	11.02	2,299,431	83.53	7.580		2,769,676	9.130	
<u>2020</u>		<u>26,531</u>	<u>11.06</u>	<u>2,224,727</u>	<u>83.85</u>	<u>7.582</u>		<u>2,649,650</u>	<u>9.030</u>	
Total	143,381	11.02	12,120,712	84.53	7.671		14,760,863	9.342		
130	Buildings	2016	4,839	32	792,226	163.72	5.116	1.236	979,191	6.324
		2017	4,868	32	804,829	165.33	5.167	1.227	987,525	6.339
		2018	4,902	32	808,329	164.90	5.153	1.214	981,311	6.256
		2019	4,870	32	794,422	163.13	5.098	1.202	954,895	6.127
		<u>2020</u>	<u>4,781</u>	<u>32</u>	<u>776,388</u>	<u>162.39</u>	<u>5.075</u>	<u>1.191</u>	<u>924,678</u>	<u>6.044</u>
	Total	24,260	32	3,976,194	163.90	5.122		4,827,600	6.219	
	Contents	2016	3,039	9	74,653	24.56	2.729	1.290	96,302	3.521
		2017	3,114	9	79,110	25.40	2.823	1.272	100,628	3.591
		2018	3,208	9	83,507	26.03	2.892	1.255	104,801	3.630
		2019	3,244	9	85,288	26.29	2.921	1.233	105,160	3.602
		<u>2020</u>	<u>3,235</u>	<u>9</u>	<u>86,784</u>	<u>26.83</u>	<u>2.981</u>	<u>1.191</u>	<u>103,360</u>	<u>3.550</u>
	Total	15,840	9	409,342	25.84	2.871		510,251	3.579	
	Total	2016	7,878	23.13	866,879	110.04	4.757		1,075,493	5.902
		2017	7,982	23.03	883,939	110.74	4.809		1,088,153	5.919
		2018	8,110	22.90	891,836	109.97	4.802		1,086,112	5.848
2019		8,114	22.80	879,710	108.42	4.755		1,060,055	5.730	
<u>2020</u>		<u>8,016</u>	<u>22.72</u>	<u>863,172</u>	<u>107.68</u>	<u>4.739</u>		<u>1,028,038</u>	<u>5.645</u>	
Total	40,100	22.91	4,385,536	109.36	4.774		5,337,851	5.810		

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED AVERAGE RATING FACTORS

FIRE

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			Earned House Years	Current Manual Base Rate ^(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]
140	Buildings	2016	31,199	29	4,001,082	128.24	4.422	1.236	4,945,337	5.466
		2017	31,123	29	3,994,856	128.36	4.426	1.227	4,901,688	5.431
		2018	30,868	29	3,952,207	128.04	4.415	1.214	4,797,979	5.360
		2019	30,391	29	3,869,037	127.31	4.390	1.202	4,650,582	5.277
		2020	29,982	29	3,794,840	126.57	4.365	1.191	4,519,654	5.198
		Total	153,563	29	19,612,022	127.71	4.404		23,815,240	5.348
	Contents	2016	19,135	9	348,118	18.19	2.021	1.290	449,072	2.608
		2017	19,621	9	364,314	18.57	2.063	1.272	463,407	2.624
		2018	20,068	9	383,696	19.12	2.124	1.255	481,538	2.666
		2019	20,334	9	398,724	19.61	2.179	1.233	491,627	2.686
		2020	20,378	9	408,293	20.04	2.226	1.191	486,277	2.651
		Total	99,536	9	1,903,145	19.12	2.124		2,371,921	2.648
	Total	2016	50,334	21.40	4,349,200	86.41	4.038		5,394,409	5.008
		2017	50,744	21.27	4,359,170	85.91	4.039		5,365,095	4.971
		2018	50,936	21.12	4,335,903	85.12	4.031		5,279,517	4.908
2019		50,725	20.98	4,267,761	84.14	4.010		5,142,209	4.832	
2020		50,360	20.91	4,203,133	83.46	3.991		5,005,931	4.754	
Total		253,099	21.13	21,515,167	85.01	4.023		26,187,161	4.897	
150	Buildings	2016	19,213	29	2,459,967	128.04	4.415	1.236	3,040,519	5.457
		2017	19,490	29	2,494,817	128.00	4.414	1.227	3,061,140	5.416
		2018	19,554	29	2,482,203	126.94	4.377	1.214	3,013,394	5.314
		2019	19,505	29	2,461,381	126.19	4.351	1.202	2,958,580	5.230
		2020	19,336	29	2,424,683	125.40	4.324	1.191	2,887,797	5.150
		Total	97,098	29	12,323,051	126.91	4.376		14,961,430	5.313
	Contents	2016	10,833	9	236,653	21.85	2.427	1.290	305,282	3.131
		2017	11,270	9	248,093	22.01	2.446	1.272	315,574	3.111
		2018	11,646	9	260,250	22.35	2.483	1.255	326,614	3.116
		2019	11,834	9	269,212	22.75	2.528	1.233	331,938	3.117
		2020	11,941	9	279,170	23.38	2.598	1.191	332,491	3.094
		Total	57,524	9	1,293,378	22.48	2.498		1,611,899	3.113
	Total	2016	30,046	21.79	2,696,620	89.75	4.119		3,345,801	5.110
		2017	30,760	21.67	2,742,910	89.17	4.115		3,376,714	5.066
		2018	31,200	21.53	2,742,453	87.90	4.083		3,340,008	4.972
2019		31,339	21.45	2,730,593	87.13	4.062		3,290,518	4.895	
2020		31,277	21.36	2,703,853	86.45	4.047		3,220,288	4.820	
Total		154,622	21.56	13,616,429	88.06	4.085		16,573,329	4.972	
160	Buildings	2016	18,107	33	2,783,111	153.70	4.658	1.236	3,439,925	5.757
		2017	18,011	33	2,787,673	154.78	4.690	1.227	3,420,475	5.755
		2018	17,792	33	2,770,659	155.72	4.719	1.214	3,363,580	5.729
		2019	16,924	33	2,637,244	155.83	4.722	1.202	3,169,967	5.676
		2020	16,346	33	2,518,792	154.09	4.669	1.191	2,999,881	5.561
		Total	87,180	33	13,497,479	154.82	4.692		16,393,828	5.698
	Contents	2016	10,089	11	209,190	20.73	1.885	1.290	269,855	2.432
		2017	10,410	11	218,081	20.95	1.904	1.272	277,399	2.422
		2018	10,587	11	224,058	21.16	1.924	1.255	281,193	2.415
		2019	10,363	11	224,812	21.69	1.972	1.233	277,193	2.432
		2020	10,312	11	229,813	22.29	2.026	1.191	273,707	2.413
		Total	51,761	11	1,105,954	21.37	1.942		1,379,347	2.423
	Total	2016	28,196	25.13	2,992,301	106.13	4.223		3,709,780	5.236
		2017	28,421	24.94	3,005,754	105.76	4.241		3,697,874	5.217
		2018	28,379	24.79	2,994,717	105.53	4.257		3,644,773	5.181
2019		27,287	24.64	2,862,056	104.89	4.257		3,447,160	5.127	
2020		26,658	24.49	2,748,605	103.11	4.210		3,273,588	5.014	
Total		138,941	24.80	14,603,433	105.11	4.238		17,773,175	5.158	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED AVERAGE RATING FACTORS

FIRE

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate ^(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3) / [(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7) / [(1)x(2)]	
170	Buildings	2016	2,099	44	340,084	162.02	3.682	1.236	420,344	4.551	
		2017	2,166	44	352,504	162.74	3.699	1.227	432,522	4.538	
		2018	2,242	44	370,489	165.25	3.756	1.214	449,774	4.559	
		2019	2,295	44	383,800	167.23	3.801	1.202	461,328	4.569	
		2020	2,384	44	400,372	167.94	3.817	1.191	476,843	4.546	
		Total	11,186	44	1,847,249	165.14	3.753		2,240,811	4.553	
	Contents	2016	1,291	13	49,917	38.67	2.974	1.290	64,393	3.837	
		2017	1,353	13	52,288	38.65	2.973	1.272	66,510	3.781	
		2018	1,440	13	57,855	40.18	3.091	1.255	72,608	3.879	
		2019	1,488	13	61,344	41.23	3.171	1.233	75,637	3.910	
		2020	1,603	13	68,593	42.79	3.292	1.191	81,694	3.920	
		Total	7,175	13	289,997	40.42	3.109		360,842	3.869	
	Total	2016	3,390	32.19	390,001	115.04	3.574		484,737	4.442	
		2017	3,519	32.08	404,792	115.03	3.586		499,032	4.421	
		2018	3,682	31.88	428,344	116.33	3.649		522,382	4.450	
		2019	3,783	31.81	445,144	117.67	3.699		536,965	4.462	
		2020	3,987	31.54	468,965	117.62	3.729		558,537	4.442	
		Total	18,361	31.89	2,137,246	116.40	3.650		2,601,653	4.443	
	180	Buildings	2016	18,410	45	3,024,431	164.28	3.651	1.236	3,738,197	4.512
			2017	18,775	45	3,126,182	166.51	3.700	1.227	3,835,825	4.540
			2018	19,070	45	3,212,737	168.47	3.744	1.214	3,900,263	4.545
2019			19,328	45	3,284,581	169.94	3.776	1.202	3,948,066	4.539	
2020			19,626	45	3,316,833	169.00	3.756	1.191	3,950,348	4.473	
Total			95,209	45	15,964,764	167.68	3.726		19,372,699	4.522	
Contents		2016	10,207	14	278,611	27.30	1.950	1.290	359,408	2.515	
		2017	10,666	14	296,258	27.78	1.984	1.272	376,840	2.524	
		2018	11,038	14	313,707	28.42	2.030	1.255	393,702	2.548	
		2019	11,300	14	325,075	28.77	2.055	1.233	400,817	2.534	
		2020	11,513	14	338,910	29.44	2.103	1.191	403,642	2.504	
		Total	54,724	14	1,552,561	28.37	2.026		1,934,409	2.525	
Total		2016	28,617	33.94	3,303,042	115.42	3.401		4,097,605	4.219	
		2017	29,441	33.77	3,422,440	116.25	3.442		4,212,665	4.237	
		2018	30,108	33.63	3,526,444	117.13	3.483		4,293,965	4.241	
		2019	30,628	33.56	3,609,656	117.85	3.512		4,348,883	4.231	
		2020	31,139	33.54	3,655,743	117.40	3.500		4,353,990	4.169	
		Total	149,933	33.69	17,517,325	116.83	3.468		21,307,108	4.218	
190		Buildings	2016	7,610	46	1,090,675	143.32	3.116	1.236	1,348,074	3.851
			2017	7,740	46	1,127,174	145.63	3.166	1.227	1,383,042	3.885
			2018	7,978	46	1,171,778	146.88	3.193	1.214	1,422,538	3.876
	2019		8,102	46	1,173,421	144.83	3.149	1.202	1,410,452	3.784	
	2020		8,197	46	1,163,934	142.00	3.087	1.191	1,386,245	3.676	
	Total		39,627	46	5,726,982	144.52	3.142		6,950,351	3.813	
	Contents	2016	4,169	14	132,727	31.84	2.274	1.290	171,218	2.934	
		2017	4,381	14	142,407	32.51	2.322	1.272	181,142	2.953	
		2018	4,644	14	151,976	32.73	2.338	1.255	190,730	2.934	
		2019	4,801	14	158,029	32.92	2.351	1.233	194,850	2.899	
		2020	5,018	14	165,918	33.06	2.362	1.191	197,608	2.813	
		Total	23,013	14	751,057	32.64	2.331		935,548	2.904	
	Total	2016	11,779	34.67	1,223,402	103.86	2.996		1,519,292	3.720	
		2017	12,121	34.43	1,269,581	104.74	3.042		1,564,184	3.748	
		2018	12,622	34.23	1,323,754	104.88	3.064		1,613,268	3.734	
		2019	12,903	34.09	1,331,450	103.19	3.027		1,605,302	3.650	
		2020	13,215	33.85	1,329,852	100.63	2.973		1,583,853	3.541	
		Total	62,640	34.24	6,478,039	103.42	3.020		7,885,899	3.677	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED AVERAGE RATING FACTORS

FIRE

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate ^(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]	
200	Buildings	2016	4,386	62	871,155	198.62	3.204	1.236	1,076,748	3.960	
		2017	4,419	62	897,417	203.08	3.276	1.227	1,101,131	4.019	
		2018	4,479	62	926,190	206.78	3.335	1.214	1,124,395	4.049	
		2019	4,503	62	922,005	204.75	3.302	1.202	1,108,250	3.970	
		2020	4,510	62	922,367	204.52	3.299	1.191	1,098,539	3.929	
		Total	22,297	62	4,539,134	203.58	3.283		5,509,063	3.985	
	Contents	2016	3,121	16	125,267	40.14	2.509	1.290	161,594	3.236	
		2017	3,159	16	132,069	41.81	2.613	1.272	167,992	3.324	
		2018	3,236	16	140,321	43.36	2.710	1.255	176,103	3.401	
		2019	3,261	16	142,924	43.83	2.739	1.233	176,225	3.378	
		2020	3,311	16	148,895	44.97	2.811	1.191	177,334	3.347	
		Total	16,088	16	689,476	42.86	2.679		859,248	3.338	
	Total	2016	7,507	42.88	996,422	132.73	3.095		1,238,342	3.847	
		2017	7,578	42.82	1,029,486	135.85	3.173		1,269,123	3.911	
		2018	7,715	42.71	1,066,511	138.24	3.237		1,300,498	3.947	
		2019	7,764	42.68	1,064,929	137.16	3.214		1,284,475	3.876	
		2020	7,821	42.53	1,071,262	136.97	3.221		1,275,873	3.836	
		Total	38,385	42.72	5,228,610	136.21	3.189		6,368,311	3.884	
	210	Buildings	2016	6,048	41	779,473	128.88	3.143	1.236	963,429	3.885
			2017	6,140	41	795,078	129.49	3.158	1.227	975,561	3.875
2018			6,471	41	840,896	129.95	3.169	1.214	1,020,848	3.848	
2019			6,614	41	872,873	131.97	3.219	1.202	1,049,193	3.869	
2020			6,772	41	902,352	133.25	3.250	1.191	1,074,701	3.871	
Total			32,045	41	4,190,672	130.77	3.190		5,083,732	3.869	
Contents		2016	2,882	13	71,642	24.86	1.912	1.290	92,418	2.467	
		2017	3,019	13	78,114	25.87	1.990	1.272	99,361	2.532	
		2018	3,135	13	81,934	26.14	2.010	1.255	102,827	2.523	
		2019	3,215	13	83,563	25.99	1.999	1.233	103,033	2.465	
		2020	3,409	13	94,286	27.66	2.128	1.191	112,295	2.534	
		Total	15,660	13	409,539	26.15	2.012		509,934	2.505	
Total		2016	8,930	31.96	851,115	95.31	2.982		1,055,847	3.699	
		2017	9,159	31.77	873,192	95.34	3.001		1,074,922	3.694	
		2018	9,606	31.86	922,830	96.07	3.015		1,123,675	3.672	
		2019	9,829	31.84	956,436	97.31	3.056		1,152,226	3.682	
		2020	10,181	31.62	996,638	97.89	3.096		1,186,996	3.687	
		Total	47,705	31.81	4,600,211	96.43	3.031		5,593,666	3.686	
220		Buildings	2016	21,221	41	4,302,816	202.76	4.945	1.236	5,318,281	6.113
			2017	21,369	41	4,509,975	211.05	5.148	1.227	5,533,739	6.316
	2018		21,363	41	4,676,439	218.90	5.339	1.214	5,677,197	6.482	
	2019		21,303	41	4,737,452	222.38	5.424	1.202	5,694,417	6.520	
	2020		20,640	41	4,625,532	224.11	5.466	1.191	5,509,009	6.510	
	Total		105,896	41	22,852,214	215.80	5.263		27,732,643	6.387	
	Contents	2016	10,742	12	225,824	21.02	1.752	1.290	291,313	2.260	
		2017	11,338	12	240,040	21.17	1.764	1.272	305,331	2.244	
		2018	11,763	12	256,771	21.83	1.819	1.255	322,248	2.283	
		2019	12,013	12	272,220	22.66	1.888	1.233	335,647	2.328	
		2020	11,989	12	287,066	23.94	1.995	1.191	341,896	2.376	
		Total	57,845	12	1,281,921	22.16	1.847		1,596,435	2.300	
	Total	2016	31,963	31.25	4,528,640	141.68	4.534		5,609,594	5.616	
		2017	32,707	30.95	4,750,015	145.23	4.692		5,839,070	5.768	
		2018	33,126	30.70	4,933,210	148.92	4.851		5,999,445	5.899	
		2019	33,316	30.54	5,009,672	150.37	4.924		6,030,064	5.927	
		2020	32,629	30.34	4,912,598	150.56	4.962		5,850,905	5.910	
		Total	163,741	30.76	24,134,135	147.39	4.792		29,329,078	5.823	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED AVERAGE RATING FACTORS

FIRE

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			Earned House Years	Current Manual Base Rate ^(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3) / [(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7) / [(1)x(2)]
230	Buildings	2016	12,161	64	1,938,947	159.44	2.491	1.236	2,396,538	3.079
		2017	12,180	64	1,956,905	160.67	2.510	1.227	2,401,122	3.080
		2018	12,038	64	1,976,857	164.22	2.566	1.214	2,399,904	3.115
		2019	11,706	64	1,997,989	170.68	2.667	1.202	2,401,583	3.206
		2020	11,688	64	1,992,232	170.45	2.663	1.191	2,372,748	3.172
		Total	59,773	64	9,862,930	165.01	2.578		11,971,895	3.130
	Contents	2016	7,671	17	266,700	34.77	2.045	1.290	344,043	2.638
		2017	7,830	17	273,585	34.94	2.055	1.272	348,000	2.614
		2018	7,937	17	284,074	35.79	2.105	1.255	356,513	2.642
		2019	7,951	17	290,226	36.50	2.147	1.233	357,849	2.647
		2020	8,048	17	297,764	37.00	2.176	1.191	354,637	2.592
		Total	39,437	17	1,412,349	35.81	2.107		1,761,042	2.627
	Total	2016	19,832	45.82	2,205,647	111.22	2.427		2,740,581	3.016
		2017	20,010	45.61	2,230,490	111.47	2.444		2,749,122	3.012
		2018	19,975	45.32	2,260,931	113.19	2.498		2,756,417	3.045
		2019	19,657	44.99	2,288,215	116.41	2.587		2,759,432	3.120
		2020	19,736	44.83	2,289,996	116.03	2.588		2,727,385	3.083
		Total	99,210	45.32	11,275,279	113.65	2.508		13,732,937	3.054
240	Buildings	2016	18,039	42	2,607,902	144.57	3.442	1.236	3,223,367	4.254
		2017	18,226	42	2,655,932	145.72	3.470	1.227	3,258,829	4.257
		2018	18,410	42	2,694,574	146.36	3.485	1.214	3,271,213	4.231
		2019	18,690	42	2,732,900	146.22	3.481	1.202	3,284,946	4.185
		2020	18,829	42	2,764,101	146.80	3.495	1.191	3,292,044	4.163
		Total	92,194	42	13,455,409	145.95	3.475		16,330,399	4.217
	Contents	2016	8,643	13	240,552	27.83	2.141	1.290	310,312	2.762
		2017	9,136	13	255,990	28.02	2.155	1.272	325,619	2.742
		2018	9,548	13	272,037	28.49	2.192	1.255	341,406	2.751
		2019	9,891	13	284,378	28.75	2.212	1.233	350,638	2.727
		2020	10,317	13	308,098	29.86	2.297	1.191	366,945	2.736
		Total	47,535	13	1,361,055	28.63	2.203		1,694,920	2.743
	Total	2016	26,682	32.61	2,848,454	106.76	3.274		3,533,679	4.061
		2017	27,362	32.32	2,911,922	106.42	3.293		3,584,448	4.053
		2018	27,958	32.10	2,966,611	106.11	3.306		3,612,619	4.025
		2019	28,581	31.96	3,017,278	105.57	3.303		3,635,584	3.980
		2020	29,146	31.73	3,072,199	105.41	3.322		3,658,989	3.957
		Total	139,729	32.13	14,816,464	106.04	3.300		18,025,319	4.015
250	Buildings	2016	10,898	39	2,055,752	188.64	4.837	1.236	2,540,909	5.978
		2017	11,066	39	2,158,207	195.03	5.001	1.227	2,648,120	6.136
		2018	10,994	39	2,227,583	202.62	5.195	1.214	2,704,286	6.307
		2019	11,020	39	2,291,342	207.93	5.331	1.202	2,754,193	6.408
		2020	11,080	39	2,321,426	209.51	5.372	1.191	2,764,818	6.398
		Total	55,058	39	11,054,310	200.78	5.148		13,412,326	6.246
	Contents	2016	5,549	12	103,471	18.65	1.554	1.290	133,478	2.005
		2017	5,810	12	111,173	19.13	1.595	1.272	141,412	2.028
		2018	5,998	12	118,306	19.72	1.644	1.255	148,474	2.063
		2019	6,189	12	125,896	20.34	1.695	1.233	155,230	2.090
		2020	6,397	12	135,945	21.25	1.771	1.191	161,910	2.109
		Total	29,943	12	594,791	19.86	1.655		740,504	2.061
	Total	2016	16,447	29.89	2,159,223	131.28	4.392		2,674,387	5.440
		2017	16,876	29.70	2,269,380	134.47	4.528		2,789,532	5.566
		2018	16,992	29.47	2,345,889	138.06	4.685		2,852,760	5.697
		2019	17,209	29.29	2,417,238	140.46	4.796		2,909,423	5.772
		2020	17,477	29.12	2,457,371	140.61	4.829		2,926,728	5.751
		Total	85,001	29.49	11,649,101	137.05	4.647		14,152,830	5.646

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED AVERAGE RATING FACTORS

FIRE

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate ^(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate	Average Rating Factor	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level	Trended Average Rating Factor	
						(3) / (1)	(3) / [(1)x(2)]		(3) x (6)	(7) / [(1)x(2)]	
260	Buildings	2016	8,156	47	1,359,139	166.64	3.546	1.236	1,679,896	4.382	
		2017	8,478	47	1,438,942	169.73	3.611	1.227	1,765,582	4.431	
		2018	8,634	47	1,475,452	170.89	3.636	1.214	1,791,199	4.414	
		2019	10,260	47	1,945,076	189.58	4.034	1.202	2,337,981	4.848	
		2020	10,178	47	1,929,214	189.55	4.033	1.191	2,297,694	4.803	
		Total	45,706	47	8,147,823	178.27	3.793		9,872,352	4.596	
	Contents	2016	3,527	13	103,849	29.44	2.265	1.290	133,965	2.922	
		2017	3,751	13	113,445	30.24	2.326	1.272	144,302	2.959	
		2018	3,907	13	120,208	30.77	2.367	1.255	150,861	2.970	
		2019	4,031	13	128,852	31.97	2.459	1.233	158,875	3.032	
		2020	4,128	13	135,595	32.85	2.527	1.191	161,494	3.009	
		Total	19,344	13	601,949	31.12	2.394		749,497	2.980	
	Total	2016	11,683	36.74	1,462,988	125.22	3.408		1,813,861	4.226	
		2017	12,229	36.57	1,552,387	126.94	3.471		1,909,884	4.271	
		2018	12,541	36.41	1,595,660	127.24	3.495		1,942,060	4.253	
		2019	14,291	37.41	2,073,928	145.12	3.879		2,496,856	4.670	
		2020	14,306	37.19	2,064,809	144.33	3.881		2,459,188	4.622	
		Total	65,050	36.89	8,749,772	134.51	3.646		10,621,849	4.426	
	270	Buildings	2016	22,560	31	4,353,285	192.96	6.225	1.236	5,380,660	7.694
			2017	22,513	31	4,433,639	196.94	6.353	1.227	5,440,075	7.795
			2018	22,676	31	4,615,796	203.55	6.566	1.214	5,603,576	7.971
2019			22,414	31	4,725,626	210.83	6.801	1.202	5,680,202	8.175	
2020			21,870	31	4,761,329	217.71	7.023	1.191	5,670,743	8.364	
Total			112,033	31	22,889,675	204.31	6.591		27,775,256	7.997	
Contents		2016	11,459	10	199,979	17.45	1.745	1.290	257,973	2.251	
		2017	11,909	10	210,512	17.68	1.768	1.272	267,771	2.248	
		2018	12,910	10	229,271	17.76	1.776	1.255	287,735	2.229	
		2019	14,156	10	253,003	17.87	1.787	1.233	311,953	2.204	
		2020	14,204	10	261,085	18.38	1.838	1.191	310,952	2.189	
		Total	64,638	10	1,153,850	17.85	1.785		1,436,384	2.222	
Total		2016	34,019	23.93	4,553,264	133.84	5.593		5,638,633	6.926	
		2017	34,422	23.73	4,644,151	134.92	5.686		5,707,846	6.988	
		2018	35,586	23.38	4,845,067	136.15	5.823		5,891,311	7.081	
		2019	36,570	22.87	4,978,629	136.14	5.953		5,992,155	7.165	
		2020	36,074	22.73	5,022,414	139.23	6.125		5,981,695	7.295	
		Total	176,671	23.32	24,043,525	136.09	5.836		29,211,640	7.090	
280		Buildings	2016	4,654	28	734,213	157.76	5.634	1.236	907,487	6.964
			2017	4,668	28	746,464	159.91	5.711	1.227	915,911	7.008
			2018	4,707	28	775,111	164.67	5.881	1.214	940,985	7.140
	2019		4,711	28	781,876	165.97	5.927	1.202	939,815	7.125	
	2020		4,747	28	782,480	164.84	5.887	1.191	931,934	7.011	
	Total		23,487	28	3,820,144	162.65	5.809		4,636,132	7.050	
	Contents	2016	2,532	9	48,966	19.34	2.149	1.290	63,166	2.772	
		2017	2,659	9	52,214	19.64	2.182	1.272	66,416	2.775	
		2018	2,799	9	56,398	20.15	2.239	1.255	70,779	2.810	
		2019	2,955	9	60,118	20.34	2.261	1.233	74,125	2.787	
		2020	3,085	9	64,094	20.78	2.308	1.191	76,336	2.749	
		Total	14,030	9	281,790	20.08	2.232		350,822	2.778	
	Total	2016	7,186	21.31	783,179	108.99	5.114		970,653	6.339	
		2017	7,327	21.10	798,678	109.00	5.166		982,327	6.354	
		2018	7,506	20.91	831,509	110.78	5.298		1,011,764	6.446	
		2019	7,666	20.68	841,994	109.83	5.311		1,013,940	6.396	
		2020	7,832	20.52	846,574	108.09	5.268		1,008,270	6.274	
		Total	37,517	20.89	4,101,934	109.34	5.234		4,986,954	6.363	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED AVERAGE RATING FACTORS

FIRE

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate ^(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate	Average Rating Factor	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level	Trended Average Rating Factor	
						(3) / (1)	(3) / [(1)x(2)]		(3) x (6)	(7) / [(1)x(2)]	
290	Buildings	2016	6,099	36	1,152,397	188.95	5.249	1.236	1,424,363	6.487	
		2017	6,029	36	1,171,461	194.30	5.397	1.227	1,437,383	6.623	
		2018	5,969	36	1,198,055	200.71	5.575	1.214	1,454,439	6.768	
		2019	5,610	36	1,106,321	197.21	5.478	1.202	1,329,798	6.584	
		2020	5,224	36	1,008,935	193.13	5.365	1.191	1,201,642	6.390	
		Total	28,931	36	5,637,169	194.85	5.412		6,847,625	6.575	
	Contents	2016	3,173	11	59,549	18.77	1.706	1.290	76,818	2.201	
		2017	3,244	11	60,098	18.53	1.684	1.272	76,445	2.142	
		2018	3,319	11	63,303	19.07	1.734	1.255	79,445	2.176	
		2019	3,261	11	64,000	19.63	1.784	1.233	78,912	2.200	
		2020	3,188	11	68,250	21.41	1.946	1.191	81,286	2.318	
		Total	16,185	11	315,200	19.47	1.770		392,906	2.207	
	Total	2016	9,272	27.44	1,211,946	130.71	4.763		1,501,181	5.900	
		2017	9,273	27.25	1,231,559	132.81	4.874		1,513,828	5.991	
		2018	9,288	27.07	1,261,358	135.81	5.017		1,533,884	6.101	
		2019	8,871	26.81	1,170,321	131.93	4.921		1,408,710	5.923	
		2020	8,412	26.53	1,077,185	128.05	4.827		1,282,928	5.749	
		Total	45,116	27.03	5,952,369	131.93	4.881		7,240,531	5.937	
	300	Buildings	2016	6,979	47	981,194	140.59	2.991	1.236	1,212,756	3.697
			2017	6,863	47	973,890	141.90	3.019	1.227	1,194,963	3.705
2018			6,794	47	977,878	143.93	3.062	1.214	1,187,144	3.718	
2019			7,246	47	1,118,258	154.33	3.284	1.202	1,344,146	3.947	
2020			7,963	47	1,305,423	163.94	3.488	1.191	1,554,759	4.154	
Total			35,845	47	5,356,643	149.44	3.180		6,493,768	3.855	
Contents		2016	3,671	15	123,898	33.75	2.250	1.290	159,828	2.903	
		2017	3,706	15	126,066	34.02	2.268	1.272	160,356	2.885	
		2018	3,775	15	130,242	34.50	2.300	1.255	163,454	2.887	
		2019	3,829	15	134,451	35.11	2.341	1.233	165,778	2.886	
		2020	3,990	15	144,974	36.33	2.422	1.191	172,664	2.885	
		Total	18,971	15	659,631	34.77	2.318		822,080	2.889	
Total		2016	10,650	35.97	1,105,092	103.76	2.885		1,372,584	3.583	
		2017	10,569	35.78	1,099,956	104.07	2.909		1,355,319	3.584	
		2018	10,569	35.57	1,108,120	104.85	2.948		1,350,598	3.593	
		2019	11,075	35.94	1,252,709	113.11	3.147		1,509,924	3.793	
		2020	11,953	36.32	1,450,397	121.34	3.341		1,727,423	3.979	
		Total	54,816	35.93	6,016,274	109.75	3.055		7,315,848	3.714	
310		Buildings	2016	41,139	35	6,343,084	154.19	4.405	1.236	7,840,052	5.445
			2017	40,536	35	6,273,905	154.77	4.422	1.227	7,698,081	5.426
	2018		39,834	35	6,213,297	155.98	4.457	1.214	7,542,943	5.410	
	2019		39,074	35	6,186,938	158.34	4.524	1.202	7,436,699	5.438	
	2020		40,220	35	6,558,638	163.07	4.659	1.191	7,811,338	5.549	
	Total		200,803	35	31,575,862	157.25	4.493		38,329,113	5.454	
	Contents	2016	16,280	11	351,226	21.57	1.961	1.290	453,082	2.530	
		2017	16,652	11	361,253	21.69	1.972	1.272	459,514	2.509	
		2018	16,906	11	374,596	22.16	2.014	1.255	470,118	2.528	
		2019	17,200	11	392,687	22.83	2.076	1.233	484,183	2.559	
		2020	17,360	11	412,063	23.74	2.158	1.191	490,767	2.570	
		Total	84,398	11	1,891,825	22.42	2.038		2,357,664	2.540	
	Total	2016	57,419	28.20	6,694,310	116.59	4.134		8,293,134	5.122	
		2017	57,188	28.01	6,635,158	116.02	4.142		8,157,595	5.093	
		2018	56,740	27.85	6,587,893	116.11	4.169		8,013,061	5.071	
		2019	56,274	27.66	6,579,625	116.92	4.227		7,920,882	5.089	
		2020	57,580	27.76	6,970,701	121.06	4.361		8,302,105	5.194	
		Total	285,201	27.90	33,467,687	117.35	4.206		40,686,777	5.113	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED AVERAGE RATING FACTORS

FIRE

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate ^(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate	Average Rating Factor	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level	Trended Average Rating Factor	
						(3) / (1)	(3) / [(1)x(2)]		(3) x (6)	(7) / [(1)x(2)]	
320	Buildings	2016	20,227	34	3,054,362	151.00	4.441	1.236	3,775,191	5.489	
		2017	19,944	34	2,996,242	150.23	4.419	1.227	3,676,389	5.422	
		2018	19,522	34	2,921,594	149.66	4.402	1.214	3,546,815	5.344	
		2019	19,088	34	2,860,031	149.83	4.407	1.202	3,437,757	5.297	
		2020	18,477	34	2,767,542	149.78	4.405	1.191	3,296,143	5.247	
		Total	97,258	34	14,599,771	150.11	4.415		17,732,295	5.362	
	Contents	2016	7,009	11	150,389	21.46	1.951	1.290	194,002	2.516	
		2017	7,247	11	153,739	21.21	1.929	1.272	195,556	2.453	
		2018	7,394	11	155,403	21.02	1.911	1.255	195,031	2.398	
		2019	7,644	11	162,553	21.27	1.933	1.233	200,428	2.384	
		2020	7,836	11	170,288	21.73	1.976	1.191	202,813	2.353	
		Total	37,130	11	792,372	21.34	1.940		987,830	2.419	
	Total	2016	27,236	28.08	3,204,751	117.67	4.190		3,969,193	5.190	
		2017	27,191	27.87	3,149,981	115.85	4.157		3,871,945	5.109	
		2018	26,916	27.68	3,076,997	114.32	4.130		3,741,846	5.022	
		2019	26,732	27.42	3,022,584	113.07	4.124		3,638,185	4.963	
		2020	26,313	27.15	2,937,830	111.65	4.112		3,498,956	4.898	
		Total	134,388	27.65	15,392,143	114.54	4.142		18,720,125	5.038	
	330	Buildings	2016	1,691	36	219,500	129.80	3.606	1.236	271,302	4.457
			2017	1,652	36	215,208	130.27	3.619	1.227	264,060	4.440
			2018	1,619	36	210,421	129.97	3.610	1.214	255,451	4.383
2019			1,650	36	219,421	132.98	3.694	1.202	263,744	4.440	
2020			1,685	36	216,710	128.61	3.573	1.191	258,102	4.255	
Total			8,297	36	1,081,260	130.32	3.620		1,312,659	4.395	
Contents		2016	817	12	20,826	25.49	2.124	1.290	26,866	2.740	
		2017	826	12	20,969	25.39	2.116	1.272	26,673	2.691	
		2018	837	12	21,556	25.75	2.146	1.255	27,053	2.693	
		2019	868	12	23,099	26.61	2.218	1.233	28,481	2.734	
		2020	895	12	23,192	25.91	2.159	1.191	27,622	2.572	
		Total	4,243	12	109,642	25.84	2.153		136,695	2.685	
Total		2016	2,508	28.18	240,326	95.82	3.400		298,168	4.219	
		2017	2,478	28.00	236,177	95.31	3.404		290,733	4.190	
		2018	2,456	27.82	231,977	94.45	3.395		282,504	4.135	
		2019	2,518	27.73	242,520	96.31	3.473		292,225	4.185	
		2020	2,580	27.67	239,902	92.99	3.361		285,724	4.002	
		Total	12,540	27.88	1,190,902	94.97	3.406		1,449,354	4.146	
340		Buildings	2016	34,972	31	6,054,525	173.12	5.585	1.236	7,483,393	6.903
			2017	34,193	31	5,891,385	172.30	5.558	1.227	7,228,729	6.820
			2018	33,447	31	5,883,179	175.90	5.674	1.214	7,142,179	6.888
	2019		32,316	31	5,803,332	179.58	5.793	1.202	6,975,605	6.963	
	2020		32,280	31	5,868,922	181.81	5.865	1.191	6,989,886	6.985	
	Total		167,208	31	29,501,343	176.43	5.691		35,819,792	6.910	
	Contents	2016	15,491	9	273,744	17.67	1.963	1.290	353,130	2.533	
		2017	15,669	9	277,050	17.68	1.965	1.272	352,408	2.499	
		2018	15,975	9	286,949	17.96	1.996	1.255	360,121	2.505	
		2019	16,610	9	304,572	18.34	2.037	1.233	375,537	2.512	
		2020	16,800	9	323,323	19.25	2.138	1.191	385,078	2.547	
		Total	80,545	9	1,465,638	18.20	2.022		1,826,274	2.519	
	Total	2016	50,463	24.25	6,328,269	125.40	5.171		7,836,523	6.404	
		2017	49,862	24.09	6,168,435	123.71	5.135		7,581,137	6.311	
		2018	49,422	23.89	6,170,128	124.85	5.226		7,502,300	6.354	
		2019	48,926	23.53	6,107,904	124.84	5.306		7,351,142	6.385	
		2020	49,080	23.47	6,192,245	126.17	5.376		7,374,964	6.402	
		Total	247,753	23.85	30,966,981	124.99	5.241		37,646,066	6.371	

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NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED AVERAGE RATING FACTORS

FIRE

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate ^(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3) / [(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7) / [(1)x(2)]	
350	Buildings	2016	18,790	35	2,672,603	142.24	4.064	1.236	3,303,337	5.023	
		2017	18,448	35	2,625,052	142.29	4.066	1.227	3,220,939	4.988	
		2018	17,952	35	2,580,219	143.73	4.107	1.214	3,132,386	4.985	
		2019	17,676	35	2,580,182	145.97	4.171	1.202	3,101,379	5.013	
		2020	17,651	35	2,627,375	148.85	4.253	1.191	3,129,204	5.065	
		Total	90,517	35	13,085,431	144.56	4.130		15,887,245	5.015	
	Contents	2016	6,078	11	132,077	21.73	1.975	1.290	170,379	2.548	
		2017	6,208	11	134,189	21.62	1.965	1.272	170,688	2.500	
		2018	6,398	11	140,599	21.98	1.998	1.255	176,452	2.507	
		2019	6,704	11	148,262	22.12	2.010	1.233	182,807	2.479	
		2020	6,934	11	156,630	22.59	2.054	1.191	186,546	2.446	
		Total	32,322	11	711,757	22.02	2.002		886,872	2.494	
	Total	2016	24,868	29.13	2,804,680	112.78	3.872		3,473,716	4.795	
		2017	24,656	28.96	2,759,241	111.91	3.864		3,391,627	4.750	
		2018	24,350	28.69	2,720,818	111.74	3.895		3,308,838	4.736	
		2019	24,380	28.40	2,728,444	111.91	3.941		3,284,186	4.743	
		2020	24,585	28.23	2,784,005	113.24	4.011		3,315,750	4.777	
		Total	122,839	28.69	13,797,188	112.32	3.915		16,774,117	4.760	
	360	Buildings	2016	32,271	29	4,442,020	137.65	4.746	1.236	5,490,337	5.867
			2017	31,316	29	4,314,162	137.76	4.750	1.227	5,293,477	5.829
2018			30,271	29	4,220,274	139.42	4.807	1.214	5,123,413	5.836	
2019			30,289	29	4,310,197	142.30	4.907	1.202	5,180,857	5.898	
2020			30,064	29	4,344,762	144.52	4.983	1.191	5,174,612	5.935	
Total			154,211	29	21,631,415	140.27	4.837		26,262,696	5.873	
Contents		2016	16,123	9	315,953	19.60	2.177	1.290	407,579	2.809	
		2017	16,369	9	325,578	19.89	2.210	1.272	414,135	2.811	
		2018	16,465	9	336,529	20.44	2.271	1.255	422,344	2.850	
		2019	17,102	9	359,170	21.00	2.334	1.233	442,857	2.877	
		2020	17,766	9	389,094	21.90	2.433	1.191	463,411	2.898	
		Total	83,825	9	1,726,324	20.59	2.288		2,150,326	2.850	
Total		2016	48,394	22.34	4,757,973	98.32	4.401		5,897,916	5.455	
		2017	47,685	22.13	4,639,740	97.30	4.397		5,707,612	5.409	
		2018	46,736	21.95	4,556,803	97.50	4.442		5,545,757	5.406	
		2019	47,391	21.78	4,669,367	98.53	4.524		5,623,714	5.448	
		2020	47,830	21.57	4,733,856	98.97	4.588		5,638,023	5.465	
		Total	238,036	21.96	23,357,739	98.13	4.468		28,413,022	5.436	
370		Buildings	2016	1,996	32	301,480	151.04	4.720	1.236	372,629	5.834
			2017	1,936	32	292,093	150.87	4.715	1.227	358,398	5.785
	2018		1,868	32	282,597	151.28	4.728	1.214	343,073	5.739	
	2019		1,934	32	296,458	153.29	4.790	1.202	356,343	5.758	
	2020		1,991	32	308,515	154.95	4.842	1.191	367,441	5.767	
	Total		9,725	32	1,481,143	152.30	4.759		1,797,884	5.777	
	Contents	2016	1,196	10	35,121	29.37	2.937	1.290	45,306	3.788	
		2017	1,176	10	34,153	29.04	2.904	1.272	43,443	3.694	
		2018	1,152	10	33,086	28.72	2.872	1.255	41,523	3.604	
		2019	1,221	10	35,798	29.32	2.932	1.233	44,139	3.615	
		2020	1,284	10	39,774	30.98	3.098	1.191	47,371	3.689	
		Total	6,029	10	177,932	29.51	2.951		221,782	3.679	
	Total	2016	3,192	23.76	336,601	105.45	4.438		417,935	5.511	
		2017	3,112	23.69	326,246	104.83	4.425		401,841	5.451	
		2018	3,020	23.61	315,683	104.53	4.427		384,596	5.394	
		2019	3,155	23.49	332,256	105.31	4.483		400,482	5.404	
		2020	3,275	23.37	348,289	106.35	4.551		414,812	5.420	
		Total	15,754	23.58	1,659,075	105.31	4.466		2,019,666	5.437	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED AVERAGE RATING FACTORS

FIRE

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate ^(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate	Average Rating Factor	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level	Trended Average Rating Factor	
						(3) / (1)	(3) / [(1)x(2)]		(3) x (6)	(7) / [(1)x(2)]	
380	Buildings	2016	5,495	29	854,617	155.53	5.363	1.236	1,056,307	6.629	
		2017	5,383	29	843,121	156.63	5.401	1.227	1,034,509	6.627	
		2018	5,263	29	843,594	160.29	5.527	1.214	1,024,123	6.710	
		2019	5,279	29	859,585	162.83	5.615	1.202	1,033,221	6.749	
		2020	<u>5,307</u>	<u>29</u>	<u>871,771</u>	<u>164.27</u>	<u>5.664</u>	<u>1.191</u>	<u>1,038,279</u>	<u>6.746</u>	
		Total	26,727	29	4,272,688	159.86	5.513		5,186,439	6.691	
	Contents	2016	2,902	9	71,884	24.77	2.752	1.290	92,730	3.550	
		2017	2,951	9	74,650	25.30	2.811	1.272	94,955	3.575	
		2018	3,001	9	77,024	25.67	2.852	1.255	96,665	3.579	
		2019	3,127	9	81,060	25.92	2.880	1.233	99,947	3.551	
		2020	<u>3,286</u>	<u>9</u>	<u>89,194</u>	<u>27.14</u>	<u>3.016</u>	<u>1.191</u>	<u>106,230</u>	<u>3.592</u>	
		Total	15,267	9	393,812	25.79	2.866		490,527	3.570	
	Total	2016	8,397	22.09	926,501	110.34	4.995		1,149,037	6.195	
		2017	8,334	21.92	917,771	110.12	5.024		1,129,464	6.183	
		2018	8,264	21.74	920,618	111.40	5.124		1,120,788	6.238	
		2019	8,406	21.56	940,645	111.90	5.190		1,133,168	6.253	
		2020	<u>8,593</u>	<u>21.35</u>	<u>960,965</u>	<u>111.83</u>	<u>5.238</u>		<u>1,144,509</u>	<u>6.238</u>	
		Total	41,994	21.73	4,666,500	111.12	5.114		5,676,966	6.221	
	390	Buildings	2016	5,321	30	916,044	172.16	5.739	1.236	1,132,230	7.093
			2017	5,198	30	890,249	171.27	5.709	1.227	1,092,336	7.005
2018			5,094	30	876,314	172.03	5.734	1.214	1,063,845	6.961	
2019			5,067	30	866,070	170.92	5.697	1.202	1,041,016	6.848	
2020			<u>4,969</u>	<u>30</u>	<u>842,138</u>	<u>169.48</u>	<u>5.649</u>	<u>1.191</u>	<u>1,002,986</u>	<u>6.728</u>	
Total			25,649	30	4,390,815	171.19	5.706		5,332,413	6.930	
Contents		2016	3,055	10	80,089	26.22	2.622	1.290	103,315	3.382	
		2017	3,011	10	82,931	27.54	2.754	1.272	105,488	3.503	
		2018	3,042	10	86,025	28.28	2.828	1.255	107,961	3.549	
		2019	3,150	10	89,752	28.49	2.849	1.233	110,664	3.513	
		2020	<u>3,240</u>	<u>10</u>	<u>92,052</u>	<u>28.41</u>	<u>2.841</u>	<u>1.191</u>	<u>109,634</u>	<u>3.384</u>	
		Total	15,498	10	430,849	27.80	2.780		537,062	3.465	
Total		2016	8,376	22.71	996,133	118.93	5.237		1,235,545	6.495	
		2017	8,209	22.66	973,180	118.55	5.232		1,197,824	6.439	
		2018	8,136	22.52	962,339	118.28	5.252		1,171,806	6.396	
		2019	8,217	22.33	955,822	116.32	5.209		1,151,680	6.277	
		2020	<u>8,209</u>	<u>22.11</u>	<u>934,190</u>	<u>113.80</u>	<u>5.147</u>		<u>1,112,620</u>	<u>6.130</u>	
		Total	41,147	22.47	4,821,664	117.18	5.215		5,869,475	6.348	
Statewide		Buildings	2016	413,254	34.68	65,232,729	157.85	4.552	1.236	80,627,653	5.626
			2017	410,706	34.77	65,420,995	159.29	4.581	1.227	80,271,561	5.621
	2018		406,676	34.86	65,581,572	161.26	4.626	1.214	79,616,028	5.616	
	2019		403,845	34.98	66,001,707	163.43	4.672	1.202	79,334,052	5.616	
	2020		<u>402,021</u>	<u>35.06</u>	<u>66,139,749</u>	<u>164.52</u>	<u>4.692</u>	<u>1.191</u>	<u>78,772,441</u>	<u>5.589</u>	
	Total		2,036,502	34.87	328,376,752	161.25	4.624		398,621,735	5.613	
	Contents	2016	215,465	10.26	4,715,562	21.89	2.133	1.290	6,083,075	2.752	
		2017	220,808	10.30	4,902,152	22.20	2.155	1.272	6,235,537	2.742	
		2018	225,412	10.35	5,107,120	22.66	2.189	1.255	6,409,436	2.747	
		2019	230,205	10.38	5,316,869	23.10	2.225	1.233	6,555,699	2.744	
		2020	<u>233,093</u>	<u>10.42</u>	<u>5,570,611</u>	<u>23.90</u>	<u>2.294</u>	<u>1.191</u>	<u>6,634,598</u>	<u>2.732</u>	
		Total	1,124,983	10.34	25,612,314	22.77	2.202		31,918,345	2.744	
	Total	2016	628,719	26.31	69,948,291	111.26	4.229		86,710,726	5.242	
		2017	631,514	26.21	70,323,147	111.36	4.249		86,507,095	5.226	
		2018	632,088	26.12	70,688,692	111.83	4.282		86,025,464	5.210	
		2019	634,050	26.05	71,318,576	112.48	4.318		85,889,749	5.200	
		2020	<u>635,114</u>	<u>26.02</u>	<u>71,710,360</u>	<u>112.91</u>	<u>4.339</u>		<u>85,407,038</u>	<u>5.168</u>	
		Total	3,161,485	26.14	353,989,066	111.97	4.283		430,540,072	5.210	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF EXPERIENCE BASE CLASS LOSS COST

FIRE

Territory	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Earned House Years	Trended Average Rating Factor	Total Adjusted Incurred Losses	Loss Trend Factor	Trended LAE Factor	Trended Adjusted Incurred Losses & LAE (3)x(4)x(5)	Experience Base Class Loss Cost (6)/[(1)x(2)]
110	2016	22,803	12.556	1,733,210	1.253	1.086	2,358,479	
	2017	22,242	12.499	644,529	1.253	1.086	877,048	
	2018	21,537	12.191	1,654,929	1.253	1.086	2,251,958	
	2019	20,914	11.846	791,473	1.253	1.086	1,077,003	
	<u>2020</u>	<u>20,319</u>	<u>11.535</u>	<u>1,583,807</u>	1.253	1.086	<u>2,155,178</u>	
	Total	107,815	12.139	6,407,948			8,719,666	6.66
	120	2016	30,652	9.590	1,435,282	1.253	1.086	1,953,071
	2017	30,057	9.590	971,196	1.253	1.086	1,321,563	
	2018	28,612	9.323	903,901	1.253	1.086	1,229,991	
	2019	27,529	9.130	247,414	1.253	1.086	336,671	
	<u>2020</u>	<u>26,531</u>	<u>9.030</u>	<u>2,384,843</u>	1.253	1.086	<u>3,245,194</u>	
	Total	143,381	9.342	5,942,636			8,086,490	6.04
130	2016	7,878	5.902	535,689	1.253	1.086	728,943	
	2017	7,982	5.919	85,705	1.253	1.086	116,624	
	2018	8,110	5.848	243,259	1.253	1.086	331,017	
	2019	8,114	5.730	521,267	1.253	1.086	709,318	
	<u>2020</u>	<u>8,016</u>	<u>5.645</u>	<u>463,622</u>	1.253	1.086	<u>630,877</u>	
	Total	40,100	5.810	1,849,542			2,516,779	10.80
	140	2016	50,334	5.008	2,129,008	1.253	1.086	2,897,065
2017		50,744	4.971	1,765,267	1.253	1.086	2,402,101	
2018		50,936	4.908	2,547,579	1.253	1.086	3,466,639	
2019		50,725	4.832	2,655,253	1.253	1.086	3,613,157	
<u>2020</u>		<u>50,360</u>	<u>4.754</u>	<u>1,328,418</u>	1.253	1.086	<u>1,807,655</u>	
Total		253,099	4.897	10,425,525			14,186,617	11.45
150		2016	30,046	5.110	1,990,241	1.253	1.086	2,708,236
	2017	30,760	5.066	2,149,571	1.253	1.086	2,925,046	
	2018	31,200	4.972	2,473,804	1.253	1.086	3,366,249	
	2019	31,339	4.895	2,350,736	1.253	1.086	3,198,783	
	<u>2020</u>	<u>31,277</u>	<u>4.820</u>	<u>1,128,764</u>	1.253	1.086	<u>1,535,975</u>	
	Total	154,622	4.972	10,093,116			13,734,289	17.87
	160	2016	28,196	5.236	2,037,609	1.253	1.086	2,772,693
2017		28,421	5.217	1,563,028	1.253	1.086	2,126,903	
2018		28,379	5.181	885,855	1.253	1.086	1,205,434	
2019		27,287	5.127	1,870,590	1.253	1.086	2,545,420	
<u>2020</u>		<u>26,658</u>	<u>5.014</u>	<u>1,898,810</u>	1.253	1.086	<u>2,583,821</u>	
Total		138,941	5.158	8,255,892			11,234,271	15.68

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF EXPERIENCE BASE CLASS LOSS COST

FIRE

Territory	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Earned House Years	Trended Average Rating Factor	Total Adjusted Incurred Losses	Loss Trend Factor	Trended LAE Factor	Trended Adjusted Incurred Losses & LAE (3)x(4)x(5)	Experience Base Class Loss Cost (6)/[(1)x(2)]
170	2016	3,390	4.442	343,779	1.253	1.086	467,800	
	2017	3,519	4.421	145,902	1.253	1.086	198,537	
	2018	3,682	4.450	475,915	1.253	1.086	647,605	
	2019	3,783	4.462	242,206	1.253	1.086	329,584	
	<u>2020</u>	<u>3,987</u>	<u>4.442</u>	<u>197,999</u>	1.253	1.086	<u>269,429</u>	
	Total	18,361	4.443	1,405,801			1,912,955	23.45
180	2016	28,617	4.219	1,913,556	1.253	1.086	2,603,887	
	2017	29,441	4.237	1,921,210	1.253	1.086	2,614,302	
	2018	30,108	4.241	1,705,870	1.253	1.086	2,321,276	
	2019	30,628	4.231	2,371,851	1.253	1.086	3,227,515	
	<u>2020</u>	<u>31,139</u>	<u>4.169</u>	<u>1,121,353</u>	1.253	1.086	<u>1,525,890</u>	
	Total	149,933	4.218	9,033,840			12,292,870	19.44
190	2016	11,779	3.720	1,135,723	1.253	1.086	1,545,444	
	2017	12,121	3.748	871,773	1.253	1.086	1,186,272	
	2018	12,622	3.734	1,228,527	1.253	1.086	1,671,728	
	2019	12,903	3.650	901,290	1.253	1.086	1,226,438	
	<u>2020</u>	<u>13,215</u>	<u>3.541</u>	<u>1,102,648</u>	1.253	1.086	<u>1,500,437</u>	
	Total	62,640	3.677	5,239,961			7,130,319	30.96
200	2016	7,507	3.847	429,619	1.253	1.086	584,607	
	2017	7,578	3.911	984,118	1.253	1.086	1,339,146	
	2018	7,715	3.947	493,544	1.253	1.086	671,594	
	2019	7,764	3.876	1,246,144	1.253	1.086	1,695,700	
	<u>2020</u>	<u>7,821</u>	<u>3.836</u>	<u>392,588</u>	1.253	1.086	<u>534,217</u>	
	Total	38,385	3.884	3,546,013			4,825,264	32.37
210	2016	8,930	3.699	554,906	1.253	1.086	755,093	
	2017	9,159	3.694	987,371	1.253	1.086	1,343,573	
	2018	9,606	3.672	829,728	1.253	1.086	1,129,059	
	2019	9,829	3.682	1,235,553	1.253	1.086	1,681,289	
	<u>2020</u>	<u>10,181</u>	<u>3.687</u>	<u>777,224</u>	1.253	1.086	<u>1,057,614</u>	
	Total	47,705	3.686	4,384,782			5,966,628	33.93
220	2016	31,963	5.616	3,314,565	1.253	1.086	4,510,321	
	2017	32,707	5.768	2,462,082	1.253	1.086	3,350,298	
	2018	33,126	5.899	2,910,988	1.253	1.086	3,961,150	
	2019	33,316	5.927	3,209,490	1.253	1.086	4,367,339	
	<u>2020</u>	<u>32,629</u>	<u>5.910</u>	<u>2,714,949</u>	1.253	1.086	<u>3,694,389</u>	
	Total	163,741	5.823	14,612,074			19,883,497	20.85

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF EXPERIENCE BASE CLASS LOSS COST

FIRE

Territory	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Earned House Years	Trended Average Rating Factor	Total Adjusted Incurred Losses	Loss Trend Factor	Trended LAE Factor	Trended Adjusted Incurred Losses & LAE (3)x(4)x(5)	Experience Base Class Loss Cost (6)/[(1)x(2)]
230	2016	19,832	3.016	2,159,201	1.253	1.086	2,938,150	
	2017	20,010	3.012	1,840,096	1.253	1.086	2,503,925	
	2018	19,975	3.045	1,580,938	1.253	1.086	2,151,274	
	2019	19,657	3.120	1,936,929	1.253	1.086	2,635,692	
	<u>2020</u>	<u>19,736</u>	<u>3.083</u>	<u>958,170</u>	1.253	1.086	<u>1,303,837</u>	
	Total	99,210	3.054	8,475,334			11,532,878	38.06
	240	2016	26,682	4.061	2,146,469	1.253	1.086	2,920,825
2017		27,362	4.053	2,055,337	1.253	1.086	2,796,816	
2018		27,958	4.025	2,970,136	1.253	1.086	4,041,636	
2019		28,581	3.980	1,804,491	1.253	1.086	2,455,476	
<u>2020</u>		<u>29,146</u>	<u>3.957</u>	<u>2,103,002</u>	1.253	1.086	<u>2,861,677</u>	
Total		139,729	4.015	11,079,435			15,076,430	26.87
250		2016	16,447	5.440	1,486,220	1.253	1.086	2,022,386
	2017	16,876	5.566	1,186,748	1.253	1.086	1,614,877	
	2018	16,992	5.697	1,659,044	1.253	1.086	2,257,557	
	2019	17,209	5.772	1,257,452	1.253	1.086	1,711,088	
	<u>2020</u>	<u>17,477</u>	<u>5.751</u>	<u>906,308</u>	1.253	1.086	<u>1,233,266</u>	
	Total	85,001	5.646	6,495,772			8,839,174	18.42
	260	2016	11,683	4.226	1,082,847	1.253	1.086	1,473,493
2017		12,229	4.271	859,915	1.253	1.086	1,170,136	
2018		12,541	4.253	1,557,410	1.253	1.086	2,119,258	
2019		14,291	4.670	1,064,848	1.253	1.086	1,449,000	
<u>2020</u>		<u>14,306</u>	<u>4.622</u>	<u>758,035</u>	1.253	1.086	<u>1,031,502</u>	
Total		65,050	4.426	5,323,055			7,243,389	25.16
270		2016	34,019	6.926	2,386,566	1.253	1.086	3,247,539
	2017	34,422	6.988	1,712,963	1.253	1.086	2,330,928	
	2018	35,586	7.081	2,139,383	1.253	1.086	2,911,183	
	2019	36,570	7.165	1,547,016	1.253	1.086	2,105,114	
	<u>2020</u>	<u>36,074</u>	<u>7.295</u>	<u>3,072,533</u>	1.253	1.086	<u>4,180,974</u>	
	Total	176,671	7.090	10,858,461			14,775,738	11.80
	280	2016	7,186	6.339	351,042	1.253	1.086	477,683
2017		7,327	6.354	170,575	1.253	1.086	232,111	
2018		7,506	6.446	94,227	1.253	1.086	128,220	
2019		7,666	6.396	261,181	1.253	1.086	355,404	
<u>2020</u>		<u>7,832</u>	<u>6.274</u>	<u>484,175</u>	1.253	1.086	<u>658,845</u>	
Total		37,517	6.363	1,361,200			1,852,263	7.76

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF EXPERIENCE BASE CLASS LOSS COST

FIRE

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Earned	Trended	Total	Loss	Trended	Trended	Experience
<u>Territory</u>	<u>Year</u>	House	Average	Adjusted	Trend	LAE	Adjusted	Base Class
		Years	Rating	Incurred	Factor	Factor	Incurred	Loss Cost
			Factor	Losses			Losses & LAE	<u>(6)/[(1)x(2)]</u>
							<u>(3)x(4)x(5)</u>	
290	2016	9,272	5.900	532,519	1.253	1.086	724,629	
	2017	9,273	5.991	440,506	1.253	1.086	599,422	
	2018	9,288	6.101	626,896	1.253	1.086	853,054	
	2019	8,871	5.923	249,894	1.253	1.086	340,045	
	<u>2020</u>	<u>8,412</u>	<u>5.749</u>	<u>903,589</u>	1.253	1.086	<u>1,229,566</u>	
	Total	45,116	5.937	2,753,404			3,746,716	13.99
300	2016	10,650	3.583	723,438	1.253	1.086	984,424	
	2017	10,569	3.584	785,020	1.253	1.086	1,068,222	
	2018	10,569	3.593	1,108,218	1.253	1.086	1,508,017	
	2019	11,075	3.793	807,741	1.253	1.086	1,099,140	
	<u>2020</u>	<u>11,953</u>	<u>3.979</u>	<u>928,375</u>	1.253	1.086	<u>1,263,294</u>	
	Total	54,816	3.714	4,352,792			5,923,097	29.09
310	2016	57,419	5.122	4,011,458	1.253	1.086	5,458,624	
	2017	57,188	5.093	2,946,833	1.253	1.086	4,009,927	
	2018	56,740	5.071	3,187,736	1.253	1.086	4,337,737	
	2019	56,274	5.089	4,622,526	1.253	1.086	6,290,139	
	<u>2020</u>	<u>57,580</u>	<u>5.194</u>	<u>3,616,414</u>	1.253	1.086	<u>4,921,064</u>	
	Total	285,201	5.113	18,384,967			25,017,491	17.16
320	2016	27,236	5.190	2,527,783	1.253	1.086	3,439,701	
	2017	27,191	5.109	2,845,243	1.253	1.086	3,871,687	
	2018	26,916	5.022	1,557,645	1.253	1.086	2,119,578	
	2019	26,732	4.963	2,324,622	1.253	1.086	3,163,248	
	<u>2020</u>	<u>26,313</u>	<u>4.898</u>	<u>1,964,979</u>	1.253	1.086	<u>2,673,861</u>	
	Total	134,388	5.038	11,220,272			15,268,075	22.55
330	2016	2,508	4.219	285,901	1.253	1.086	389,042	
	2017	2,478	4.190	258,252	1.253	1.086	351,418	
	2018	2,456	4.135	107,341	1.253	1.086	146,065	
	2019	2,518	4.185	58,231	1.253	1.086	79,238	
	<u>2020</u>	<u>2,580</u>	<u>4.002</u>	<u>66,145</u>	1.253	1.086	<u>90,007</u>	
	Total	12,540	4.146	775,870			1,055,770	20.31
340	2016	50,463	6.404	3,441,866	1.253	1.086	4,683,547	
	2017	49,862	6.311	2,935,207	1.253	1.086	3,994,106	
	2018	49,422	6.354	4,119,980	1.253	1.086	5,606,296	
	2019	48,926	6.385	4,268,018	1.253	1.086	5,807,740	
	<u>2020</u>	<u>49,080</u>	<u>6.402</u>	<u>3,527,969</u>	1.253	1.086	<u>4,800,712</u>	
	Total	247,753	6.371	18,293,040			24,892,401	15.77

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF EXPERIENCE BASE CLASS LOSS COST

FIRE

Territory	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Earned House Years	Trended Average Rating Factor	Total Adjusted Incurred Losses	Loss Trend Factor	Trended LAE Factor	Trended Adjusted Incurred Losses & LAE (3)x(4)x(5)	Experience Base Class Loss Cost (6)/[(1)x(2)]
350	2016	24,868	4.795	2,480,895	1.253	1.086	3,375,898	
	2017	24,656	4.750	1,844,928	1.253	1.086	2,510,501	
	2018	24,350	4.736	1,853,563	1.253	1.086	2,522,251	
	2019	24,380	4.743	2,436,226	1.253	1.086	3,315,114	
	<u>2020</u>	<u>24,585</u>	<u>4.777</u>	<u>2,025,752</u>	1.253	1.086	<u>2,756,558</u>	
	Total	122,839	4.760	10,641,364			14,480,322	24.76
360	2016	48,394	5.455	3,585,123	1.253	1.086	4,878,485	
	2017	47,685	5.409	2,190,925	1.253	1.086	2,981,319	
	2018	46,736	5.406	1,824,803	1.253	1.086	2,483,115	
	2019	47,391	5.448	3,553,586	1.253	1.086	4,835,571	
	<u>2020</u>	<u>47,830</u>	<u>5.465</u>	<u>2,100,516</u>	1.253	1.086	<u>2,858,294</u>	
	Total	238,036	5.436	13,254,953			18,036,784	13.94
370	2016	3,192	5.511	57,505	1.253	1.086	78,250	
	2017	3,112	5.451	43,114	1.253	1.086	58,668	
	2018	3,020	5.394	419,755	1.253	1.086	571,185	
	2019	3,155	5.404	196,770	1.253	1.086	267,756	
	<u>2020</u>	<u>3,275</u>	<u>5.420</u>	<u>80,352</u>	1.253	1.086	<u>109,340</u>	
	Total	15,754	5.437	797,496			1,085,199	12.67
380	2016	8,397	6.195	687,922	1.253	1.086	936,095	
	2017	8,334	6.183	762,625	1.253	1.086	1,037,748	
	2018	8,264	6.238	521,147	1.253	1.086	709,155	
	2019	8,406	6.253	769,977	1.253	1.086	1,047,752	
	<u>2020</u>	<u>8,593</u>	<u>6.238</u>	<u>617,207</u>	1.253	1.086	<u>839,869</u>	
	Total	41,994	6.221	3,358,878			4,570,619	17.50
390	2016	8,376	6.495	608,437	1.253	1.086	827,936	
	2017	8,209	6.439	453,529	1.253	1.086	617,143	
	2018	8,136	6.396	989,204	1.253	1.086	1,346,067	
	2019	8,217	6.277	934,986	1.253	1.086	1,272,290	
	<u>2020</u>	<u>8,209</u>	<u>6.130</u>	<u>44,986</u>	1.253	1.086	<u>61,215</u>	
	Total	41,147	6.348	3,031,142			4,124,651	15.79
Statewide	2016	628,719	5.242	46,108,379	1.253	1.086	62,742,346	
	2017	631,514	5.226	37,883,568	1.253	1.086	51,550,368	
	2018	632,088	5.210	42,671,325	1.253	1.086	58,065,347	
	2019	634,050	5.200	45,737,761	1.253	1.086	62,238,024	
	<u>2020</u>	<u>635,114</u>	<u>5.168</u>	<u>39,253,532</u>	1.253	1.086	<u>53,414,558</u>	
	Total	3,161,485	5.210	211,654,565			288,010,643	17.49

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF EXCESS FACTOR (EXCLUDING HURRICANE LOSSES)
EXTENDED COVERAGE

<u>Year</u>	(1) Reported Earned <u>Premium</u>	(2) Developed Incurred <u>Losses</u>	(3) Loss Ratio <u>(2)/(1)</u>	(4) Normal Loss Ratio <u>Loss Ratio</u>	(5) Excess Loss Ratio <u>(3)-(4)</u>	(6) Total Excess Losses <u>(1)x(5)</u>	(7) Excess Ratio <u>(6)/(2)</u>
1991	28,100,632	4,332,959	0.154	0.154	0.000	0	0.000
1992	29,900,438	4,742,564	0.159	0.159	0.000	0	0.000
1993	31,889,553	16,886,073	0.530	0.500	0.030	956,687	0.057
1994	34,062,149	8,139,204	0.239	0.239	0.000	0	0.000
1995	36,469,795	7,946,434	0.218	0.218	0.000	0	0.000
1996	40,105,731	10,177,932	0.254	0.254	0.000	0	0.000
1997	45,956,155	8,042,733	0.175	0.175	0.000	0	0.000
1998	50,483,351	19,677,761	0.390	0.390	0.000	0	0.000
1999	57,917,971	26,401,571	0.456	0.456	0.000	0	0.000
2000	64,276,450	14,556,461	0.226	0.226	0.000	0	0.000
2001	58,472,402	9,227,560	0.158	0.158	0.000	0	0.000
2002	62,801,958	15,725,972	0.250	0.250	0.000	0	0.000
2003	70,166,881	19,351,691	0.276	0.276	0.000	0	0.000
2004	77,384,514	15,018,657	0.194	0.194	0.000	0	0.000
2005	86,660,735	15,298,940	0.177	0.177	0.000	0	0.000
2006	93,459,391	16,657,822	0.178	0.178	0.000	0	0.000
2007	107,421,691	18,390,566	0.171	0.171	0.000	0	0.000
2008	88,217,778	13,999,208	0.159	0.159	0.000	0	0.000
2009	111,244,031	29,274,749	0.263	0.263	0.000	0	0.000
2010	112,338,979	36,014,031	0.321	0.321	0.000	0	0.000
2011	111,845,007	106,994,195	0.957	0.500	0.457	51,113,168	0.478
2012	114,730,408	43,404,563	0.378	0.378	0.000	0	0.000
2013	130,312,911	36,515,999	0.280	0.280	0.000	0	0.000
2014	129,484,769	41,392,117	0.320	0.320	0.000	0	0.000
2015	144,645,016	41,215,981	0.285	0.285	0.000	0	0.000
2016	151,098,382	43,539,523	0.288	0.288	0.000	0	0.000
2017	150,972,162	50,641,078	0.335	0.335	0.000	0	0.000
2018	150,501,099	59,186,713	0.393	0.393	0.000	0	0.000
2019	165,509,052	55,792,475	0.337	0.337	0.000	0	0.000
2020	181,396,312	76,150,254	0.420	0.420	0.000	0	0.000
Total	2,717,825,703	864,695,786	8.941	8.454	0.487	52,069,855	
Average			0.298	0.282	0.016		
Average Excess Loss Ratio = Avg of column (5)					0.016		
Average Normal Loss Ratio = Avg of column (4)					0.282		
Excess Factor = 1.0 + (avg (5)/avg (4)) =							
= 1.0 + (0.016 / 0.282) =					1.057		

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DEVELOPMENT OF EXCESS LOSSES ON A \$500 DEDUCTIBLE LEVEL
EXTENDED COVERAGE

<u>Accident</u> <u>Year</u>	<u>Non-Hurricane</u> <u>Adjusted</u> <u>Incurred Losses</u>	<u>Excess</u> <u>Ratio</u>	<u>Adjusted Incurred</u> <u>Excess Losses</u>
2016	46,847,347	0.000	0
2017	54,944,767	0.000	0
2018	64,413,371	0.000	0
2019	60,685,669	0.000	0
2020	82,943,870	0.000	0

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TERRITORY EXCESS LOSSES
EXTENDED COVERAGE

Territory Group	Territory	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Reported Earned Premium	Non-Hurricane Developed Incurred Losses	Loss Ratio (2)/(1)	Normal Loss Ratio	Excess Loss Ratio (3)-(4)	Total Excess Losses (1)x(5)	Excess Ratio (6)/(2)
Beach	110	2016	21,559,031	1,619,139	0.075	0.075	0.000	0	0.000
		2017	21,199,787	1,928,844	0.091	0.091	0.000	0	0.000
		2018	20,305,274	2,461,606	0.121	0.121	0.000	0	0.000
		2019	20,413,832	1,745,632	0.086	0.086	0.000	0	0.000
		<u>2020</u>	<u>20,723,636</u>	<u>2,226,970</u>	0.107	0.107	0.000	<u>0</u>	0.000
	Total	104,201,560	9,982,191				0		
	120	2016	25,454,950	976,142	0.038	0.038	0.000	0	0.000
		2017	25,263,683	1,619,537	0.064	0.064	0.000	0	0.000
		2018	23,835,592	3,074,763	0.129	0.129	0.000	0	0.000
		2019	23,876,652	1,423,223	0.060	0.060	0.000	0	0.000
<u>2020</u>		<u>24,470,904</u>	<u>1,622,680</u>	0.066	0.066	0.000	<u>0</u>	0.000	
Total	122,901,781	8,716,345				0			
Coast	130	2016	2,062,412	291,148	0.141	0.141	0.000	0	0.000
		2017	2,071,407	308,723	0.149	0.149	0.000	0	0.000
		2018	2,118,967	354,259	0.167	0.167	0.000	0	0.000
		2019	2,431,660	390,503	0.161	0.161	0.000	0	0.000
		<u>2020</u>	<u>2,807,853</u>	<u>622,764</u>	0.222	0.222	0.000	<u>0</u>	0.000
	Total	11,492,299	1,967,397				0		
	140	2016	15,806,087	1,685,358	0.107	0.107	0.000	0	0.000
		2017	15,521,259	2,433,383	0.157	0.157	0.000	0	0.000
		2018	15,466,193	2,996,766	0.194	0.194	0.000	0	0.000
		2019	16,675,375	2,562,323	0.154	0.154	0.000	0	0.000
<u>2020</u>		<u>18,415,076</u>	<u>2,976,116</u>	0.162	0.162	0.000	<u>0</u>	0.000	
Total	81,883,990	12,653,946				0			
150	2016	7,389,758	878,585	0.119	0.119	0.000	0	0.000	
	2017	7,472,441	1,119,221	0.150	0.150	0.000	0	0.000	
	2018	7,586,042	2,166,975	0.286	0.286	0.000	0	0.000	
	2019	8,490,091	1,477,517	0.174	0.174	0.000	0	0.000	
	<u>2020</u>	<u>9,296,075</u>	<u>2,807,215</u>	0.302	0.302	0.000	<u>0</u>	0.000	
Total	40,234,407	8,449,513				0			
160	2016	9,237,110	1,227,065	0.133	0.133	0.000	0	0.000	
	2017	8,694,708	1,316,642	0.151	0.151	0.000	0	0.000	
	2018	7,977,965	2,012,351	0.252	0.252	0.000	0	0.000	
	2019	8,197,222	1,497,731	0.183	0.183	0.000	0	0.000	
	<u>2020</u>	<u>8,470,974</u>	<u>1,986,883</u>	0.235	0.235	0.000	<u>0</u>	0.000	
Total	42,577,979	8,040,672				0			

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TERRITORY EXCESS LOSSES
EXTENDED COVERAGE

Territory Group	Territory	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Reported Earned Premium	Non-Hurricane Developed Incurred Losses	Loss Ratio (2)/(1)	Normal Loss Ratio	Excess Loss Ratio (3)-(4)	Total Excess Losses (1)x(5)	Excess Ratio (6)/(2)
Inland	170	2016	487,624	101,951	0.209	0.209	0.000	0	0.000
		2017	504,911	111,273	0.220	0.220	0.000	0	0.000
		2018	546,739	248,075	0.454	0.454	0.000	0	0.000
		2019	652,627	2,139,000	3.278	0.500	2.778	1,812,998	0.848
		<u>2020</u>	<u>785,998</u>	<u>932,729</u>	1.187	0.500	0.687	<u>539,981</u>	0.579
		Total	2,977,899	3,533,028				2,352,979	
	180	2016	5,102,188	1,177,994	0.231	0.231	0.000	0	0.000
		2017	5,259,122	1,104,512	0.210	0.210	0.000	0	0.000
		2018	5,506,806	1,230,145	0.223	0.223	0.000	0	0.000
		2019	6,477,910	3,107,004	0.480	0.480	0.000	0	0.000
		<u>2020</u>	<u>7,520,829</u>	<u>3,611,353</u>	0.480	0.480	0.000	<u>0</u>	0.000
		Total	29,866,855	10,231,008				0	
	190	2016	1,682,484	520,734	0.310	0.310	0.000	0	0.000
		2017	1,749,161	449,415	0.257	0.257	0.000	0	0.000
		2018	1,863,839	473,548	0.254	0.254	0.000	0	0.000
		2019	2,160,903	519,749	0.241	0.241	0.000	0	0.000
		<u>2020</u>	<u>2,507,842</u>	<u>972,912</u>	0.388	0.388	0.000	<u>0</u>	0.000
		Total	9,964,229	2,936,358				0	
	200	2016	940,125	307,271	0.327	0.327	0.000	0	0.000
		2017	966,757	220,427	0.228	0.228	0.000	0	0.000
		2018	995,870	179,652	0.180	0.180	0.000	0	0.000
		2019	1,223,999	274,231	0.224	0.224	0.000	0	0.000
		<u>2020</u>	<u>1,535,323</u>	<u>518,589</u>	0.338	0.338	0.000	<u>0</u>	0.000
		Total	5,662,074	1,500,170				0	
	210	2016	1,181,618	366,463	0.310	0.310	0.000	0	0.000
		2017	1,209,292	364,934	0.302	0.302	0.000	0	0.000
		2018	1,311,110	359,552	0.274	0.274	0.000	0	0.000
		2019	1,530,734	915,953	0.598	0.500	0.098	150,012	0.164
		<u>2020</u>	<u>1,837,115</u>	<u>1,546,639</u>	0.842	0.500	0.342	<u>628,293</u>	0.406
		Total	7,069,869	3,553,541				778,305	
	220	2016	7,347,649	4,726,718	0.643	0.500	0.143	1,050,714	0.222
		2017	7,717,035	4,513,512	0.585	0.500	0.085	655,948	0.145
		2018	8,169,493	5,296,353	0.648	0.500	0.148	1,209,085	0.228
		2019	9,809,708	3,667,966	0.374	0.374	0.000	0	0.000
		<u>2020</u>	<u>10,889,236</u>	<u>5,769,110</u>	0.530	0.500	0.030	<u>326,677</u>	0.057
		Total	43,933,121	23,973,659				3,242,424	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TERRITORY EXCESS LOSSES
EXTENDED COVERAGE

Territory Group	Territory	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Reported Earned Premium	Non-Hurricane Developed Incurred Losses	Loss Ratio (2)/(1)	Normal Loss Ratio	Excess Loss Ratio (3)-(4)	Total Excess Losses (1)x(5)	Excess Ratio (6)/(2)
Inland	230	2016	2,231,054	879,948	0.394	0.394	0.000	0	0.000
		2017	2,247,310	245,066	0.109	0.109	0.000	0	0.000
		2018	2,286,950	381,373	0.167	0.167	0.000	0	0.000
		2019	2,766,961	523,053	0.189	0.189	0.000	0	0.000
		<u>2020</u>	<u>3,353,938</u>	<u>1,271,976</u>	0.379	0.379	0.000	<u>0</u>	0.000
		Total	12,886,213	3,301,416				0	
	240	2016	3,704,496	1,390,919	0.375	0.375	0.000	0	0.000
		2017	3,800,349	1,216,604	0.320	0.320	0.000	0	0.000
		2018	3,984,315	1,978,105	0.496	0.496	0.000	0	0.000
		2019	4,540,100	2,916,121	0.642	0.500	0.142	644,694	0.221
		<u>2020</u>	<u>5,198,343</u>	<u>3,535,782</u>	0.680	0.500	0.180	<u>935,702</u>	0.265
		Total	21,227,603	11,037,531				1,580,396	
	250	2016	3,604,035	1,358,400	0.377	0.377	0.000	0	0.000
		2017	3,730,557	1,308,836	0.351	0.351	0.000	0	0.000
		2018	3,882,767	1,872,247	0.482	0.482	0.000	0	0.000
		2019	4,792,238	1,672,296	0.349	0.349	0.000	0	0.000
		<u>2020</u>	<u>5,580,117</u>	<u>3,069,041</u>	0.550	0.500	0.050	<u>279,006</u>	0.091
		Total	21,589,714	9,280,820				279,006	
	260	2016	1,185,635	1,809,830	1.526	0.500	1.026	1,216,462	0.672
		2017	1,303,588	374,950	0.288	0.288	0.000	0	0.000
		2018	1,369,011	715,065	0.522	0.500	0.022	30,118	0.042
2019		2,253,841	902,273	0.400	0.400	0.000	0	0.000	
<u>2020</u>		<u>2,641,536</u>	<u>1,244,701</u>	0.471	0.471	0.000	<u>0</u>	0.000	
Total		8,753,611	5,046,819				1,246,580		
270	2016	7,407,779	4,570,142	0.617	0.500	0.117	866,710	0.190	
	2017	7,590,443	6,998,883	0.922	0.500	0.422	3,203,167	0.458	
	2018	8,033,120	4,819,029	0.600	0.500	0.100	803,312	0.167	
	2019	9,300,394	6,340,108	0.682	0.500	0.182	1,692,672	0.267	
	<u>2020</u>	<u>10,215,766</u>	<u>8,981,907</u>	0.879	0.500	0.379	<u>3,871,775</u>	0.431	
	Total	42,547,502	31,710,069				10,437,636		
280	2016	1,234,384	447,893	0.363	0.363	0.000	0	0.000	
	2017	1,265,606	671,312	0.530	0.500	0.030	37,968	0.057	
	2018	1,352,856	522,487	0.386	0.386	0.000	0	0.000	
	2019	1,550,872	726,948	0.469	0.469	0.000	0	0.000	
	<u>2020</u>	<u>1,762,351</u>	<u>1,122,840</u>	0.637	0.500	0.137	<u>241,442</u>	0.215	
	Total	7,166,069	3,491,480				279,410		

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TERRITORY EXCESS LOSSES
EXTENDED COVERAGE

Territory Group	Territory	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Reported Earned Premium	Non-Hurricane Developed Incurred Losses	Loss Ratio (2)/(1)	Normal Loss Ratio	Excess Loss Ratio (3)-(4)	Total Excess Losses (1)x(5)	Excess Ratio (6)/(2)
Inland	290	2016	2,241,936	565,741	0.252	0.252	0.000	0	0.000
		2017	2,246,802	671,049	0.299	0.299	0.000	0	0.000
		2018	2,294,114	1,108,978	0.483	0.483	0.000	0	0.000
		2019	2,444,744	573,113	0.234	0.234	0.000	0	0.000
		<u>2020</u>	<u>2,296,194</u>	<u>685,596</u>	0.299	0.299	0.000	<u>0</u>	0.000
		Total	11,523,790	3,604,477				0	
	300	2016	935,201	409,688	0.438	0.438	0.000	0	0.000
		2017	937,856	412,492	0.440	0.440	0.000	0	0.000
		2018	955,295	456,606	0.478	0.478	0.000	0	0.000
		2019	1,244,511	436,120	0.350	0.350	0.000	0	0.000
		<u>2020</u>	<u>1,622,171</u>	<u>1,871,747</u>	1.154	0.500	0.654	<u>1,060,900</u>	0.567
		Total	5,695,034	3,586,653				1,060,900	
	310	2016	7,191,739	4,315,918	0.600	0.500	0.100	719,174	0.167
		2017	7,247,074	4,765,737	0.658	0.500	0.158	1,145,038	0.240
		2018	7,386,390	8,758,388	1.186	0.500	0.686	5,067,064	0.579
		2019	8,427,978	5,358,795	0.636	0.500	0.136	1,146,205	0.214
		<u>2020</u>	<u>10,172,236</u>	<u>7,124,625</u>	0.700	0.500	0.200	<u>2,034,447</u>	0.286
		Total	40,425,417	30,323,463				10,111,928	
	320	2016	3,856,062	2,189,845	0.568	0.500	0.068	262,212	0.120
		2017	3,861,860	2,444,794	0.633	0.500	0.133	513,627	0.210
		2018	3,899,261	2,593,487	0.665	0.500	0.165	643,378	0.248
2019		4,312,858	3,231,832	0.749	0.500	0.249	1,073,902	0.332	
<u>2020</u>		<u>4,719,159</u>	<u>3,246,179</u>	0.688	0.500	0.188	<u>887,202</u>	0.273	
Total		20,649,200	13,706,137				3,380,321		
330	2016	202,835	169,414	0.835	0.500	0.335	67,950	0.401	
	2017	203,572	321,050	1.577	0.500	1.077	219,247	0.683	
	2018	206,913	155,271	0.750	0.500	0.250	51,728	0.333	
	2019	258,738	178,444	0.690	0.500	0.190	49,160	0.275	
	<u>2020</u>	<u>320,514</u>	<u>181,978</u>	0.568	0.500	0.068	<u>21,795</u>	0.120	
	Total	1,192,572	1,006,157				409,880		
340	2016	7,488,161	6,785,603	0.906	0.500	0.406	3,040,193	0.448	
	2017	7,445,709	7,415,934	0.996	0.500	0.496	3,693,072	0.498	
	2018	7,591,493	7,352,526	0.969	0.500	0.469	3,560,410	0.484	
	2019	8,845,511	7,164,644	0.810	0.500	0.310	2,742,108	0.383	
	<u>2020</u>	<u>10,300,603</u>	<u>10,439,300</u>	1.013	0.500	0.513	<u>5,284,209</u>	0.506	
	Total	41,671,477	39,158,007				18,319,992		

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TERRITORY EXCESS LOSSES
EXTENDED COVERAGE

Territory Group	Territory	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			Reported Earned Premium	Non-Hurricane Developed Incurred Losses	Loss Ratio (2)/(1)	Normal Loss Ratio	Excess Loss Ratio (3)-(4)	Total Excess Losses (1)x(5)	Excess Ratio (6)/(2)
Inland	350	2016	2,884,198	1,439,182	0.499	0.499	0.000	0	0.000
		2017	2,874,988	2,336,927	0.813	0.500	0.313	899,871	0.385
		2018	2,895,989	2,702,082	0.933	0.500	0.433	1,253,963	0.464
		2019	3,259,204	1,711,677	0.525	0.500	0.025	81,480	0.048
		<u>2020</u>	<u>3,753,175</u>	<u>2,702,688</u>	0.720	0.500	0.220	<u>825,699</u>	0.306
		Total	15,667,554	10,892,556				3,061,013	
	360	2016	6,200,633	2,432,929	0.392	0.392	0.000	0	0.000
		2017	6,122,736	4,721,548	0.771	0.500	0.271	1,659,261	0.351
		2018	6,167,383	3,507,175	0.569	0.500	0.069	425,549	0.121
		2019	6,876,677	3,226,458	0.469	0.469	0.000	0	0.000
		<u>2020</u>	<u>7,415,118</u>	<u>3,572,537</u>	0.482	0.482	0.000	<u>0</u>	0.000
		Total	32,782,547	17,460,647				2,084,810	
	370	2016	326,053	91,668	0.281	0.281	0.000	0	0.000
		2017	326,086	117,539	0.360	0.360	0.000	0	0.000
		2018	333,395	232,211	0.697	0.500	0.197	65,679	0.283
		2019	381,774	248,089	0.650	0.500	0.150	57,266	0.231
		<u>2020</u>	<u>433,171</u>	<u>157,845</u>	0.364	0.364	0.000	<u>0</u>	0.000
		Total	1,800,479	847,352				122,945	
	380	2016	1,056,259	465,127	0.440	0.440	0.000	0	0.000
		2017	1,052,924	546,409	0.519	0.500	0.019	20,006	0.037
		2018	1,083,646	644,631	0.595	0.500	0.095	102,946	0.160
2019		1,165,410	445,297	0.382	0.382	0.000	0	0.000	
<u>2020</u>		<u>1,207,683</u>	<u>825,352</u>	0.683	0.500	0.183	<u>221,006</u>	0.268	
Total		5,565,922	2,926,816				343,958		
390	2016	1,096,886	338,708	0.309	0.309	0.000	0	0.000	
	2017	1,085,139	581,525	0.536	0.500	0.036	39,065	0.067	
	2018	1,094,311	533,007	0.487	0.487	0.000	0	0.000	
	2019	1,146,528	416,375	0.363	0.363	0.000	0	0.000	
	<u>2020</u>	<u>1,143,376</u>	<u>522,200</u>	0.457	0.457	0.000	<u>0</u>	0.000	
	Total	5,566,240	2,391,815				39,065		
Statewide	2016	151,098,382	43,539,523				7,223,415		
	2017	150,972,162	50,641,078				12,086,270		
	2018	150,501,099	59,186,713				13,213,232		
	2019	165,509,052	55,792,475				9,450,497		
	<u>2020</u>	<u>181,396,312</u>	<u>76,150,254</u>				<u>17,158,134</u>		
	Total	799,477,007	285,310,043				59,131,548		

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DEVELOPMENT OF TERRITORY EXCESS LOSSES ON A \$500 DEDUCTIBLE LEVEL
EXTENDED COVERAGE

Territory Group	Territory	Year	(1)	(2)	(3)	(4)	(5)
			Total Adjusted Incurred Losses	Hurricane Adjusted Incurred Losses	Non-Hurricane Adjusted Incurred Losses (1) - (2)	Excess Ratio	Adjusted Incurred Excess Losses (3) x (4)
Beach	110	2016	7,156,890	5,234,139	1,922,751	0.000	0
		2017	2,341,390	10,829	2,330,561	0.000	0
		2018	3,694,249	748,598	2,945,651	0.000	0
		2019	11,737,257	9,671,374	2,065,883	0.000	0
		<u>2020</u>	<u>2,864,706</u>	<u>205,908</u>	<u>2,658,798</u>	0.000	<u>0</u>
	Total	27,794,492	15,870,848	11,923,644		0	
	120	2016	4,161,145	3,002,331	1,158,814	0.000	0
		2017	1,955,907	28,945	1,926,962	0.000	0
		2018	190,009,521	186,267,244	3,742,277	0.000	0
		2019	6,633,064	4,628,089	2,004,975	0.000	0
<u>2020</u>		<u>10,159,975</u>	<u>8,216,825</u>	<u>1,943,150</u>	0.000	<u>0</u>	
Total	212,919,612	202,143,434	10,776,178		0		
Coast	130	2016	1,822,559	1,513,948	308,611	0.000	0
		2017	372,972	15,303	357,669	0.000	0
		2018	4,479,984	4,088,259	391,725	0.000	0
		2019	2,186,082	1,750,020	436,062	0.000	0
		<u>2020</u>	<u>903,479</u>	<u>194,128</u>	<u>709,351</u>	0.000	<u>0</u>
	Total	9,765,076	7,561,658	2,203,418		0	
	140	2016	7,017,448	5,084,122	1,933,326	0.000	0
		2017	2,822,321	4,720	2,817,601	0.000	0
		2018	169,524,041	166,028,023	3,496,018	0.000	0
		2019	7,083,190	4,114,768	2,968,422	0.000	0
<u>2020</u>		<u>8,820,260</u>	<u>5,415,397</u>	<u>3,404,863</u>	0.000	<u>0</u>	
Total	195,267,260	180,647,030	14,620,230		0		
150	2016	3,804,419	2,854,914	949,505	0.000	0	
	2017	1,266,326	16,534	1,249,792	0.000	0	
	2018	27,048,361	24,588,375	2,459,986	0.000	0	
	2019	4,608,779	2,945,929	1,662,850	0.000	0	
	<u>2020</u>	<u>5,516,218</u>	<u>2,369,226</u>	<u>3,146,992</u>	0.000	<u>0</u>	
Total	42,244,103	32,774,978	9,469,125		0		
160	2016	5,391,354	4,052,362	1,338,992	0.000	0	
	2017	1,462,387	0	1,462,387	0.000	0	
	2018	94,763,916	92,472,832	2,291,084	0.000	0	
	2019	2,604,521	921,864	1,682,657	0.000	0	
	<u>2020</u>	<u>4,673,717</u>	<u>2,427,492</u>	<u>2,246,225</u>	0.000	<u>0</u>	
Total	108,895,895	99,874,550	9,021,345		0		

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DEVELOPMENT OF TERRITORY EXCESS LOSSES ON A \$500 DEDUCTIBLE LEVEL
EXTENDED COVERAGE

Territory Group	Territory	Year	(1)	(2)	(3)	(4)	(5)
			Total Adjusted Incurred Losses	Hurricane Adjusted Incurred Losses	Non-Hurricane Adjusted Incurred Losses (1) - (2)	Excess Ratio	Adjusted Incurred Excess Losses (3) x (4)
Inland	170	2016	347,106	238,072	109,034	0.000	0
		2017	121,291	0	121,291	0.000	0
		2018	327,040	66,880	260,160	0.000	0
		2019	2,293,350	34,715	2,258,635	0.848	1,915,322
		<u>2020</u>	<u>1,487,864</u>	<u>491,299</u>	<u>996,565</u>	<u>0.579</u>	<u>577,011</u>
	Total	4,576,651	830,966	3,745,685		2,492,333	
	180	2016	5,861,356	4,608,943	1,252,413	0.000	0
		2017	1,176,268	9,155	1,167,113	0.000	0
		2018	7,603,598	6,295,942	1,307,656	0.000	0
		2019	4,154,882	870,262	3,284,620	0.000	0
<u>2020</u>		<u>5,620,218</u>	<u>1,766,194</u>	<u>3,854,024</u>	<u>0.000</u>	<u>0</u>	
Total	24,416,322	13,550,496	10,865,826		0		
190	2016	3,540,210	2,993,182	547,028	0.000	0	
	2017	469,955	0	469,955	0.000	0	
	2018	11,316,943	10,812,062	504,881	0.000	0	
	2019	1,018,792	476,460	542,332	0.000	0	
	<u>2020</u>	<u>1,452,807</u>	<u>428,728</u>	<u>1,024,079</u>	<u>0.000</u>	<u>0</u>	
Total	17,798,707	14,710,432	3,088,275		0		
200	2016	4,414,096	4,090,303	323,793	0.000	0	
	2017	246,797	0	246,797	0.000	0	
	2018	10,994,679	10,807,252	187,427	0.000	0	
	2019	672,295	380,780	291,515	0.000	0	
	<u>2020</u>	<u>843,399</u>	<u>294,629</u>	<u>548,770</u>	<u>0.000</u>	<u>0</u>	
Total	17,171,266	15,572,964	1,598,302		0		
210	2016	1,185,851	790,251	395,600	0.000	0	
	2017	376,076	1,826	374,250	0.000	0	
	2018	1,067,542	689,028	378,514	0.000	0	
	2019	1,015,748	45,991	969,757	0.164	159,040	
	<u>2020</u>	<u>1,825,911</u>	<u>188,896</u>	<u>1,637,015</u>	<u>0.406</u>	<u>664,628</u>	
Total	5,471,128	1,715,992	3,755,136		823,668		
220	2016	15,660,804	10,743,086	4,917,718	0.222	1,091,733	
	2017	4,762,626	36,259	4,726,367	0.145	685,323	
	2018	29,413,675	23,905,120	5,508,555	0.228	1,255,951	
	2019	4,243,892	389,342	3,854,550	0.000	0	
	<u>2020</u>	<u>6,696,043</u>	<u>626,135</u>	<u>6,069,908</u>	<u>0.057</u>	<u>345,985</u>	
Total	60,777,040	35,699,942	25,077,098		3,378,992		

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DEVELOPMENT OF TERRITORY EXCESS LOSSES ON A \$500 DEDUCTIBLE LEVEL
EXTENDED COVERAGE

Territory Group	Territory	Year	(1)	(2)	(3)	(4)	(5)
			Total Adjusted Incurred Losses	Hurricane Adjusted Incurred Losses	Non-Hurricane Adjusted Incurred Losses (1) - (2)	Excess Ratio	Adjusted Incurred Excess Losses (3) x (4)
Inland	230	2016	10,078,926	9,162,963	915,963	0.000	0
		2017	254,416	892	253,524	0.000	0
		2018	16,860,769	16,451,230	409,539	0.000	0
		2019	673,469	129,487	543,982	0.000	0
		<u>2020</u>	<u>1,421,181</u>	<u>94,007</u>	<u>1,327,174</u>	0.000	<u>0</u>
	Total	29,288,761	25,838,579	3,450,182		0	
	240	2016	3,859,828	2,384,132	1,475,696	0.000	0
		2017	1,332,207	10,172	1,322,035	0.000	0
		2018	5,193,767	3,095,271	2,098,496	0.000	0
		2019	3,357,973	247,701	3,110,272	0.221	687,370
<u>2020</u>		<u>4,274,163</u>	<u>532,139</u>	<u>3,742,024</u>	0.265	<u>991,636</u>	
Total	18,017,938	6,269,415	11,748,523		1,679,006		
250	2016	4,195,455	2,766,680	1,428,775	0.000	0	
	2017	1,385,269	13,135	1,372,134	0.000	0	
	2018	12,151,797	10,169,200	1,982,597	0.000	0	
	2019	1,924,719	159,888	1,764,831	0.000	0	
	<u>2020</u>	<u>3,624,089</u>	<u>346,553</u>	<u>3,277,536</u>	0.091	<u>298,256</u>	
Total	23,281,329	13,455,456	9,825,873		298,256		
260	2016	2,134,910	181,702	1,953,208	0.672	1,312,556	
	2017	403,861	0	403,861	0.000	0	
	2018	1,675,201	889,119	786,082	0.042	33,015	
	2019	973,337	3,811	969,526	0.000	0	
	<u>2020</u>	<u>1,465,994</u>	<u>152,412</u>	<u>1,313,582</u>	0.000	<u>0</u>	
Total	6,653,303	1,227,044	5,426,259		1,345,571		
270	2016	6,604,770	1,638,623	4,966,147	0.190	943,568	
	2017	7,685,003	7,736	7,677,267	0.458	3,516,188	
	2018	7,147,227	1,950,191	5,197,036	0.167	867,905	
	2019	7,097,840	89,020	7,008,820	0.267	1,871,355	
	<u>2020</u>	<u>10,444,062</u>	<u>581,422</u>	<u>9,862,640</u>	0.431	<u>4,250,798</u>	
Total	38,978,902	4,266,992	34,711,910		11,449,814		
280	2016	567,744	81,863	485,881	0.000	0	
	2017	732,850	0	732,850	0.057	41,772	
	2018	1,105,638	532,075	573,563	0.000	0	
	2019	799,941	1,401	798,540	0.000	0	
	<u>2020</u>	<u>1,284,296</u>	<u>65,370</u>	<u>1,218,926</u>	0.215	<u>262,069</u>	
Total	4,490,469	680,709	3,809,760		303,841		

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DEVELOPMENT OF TERRITORY EXCESS LOSSES ON A \$500 DEDUCTIBLE LEVEL
EXTENDED COVERAGE

Territory Group	Territory	Year	(1) Total Adjusted Incurred Losses	(2) Hurricane Adjusted Incurred Losses	(3) Non-Hurricane Adjusted Incurred Losses (1) - (2)	(4) Excess Ratio	(5) Adjusted Incurred Excess Losses (3) x (4)	
Inland	290	2016	1,562,354	963,773	598,581	0.000	0	
		2017	729,675	9,197	720,478	0.000	0	
		2018	3,007,405	1,845,468	1,161,937	0.000	0	
		2019	637,134	0	637,134	0.000	0	
		<u>2020</u>	<u>776,280</u>	<u>49,432</u>	<u>726,848</u>	0.000	<u>0</u>	
		Total	6,712,848	2,867,870	3,844,978		0	
		300	2016	921,902	489,263	432,639	0.000	0
	2017		447,901	0	447,901	0.000	0	
	2018		3,566,391	3,076,513	489,878	0.000	0	
	2019		472,605	7,384	465,221	0.000	0	
	<u>2020</u>		<u>2,135,433</u>	<u>145,384</u>	<u>1,990,049</u>	0.567	<u>1,128,358</u>	
		Total	7,544,232	3,718,544	3,825,688		1,128,358	
		310	2016	5,108,533	537,973	4,570,560	0.167	763,284
	2017		5,033,440	0	5,033,440	0.240	1,208,026	
	2018		13,931,149	4,517,941	9,413,208	0.579	5,450,247	
	2019		5,739,154	32,343	5,706,811	0.214	1,221,258	
	<u>2020</u>		<u>9,460,412</u>	<u>1,834,608</u>	<u>7,625,804</u>	0.286	<u>2,180,980</u>	
		Total	39,272,688	6,922,865	32,349,823		10,823,795	
		320	2016	2,472,982	109,775	2,363,207	0.120	283,585
	2017		2,578,036	0	2,578,036	0.210	541,388	
2018	4,954,342		2,157,357	2,796,985	0.248	693,652		
2019	3,455,397		12,567	3,442,830	0.332	1,143,020		
<u>2020</u>	<u>4,315,943</u>		<u>682,744</u>	<u>3,633,199</u>	0.273	<u>991,863</u>		
	Total	17,776,700	2,962,443	14,814,257		3,653,508		
	330	2016	180,967	1,616	179,351	0.401	71,920	
2017		318,688	0	318,688	0.683	217,664		
2018		176,102	14,023	162,079	0.333	53,972		
2019		184,905	0	184,905	0.275	50,849		
<u>2020</u>		<u>315,891</u>	<u>118,953</u>	<u>196,938</u>	0.120	<u>23,633</u>		
	Total	1,176,553	134,592	1,041,961		418,038		
	340	2016	7,953,058	763,002	7,190,056	0.448	3,221,145	
2017		8,000,895	92,033	7,908,862	0.498	3,938,613		
2018		11,796,027	3,996,797	7,799,230	0.484	3,774,827		
2019		7,691,017	49,799	7,641,218	0.383	2,926,586		
<u>2020</u>		<u>12,661,381</u>	<u>1,246,903</u>	<u>11,414,478</u>	0.506	<u>5,775,726</u>		
	Total	48,102,378	6,148,534	41,953,844		19,636,897		

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DEVELOPMENT OF TERRITORY EXCESS LOSSES ON A \$500 DEDUCTIBLE LEVEL
EXTENDED COVERAGE

Territory Group	Territory	Year	(1) Total Adjusted Incurred Losses	(2) Hurricane Adjusted Incurred Losses	(3) Non-Hurricane Adjusted Incurred Losses (1) - (2)	(4) Excess Ratio	(5) Adjusted Incurred Excess Losses (3) x (4)	
Inland	350	2016	1,547,798	28,518	1,519,280	0.000	0	
		2017	2,482,271	7,986	2,474,285	0.385	952,600	
		2018	3,706,292	881,766	2,824,526	0.464	1,310,580	
		2019	1,826,117	28,519	1,797,598	0.048	86,285	
		<u>2020</u>	<u>3,423,661</u>	<u>577,158</u>	<u>2,846,503</u>	0.306	<u>871,030</u>	
		Total	12,986,139	1,523,947	11,462,192		3,220,495	
		360	2016	2,707,238	57,537	2,649,701	0.000	0
	2017		5,091,154	254	5,090,900	0.351	1,786,906	
	2018		4,770,705	1,057,756	3,712,949	0.121	449,267	
	2019		3,446,997	46,586	3,400,411	0.000	0	
	<u>2020</u>		<u>4,710,487</u>	<u>861,068</u>	<u>3,849,419</u>	0.000	<u>0</u>	
		Total	20,726,581	2,023,201	18,703,380		2,236,173	
		370	2016	102,057	172	101,885	0.000	0
	2017		122,926	0	122,926	0.000	0	
	2018		316,166	67,129	249,037	0.283	70,477	
	2019		267,604	0	267,604	0.231	61,817	
	<u>2020</u>		<u>172,721</u>	<u>8,106</u>	<u>164,615</u>	0.000	<u>0</u>	
		Total	981,474	75,407	906,067		132,294	
		380	2016	497,262	4,842	492,420	0.000	0
	2017		590,646	0	590,646	0.037	21,854	
2018	790,698		95,055	695,643	0.160	111,303		
2019	474,250		0	474,250	0.000	0		
<u>2020</u>	<u>1,033,072</u>		<u>83,495</u>	<u>949,577</u>	0.268	<u>254,487</u>		
	Total	3,385,928	183,392	3,202,536		387,644		
	390	2016	388,854	22,442	366,412	0.000	0	
2017		646,189	0	646,189	0.067	43,295		
2018		670,035	83,383	586,652	0.000	0		
2019		449,458	0	449,458	0.000	0		
<u>2020</u>		<u>611,306</u>	<u>46,488</u>	<u>564,818</u>	0.000	<u>0</u>		
	Total	2,765,842	152,313	2,613,529		43,295		
Statewide		2016	111,247,876	64,400,529	46,847,347		7,687,791	
		2017	55,209,743	264,976	54,944,767		12,953,629	
		2018	642,063,260	577,649,889	64,413,371		14,071,196	
		2019	87,723,769	27,038,100	60,685,669		10,122,902	
		<u>2020</u>	<u>112,994,969</u>	<u>30,051,099</u>	<u>82,943,870</u>		<u>18,616,460</u>	
		Total	1,009,239,617	699,404,593	309,835,024		63,451,978	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

TERRITORY EXCESS HISTORY
EXTENDED COVERAGE

Territory Group ^(a)	Year	(1)	(2)	(3)	(4)	(5)
		Reported Earned <u>Premium</u>	Non-Hurricane Developed <u>Incurred Losses</u>	Loss Ratio <u>(2)/(1)</u>	Normal Loss Ratio	Excess Loss Ratio <u>(3)-(4)</u>
Beach	1991	9,833,195	380,398	0.039	0.039	0.000
	1992	10,360,778	221,952	0.021	0.021	0.000
	1993	11,250,305	5,507,038	0.490	0.490	0.000
	1994	12,810,077	908,287	0.071	0.071	0.000
	1995	14,277,092	610,612	0.043	0.043	0.000
	1996	16,284,838	1,368,719	0.084	0.084	0.000
	1997	20,632,874	857,168	0.042	0.042	0.000
	1998	21,926,477	5,178,232	0.236	0.236	0.000
	1999	25,611,849	11,081,702	0.433	0.433	0.000
	2000	28,077,262	1,501,064	0.053	0.053	0.000
	2001	21,673,412	1,149,484	0.053	0.053	0.000
	2002	22,940,351	1,165,195	0.051	0.051	0.000
	2003	26,026,651	3,007,193	0.116	0.116	0.000
	2004	29,879,061	2,228,458	0.075	0.075	0.000
	2005	34,544,227	2,142,282	0.062	0.062	0.000
	2006	37,440,178	2,133,444	0.057	0.057	0.000
	2007	45,036,237	2,439,041	0.054	0.054	0.000
	2008	48,846,340	2,162,126	0.044	0.044	0.000
	2009	45,439,460	2,755,214	0.061	0.061	0.000
	2010	43,461,783	2,770,274	0.064	0.064	0.000
	2011	38,091,605	1,974,297	0.052	0.052	0.000
	2012	36,029,152	2,076,940	0.058	0.058	0.000
	2013	37,644,589	2,369,563	0.063	0.063	0.000
	2014	42,698,055	2,579,285	0.060	0.060	0.000
	2015	46,223,933	3,746,603	0.081	0.081	0.000
	2016	47,013,981	2,595,281	0.055	0.055	0.000
	2017	46,463,470	3,548,381	0.076	0.076	0.000
	2018	44,140,866	5,536,369	0.125	0.125	0.000
	2019	44,290,484	3,168,855	0.072	0.072	0.000
	<u>2020</u>	45,194,540	3,849,650	<u>0.085</u>	<u>0.085</u>	<u>0.000</u>
	Average			0.096	0.096	0.000

Selected Excess Distributional Weight = 1.0

^(a) The Beach Territory Group consists of current Territories 110 and 120, as well as past Territories 04, 05, 06, 07, and 08.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

TERRITORY EXCESS HISTORY
EXTENDED COVERAGE

Territory		(1)	(2)	(3)	(4)	(5)
<u>Group</u> ^(a)	<u>Year</u>	Reported Earned <u>Premium</u>	Non-Hurricane Developed <u>Incurred Losses</u>	Loss Ratio <u>(2)/(1)</u>	Normal Loss Ratio	Excess Loss Ratio <u>(3)-(4)</u>
Coast	1991	3,685,703	384,221	0.104	0.104	0.000
	1992	3,692,065	429,715	0.116	0.116	0.000
	1993	3,892,559	2,956,249	0.759	0.500	0.259
	1994	4,136,913	414,178	0.100	0.100	0.000
	1995	4,400,806	614,221	0.140	0.140	0.000
	1996	4,747,317	1,244,955	0.262	0.262	0.000
	1997	5,714,794	731,035	0.128	0.128	0.000
	1998	6,480,779	1,604,853	0.248	0.248	0.000
	1999	8,281,989	4,156,110	0.502	0.500	0.002
	2000	10,595,742	990,675	0.093	0.093	0.000
	2001	9,677,523	810,004	0.084	0.084	0.000
	2002	10,765,695	1,017,967	0.095	0.095	0.000
	2003	12,832,643	1,676,339	0.131	0.131	0.000
	2004	13,658,566	1,199,394	0.088	0.088	0.000
	2005	14,958,786	1,660,690	0.111	0.111	0.000
	2006	16,801,890	1,664,870	0.099	0.099	0.000
	2007	20,873,986	982,392	0.047	0.047	0.000
	2008	20,870,002	1,319,294	0.063	0.063	0.000
	2009	19,385,890	1,616,200	0.083	0.083	0.000
	2010	20,296,410	3,054,900	0.151	0.151	0.000
	2011	21,325,373	3,485,808	0.163	0.163	0.000
	2012	22,134,860	2,910,030	0.131	0.131	0.000
	2013	24,503,099	2,598,727	0.106	0.106	0.000
	2014	28,399,077	6,559,307	0.231	0.231	0.000
	2015	33,058,524	4,350,447	0.132	0.132	0.000
	2016	34,495,367	4,082,156	0.118	0.118	0.000
	2017	33,759,815	5,177,969	0.153	0.153	0.000
	2018	33,149,167	7,530,351	0.227	0.227	0.000
	2019	35,794,348	5,928,074	0.166	0.166	0.000
	<u>2020</u>	38,989,978	8,392,978	<u>0.215</u>	<u>0.215</u>	<u>0.000</u>
	Average			0.168	0.160	0.009

Selected Excess Distributional Weight = 1.5

^(a) The Coast Territory Group consists of current Territories 130-160, as well as past Territories 30, 31, 42, 43, 48, 49, and 52.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

TERRITORY EXCESS HISTORY
EXTENDED COVERAGE

Territory Group ^(a)	Year	(1)	(2)	(3)	(4)	(5)
		Reported Earned <u>Premium</u>	Non-Hurricane Developed <u>Incurred Losses</u>	Loss Ratio <u>(2)/(1)</u>	Normal Loss Ratio	Excess Loss Ratio <u>(3)-(4)</u>
Inland	1991	14,581,736	3,568,339	0.245	0.245	0.000
	1992	15,847,594	4,090,896	0.258	0.258	0.000
	1993	16,746,689	8,422,786	0.503	0.500	0.003
	1994	17,115,160	6,816,738	0.398	0.398	0.000
	1995	17,791,896	6,721,602	0.378	0.378	0.000
	1996	18,828,702	7,485,717	0.398	0.398	0.000
	1997	19,326,674	6,386,230	0.330	0.330	0.000
	1998	21,566,331	12,756,189	0.591	0.500	0.091
	1999	24,024,133	11,163,759	0.465	0.465	0.000
	2000	25,603,446	12,064,722	0.471	0.471	0.000
	2001	27,121,467	7,268,072	0.268	0.268	0.000
	2002	29,095,912	13,542,810	0.465	0.465	0.000
	2003	31,307,587	14,668,157	0.469	0.469	0.000
	2004	33,846,888	11,590,805	0.342	0.342	0.000
	2005	37,157,722	11,523,625	0.310	0.310	0.000
	2006	39,217,323	12,863,339	0.328	0.328	0.000
	2007	41,511,468	14,991,832	0.361	0.361	0.000
	2008	18,501,436	10,517,787	0.568	0.500	0.068
	2009	46,418,680	24,903,333	0.536	0.500	0.036
	2010	48,580,790	30,188,858	0.621	0.500	0.121
	2011	52,428,029	101,534,090	1.937	0.500	1.437
	2012	56,566,396	38,417,593	0.679	0.500	0.179
	2013	68,165,223	31,547,709	0.463	0.463	0.000
	2014	58,387,637	32,253,525	0.552	0.500	0.052
	2015	65,362,559	33,118,931	0.507	0.500	0.007
	2016	69,589,034	36,862,086	0.530	0.500	0.030
	2017	70,748,877	41,914,728	0.592	0.500	0.092
	2018	73,211,066	46,119,993	0.630	0.500	0.130
	2019	85,424,220	46,695,546	0.547	0.500	0.047
	<u>2020</u>	97,211,794	63,907,626	<u>0.657</u>	<u>0.500</u>	<u>0.157</u>
	Average			0.513	0.432	0.082

Selected Excess Distributional Weight = 4.0

^(a) The Inland Territory Group consists of current Territories 170-390, as well as past Territories 32-41, 44-47, 53, 57, and 60.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TERRITORY EXCESS FACTORS
EXTENDED COVERAGE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
	Total	Hurricane	Non-Hurricane	Non-Hurricane	Loss	Trended	Excess	Excess	Statewide	Excess	Territory	
	Adjusted	Adjusted	Adjusted	Non-Excess	Trend	Non-Hurricane	Distributional	Amount	Excess	Unit	Excess	
Territory	Incurred	Incurred	Incurred	Incurred Losses	Factor	Adjusted Incurred	Weight	(6)x(7)	Factor	(6)/(8)x[(9)-1.0]	Factor	
Group	Year	Losses	Losses	Excess Losses	(1) - (2) - (3)	(4)x(5)		(6)x(7)			1.0+[(7)x(10)]	
Beach	2016	11,318,035	8,236,470	0	3,081,565	1.549	4,773,344	4,773,344	1.0			
	2017	4,297,297	39,774	0	4,257,523	1.475	6,279,846	6,279,846	1.0			
	2018	193,703,770	187,015,842	0	6,687,928	1.405	9,396,539	9,396,539	1.0			
	2019	18,370,321	14,299,463	0	4,070,858	1.338	5,446,808	5,446,808	1.0			
	<u>2020</u>	<u>13,024,681</u>	<u>8,422,733</u>	<u>0</u>	<u>4,601,948</u>	<u>1.274</u>	<u>5,862,882</u>	<u>5,862,882</u>	<u>1.0</u>			
	Total	240,714,104	218,014,282	0	22,699,822		31,759,419	31,759,419	1.0			1.017
Coast	2016	18,035,780	13,505,346	0	4,530,434	1.549	7,017,642	10,526,463	1.5			
	2017	5,924,006	36,557	0	5,887,449	1.475	8,683,987	13,025,981	1.5			
	2018	295,816,302	287,177,489	0	8,638,813	1.405	12,137,532	18,206,298	1.5			
	2019	16,482,572	9,732,581	0	6,749,991	1.338	9,031,488	13,547,232	1.5			
	<u>2020</u>	<u>19,913,674</u>	<u>10,406,243</u>	<u>0</u>	<u>9,507,431</u>	<u>1.274</u>	<u>12,112,467</u>	<u>18,168,701</u>	<u>1.5</u>			
	Total	356,172,334	320,858,216	0	35,314,118		48,983,116	73,474,675	1.5			1.025
Inland	2016	81,894,061	42,658,713	7,687,791	31,547,557	1.549	48,867,166	195,468,664	4.0			
	2017	44,988,440	188,645	12,953,629	31,846,166	1.475	46,973,095	187,892,380	4.0			
	2018	152,543,188	103,456,558	14,071,196	35,015,434	1.405	49,196,685	196,786,740	4.0			
	2019	52,870,876	3,006,056	10,122,902	39,741,918	1.338	53,174,686	212,698,744	4.0			
	<u>2020</u>	<u>80,056,614</u>	<u>11,222,123</u>	<u>18,616,460</u>	<u>50,218,031</u>	<u>1.274</u>	<u>63,977,771</u>	<u>255,911,084</u>	<u>4.0</u>			
	Total	412,353,179	160,532,095	63,451,978	188,369,106		262,189,403	1,048,757,612	4.0			1.068
Statewide	1,009,239,617	699,404,593	63,451,978	246,383,046		342,931,938	1,153,991,706	1.057	0.016939			

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF TRENDED AVERAGE RATING FACTORS
EXTENDED COVERAGE**

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]	
110	Buildings	2016	11,981	191	32,865,086	2,743.10	14.362	1.245	40,917,032	17.880	
		2017	11,654	191	32,156,777	2,759.29	14.447	1.230	39,552,836	17.769	
		2018	11,289	191	31,154,276	2,759.70	14.449	1.212	37,758,983	17.512	
		2019	10,904	191	30,006,510	2,751.88	14.408	1.201	36,037,819	17.304	
		<u>2020</u>	<u>10,601</u>	<u>191</u>	<u>29,015,770</u>	<u>2,737.08</u>	<u>14.330</u>	<u>1.191</u>	<u>34,557,782</u>	<u>17.067</u>	
		Total	56,429	191	155,198,419	2,750.33	14.400		188,824,452	17.520	
	Contents	2016	10,563	26	1,472,327	139.39	5.361	1.321	1,944,944	7.082	
		2017	10,295	26	1,461,257	141.94	5.459	1.295	1,892,328	7.070	
		2018	9,953	26	1,437,153	144.39	5.554	1.270	1,825,184	7.053	
		2019	9,655	26	1,433,025	148.42	5.709	1.246	1,785,549	7.113	
		<u>2020</u>	<u>9,431</u>	<u>26</u>	<u>1,424,875</u>	<u>151.08</u>	<u>5.811</u>	<u>1.191</u>	<u>1,697,026</u>	<u>6.921</u>	
		Total	49,897	26	7,228,637	144.87	5.572		9,145,031	7.049	
	Total	2016	22,544	113.69	34,337,413	1,523.13	13.397		42,861,976	16.723	
		2017	21,949	113.61	33,618,034	1,531.64	13.482		41,445,164	16.620	
		2018	21,242	113.69	32,591,429	1,534.29	13.495		39,584,167	16.391	
		2019	20,559	113.51	31,439,535	1,529.23	13.472		37,823,368	16.208	
		<u>2020</u>	<u>20,032</u>	<u>113.32</u>	<u>30,440,645</u>	<u>1,519.60</u>	<u>13.410</u>		<u>36,254,808</u>	<u>15.971</u>	
		Total	106,326	113.57	162,427,056	1,527.63	13.451		197,969,483	16.394	
	120	Buildings	2016	16,462	214	40,127,549	2,437.59	11.391	1.245	49,958,799	14.181
			2017	16,081	214	39,560,968	2,460.11	11.496	1.230	48,659,991	14.140
2018			15,331	214	37,144,621	2,422.84	11.322	1.212	45,019,281	13.722	
2019			14,767	214	35,392,165	2,396.71	11.200	1.201	42,505,990	13.451	
<u>2020</u>			<u>14,310</u>	<u>214</u>	<u>34,265,463</u>	<u>2,394.51</u>	<u>11.189</u>	<u>1.191</u>	<u>40,810,166</u>	<u>13.326</u>	
Total			76,951	214	186,490,766	2,423.50	11.325		226,954,227	13.782	
Contents		2016	14,031	31	2,157,076	153.74	4.959	1.321	2,849,497	6.551	
		2017	13,824	31	2,158,879	156.17	5.038	1.295	2,795,748	6.524	
		2018	13,133	31	2,030,508	154.61	4.987	1.270	2,578,745	6.334	
		2019	12,568	31	1,948,545	155.04	5.001	1.246	2,427,887	6.232	
		<u>2020</u>	<u>12,153</u>	<u>31</u>	<u>1,918,468</u>	<u>157.86</u>	<u>5.092</u>	<u>1.191</u>	<u>2,284,895</u>	<u>6.065</u>	
		Total	65,709	31	10,213,476	155.43	5.014		12,936,772	6.351	
Total		2016	30,493	129.79	42,284,625	1,386.70	10.684		52,808,296	13.343	
		2017	29,905	129.41	41,719,847	1,395.08	10.780		51,455,739	13.296	
		2018	28,464	129.57	39,175,129	1,376.30	10.622		47,598,026	12.906	
		2019	27,335	129.86	37,340,710	1,366.04	10.519		44,933,877	12.658	
		<u>2020</u>	<u>26,463</u>	<u>129.96</u>	<u>36,183,931</u>	<u>1,367.34</u>	<u>10.521</u>		<u>43,095,061</u>	<u>12.531</u>	
		Total	142,660	129.71	196,704,242	1,378.83	10.630		239,890,999	12.964	
130		Buildings	2016	4,779	154	4,298,477	899.45	5.841	1.245	5,351,604	7.272
			2017	4,808	154	4,384,453	911.91	5.921	1.230	5,392,877	7.283
	2018		4,838	154	4,459,981	921.86	5.986	1.212	5,405,497	7.255	
	2019		4,790	154	4,447,591	928.52	6.029	1.201	5,341,557	7.241	
	<u>2020</u>		<u>4,695</u>	<u>154</u>	<u>4,463,770</u>	<u>950.75</u>	<u>6.174</u>	<u>1.191</u>	<u>5,316,350</u>	<u>7.353</u>	
	Total		23,910	154	22,054,272	922.39	5.990		26,807,885	7.281	
	Contents	2016	3,011	23	207,978	69.07	3.003	1.321	274,739	3.967	
		2017	3,086	23	223,106	72.30	3.143	1.295	288,922	4.071	
		2018	3,174	23	237,692	74.89	3.256	1.270	301,869	4.135	
		2019	3,206	23	248,161	77.41	3.365	1.246	309,209	4.193	
		<u>2020</u>	<u>3,212</u>	<u>23</u>	<u>261,183</u>	<u>81.31</u>	<u>3.535</u>	<u>1.191</u>	<u>311,069</u>	<u>4.211</u>	
		Total	15,689	23	1,178,120	75.09	3.265		1,485,808	4.118	
	Total	2016	7,790	103.37	4,506,455	578.49	5.596		5,626,343	6.987	
		2017	7,894	102.79	4,607,559	583.68	5.678		5,681,799	7.002	
		2018	8,012	102.10	4,697,673	586.33	5.743		5,707,366	6.977	
		2019	7,996	101.48	4,695,752	587.26	5.787		5,650,766	6.964	
		<u>2020</u>	<u>7,907</u>	<u>100.78</u>	<u>4,724,953</u>	<u>597.57</u>	<u>5.929</u>		<u>5,627,419</u>	<u>7.062</u>	
		Total	39,599	102.10	23,232,392	586.69	5.746		28,293,693	6.998	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF TRENDED AVERAGE RATING FACTORS
EXTENDED COVERAGE**

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]	
140	Buildings	2016	31,348	167	32,453,421	1,035.26	6.199	1.245	40,404,509	7.718	
		2017	31,384	167	32,897,407	1,048.22	6.277	1.230	40,463,811	7.720	
		2018	31,107	167	32,626,379	1,048.84	6.281	1.212	39,543,171	7.612	
		2019	30,353	167	31,620,477	1,041.76	6.238	1.201	37,976,193	7.492	
		<u>2020</u>	<u>29,714</u>	<u>167</u>	<u>30,926,914</u>	<u>1,040.82</u>	<u>6.232</u>	<u>1.191</u>	<u>36,833,955</u>	<u>7.423</u>	
		Total	153,906	167	160,524,598	1,043.00	6.246		195,221,639	7.595	
	Contents	2016	19,293	23	1,139,999	59.09	2.569	1.321	1,505,939	3.394	
		2017	19,826	23	1,206,498	60.85	2.646	1.295	1,562,415	3.426	
		2018	20,238	23	1,280,119	63.25	2.750	1.270	1,625,751	3.493	
		2019	20,335	23	1,342,999	66.04	2.871	1.246	1,673,377	3.578	
		<u>2020</u>	<u>20,272</u>	<u>23</u>	<u>1,400,018</u>	<u>69.06</u>	<u>3.003</u>	<u>1.191</u>	<u>1,667,421</u>	<u>3.576</u>	
		Total	99,964	23	6,369,633	63.72	2.770		8,034,903	3.495	
	Total	2016	50,641	112.14	33,593,420	663.36	5.915		41,910,448	7.380	
		2017	51,210	111.25	34,103,905	665.96	5.986		42,026,226	7.377	
		2018	51,345	110.24	33,906,498	660.37	5.990		41,168,922	7.273	
		2019	50,688	109.23	32,963,476	650.32	5.954		39,649,570	7.161	
		<u>2020</u>	<u>49,986</u>	<u>108.60</u>	<u>32,326,932</u>	<u>646.72</u>	<u>5.955</u>		<u>38,501,376</u>	<u>7.092</u>	
		Total	253,870	110.30	166,894,231	657.40	5.960		203,256,542	7.259	
	150	Buildings	2016	18,933	140	14,519,427	766.88	5.478	1.245	18,076,687	6.820
			2017	19,253	140	14,872,511	772.48	5.518	1.230	18,293,189	6.787
			2018	19,335	140	14,951,192	773.27	5.523	1.212	18,120,845	6.694
2019			19,241	140	14,837,727	771.15	5.508	1.201	17,820,110	6.615	
<u>2020</u>			<u>18,994</u>	<u>140</u>	<u>14,642,373</u>	<u>770.89</u>	<u>5.506</u>	<u>1.191</u>	<u>17,439,066</u>	<u>6.558</u>	
Total			95,756	140	73,823,230	770.95	5.507		89,749,897	6.695	
Contents		2016	10,806	11	331,843	30.71	2.792	1.321	438,365	3.688	
		2017	11,250	11	353,159	31.39	2.854	1.295	457,341	3.696	
		2018	11,625	11	375,354	32.29	2.935	1.270	476,700	3.728	
		2019	11,792	11	392,026	33.25	3.022	1.246	488,464	3.766	
		<u>2020</u>	<u>11,859</u>	<u>11</u>	<u>413,040</u>	<u>34.83</u>	<u>3.166</u>	<u>1.191</u>	<u>491,931</u>	<u>3.771</u>	
		Total	57,332	11	1,865,422	32.54	2.958		2,352,801	3.731	
Total		2016	29,739	93.13	14,851,270	499.39	5.362		18,515,052	6.685	
		2017	30,503	92.42	15,225,670	499.15	5.401		18,750,530	6.651	
		2018	30,960	91.56	15,326,546	495.04	5.407		18,597,545	6.561	
		2019	31,033	90.98	15,229,753	490.76	5.394		18,308,574	6.485	
		<u>2020</u>	<u>30,853</u>	<u>90.42</u>	<u>15,055,413</u>	<u>487.97</u>	<u>5.397</u>		<u>17,930,997</u>	<u>6.428</u>	
		Total	153,088	91.69	75,688,652	494.41	5.392		92,102,698	6.562	
160		Buildings	2016	18,333	145	16,075,471	876.86	6.047	1.245	20,013,961	7.529
			2017	18,253	145	16,174,660	886.14	6.111	1.230	19,894,832	7.517
			2018	18,016	145	16,127,183	895.16	6.174	1.212	19,546,146	7.482
	2019		16,963	145	15,248,874	898.95	6.200	1.201	18,313,898	7.446	
	<u>2020</u>		<u>16,220</u>	<u>145</u>	<u>14,566,799</u>	<u>898.08</u>	<u>6.194</u>	<u>1.191</u>	<u>17,349,058</u>	<u>7.377</u>	
	Total		87,785	145	78,192,987	890.73	6.143		95,117,895	7.473	
	Contents	2016	10,209	15	328,546	32.18	2.145	1.321	434,009	2.834	
		2017	10,545	15	344,763	32.69	2.180	1.295	446,468	2.823	
		2018	10,700	15	355,420	33.22	2.214	1.270	451,383	2.812	
		2019	10,376	15	363,049	34.99	2.333	1.246	452,359	2.906	
		<u>2020</u>	<u>10,236</u>	<u>15</u>	<u>384,503</u>	<u>37.56</u>	<u>2.504</u>	<u>1.191</u>	<u>457,943</u>	<u>2.983</u>	
		Total	52,066	15	1,776,281	34.12	2.274		2,242,162	2.871	
	Total	2016	28,542	98.50	16,404,017	574.73	5.835		20,447,970	7.273	
		2017	28,798	97.40	16,519,423	573.63	5.889		20,341,300	7.252	
		2018	28,716	96.56	16,482,603	573.99	5.944		19,997,529	7.212	
		2019	27,339	95.66	15,611,923	571.05	5.970		18,766,257	7.176	
		<u>2020</u>	<u>26,456</u>	<u>94.70</u>	<u>14,951,302</u>	<u>565.14</u>	<u>5.968</u>		<u>17,807,001</u>	<u>7.107</u>	
		Total	139,851	96.60	79,969,268	571.82	5.919		97,360,057	7.207	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF TRENDED AVERAGE RATING FACTORS
EXTENDED COVERAGE**

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]	
170	Buildings	2016	2,111	69	707,247	335.03	4.855	1.245	880,523	6.045	
		2017	2,171	69	732,172	337.25	4.888	1.230	900,572	6.012	
		2018	2,237	69	769,463	343.97	4.985	1.212	932,589	6.042	
		2019	2,294	69	801,643	349.45	5.065	1.201	962,773	6.082	
		<u>2020</u>	<u>2,381</u>	<u>69</u>	<u>855,815</u>	<u>359.44</u>	<u>5.209</u>	<u>1.191</u>	<u>1,019,276</u>	<u>6.204</u>	
		Total	11,194	69	3,866,340	345.39	5.006		4,695,733	6.080	
	Contents	2016	1,295	6	28,406	21.94	3.656	1.321	37,524	4.829	
		2017	1,353	6	29,954	22.14	3.690	1.295	38,790	4.778	
		2018	1,436	6	32,969	22.96	3.826	1.270	41,871	4.860	
		2019	1,486	6	35,502	23.89	3.982	1.246	44,235	4.961	
		<u>2020</u>	<u>1,591</u>	<u>6</u>	<u>41,334</u>	<u>25.98</u>	<u>4.330</u>	<u>1.191</u>	<u>49,229</u>	<u>5.157</u>	
		Total	7,161	6	168,165	23.48	3.914		211,649	4.926	
	Total	2016	3,406	45.05	735,653	215.99	4.794		918,047	5.983	
		2017	3,524	44.81	762,126	216.27	4.826		939,362	5.949	
		2018	3,673	44.37	802,432	218.47	4.924		974,460	5.979	
		2019	3,780	44.23	837,145	221.47	5.007		1,007,008	6.023	
		<u>2020</u>	<u>3,972</u>	<u>43.77</u>	<u>897,149</u>	<u>225.87</u>	<u>5.160</u>		<u>1,068,505</u>	<u>6.146</u>	
		Total	18,355	44.42	4,034,505	219.80	4.948		4,907,382	6.019	
	180	Buildings	2016	18,569	75	8,101,801	436.31	5.817	1.245	10,086,742	7.243
			2017	18,861	75	8,426,313	446.76	5.957	1.230	10,364,365	7.327
2018			19,085	75	8,714,756	456.63	6.088	1.212	10,562,284	7.379	
2019			19,340	75	8,941,011	462.31	6.164	1.201	10,738,154	7.403	
<u>2020</u>			<u>19,558</u>	<u>75</u>	<u>9,122,205</u>	<u>466.42</u>	<u>6.219</u>	<u>1.191</u>	<u>10,864,546</u>	<u>7.407</u>	
Total			95,413	75	43,306,086	453.88	6.052		52,616,091	7.353	
Contents		2016	10,237	7	191,419	18.70	2.671	1.321	252,864	3.529	
		2017	10,665	7	206,108	19.33	2.761	1.295	266,910	3.575	
		2018	11,001	7	220,002	20.00	2.857	1.270	279,403	3.628	
		2019	11,237	7	232,979	20.73	2.962	1.246	290,292	3.691	
		<u>2020</u>	<u>11,326</u>	<u>7</u>	<u>249,250</u>	<u>22.01</u>	<u>3.144</u>	<u>1.191</u>	<u>296,857</u>	<u>3.744</u>	
		Total	54,466	7	1,099,758	20.19	2.885		1,386,326	3.636	
Total		2016	28,806	50.83	8,293,220	287.90	5.664		10,339,606	7.062	
		2017	29,526	50.44	8,632,421	292.37	5.796		10,631,275	7.138	
		2018	30,086	50.14	8,934,758	296.97	5.923		10,841,687	7.187	
		2019	30,577	50.01	9,173,990	300.03	5.999		11,028,446	7.212	
		<u>2020</u>	<u>30,884</u>	<u>50.06</u>	<u>9,371,455</u>	<u>303.44</u>	<u>6.062</u>		<u>11,161,403</u>	<u>7.219</u>	
		Total	149,879	50.29	44,405,844	296.28	5.891		54,002,417	7.165	
190		Buildings	2016	7,665	77	2,732,912	356.54	4.630	1.245	3,402,475	5.765
			2017	7,784	77	2,837,449	364.52	4.734	1.230	3,490,062	5.823
	2018		8,000	77	2,980,972	372.62	4.839	1.212	3,612,938	5.865	
	2019		8,122	77	3,032,043	373.31	4.848	1.201	3,641,484	5.823	
	<u>2020</u>		<u>8,194</u>	<u>77</u>	<u>3,063,479</u>	<u>373.87</u>	<u>4.855</u>	<u>1.191</u>	<u>3,648,603</u>	<u>5.783</u>	
	Total		39,765	77	14,646,855	368.34	4.784		17,795,562	5.812	
	Contents	2016	4,171	9	113,839	27.29	3.033	1.321	150,381	4.006	
		2017	4,374	9	123,042	28.13	3.126	1.295	159,339	4.048	
		2018	4,616	9	132,410	28.69	3.187	1.270	168,161	4.048	
		2019	4,778	9	142,563	29.84	3.315	1.246	177,633	4.131	
		<u>2020</u>	<u>4,958</u>	<u>9</u>	<u>157,030</u>	<u>31.67</u>	<u>3.519</u>	<u>1.191</u>	<u>187,023</u>	<u>4.191</u>	
		Total	22,897	9	668,884	29.21	3.246		842,537	4.089	
	Total	2016	11,836	53.04	2,846,751	240.52	4.535		3,552,856	5.659	
		2017	12,158	52.54	2,960,491	243.50	4.635		3,649,401	5.713	
		2018	12,616	52.12	3,113,382	246.78	4.735		3,781,099	5.750	
		2019	12,900	51.81	3,174,606	246.09	4.750		3,819,117	5.714	
		<u>2020</u>	<u>13,152</u>	<u>51.37</u>	<u>3,220,509</u>	<u>244.87</u>	<u>4.767</u>		<u>3,835,626</u>	<u>5.677</u>	
		Total	62,662	52.15	15,315,739	244.42	4.687		18,638,099	5.704	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF TRENDED AVERAGE RATING FACTORS
EXTENDED COVERAGE**

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]	
200	Buildings	2016	4,382	97	1,679,829	383.35	3.952	1.245	2,091,387	4.920	
		2017	4,422	97	1,737,157	392.84	4.050	1.230	2,136,703	4.981	
		2018	4,475	97	1,800,761	402.40	4.149	1.212	2,182,522	5.028	
		2019	4,491	97	1,827,144	406.85	4.194	1.201	2,194,400	5.037	
		<u>2020</u>	<u>4,487</u>	<u>97</u>	<u>1,861,494</u>	<u>414.86</u>	<u>4.277</u>	<u>1.191</u>	<u>2,217,039</u>	<u>5.094</u>	
		Total	22,257	97	8,906,385	400.16	4.125		10,822,051	5.013	
	Contents	2016	3,115	12	118,213	37.95	3.162	1.321	156,159	4.178	
		2017	3,160	12	125,858	39.83	3.319	1.295	162,986	4.298	
		2018	3,225	12	135,276	41.95	3.496	1.270	171,801	4.439	
		2019	3,245	12	141,662	43.66	3.638	1.246	176,511	4.533	
		<u>2020</u>	<u>3,286</u>	<u>12</u>	<u>152,748</u>	<u>46.48</u>	<u>3.874</u>	<u>1.191</u>	<u>181,923</u>	<u>4.614</u>	
		Total	16,031	12	673,757	42.03	3.502		849,380	4.415	
	Total	2016	7,497	61.68	1,798,042	239.83	3.888		2,247,546	4.860	
		2017	7,582	61.57	1,863,015	245.72	3.991		2,299,689	4.926	
		2018	7,700	61.40	1,936,037	251.43	4.095		2,354,323	4.980	
		2019	7,736	61.35	1,968,806	254.50	4.148		2,370,911	4.996	
		<u>2020</u>	<u>7,773</u>	<u>61.07</u>	<u>2,014,242</u>	<u>259.13</u>	<u>4.243</u>		<u>2,398,962</u>	<u>5.054</u>	
		Total	38,288	61.41	9,580,142	250.21	4.074		11,671,431	4.964	
	210	Buildings	2016	6,135	63	1,895,672	308.99	4.905	1.245	2,360,112	6.106
			2017	6,186	63	1,940,147	313.64	4.978	1.230	2,386,381	6.123
2018			6,469	63	2,063,451	318.98	5.063	1.212	2,500,903	6.136	
2019			6,604	63	2,136,246	323.48	5.135	1.201	2,565,631	6.167	
<u>2020</u>			<u>6,748</u>	<u>63</u>	<u>2,224,944</u>	<u>329.72</u>	<u>5.234</u>	<u>1.191</u>	<u>2,649,908</u>	<u>6.233</u>	
Total			32,142	63	10,260,460	319.22	5.067		12,462,935	6.155	
Contents		2016	2,900	4	34,723	11.97	2.993	1.321	45,869	3.954	
		2017	3,030	4	38,439	12.69	3.172	1.295	49,779	4.107	
		2018	3,135	4	40,766	13.00	3.251	1.270	51,773	4.129	
		2019	3,209	4	42,291	13.18	3.295	1.246	52,695	4.105	
		<u>2020</u>	<u>3,349</u>	<u>4</u>	<u>49,385</u>	<u>14.75</u>	<u>3.687</u>	<u>1.191</u>	<u>58,818</u>	<u>4.391</u>	
		Total	15,623	4	205,604	13.16	3.290		258,934	4.143	
Total		2016	9,035	44.06	1,930,395	213.66	4.849		2,405,981	6.044	
		2017	9,216	43.60	1,978,586	214.69	4.924		2,436,160	6.063	
		2018	9,604	43.74	2,104,217	219.10	5.009		2,552,676	6.077	
		2019	9,813	43.71	2,178,537	222.01	5.079		2,618,326	6.104	
		<u>2020</u>	<u>10,097</u>	<u>43.43</u>	<u>2,274,329</u>	<u>225.25</u>	<u>5.186</u>		<u>2,708,726</u>	<u>6.177</u>	
		Total	47,765	43.70	10,466,064	219.12	5.014		12,721,869	6.095	
220		Buildings	2016	21,271	56	11,322,249	532.29	9.505	1.245	14,096,200	11.834
			2017	21,411	56	11,926,933	557.05	9.947	1.230	14,670,128	12.235
	2018		21,362	56	12,401,592	580.54	10.367	1.212	15,030,730	12.565	
	2019		21,256	56	12,512,482	588.66	10.512	1.201	15,027,491	12.625	
	<u>2020</u>		<u>20,532</u>	<u>56</u>	<u>12,165,249</u>	<u>592.50</u>	<u>10.580</u>	<u>1.191</u>	<u>14,488,812</u>	<u>12.601</u>	
	Total		105,832	56	60,328,505	570.04	10.179		73,313,361	12.370	
	Contents	2016	9,132	3	91,347	10.00	3.334	1.321	120,669	4.405	
		2017	9,165	3	95,643	10.44	3.479	1.295	123,858	4.505	
		2018	9,373	3	105,551	11.26	3.754	1.270	134,050	4.767	
		2019	10,602	3	127,577	12.03	4.011	1.246	158,961	4.998	
		<u>2020</u>	<u>11,741</u>	<u>3</u>	<u>141,017</u>	<u>12.01</u>	<u>4.004</u>	<u>1.191</u>	<u>167,951</u>	<u>4.768</u>	
		Total	50,013	3	561,135	11.22	3.740		705,489	4.702	
	Total	2016	30,403	40.08	11,413,596	375.41	9.367		14,216,869	11.667	
		2017	30,576	40.11	12,022,576	393.20	9.803		14,793,986	12.063	
		2018	30,735	39.84	12,507,143	406.93	10.214		15,164,780	12.385	
		2019	31,858	38.36	12,640,059	396.76	10.343		15,186,452	12.427	
		<u>2020</u>	<u>32,273</u>	<u>36.72</u>	<u>12,306,266</u>	<u>381.32</u>	<u>10.384</u>		<u>14,656,763</u>	<u>12.368</u>	
		Total	155,845	38.99	60,889,640	390.71	10.021		74,018,850	12.181	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF TRENDED AVERAGE RATING FACTORS
EXTENDED COVERAGE**

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]	
230	Buildings	2016	12,219	89	3,686,749	301.72	3.390	1.245	4,590,003	4.221	
		2017	12,190	89	3,726,167	305.67	3.435	1.230	4,583,185	4.224	
		2018	11,986	89	3,769,069	314.46	3.533	1.212	4,568,112	4.282	
		2019	11,646	89	3,837,037	329.47	3.702	1.201	4,608,281	4.446	
		<u>2020</u>	<u>11,607</u>	<u>89</u>	<u>3,886,917</u>	<u>334.88</u>	<u>3.763</u>	<u>1.191</u>	<u>4,629,318</u>	<u>4.481</u>	
		Total	59,648	89	18,905,939	316.96	3.561		22,978,899	4.329	
	Contents	2016	7,665	10	202,897	26.47	2.647	1.321	268,027	3.497	
		2017	7,805	10	209,340	26.82	2.682	1.295	271,095	3.473	
		2018	7,882	10	217,564	27.60	2.760	1.270	276,306	3.506	
		2019	7,916	10	225,870	28.53	2.853	1.246	281,434	3.555	
		<u>2020</u>	<u>7,960</u>	<u>10</u>	<u>237,031</u>	<u>29.78</u>	<u>2.978</u>	<u>1.191</u>	<u>282,304</u>	<u>3.547</u>	
		Total	39,228	10	1,092,702	27.86	2.786		1,379,166	3.516	
	Total	2016	19,884	58.55	3,889,646	195.62	3.341		4,858,030	4.173	
		2017	19,995	58.16	3,935,507	196.82	3.384		4,854,280	4.174	
		2018	19,868	57.66	3,986,633	200.66	3.480		4,844,418	4.229	
		2019	19,562	57.03	4,062,907	207.69	3.642		4,889,715	4.383	
		<u>2020</u>	<u>19,567</u>	<u>56.86</u>	<u>4,123,948</u>	<u>210.76</u>	<u>3.707</u>		<u>4,911,622</u>	<u>4.415</u>	
		Total	98,876	57.66	19,998,641	202.26	3.508		24,358,065	4.272	
	240	Buildings	2016	18,406	57	5,500,926	298.87	5.243	1.245	6,848,653	6.528
			2017	18,381	57	5,594,047	304.34	5.339	1.230	6,880,678	6.567
			2018	18,341	57	5,683,982	309.91	5.437	1.212	6,888,986	6.590
2019			18,516	57	5,733,652	309.66	5.433	1.201	6,886,116	6.525	
<u>2020</u>			<u>18,608</u>	<u>57</u>	<u>5,825,984</u>	<u>313.09</u>	<u>5.493</u>	<u>1.191</u>	<u>6,938,747</u>	<u>6.542</u>	
Total			92,252	57	28,338,591	307.19	5.389		34,443,180	6.550	
Contents		2016	8,700	3	80,587	9.26	3.088	1.321	106,455	4.079	
		2017	9,162	3	86,378	9.43	3.143	1.295	111,860	4.070	
		2018	9,534	3	92,732	9.73	3.242	1.270	117,770	4.118	
		2019	9,816	3	98,369	10.02	3.340	1.246	122,568	4.162	
		<u>2020</u>	<u>10,076</u>	<u>3</u>	<u>110,153</u>	<u>10.93</u>	<u>3.644</u>	<u>1.191</u>	<u>131,192</u>	<u>4.340</u>	
		Total	47,288	3	468,219	9.90	3.300		589,845	4.158	
Total		2016	27,106	39.67	5,581,513	205.91	5.191		6,955,108	6.468	
		2017	27,543	39.04	5,680,425	206.24	5.283		6,992,538	6.503	
		2018	27,875	38.53	5,776,714	207.24	5.379		7,006,756	6.524	
		2019	28,332	38.29	5,832,021	205.85	5.376		7,008,684	6.461	
		<u>2020</u>	<u>28,684</u>	<u>38.03</u>	<u>5,936,137</u>	<u>206.95</u>	<u>5.442</u>		<u>7,069,939</u>	<u>6.481</u>	
		Total	139,540	38.70	28,806,810	206.44	5.334		35,033,025	6.487	
250		Buildings	2016	11,102	59	5,231,487	471.22	7.987	1.245	6,513,201	9.944
			2017	11,168	59	5,525,722	494.78	8.386	1.230	6,796,638	10.315
			2018	10,991	59	5,710,316	519.54	8.806	1.212	6,920,903	10.673
	2019		10,975	59	5,895,504	537.18	9.105	1.201	7,080,500	10.935	
	<u>2020</u>		<u>10,995</u>	<u>59</u>	<u>6,013,592</u>	<u>546.94</u>	<u>9.270</u>	<u>1.191</u>	<u>7,162,188</u>	<u>11.041</u>	
	Total		55,231	59	28,376,621	513.78	8.708		34,473,430	10.579	
	Contents	2016	5,602	3	37,763	6.74	2.247	1.321	49,885	2.968	
		2017	5,825	3	40,946	7.03	2.343	1.295	53,025	3.034	
		2018	5,970	3	43,710	7.32	2.441	1.270	55,512	3.099	
		2019	6,149	3	48,271	7.85	2.617	1.246	60,146	3.260	
		<u>2020</u>	<u>6,269</u>	<u>3</u>	<u>53,305</u>	<u>8.50</u>	<u>2.834</u>	<u>1.191</u>	<u>63,486</u>	<u>3.376</u>	
		Total	29,815	3	223,995	7.51	2.504		282,054	3.153	
	Total	2016	16,704	40.22	5,269,250	315.45	7.843		6,563,086	9.769	
		2017	16,993	39.80	5,566,668	327.59	8.231		6,849,663	10.128	
		2018	16,961	39.29	5,754,026	339.25	8.635		6,976,415	10.469	
		2019	17,124	38.89	5,943,775	347.10	8.925		7,140,646	10.722	
		<u>2020</u>	<u>17,264</u>	<u>38.66</u>	<u>6,066,897</u>	<u>351.42</u>	<u>9.090</u>		<u>7,225,674</u>	<u>10.826</u>	
		Total	85,046	39.37	28,600,616	336.30	8.542		34,755,484	10.380	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF TRENDED AVERAGE RATING FACTORS
EXTENDED COVERAGE**

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]	
260	Buildings	2016	8,153	55	2,160,712	265.02	4.819	1.245	2,690,086	5.999	
		2017	8,457	55	2,324,674	274.88	4.998	1.230	2,859,349	6.147	
		2018	8,521	55	2,376,122	278.85	5.070	1.212	2,879,860	6.145	
		2019	10,089	55	3,459,499	342.90	6.235	1.201	4,154,858	7.488	
		<u>2020</u>	<u>9,960</u>	<u>55</u>	<u>3,461,758</u>	<u>347.57</u>	<u>6.319</u>	<u>1.191</u>	<u>4,122,954</u>	<u>7.526</u>	
		Total	45,180	55	13,782,765	305.06	5.547		16,707,107	6.723	
	Contents	2016	3,491	2	21,040	6.03	3.013	1.321	27,794	3.981	
		2017	3,708	2	23,415	6.31	3.157	1.295	30,322	4.089	
		2018	3,846	2	25,030	6.51	3.254	1.270	31,788	4.133	
		2019	3,959	2	27,290	6.89	3.447	1.246	34,003	4.294	
		<u>2020</u>	<u>3,988</u>	<u>2</u>	<u>29,858</u>	<u>7.49</u>	<u>3.743</u>	<u>1.191</u>	<u>35,561</u>	<u>4.459</u>	
		Total	18,992	2	126,633	6.67	3.334		159,468	4.198	
	Total	2016	11,644	39.11	2,181,752	187.37	4.791		2,717,880	5.968	
		2017	12,165	38.85	2,348,089	193.02	4.968		2,889,671	6.114	
		2018	12,367	38.52	2,401,152	194.16	5.040		2,911,648	6.112	
		2019	14,048	40.06	3,486,789	248.21	6.196		4,188,861	7.443	
		<u>2020</u>	<u>13,948</u>	<u>39.85</u>	<u>3,491,616</u>	<u>250.33</u>	<u>6.282</u>		<u>4,158,515</u>	<u>7.482</u>	
		Total	64,172	39.31	13,909,398	216.75	5.514		16,866,575	6.686	
	270	Buildings	2016	22,626	42	11,099,762	490.58	11.680	1.245	13,819,204	14.542
			2017	22,563	42	11,462,193	508.01	12.095	1.230	14,098,497	14.877
2018			22,662	42	12,004,731	529.73	12.613	1.212	14,549,734	15.286	
2019			22,348	42	12,249,742	548.14	13.051	1.201	14,711,940	15.674	
<u>2020</u>			<u>21,676</u>	<u>42</u>	<u>12,258,776</u>	<u>565.55</u>	<u>13.465</u>	<u>1.191</u>	<u>14,600,202</u>	<u>16.037</u>	
Total			111,875	42	59,075,204	528.05	12.573		71,779,577	15.276	
Contents		2016	10,909	2	69,817	6.40	3.200	1.321	92,228	4.227	
		2017	11,126	2	75,018	6.74	3.371	1.295	97,148	4.366	
		2018	12,025	2	82,761	6.88	3.441	1.270	105,106	4.370	
		2019	13,202	2	92,579	7.01	3.506	1.246	115,353	4.369	
		<u>2020</u>	<u>13,475</u>	<u>2</u>	<u>96,959</u>	<u>7.20</u>	<u>3.598</u>	<u>1.191</u>	<u>115,478</u>	<u>4.285</u>	
		Total	60,737	2	417,134	6.87	3.434		525,313	4.324	
Total		2016	33,535	28.99	11,169,579	333.07	11.489		13,911,432	14.310	
		2017	33,689	28.79	11,537,211	342.46	11.895		14,195,645	14.636	
		2018	34,687	28.13	12,087,492	348.47	12.388		14,654,840	15.019	
		2019	35,550	27.15	12,342,321	347.18	12.788		14,827,293	15.362	
		<u>2020</u>	<u>35,151</u>	<u>26.67</u>	<u>12,355,735</u>	<u>351.50</u>	<u>13.180</u>		<u>14,715,680</u>	<u>15.697</u>	
		Total	172,612	27.93	59,492,338	344.66	12.340		72,304,890	14.998	
280		Buildings	2016	4,656	41	1,842,067	395.63	9.650	1.245	2,293,373	12.014
			2017	4,660	41	1,879,769	403.38	9.839	1.230	2,312,116	12.102
	2018		4,675	41	1,965,599	420.45	10.255	1.212	2,382,306	12.429	
	2019		4,680	41	1,989,894	425.19	10.371	1.201	2,389,863	12.455	
	<u>2020</u>		<u>4,713</u>	<u>41</u>	<u>2,003,011</u>	<u>425.00</u>	<u>10.366</u>	<u>1.191</u>	<u>2,385,586</u>	<u>12.346</u>	
	Total		23,384	41	9,680,340	413.97	10.097		11,763,244	12.269	
	Contents	2016	2,451	2	18,384	7.50	3.750	1.321	24,285	4.954	
		2017	2,538	2	19,799	7.80	3.901	1.295	25,640	5.051	
		2018	2,649	2	21,461	8.10	4.051	1.270	27,255	5.144	
		2019	2,786	2	22,995	8.25	4.127	1.246	28,652	5.142	
		<u>2020</u>	<u>2,917</u>	<u>2</u>	<u>24,980</u>	<u>8.56</u>	<u>4.282</u>	<u>1.191</u>	<u>29,751</u>	<u>5.100</u>	
		Total	13,341	2	107,619	8.07	4.033		135,583	5.081	
	Total	2016	7,107	27.55	1,860,451	261.78	9.502		2,317,658	11.837	
		2017	7,198	27.25	1,899,568	263.90	9.684		2,337,756	11.918	
		2018	7,324	26.89	1,987,060	271.31	10.090		2,409,561	12.235	
		2019	7,466	26.45	2,012,889	269.61	10.193		2,418,515	12.247	
		<u>2020</u>	<u>7,630</u>	<u>26.09</u>	<u>2,027,991</u>	<u>265.79</u>	<u>10.187</u>		<u>2,415,337</u>	<u>12.133</u>	
		Total	36,725	26.83	9,787,959	266.52	9.934		11,898,827	12.076	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF TRENDED AVERAGE RATING FACTORS
EXTENDED COVERAGE**

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]	
290	Buildings	2016	6,092	52	2,881,339	472.97	9.096	1.245	3,587,267	11.324	
		2017	6,027	52	2,948,540	489.22	9.408	1.230	3,626,704	11.572	
		2018	5,954	52	3,028,602	508.67	9.782	1.212	3,670,666	11.856	
		2019	5,580	52	2,779,131	498.05	9.578	1.201	3,337,736	11.503	
		<u>2020</u>	<u>5,189</u>	<u>52</u>	<u>2,513,351</u>	<u>484.36</u>	<u>9.315</u>	<u>1.191</u>	<u>2,993,401</u>	<u>11.094</u>	
	Total	28,842	52	14,150,963	490.64	9.435		17,215,774	11.479		
	Contents	2016	3,168	2	16,628	5.25	2.624	1.321	21,966	3.467	
		2017	3,239	2	16,838	5.20	2.599	1.295	21,805	3.366	
		2018	3,307	2	17,871	5.40	2.702	1.270	22,696	3.432	
		2019	3,145	2	18,019	5.73	2.865	1.246	22,452	3.569	
		<u>2020</u>	<u>3,016</u>	<u>2</u>	<u>19,421</u>	<u>6.44</u>	<u>3.220</u>	<u>1.191</u>	<u>23,130</u>	<u>3.835</u>	
	Total	15,875	2	88,777	5.59	2.796		112,049	3.529		
	Total	2016	9,260	34.89	2,897,967	312.96	8.970		3,609,233	11.171	
		2017	9,266	34.52	2,965,378	320.03	9.271		3,648,509	11.406	
		2018	9,261	34.15	3,046,473	328.96	9.633		3,693,362	11.678	
		2019	8,725	33.98	2,797,150	320.59	9.435		3,360,188	11.334	
		<u>2020</u>	<u>8,205</u>	<u>33.62</u>	<u>2,532,772</u>	<u>308.69</u>	<u>9.182</u>		<u>3,016,531</u>	<u>10.935</u>	
	Total	44,717	34.25	14,239,740	318.44	9.298		17,327,823	11.314		
	300	Buildings	2016	7,037	47	1,419,389	201.70	4.292	1.245	1,767,139	5.343
			2017	6,877	47	1,417,196	206.08	4.385	1.230	1,743,151	5.393
2018			6,779	47	1,428,123	210.67	4.482	1.212	1,730,885	5.433	
2019			7,223	47	1,714,804	237.41	5.051	1.201	2,059,480	6.067	
<u>2020</u>			<u>7,916</u>	<u>47</u>	<u>2,085,514</u>	<u>263.46</u>	<u>5.605</u>	<u>1.191</u>	<u>2,483,847</u>	<u>6.676</u>	
Total		35,832	47	8,065,026	225.08	4.789		9,784,502	5.810		
Contents		2016	3,672	4	47,471	12.93	3.232	1.321	62,709	4.269	
		2017	3,699	4	48,777	13.19	3.297	1.295	63,166	4.269	
		2018	3,762	4	50,577	13.44	3.361	1.270	64,233	4.269	
		2019	3,799	4	53,491	14.08	3.520	1.246	66,650	4.386	
		<u>2020</u>	<u>3,927</u>	<u>4</u>	<u>59,597</u>	<u>15.18</u>	<u>3.794</u>	<u>1.191</u>	<u>70,980</u>	<u>4.519</u>	
Total		18,859	4	259,913	13.78	3.445		327,738	4.345		
Total		2016	10,709	32.26	1,466,860	136.97	4.246		1,829,848	5.297	
		2017	10,576	31.96	1,465,973	138.61	4.337		1,806,317	5.344	
		2018	10,541	31.65	1,478,700	140.28	4.432		1,795,118	5.381	
		2019	11,022	32.18	1,768,295	160.43	4.985		2,126,130	5.994	
		<u>2020</u>	<u>11,843</u>	<u>32.74</u>	<u>2,145,111</u>	<u>181.13</u>	<u>5.532</u>		<u>2,554,827</u>	<u>6.589</u>	
Total		54,691	32.17	8,324,939	152.22	4.732		10,112,240	5.748		
310		Buildings	2016	41,328	34	10,868,576	262.98	7.735	1.245	13,531,377	9.630
			2017	40,601	34	10,758,534	264.98	7.794	1.230	13,232,997	9.586
	2018		39,711	34	10,699,734	269.44	7.925	1.212	12,968,078	9.605	
	2019		38,967	34	10,710,599	274.86	8.084	1.201	12,863,429	9.709	
	<u>2020</u>		<u>39,977</u>	<u>34</u>	<u>11,452,830</u>	<u>286.49</u>	<u>8.426</u>	<u>1.191</u>	<u>13,640,321</u>	<u>10.035</u>	
	Total	200,584	34	54,490,273	271.66	7.990		66,236,202	9.712		
	Contents	2016	15,803	1	43,056	2.72	2.725	1.321	56,877	3.599	
		2017	15,914	1	43,722	2.75	2.747	1.295	56,620	3.558	
		2018	15,963	1	45,846	2.87	2.872	1.270	58,224	3.647	
		2019	16,145	1	50,692	3.14	3.140	1.246	63,162	3.912	
		<u>2020</u>	<u>15,515</u>	<u>1</u>	<u>53,462</u>	<u>3.45</u>	<u>3.446</u>	<u>1.191</u>	<u>63,673</u>	<u>4.104</u>	
	Total	79,340	1	236,778	2.98	2.984		298,556	3.763		
	Total	2016	57,131	24.87	10,911,632	190.99	7.680		13,588,254	9.563	
		2017	56,515	24.71	10,802,256	191.14	7.735		13,289,617	9.516	
		2018	55,674	24.54	10,745,580	193.01	7.865		13,026,302	9.534	
		2019	55,112	24.33	10,761,291	195.26	8.026		12,926,591	9.640	
		<u>2020</u>	<u>55,492</u>	<u>24.77</u>	<u>11,506,292</u>	<u>207.35</u>	<u>8.371</u>		<u>13,703,994</u>	<u>9.970</u>	
	Total	279,924	24.65	54,727,051	195.51	7.931		66,534,758	9.643		

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF TRENDED AVERAGE RATING FACTORS
EXTENDED COVERAGE**

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
		Earned House Years	Current Manual Base Rate(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]		
Territory	Class	Year									
320	Buildings	2016	20,302	38	5,869,068	289.09	7.608	1.245	7,306,990	9.471	
		2017	19,905	38	5,768,293	289.79	7.626	1.230	7,095,000	9.380	
		2018	19,380	38	5,664,327	292.28	7.691	1.212	6,865,164	9.322	
		2019	18,869	38	5,541,214	293.67	7.728	1.201	6,654,998	9.281	
		2020	18,201	38	5,373,267	295.22	7.769	1.191	6,399,561	9.253	
		Total	96,657	38	28,216,169	291.92	7.682		34,321,713	9.344	
	Contents	2016	6,890	1	19,045	2.76	2.764	1.321	25,158	3.651	
		2017	7,043	1	19,203	2.73	2.727	1.295	24,868	3.531	
		2018	7,128	1	19,671	2.76	2.760	1.270	24,982	3.505	
		2019	7,140	1	20,843	2.92	2.919	1.246	25,970	3.637	
		2020	6,717	1	21,425	3.19	3.190	1.191	25,517	3.799	
		Total	34,918	1	100,187	2.87	2.869		126,495	3.623	
	Total	2016	27,192	28.62	5,888,113	216.54	7.566		7,332,148	9.422	
		2017	26,948	28.33	5,787,496	214.77	7.581		7,119,868	9.326	
		2018	26,508	28.05	5,683,998	214.43	7.644		6,890,146	9.267	
		2019	26,009	27.84	5,562,057	213.85	7.681		6,680,968	9.227	
		2020	24,918	28.03	5,394,692	216.50	7.724		6,425,078	9.199	
		Total	131,575	28.18	28,316,356	215.21	7.637		34,448,208	9.291	
	330	Buildings	2016	1,722	41	343,118	199.26	4.860	1.245	427,182	6.051
			2017	1,666	41	334,007	200.48	4.890	1.230	410,829	6.015
			2018	1,611	41	323,350	200.71	4.895	1.212	391,900	5.933
			2019	1,638	41	344,070	210.05	5.123	1.201	413,228	6.153
			2020	1,675	41	362,526	216.43	5.279	1.191	431,768	6.287
			Total	8,312	41	1,707,071	205.37	5.009		2,074,907	6.088
		Contents	2016	817	1	1,848	2.26	2.262	1.321	2,441	2.988
			2017	823	1	1,835	2.23	2.230	1.295	2,376	2.887
			2018	828	1	1,860	2.25	2.246	1.270	2,362	2.853
2019			848	1	2,008	2.37	2.368	1.246	2,502	2.950	
2020			835	1	2,096	2.51	2.510	1.191	2,496	2.989	
Total			4,151	1	9,647	2.32	2.324		12,177	2.934	
Total		2016	2,539	28.13	344,966	135.87	4.830		429,623	6.015	
		2017	2,489	27.77	335,842	134.93	4.859		413,205	5.978	
		2018	2,439	27.42	325,210	133.34	4.863		394,262	5.895	
		2019	2,486	27.36	346,078	139.21	5.088		415,730	6.112	
		2020	2,510	27.69	364,622	145.27	5.246		434,264	6.248	
		Total	12,463	27.68	1,716,718	137.75	4.976		2,087,084	6.050	
340		Buildings	2016	35,778	32	11,924,375	333.29	10.415	1.245	14,845,847	12.967
			2017	34,902	32	11,758,487	336.90	10.528	1.230	14,462,939	12.950
			2018	33,944	32	11,813,234	348.02	10.876	1.212	14,317,640	13.181
			2019	32,775	32	11,607,709	354.16	11.068	1.201	13,940,859	13.292
			2020	32,227	32	11,519,441	357.45	11.170	1.191	13,719,654	13.304
			Total	169,626	32	58,623,246	345.60	10.800		71,286,939	13.133
		Contents	2016	14,895	1	45,619	3.06	3.063	1.321	60,263	4.046
			2017	14,726	1	45,981	3.12	3.122	1.295	59,545	4.044
			2018	14,738	1	48,712	3.31	3.305	1.270	61,864	4.198
	2019		15,180	1	58,403	3.85	3.847	1.246	72,770	4.794	
	2020		14,954	1	62,535	4.18	4.182	1.191	74,479	4.981	
	Total		74,493	1	261,250	3.51	3.507		328,921	4.415	
	Total	2016	50,673	22.89	11,969,994	236.22	10.320		14,906,110	12.851	
		2017	49,628	22.80	11,804,468	237.86	10.432		14,522,484	12.835	
		2018	48,682	22.62	11,861,946	243.66	10.772		14,379,504	13.058	
		2019	47,955	22.19	11,666,112	243.27	10.963		14,013,629	13.169	
		2020	47,181	22.17	11,581,976	245.48	11.073		13,794,133	13.187	
		Total	244,119	22.54	58,884,496	241.21	10.702		71,615,860	13.015	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF TRENDED AVERAGE RATING FACTORS
EXTENDED COVERAGE**

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]	
350	Buildings	2016	19,334	33	4,265,569	220.63	6.686	1.245	5,310,633	8.324	
		2017	18,724	33	4,177,834	223.13	6.761	1.230	5,138,736	8.317	
		2018	17,964	33	4,107,710	228.66	6.929	1.212	4,978,545	8.398	
		2019	17,650	33	4,111,690	232.96	7.059	1.201	4,938,140	8.478	
		<u>2020</u>	<u>17,497</u>	<u>33</u>	<u>4,217,500</u>	<u>241.04</u>	<u>7.304</u>	<u>1.191</u>	<u>5,023,043</u>	<u>8.699</u>	
		Total	91,169	33	20,880,303	229.03	6.940		25,389,097	8.439	
	Contents	2016	6,017	1	15,461	2.57	2.570	1.321	20,424	3.394	
		2017	6,051	1	15,502	2.56	2.562	1.295	20,075	3.318	
		2018	6,171	1	16,285	2.64	2.639	1.270	20,682	3.351	
		2019	6,323	1	17,466	2.76	2.762	1.246	21,763	3.442	
		<u>2020</u>	<u>6,005</u>	<u>1</u>	<u>18,527</u>	<u>3.09</u>	<u>3.085</u>	<u>1.191</u>	<u>22,066</u>	<u>3.675</u>	
		Total	30,567	1	83,241	2.72	2.723		105,010	3.435	
	Total	2016	25,351	25.40	4,281,030	168.87	6.648		5,331,057	8.279	
		2017	24,775	25.18	4,193,336	169.26	6.722		5,158,811	8.270	
		2018	24,135	24.82	4,123,995	170.87	6.884		4,999,227	8.346	
		2019	23,973	24.56	4,129,156	172.24	7.013		4,959,903	8.424	
		<u>2020</u>	<u>23,502</u>	<u>24.82</u>	<u>4,236,027</u>	<u>180.24</u>	<u>7.262</u>		<u>5,045,109</u>	<u>8.649</u>	
		Total	121,736	24.97	20,963,544	172.20	6.896		25,494,107	8.387	
	360	Buildings	2016	32,666	32	8,111,571	248.32	7.760	1.245	10,098,906	9.661
			2017	31,401	32	7,867,399	250.55	7.830	1.230	9,676,901	9.630
			2018	30,029	32	7,695,077	256.25	8.008	1.212	9,326,433	9.706
2019			30,024	32	7,953,674	264.91	8.278	1.201	9,552,362	9.942	
<u>2020</u>			<u>29,773</u>	<u>32</u>	<u>8,103,019</u>	<u>272.16</u>	<u>8.505</u>	<u>1.191</u>	<u>9,650,696</u>	<u>10.129</u>	
Total			153,893	32	39,730,740	258.17	8.068		48,305,298	9.809	
Contents		2016	15,879	2	108,969	6.86	3.431	1.321	143,948	4.533	
		2017	15,937	2	113,156	7.10	3.550	1.295	146,537	4.597	
		2018	15,926	2	117,756	7.39	3.697	1.270	149,550	4.695	
		2019	16,651	2	128,380	7.71	3.855	1.246	159,961	4.803	
		<u>2020</u>	<u>17,369</u>	<u>2</u>	<u>142,488</u>	<u>8.20</u>	<u>4.102</u>	<u>1.191</u>	<u>169,703</u>	<u>4.885</u>	
		Total	81,762	2	610,749	7.47	3.735		769,699	4.707	
Total		2016	48,545	22.19	8,220,540	169.34	7.631		10,242,854	9.509	
		2017	47,338	21.90	7,980,555	168.59	7.698		9,823,438	9.476	
		2018	45,955	21.60	7,812,833	170.01	7.871		9,475,983	9.546	
		2019	46,675	21.30	8,082,054	173.16	8.129		9,712,323	9.769	
		<u>2020</u>	<u>47,142</u>	<u>20.95</u>	<u>8,245,507</u>	<u>174.91</u>	<u>8.349</u>		<u>9,820,399</u>	<u>9.943</u>	
		Total	235,655	21.59	40,341,489	171.19	7.929		49,074,997	9.646	
370		Buildings	2016	2,029	34	456,419	224.95	6.616	1.245	568,242	8.237
			2017	1,943	34	442,835	227.91	6.703	1.230	544,687	8.245
			2018	1,850	34	428,304	231.52	6.809	1.212	519,104	8.253
	2019		1,891	34	445,363	235.52	6.927	1.201	534,881	8.319	
	<u>2020</u>		<u>1,939</u>	<u>34</u>	<u>469,529</u>	<u>242.15</u>	<u>7.122</u>	<u>1.191</u>	<u>559,209</u>	<u>8.482</u>	
	Total		9,652	34	2,242,450	232.33	6.833		2,726,123	8.307	
	Contents	2016	1,200	2	10,433	8.69	4.347	1.321	13,782	5.743	
		2017	1,166	2	10,151	8.71	4.353	1.295	13,146	5.637	
		2018	1,125	2	9,852	8.76	4.379	1.270	12,512	5.561	
		2019	1,185	2	10,701	9.03	4.515	1.246	13,333	5.626	
		<u>2020</u>	<u>1,249</u>	<u>2</u>	<u>12,063</u>	<u>9.66</u>	<u>4.829</u>	<u>1.191</u>	<u>14,367</u>	<u>5.751</u>	
		Total	5,925	2	53,200	8.98	4.489		67,140	5.666	
	Total	2016	3,229	22.11	466,852	144.58	6.539		582,024	8.152	
		2017	3,109	22.00	452,986	145.70	6.623		557,833	8.156	
		2018	2,975	21.90	438,156	147.28	6.725		531,616	8.160	
		2019	3,076	21.67	456,064	148.27	6.842		548,214	8.224	
		<u>2020</u>	<u>3,188</u>	<u>21.46</u>	<u>481,592</u>	<u>151.06</u>	<u>7.039</u>		<u>573,576</u>	<u>8.384</u>	
		Total	15,577	21.83	2,295,650	147.37	6.751		2,793,263	8.214	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF TRENDED AVERAGE RATING FACTORS
EXTENDED COVERAGE

Territory	Class	Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			Earned House Years	Current Manual Base Rate(a)	Aggregate Calculated Earned Premium at Current Level	Average Rate (3) / (1)	Average Rating Factor (3)/[(1)x(2)]	Premium Trend Factor	Trended Aggregate Calculated Earned Premium at Current Level (3) x (6)	Trended Average Rating Factor (7)/[(1)x(2)]	
380	Buildings	2016	5,501	30	1,296,449	235.68	7.856	1.245	1,614,079	9.781	
		2017	5,365	30	1,268,020	236.35	7.878	1.230	1,559,665	9.690	
		2018	5,235	30	1,266,812	241.99	8.066	1.212	1,535,376	9.776	
		2019	5,261	30	1,307,305	248.49	8.283	1.201	1,570,073	9.948	
		2020	5,267	30	1,336,814	253.81	8.460	1.191	1,592,145	10.076	
		Total	26,629	30	6,475,400	243.17	8.106		7,871,338	9.853	
	Contents	2016	2,863	1	9,946	3.47	3.474	1.321	13,139	4.589	
		2017	2,894	1	10,210	3.53	3.528	1.295	13,222	4.569	
		2018	2,925	1	10,405	3.56	3.557	1.270	13,214	4.518	
		2019	3,053	1	11,110	3.64	3.639	1.246	13,843	4.534	
		2020	3,127	1	12,069	3.86	3.860	1.191	14,374	4.597	
		Total	14,862	1	53,740	3.62	3.616		67,792	4.561	
	Total	2016	8,364	20.07	1,306,395	156.19	7.782		1,627,218	9.694	
		2017	8,259	19.84	1,278,230	154.77	7.801		1,572,887	9.599	
		2018	8,160	19.60	1,277,217	156.52	7.986		1,548,590	9.683	
		2019	8,314	19.35	1,318,415	158.58	8.195		1,583,916	9.846	
		2020	8,394	19.20	1,348,883	160.70	8.370		1,606,519	9.968	
		Total	41,491	19.61	6,529,140	157.36	8.025		7,939,130	9.758	
	390	Buildings	2016	5,353	30	1,328,144	248.11	8.270	1.245	1,653,539	10.297
			2017	5,182	30	1,294,340	249.78	8.326	1.230	1,592,038	10.241
			2018	5,047	30	1,276,953	253.01	8.434	1.212	1,547,667	10.222
2019			5,011	30	1,278,347	255.11	8.504	1.201	1,535,295	10.213	
2020			4,901	30	1,253,441	255.75	8.525	1.191	1,492,848	10.153	
Total			25,494	30	6,431,225	252.26	8.409		7,821,387	10.226	
Contents		2016	3,036	1	10,250	3.38	3.376	1.321	13,540	4.460	
		2017	2,977	1	10,807	3.63	3.630	1.295	13,995	4.701	
		2018	2,993	1	11,063	3.70	3.696	1.270	14,050	4.694	
		2019	3,079	1	11,435	3.71	3.714	1.246	14,248	4.627	
		2020	3,085	1	11,628	3.77	3.769	1.191	13,849	4.489	
		Total	15,170	1	55,183	3.64	3.638		69,682	4.593	
Total		2016	8,389	19.50	1,338,394	159.54	8.182		1,667,079	10.191	
		2017	8,159	19.42	1,305,147	159.96	8.237		1,606,033	10.136	
		2018	8,040	19.20	1,288,016	160.20	8.344		1,561,717	10.117	
		2019	8,090	18.96	1,289,782	159.43	8.409		1,549,543	10.102	
		2020	7,986	18.80	1,265,069	158.41	8.426		1,506,697	10.035	
		Total	40,664	19.18	6,486,408	159.51	8.317		7,891,069	10.118	
Statewide		Buildings	2016	416,273	76.20	245,064,861	588.71	7.726	1.245	305,105,752	9.619
			2017	412,280	76.48	246,195,004	597.15	7.808	1.230	302,819,855	9.604
			2018	406,224	76.56	244,436,672	601.73	7.860	1.212	296,257,246	9.526
	2019		402,268	76.09	241,763,147	601.00	7.899	1.201	290,357,540	9.486	
	2020		398,555	75.63	239,311,545	600.45	7.939	1.191	285,020,050	9.456	
	Total		2,035,600	76.20	1,216,771,229	597.75	7.844		1,479,560,443	9.539	
	Contents	2016	211,821	9.19	6,974,930	32.93	3.583	1.321	9,213,883	4.733	
		2017	215,206	9.15	7,157,784	33.26	3.635	1.295	9,269,330	4.707	
		2018	218,381	9.01	7,216,376	33.04	3.668	1.270	9,164,798	4.658	
		2019	222,865	8.78	7,348,301	32.97	3.755	1.246	9,155,983	4.679	
		2020	223,898	8.69	7,560,448	33.77	3.886	1.191	9,004,494	4.628	
		Total	1,092,171	8.96	36,257,839	33.20	3.705		45,808,488	4.681	
	Total	2016	628,094	53.60	252,039,791	401.28	7.487		314,319,632	9.336	
		2017	627,486	53.39	253,352,788	403.76	7.562		312,089,186	9.316	
		2018	624,605	52.94	251,653,048	402.90	7.610		305,422,045	9.237	
		2019	625,133	52.09	249,111,448	398.49	7.650		299,513,521	9.198	
		2020	622,453	51.55	246,871,993	396.61	7.694		294,024,541	9.163	
		Total	3,127,771	52.72	1,253,029,068	400.61	7.599		1,525,368,925	9.250	

(a) The Total Class Current Manual Base Rate is the weighted average of the Buildings and Contents Current Manual Base Rates using Earned House Years as weights.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF NON-HURRICANE EXPERIENCE BASE CLASS LOSS COST
EXTENDED COVERAGE**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Trended Average Rating Factor	Non-Hurricane Adjusted Incurred Losses	Adjusted Incurred Excess Losses	Excess Factor	Loss Trend Factor	Trended LAE Factor	Trended Non-Hurricane Losses & LAE Adjusted for Excess [(3)-(4)]x(5)x(6)x(7)	Non-Hurricane Experience Base Class Loss Cost (8)/[(1)x(2)]
<u>Territory</u>	<u>Year</u>	<u>Earned House Years</u>							
110	2016	22,544	16.723	1,922,751	0	1.017	1.549	1.104	3,343,986
	2017	21,949	16.620	2,330,561	0	1.017	1.475	1.104	3,859,602
	2018	21,242	16.391	2,945,651	0	1.017	1.405	1.104	4,646,732
	2019	20,559	16.208	2,065,883	0	1.017	1.338	1.104	3,103,501
	<u>2020</u>	<u>20,032</u>	<u>15.971</u>	<u>2,658,798</u>	<u>0</u>	<u>1.017</u>	<u>1.274</u>	<u>1.104</u>	<u>3,803,162</u>
	Total	106,326	16.394	11,923,644	0				18,756,983
120	2016	30,493	13.343	1,158,814	0	1.017	1.549	1.104	2,015,372
	2017	29,905	13.296	1,926,962	0	1.017	1.475	1.104	3,191,209
	2018	28,464	12.906	3,742,277	0	1.017	1.405	1.104	5,903,401
	2019	27,335	12.658	2,004,975	0	1.017	1.338	1.104	3,012,001
	<u>2020</u>	<u>26,463</u>	<u>12.531</u>	<u>1,943,150</u>	<u>0</u>	<u>1.017</u>	<u>1.274</u>	<u>1.104</u>	<u>2,779,494</u>
	Total	142,660	12.964	10,776,178	0				16,901,477
130	2016	7,790	6.987	308,611	0	1.025	1.549	1.104	540,948
	2017	7,894	7.002	357,669	0	1.025	1.475	1.104	596,989
	2018	8,012	6.977	391,725	0	1.025	1.405	1.104	622,803
	2019	7,996	6.964	436,062	0	1.025	1.338	1.104	660,233
	<u>2020</u>	<u>7,907</u>	<u>7.062</u>	<u>709,351</u>	<u>0</u>	<u>1.025</u>	<u>1.274</u>	<u>1.104</u>	<u>1,022,642</u>
	Total	39,599	6.998	2,203,418	0				3,443,615
140	2016	50,641	7.380	1,933,326	0	1.025	1.549	1.104	3,388,827
	2017	51,210	7.377	2,817,601	0	1.025	1.475	1.104	4,702,886
	2018	51,345	7.273	3,496,018	0	1.025	1.405	1.104	5,558,312
	2019	50,688	7.161	2,968,422	0	1.025	1.338	1.104	4,494,431
	<u>2020</u>	<u>49,986</u>	<u>7.092</u>	<u>3,404,863</u>	<u>0</u>	<u>1.025</u>	<u>1.274</u>	<u>1.104</u>	<u>4,908,649</u>
	Total	253,870	7.259	14,620,230	0				23,053,105
150	2016	29,739	6.685	949,505	0	1.025	1.549	1.104	1,664,338
	2017	30,503	6.651	1,249,792	0	1.025	1.475	1.104	2,086,040
	2018	30,960	6.561	2,459,986	0	1.025	1.405	1.104	3,911,127
	2019	31,033	6.485	1,662,850	0	1.025	1.338	1.104	2,517,689
	<u>2020</u>	<u>30,853</u>	<u>6.428</u>	<u>3,146,992</u>	<u>0</u>	<u>1.025</u>	<u>1.274</u>	<u>1.104</u>	<u>4,536,887</u>
	Total	153,088	6.562	9,469,125	0				14,716,081

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF NON-HURRICANE EXPERIENCE BASE CLASS LOSS COST
EXTENDED COVERAGE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
		Trended	Non-Hurricane	Adjusted	Excess	Loss	Trended	Trended	Non-Hurricane	
	Earned	Average	Adjusted	Incurred	Factor	Trend	LAE	Non-Hurricane	Experience	
	House	Rating	Incurred	Excess	Factor	Factor	Adjusted	Losses & LAE	Base Class	
	Years	Factor	Losses	Losses	Factor	Factor	for Excess	for Excess	Loss Cost	
<u>Territory</u>	<u>Year</u>	<u>Years</u>	<u>Factor</u>	<u>Losses</u>	<u>Excess Losses</u>	<u>Factor</u>	<u>Factor</u>	<u>Factor</u>	<u>[(3)-(4)]x(5)x(6)x(7)</u>	<u>(8)/[(1)x(2)]</u>
160	2016	28,542	7.273	1,338,992	0	1.025	1.549	1.104	2,347,050	
	2017	28,798	7.252	1,462,387	0	1.025	1.475	1.104	2,440,885	
	2018	28,716	7.212	2,291,084	0	1.025	1.405	1.104	3,642,590	
	2019	27,339	7.176	1,682,657	0	1.025	1.338	1.104	2,547,679	
	<u>2020</u>	<u>26,456</u>	<u>7.107</u>	<u>2,246,225</u>	<u>0</u>	<u>1.025</u>	<u>1.274</u>	<u>1.104</u>	<u>3,238,289</u>	
	Total	139,851	7.207	9,021,345	0				14,216,493	14.10
170	2016	3,406	5.983	109,034	0	1.068	1.549	1.104	199,138	
	2017	3,524	5.949	121,291	0	1.068	1.475	1.104	210,941	
	2018	3,673	5.979	260,160	0	1.068	1.405	1.104	430,980	
	2019	3,780	6.023	2,258,635	1,915,322	1.068	1.338	1.104	541,610	
	<u>2020</u>	<u>3,972</u>	<u>6.146</u>	<u>996,565</u>	<u>577,011</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>630,228</u>	
	Total	18,355	6.019	3,745,685	2,492,333				2,012,897	18.22
180	2016	28,806	7.062	1,252,413	0	1.068	1.549	1.104	2,287,385	
	2017	29,526	7.138	1,167,113	0	1.068	1.475	1.104	2,029,763	
	2018	30,086	7.187	1,307,656	0	1.068	1.405	1.104	2,166,258	
	2019	30,577	7.212	3,284,620	0	1.068	1.338	1.104	5,181,811	
	<u>2020</u>	<u>30,884</u>	<u>7.219</u>	<u>3,854,024</u>	<u>0</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>5,789,275</u>	
	Total	149,879	7.165	10,865,826	0				17,454,492	16.25
190	2016	11,836	5.659	547,028	0	1.068	1.549	1.104	999,082	
	2017	12,158	5.713	469,955	0	1.068	1.475	1.104	817,313	
	2018	12,616	5.750	504,881	0	1.068	1.405	1.104	836,384	
	2019	12,900	5.714	542,332	0	1.068	1.338	1.104	855,582	
	<u>2020</u>	<u>13,152</u>	<u>5.677</u>	<u>1,024,079</u>	<u>0</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>1,538,308</u>	
	Total	62,662	5.704	3,088,275	0				5,046,669	14.12
200	2016	7,497	4.860	323,793	0	1.068	1.549	1.104	591,370	
	2017	7,582	4.926	246,797	0	1.068	1.475	1.104	429,212	
	2018	7,700	4.980	187,427	0	1.068	1.405	1.104	310,491	
	2019	7,736	4.996	291,515	0	1.068	1.338	1.104	459,894	
	<u>2020</u>	<u>7,773</u>	<u>5.054</u>	<u>548,770</u>	<u>0</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>824,328</u>	
	Total	38,288	4.964	1,598,302	0				2,615,295	13.76

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF NON-HURRICANE EXPERIENCE BASE CLASS LOSS COST
EXTENDED COVERAGE**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Trended Average Rating Factor	Non-Hurricane Adjusted Incurred Losses	Adjusted Incurred Excess Losses	Excess Factor	Loss Trend Factor	Trended LAE Factor	Trended Non-Hurricane Losses & LAE Adjusted for Excess [(3)-(4)]x(5)x(6)x(7)	Non-Hurricane Experience Base Class Loss Cost (8)/[(1)x(2)]
<u>Territory</u>	<u>Year</u>	<u>Earned House Years</u>							
210	2016	9,035	6.044	395,600	0	1.068	1.549	1.104	722,517
	2017	9,216	6.063	374,250	0	1.068	1.475	1.104	650,870
	2018	9,604	6.077	378,514	0	1.068	1.405	1.104	627,045
	2019	9,813	6.104	969,757	159,040	1.068	1.338	1.104	1,278,986
	<u>2020</u>	<u>10,097</u>	<u>6.177</u>	<u>1,637,015</u>	<u>664,628</u>	1.068	1.274	1.104	<u>1,460,659</u>
	Total	47,765	6.095	3,755,136	823,668				4,740,077
220	2016	30,403	11.667	4,917,718	1,091,733	1.068	1.549	1.104	6,987,712
	2017	30,576	12.063	4,726,367	685,323	1.068	1.475	1.104	7,027,906
	2018	30,735	12.385	5,508,555	1,255,951	1.068	1.405	1.104	7,044,847
	2019	31,858	12.427	3,854,550	0	1.068	1.338	1.104	6,080,932
	<u>2020</u>	<u>32,273</u>	<u>12.368</u>	<u>6,069,908</u>	<u>345,985</u>	1.068	1.274	1.104	<u>8,598,121</u>
	Total	155,845	12.181	25,077,098	3,378,992				35,739,518
230	2016	19,884	4.173	915,963	0	1.068	1.549	1.104	1,672,899
	2017	19,995	4.174	253,524	0	1.068	1.475	1.104	440,911
	2018	19,868	4.229	409,539	0	1.068	1.405	1.104	678,441
	2019	19,562	4.383	543,982	0	1.068	1.338	1.104	858,185
	<u>2020</u>	<u>19,567</u>	<u>4.415</u>	<u>1,327,174</u>	<u>0</u>	1.068	1.274	1.104	<u>1,993,598</u>
	Total	98,876	4.272	3,450,182	0				5,644,034
240	2016	27,106	6.468	1,475,696	0	1.068	1.549	1.104	2,695,185
	2017	27,543	6.503	1,322,035	0	1.068	1.475	1.104	2,299,192
	2018	27,875	6.524	2,098,496	0	1.068	1.405	1.104	3,476,360
	2019	28,332	6.461	3,110,272	687,370	1.068	1.338	1.104	3,822,366
	<u>2020</u>	<u>28,684</u>	<u>6.481</u>	<u>3,742,024</u>	<u>991,636</u>	1.068	1.274	1.104	<u>4,131,462</u>
	Total	139,540	6.487	11,748,523	1,679,006				16,424,565
250	2016	16,704	9.769	1,428,775	0	1.068	1.549	1.104	2,609,490
	2017	16,993	10.128	1,372,134	0	1.068	1.475	1.104	2,386,321
	2018	16,961	10.469	1,982,597	0	1.068	1.405	1.104	3,284,363
	2019	17,124	10.722	1,764,831	0	1.068	1.338	1.104	2,784,194
	<u>2020</u>	<u>17,264</u>	<u>10.826</u>	<u>3,277,536</u>	<u>298,256</u>	1.068	1.274	1.104	<u>4,475,289</u>
	Total	85,046	10.380	9,825,873	298,256				15,539,657

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF NON-HURRICANE EXPERIENCE BASE CLASS LOSS COST
EXTENDED COVERAGE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Trended	Non-Hurricane	Adjusted	Excess	Loss	Trended	Trended	Non-Hurricane
	Earned	Average	Adjusted	Incurred	Factor	Trend	LAE	Non-Hurricane	Experience
	House	Rating	Incurred	Excess	Factor	Factor	Factor	Losses & LAE	Base Class
	Years	Factor	Losses	Losses	Factor	Factor	Factor	Adjusted	Loss Cost
								for Excess	
<u>Territory</u>	<u>Year</u>	<u>Years</u>	<u>Factor</u>	<u>Losses</u>	<u>Excess Losses</u>	<u>Factor</u>	<u>Factor</u>	<u>Factor</u>	<u>Loss Cost</u>
								<u>[(3)-(4)]x(5)x(6)x(7)</u>	<u>(8)/[(1)x(2)]</u>
260	2016	11,644	5.968	1,953,208	1,312,556	1.068	1.549	1.104	1,170,076
	2017	12,165	6.114	403,861	0	1.068	1.475	1.104	702,367
	2018	12,367	6.112	786,082	33,015	1.068	1.405	1.104	1,247,528
	2019	14,048	7.443	969,526	0	1.068	1.338	1.104	1,529,523
	<u>2020</u>	<u>13,948</u>	<u>7.482</u>	<u>1,313,582</u>	<u>0</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>1,973,181</u>
	Total	64,172	6.686	5,426,259	1,345,571				6,622,675
270	2016	33,535	14.310	4,966,147	943,568	1.068	1.549	1.104	7,346,768
	2017	33,689	14.636	7,677,267	3,516,188	1.068	1.475	1.104	7,236,662
	2018	34,687	15.019	5,197,036	867,905	1.068	1.405	1.104	7,171,622
	2019	35,550	15.362	7,008,820	1,871,355	1.068	1.338	1.104	8,104,856
	<u>2020</u>	<u>35,151</u>	<u>15.697</u>	<u>9,862,640</u>	<u>4,250,798</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>8,429,760</u>
	Total	172,612	14.998	34,711,910	11,449,814				38,289,668
280	2016	7,107	11.837	485,881	0	1.068	1.549	1.104	887,405
	2017	7,198	11.918	732,850	41,772	1.068	1.475	1.104	1,201,875
	2018	7,324	12.235	573,563	0	1.068	1.405	1.104	950,162
	2019	7,466	12.247	798,540	0	1.068	1.338	1.104	1,259,775
	<u>2020</u>	<u>7,630</u>	<u>12.133</u>	<u>1,218,926</u>	<u>262,069</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>1,437,331</u>
	Total	36,725	12.076	3,809,760	303,841				5,736,548
290	2016	9,260	11.171	598,581	0	1.068	1.549	1.104	1,093,238
	2017	9,266	11.406	720,478	0	1.068	1.475	1.104	1,253,006
	2018	9,261	11.678	1,161,937	0	1.068	1.405	1.104	1,924,860
	2019	8,725	11.334	637,134	0	1.068	1.338	1.104	1,005,142
	<u>2020</u>	<u>8,205</u>	<u>10.935</u>	<u>726,848</u>	<u>0</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>1,091,826</u>
	Total	44,717	11.314	3,844,978	0				6,368,072
300	2016	10,709	5.297	432,639	0	1.068	1.549	1.104	790,164
	2017	10,576	5.344	447,901	0	1.068	1.475	1.104	778,959
	2018	10,541	5.381	489,878	0	1.068	1.405	1.104	811,530
	2019	11,022	5.994	465,221	0	1.068	1.338	1.104	733,932
	<u>2020</u>	<u>11,843</u>	<u>6.589</u>	<u>1,990,049</u>	<u>1,128,358</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>1,294,379</u>
	Total	54,691	5.748	3,825,688	1,128,358				4,408,964

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**CALCULATION OF NON-HURRICANE EXPERIENCE BASE CLASS LOSS COST
EXTENDED COVERAGE**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Trended Average Rating	Non-Hurricane Adjusted Incurred Losses	Adjusted Incurred Excess Losses	Excess Factor	Loss Trend Factor	Trended LAE Factor	Trended Non-Hurricane Losses & LAE Adjusted for Excess [(3)-(4)]x(5)x(6)x(7)	Non-Hurricane Experience Base Class Loss Cost (8)/[(1)x(2)]
<u>Territory</u>	<u>Year</u>	<u>Earned House Years</u>	<u>Factor</u>	<u>Losses</u>	<u>Excess Losses</u>	<u>Factor</u>	<u>Factor</u>	<u>Factor</u>	<u>Factor</u>
310	2016	57,131	9.563	4,570,560	763,284	1.068	1.549	1.104	6,953,542
	2017	56,515	9.516	5,033,440	1,208,026	1.068	1.475	1.104	6,652,897
	2018	55,674	9.534	9,413,208	5,450,247	1.068	1.405	1.104	6,565,026
	2019	55,112	9.640	5,706,811	1,221,258	1.068	1.338	1.104	7,076,401
	<u>2020</u>	<u>55,492</u>	<u>9.970</u>	<u>7,625,804</u>	<u>2,180,980</u>	1.068	1.274	1.104	<u>8,178,876</u>
	Total	279,924	9.643	32,349,823	10,823,795				35,426,742
320	2016	27,192	9.422	2,363,207	283,585	1.068	1.549	1.104	3,798,185
	2017	26,948	9.326	2,578,036	541,388	1.068	1.475	1.104	3,541,998
	2018	26,508	9.267	2,796,985	693,652	1.068	1.405	1.104	3,484,373
	2019	26,009	9.227	3,442,830	1,143,020	1.068	1.338	1.104	3,628,176
	<u>2020</u>	<u>24,918</u>	<u>9.199</u>	<u>3,633,199</u>	<u>991,863</u>	1.068	1.274	1.104	<u>3,967,650</u>
	Total	131,575	9.291	14,814,257	3,653,508				18,420,382
330	2016	2,539	6.015	179,351	71,920	1.068	1.549	1.104	196,210
	2017	2,489	5.978	318,688	217,664	1.068	1.475	1.104	175,694
	2018	2,439	5.895	162,079	53,972	1.068	1.405	1.104	179,090
	2019	2,486	6.112	184,905	50,849	1.068	1.338	1.104	211,487
	<u>2020</u>	<u>2,510</u>	<u>6.248</u>	<u>196,938</u>	<u>23,633</u>	1.068	1.274	1.104	<u>260,328</u>
	Total	12,463	6.050	1,041,961	418,038				1,022,809
340	2016	50,673	12.851	7,190,056	3,221,145	1.068	1.549	1.104	7,248,750
	2017	49,628	12.835	7,908,862	3,938,613	1.068	1.475	1.104	6,904,784
	2018	48,682	13.058	7,799,230	3,774,827	1.068	1.405	1.104	6,666,811
	2019	47,955	13.169	7,641,218	2,926,586	1.068	1.338	1.104	7,437,796
	<u>2020</u>	<u>47,181</u>	<u>13.187</u>	<u>11,414,478</u>	<u>5,775,726</u>	1.068	1.274	1.104	<u>8,470,182</u>
	Total	244,119	13.015	41,953,844	19,636,897				36,728,323
350	2016	25,351	8.279	1,519,280	0	1.068	1.549	1.104	2,774,786
	2017	24,775	8.270	2,474,285	952,600	1.068	1.475	1.104	2,646,410
	2018	24,135	8.346	2,824,526	1,310,580	1.068	1.405	1.104	2,507,997
	2019	23,973	8.424	1,797,598	86,285	1.068	1.338	1.104	2,699,765
	<u>2020</u>	<u>23,502</u>	<u>8.649</u>	<u>2,846,503</u>	<u>871,030</u>	1.068	1.274	1.104	<u>2,967,433</u>
	Total	121,736	8.387	11,462,192	3,220,495				13,596,391

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

CALCULATION OF NON-HURRICANE EXPERIENCE BASE CLASS LOSS COST
EXTENDED COVERAGE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Trended	Non-Hurricane	Adjusted	Excess	Loss	Trended	Trended	Non-Hurricane
		Average	Adjusted	Incurred	Factor	Trend	LAE	Non-Hurricane	Experience
		Rating	Incurred	Excess	Factor	Factor	Adjusted	Losses & LAE	Base Class
		Factor	Losses	Losses	Factor	Factor	for Excess	for Excess	Loss Cost
<u>Territory</u>	<u>Year</u>	<u>Earned</u>	<u>Adjusted</u>	<u>Excess</u>	<u>Excess</u>	<u>Loss</u>	<u>Trended</u>	<u>[(3)-(4)]x(5)x(6)x(7)</u>	<u>(8)/[(1)x(2)]</u>
		<u>House</u>	<u>Incurred</u>	<u>Losses</u>	<u>Losses</u>	<u>Trend</u>	<u>LAE</u>		
		<u>Years</u>	<u>Factor</u>	<u>Losses</u>	<u>Losses</u>	<u>Factor</u>	<u>Factor</u>		
360	2016	48,545	9.509	2,649,701	0	1.068	1.549	1.104	4,839,368
	2017	47,338	9.476	5,090,900	1,786,906	1.068	1.475	1.104	5,746,079
	2018	45,955	9.546	3,712,949	449,267	1.068	1.405	1.104	5,406,603
	2019	46,675	9.769	3,400,411	0	1.068	1.338	1.104	5,364,483
	<u>2020</u>	<u>47,142</u>	<u>9.943</u>	<u>3,849,419</u>	<u>0</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>5,782,358</u>
	Total	235,655	9.646	18,703,380	2,236,173				27,138,891
370	2016	3,229	8.152	101,885	0	1.068	1.549	1.104	186,081
	2017	3,109	8.156	122,926	0	1.068	1.475	1.104	213,784
	2018	2,975	8.160	249,037	70,477	1.068	1.405	1.104	295,802
	2019	3,076	8.224	267,604	61,817	1.068	1.338	1.104	324,649
	<u>2020</u>	<u>3,188</u>	<u>8.384</u>	<u>164,615</u>	<u>0</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>247,274</u>
	Total	15,577	8.214	906,067	132,294				1,267,590
380	2016	8,364	9.694	492,420	0	1.068	1.549	1.104	899,347
	2017	8,259	9.599	590,646	21,854	1.068	1.475	1.104	989,204
	2018	8,160	9.683	695,643	111,303	1.068	1.405	1.104	968,015
	2019	8,314	9.846	474,250	0	1.068	1.338	1.104	748,176
	<u>2020</u>	<u>8,394</u>	<u>9.968</u>	<u>949,577</u>	<u>254,487</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>1,044,121</u>
	Total	41,491	9.758	3,202,536	387,644				4,648,863
390	2016	8,389	10.191	366,412	0	1.068	1.549	1.104	669,208
	2017	8,159	10.136	646,189	43,295	1.068	1.475	1.104	1,048,512
	2018	8,040	10.117	586,652	0	1.068	1.405	1.104	971,845
	2019	8,090	10.102	449,458	0	1.068	1.338	1.104	709,064
	<u>2020</u>	<u>7,986</u>	<u>10.035</u>	<u>564,818</u>	<u>0</u>	<u>1.068</u>	<u>1.274</u>	<u>1.104</u>	<u>848,434</u>
	Total	40,664	10.118	2,613,529	43,295				4,247,063
Statewide	2016	628,094	9.336	46,847,347	7,687,791		1.549	1.104	70,918,427
	2017	627,486	9.316	54,944,767	12,953,629		1.475	1.104	72,262,271
	2018	624,605	9.237	64,413,371	14,071,196		1.405	1.104	82,291,398
	2019	625,133	9.198	60,685,669	10,122,902		1.338	1.104	79,032,319
	<u>2020</u>	<u>622,453</u>	<u>9.163</u>	<u>82,943,870</u>	<u>18,616,460</u>		<u>1.274</u>	<u>1.104</u>	<u>95,723,524</u>
	Total	3,127,771	9.250	309,835,024	63,451,978				400,227,939

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF MODELED HURRICANE BASE CLASS LOSS COST

<u>Territory</u>	(1) Modeled Hurricane Losses ^(a)	(2) Latest-Year Earned House Years	(3) Latest-Year Trended Average Rating Factor	(4) Modeled Hurricane Base Class Loss Cost = (1) / [(2)x(3)]
110	20,312,545	20,032	15.971	63.49
120	23,158,672	26,463	12.531	69.84
130	2,376,361	7,907	7.062	42.56
140	19,642,839	49,986	7.092	55.41
150	4,495,092	30,853	6.428	22.67
160	5,034,069	26,456	7.107	26.77
170	231,634	3,972	6.146	9.49
180	3,001,436	30,884	7.219	13.46
190	1,555,373	13,152	5.677	20.83
200	976,330	7,773	5.054	24.85
210	671,385	10,097	6.177	10.76
220	2,844,893	32,273	12.368	7.13
230	1,618,248	19,567	4.415	18.73
240	1,571,418	28,684	6.481	8.45
250	1,138,622	17,264	10.826	6.09
260	494,317	13,948	7.482	4.74
270	1,703,368	35,151	15.697	3.09
280	286,835	7,630	12.133	3.10
290	397,560	8,205	10.935	4.43
300	388,164	11,843	6.589	4.97
310	1,162,686	55,492	9.970	2.10
320	628,930	24,918	9.199	2.74
330	35,359	2,510	6.248	2.25
340	1,203,094	47,181	13.187	1.93
350	370,593	23,502	8.649	1.82
360	483,909	47,142	9.943	1.03
370	21,339	3,188	8.384	0.80
380	51,300	8,394	9.968	0.61
390	43,974	7,986	10.035	0.55
Statewide	95,900,346	622,453	9.163	16.81

^(a) The modeled hurricane losses include a loading for LAE of 6.0%.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

DERIVATION OF NET COST OF REINSURANCE

<u>Territory</u>	(1) Net Cost of <u>Reinsurance</u>	(2) Latest-Year Earned <u>House Years</u>	(3) Latest-Year Trended Average <u>Rating Factor</u>	(4) Expected Loss and Fixed <u>Expense Ratio</u>	(5) Net Cost of Reinsurance per Policy ^(a) <u>= (1) / [(2)x(3)x(4)]</u>
110	22,264,184	20,032	15.971	78.4%	88.76
120	31,921,005	26,463	12.531	78.4%	122.78
130	2,860,177	7,907	7.062	78.4%	65.33
140	26,288,019	49,986	7.092	78.4%	94.59
150	5,959,719	30,853	6.428	78.4%	38.33
160	7,502,644	26,456	7.107	78.4%	50.90
170	295,852	3,972	6.146	78.4%	15.46
180	4,319,567	30,884	7.219	78.4%	24.71
190	2,284,629	13,152	5.677	78.4%	39.03
200	1,436,084	7,773	5.054	78.4%	46.63
210	975,860	10,097	6.177	78.4%	19.96
220	4,368,044	32,273	12.368	78.4%	13.96
230	2,295,433	19,567	4.415	78.4%	33.89
240	2,267,988	28,684	6.481	78.4%	15.56
250	1,677,751	17,264	10.826	78.4%	11.45
260	699,657	13,948	7.482	78.4%	8.55
270	2,569,690	35,151	15.697	78.4%	5.94
280	417,690	7,630	12.133	78.4%	5.76
290	587,161	8,205	10.935	78.4%	8.35
300	521,581	11,843	6.589	78.4%	8.53
310	1,661,016	55,492	9.970	78.4%	3.83
320	822,176	24,918	9.199	78.4%	4.58
330	42,988	2,510	6.248	78.4%	3.50
340	1,409,766	47,181	13.187	78.4%	2.89
350	348,882	23,502	8.649	78.4%	2.19
360	418,426	47,142	9.943	78.4%	1.14
370	17,198	3,188	8.384	78.4%	0.82
380	24,338	8,394	9.968	78.4%	0.37
390	14,561	7,986	10.035	78.4%	0.23
Statewide	126,272,086	622,453	9.163	78.4%	28.24

^(a) For use on page C-12 Column (16)

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

SECTION E - SUPPLEMENTAL MATERIAL

North Carolina G.S. 58-36-15(h) specifies that the following information must be included in all policy form, rule and rate filings filed under Article 36. 11 NCAC 10.1105 specifies that additional detail be provided under each of these items. These materials are contained on the pages indicated.

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NORTH CAROLINA

DWELLING PROPERTY INSURANCE

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NORTH CAROLINA

DWELLING PROPERTY INSURANCE

EARNED PREMIUMS AT ACTUAL AND CURRENT RATE LEVELS

I. Earned Premium at Collected Rate Level

<u>Year</u>	<u>Fire</u>	<u>Extended Coverage</u>
2016	\$ 80,843,061	\$ 171,864,077
2017	82,698,979	171,365,075
2018	84,895,696	171,730,019
2019	76,423,192	186,695,767
2020	67,699,411	202,202,401

II. Earned Premium at Current Rate Level

<u>Year</u>	<u>Fire</u>	<u>Extended Coverage</u>
2016	\$ 69,948,291	\$ 252,039,791
2017	70,323,147	253,352,788
2018	70,688,692	251,653,048
2019	71,318,576	249,111,448
2020	71,710,360	246,871,993

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

PAID/INCURRED LOSSES AND ALLOCATED LOSS ADJUSTMENT EXPENSE

I. Paid Losses

The Rate Bureau is advised by ISO that paid loss and loss adjustment expenses are not available for the experience period of this filing.

II. Incurred Losses ^(a)

<u>Year</u>	<u>Fire</u>	<u>Extended Coverage</u>
2016	\$ 46,108,379	\$ 111,247,876
2017	37,883,568	55,209,743
2018	42,671,325	642,063,260
2019	45,737,761	87,723,769
2020	39,253,532	112,994,969

^(a) Incurred losses are developed, adjusted to a common deductible of \$500, include actual hurricane losses and do not include loss adjustment expense.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

ANTICIPATED LOSS AND LOSS ADJUSTMENT EXPENSE RATIOS

Loss and LAE ratios that were anticipated at the time the rates were promulgated for the experience period:

<u>Rate Filing</u>	Years in Experience <u>Period Affected</u>	<u>Anticipated Loss and LAE Ratios</u>	
		<u>Fire</u>	<u>Extended Coverage</u>
2011	2016 - 2020	0.539	0.166
2018	2019 - 2020	0.604	0.278
2019	2020	0.583	0.288

NORTH CAROLINA
DWELLING PROPERTY INSURANCE
EXCLUDED COMPANIES

(The market shares shown are based on 2020 Dwelling Fire and Extended Coverage written premium.)

The historical experience used to develop the statewide rate-level indications, territory rate-level indications and class indications is based on the experience of companies and residual market entities reporting to the Insurance Services Office (full statistical plan) and the Independent Statistical Service. The historical premium and loss experience utilized in this filing, after accounting for the premium and loss experience of reporting companies whose data were not included (as described below), accounts for 98.56% of the total North Carolina Residential Dwelling insurance market.

The experience reported to the National Insurance Statistical Service is not considered in this review as over 98% of its reported premium is not written using the Rate Bureau's policy program. The experience reported to the American Association of Insurance Services and to Insurance Services Office under the Statistical Agent Plan is excluded because it is not available in sufficient detail. This experience, including the portion reported to the National Insurance Statistical Service which was written using the Rate Bureau's policy program, accounts for approximately 0.54% of the total North Carolina Dwelling insurance market.

Premium and loss experience for the following insurers is not included in the filed experience: Bankers Standard Insurance Company, Federal Insurance Company, Lighthouse Property Insurance Corporation, Pacific Indemnity Company, and Vigilant Insurance Company. The experience for these companies was not included pending resolution of data anomalies.

The loss development factors used in the calculation of the statewide rate level indications are based on ISO North Carolina experience. This experience represents 25.39% of the market. See also the prefiled testimony of P. Anderson and P. Ericksen.

Earned House Years by year are as follows:

<u>Year</u>	<u>Fire</u>	<u>Extended Coverage</u>
2016	628,719	628,094
2017	631,514	627,486
2018	632,088	624,605
2019	634,050	625,133
2020	635,114	622,453

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

**ADJUSTMENTS TO PREMIUMS, LOSSES, LOSS ADJUSTMENT EXPENSES,
EXPENSES AND EXPOSURES**

Adjustments made to premiums, losses, loss adjustment expenses, and expenses are set forth below and in the prefiled testimony of P. Anderson, M. Mao and P. Ericksen.

Losses are adjusted to the \$500 base deductible level by application of loss elimination ratios. These factors are applied on a record-by-record basis and vary by cause of loss.

Losses were developed to an ultimate basis through the application of loss development factors.

Non-hurricane losses for Extended Coverage have been smoothed using an excess procedure.

Additionally, due to the volatile nature and the catastrophic potential of hurricane losses, they have been removed from the actual data. A separate provision for hurricane losses was included based on modeled hurricane losses developed by Aon.

NORTH CAROLINA**DWELLING PROPERTY INSURANCE****EARNED PREMIUM AT PRESENT RATES CALCULATION**

Earned premium at present rates by coverage is calculated by the following formula for each exposure:

Fire Premium = Territory Base Rate × Amount of Insurance Factor × Optional Coverage Factor

Extended Coverage Premium = Territory Base Rate × Amount of Insurance Factor × Optional Coverage Factor

The results are then summed to generate the aggregate earned premium at present rates used in the rate review.

A sample calculation for a single insured is shown below. This sample insured is in Territory 230, Coverage A, \$30,000 amount of insurance, protection class 8, masonry construction, Extended Coverage policy form 1.

Fire:

(1)	Territory 230, Coverage A, protection class 8, masonry construction base rate	\$61
(2)	Amount of insurance factor for \$30,000	1.60
(3)	Optional Coverage Factor	1.00
(4)	Earned premium at present rates (1)×(2)×(3)	\$97.60

Extended Coverage:

(1)	Territory 230, Coverage A, masonry construction, policy form 1 base rate	\$84
(2)	Amount of insurance factor for \$30,000	1.79
(3)	Optional Coverage Factor	1.00
(4)	Earned premium at present rates (1)×(2)×(3)	\$150.36

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

TOP TEN DWELLING FIRE INSURANCE WRITERS

<u>Company Name</u>	2020 Written Premium ^(a)	2020 Written Premium <u>Market Share</u>	2020 Earned Premium ^(a)	2020 Earned Premium <u>Market Share</u>
North Carolina Farm Bureau Mutual Insurance Company	8,134,669	23.31%	8,320,102	23.58%
United Services Automobile Association	5,357,515	15.35%	5,421,309	15.37%
Nationwide Mutual Fire Insurance Company	3,476,804	9.96%	1,752,802	4.97%
American Modern Select Insurance Company	3,249,476	9.31%	3,349,880	9.49%
American Strategic Insurance Company	2,006,764	5.75%	1,934,165	5.48%
USAA Casualty Insurance Company	1,723,389	4.94%	1,673,815	4.74%
USAA General Indemnity Company	1,038,590	2.98%	1,048,414	2.97%
The Cincinnati Insurance Company	985,837	2.82%	1,008,867	2.86%
Lighthouse Property Insurance Corporation	938,114	2.69%	846,930	2.40%
Lititz Mutual Insurance Company	778,907	2.23%	789,302	2.24%
Total	27,690,065	79.34%	26,145,586	74.11%
Grand Total	34,899,565		35,280,654	

^(a) NCRB Expense Experience data call, based on 2020 Annual Statement, Statutory Page 14, Line 1.0 (Residential Only).

Notes:

The Beach and Fair Plans are not included in this report.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

TOP TEN DWELLING EXTENDED COVERAGE INSURANCE WRITERS

<u>Company Name</u>	2020 Written Premium ^(a)	2020 Written Premium Market Share	2020 Earned Premium ^(a)	2020 Earned Premium Market Share
United Services Automobile Association	19,037,158	24.87%	19,294,733	25.32%
North Carolina Farm Bureau Mutual Insurance Company	11,720,704	15.31%	11,953,707	15.69%
Nationwide Mutual Fire Insurance Company	7,431,970	9.71%	3,718,013	4.88%
American Modern Select Insurance Company	6,321,101	8.26%	6,364,967	8.35%
USAA Casualty Insurance Company	4,703,644	6.15%	4,582,649	6.01%
Pennsylvania National Mutual Casualty Insurance Co	3,257,963	4.26%	3,183,834	4.18%
USAA General Indemnity Company	2,965,846	3.88%	3,006,474	3.95%
American Strategic Insurance Company	2,428,298	3.17%	2,316,041	3.04%
The Cincinnati Insurance Company	2,046,116	2.67%	2,058,838	2.70%
Lititz Mutual Insurance Company	1,624,912	2.12%	1,622,545	2.13%
Total	61,537,712	80.40%	58,101,801	76.24%
Grand Total	76,537,561		76,207,864	

^(a) NCRB Expense Experience data call, based on 2020 Annual Statement, Statutory Page 14, Line 2.1 (Residential Only).

Notes:

The Beach and Fair Plans are not included in this report.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES AND LOSS ADJUSTMENT EXPENSE

The data requested by 11 NCAC 10.1105(1)(i)(i,ii) were not being collected or reported in the experience period. The response to 11 NCAC 10.1105(1), page E-4, provides incurred loss and loss adjustment expense information. The response to 11 NCAC 10.1105(1)(l) provides incurred data by cause of loss. Additional information concerning loss adjustment expenses is provided in the response to 11 NCAC 10.1105(7). Additional information concerning loss trend is provided in Section D and in the prefiled testimony of P. Anderson and P. Ericksen.

(iii) Applied Loss Development Factor

<u>Year</u>	<u>Fire</u>	<u>Extended Coverage</u>
2016	1.000	1.000
2017	1.000	1.000
2018	0.997	1.001
2019	0.993	1.004
2020	0.955	1.034

(iv) Loss Adjustment Expense Factor

	<u>Fire</u>	<u>Extended Coverage</u>
Non-Hurricane	1.086	1.104
Hurricane	-	1.060

(v) Applied Loss Trend Factor

<u>Year</u>	<u>Fire</u>	<u>Extended Coverage</u>
2016	1.253	1.549
2017	1.253	1.475
2018	1.253	1.405
2019	1.253	1.338
2020	1.253	1.274

(vi) Trended Incurred Losses and LAE

<u>Year</u>	<u>Fire</u>	<u>Extended Coverage</u>
2016	\$ 62,742,346	\$ 185,855,265
2017	51,550,368	89,886,349
2018	58,065,347	960,206,848
2019	62,238,024	127,989,554
2020	53,414,558	157,242,428

(vii) This information is given in the response to 11 NCAC 10.1105(1), page E-5.

NORTH CAROLINA
DWELLING PROPERTY INSURANCE
EXCESS LOSS PROCEDURE

See Section D and prefiled testimony of P. Anderson, P. Ericksen, and M. Mao.

NORTH CAROLINA
DWELLING PROPERTY INSURANCE
CAUSE OF LOSS DATA

Loss experience by cause of loss is provided on the attached Exhibit (1)(l).

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES BY CAUSE
EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
110	Wind and Hail	2016	5,356,502	1,074	4,987	4.76	237.60
		2017	288,971	32	9,030	0.15	13.17
		2018	919,366	118	7,791	0.56	43.28
		2019	10,276,587	1,122	9,159	5.46	499.86
		2020	1,180,098	127	9,292	0.63	58.91
	Water Damage and Freezing	2016	1,562,049	122	12,804	0.54	69.29
		2017	1,967,336	129	15,251	0.59	89.63
		2018	2,600,662	181	14,368	0.85	122.43
		2019	1,163,959	97	12,000	0.47	56.62
		2020	1,567,952	129	12,155	0.64	78.27
	All Other Physical Damage	2016	205,847	27	7,624	0.12	9.13
		2017	85,083	11	7,735	0.05	3.88
		2018	119,829	15	7,989	0.07	5.64
		2019	231,654	16	14,478	0.08	11.27
		2020	106,136	14	7,581	0.07	5.30
	Vandalism & Malicious Mischief	2016	32,492	3	10,831	0.01	1.44
		2017	0	0	0	0.00	0.00
		2018	54,392	10	5,439	0.05	2.56
		2019	65,057	8	8,132	0.04	3.16
		2020	10,520	3	3,507	0.01	0.53
Total	2016	7,156,890	1,226	5,838	5.44	317.46	
	2017	2,341,390	172	13,613	0.78	106.67	
	2018	3,694,249	324	11,402	1.53	173.91	
	2019	11,737,257	1,243	9,443	6.05	570.91	
	2020	2,864,706	273	10,493	1.36	143.01	
120	Wind and Hail	2016	3,218,348	787	4,089	2.58	105.54
		2017	597,997	104	5,750	0.35	20.00
		2018	187,327,819	8,791	21,309	30.88	6,581.22
		2019	5,372,607	405	13,266	1.48	196.55
		2020	8,966,867	902	9,941	3.41	338.85
	Water Damage and Freezing	2016	882,987	110	8,027	0.36	28.96
		2017	1,299,517	106	12,260	0.35	43.45
		2018	2,445,904	220	11,118	0.77	85.93
		2019	1,177,867	106	11,112	0.39	43.09
		2020	1,102,503	124	8,891	0.47	41.66
	All Other Physical Damage	2016	55,669	11	5,061	0.04	1.83
		2017	54,585	11	4,962	0.04	1.83
		2018	197,691	29	6,817	0.10	6.95
		2019	79,009	17	4,648	0.06	2.89
		2020	85,180	14	6,084	0.05	3.22
	Vandalism & Malicious Mischief	2016	4,141	3	1,380	0.01	0.14
		2017	3,808	3	1,269	0.01	0.13
		2018	38,107	8	4,763	0.03	1.34
		2019	3,581	2	1,791	0.01	0.13
		2020	5,425	2	2,713	0.01	0.21
Total	2016	4,161,145	911	4,568	2.99	136.46	
	2017	1,955,907	224	8,732	0.75	65.40	
	2018	190,009,521	9,048	21,000	31.79	6,675.43	
	2019	6,633,064	530	12,515	1.94	242.66	
	2020	10,159,975	1,042	9,750	3.94	383.93	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES BY CAUSE
EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
130	Wind and Hail	2016	1,579,385	328	4,815	4.21	202.75
		2017	225,578	33	6,836	0.42	28.58
		2018	4,209,684	517	8,143	6.45	525.42
		2019	1,929,689	268	7,200	3.35	241.33
		2020	752,794	115	6,546	1.45	95.21
	Water Damage and Freezing	2016	221,077	19	11,636	0.24	28.38
		2017	133,570	19	7,030	0.24	16.92
		2018	248,645	28	8,880	0.35	31.03
		2019	230,039	19	12,107	0.24	28.77
		2020	115,578	19	6,083	0.24	14.62
	All Other Physical Damage	2016	16,794	6	2,799	0.08	2.16
		2017	13,824	7	1,975	0.09	1.75
		2018	21,655	5	4,331	0.06	2.70
		2019	25,798	7	3,685	0.09	3.23
		2020	35,107	5	7,021	0.06	4.44
	Vandalism & Malicious Mischief	2016	5,303	1	5,303	0.01	0.68
		2017	0	0	0	0.00	0.00
		2018	0	0	0	0.00	0.00
		2019	556	1	556	0.01	0.07
		2020	0	0	0	0.00	0.00
Total	2016	1,822,559	354	5,148	4.54	233.96	
	2017	372,972	59	6,322	0.75	47.25	
	2018	4,479,984	550	8,145	6.86	559.16	
	2019	2,186,082	295	7,410	3.69	273.40	
	2020	903,479	139	6,500	1.76	114.26	
140	Wind and Hail	2016	5,790,189	1,364	4,245	2.69	114.34
		2017	1,241,672	225	5,519	0.44	24.25
		2018	164,798,154	13,160	12,523	25.63	3,209.62
		2019	5,131,088	677	7,579	1.34	101.23
		2020	6,850,561	948	7,226	1.90	137.05
	Water Damage and Freezing	2016	955,019	158	6,044	0.31	18.86
		2017	1,376,954	178	7,736	0.35	26.89
		2018	2,378,513	246	9,669	0.48	46.32
		2019	1,389,244	151	9,200	0.30	27.41
		2020	1,572,264	180	8,735	0.36	31.45
	All Other Physical Damage	2016	251,574	42	5,990	0.08	4.97
		2017	182,116	41	4,442	0.08	3.56
		2018	2,323,063	219	10,608	0.43	45.24
		2019	524,275	55	9,532	0.11	10.34
		2020	337,687	52	6,494	0.10	6.76
	Vandalism & Malicious Mischief	2016	20,666	8	2,583	0.02	0.41
		2017	21,579	10	2,158	0.02	0.42
		2018	24,311	9	2,701	0.02	0.47
		2019	38,583	9	4,287	0.02	0.76
		2020	59,748	10	5,975	0.02	1.20
Total	2016	7,017,448	1,572	4,464	3.10	138.57	
	2017	2,822,321	454	6,217	0.89	55.11	
	2018	169,524,041	13,634	12,434	26.55	3,301.67	
	2019	7,083,190	892	7,941	1.76	139.74	
	2020	8,820,260	1,190	7,412	2.38	176.45	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES BY CAUSE
EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
150	Wind and Hail	2016	3,377,884	880	3,839	2.96	113.58
		2017	687,798	159	4,326	0.52	22.55
		2018	24,998,819	2,965	8,431	9.58	807.46
		2019	3,907,280	670	5,832	2.16	125.91
		2020	4,726,024	815	5,799	2.64	153.18
	Water Damage and Freezing	2016	270,220	59	4,580	0.20	9.09
		2017	438,396	76	5,768	0.25	14.37
		2018	1,407,101	123	11,440	0.40	45.45
		2019	523,556	72	7,272	0.23	16.87
		2020	624,126	102	6,119	0.33	20.23
	All Other Physical Damage	2016	148,198	45	3,293	0.15	4.98
		2017	136,044	40	3,401	0.13	4.46
		2018	608,087	92	6,610	0.30	19.64
		2019	168,035	37	4,541	0.12	5.41
		2020	152,160	37	4,112	0.12	4.93
	Vandalism & Malicious Mischief	2016	8,117	3	2,706	0.01	0.27
		2017	4,088	1	4,088	0.00	0.13
		2018	34,354	8	4,294	0.03	1.11
		2019	9,908	3	3,303	0.01	0.32
		2020	13,908	1	13,908	0.00	0.45
Total	2016	3,804,419	987	3,855	3.32	127.93	
	2017	1,266,326	276	4,588	0.90	41.51	
	2018	27,048,361	3,188	8,484	10.30	873.66	
	2019	4,608,779	782	5,894	2.52	148.51	
	2020	5,516,218	955	5,776	3.10	178.79	
160	Wind and Hail	2016	4,650,347	1,121	4,148	3.93	162.93
		2017	583,712	122	4,785	0.42	20.27
		2018	92,279,559	8,318	11,094	28.97	3,213.52
		2019	1,387,010	221	6,276	0.81	50.73
		2020	3,678,903	580	6,343	2.19	139.06
	Water Damage and Freezing	2016	474,840	84	5,653	0.29	16.64
		2017	683,638	100	6,836	0.35	23.74
		2018	1,267,006	183	6,924	0.64	44.12
		2019	752,505	93	8,091	0.34	27.52
		2020	658,978	85	7,753	0.32	24.91
	All Other Physical Damage	2016	235,094	43	5,467	0.15	8.24
		2017	162,552	38	4,278	0.13	5.64
		2018	1,156,207	165	7,007	0.57	40.26
		2019	426,648	41	10,406	0.15	15.61
		2020	270,218	44	6,141	0.17	10.21
	Vandalism & Malicious Mischief	2016	31,073	11	2,825	0.04	1.09
		2017	32,485	9	3,609	0.03	1.13
		2018	61,144	12	5,095	0.04	2.13
		2019	38,358	9	4,262	0.03	1.40
		2020	65,618	5	13,124	0.02	2.48
Total	2016	5,391,354	1,259	4,282	4.41	188.89	
	2017	1,462,387	269	5,436	0.93	50.78	
	2018	94,763,916	8,678	10,920	30.22	3,300.04	
	2019	2,604,521	364	7,155	1.33	95.27	
	2020	4,673,717	714	6,546	2.70	176.66	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES BY CAUSE
EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
170	Wind and Hail	2016	313,062	100	3,131	2.94	91.91
		2017	96,013	28	3,429	0.79	27.25
		2018	251,327	81	3,103	2.21	68.43
		2019	2,180,604	252	8,653	6.67	576.88
		2020	1,408,907	233	6,047	5.87	354.71
	Water Damage and Freezing	2016	14,135	8	1,767	0.23	4.15
		2017	21,699	6	3,617	0.17	6.16
		2018	57,307	14	4,093	0.38	15.60
		2019	58,319	16	3,645	0.42	15.43
		2020	13,219	5	2,644	0.13	3.33
	All Other Physical Damage	2016	19,909	9	2,212	0.26	5.85
		2017	2,842	1	2,842	0.03	0.81
		2018	16,350	7	2,336	0.19	4.45
		2019	54,427	9	6,047	0.24	14.40
		2020	58,635	15	3,909	0.38	14.76
	Vandalism & Malicious Mischief	2016	0	0	0	0.00	0.00
		2017	737	1	737	0.03	0.21
		2018	2,056	2	1,028	0.05	0.56
		2019	0	0	0	0.00	0.00
		2020	7,103	1	7,103	0.03	1.79
Total	2016	347,106	117	2,967	3.44	101.91	
	2017	121,291	36	3,369	1.02	34.42	
	2018	327,040	104	3,145	2.83	89.04	
	2019	2,293,350	277	8,279	7.33	606.71	
	2020	1,487,864	254	5,858	6.39	374.59	
180	Wind and Hail	2016	5,238,174	1,330	3,938	4.62	181.84
		2017	578,629	153	3,782	0.52	19.60
		2018	6,752,771	1,215	5,558	4.04	224.45
		2019	3,300,276	470	7,022	1.54	107.93
		2020	4,595,795	840	5,471	2.72	148.81
	Water Damage and Freezing	2016	409,515	108	3,792	0.37	14.22
		2017	381,166	85	4,484	0.29	12.91
		2018	580,554	112	5,184	0.37	19.30
		2019	525,983	91	5,780	0.30	17.20
		2020	675,168	129	5,234	0.42	21.86
	All Other Physical Damage	2016	181,260	65	2,789	0.23	6.29
		2017	202,156	44	4,594	0.15	6.85
		2018	228,134	48	4,753	0.16	7.58
		2019	304,858	52	5,863	0.17	9.97
		2020	319,429	58	5,507	0.19	10.34
	Vandalism & Malicious Mischief	2016	32,407	11	2,946	0.04	1.13
		2017	14,317	8	1,790	0.03	0.48
		2018	42,139	7	6,020	0.02	1.40
		2019	23,765	14	1,698	0.05	0.78
		2020	29,826	8	3,728	0.03	0.97
Total	2016	5,861,356	1,514	3,871	5.26	203.48	
	2017	1,176,268	290	4,056	0.98	39.84	
	2018	7,603,598	1,382	5,502	4.59	252.73	
	2019	4,154,882	627	6,627	2.05	135.88	
	2020	5,620,218	1,035	5,430	3.35	181.98	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES BY CAUSE
EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
190	Wind and Hail	2016	3,388,306	929	3,647	7.85	286.27
		2017	272,471	69	3,949	0.57	22.41
		2018	11,012,794	1,595	6,905	12.64	872.92
		2019	752,390	138	5,452	1.07	58.32
		2020	1,185,603	233	5,088	1.77	90.15
	Water Damage and Freezing	2016	57,728	27	2,138	0.23	4.88
		2017	151,951	19	7,997	0.16	12.50
		2018	219,534	37	5,933	0.29	17.40
		2019	142,340	26	5,475	0.20	11.03
		2020	214,531	45	4,767	0.34	16.31
	All Other Physical Damage	2016	91,136	31	2,940	0.26	7.70
		2017	39,802	18	2,211	0.15	3.27
		2018	80,848	24	3,369	0.19	6.41
		2019	91,889	15	6,126	0.12	7.12
		2020	49,042	13	3,772	0.10	3.73
	Vandalism & Malicious Mischief	2016	3,040	4	760	0.03	0.26
		2017	5,731	4	1,433	0.03	0.47
		2018	3,767	4	942	0.03	0.30
		2019	32,173	3	10,724	0.02	2.49
		2020	3,631	3	1,210	0.02	0.28
Total	2016	3,540,210	991	3,572	8.37	299.11	
	2017	469,955	110	4,272	0.90	38.65	
	2018	11,316,943	1,660	6,817	13.16	897.03	
	2019	1,018,792	182	5,598	1.41	78.98	
	2020	1,452,807	294	4,942	2.24	110.46	
200	Wind and Hail	2016	4,260,208	971	4,387	12.95	568.26
		2017	187,395	43	4,358	0.57	24.72
		2018	10,795,537	1,398	7,722	18.16	1,402.02
		2019	586,010	76	7,711	0.98	75.75
		2020	682,190	96	7,106	1.24	87.76
	Water Damage and Freezing	2016	81,452	16	5,091	0.21	10.86
		2017	37,725	12	3,144	0.16	4.98
		2018	123,823	17	7,284	0.22	16.08
		2019	32,729	7	4,676	0.09	4.23
		2020	88,396	17	5,200	0.22	11.37
	All Other Physical Damage	2016	71,569	16	4,473	0.21	9.55
		2017	7,757	4	1,939	0.05	1.02
		2018	73,399	17	4,318	0.22	9.53
		2019	49,877	10	4,988	0.13	6.45
		2020	62,256	6	10,376	0.08	8.01
	Vandalism & Malicious Mischief	2016	867	2	434	0.03	0.12
		2017	13,920	2	6,960	0.03	1.84
		2018	1,920	2	960	0.03	0.25
		2019	3,679	3	1,226	0.04	0.48
		2020	10,557	2	5,279	0.03	1.36
Total	2016	4,414,096	1,005	4,392	13.41	588.78	
	2017	246,797	61	4,046	0.80	32.55	
	2018	10,994,679	1,434	7,667	18.62	1,427.88	
	2019	672,295	96	7,003	1.24	86.90	
	2020	843,399	121	6,970	1.56	108.50	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES BY CAUSE
EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
210	Wind and Hail	2016	992,625	249	3,986	2.76	109.86
		2017	247,276	40	6,182	0.43	26.83
		2018	890,425	162	5,496	1.69	92.71
		2019	822,442	130	6,326	1.32	83.81
		2020	1,541,879	248	6,217	2.46	152.71
	Water Damage and Freezing	2016	113,485	21	5,404	0.23	12.56
		2017	57,345	20	2,867	0.22	6.22
		2018	103,687	23	4,508	0.24	10.80
		2019	113,702	23	4,944	0.23	11.59
		2020	168,047	34	4,943	0.34	16.64
	All Other Physical Damage	2016	72,155	23	3,137	0.25	7.99
		2017	70,746	16	4,422	0.17	7.68
		2018	60,790	10	6,079	0.10	6.33
		2019	61,192	18	3,400	0.18	6.24
		2020	104,027	18	5,779	0.18	10.30
	Vandalism & Malicious Mischief	2016	7,586	6	1,264	0.07	0.84
		2017	709	0	0	0.00	0.08
		2018	12,640	2	6,320	0.02	1.32
		2019	18,412	6	3,069	0.06	1.88
		2020	11,958	4	2,990	0.04	1.18
Total	2016	1,185,851	299	3,966	3.31	131.25	
	2017	376,076	76	4,948	0.82	40.81	
	2018	1,067,542	197	5,419	2.05	111.16	
	2019	1,015,748	177	5,739	1.80	103.51	
	2020	1,825,911	304	6,006	3.01	180.84	
220	Wind and Hail	2016	12,637,953	2,526	5,003	8.31	415.68
		2017	2,066,592	372	5,555	1.22	67.59
		2018	24,994,737	4,124	6,061	13.42	813.23
		2019	1,829,954	304	6,020	0.95	57.44
		2020	4,196,052	645	6,506	2.00	130.02
	Water Damage and Freezing	2016	2,148,770	402	5,345	1.32	70.68
		2017	1,857,765	266	6,984	0.87	60.76
		2018	3,421,504	427	8,013	1.39	111.32
		2019	1,716,689	251	6,839	0.79	53.89
		2020	1,556,491	232	6,709	0.72	48.23
	All Other Physical Damage	2016	705,698	162	4,356	0.53	23.21
		2017	652,105	135	4,830	0.44	21.33
		2018	794,395	151	5,261	0.49	25.85
		2019	553,466	93	5,951	0.29	17.37
		2020	633,847	115	5,512	0.36	19.64
	Vandalism & Malicious Mischief	2016	168,383	34	4,952	0.11	5.54
		2017	186,164	34	5,475	0.11	6.09
		2018	203,039	38	5,343	0.12	6.61
		2019	143,783	38	3,784	0.12	4.51
		2020	309,653	34	9,107	0.11	9.59
Total	2016	15,660,804	3,124	5,013	10.28	515.11	
	2017	4,762,626	807	5,902	2.64	155.76	
	2018	29,413,675	4,740	6,205	15.42	957.01	
	2019	4,243,892	686	6,186	2.15	133.21	
	2020	6,696,043	1,026	6,526	3.18	207.48	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES BY CAUSE
EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
230	Wind and Hail	2016	9,671,213	2,382	4,060	11.98	486.38
		2017	125,590	54	2,326	0.27	6.28
		2018	16,552,227	2,857	5,794	14.38	833.11
		2019	397,596	105	3,787	0.54	20.32
		2020	1,083,994	219	4,950	1.12	55.40
	Water Damage and Freezing	2016	200,226	42	4,767	0.21	10.07
		2017	40,069	14	2,862	0.07	2.00
		2018	182,398	35	5,211	0.18	9.18
		2019	58,076	14	4,148	0.07	2.97
		2020	142,213	23	6,183	0.12	7.27
	All Other Physical Damage	2016	177,011	48	3,688	0.24	8.90
		2017	59,283	21	2,823	0.11	2.96
		2018	104,987	36	2,916	0.18	5.28
		2019	179,057	31	5,776	0.16	9.15
		2020	158,521	40	3,963	0.20	8.10
	Vandalism & Malicious Mischief	2016	30,476	16	1,905	0.08	1.53
		2017	29,474	10	2,947	0.05	1.47
		2018	21,157	7	3,022	0.04	1.06
		2019	38,740	7	5,534	0.04	1.98
		2020	36,453	12	3,038	0.06	1.86
Total	2016	10,078,926	2,488	4,051	12.51	506.89	
	2017	254,416	99	2,570	0.50	12.72	
	2018	16,860,769	2,935	5,745	14.77	848.64	
	2019	673,469	157	4,290	0.80	34.43	
	2020	1,421,181	294	4,834	1.50	72.63	
240	Wind and Hail	2016	3,223,695	621	5,191	2.29	118.93
		2017	737,937	193	3,824	0.70	26.79
		2018	3,786,170	640	5,916	2.30	135.83
		2019	2,805,459	435	6,449	1.54	99.02
		2020	3,194,135	581	5,498	2.03	111.36
	Water Damage and Freezing	2016	363,274	90	4,036	0.33	13.40
		2017	309,015	73	4,233	0.27	11.22
		2018	1,166,521	79	14,766	0.28	41.85
		2019	229,304	56	4,095	0.20	8.09
		2020	740,464	121	6,120	0.42	25.81
	All Other Physical Damage	2016	259,677	54	4,809	0.20	9.58
		2017	275,182	34	8,094	0.12	9.99
		2018	216,515	48	4,511	0.17	7.77
		2019	296,558	45	6,590	0.16	10.47
		2020	316,065	66	4,789	0.23	11.02
	Vandalism & Malicious Mischief	2016	13,182	7	1,883	0.03	0.49
		2017	10,073	5	2,015	0.02	0.37
		2018	24,561	8	3,070	0.03	0.88
		2019	26,652	7	3,807	0.02	0.94
		2020	23,499	9	2,611	0.03	0.82
Total	2016	3,859,828	772	5,000	2.85	142.40	
	2017	1,332,207	305	4,368	1.11	48.37	
	2018	5,193,767	775	6,702	2.78	186.32	
	2019	3,357,973	543	6,184	1.92	118.52	
	2020	4,274,163	777	5,501	2.71	149.01	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

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EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
250	Wind and Hail	2016	3,485,024	802	4,345	4.80	208.63
		2017	645,181	126	5,120	0.74	37.97
		2018	10,779,597	1,680	6,416	9.91	635.55
		2019	1,062,752	159	6,684	0.93	62.06
		2020	2,142,897	337	6,359	1.95	124.13
	Water Damage and Freezing	2016	542,448	103	5,266	0.62	32.47
		2017	562,790	79	7,124	0.46	33.12
		2018	992,986	136	7,301	0.80	58.55
		2019	702,723	96	7,320	0.56	41.04
		2020	1,034,398	100	10,344	0.58	59.92
	All Other Physical Damage	2016	142,963	56	2,553	0.34	8.56
		2017	150,567	38	3,962	0.22	8.86
		2018	318,541	70	4,551	0.41	18.78
		2019	131,044	41	3,196	0.24	7.65
		2020	100,687	30	3,356	0.17	5.83
	Vandalism & Malicious Mischief	2016	25,020	10	2,502	0.06	1.50
		2017	26,731	6	4,455	0.04	1.57
		2018	60,673	13	4,667	0.08	3.58
		2019	28,200	3	9,400	0.02	1.65
		2020	346,107	18	19,228	0.10	20.05
Total	2016	4,195,455	971	4,321	5.81	251.16	
	2017	1,385,269	249	5,563	1.47	81.52	
	2018	12,151,797	1,899	6,399	11.20	716.46	
	2019	1,924,719	299	6,437	1.75	112.40	
	2020	3,624,089	485	7,472	2.81	209.92	
260	Wind and Hail	2016	1,847,647	390	4,738	3.35	158.68
		2017	234,634	57	4,116	0.47	19.29
		2018	1,258,691	248	5,075	2.01	101.78
		2019	526,904	97	5,432	0.69	37.51
		2020	1,070,430	212	5,049	1.52	76.74
	Water Damage and Freezing	2016	39,146	8	4,893	0.07	3.36
		2017	51,206	14	3,658	0.12	4.21
		2018	242,493	26	9,327	0.21	19.61
		2019	270,245	27	10,009	0.19	19.24
		2020	169,946	36	4,721	0.26	12.18
	All Other Physical Damage	2016	231,349	36	6,426	0.31	19.87
		2017	101,020	20	5,051	0.16	8.30
		2018	140,397	25	5,616	0.20	11.35
		2019	166,404	28	5,943	0.20	11.85
		2020	206,068	22	9,367	0.16	14.77
	Vandalism & Malicious Mischief	2016	16,768	3	5,589	0.03	1.44
		2017	17,001	1	17,001	0.01	1.40
		2018	33,620	1	33,620	0.01	2.72
		2019	9,784	2	4,892	0.01	0.70
		2020	19,550	3	6,517	0.02	1.40
Total	2016	2,134,910	437	4,885	3.75	183.35	
	2017	403,861	92	4,390	0.76	33.20	
	2018	1,675,201	300	5,584	2.43	135.46	
	2019	973,337	154	6,320	1.10	69.29	
	2020	1,465,994	273	5,370	1.96	105.10	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

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<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
270	Wind and Hail	2016	3,651,158	673	5,425	2.01	108.88
		2017	3,952,458	528	7,486	1.57	117.32
		2018	3,181,462	448	7,101	1.29	91.72
		2019	4,034,280	504	8,005	1.42	113.48
		2020	5,742,588	729	7,877	2.07	163.37
	Water Damage and Freezing	2016	1,786,687	213	8,388	0.64	53.28
		2017	2,159,092	234	9,227	0.69	64.09
		2018	2,822,195	271	10,414	0.78	81.36
		2019	2,052,697	225	9,123	0.63	57.74
		2020	3,091,830	282	10,964	0.80	87.96
	All Other Physical Damage	2016	1,101,848	187	5,892	0.56	32.86
		2017	1,552,446	156	9,952	0.46	46.08
		2018	1,000,789	161	6,216	0.46	28.85
		2019	901,361	124	7,269	0.35	25.35
		2020	1,534,839	155	9,902	0.44	43.66
	Vandalism & Malicious Mischief	2016	65,077	8	8,135	0.02	1.94
		2017	21,007	10	2,101	0.03	0.62
		2018	142,781	14	10,199	0.04	4.12
		2019	109,502	14	7,822	0.04	3.08
		2020	74,805	10	7,481	0.03	2.13
Total	2016	6,604,770	1,081	6,110	3.22	196.95	
	2017	7,685,003	928	8,281	2.75	228.12	
	2018	7,147,227	894	7,995	2.58	206.05	
	2019	7,097,840	867	8,187	2.44	199.66	
	2020	10,444,062	1,176	8,881	3.35	297.12	
280	Wind and Hail	2016	383,187	66	5,806	0.93	53.92
		2017	129,516	30	4,317	0.42	17.99
		2018	709,034	111	6,388	1.52	96.81
		2019	414,148	51	8,121	0.68	55.47
		2020	807,180	72	11,211	0.94	105.79
	Water Damage and Freezing	2016	126,728	19	6,670	0.27	17.83
		2017	446,043	31	14,388	0.43	61.97
		2018	203,944	36	5,665	0.49	27.85
		2019	190,119	30	6,337	0.40	25.46
		2020	368,932	37	9,971	0.48	48.35
	All Other Physical Damage	2016	57,829	15	3,855	0.21	8.14
		2017	157,291	23	6,839	0.32	21.85
		2018	172,242	25	6,890	0.34	23.52
		2019	195,674	20	9,784	0.27	26.21
		2020	108,184	21	5,152	0.28	14.18
	Vandalism & Malicious Mischief	2016	0	0	0	0.00	0.00
		2017	0	0	0	0.00	0.00
		2018	20,418	2	10,209	0.03	2.79
		2019	0	0	0	0.00	0.00
		2020	0	0	0	0.00	0.00
Total	2016	567,744	100	5,677	1.41	79.89	
	2017	732,850	84	8,724	1.17	101.81	
	2018	1,105,638	174	6,354	2.38	150.96	
	2019	799,941	101	7,920	1.35	107.14	
	2020	1,284,296	130	9,879	1.70	168.32	

NORTH CAROLINA

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<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
290	Wind and Hail	2016	1,207,688	188	6,424	2.03	130.42
		2017	344,941	45	7,665	0.49	37.23
		2018	2,026,984	320	6,334	3.46	218.87
		2019	362,145	38	9,530	0.44	41.51
		2020	454,392	74	6,140	0.90	55.38
	Water Damage and Freezing	2016	230,126	39	5,901	0.42	24.85
		2017	283,931	39	7,280	0.42	30.64
		2018	786,733	84	9,366	0.91	84.95
		2019	199,268	29	6,871	0.33	22.84
		2020	184,944	24	7,706	0.29	22.54
	All Other Physical Damage	2016	98,285	20	4,914	0.22	10.61
		2017	64,791	16	4,049	0.17	6.99
		2018	167,355	25	6,694	0.27	18.07
		2019	56,732	10	5,673	0.11	6.50
		2020	136,944	19	7,208	0.23	16.69
	Vandalism & Malicious Mischief	2016	26,255	4	6,564	0.04	2.84
		2017	36,012	4	9,003	0.04	3.89
		2018	26,333	7	3,762	0.08	2.84
		2019	18,989	2	9,495	0.02	2.18
		2020	0	0	0	0.00	0.00
Total	2016	1,562,354	251	6,225	2.71	168.72	
	2017	729,675	104	7,016	1.12	78.75	
	2018	3,007,405	436	6,898	4.71	324.74	
	2019	637,134	79	8,065	0.91	73.02	
	2020	776,280	117	6,635	1.43	94.61	
300	Wind and Hail	2016	726,389	168	4,324	1.57	67.83
		2017	341,972	84	4,071	0.79	32.33
		2018	3,344,669	569	5,878	5.40	317.30
		2019	289,493	63	4,595	0.57	26.27
		2020	1,750,815	278	6,298	2.35	147.84
	Water Damage and Freezing	2016	66,325	14	4,738	0.13	6.19
		2017	73,617	15	4,908	0.14	6.96
		2018	75,361	19	3,966	0.18	7.15
		2019	53,347	9	5,927	0.08	4.84
		2020	180,402	15	12,027	0.13	15.23
	All Other Physical Damage	2016	103,775	32	3,243	0.30	9.69
		2017	32,006	10	3,201	0.09	3.03
		2018	142,138	32	4,442	0.30	13.48
		2019	119,815	22	5,446	0.20	10.87
		2020	188,506	32	5,891	0.27	15.92
	Vandalism & Malicious Mischief	2016	25,413	4	6,353	0.04	2.37
		2017	306	2	153	0.02	0.03
		2018	4,223	2	2,112	0.02	0.40
		2019	9,950	4	2,488	0.04	0.90
		2020	15,710	5	3,142	0.04	1.33
Total	2016	921,902	218	4,229	2.04	86.09	
	2017	447,901	111	4,035	1.05	42.35	
	2018	3,566,391	622	5,734	5.90	338.34	
	2019	472,605	98	4,823	0.89	42.88	
	2020	2,135,433	330	6,471	2.79	180.31	

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310	Wind and Hail	2016	3,352,135	735	4,561	1.29	58.67
		2017	2,726,450	528	5,164	0.93	48.24
		2018	11,108,403	1,369	8,114	2.46	199.53
		2019	3,873,571	591	6,554	1.07	70.29
		2020	6,223,046	1,049	5,932	1.89	112.14
	Water Damage and Freezing	2016	895,953	135	6,637	0.24	15.68
		2017	1,337,167	153	8,740	0.27	23.66
		2018	1,231,530	206	5,978	0.37	22.12
		2019	777,470	113	6,880	0.21	14.11
		2020	1,408,520	191	7,374	0.34	25.38
	All Other Physical Damage	2016	838,065	191	4,388	0.33	14.67
		2017	878,219	184	4,773	0.33	15.54
		2018	1,533,483	278	5,516	0.50	27.54
		2019	1,004,745	193	5,206	0.35	18.23
		2020	1,649,808	222	7,432	0.40	29.73
	Vandalism & Malicious Mischief	2016	22,380	13	1,722	0.02	0.39
		2017	91,604	18	5,089	0.03	1.62
		2018	57,733	18	3,207	0.03	1.04
		2019	83,368	22	3,789	0.04	1.51
		2020	179,038	28	6,394	0.05	3.23
Total	2016	5,108,533	1,074	4,757	1.88	89.42	
	2017	5,033,440	883	5,700	1.56	89.06	
	2018	13,931,149	1,871	7,446	3.36	250.23	
	2019	5,739,154	919	6,245	1.67	104.14	
	2020	9,460,412	1,490	6,349	2.69	170.48	
320	Wind and Hail	2016	1,485,543	300	4,952	1.10	54.63
		2017	1,556,522	301	5,171	1.12	57.76
		2018	3,480,347	492	7,074	1.86	131.29
		2019	2,160,184	325	6,647	1.25	83.06
		2020	3,271,920	480	6,817	1.93	131.31
	Water Damage and Freezing	2016	363,630	58	6,269	0.21	13.37
		2017	352,723	61	5,782	0.23	13.09
		2018	616,300	82	7,516	0.31	23.25
		2019	398,587	53	7,521	0.20	15.32
		2020	440,405	66	6,673	0.26	17.67
	All Other Physical Damage	2016	380,426	102	3,730	0.38	13.99
		2017	641,180	101	6,348	0.37	23.79
		2018	795,014	135	5,889	0.51	29.99
		2019	608,989	68	8,956	0.26	23.41
		2020	587,377	99	5,933	0.40	23.57
	Vandalism & Malicious Mischief	2016	243,383	9	27,043	0.03	8.95
		2017	27,611	9	3,068	0.03	1.02
		2018	62,681	13	4,822	0.05	2.36
		2019	287,637	9	31,960	0.03	11.06
		2020	16,241	6	2,707	0.02	0.65
Total	2016	2,472,982	469	5,273	1.72	90.95	
	2017	2,578,036	472	5,462	1.75	95.67	
	2018	4,954,342	722	6,862	2.72	186.90	
	2019	3,455,397	455	7,594	1.75	132.85	
	2020	4,315,943	651	6,630	2.61	173.21	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES BY CAUSE
EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
330	Wind and Hail	2016	133,820	47	2,847	1.85	52.71
		2017	118,259	26	4,548	1.04	47.51
		2018	131,672	24	5,486	0.98	53.99
		2019	127,632	26	4,909	1.05	51.34
		2020	246,612	47	5,247	1.87	98.25
	Water Damage and Freezing	2016	527	1	527	0.04	0.21
		2017	136,588	2	68,294	0.08	54.88
		2018	20,990	4	5,248	0.16	8.61
		2019	18,992	2	9,496	0.08	7.64
		2020	37,443	5	7,489	0.20	14.92
	All Other Physical Damage	2016	46,620	7	6,660	0.28	18.36
		2017	63,841	7	9,120	0.28	25.65
		2018	23,440	7	3,349	0.29	9.61
		2019	37,860	11	3,442	0.44	15.23
		2020	31,115	6	5,186	0.24	12.40
	Vandalism & Malicious Mischief	2016	0	0	0	0.00	0.00
		2017	0	0	0	0.00	0.00
		2018	0	0	0	0.00	0.00
		2019	421	0	0	0.00	0.17
		2020	721	0	0	0.00	0.29
Total	2016	180,967	55	3,290	2.17	71.27	
	2017	318,688	35	9,105	1.41	128.04	
	2018	176,102	35	5,031	1.44	72.20	
	2019	184,905	39	4,741	1.57	74.38	
	2020	315,891	58	5,446	2.31	125.85	
340	Wind and Hail	2016	3,904,500	724	5,393	1.43	77.05
		2017	4,492,437	756	5,942	1.52	90.52
		2018	7,122,096	942	7,561	1.94	146.30
		2019	3,666,006	505	7,259	1.05	76.45
		2020	8,409,891	1,022	8,229	2.17	178.25
	Water Damage and Freezing	2016	1,509,633	205	7,364	0.40	29.79
		2017	1,583,306	197	8,037	0.40	31.90
		2018	2,184,163	233	9,374	0.48	44.87
		2019	1,627,143	188	8,655	0.39	33.93
		2020	2,348,295	223	10,530	0.47	49.77
	All Other Physical Damage	2016	2,424,315	347	6,986	0.68	47.84
		2017	1,772,083	283	6,262	0.57	35.71
		2018	2,353,196	287	8,199	0.59	48.34
		2019	2,160,156	214	10,094	0.45	45.05
		2020	1,718,403	249	6,901	0.53	36.42
	Vandalism & Malicious Mischief	2016	114,610	28	4,093	0.06	2.26
		2017	153,069	30	5,102	0.06	3.08
		2018	136,572	27	5,058	0.06	2.81
		2019	237,712	21	11,320	0.04	4.96
		2020	184,792	18	10,266	0.04	3.92
Total	2016	7,953,058	1,304	6,099	2.57	156.95	
	2017	8,000,895	1,266	6,320	2.55	161.22	
	2018	11,796,027	1,489	7,922	3.06	242.31	
	2019	7,691,017	928	8,288	1.94	160.38	
	2020	12,661,381	1,512	8,374	3.20	268.36	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES BY CAUSE
EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
350	Wind and Hail	2016	880,452	206	4,274	0.81	34.73
		2017	1,609,566	254	6,337	1.03	64.97
		2018	2,610,022	345	7,565	1.43	108.14
		2019	814,368	152	5,358	0.63	33.97
		2020	2,240,382	400	5,601	1.70	95.33
	Water Damage and Freezing	2016	326,312	42	7,769	0.17	12.87
		2017	318,781	44	7,245	0.18	12.87
		2018	379,617	49	7,747	0.20	15.73
		2019	498,838	61	8,178	0.25	20.81
		2020	585,818	66	8,876	0.28	24.93
	All Other Physical Damage	2016	279,670	65	4,303	0.26	11.03
		2017	490,560	92	5,332	0.37	19.80
		2018	712,901	100	7,129	0.41	29.54
		2019	485,375	55	8,825	0.23	20.25
		2020	566,696	66	8,586	0.28	24.11
	Vandalism & Malicious Mischief	2016	61,364	10	6,136	0.04	2.42
		2017	63,364	12	5,280	0.05	2.56
		2018	3,752	3	1,251	0.01	0.16
		2019	27,536	9	3,060	0.04	1.15
		2020	30,765	8	3,846	0.03	1.31
Total	2016	1,547,798	323	4,792	1.27	61.05	
	2017	2,482,271	402	6,175	1.62	100.19	
	2018	3,706,292	497	7,457	2.06	153.57	
	2019	1,826,117	277	6,592	1.16	76.17	
	2020	3,423,661	540	6,340	2.30	145.68	
360	Wind and Hail	2016	1,458,602	341	4,277	0.70	30.05
		2017	3,145,521	555	5,668	1.17	66.45
		2018	2,820,347	380	7,422	0.83	61.37
		2019	1,874,980	333	5,631	0.71	40.17
		2020	3,024,212	479	6,314	1.02	64.15
	Water Damage and Freezing	2016	507,796	89	5,706	0.18	10.46
		2017	1,026,342	104	9,869	0.22	21.68
		2018	997,028	147	6,783	0.32	21.70
		2019	762,580	86	8,867	0.18	16.34
		2020	1,022,438	128	7,988	0.27	21.69
	All Other Physical Damage	2016	721,115	121	5,960	0.25	14.85
		2017	877,055	110	7,973	0.23	18.53
		2018	900,169	160	5,626	0.35	19.59
		2019	768,928	114	6,745	0.24	16.47
		2020	588,919	92	6,401	0.20	12.49
	Vandalism & Malicious Mischief	2016	19,725	4	4,931	0.01	0.41
		2017	42,236	9	4,693	0.02	0.89
		2018	53,161	7	7,594	0.02	1.16
		2019	40,509	10	4,051	0.02	0.87
		2020	74,918	13	5,763	0.03	1.59
Total	2016	2,707,238	555	4,878	1.14	55.77	
	2017	5,091,154	778	6,544	1.64	107.55	
	2018	4,770,705	694	6,874	1.51	103.81	
	2019	3,446,997	543	6,348	1.16	73.85	
	2020	4,710,487	712	6,616	1.51	99.92	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES BY CAUSE
EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
370	Wind and Hail	2016	55,331	15	3,689	0.46	17.14
		2017	32,425	13	2,494	0.42	10.43
		2018	143,251	22	6,511	0.74	48.15
		2019	119,579	21	5,694	0.68	38.87
		2020	76,076	13	5,852	0.41	23.86
	Water Damage and Freezing	2016	9,788	6	1,631	0.19	3.03
		2017	47,530	7	6,790	0.23	15.29
		2018	125,968	13	9,690	0.44	42.34
		2019	103,815	6	17,303	0.20	33.75
		2020	54,266	6	9,044	0.19	17.02
	All Other Physical Damage	2016	36,845	4	9,211	0.12	11.41
		2017	40,786	3	13,595	0.10	13.12
		2018	46,579	9	5,175	0.30	15.66
		2019	43,157	4	10,789	0.13	14.03
		2020	42,379	4	10,595	0.13	13.29
	Vandalism & Malicious Mischief	2016	93	0	0	0.00	0.03
		2017	2,185	1	2,185	0.03	0.70
		2018	368	1	368	0.03	0.12
		2019	1,053	1	1,053	0.03	0.34
		2020	0	0	0	0.00	0.00
Total	2016	102,057	25	4,082	0.77	31.61	
	2017	122,926	24	5,122	0.77	39.54	
	2018	316,166	45	7,026	1.51	106.27	
	2019	267,604	32	8,363	1.04	87.00	
	2020	172,721	23	7,510	0.72	54.18	
380	Wind and Hail	2016	214,908	31	6,933	0.37	25.69
		2017	335,020	44	7,614	0.53	40.56
		2018	326,736	40	8,168	0.49	40.04
		2019	276,161	52	5,311	0.63	33.22
		2020	851,654	65	13,102	0.77	101.46
	Water Damage and Freezing	2016	190,247	21	9,059	0.25	22.75
		2017	164,351	17	9,668	0.21	19.90
		2018	297,006	27	11,000	0.33	36.40
		2019	92,094	14	6,578	0.17	11.08
		2020	82,251	13	6,327	0.15	9.80
	All Other Physical Damage	2016	91,545	14	6,539	0.17	10.95
		2017	91,275	17	5,369	0.21	11.05
		2018	165,241	25	6,610	0.31	20.25
		2019	94,868	12	7,906	0.14	11.41
		2020	79,494	9	8,833	0.11	9.47
	Vandalism & Malicious Mischief	2016	562	0	0	0.00	0.07
		2017	0	0	0	0.00	0.00
		2018	1,715	1	1,715	0.01	0.21
		2019	11,127	4	2,782	0.05	1.34
		2020	19,673	1	19,673	0.01	2.34
Total	2016	497,262	66	7,534	0.79	59.45	
	2017	590,646	78	7,572	0.94	71.52	
	2018	790,698	93	8,502	1.14	96.90	
	2019	474,250	82	5,784	0.99	57.04	
	2020	1,033,072	88	11,739	1.05	123.07	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

LOSSES BY CAUSE
EXTENDED COVERAGE

<u>Territory</u>	<u>Cause of Loss</u>	<u>Year</u>	<u>Incurred Losses</u>	<u>Incurred Claims</u>	<u>Average Loss</u>	<u>Frequency per-100</u>	<u>Pure Premium</u>
390	Wind and Hail	2016	194,524	31	6,275	0.37	23.19
		2017	249,683	49	5,096	0.60	30.60
		2018	264,499	34	7,779	0.42	32.90
		2019	232,549	40	5,814	0.49	28.75
		2020	440,789	66	6,679	0.83	55.20
	Water Damage and Freezing	2016	72,002	6	12,000	0.07	8.58
		2017	195,292	17	11,488	0.21	23.94
		2018	76,760	12	6,397	0.15	9.55
		2019	107,731	13	8,287	0.16	13.32
		2020	66,328	14	4,738	0.18	8.31
	All Other Physical Damage	2016	79,023	19	4,159	0.23	9.42
		2017	201,214	25	8,049	0.31	24.66
		2018	276,901	20	13,845	0.25	34.44
		2019	103,843	15	6,923	0.19	12.84
		2020	94,624	17	5,566	0.21	11.85
	Vandalism & Malicious Mischief	2016	43,305	4	10,826	0.05	5.16
		2017	0	0	0	0.00	0.00
		2018	51,875	2	25,938	0.02	6.45
		2019	5,335	3	1,778	0.04	0.66
		2020	9,565	1	9,565	0.01	1.20
Total	2016	388,854	60	6,481	0.72	46.35	
	2017	646,189	91	7,101	1.12	79.20	
	2018	670,035	68	9,853	0.85	83.34	
	2019	449,458	71	6,330	0.88	55.56	
	2020	611,306	98	6,238	1.23	76.55	
Statewide	Wind and Hail	2016	86,678,799	19,379	4,473	3.09	138.00
		2017	27,852,216	5,023	5,545	0.80	44.39
		2018	598,877,199	52,965	11,307	8.48	958.81
		2019	60,513,744	8,230	7,353	1.32	96.80
		2020	80,796,686	11,905	6,787	1.91	129.80
	Water Damage and Freezing	2016	14,422,125	2,225	6,482	0.35	22.96
		2017	17,494,905	2,117	8,264	0.34	27.88
		2018	27,256,233	3,070	8,878	0.49	43.64
		2019	15,969,961	1,974	8,090	0.32	25.55
		2020	20,316,146	2,451	8,289	0.39	32.64
	All Other Physical Damage	2016	9,125,264	1,798	5,075	0.29	14.53
		2017	9,058,411	1,506	6,015	0.24	14.44
		2018	14,750,336	2,225	6,629	0.36	23.62
		2019	9,925,694	1,377	7,208	0.22	15.88
		2020	10,322,353	1,540	6,703	0.25	16.58
	Vandalism & Malicious Mischief	2016	1,021,688	206	4,960	0.03	1.63
		2017	804,211	189	4,255	0.03	1.28
		2018	1,179,492	228	5,173	0.04	1.89
		2019	1,314,370	214	6,142	0.03	2.10
		2020	1,559,784	205	7,609	0.03	2.51
Total	2016	111,247,876	23,608	4,712	3.76	177.12	
	2017	55,209,743	8,835	6,249	1.41	87.99	
	2018	642,063,260	58,488	10,978	9.36	1,027.95	
	2019	87,723,769	11,795	7,437	1.89	140.33	
	2020	112,994,969	16,101	7,018	2.59	181.53	

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

2. CREDIBILITY FACTOR DEVELOPMENT AND APPLICATION

The volume of North Carolina data is sufficiently large that it is fully credible in both the statewide and class rate level reviews.

To distribute the statewide change by territory, a credibility procedure was used on the five-year (non-hurricane for Extended Coverage) loss costs. The credibility standard used was based on the 'frequency with severity modification' model discussed in "Credibility of the Pure Premium" by Mayerson, Bowers and Jones. The full credibility standard is based on a normal distribution with a 90% probability of meeting the test and a 10% maximum departure from the expected value, translated to house years. The full credibility standards are 500,000 house years for Fire and 330,000 house years for Extended Coverage. Partial credibility (Z_p) is calculated using the square root rule:

$$Z_p = \sqrt{\frac{\text{Five Year House Years}}{\text{Full Credibility Standard}}} \quad (\text{truncated to one decimal place})$$

The Rate Bureau has used the same credibility procedure in all dwelling insurance rate filings made in the last three years.

See Section D and prefiled testimony of P. Anderson and P. Ericksen.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

3. LOSS DEVELOPMENT FACTOR DERIVATION AND APPLICATION ON BOTH PAID AND INCURRED BASES AND IN BOTH NUMBERS AND DOLLARS OF CLAIMS

See Section D and prefiled testimony of P. Ericksen.

Paragraphs (3)(a) through (3)(g) are not applicable to dwelling insurance.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

4. TRENDING FACTOR DEVELOPMENT AND APPLICATION
 - (a) See Section D and prefiled testimony of P. Anderson and P. Ericksen. The Rate Bureau made a dwelling insurance rate level filing in 2020 that used the same exposure trend procedure.
 - (b) See prefiled testimony of P. Anderson and P. Ericksen.
 - (c) Not applicable for dwelling insurance.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

5. CHANGES IN PREMIUM BASE RESULTING FROM RATING EXPOSURE TRENDS
 - (a) See Section D and prefiled testimony of P. Anderson and P. Ericksen. The Rate Bureau made a dwelling insurance rate level filing in 2020 that used the same exposure trend procedure.
 - (b) Not applicable to dwelling insurance.

NORTH CAROLINA
DWELLING PROPERTY INSURANCE

6. LIMITING FACTOR DEVELOPMENT AND APPLICATION

- (a) There were no limitations.
- (b) There were no limitations.
- (c) See pages C-13-17.
- (d) There were no limitations.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

7. OVERHEAD EXPENSE DEVELOPMENT AND APPLICATION OF COMMISSION AND BROKERAGE, OTHER ACQUISITION EXPENSES, GENERAL EXPENSES, TAXES, LICENSES, AND FEES
 - (a) Exhibit (7)(a) provides all information relating to expense provisions contained in the filing. The Rate Bureau made a dwelling insurance rate level filing in 2020 that used the same procedure for overhead expense development and application of commission and brokerage, other acquisition expense, general expenses, taxes, licenses and fees.
 - (b) Not applicable to dwelling insurance.
 - (c) Not applicable to dwelling insurance.

NORTH CAROLINA
DWELLING PROPERTY INSURANCE

The following provides a description of the derivation of dwelling insurance expense provisions. The underlying expense data are provided by the North Carolina Rate Bureau and are displayed on pages D-22-27.

The filed expense provision methodology makes a distinction between those provisions that require trending and those that do not. For example, since commission and brokerage, and taxes, licenses and fees vary directly with premium, no additional trend is required. In contrast, general expense, other acquisition expense, and loss adjustment expense do not vary directly with premium and are subject to trend.

The provisions for commission and brokerage expenses, 11.5% of written premium for Fire and 9.2% of written premium for Extended Coverage, and the provisions for taxes, licenses, and fees, 2.9% of written premium for Fire and 2.6% of written premium for Extended Coverage, are based on the data shown on pages D-22 and D-25 for the latest three years.

Since general expenses and other acquisition expenses are relative to earned premiums and loss adjustment expenses are relative to losses, separate trend factors are required for premiums, losses, and expenses.

General Expense and Other Acquisition Expense - Based on the 2018-2020 experience on pages D-22 and D-25, the selected loadings for general expenses are 5.7% of earned premium for Fire and 4.5% of earned premium for Extended Coverage, and the selected loadings for other acquisition expenses are 8.5% of earned premium for Fire and 7.5% of earned premium for Extended Coverage. Since these expenses are incurred throughout the twelve-month effective period, both the numerator and denominator of these factors are trended to 8/1/2023 (six months beyond the 2/1/2023 trend effective date).

The average date of payment of the 2018-2020 expenses used to calculate the provisions is 7/1/2019. Similarly, the average date of earning of the 2018-2020 premiums is 7/1/2019. Assuming policies are written with an effective period of one year, the average date of writing is therefore six months earlier, or 1/1/2019. The average date of writing of policies under the proposed rates, and the average date of payment of the expenses on these policies, is six months after the assumed effective date of 2/1/2023, or 8/1/2023. Therefore, the expenses in the numerator are projected 49 months (from 7/1/2019 to 8/1/2023) and the premiums in the denominator are projected 55 months (from 1/1/2019 to 8/1/2023).

The trend factor for expenses in the numerator is based on the rates of change inherent in the Consumer Price Index - All Items, the Consumer Price Index - All Items less Energy and the Compensation Cost Index, displayed on pages D-20-21. Based on a weighted average of the rates of change in these indices, an average annual change of 4.0% was selected. This average annual change is projected 49 months (from 7/1/2019 to 8/1/2023).

To trend the premiums in the denominator, the 2019 Premium Trend Factor is applied. The Premium Trend Factors are shown on page D-18.

NORTH CAROLINA**DWELLING PROPERTY INSURANCE**Loss Adjustment Expense

Fire: Based on the 2016-2020 experience shown on page D-24, loss adjustment expenses (both allocated and unallocated) average 8.7% of incurred losses, after excluding the highest- and lowest-valued years. The average date of loss in these data is 7/1/2018. Both the numerator and denominator are trended 67 months, from 7/1/2018 to 2/1/2024 (12 months beyond the trend effective date of 2/1/2023).

Extended Coverage: Based on the 2016-2020 experience shown on page D-27, loss adjustment expenses (both allocated and unallocated) average 11.7% of incurred losses, after excluding the highest- and lowest-valued years. The average date of loss in these data is 7/1/2018. Both the numerator and denominator are trended 67 months, from 7/1/2018 to 2/1/2024 (12 months beyond the trend effective date of 2/1/2023).

Please note that a separate loss adjustment expense factor is used for modeled hurricane losses. (See prefiled testimony of P. Anderson and M. Mao.)

The trend factor used for expenses in the numerator is determined in a similar way as for general and other acquisition expenses. The 4.0% selected average annual change is projected 67 months for Fire and Extended Coverage (from 7/1/2018 to 2/1/2024).

To trend the losses in the denominator, the 2018 Loss Trend Factor is applied. The Loss Trend Factors are shown on page D-16.

No alternate expense trend methodology has been considered within the last three years.

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

8. PERCENT RATE CHANGE

The overall statewide rate change by coverage is shown on page A-2. The statewide rate changes are applied uniformly by coverage amount, protection class, construction and deductible.

The proposed rate changes are dependent on the actual implementation date of the new rates, because any such change will affect all of the trending periods used in the filing. Any change in the trending periods will affect all of the losses, fixed expenses, and premiums used in the calculation of the rate level indication.

If the effective date were to be changed, advance notice of one hundred twenty (120) days is required for an orderly implementation of the change in rates. This is the amount of time required to calculate the new rates based on the new effective date and distribute the necessary information to member companies.

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DWELLING PROPERTY INSURANCE

9. FINAL PROPOSED RATES

The proposed rates are shown in Section B.

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DWELLING PROPERTY INSURANCE

10. INVESTMENT EARNINGS, CONSISTING OF INVESTMENT INCOME AND REALIZED PLUS UNREALIZED CAPITAL GAINS, FROM LOSS, LOSS EXPENSE AND UNEARNED PREMIUM RESERVES

(a) See attached Exhibit (10)(a) and the prefiled testimony of P. Anderson, P. Ericksen and G. Zanjani.

(b) Not applicable to dwelling insurance.

(c) Not applicable to dwelling insurance.

NORTH CAROLINA

DWELLING FIRE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

A. Unearned Premium Reserve

1.	Direct Earned Premium for Accident Year Ended 12/31/20	\$35,280,654
2.	Mean Unearned Premium Reserve, (1) x 0.4803	\$16,945,298
3.	Deduction for Prepaid Expenses	
	Commission and Brokerage	11.59%
	Taxes, Licenses and Fees	2.54%
	1/2 General Expenses	3.36%
	1/2 Other Acquisition	3.54%
	Total	21.03%
4.	(2) x (3)	\$3,563,596
5.	Net Subject to Investment, (2) - (4)	\$13,381,702

B. Delayed Remission of Premium (Agents' Balances)

1.	Direct Earned Premium (A-1)	\$35,280,654
2.	Average Agents' Balances	0.196
3.	Delayed Remission, (1) x (2)	\$6,915,008

C. Loss Reserve

1.	Direct Earned Premium (A-1)	\$35,280,654
2.	Expected Incurred Losses and Loss Adjustment Expense, (1) x 0.5884	\$20,759,137
3.	Expected Mean Loss Reserves, (2) x 0.561	\$11,645,876

D. Net Subject to Investment, (A-5) - (B-3) + (C-3) \$18,112,570

E. Average Rate of Return 2.75%

F. Investment Earnings on Net Subject to
Investment, (D) x (E) \$498,096G. Average Rate of Return as a Percent of Direct
Earned Premium, (F) / (A-1) 1.41%H. Average Rate of Return as a Percent of Direct Earned
Premium after Federal Income Taxes, (G) x (1 - 0.156) 1.19%

NORTH CAROLINA

DWELLING EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

A. Unearned Premium Reserve

1.	Direct Earned Premium for Accident Year Ended 12/31/20	\$76,207,864
2.	Mean Unearned Premium Reserve, (1) x 0.4826	\$36,777,915
3.	Deduction for Prepaid Expenses	
	Commission and Brokerage	9.47%
	Taxes, Licenses and Fees	2.32%
	1/2 General Expenses	3.12%
	1/2 Other Acquisition	4.37%
	Total	19.28%
4.	(2) x (3)	\$7,090,782
5.	Net Subject to Investment, (2) - (4)	\$29,687,133

B. Delayed Remission of Premium (Agents' Balances)

1.	Direct Earned Premium (A-1)	\$76,207,864
2.	Average Agents' Balances	0.177
3.	Delayed Remission, (1) x (2)	\$13,488,792

C. Loss Reserve

1.	Direct Earned Premium (A-1)	\$76,207,864
2.	Expected Incurred Losses and Loss Adjustment Expense, (1) x 0.2386	\$18,183,196
3.	Expected Mean Loss Reserves, (2) x 0.998	\$18,146,830

D. Net Subject to Investment, (A-5) - (B-3) + (C-3) \$34,345,171

E. Average Rate of Return 2.75%

F. Investment Earnings on Net Subject to
Investment, (D) x (E) \$944,492

G. Average Rate of Return as a Percent of Direct
Earned Premium, (F) / (A-1) 1.24%

H. Average Rate of Return as a Percent of Direct Earned
Premium after Federal Income Taxes, (G) x (1 - 0.156) 1.05%

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line A-1

Direct earned premiums are the earned premiums for dwelling insurance in North Carolina from Statutory Page 14 of the Annual Statement.

Line A-2

The mean unearned premium reserve is determined by multiplying the direct earned premiums in line (1) by the ratio of the mean unearned premium reserve to the collected earned premium for calendar year ended 12/31/20 for all companies writing Dwelling insurance in North Carolina. These data are from Statutory Page 14 of the Annual Statement.

	<u>Fire</u>	<u>EC</u>
1. Collected Earned Premium for Calendar Year ended 12/31/20	\$243,038,711	\$319,147,476
2. Unearned Premium Reserve as of 12/31/19	\$111,854,920	\$148,478,317
3. Unearned Premium Reserve as of 12/31/20	\$121,594,938	\$159,573,973
4. Mean Unearned Premium Reserve, 1/2 [(2) + (3)]	\$116,724,929	\$154,026,145
5. Ratio, (4) ÷ (1)	0.4803	0.4826

Line A-3

Deduction for prepaid expenses:

Production costs and a large part of the other company expenses in connection with the writing and handling of dwelling policies, exclusive of claim adjustment expenses, are incurred when the policy is written and before the premium is paid. The deduction for these expenses is determined from data provided by the NCRB for the year ended 12/31/20.

Line B-2

Delayed remission of premium:

This deduction is necessary because of delay in remission and collection of premium to the companies, which amounts to approximately 50-75 days after the effective dates of the policies. Therefore, funds for the unearned premium reserve required during the initial days of all policies must be taken from the company's surplus.

1. Agents' balances for premiums due less than 90 days as a ratio to net written premium (based on data for all companies writing dwelling insurance in North Carolina)	0.1919	0.1729
2. Factor to include effect of agents' balances or uncollected premiums overdue for more than 90 days (based on data provided by A. M. Best)	1.021	1.021
3. Factor for agents' balances, (1) x (2)	0.196	0.177

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line C-2

The expected loss and loss adjustment expense ratio reflects the expense provisions for the year ended 12/31/20.

Line C-3

The mean loss reserve is determined by multiplying the incurred losses in line (2) by the North Carolina ratio of the mean loss reserves to the incurred losses in 2020 for dwelling insurance. This ratio is based on North Carolina companies' Statutory Page 14 annual statement data and has been adjusted to include loss adjustment expense reserves.

	<u>Fire</u>	<u>EC</u>
1. Incurred Losses for Calendar Year 2020	\$104,935,680	\$130,492,323
2. Loss Reserves as of 12/31/19	\$51,559,349	\$140,237,573
3. Loss Reserves as of 12/31/20	\$61,323,461	\$109,778,079
4. Mean Loss Reserve 2020, 1/2 [(2) + (3)]	\$56,441,405	\$125,007,826
5. Ratio, (4) ÷ (1)	0.538	0.958
6. Ratio of LAE Reserves to Loss Reserves (a)	0.188	0.188
7. Ratio of Incurred LAE to Incurred Losses (a)	0.140	0.140
8. Loss and LAE Reserve, [(5)x(1.0+(6))]/(1.0+(7))]	0.561	0.998

(a) Based on 2020 All-Industry Insurance Expense Exhibit (source: A.M. Best)

Line E

The rate of return is the ratio of net investment income earned to mean cash and invested assets. Net investment income is computed for all companies writing dwelling insurance in North Carolina as follows:

<u>Year</u>	<u>Net Investment Income Earned</u>	<u>Mean Cash and Invested Assets</u>	<u>Rate of Return</u>
2020	\$54,400,619	\$1,976,918,120	2.75%

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line H

The average rate of Federal income tax was determined by applying the average tax rate for net investment income and the current tax rate applicable to realized capital gains (or losses) to the rates of return as calculated above.

		<u>Rate of Return</u>	<u>Federal Income Tax Rate</u>
Net Investment Income Earned		2.75%	0.156
The average rate of Federal income tax was determined by applying current tax rates to the distribution of investment income earned for all companies. These data are for 2020 from Best's Aggregates and Averages, Underwriting and Investment Exhibit, Part 1, Column 8.			
Bonds	Taxable	\$28,339,436	0.210
	Non-Taxable	\$7,246,012	-
	Sub-Total	\$35,585,448	0.167
Stocks	Taxable (a)	\$8,494,491	0.105
	Non-Taxable	\$2,429,550	-
	Sub-Total	\$10,924,041	0.082
Mortgage Loans		\$1,029,624	
Real Estate		\$1,999,576	
Collateral Loans		\$17,597	
Cash on Deposit		\$820,107	
Short Term Investments		(\$183,091)	
All Other		\$10,043,526	
Sub-Total		\$13,727,339	0.210
Total		\$60,236,828	0.161
Investment Deductions		\$5,836,159	0.210
Net Investment Income Earned		\$54,400,669	0.156

(a) Only 50% of dividend income on stock is subject to the full corporate income tax rate of 21%. The applicable tax rate is thus 10.5% (.21 x .5 = 10.5%)

NORTH CAROLINA

DWELLING FIRE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

A. Unearned Premium Reserve

1.	Direct Earned Premium for Accident Year Ended 12/31/19	\$41,317,024
2.	Mean Unearned Premium Reserve, (1) x 0.4813	\$19,885,884
3.	Deduction for Prepaid Expenses	
	Commission and Brokerage	12.22%
	Taxes, Licenses and Fees	2.37%
	1/2 General Expenses	2.20%
	1/2 Other Acquisition	3.56%
	Total	20.35%
4.	(2) x (3)	\$4,046,777
5.	Net Subject to Investment, (2) - (4)	\$15,839,107

B. Delayed Remission of Premium (Agents' Balances)

1.	Direct Earned Premium (A-1)	\$41,317,024
2.	Average Agents' Balances	0.203
3.	Delayed Remission, (1) x (2)	\$8,387,356

C. Loss Reserve

1.	Direct Earned Premium (A-1)	\$41,317,024
2.	Expected Incurred Losses and Loss Adjustment Expense, (1) x 0.5996	\$24,773,688
3.	Expected Mean Loss Reserves, (2) x 0.964	\$23,881,835

D. Net Subject to Investment, (A-5) - (B-3) + (C-3) \$31,333,586

E. Average Rate of Return 3.14%

F. Investment Earnings on Net Subject to
Investment, (D) x (E) \$983,875G. Average Rate of Return as a Percent of Direct
Earned Premium, (F) / (A-1) 2.38%H. Average Rate of Return as a Percent of Direct Earned
Premium after Federal Income Taxes, (G) x (1 - 0.159) 2.00%

NORTH CAROLINA

DWELLING EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

A. Unearned Premium Reserve

1.	Direct Earned Premium for Accident Year Ended 12/31/19	\$67,085,445
2.	Mean Unearned Premium Reserve, (1) x 0.4814	\$32,294,933
3.	Deduction for Prepaid Expenses	
	Commission and Brokerage	9.29%
	Taxes, Licenses and Fees	2.15%
	1/2 General Expenses	2.80%
	1/2 Other Acquisition	4.95%
	Total	19.19%
4.	(2) x (3)	\$6,197,398
5.	Net Subject to Investment, (2) - (4)	\$26,097,535

B. Delayed Remission of Premium (Agents' Balances)

1.	Direct Earned Premium (A-1)	\$67,085,445
2.	Average Agents' Balances	0.177
3.	Delayed Remission, (1) x (2)	\$11,874,124

C. Loss Reserve

1.	Direct Earned Premium (A-1)	\$67,085,445
2.	Expected Incurred Losses and Loss Adjustment Expense, (1) x 0.2374	\$15,926,085
3.	Expected Mean Loss Reserves, (2) x 4.566	\$72,718,504

D. Net Subject to Investment, (A-5) - (B-3) + (C-3) \$86,941,915

E. Average Rate of Return 3.14%

F. Investment Earnings on Net Subject to
Investment, (D) x (E) \$2,729,976

G. Average Rate of Return as a Percent of Direct
Earned Premium, (F) / (A-1) 4.07%

H. Average Rate of Return as a Percent of Direct Earned
Premium after Federal Income Taxes, (G) x (1 - 0.159) 3.42%

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line A-1

Direct earned premiums are the earned premiums for dwelling insurance in North Carolina from Statutory Page 14 of the Annual Statement.

Line A-2

The mean unearned premium reserve is determined by multiplying the direct earned premiums in line (1) by the ratio of the mean unearned premium reserve to the collected earned premium for calendar year ended 12/31/19 for all companies writing Dwelling insurance in North Carolina. These data are from Statutory Page 14 of the Annual Statement.

	<u>Fire</u>	<u>EC</u>
1. Collected Earned Premium for Calendar Year ended 12/31/19	\$230,415,747	\$287,004,527
2. Unearned Premium Reserve as of 12/31/18	\$109,932,656	\$127,836,607
3. Unearned Premium Reserve as of 12/31/19	\$111,854,920	\$148,478,317
4. Mean Unearned Premium Reserve, 1/2 [(2) + (3)]	\$110,893,788	\$138,157,462
5. Ratio, (4) ÷ (1)	0.4813	0.4814

Line A-3

Deduction for prepaid expenses:

Production costs and a large part of the other company expenses in connection with the writing and handling of dwelling policies, exclusive of claim adjustment expenses, are incurred when the policy is written and before the premium is paid. The deduction for these expenses is determined from data provided by the NCRB for the year ended 12/31/19.

Line B-2

Delayed remission of premium:

This deduction is necessary because of delay in remission and collection of premium to the companies, which amounts to approximately 50-75 days after the effective dates of the policies. Therefore, funds for the unearned premium reserve required during the initial days of all policies must be taken from the company's surplus.

1. Agents' balances for premiums due less than 90 days as a ratio to net written premium (based on data for all companies writing dwelling insurance in North Carolina)	0.1989	0.1733
2. Factor to include effect of agents' balances or uncollected premiums overdue for more than 90 days (based on data provided by A. M. Best)	1.021	1.021
3. Factor for agents' balances, (1) x (2)	0.203	0.177

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line C-2

The expected loss and loss adjustment expense ratio reflects the expense provisions for the year ended 12/31/19.

Line C-3

The mean loss reserve is determined by multiplying the incurred losses in line (2) by the North Carolina ratio of the mean loss reserves to the incurred losses in 2019 for dwelling insurance. This ratio is based on North Carolina companies' Statutory Page 14 annual statement data and has been adjusted to include loss adjustment expense reserves.

	<u>Fire</u>	<u>EC</u>
1. Incurred Losses for Calendar Year 2019	\$67,537,148	\$64,562,157
2. Loss Reserves as of 12/31/18	\$71,679,352	\$417,341,717
3. Loss Reserves as of 12/31/19	\$51,559,349	\$140,237,573
4. Mean Loss Reserve 2019, 1/2 [(2) + (3)]	\$61,619,351	\$278,789,645
5. Ratio, (4) ÷ (1)	0.912	4.318
6. Ratio of LAE Reserves to Loss Reserves (a)	0.213	0.213
7. Ratio of Incurred LAE to Incurred Losses (a)	0.147	0.147
8. Loss and LAE Reserve, [(5)x(1.0+(6)))/(1.0+(7))]	0.964	4.566

(a) Based on 2019 All-Industry Insurance Expense Exhibit (source: A.M. Best)

Line E

The rate of return is the ratio of net investment income earned to mean cash and invested assets. Net investment income is computed for all companies writing dwelling insurance in North Carolina as follows:

<u>Year</u>	<u>Net Investment Income Earned</u>	<u>Mean Cash and Invested Assets</u>	<u>Rate of Return</u>
2019	\$57,196,091	\$1,824,395,370	3.14%

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line H

The average rate of Federal income tax was determined by applying the average tax rate for net investment income and the current tax rate applicable to realized capital gains (or losses) to the rates of return as calculated above.

	<u>Rate of Return</u>	<u>Federal Income Tax Rate</u>
Net Investment Income Earned	3.14%	0.159

The average rate of Federal income tax was determined by applying current tax rates to the distribution of investment income earned for all companies. These data are for 2019 from Best's Aggregates and Averages, Underwriting and Investment Exhibit, Part 1, Column 8.

Bonds	Taxable	\$29,410,180	0.210
	Non-Taxable	\$7,801,848	-
	Sub-Total	\$37,212,028	0.166
Stocks	Taxable (a)	\$8,917,321	0.105
	Non-Taxable	\$1,595,409	-
	Sub-Total	\$10,512,730	0.089
Mortgage Loans		\$996,462	
Real Estate		\$2,035,516	
Collateral Loans		\$202	
Cash on Deposit		\$2,501,850	
Short Term Investments		(\$92,602)	
All Other		\$9,880,010	
Sub-Total		\$15,321,438	0.210
Total		\$63,046,196	0.164
Investment Deductions		\$5,850,107	0.210
Net Investment Income Earned		\$57,196,089	0.159

(a) Only 50% of dividend income on stock is subject to the full corporate income tax rate of 21%. The applicable tax rate is thus 10.5% (.21 x .5 = 10.5%)

NORTH CAROLINA

DWELLING FIRE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

A. Unearned Premium Reserve

1.	Direct Earned Premium for Accident Year Ended 12/31/18	\$48,399,271
2.	Mean Unearned Premium Reserve, (1) x 0.4996	\$24,180,276
3.	Deduction for Prepaid Expenses	
	Commission and Brokerage	10.80%
	Taxes, Licenses and Fees	2.23%
	1/2 General Expenses	2.11%
	1/2 Other Acquisition	3.74%
	Total	18.88%
4.	(2) x (3)	\$4,565,236
5.	Net Subject to Investment, (2) - (4)	\$19,615,040

B. Delayed Remission of Premium (Agents' Balances)

1.	Direct Earned Premium (A-1)	\$48,399,271
2.	Average Agents' Balances	0.206
3.	Delayed Remission, (1) x (2)	\$9,970,250

C. Loss Reserve

1.	Direct Earned Premium (A-1)	\$48,399,271
2.	Expected Incurred Losses and Loss Adjustment Expense, (1) x 0.5517	\$26,701,878
3.	Expected Mean Loss Reserves, (2) x 0.494	\$13,190,728

D. Net Subject to Investment, (A-5) - (B-3) + (C-3) \$22,835,518

E. Average Rate of Return 3.33%

F. Investment Earnings on Net Subject to
Investment, (D) x (E) \$760,423

G. Average Rate of Return as a Percent of Direct
Earned Premium, (F) / (A-1) 1.57%

H. Average Rate of Return as a Percent of Direct Earned
Premium after Federal Income Taxes, (G) x (1 - 0.149) 1.34%

NORTH CAROLINA

DWELLING EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

A. Unearned Premium Reserve

1.	Direct Earned Premium for Accident Year Ended 12/31/18	\$60,468,266
2.	Mean Unearned Premium Reserve, (1) x 0.4755	\$28,752,660
3.	Deduction for Prepaid Expenses	
	Commission and Brokerage	8.94%
	Taxes, Licenses and Fees	1.99%
	1/2 General Expenses	2.34%
	1/2 Other Acquisition	4.23%
	Total	17.50%
4.	(2) x (3)	\$5,031,716
5.	Net Subject to Investment, (2) - (4)	\$23,720,944

B. Delayed Remission of Premium (Agents' Balances)

1.	Direct Earned Premium (A-1)	\$60,468,266
2.	Average Agents' Balances	0.185
3.	Delayed Remission, (1) x (2)	\$11,186,629

C. Loss Reserve

1.	Direct Earned Premium (A-1)	\$60,468,266
2.	Expected Incurred Losses and Loss Adjustment Expense, (1) x 0.1406	\$8,501,838
3.	Expected Mean Loss Reserves, (2) x 0.354	\$3,009,651

D. Net Subject to Investment, (A-5) - (B-3) + (C-3) \$15,543,966

E. Average Rate of Return 3.33%

F. Investment Earnings on Net Subject to
Investment, (D) x (E) \$517,614

G. Average Rate of Return as a Percent of Direct
Earned Premium, (F) / (A-1) 0.86%

H. Average Rate of Return as a Percent of Direct Earned
Premium after Federal Income Taxes, (G) x (1 - 0.149) 0.73%

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line A-1

Direct earned premiums are the earned premiums for dwelling insurance in North Carolina from Statutory Page 14 of the Annual Statement.

Line A-2

The mean unearned premium reserve is determined by multiplying the direct earned premiums in line (1) by the ratio of the mean unearned premium reserve to the collected earned premium for calendar year ended 12/31/18 for all companies writing Dwelling insurance in North Carolina. These data are from Statutory Page 14 of the Annual Statement.

	<u>Fire</u>	<u>EC</u>
1. Collected Earned Premium for Calendar Year ended 12/31/18	\$222,636,051	\$261,481,286
2. Unearned Premium Reserve as of 12/31/17	\$112,545,362	\$120,812,171
3. Unearned Premium Reserve as of 12/31/18	\$109,932,656	\$127,836,607
4. Mean Unearned Premium Reserve, 1/2 [(2) + (3)]	\$111,239,009	\$124,324,389
5. Ratio, (4) ÷ (1)	0.4996	0.4755

Line A-3

Deduction for prepaid expenses:

Production costs and a large part of the other company expenses in connection with the writing and handling of dwelling policies, exclusive of claim adjustment expenses, are incurred when the policy is written and before the premium is paid. The deduction for these expenses is determined from data provided by the NCRB for the year ended 12/31/18.

Line B-2

Delayed remission of premium:

This deduction is necessary because of delay in remission and collection of premium to the companies, which amounts to approximately 50-75 days after the effective dates of the policies. Therefore, funds for the unearned premium reserve required during the initial days of all policies must be taken from the company's surplus.

1. Agents' balances for premiums due less than 90 days as a ratio to net written premium (based on data for all companies writing dwelling insurance in North Carolina)	0.2014	0.1809
2. Factor to include effect of agents' balances or uncollected premiums overdue for more than 90 days (based on data provided by A. M. Best)	1.021	1.021
3. Factor for agents' balances, (1) x (2)	0.206	0.185

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line C-2

The expected loss and loss adjustment expense ratio reflects the expense provisions for the year ended 12/31/18.

Line C-3

The mean loss reserve is determined by multiplying the incurred losses in line (2) by the North Carolina ratio of the mean loss reserves to the incurred losses in 2018 for dwelling insurance. This ratio is based on North Carolina companies' Statutory Page 14 annual statement data and has been adjusted to include loss adjustment expense reserves.

	<u>Fire</u>	<u>EC</u>
1. Incurred Losses for Calendar Year 2018	\$147,266,683	\$703,738,774
2. Loss Reserves as of 12/31/17	\$66,350,617	\$55,475,077
3. Loss Reserves as of 12/31/18	\$71,679,352	\$417,341,717
4. Mean Loss Reserve 2018, 1/2 [(2) + (3)]	\$69,014,985	\$236,408,397
5. Ratio, (4) ÷ (1)	0.469	0.336
6. Ratio of LAE Reserves to Loss Reserves (a)	0.187	0.187
7. Ratio of Incurred LAE to Incurred Losses (a)	0.127	0.127
8. Loss and LAE Reserve, [(5)x(1.0+(6)))/(1.0+(7))]	0.494	0.354

(a) Based on 2018 All-Industry Insurance Expense Exhibit (source: A.M. Best)

Line E

The rate of return is the ratio of net investment income earned to mean cash and invested assets. Net investment income is computed for all companies writing dwelling insurance in North Carolina as follows:

<u>Year</u>	<u>Net Investment Income Earned</u>	<u>Mean Cash and Invested Assets</u>	<u>Rate of Return</u>
2018	\$57,671,849	\$1,734,094,329	3.33%

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line H

The average rate of Federal income tax was determined by applying the average tax rate for net investment income and the current tax rate applicable to realized capital gains (or losses) to the rates of return as calculated above.

		<u>Rate of Return</u>	<u>Federal Income Tax Rate</u>
Net Investment Income Earned		3.33%	0.149
The average rate of Federal income tax was determined by applying current tax rates to the distribution of investment income earned for all companies. These data are for 2018 from Best's Aggregates and Averages, Underwriting and Investment Exhibit, Part 1, Column 8.			
Bonds	Taxable	\$26,161,755	0.210
	Non-Taxable	\$8,708,550	-
	Sub-Total	\$34,870,305	0.158
Stocks	Taxable (a)	\$7,974,536	0.105
	Non-Taxable	\$4,005,063	-
	Sub-Total	\$11,979,599	0.070
Mortgage Loans		\$908,739	
Real Estate		\$1,937,053	
Collateral Loans		\$5,854	
Cash on Deposit		\$1,985,735	
Short Term Investments		(\$116,536)	
All Other		\$12,020,161	
Sub-Total		\$16,741,006	0.210
Total		\$63,590,910	0.155
Investment Deductions		\$5,919,053	0.210
Net Investment Income Earned		\$57,671,857	0.149

(a) Only 50% of dividend income on stock is subject to the full corporate income tax rate of 21%. The applicable tax rate is thus 10.5% (.21 x .5 = 10.5%)

NORTH CAROLINA

DWELLING FIRE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

A. Unearned Premium Reserve

1.	Direct Earned Premium for Accident Year Ended 12/31/17	\$47,992,199
2.	Mean Unearned Premium Reserve, (1) x 0.5347	\$25,661,429
3.	Deduction for Prepaid Expenses	
	Commission and Brokerage	10.82%
	Taxes, Licenses and Fees	2.29%
	1/2 General Expenses	2.40%
	1/2 Other Acquisition	3.82%
	Total	19.33%
4.	(2) x (3)	\$4,960,354
5.	Net Subject to Investment, (2) - (4)	\$20,701,075

B. Delayed Remission of Premium (Agents' Balances)

1.	Direct Earned Premium (A-1)	\$47,992,199
2.	Average Agents' Balances	0.208
3.	Delayed Remission, (1) x (2)	\$9,982,377

C. Loss Reserve

1.	Direct Earned Premium (A-1)	\$47,992,199
2.	Expected Incurred Losses and Loss Adjustment Expense, (1) x 0.5437	\$26,093,359
3.	Expected Mean Loss Reserves, (2) x 0.522	\$13,620,733

D. Net Subject to Investment, (A-5) - (B-3) + (C-3) \$24,339,431

E. Average Rate of Return 3.05%

F. Investment Earnings on Net Subject to
Investment, (D) x (E) \$742,353

G. Average Rate of Return as a Percent of Direct
Earned Premium, (F) / (A-1) 1.55%

H. Average Rate of Return as a Percent of Direct Earned
Premium after Federal Income Taxes, (G) x (1 - 0.234) 1.19%

NORTH CAROLINA

DWELLING EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

A. Unearned Premium Reserve

1.	Direct Earned Premium for Accident Year Ended 12/31/17	\$62,065,299
2.	Mean Unearned Premium Reserve, (1) x 0.4914	\$30,498,888
3.	Deduction for Prepaid Expenses	
	Commission and Brokerage	9.25%
	Taxes, Licenses and Fees	2.23%
	1/2 General Expenses	2.22%
	1/2 Other Acquisition	3.85%
	Total	17.55%
4.	(2) x (3)	\$5,352,555
5.	Net Subject to Investment, (2) - (4)	\$25,146,333

B. Delayed Remission of Premium (Agents' Balances)

1.	Direct Earned Premium (A-1)	\$62,065,299
2.	Average Agents' Balances	0.189
3.	Delayed Remission, (1) x (2)	\$11,730,342

C. Loss Reserve

1.	Direct Earned Premium (A-1)	\$62,065,299
2.	Expected Incurred Losses and Loss Adjustment Expense, (1) x 0.1440	\$8,937,403
3.	Expected Mean Loss Reserves, (2) x 0.886	\$7,918,539

D. Net Subject to Investment, (A-5) - (B-3) + (C-3) \$21,334,530

E. Average Rate of Return 3.05%

F. Investment Earnings on Net Subject to
Investment, (D) x (E) \$650,703

G. Average Rate of Return as a Percent of Direct
Earned Premium, (F) / (A-1) 1.05%

H. Average Rate of Return as a Percent of Direct Earned
Premium after Federal Income Taxes, (G) x (1 - 0.234) 0.80%

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line A-1

Direct earned premiums are the earned premiums for dwelling insurance in North Carolina from Statutory Page 14 of the Annual Statement.

Line A-2

The mean unearned premium reserve is determined by multiplying the direct earned premiums in line (1) by the ratio of the mean unearned premium reserve to the collected earned premium for calendar year ended 12/31/17 for all companies writing Dwelling insurance in North Carolina. These data are from Statutory Page 14 of the Annual Statement.

	<u>Fire</u>	<u>EC</u>
1. Collected Earned Premium for Calendar Year ended 12/31/17	\$213,782,422	\$249,790,305
2. Unearned Premium Reserve as of 12/31/16	\$116,086,201	\$124,686,420
3. Unearned Premium Reserve as of 12/31/17	\$112,545,362	\$120,812,171
4. Mean Unearned Premium Reserve, $1/2 [(2) + (3)]$	\$114,315,782	\$122,749,296
5. Ratio, (4) \div (1)	0.5347	0.4914

Line A-3

Deduction for prepaid expenses:

Production costs and a large part of the other company expenses in connection with the writing and handling of dwelling policies, exclusive of claim adjustment expenses, are incurred when the policy is written and before the premium is paid. The deduction for these expenses is determined from data provided by the NCRB for the year ended 12/31/17.

Line B-2

Delayed remission of premium:

This deduction is necessary because of delay in remission and collection of premium to the companies, which amounts to approximately 50-75 days after the effective dates of the policies. Therefore, funds for the unearned premium reserve required during the initial days of all policies must be taken from the company's surplus.

1. Agents' balances for premiums due less than 90 days as a ratio to net written premium (based on data for all companies writing dwelling insurance in North Carolina)	0.2040	0.1855
2. Factor to include effect of agents' balances or uncollected premiums overdue for more than 90 days (based on data provided by A. M. Best)	1.021	1.021
3. Factor for agents' balances, (1) x (2)	0.208	0.189

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line C-2

The expected loss and loss adjustment expense ratio reflects the expense provisions for the year ended 12/31/17.

Line C-3

The mean loss reserve is determined by multiplying the incurred losses in line (2) by the North Carolina ratio of the mean loss reserves to the incurred losses in 2017 for dwelling insurance. This ratio is based on North Carolina companies' Statutory Page 14 annual statement data and has been adjusted to include loss adjustment expense reserves.

	<u>Fire</u>	<u>EC</u>
1. Incurred Losses for Calendar Year 2017	\$123,225,922	\$74,001,415
2. Loss Reserves as of 12/31/16	\$55,733,024	\$68,978,452
3. Loss Reserves as of 12/31/17	\$66,350,617	\$55,475,077
4. Mean Loss Reserve 2017, 1/2 [(2) + (3)]	\$61,041,821	\$62,226,765
5. Ratio, (4) ÷ (1)	0.495	0.841
6. Ratio of LAE Reserves to Loss Reserves (a)	0.197	0.197
7. Ratio of Incurred LAE to Incurred Losses (a)	0.136	0.136
8. Loss and LAE Reserve, [(5)x(1.0+(6)))/(1.0+(7))]	0.522	0.886

(a) Based on 2017 All-Industry Insurance Expense Exhibit (source: A.M. Best)

Line E

The rate of return is the ratio of net investment income earned to mean cash and invested assets. Net investment income is computed for all companies writing dwelling insurance in North Carolina as follows:

<u>Year</u>	<u>Net Investment Income Earned</u>	<u>Mean Cash and Invested Assets</u>	<u>Rate of Return</u>
2017	\$51,111,117	\$1,677,388,358	3.05%

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line H

The average rate of Federal income tax was determined by applying the average tax rate for net investment income and the current tax rate applicable to realized capital gains (or losses) to the rates of return as calculated above.

	<u>Rate of Return</u>	<u>Federal Income Tax Rate</u>
Net Investment Income Earned	3.05%	0.234

The average rate of Federal income tax was determined by applying current tax rates to the distribution of investment income earned for all companies. These data are for 2017 from Best's Aggregates and Averages, Underwriting and Investment Exhibit, Part 1, Column 8.

Bonds	Taxable	\$23,383,712	0.350
	Non-Taxable	\$9,714,629	-
	Sub-Total	\$33,098,341	0.247
Stocks	Taxable (a)	\$7,611,742	0.105
	Non-Taxable	\$1,789,178	-
	Sub-Total	\$9,400,920	0.085
Mortgage Loans		\$755,495	
Real Estate		\$1,839,630	
Collateral Loans		\$672	
Cash on Deposit		\$980,828	
Short Term Investments		(\$156,684)	
All Other		\$10,386,831	
Sub-Total		\$13,806,772	0.350
Total		\$56,306,033	0.245
Investment Deductions		\$5,186,760	0.350
Net Investment Income Earned		\$51,119,273	0.234

(a) Only 30% of dividend income on stock is subject to the full corporate income tax rate of 35%. The applicable tax rate is thus 10.5% (.35 x .3 = 10.5%)

NORTH CAROLINA

DWELLING FIRE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

A. Unearned Premium Reserve

1.	Direct Earned Premium for Accident Year Ended 12/31/16	\$50,573,659
2.	Mean Unearned Premium Reserve, (1) x 0.5107	\$25,827,968
3.	Deduction for Prepaid Expenses	
	Commission and Brokerage	10.63%
	Taxes, Licenses and Fees	2.37%
	1/2 General Expenses	2.31%
	1/2 Other Acquisition	3.40%
	Total	18.71%
4.	(2) x (3)	\$4,832,413
5.	Net Subject to Investment, (2) - (4)	\$20,995,555

B. Delayed Remission of Premium (Agents' Balances)

1.	Direct Earned Premium (A-1)	\$50,573,659
2.	Average Agents' Balances	0.199
3.	Delayed Remission, (1) x (2)	\$10,064,158

C. Loss Reserve

1.	Direct Earned Premium (A-1)	\$50,573,659
2.	Expected Incurred Losses and Loss Adjustment Expense, (1) x 0.5559	\$28,113,897
3.	Expected Mean Loss Reserves, (2) x 1.033	\$29,041,656

D. Net Subject to Investment, (A-5) - (B-3) + (C-3) \$39,973,053

E. Average Rate of Return 3.01%

F. Investment Earnings on Net Subject to
Investment, (D) x (E) \$1,203,189

G. Average Rate of Return as a Percent of Direct
Earned Premium, (F) / (A-1) 2.38%

H. Average Rate of Return as a Percent of Direct Earned
Premium after Federal Income Taxes, (G) x (1 - 0.221) 1.85%

NORTH CAROLINA

DWELLING EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

A. Unearned Premium Reserve

1.	Direct Earned Premium for Accident Year Ended 12/31/16	\$68,124,747
2.	Mean Unearned Premium Reserve, (1) x 0.4971	\$33,864,812
3.	Deduction for Prepaid Expenses	
	Commission and Brokerage	9.56%
	Taxes, Licenses and Fees	2.25%
	1/2 General Expenses	2.14%
	1/2 Other Acquisition	3.58%
	Total	17.53%
4.	(2) x (3)	\$5,936,502
5.	Net Subject to Investment, (2) - (4)	\$27,928,310

B. Delayed Remission of Premium (Agents' Balances)

1.	Direct Earned Premium (A-1)	\$68,124,747
2.	Average Agents' Balances	0.182
3.	Delayed Remission, (1) x (2)	\$12,398,704

C. Loss Reserve

1.	Direct Earned Premium (A-1)	\$68,124,747
2.	Expected Incurred Losses and Loss Adjustment Expense, (1) x 0.1482	\$10,096,088
3.	Expected Mean Loss Reserves, (2) x 0.442	\$4,462,471

D. Net Subject to Investment, (A-5) - (B-3) + (C-3) \$19,992,077

E. Average Rate of Return 3.01%

F. Investment Earnings on Net Subject to
Investment, (D) x (E) \$601,762

G. Average Rate of Return as a Percent of Direct
Earned Premium, (F) / (A-1) 0.88%

H. Average Rate of Return as a Percent of Direct Earned
Premium after Federal Income Taxes, (G) x (1 - 0.221) 0.69%

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line A-1

Direct earned premiums are the earned premiums for dwelling insurance in North Carolina from Statutory Page 14 of the Annual Statement.

Line A-2

The mean unearned premium reserve is determined by multiplying the direct earned premiums in line (1) by the ratio of the mean unearned premium reserve to the collected earned premium for calendar year ended 12/31/16 for all companies writing Dwelling insurance in North Carolina. These data are from Statutory Page 14 of the Annual Statement.

	<u>Fire</u>	<u>EC</u>
1. Collected Earned Premium for Calendar Year ended 12/31/16	\$221,593,784	\$241,893,067
2. Unearned Premium Reserve as of 12/31/15	\$110,269,649	\$115,797,891
3. Unearned Premium Reserve as of 12/31/16	\$116,086,201	\$124,686,420
4. Mean Unearned Premium Reserve, 1/2 [(2) + (3)]	\$113,177,925	\$120,242,156
5. Ratio, (4) ÷ (1)	0.5107	0.4971

Line A-3

Deduction for prepaid expenses:

Production costs and a large part of the other company expenses in connection with the writing and handling of dwelling policies, exclusive of claim adjustment expenses, are incurred when the policy is written and before the premium is paid. The deduction for these expenses is determined from data provided by the NCRB for the year ended 12/31/16.

Line B-2

Delayed remission of premium:

This deduction is necessary because of delay in remission and collection of premium to the companies, which amounts to approximately 50-75 days after the effective dates of the policies. Therefore, funds for the unearned premium reserve required during the initial days of all policies must be taken from the company's surplus.

1. Agents' balances for premiums due less than 90 days as a ratio to net written premium (based on data for all companies writing dwelling insurance in North Carolina)	0.1949	0.1786
2. Factor to include effect of agents' balances or uncollected premiums overdue for more than 90 days (based on data provided by A. M. Best)	1.021	1.021
3. Factor for agents' balances, (1) x (2)	0.199	0.182

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line C-2

The expected loss and loss adjustment expense ratio reflects the expense provisions for the year ended 12/31/16.

Line C-3

The mean loss reserve is determined by multiplying the incurred losses in line (2) by the North Carolina ratio of the mean loss reserves to the incurred losses in 2016 for dwelling insurance. This ratio is based on North Carolina companies' Statutory Page 14 annual statement data and has been adjusted to include loss adjustment expense reserves.

	<u>Fire</u>	<u>EC</u>
1. Incurred Losses for Calendar Year 2016	\$70,550,363	\$126,737,675
2. Loss Reserves as of 12/31/15	\$78,177,895	\$33,833,302
3. Loss Reserves as of 12/31/16	\$55,733,024	\$68,978,452
4. Mean Loss Reserve 2016, 1/2 [(2) + (3)]	\$66,955,460	\$51,405,877
5. Ratio, (4) ÷ (1)	0.949	0.406
6. Ratio of LAE Reserves to Loss Reserves (a)	0.261	0.261
7. Ratio of Incurred LAE to Incurred Losses (a)	0.158	0.158
8. Loss and LAE Reserve, [(5)x(1.0+(6)))/(1.0+(7))]	1.033	0.442

(a) Based on 2016 All-Industry Insurance Expense Exhibit (source: A.M. Best)

Line E

The rate of return is the ratio of net investment income earned to mean cash and invested assets. Net investment income is computed for all companies writing dwelling insurance in North Carolina as follows:

<u>Year</u>	<u>Net Investment Income Earned</u>	<u>Mean Cash and Invested Assets</u>	<u>Rate of Return</u>
2016	\$48,019,546	\$1,597,608,236	3.01%

NORTH CAROLINA

DWELLING FIRE AND EXTENDED COVERAGE INSURANCE

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line H

The average rate of Federal income tax was determined by applying the average tax rate for net investment income and the current tax rate applicable to realized capital gains (or losses) to the rates of return as calculated above.

	<u>Rate of Return</u>	<u>Federal Income Tax Rate</u>
Net Investment Income Earned	3.01%	0.221

The average rate of Federal income tax was determined by applying current tax rates to the distribution of investment income earned for all companies. These data are for 2016 from Best's Aggregates and Averages, Underwriting and Investment Exhibit, Part 1, Column 8.

Bonds	Taxable	\$22,730,939	0.350
	Non-Taxable	\$10,564,051	-
	Sub-Total	\$33,294,990	0.239
Stocks	Taxable (a)	\$7,489,366	0.105
	Non-Taxable	\$1,972,096	-
	Sub-Total	\$9,461,462	0.083
Mortgage Loans		\$665,613	
Real Estate		\$1,810,152	
Collateral Loans		\$780	
Cash on Deposit		\$378,097	
Short Term Investments		(\$17,642)	
All Other		\$7,536,112	
Sub-Total		\$10,373,112	0.350
Total		\$53,129,564	0.233
Investment Deductions		\$5,107,215	0.350
Net Investment Income Earned		\$48,022,349	0.221

(a) Only 30% of dividend income on stock is subject to the full corporate income tax rate of 35%. The applicable tax rate is thus 10.5% (.35 x .3 = 10.5%)

NORTH CAROLINA

DWELLING PROPERTY INSURANCE

11. IDENTIFICATION OF APPLICABLE STATISTICAL PLANS AND PROGRAMS AND A CERTIFICATION OF COMPLIANCE WITH THEM
 - (a) ISO Personal Lines Statistical Plan (Other Than Automobile)
 - ISO Personal Lines Statistical Agent Plan (Other Than Automobile)
 - ISO Call(s) for Dwelling Fire and Extended Coverage Statistics
 - ISO Call(s) for Dwelling Fire and Extended Coverage Statistical Agent Plan Statistics
 - ISS Personal Lines Statistical Plans - All Coverages
 - ISS Dwelling Fire and Extended Coverage Call(s)
 - AAIS Personal Lines Statistical Plan
 - AAIS Call(s) for Dwelling Fire and Extended Coverage Statistics
 - NISS Statistical Plan - All Coverages - Part IV, North Carolina
 - NISS Quarterly Call(s)
 - NISS Financial Reconciliation Call(s)
 - NAIC Annual Statements
 - NAIC Insurance Expense Exhibits
 - NCRB Call(s) for North Carolina Expense Experience
 - (b) The North Carolina Rate Bureau certifies that there is no evidence known to it or, insofar as it is aware following reasonable inquiry, to the statistical agencies involved that the data which were collected under the statistical plans identified in response (11) (a) above and used in the filing are not materially true and accurate representations of the experience of the companies whose data underlie such experience. While the Rate Bureau is aware that the collected data sometimes require corrections or adjustments, the Rate Bureau's review of the data, the data collection process, and the ratemaking process indicates that the aggregate data are reasonable and reliable for ratemaking purposes. See also the prefiled testimony of P. Ericksen.
 - (c) The attached Exhibit (11) (c) contains general descriptions of the editing procedures used to ensure data were collected in accordance with the applicable statistical plans.

NORTH CAROLINA**DWELLING PROPERTY INSURANCE**ISO Editing Procedures

1. Upon receipt of the data from each reporting company, checks are made to ensure that each record (i.e., the data reported for each exposure) has valid and readable information. This includes a check that the appropriate alpha-numeric codes have been utilized.
2. The records are then checked to ensure that each of the fields has a valid code in it (e.g., company numbers must be entered as four-digit numerals).
3. Relationship edits which evaluate the interrelationship between codes are then performed. For example, if a record indicates North Carolina, Homeowners, Form 3, checks are made to ascertain that applicable interrelationships are maintained.
4. Distributional edits are performed to make sure that the reporting company has not erred in miscoding its data into a single class, territory, or other rating criteria due a systems problem or other error.
5. The resulting combined data from all the company records are reconciled with Statutory Page 14 Annual Statement data for that company.
6. After all of the ISO data are aggregated, a consolidated review of the data is conducted to determine overall reasonableness and accuracy. In this procedure the data are compared with previous statewide and territory figures. Areas of concern are identified, and results are verified by checking back to the source data.

ISS Editing Procedures

The following narrative sets forth a general description of the editing procedures utilized by ISS to review North Carolina statistical data. All North Carolina experience submitted to the ISS by affiliated companies undergoes standard procedures to ensure that the data is reported in accordance with the ISS's approved statistical plans.

ISS's review of the data takes place on two levels: analysis of individual company data and analysis of the aggregate data of all the companies combined. These two separate functions will be treated in that order.

NORTH CAROLINA
DWELLING PROPERTY INSURANCE

ISS Editing Procedures (continued)

Analysis of Company Data

Analysis of company data includes: completeness checks, editing for valid coding and checking the distribution of data among the various data elements.

1. Completeness Checks (Balancing and Reconciliation):

Balancing and reconciliation procedures are used to determine completeness of reporting. Completeness means that the ISS has received and processed all of the data due to be filed with the ISS. First, totals of each company's processed data are compared to separate transmittal totals supplied by the company. This step ensures that ISS has processed completely the experience included in the company's submission of data and that no errors occur during this processing. As a second check for completeness, the reported statistical data is reconciled to Statutory Page 14 totals from the company's Annual Statement. It is a useful procedure in determining completeness because the annual statement represents an independent source of information.

2. Editing of Codes:

Format and Readability

Statistical data reported by affiliated companies must be filed in accordance with ISS's approved statistical plans. This includes the requirement that the data must conform to the specific formats and technical specifications in order for ISS to properly read and process these submissions. The initial edit is a test of each company's submission to ensure it has been reported using the proper record format and that it meets certain technical requirements for the line of insurance being reported. Key fields are tested to ensure that only numeric information has been reported in fields defined as numeric, and that the fields have been reported in the proper position in the record.

Relational Edits

The data items of information filed with the insurance company's experience are reported by using codes defined under ISS's statistical plans. For example, the various types of Policy Forms written on Homeowners policies in North Carolina are defined in the Personal Lines Statistical Plan. Each definition for each data element has a unique code assigned to it which distinguishes it from other definitions. All data items applicable to North Carolina are defined in a similar manner in each of ISS's statistical plans and have codes assigned to properly identify each definition.

All records reported to ISS are subjected to validation of the reported codes. This validation, called editing, is performed to assure that companies are reporting properly defined ISS Statistical Plan codes for North Carolina experience.

The purpose of the edit is to validate the statistical codes reported in each record. This validation is called a Relation Edit. A relational edit verifies that a reported code is valid in combination with one or more related data items. Relational edit tests are accomplished primarily through the use of specific edit tables applicable to each line of insurance.

NORTH CAROLINA**DWELLING PROPERTY INSURANCE**ISS Editing Procedures (continued)

In most cases, the experience data in the record is used in conjunction with the related codes and compared to an establishment or discontinued date for the code being validated. This ensures that specific codes are not being utilized beyond the range of time during which they are valid.

An example of a relational edit involves territory coding. Many territory code numbers are available under each statistical plan for various states, with various effective dates. However, only codes defined for North Carolina for the specific line being processed are valid in combination with North Carolina reported experience. Further, if a new code is erected, that code will be considered valid only if the date reported in the statistical record is equal or subsequent to the establishment date of the code.

3. Distributional Analysis:

The validation of the codes is not by itself sufficient to assure the credibility of company data. Having assured the reporting of valid codes, the statistical agent must verify that valid entries are indeed reliable. Therefore, the data is also reviewed for reasonable distributions. The primary focus of this review is to establish that the statistical data reported by the company is a credible reflection of the company's experience.

The distribution of company experience by specific data elements such as state, territory, policy form, and construction, for example, for the current reporting period is compared to company profiles of prior periods. In addition, ratios relevant to the line of insurance such as average premium, average loss, volume, loss ratio and loss frequency are compared to industry averages. This historical comparison can highlight changes in the pattern of reporting.

The distributional analysis serves as an additional verification that systematic errors are not introduced during the production of data files submitted to ISS by our affiliated companies. Disproportionate amounts of premiums and/or losses in a particular class or territory, for example, can be detected using this technique.

4. Validation of Aggregate Data

After the individual company has been reviewed, the data for all reporting companies is compiled to produce aggregate reports. The aggregate data represents the combined experience of many companies. This data is also subjected to similar review procedures. To ensure completeness, run to run control techniques are applied. This involves balancing the totals of the aggregate runs to previously verified control totals. In this manner the aggregate data is monitored to ensure the inclusion of the appropriate company data.

The aggregate data is also reviewed for credibility through distributional analysis similar to that performed on the individual company data. Earned exposures (where applicable) and premiums and incurred losses and claims are used to calculate pure premiums, claim frequencies and claim costs for comparison to past averages. The analysis of the aggregate data centers on determining consistency over time by comparing several years of experience, by coverage and class, or territory, for example. Through the application of these techniques, ISS is able to provide reliable insurance statistical data in North Carolina.

NORTH CAROLINA**DWELLING PROPERTY INSURANCE**NISS Editing Procedures

- a. Every report received is checked for completeness. Every submission must include (1) an affidavit; (2) a letter of transmittal setting forth company control totals for the data being sent; (3) the data submitted via the NISS website.
- b. Individual company submissions are balanced to the company letter of transmittal to ensure that all data have been received and processed. After all data has been received, the company reports are reconciled to the Annual Statement Statutory Page 14 amounts. The NISS Financial Reconciliation identifies any amounts needed to reconcile any differences between the company reported data and Annual Statement amounts.
- c. Every company record submitted to NISS is verified through NISS edit software for its coding accuracy and conformance with NISS record layouts and instructions. NISS edits verify the accuracy of each code for each data element. Where possible, each data element is subjected to a relational edit whereby it will be checked for accuracy in conjunction with another field.
- d. Individual company submissions are also subjected to a series of reasonability tests to determine that the current submission is consistent with previous company submissions, known changes in this line of business and statewide trends. NISS compares current year data to the previous year. This comparison is performed and analyzed by grouping data.
- e. After all of the NISS data are combined, a review of this consolidated data is also performed. The aggregate data is compared on a year to year basis to again verify its reasonableness, similar to those checks employed on an individual company submission.

AAIS Editing Procedures

The American Association of Insurance Services functions as an official statistical agent in the State of North Carolina for a number of lines of insurance, including Homeowners. In this capacity, it provides for the administration of statistical programs in accordance with approved statistical plans on behalf of the Commissioner of Insurance. These plans, which were filed according to the requirements of the State of North Carolina, serve to ensure a high quality of data reliability.

1. All statistical plans constitute permanent calls for data, which is due at AAIS within 60 days following the close of the period covered by the report.
2. The AAIS data collection procedure consists of several consecutive steps in order to further verify receipt of accurate and complete data from each company and ultimately aggregate the data into the final experience format.

NORTH CAROLINA**DWELLING PROPERTY INSURANCE**AAIS Editing Procedures (continued)

3. The data collection procedure begins with the company uploading their data file into the AAIS secure online Statistical Data Management Application (SDMA). The SDMA verifies certain key fields, calculates transmittal totals for verification, and houses the edit program. The key fields are company number, line of insurance, transaction code and report period (quarter and year). All invalid key fields must be corrected before the data proceeds to the next step. Once all key fields have been validated, the data moves on to the edit program.
4. The edit program has several functions and reports. They are:
 - a. Data is balanced to transmittal totals and submitting companies are verifying this upon submission of their data using our Statistical Data Management Application (SDMA).
 - b. Each statistical field is edited to the valid codes in the statistical plan for the line being processed. Many fields are also cross edited. An example is deductible type and amount. All invalid codes are identified with an asterisk to the right of the code.
 - c. Edit reports consist of a listing of invalid records, error summary report, month report, state report and field error detail report.
 - d. Data distributions are monitored by the Statistical Reporting staff in conjunction with AAIS Actuaries. Material quality problems are logged by the Data Governance Steering Committee and the offending affiliate is notified of the error.
 - e. Along with the edit and distribution reports, there are additional review procedures in place to identify procedural reporting errors that may exist (e.g., cancellations and coverage changes). A great deal of time is spent on this item because of its importance to the validity of the reported data.
 - f. The Statistical Data Management Application (SDMA) performs analysis of a company's data and provides the company with a customized letter stating that their data was accepted by AAIS. Throughout the submission and editing process, the SDMA provides a status for the submission indicating the type of action required. Depending on the severity of errors, companies are requested to make corrections or resubmit data.
5. AAIS provides assistance to all of its affiliated companies to ensure a continued high level of data quality. Statistical coding seminars designed to instruct company coders and respond to questions are scheduled annually. In addition to the seminars, AAIS has developed Statistical Training Manuals for some lines and pre-edit programs for company in-house use. Technical Services staff is available to train company personnel in all aspects of data collection, coding, statistical reporting and data processing.

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12. INVESTMENT EARNINGS ON CAPITAL AND SURPLUS

Not applicable to dwelling insurance.

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13. LEVEL OF CAPITAL AND SURPLUS NEEDED TO SUPPORT PREMIUM WRITINGS WITHOUT ENDANGERING THE SOLVENCY OF MEMBER COMPANIES

- (a) The weighted average premium to surplus ratios (weighted by North Carolina Dwelling Fire and Extended Coverage Direct Premiums Written) for the calendar years 2011-2020 for the company groups which wrote the coverages in each of those years:

Year	Fire		Extended Coverage	
	Direct	Net	Direct	Net
2020	0.86	0.87	0.82	0.84
2019	0.92	0.93	0.88	0.91
2018	0.90	0.82	1.05	0.82
2017	0.85	0.86	0.85	0.87
2016	0.82	0.80	0.78	0.80
2015	0.82	0.78	0.78	0.78
2014	0.84	0.80	0.82	0.81
2013	0.89	0.86	0.85	0.85
2012	1.23	1.06	0.98	0.92
2011	1.31	1.14	1.04	0.99
Average	0.94	0.89	0.88	0.86

Note: These data are based on statutory filings as compiled by the NAIC.

- (b) The estimate of the future premium to surplus ratio is based on the 10-year average of the past premium to surplus ratios. See the pre-filed testimony of G. Zanjani.
- (c) The necessary level of capital and surplus to support particular coverages varies by line, and the Rate Bureau regards the ratios shown in (a) as indicative of levels typical within the industry for the lines of business covered by this filing. The actual level of capital and surplus needed to support premium writings without endangering the solvency of a company is dependent upon (among others) the financial structure and investments unique to each company, the relationship of the company with affiliated companies as a group (and the experience of the affiliated companies), the mix of business of each company, and the conditions of the economy as they affect each company's individual circumstances. The Rate Bureau is advised that the National Association of Insurance Commissioners, as one of several criteria, generally considers that a premium to surplus ratio for an individual company of 3 to 1 warrants close regulatory attention and monitoring with respect to the company's solvency position.
- (d) The Rate Bureau has determined the premium to surplus ratio for dwelling insurance in North Carolina based on the weighted average premium to surplus ratios for insurance groups writing dwelling insurance in North Carolina, where the weights are the actual premiums written for dwelling insurance. The premium to surplus ratios of the insurers actually writing this business in North Carolina is representative of the leverage relevant for this line and state. The Rate Bureau has not further allocated surplus within these insurers across lines and states in this or other filings in North Carolina.

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14. OTHER INFORMATION REQUIRED BY THE COMMISSIONER

- (a) See the pre-filed testimony of P. Ericksen, M. Mao, P. Anderson, and G. Zanjani.
- (b) Not applicable to dwelling insurance.
- (c) Not applicable to dwelling insurance.
- (d) See attached Exhibit 14(d).

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The following are changes in methodology or presentation used in this filing as compared to the methodologies or presentation used in the December 14, 2020 filing:

1. In this filing, the modeled hurricane losses for the 2022 storm season for the Beach and FAIR Plans were not available for use in the compensation for assessment risk analysis. The compensation for assessment risk provision was determined by using an average of the compensation for assessment risk provisions used in the 2017, 2018, 2019, 2020, and 2021 property filings and then modifying that average to reflect that some insurance companies no longer retain exposure to assessments from the Beach and FAIR Plans pursuant to their respective reinsurance agreements. In the previous filing, the modeled losses for the 2019 storm season were adjusted to the 2020 storm season based on the impact of changes in the underlying exposures and the hurricane models, because the modeled losses for the 2020 storm season were not available.

See also the pre-filed testimony of P. Anderson.

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For Section F See Part 2 of 2



Notice to Manualholders

PERSONAL LINES

DWELLING POLICY PROGRAM MANUAL – MULTISTATE RULES

NOTICE DP-MU-2014-RU-001

CAUTION

Refer to state Notices for announcement of the use of this revision in individual jurisdictions.

INSTRUCTIONS TO MANUALHOLDERS

If your company has adopted this revision, you should insert the enclosed page(s) into your manual.

EFFECTIVE DATE

Refer to individual state Notices for effective date language.

CHANGE(S)

This notice presents the 2014 revisions to the Dwelling Policy Program Manual – General Rules. The following rules were revised:

- Rule **102**. Perils Insured Against has been revised to more closely reflect coverages provided by the individual Dwelling Policy forms.
- Rule **104**. Protection Classification Information has been revised to refer manual users to the ISO Community Mitigation Classification (CMC) Manual when determining the ISO Public Protection Classification information.
- Rule **210**. Refer To Company has been revised to introduce a facultative reinsurance rule.
- Rule **402**. Coverage **C** – Personal Property In Buildings Subject To Commercial Class Rates Or Specific Rates has been revised to complement changes made in Division Five of the Commercial Lines Manual (CLM).
- Rule **501**. Coverage **B** – Other Structures has been revised to add instructions which advise that no entry is needed in the policy Declarations for Coverage **B** since this coverage is automatically provided on a blanket basis for up to 10% of the Coverage **A** limit in all Dwelling policy forms.
- Rule **502**. Coverage **D** – Fair Rental Value and Coverage **E** – Additional Living Expense has been revised to add instructions which advise that no entry is needed in the policy Declarations for Coverage **D** in Form **DP 00 01** and for Coverages **D** and **E** in Forms **DP 00 02** and **DP 00 03** since these coverages are automatically provided for up to 20% of the Coverage **A** limit available. In addition, we have made changes to complement the companion forms filing.
- Rule **505**. Building Items Condo Unit-owner – **DP 00 01** Or **DP 00 02** has been revised to delete Paragraph **B**. to complement a change in the companion forms filing.
- Rule **510**. Theft Coverage has been revised to change the base deductible for Theft Coverage to \$500 and introduce a new deductible factor for the \$250 option. In addition, the factors for \$1,000 and \$2,500 have been revised to correspond with this change.
- Rule **513**. Limited Water Back-up And Sump Discharge Or Overflow Coverage has been revised to reflect that increased limits of coverage are now available.
- Rule **515**. Motorized Golf Cart – Physical Loss Coverage has been revised to delete text referencing the separate deductible for each involved golf cart.
- Rule **517**. Limited Fungi, Wet Or Dry Rot, Or Bacteria Coverage has been revised to reinforce that the limits provided are on an aggregate basis and to delete text to condense and streamline the rule.

Rule **211**. Additional Insured has been introduced to complement Additional Insured Described Location Endorsement **DP 04 41**.

Exceptions to the General Rules were previously filed and implemented on an individual state basis for eventual multistate application. Now that the exceptions apply in most states, the following exceptions are being relocated to the General Rules:

- Rule **303**. Ordinance Or Law Coverage – All Forms (Table **303.B.3.a.(1)(a)** and Table **303.B.3.a.(2)**)
- Rule **406**. Deductibles, multistate text in Paragraphs **A.** and **B.**
- Rule **503**. Ordinance Or Law Coverage For Coverage **B** – Specific Structures, Building Items And Improvements, Alterations And Additions (Paragraph **C.2.**)
- Rule **509**. Earthquake Coverage (Paragraphs **E.3.**, **E.4.**, **E.5.** and **F.**)

The following rules have been revised to make minor editorial revisions:

- Rule **204**. Multiple Locations
- Rule **205**. Multiple Policies
- Rule **304**. Permitted Incidental Occupancies
- Rule **404**. Mobile Or Trailer Homes – **DP 00 01** Only
- Rule **407**. Automatic Increase In Insurance
- Rule **408**. Protective Devices
- Rule **409**. Actual Cash Value Loss Settlement Windstorm Or Hail Losses To Roof Surfacing – **DP 00 02**, **DP 00 03** And **DP 00 01** With **DP 00 08**
- Rule **410**. Building Code Effectiveness Grading
- Rule **504**. Improvements, Alterations And Additions Tenant And Co-op Unit-owner – **DP 00 01** Or **DP 00 02**
- Rule **511**. Sinkhole Collapse Coverage

COMPANION REVISION

We are simultaneously revising our forms, which are being distributed under separate Notices.

REVISED PAGE(S)

DP-i thru DP-viii

DP-1 thru DP-23

PAGE CHECKLIST

Included in this distribution is a page checklist displaying the latest page numbers and edition dates.

REFERENCE INFORMATION (FOR COMPANY USE ONLY)

Circular Reference(s):

- Refer to individual state Notices for the approval/implementation circular references.
- LI-DP-2013-097 (07/01/2013) Dwelling Policy Program 2014 Multistate Loss Costs Revision To Be Submitted
- LI-DP-2013-096 (07/01/2013) Dwelling Policy Program 2014 Multistate Rules Revision To Be Submitted

Filing Reference(s):

- DP-2013-RRU13
- DP-2013-RLC13

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**DWELLING POLICY PROGRAM MANUAL
PAGE CHECKLIST – MULTISTATE**

THIS MANUAL PAGE CHECKLIST DISPLAYS THE LATEST PAGE INFORMATION AS OF 7-14.

NOTE: ALWAYS USE THE EDITION NUMBER TO DETERMINE THE LATEST PAGE.

IF YOUR MANUAL PAGES DO NOT COINCIDE WITH THIS LISTING, CONTACT CUSTOMER SUPPORT FOR THE NECESSARY MATERIAL TO UPDATE YOUR MANUAL.

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	NUMBER	DATE		NUMBER	DATE
DP-MU-2014-RU-001	–	7-14	DP-1 thru DP-23	2nd	7-14
DP-i thru DP-viii	2nd	7-14			

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**DWELLING POLICY PROGRAM MANUAL
GENERAL RULES**

**PART I
COVERAGE AND DEFINITION TYPE RULES**

**RULE 100.
INTRODUCTION**

A. About The Dwelling Manual

The Dwelling Policy Program provides property and related coverages using the forms and endorsements referred to in this Manual. The rates, rules, forms and endorsements of the company shall apply in all cases not provided for in this Manual. This program does not apply to Farm Property. Refer to the company for its method of insuring farm property.

B. Manual Structure

1. Contents

The Dwelling Policy Program Manual contains the rules, classifications and rating provisions for the issuance of the Dwelling Policy. The Manual is divided into two sections, multistate general rules and state rules and rates.

The multistate general rules section contains rules common to most states. Any departures, additions, etc. to these rules, unique to individual jurisdictions, are contained in the state rules and rates section.

The general rules do **not** contain premiums, rates, charges or credits expressed in dollars and cents. They do, however, contain rating factors that are applied to state premiums.

2. General Rules

These rules are grouped into the following categories:

- a. Part I – Coverage And Definition Type Rules,
- b. Part II – Servicing Type Rules,
- c. Part III – Base Premium Computation Rules,
- d. Part IV – Adjusted Base Premium Computation Rules, and
- e. Part V – Additional Coverages And Increased Limits Rules.

3. State Rules And Rates/ISO Loss Costs

These rules are grouped into the following categories:

- a. Exceptions and Additional Rules,
- b. Special State Requirements,
- c. Territory Definitions,
- d. Key Premium/Key Factor Tables, and
- e. Premiums, Rates, Charges and Credits.

C. Company Rates/ISO Loss Costs

1. Definition

This Manual contains either ISO loss costs or individual company rates. A loss cost is that portion of the premium which covers only losses and the costs associated with settling losses.

2. Company Rates

All rules in this Manual are designed to be utilized with rates. All references in the rules and examples to rates and/or premiums (including base premiums) shall be interpreted to mean those established by the individual insurance company.

3. Loss Cost Conversion

Each insurance company must provide manualholders with either its own rates or with procedures to convert ISO loss costs to rates and/or premiums. If an insurer provides its own rates, use them in place of the ISO loss costs in this Manual. If an insurer does not provide its own rates, manualholders must convert ISO loss costs in this Manual to rates and/or premiums before applying any of the rules. Refer to the company for special instructions – including rounding procedures – on how to do this.

**RULE 101.
FORMS, COVERAGES, MINIMUM LIMITS OF LIABILITY**

A. Forms

The Dwelling Policy Program makes available the following policy forms:

1. Dwelling Property 1 Basic Form **DP 00 01**,
2. Dwelling Property 2 Broad Form **DP 00 02**, and
3. Dwelling Property 3 Special Form **DP 00 03**.

B. Coverages

1. Forms **DP 00 02** and **DP 00 03** provide the following coverages. These coverages are written as separate items in the policy or in separate policies:

- a. Coverage **A** – Dwelling
- b. Coverage **B** – Other Structures
- c. Coverage **C** – Personal Property
- d. Coverage **D** – Fair Rental Value
- e. Coverage **E** – Additional Living Expense

2. Form **DP 00 01** provides Coverages **A** through **D**; Coverage **E** is available by endorsement.

**DWELLING POLICY PROGRAM MANUAL
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**RULE 101.
FORMS, COVERAGES, MINIMUM LIMITS OF LIABILITY
(Cont'd)**

C. Minimum Limits Of Liability

The following coverages are subject to a minimum limit of liability:

Coverages	Minimum Limit
Coverage A – Dwelling	\$12,000 (Form DP 00 02) \$15,000 (Form DP 00 03)
Coverage C – Personal Property	\$4,000 without Coverage A (Forms DP 00 02 and DP 00 03)
There are no minimum limits for Form DP 00 01	

Table 101.C. Minimum Limits Of Liability

**RULE 102.
PERILS INSURED AGAINST**

The following is a general description of the coverages provided by the individual Dwelling Policy Forms. The policy should be consulted for exact contract conditions.

Perils	DP 00 01 Basic Form	DP 00 02 Broad Form	DP 00 03 Special Form
Fire or Lightning, Internal Explosion	Yes	Yes	Yes
Extended Coverage meaning Windstorm or Hail, Explosion, Riot or Civil Commotion, Aircraft, Vehicles, Smoke, Volcanic Eruption	Optional*	Yes	Yes
Vandalism or Malicious Mischief	Optional**	Yes	Yes
Damage by burglars, Falling objects, Weight of ice, snow or sleet, Accidental discharge or overflow of water or steam, Sudden and accidental tearing apart of a heating system or appliance for heating water, Freezing, Sudden and accidental damage from artificially generated electrical current.	No	Yes	Yes
Additional risks with certain exceptions	No	No	Yes***
* May only be written with the perils of Fire or Lightning, Internal Explosion ** May only be written with Extended Coverage *** Special Coverage (Coverages A and B)			

Table 102. Perils Insured Against

DWELLING POLICY PROGRAM MANUAL GENERAL RULES

RULE 103. ELIGIBILITY

A Dwelling Policy may be issued to provide insurance under:

- A. Coverage A** – on a dwelling building:
 - 1. Used solely for residential purposes except that certain incidental occupancies or up to 5 roomers or boarders are permitted;
 - 2. Containing not more than four apartments; and
 - 3. Which may be in a townhouse or rowhouse structure; or
 - 4. In course of construction.
- B. Coverage A** – on a mobile or trailer home:
 - 1. Using Form **DP 00 01** only;
 - 2. Used solely for residential purposes except that certain incidental occupancies or up to 5 roomers or boarders are permitted;
 - 3. Containing not more than one apartment;
 - 4. For a policy period of not longer than one year; and
 - 5. At the permanent location described in the policy.
- C. Coverage B:**
 - 1. At the same location as the dwelling eligible for insurance under Coverage **A**;
 - 2. Not used for business purposes except a permitted incidental occupancy or when rented for use as a private garage;
 - 3. At a separate location when used in connection with the insured location but not for business purposes.
- D. Coverage C** in:
 - 1. A dwelling, mobile or trailer home eligible under Coverage **A**; or
 - 2. A dwelling with rental apartments including furnishings, equipment and appliances in halls or utility rooms; or
 - 3. Any apartment, cooperative or condominium unit used as private living quarters of the insured or rented to others.

- E. Coverage D** for the loss of the fair rental value of:
 - 1. A building eligible for insurance under Coverage **A** or **B**; or
 - 2. Private living quarters eligible under Coverage **C**.
- F. Coverage E** for the additional living expenses incurred to maintain the insured's household.

RULE 104. PROTECTION CLASSIFICATION INFORMATION

Determine the ISO Public Protection Classification; refer to ISO's Community Mitigation Classifications (CMC) Manual, applicable to the municipality or classified area where the insured property is located.

RULE 105. SEASONAL DWELLING DEFINITION

A seasonal dwelling is a dwelling with continuous unoccupancy of three or more consecutive months during any one year period.

**DWELLING POLICY PROGRAM MANUAL
GENERAL RULES**

**RULE 106.
CONSTRUCTION DEFINITIONS**

A. Frame

Exterior wall of wood or other combustible construction, including wood iron-clad, stucco on wood or plaster on combustible supports or aluminum or plastic siding over frame.

B. Masonry Veneer

Exterior walls of combustible construction veneered with brick or stone.

C. Masonry

Exterior walls constructed of masonry materials such as adobe, brick, concrete, gypsum block, hollow concrete block, stone, tile or similar materials and floors and roof of combustible construction. (Disregarding floors resting directly on the ground).

D. Superior Construction

1. Non-Combustible

Exterior walls and floors and roof constructed of, and supported by metal, asbestos, gypsum, or other noncombustible materials.

2. Masonry Non-Combustible

Exterior walls constructed of masonry materials (as described in Paragraph C.) and floors and roof of metal or other non-combustible materials.

3. Fire Resistive

Exterior walls and floors and roof constructed of masonry or other fire resistive materials.

E. Mixed (Masonry/Frame)

A combination of both frame and masonry construction shall be classed and coded as frame when the exterior walls of frame construction (including gables) exceed 33 1/3% of the total exterior wall area; otherwise class as masonry.

**RULE 107.
SINGLE AND SEPARATE BUILDINGS DEFINITION**

A. Single Building

All buildings or sections of buildings which are accessible through unprotected openings shall be considered as a single building.

B. Separate Building

1. Buildings which are separated by space shall be considered separate buildings.

2. Buildings or sections of buildings which are separated by:

a. A 6 inch reinforced concrete or an 8 inch masonry party wall; or

b. A documented minimum two hour non-combustible wall which has been laboratory tested for independent structural integrity under fire conditions;

which pierces or rises to the underside of the roof and which pierces or extends to the innerside of the exterior wall shall be considered separate buildings. Accessibility between buildings with independent walls or through masonry party walls described above shall be protected by at least a Class A Fire Door installed in a masonry wall section.

**RULE 108. – 200.
RESERVED FOR FUTURE USE**

**DWELLING POLICY PROGRAM MANUAL
GENERAL RULES**

**PART II
SERVICING TYPE RULES**

**RULE 201.
POLICY PERIOD**

The policy may be written for a period of:

- A.** One year and may be extended for successive policy periods by extension certificate based upon the forms, premiums and endorsements then in effect for the company.
- B.** Three years prepaid at three times the annual premium.
- C.** Three years in annual installments. Each annual installment shall be the annual premium then in effect for the company. Use Deferred Premium Payment Endorsement **DP 04 32**.

For maintaining common anniversary dates, a policy may be written for a period less than one year or less than three years on a pro rata basis.

**RULE 202.
CHANGES OR CANCELLATIONS**

If insurance is increased, cancelled or reduced, the additional or return premium shall be computed on a pro rata basis, subject to the minimum premium.

**RULE 203.
MANUAL PREMIUM REVISION**

A manual premium revision shall be made in accordance with the following procedures:

- A.** The effective date of such revision shall be as announced.
- B.** The revision shall apply to any policy or endorsement in the manner outlined in the announcement of the revision.
- C.** Unless otherwise provided at the time of the announcement of the premium revision, the revision shall not affect:
 - 1.** In-force policy forms, endorsements or premiums, until the policy is renewed; or
 - 2.** In the case of a Deferred Premium Payment Plan, in-force policy premiums, until the anniversary following the effective date of the revision.

**RULE 204.
MULTIPLE LOCATIONS**

A policy may be issued to provide insurance at more than one Described Location in the same state provided:

- A.** The same form and deductible applies at each location;
- B.** A separate policy Declarations page is completed for each location; or
- C.** The policy Declarations page is completed by:
 - 1.** Showing the total policy premium for all locations in the premium payments section.
 - 2.** Showing the deductible by entry of the deductible amount and adding "at each location".
 - 3.** Inserting the form number that applies.
 - 4.** Adding an appropriate reference to the Additional Dwelling Declarations or company equivalent.

**RULE 205.
MULTIPLE POLICIES**

A. Application

Insurance may be provided on the same property under two or more Dwelling policies in one or more companies as follows:

- 1.** The same form and endorsements must apply to all policies.
- 2.** The same deductible amount must apply to all policies.

B. Endorsement

Use Premium Sharing – Two Or More Policies Endorsement **DP 04 30**.

C. Premium

The premium for each policy is developed as follows:

- 1.** Compute the premium for the total limits of liability from the manual of the company issuing each policy.
- 2.** Allocate the premium determined in Paragraph **1.** based on the ratio of each policy's limit of liability to the total limits of liability for all policies.

**DWELLING POLICY PROGRAM MANUAL
GENERAL RULES**

**RULE 205.
MULTIPLE POLICIES (Cont'd)**

D. Example

The following example is a premium computation between two companies using a \$50,000 Coverage A Limit. The premiums shown are only for illustration.

Each Company's	Company A	Company B
Percentage share	70%	30%
Premium for \$50,000 Cov. A	\$240	\$200
Each Company's Policy Premium	168 (70% of 240)	60 (30% of 200)
Total Premium	(168 + 60) = 228	

Table 205.D. Example

**RULE 206.
MINIMUM PREMIUM**

- A. For prepaid policies a minimum **annual** premium shall be charged for each policy.
- B. When policies are written under a premium payment plan, no payment shall be less than the minimum premium for each annual period.
- C. The minimum premium may include all chargeable endorsements or coverages for Fire or Fire and Allied Lines if written at inception of the policy.
- D. The minimum annual premium shall **not** include charges for Theft or Earthquake Coverage, except when Earthquake is the only peril covered under the policy.
- E. Refer to company for minimum premium.

**RULE 207.
TRANSFER OR ASSIGNMENT**

Subject to the consent of the company, all rules of this Manual and any necessary adjustments of premium, a policy may be endorsed to effect:

- A. Transfer to another location within the same state; or
- B. Assignment from one insured to another in the event of transfer of title of the dwelling.

**RULE 208.
WAIVER OF PREMIUM**

- A. When a policy is endorsed after the inception date, an amount of additional or return premium may be waived.
- B. Refer to company for amount that may be waived.

**RULE 209.
WHOLE DOLLAR PREMIUM RULE**

Each premium shown on the policy and endorsements shall be rounded to the nearest whole dollar. A premium of fifty cents (\$.50) or more shall be rounded to the next higher whole dollar.

In the event of cancellation by the company, the return premium may be carried to the next higher whole dollar.

**RULE 210.
REFER TO COMPANY**

Refer to company for:

- A. Rating or classifying any risk for which there is no manual rate.
- B. Situations where a portion of the property coverage is reinsured on a facultative basis.

The following rating procedure is available for the determination of the applicable premium:

1. Manual rules and rates shall apply to the portion of the property limit of liability retained by the company.
2. For any portion of the limit(s) of liability obtained by means of facultative reinsurance, the premium shall be the facultative cost for such insurance increased by a charge up to but not exceeding 50% of the facultative cost.

With respect to premium developed in accordance with this Paragraph 2., the company is responsible for maintaining complete files, including all details relating to selection of the premium charge.

Whenever a risk is rated on a refer-to-company basis each company is responsible for complying with regulatory or statutory rate filing or disclosure requirements.

Note

Rates shall not be inadequate, excessive or unfairly discriminatory.

**RULE 211.
ADDITIONAL INSURED**

A. Coverage Description

1. In addition to the named insured shown in the Declarations, another person or organization may be considered an insured in this policy with respect to Coverage A – Dwelling and Coverage B – Other Structure at the Described Location listed in the Schedule, or elsewhere in the policy. The interest of such persons or organization and the Described Location to which it applies may be acknowledged by naming them in the endorsement referenced in Paragraph C.
2. Such persons or organizations are entitled to receive notification if the policy is canceled or nonrenewed by the insurer.

**DWELLING POLICY PROGRAM MANUAL
GENERAL RULES**

**RULE 211.
ADDITIONAL INSURED (Cont'd)**

B. Premium Computation

No additional charge is made for use of this endorsement.

C. Endorsement

Use Additional Insured Endorsement **DP 04 41**.

**RULES 212. – 300.
RESERVED FOR FUTURE USE**

**PART III
BASE PREMIUM COMPUTATION RULES**

**RULE 301.
BASE PREMIUM COMPUTATION**

To compute the Base Premium, use the Key Premiums and Key Factors that are displayed in Rule **301**. Refer to state company rates/ISO loss costs.

A. Fire (All Forms), Extended Coverage (DP 00 01), Broad Form (DP 00 02), Or Special Form (DP 00 03) For Coverage A – Dwelling/Coverage C – Personal Property

1. From the Key Premium Table in this Manual, select the Key Premium for the classifications or coverages that apply to the risk.
2. From the Key Factor Table in this Manual, determine the Key Factor for the desired limit of liability. If the desired limit of liability is not shown in the table, **interpolate** as illustrated in Paragraph **B**. of this rule.
3. Multiply the Key Premium by the Key Factor and round to the nearest whole dollar to develop the Base Premium (\$.50 or more rounded to the next higher whole dollar).

B. Interpolation Example

1. When the desired limit of liability is **less** than the highest limit shown, interpolate the Key Factors using the nearest limit above and below the desired limit, for example:
 - a. \$25,500 desired limit; the nearest limits are \$25,000 and \$26,000.
 - b. For \$25,000 the Key Factor is 1.082; for \$26,000 the Key Factor is 1.098. Figure the difference between the two Key Factors and divide by 10. This provides a factor per \$100.

$$\begin{array}{r} 1.098 \\ - 1.082 \\ \hline .016 \div 10 = .0016 \end{array}$$

- c. Multiply the factor per \$100 times five, and add 1.082: the Key Factor for \$25,000:

$$\begin{array}{r} .0016 \\ \times 5 \\ \hline .0080 + 1.082 = 1.090 \end{array}$$

- d. The result, 1.090, is the Key Factor for this example.
2. The factors shown in the interpolation example are for illustration only and are not necessarily the factors shown in the Key Factor Table of this Manual.

**RULE 302.
VANDALISM AND MALICIOUS MISCHIEF – DP 00 01**

Develop the Base Premium by multiplying the same limit of liability selected for Extended Coverage by the Vandalism and Malicious Mischief rate. Refer to state company rates/ISO loss costs.

**RULE 303.
ORDINANCE OR LAW COVERAGE – ALL FORMS**

A. Applicability By Form

1. DP 00 01

Coverage is **not** automatically included in this form but may be added by endorsement. See Paragraph **B**. for rating instructions.

2. DP 00 02 And DP 00 03

A limited amount of coverage is automatically included at each Described Location to pay for the increased costs necessary to comply with the enforcement of an ordinance or law. This amount is equal to 10% of the limit of liability that applies to:

- a. Coverage **A** or Unit-owner Building Items if the insured is an owner of a Described Location; or
- b. Coverage **B** if the insured is an owner of a Described Location which is not insured for Coverage **A** or Unit-owner Building Items; or
- c. Improvements, Alterations and Additions if the insured is a tenant of a Described Location.

This amount may be increased by endorsement. See Paragraph **B**. for rating instructions.

**DWELLING POLICY PROGRAM MANUAL
GENERAL RULES**

**RULE 303.
ORDINANCE OR LAW COVERAGE – ALL FORMS
(Cont'd)**

B. New Or Increased Coverage

1. Ordinance Or Law Coverage

The policy may be endorsed to add (Form **DP 00 01**) or increase (Form **DP 00 02/DP 00 03**) basic Ordinance or Law Coverage to accommodate the increased costs known or estimated by the insured for material and labor to repair or replace the damaged property and to demolish the undamaged portion of damaged property and clear the site of resulting debris according to the ordinance or law.

2. Endorsement

For Form **DP 00 01**, use Ordinance Or Law Coverage Endorsement **DP 04 74**. For Form **DP 00 02** or **DP 00 03**, use Ordinance Or Law – Increased Amount Of Coverage Endorsement **DP 04 71**.

3. Premium Determination

a. Described Location Including Coverage A

(1) Form DP 00 01

(a) Fire And Extended Coverage

The premium is computed by multiplying the Base Premium by the appropriate factor selected from the following table:

Percentage Of Coverage A	
Total Amount	Factors
10%	1.03
25%	1.08
50%	1.15
75%	1.23
100%	1.30
For each add'l 25% increment, add:	.08

Table 303.B.3.a.(1)(a) Factors

(b) Vandalism And Malicious Mischief

Multiply the rate per \$1,000 used to determine the Vandalism and Malicious Mischief Base Premium by the dollar amount of coverage added. Then multiply the result by .30.

(2) DP 00 02 Or DP 00 03 – Fire, Broad Or Special Forms

The premium is computed by multiplying the Base Premium by the appropriate factor selected from the following table:

Percentage Of Coverage A		
Increase In Amount	Total Amount	Factors
15%	25%	1.05
40%	50%	1.12
65%	75%	1.20
90%	100%	1.27
For each add'l 25% increment, add:		.08

Table 303.B.3.a.(2) Factors

b. Described Location Not Including Coverage A, But Including Coverage B – Specific Structures, Unit-owner Building Items, And/Or Improvements, Alterations And Additions

See Rule 503. for rating instructions.

**RULE 304.
PERMITTED INCIDENTAL OCCUPANCIES**

A. Coverage Description

- One of the incidental occupancies described in Paragraph **B.** is permitted in a premises eligible for coverage under a Dwelling Policy, if:
 - The policy provides insurance under Coverage **A, B** or **C**;
 - The incidental occupancy is operated by the insured who is the owner or a resident of the premises; and
 - There are no more than two persons at work in the incidental occupancy.
- Use Permitted Incidental Occupancies Endorsement **DP 04 20**.

B. Permitted Incidental Occupancies

- Offices, Schools or Studios meaning offices for business or professional purposes, and private schools or studios for music, dance, photography and other instructional purposes.
- Small Service Occupancies meaning occupancies primarily for service rather than sales. For example: barber or beauty shop, tailor or dressmaker, telephone exchanges or shoe repair shops using handwork only.
- Storage of merchandise if the value of the merchandise does not exceed \$10,000.

**DWELLING POLICY PROGRAM MANUAL
GENERAL RULES**

**RULE 304.
PERMITTED INCIDENTAL OCCUPANCIES (Cont'd)**

C. Amount Of Insurance

The amounts of insurance for the contents of the incidental occupancy and merchandise in storage shall be stated as separate contents items in the policy Declarations.

D. Premium Computation

Determine the Coverage C Base Premium under Rule 301., using the single Key Factor for the total amount of insurance for:

1. Household personal property,
2. Contents of the incidental occupancy, and
3. Merchandise in storage.

**RULE 305.
LOSS SETTLEMENT OPTIONS**

A. Functional Replacement Cost Loss Settlement – Forms DP 00 02 And DP 00 03 Only

1. Introduction

The policy provides building loss settlement on a replacement cost basis if, at the time of loss, the amount of insurance on the damaged building represents at least 80% of the full replacement cost of the building immediately before the loss.

2. Coverage Description

The policy may be endorsed to provide building loss settlement exclusively on a functional replacement cost basis if, at the time of loss, the amount of insurance on the damaged building is 80% or more of the functional replacement cost of the building immediately before the loss. Functional Replacement Cost means the amount which it would cost to repair or replace the damaged building with less costly common construction materials and methods which are functionally equivalent to obsolete, antique or custom construction materials and methods.

3. Premium Computation

Develop the Base Premium in accordance with Rule 301. for the amount of insurance selected for this option.

4. Endorsement

Use Functional Replacement Cost Loss Settlement Endorsement **DP 05 30**.

B. Actual Cash Value Loss Settlement – Forms DP 00 02 And DP 00 03 Only

1. Introduction

The policy provides building loss settlement on a replacement cost basis if, at the time of loss, the amount of insurance on the damaged building represents at least 80% of the full replacement cost of the building immediately before the loss.

2. Coverage Description

The policy may be endorsed to provide building loss settlement exclusively on an actual cash value basis if, on the inception date of the policy, the Coverage A limit of liability selected by the insured is less than 80% of the full replacement cost of the dwelling.

3. Premium Computation

The premium is computed by multiplying the Base Premium by the appropriate factor from the following table:

Coverage A Limit Of Liability Equals Less Than _____% Of Replacement Value	Factor
80%, but not less than 50%	1.05
Less than 50%	1.10

Table 305.B.3. Factors

4. Endorsement

Use Actual Cash Value Loss Settlement Endorsement **DP 04 76**.

**RULES 306. – 400.
RESERVED FOR FUTURE USE**

**DWELLING POLICY PROGRAM MANUAL
GENERAL RULES**

**PART IV
ADJUSTED BASE PREMIUM COMPUTATION RULES**

**RULE 401.
SUPERIOR CONSTRUCTION**

A. Introduction

Refer to the Construction Definition rule in this Manual for details.

B. Extended Coverage Rating Classification

For Extended Coverage rating purposes a dwelling classified as:

1. Fire Resistive is considered Wind Resistive.
2. Masonry Non-Combustible is considered Semi-Wind Resistive.

C. Premium Computation

Multiply the Masonry Base Premium by the appropriate factor selected from the following table:

Classifications	Fire	E.C., Broad & Special Forms
Fire Resistive & Masonry Non-Combustible	.50	.50
Non-Combustible	.50	1.00

Table 401.C. Superior Construction Factors

**RULE 402.
COVERAGE C – PERSONAL PROPERTY IN BUILDINGS
SUBJECT TO COMMERCIAL CLASS RATES OR
SPECIFIC RATES**

A. Fire

If the building is classified in Division Five of the Commercial Lines Manual – Fire And Allied Lines, Rule **85.**, Paragraph **B.1.**, **B.2.**, **B.3.** or **B.4.**, use the appropriate factor selected from the following table:

Types Of Construction	B.1. Or B.2.*	All Other B.2. Classifications, B.3., B.4. Or Is Rated Specifically
1. Fire Resistive, Masonry Non-Comb. & Non-Comb. Multiply the Masonry Coverage C Base Premium by:	.50	1.00
2. All Other Construction Multiply the Masonry Coverage C or Frame Base Premium by:	1.00	2.00

* Hotels and Motels Without Restaurant Only

Table 402.A. Coverage C – Personal Property In Buildings

B. Extended Coverage, Vandalism And Malicious Mischief, Broad Or Special Form

Multiply the Coverage C Base Premium by 1.00.

**RULE 403.
DWELLING UNDER CONSTRUCTION**

A. Coverage Description

Two methods are provided for insuring this exposure.

1. Named Insured Is The Intended Occupant

A builder (contractor) may be designated as an additional insured. The policy may be cancelled upon completion of the dwelling. Use Dwelling Under Construction Endorsement **DP 11 43.**

2. Named Insured Is Not The Intended Occupant

The policy shall specify building is in course of construction and permission is granted to complete.

For other coverage bases, refer to the Commercial Lines Manual.

B. Premium Computation

1. Multiply the Coverage A Owner Occupied Base Premium by .65.
2. Multiply the Coverage A Non-Owner Occupied Base Premium by 1.00.

**RULE 404.
MOBILE OR TRAILER HOMES – DP 00 01 ONLY**

Refer to the state company rates/ISO loss costs.

Rule **410.** does not apply to Mobile or Trailer homes.

**RULE 405.
TOWNHOUSE OR ROWHOUSE**

A. Individual Family Units

Determine the total number of individual family units within a Fire Division. For example, a two family dwelling attached to a one family dwelling is considered **three** individual family units within a Fire Division if both dwellings are not separated by a fire wall. Four attached two family dwellings are considered **eight** individual family units within a Fire Division if they are not separated by fire walls. A policy may be issued for:

1. Coverage A when the dwelling contains one, two, three or four individual family units within a Fire Division.
2. Coverage C in a dwelling with one or more individual family units within a Fire Division.

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**RULE 405.
TOWNHOUSE OR ROWHOUSE (Cont'd)**

B. Premium Computation

Number Of Individual Family Units	Use Coverage A* Or C Base Premium
1, 2, 3 or 4	1, 2, 3 or 4 families
5 or more	5 or more families
* Refer to Commercial Lines Manual for Building Coverage when it contains five or more individual family units within a Fire Division	

Table 405.B. Townhouse Or Rowhouse

**RULE 406.
DEDUCTIBLES**

All policies are subject to a deductible that applies to loss from all perils except Earthquake. A separate deductible type applies to Earthquake Coverage as described in Rule 509.

For Theft Coverage, the deductible amount may differ from the deductible amount that applies to Fire and Allied Lines perils.

Refer to the Earthquake and Theft Coverage rules for the applicable deductible provision.

A. Base Deductible

\$500 Deductible.

B. Optional Deductibles

1. All Perils Deductibles

To compute the premium for these options, multiply the Base Premium for the Base Deductible by the factors selected from the state exception pages.

2. Windstorm Or Hail Deductibles

When the policy covers the peril of Windstorm or Hail, the following deductible options may be used in conjunction with a deductible applicable to all other perils covered under Extended Coverage, Broad or Special Forms.

a. Percentage Deductibles

(1) Deductible Amounts

This option provides for higher Windstorm or Hail percentage deductibles of 1%, 2%, 5%, 7.5% and 10% of the limit of liability that applies to Coverage A, B, D or E, whichever is greatest, when the dollar amount of the percentage deductible selected exceeds the amount of the All Other Perils deductible. This option is not available for policies covering only personal property.

(2) Endorsement

Use Windstorm Or Hail Percentage Deductible Endorsement **DP 03 12**.

(3) Declarations Instructions

Enter, on the policy Declarations, the percentage amount that applies to Windstorm or Hail and the dollar amount that applies to All Other Perils. For example:

Deductible – Windstorm or Hail 2% of the Coverage A limit and \$500 for All Other Perils.

(4) Deductible Application

In the event of a Windstorm or Hail loss to covered property, the dollar amount is deducted from the total of the loss for all coverages.

(5) Coverage Options

The deductible factors for Coverage A, B, D or E and coverage options for buildings and non-building structures differ by the deductible percentage amounts that apply to Windstorm or Hail, deductible amounts that apply to other perils, and the Coverage A, B, D or E limit.

The deductible factors for Coverage C and other personal property coverage options differ by the deductible percentage amounts that apply to Windstorm or Hail and the deductible amounts that apply to other perils.

(6) Use Of Factors

The factors for the Windstorm or Hail Deductibles incorporate the factors for the All Perils Deductibles. Do not use the factors for the All Perils Deductibles when rating a policy with a higher Windstorm or Hail deductible.

(7) Deductible Factors

To compute the premium for this provision, multiply the Extended Coverage, Broad or Special Form Base Premium for the Base Deductible for each coverage insured under the policy by the factor selected from the state exception pages.

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**RULE 406.
DEDUCTIBLES (Cont'd)**

b. Higher Fixed-dollar Deductibles

(1) Deductible Amounts

This option provides for higher Windstorm or Hail fixed-dollar deductible amounts of \$1,000, \$2,000, \$5,000, \$7,500 and \$10,000 when the dollar amount of the higher fixed-dollar deductible selected exceeds the amount of the All Other Perils deductible. This option is not available for policies covering only personal property.

(2) Endorsement

An endorsement is not required.

(3) Declarations Instructions

Separately enter, on the policy Declarations, the deductible amounts that apply to Windstorm or Hail and All Other Perils. For example: \$1,000 for Windstorm or Hail and \$500 for All Other Perils.

(4) Deductible Application

In the event of a Windstorm or Hail loss to covered property, the dollar amount is deducted from the total of the loss for all coverages.

(5) Coverage Options

The deductible factors for Coverage **A**, **B**, **D** or **E** and coverage options for buildings and non-building structures differ by the deductible amounts that apply to Windstorm or Hail and to other perils and the Coverage **A**, **B**, **D** or **E** limit.

The deductible factors for Coverage **C** and other personal property coverage options differ by the deductible amounts that apply to Windstorm or Hail and other perils.

(6) Use Of Factors

The factors for the Windstorm or Hail Deductibles incorporate the factors for the All Perils Deductibles. Do not use the factors for the All Perils Deductibles when rating a policy with a higher Windstorm or Hail deductible.

(7) Deductible Factors

To compute the premium for this provision, multiply the Extended Coverage, Broad or Special Form Base Premium for the Base Deductible for each coverage insured under the policy by the factor selected from the state exception pages.

**RULE 407.
AUTOMATIC INCREASE IN INSURANCE**

A. Coverage Description

The policy may be endorsed to provide automatic annual increases in the Coverage **A** and **B** limits of liability.

B. Premium Computation

1. The premium is computed by multiplying the Base Premium by the appropriate factors selected from the following table as follows:

Amount Of Annual Increase	Factor
4%	1.02
6%	1.03
8%	1.04
Each Add'l 4% over 8% add:	.02

Table 407.B.1. Factors

2. The premium for a three-year policy is 3.2 times the annual policy premium.

C. Endorsement

Use Automatic Increase In Insurance Endorsement **DP 04 11**.

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**RULE 408.
PROTECTIVE DEVICES**

A. Protective Devices Factors

Approved and properly maintained installations of fire alarms and automatic sprinklers in the dwelling may be recognized for a reduced premium – computed by multiplying the Fire Base Premium by the selected factors below:

Protective Devices Factors

Type Of Installation*	Dwelling Factor	Mobile Or Trailer Home Factor
Central Station Reporting Fire Alarm	.90 to 1.00	.92 to 1.00
Fire Department Reporting Fire Alarm	.93 to 1.00	.95 to 1.00
Local Fire Alarm	.95	.97
Automatic Sprinklers In All Areas Including Attics, Bathrooms, Closets, Attached Structures	.80 to .90	.90 to .95
Automatic Sprinklers In All Areas Except Attic, Bathroom, Closet And Attached Structure Areas That Are Protected By A Fire Detector	.90 to 1.00	.95 to 1.00
* Refer to company for eligibility, types of systems and devices, installations, and available credits		

Table 408.A. Protective Devices Factors

B. Endorsement

Use Premises Alarm Or Fire Protection System Endorsement **DP 04 70.**

**RULE 409.
ACTUAL CASH VALUE LOSS SETTLEMENT
WINDSTORM OR HAIL LOSSES TO ROOF
SURFACING – DP 00 02, DP 00 03 AND DP 00 01 WITH
DP 00 08**

A. Introduction

The policy provides settlement for building losses on a repair or replacement cost basis, subject to certain conditions.

B. Coverage Description

The policy may be endorsed to provide loss settlement exclusively on an Actual Cash Value basis for roof surfacing when damage is caused by the peril of Windstorm or Hail.

C. Premium Determination

To develop a premium for this option, multiply the Extended Coverage, if applicable, and Broad or Special Form Base Premium by a factor of .98.

D. Endorsement

Use Actual Cash Value Loss Settlement Windstorm Or Hail Losses To Roof Surfacing Endorsement **DP 04 75.**

**RULE 410.
BUILDING CODE EFFECTIVENESS GRADING**

This rule does not apply to Mobile or Trailer homes.

A. General Information

1. The Building Code Effectiveness Grading Schedule (BCEGS) develops a grade of 1 to 10 for a community based on the adequacy of its building code and the effectiveness of its enforcement of that code. Policies which cover the perils of Windstorm or Hail or Earthquake may be eligible for special rating treatment, subject to the criteria in the following paragraphs. The BCEGS factor applies, where applicable, in addition to the Public Protection Classification factors.
2. In some communities, two BCEGS classifications may be assigned. One classification for personal lines indicated next to "PERS" will apply to one- and two-family dwelling buildings and/or personal property contained in such buildings. The other classification indicated next to "COML" will apply to all other buildings occupied for residential, commercial and/or manufacturing purposes, including personal and business property contained therein. The ISO Community Mitigation Classifications will indicate the application of each grade.
3. Refer to the ISO Community Mitigation Classifications (CMC) Manual for the BCEGS classifications for a community and their effective dates.

B. Community Grading

1. The BCEGS classification applies to any building that has an original certificate of occupancy dated the year of the effective date of the community grading, or later. A rating factor has been developed for each community classification.
2. If a community is regraded subsequent to its initial grading, the factor for the revised grade applies to buildings that have an original certificate of occupancy dated the year of the effective date of the revised grading, or later.
3. Where certificates of occupancy are not issued, equivalent documentation acceptable to the company may be used.
4. If, due to an addition or alteration, the original building is changed to comply with the latest building code, the factor for the community classification applicable at the time the reconstruction is completed will apply to such building.

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**RULE 410.
BUILDING CODE EFFECTIVENESS GRADING (Cont'd)**

5. The BCEGS classification may apply to Windstorm or Hail or Earthquake, or to both. Specific information is provided in the ISO Community Mitigation Classifications (CMC) Manual. If the grade in the manual does not apply to one of the perils, the factor should not be applied for that peril.

C. Individual Grading

Where buildings have been built in full conformance with the natural hazard mitigation elements of one of the nationally recognized building codes even though the community grade is greater than one, exception rating procedures may apply.

1. Any building may be classified as a 1 for Windstorm or Hail upon certification by a registered or licensed design professional, based on an on-site inspection, that such building is in compliance with one of the three nationally recognized building codes with respect to mitigation of the windstorm or hail hazard. This classification is effective only from the date of the certification.
2. Any building may be classified as a 1 for Earthquake upon certification by a registered or licensed design professional, based on an on-site inspection, that such building is in compliance with the earthquake mitigation elements of one of the three nationally recognized building codes. This classification is effective only from the date of the certification.

D. Ungraded Risks

Buildings which do **not** meet the criteria in Paragraph **B.** or **C.** for classification assignment are rated and coded as ungraded risks. Do not classify as a 10.

E. Premium Credit Computation

1. Community Grading

a. Windstorm Or Hail

Compute the premium credit as follows:

- (1) For buildings which are eligible under Paragraph **B.** of this rule, and for personal property inside such buildings, multiply the Key Premium for Extended Coverage (**DP 00 01**) by the applicable factor in Paragraph **E.1.c.(1)**; and
- (2) Multiply the result from Paragraph (1) by the Key Factor for the desired amount of insurance.

b. Earthquake

When Earthquake Endorsement **DP 04 69** is attached to the policy, multiply the Earthquake Base Premium by the appropriate factor in Paragraph **E.1.c.(2)** located in the state exceptions.

c. Credit Factors

Refer to state exceptions for state-specific factors.

2. Individual Grading

For any building classified as a 1 based upon certification as set forth in Paragraph **C.**, use the appropriate factor listed under Paragraph **E.1.c.** located in the state exceptions.

**RULES 411. – 499.
RESERVED FOR FUTURE USE**

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**PART V
ADDITIONAL COVERAGES AND INCREASED LIMITS
RULES**

**RULE 500.
MISCELLANEOUS LOSS COSTS**

This rule is reserved to provide rates for various rating rules in this Manual. Refer to state company rates/ISO loss costs.

**RULE 501.
COVERAGE B – OTHER STRUCTURES**

A. Coverage Description

Coverage for other structures described as covered under Coverage **B** is automatically provided on a blanket basis for up to 10% of the Coverage **A** limit.

1. Under Form **DP 00 01**, use of this option reduces the Coverage **A** limit for the same loss.
2. Under Form **DP 00 02** or **DP 00 03**, this limit is additional insurance.

The blanket limit may not be increased.

No entry is needed in the policy Declarations for this coverage to apply.

B. Specific Structures Coverage

Coverage may be purchased for specific structures. Enter the limit of liability and description of each structure in the policy Declarations. Refer to Paragraph **C**. for premium computation instructions.

C. Premium Computation

1. **Structure Rented To Others For Dwelling Purposes**

Rate each structure separately as a Coverage **A** Dwelling, Non-Owner-Occupied under Rule **301**.

2. **Structure Not Rented To Others For Dwelling Purposes**

- a. Policy includes Coverage **A** or structure does not have permitted incidental occupancy or is at same Described Location as the dwelling:

- (1) **Fire, Extended Coverage, Broad And Special Forms**

Refer to the state company rates/ISO loss costs Rule **500**. Miscellaneous Rates.

- (2) **Vandalism And Malicious Mischief (DP 00 01)**

Refer to the state company rates/ISO loss costs Rule **302**. Vandalism And Malicious Mischief.

- b. Policy does not include Coverage **A** or structure has permitted incidental occupancy or is not at same Described Location as the dwelling:

- (1) **Fire, Extended Coverage, Broad And Special Forms**

Rate each structure separately as a Coverage **A** item under Rule **301**. using the one Family Key Premium.

- (2) **Vandalism And Malicious Mischief (DP 00 01)**

Refer to the state company rates/ISO loss costs Rule **302**. Vandalism And Malicious Mischief.

**RULE 502.
COVERAGE D – FAIR RENTAL VALUE
COVERAGE E – ADDITIONAL LIVING EXPENSE**

A. Introduction

Coverage is automatically provided in the forms on a limited basis as follows:

1. **Form DP 00 01**

a. Coverage D

Up to 20% of the Coverage **A** limit is available. Use of this option reduces the Coverage **A** limit for the same loss. No entry is needed in the policy Declarations for this coverage to apply.

b. Coverage E

Not automatically included in form. It may be added as noted in Paragraph **B**.

2. **Form DP 00 02 Or DP 00 03**

Coverage **D** and **E** combined – Up to 20% of the Coverage **A** limit is available for Coverage **D** and Coverage **E** combined as additional insurance. No entry is needed in the policy Declarations for this coverage to apply.

B. Coverage Description

Coverage may be increased or added as follows for all forms:

1. **Coverage D**

- a. The amount recoverable each month under this coverage shall be based on the lost rental income less any expenses that do not continue during untenability.

- b. Enter amount of increase in the policy Declarations.

- c. For **DP 00 01**, the amount recoverable each month is limited to a fraction of the total rental value amount insured under the policy. This fraction is equal to one divided by the number of months dwelling is rented per year.

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**RULE 502.
COVERAGE D – FAIR RENTAL VALUE
COVERAGE E – ADDITIONAL LIVING EXPENSE (Cont'd)**

DP 00 01 Example

Factors
\$10,000 = Rental Value Coverage in Form (20% of Coverage A limit of \$50,000)
+2,000 = Additional Insurance (Shown under Coverage D in policy Declarations)
\$12,000 = Total Rental Value Amount Insured
Scenario A
If dwelling is rented for entire year, then fraction = 1/12. \$12,000 X 1/12 = Up to \$1,000 available each month.
Scenario B
If dwelling is rented 8 months per year, then fraction = 1/8. \$12,000 X 1/8 = Up to \$1,500 available each month.

Table 502.B.1.c. DP 00 01 Example

2. Coverage E

- a. Enter initial limit (**DP 00 01**) or amount of increase (**DP 00 02** or **DP 00 03**) in policy Declarations.
- b. For **DP 00 01**, the amount recoverable each month is limited to no more than 25% per month of the total additional living expense amount insured under the policy.
- c. For **DP 00 01**, use Additional Living Expense Endorsement **DP 04 14**.

C. Premium Computation

1. Policy Includes Coverage A Or Coverage C

a. Fire, Extended Coverage, Broad And Special Forms

Refer to the state company rates/ISO loss costs Rule **500**. Miscellaneous Rates.

b. Vandalism And Malicious Mischief (DP 00 01)

Refer to the state company rates/ISO loss costs Rule **302**. Vandalism And Malicious Mischief.

2. Policy Does Not Include Coverage A Or Coverage C

a. Fire, Extended Coverage, Broad And Special Forms

(1) One To Four Family Dwelling

Multiply the Coverage A Key Premium by the Coverage A Key Factor, for:

- (a) The Coverage D limit, times .53; or
- (b) The Coverage E limit, times 1.00

(2) Five Or More Family Dwelling

Calculate the premium as instructed above using the Four Family Key Premium.

b. Vandalism And Malicious Mischief (DP 00 01)

Refer to the state company rates/ISO loss costs Rule **302**. Vandalism And Malicious Mischief.

**RULE 503.
ORDINANCE OR LAW COVERAGE FOR COVERAGE B – SPECIFIC STRUCTURES, BUILDING ITEMS AND IMPROVEMENTS, ALTERATIONS AND ADDITIONS**

A. Coverage Description

1. DP 00 01

The policy may be endorsed to add an amount of Ordinance or Law Coverage equal to the amounts noted in Paragraphs 1. and 2.

2. DP 00 02 Or DP 00 03

The basic 10% of coverage may be initially increased to the amounts noted in Paragraphs **A.2.a.** and **b.**

- a. 50% of the total Coverage B or Unit-owner Building Items limit; or
- b. 100% of the Improvements, Alterations and Additions limit.

B. Increased Limits

These amounts may be further increased in 25% increments.

C. Premium Determination

1. The premium for this additional coverage is determined based on the dollar amount of coverage added for **DP 00 01**, or the dollar amount of increase, represented by the increased percentage selected above the basic limit for **DP 00 02** or **DP 00 03**.
2. Multiply state company rates/ISO loss costs Rule **500**. Miscellaneous Rates by .30.

**DWELLING POLICY PROGRAM MANUAL
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**RULE 504.
IMPROVEMENTS, ALTERATIONS AND ADDITIONS
TENANT AND CO-OP UNIT-OWNER – DP 00 01 OR
DP 00 02**

A. Introduction

Named perils coverage is automatically provided in the forms for up to 10% of the Coverage **C** limit.

1. DP 00 01

Use of this option reduces the Coverage **C** limit for the same loss.

2. DP 00 02

This limit is additional insurance.

This limit may be increased for an additional premium.

B. Special Coverage

For Form **DP 00 02**, coverage may be extended to Special Coverage for an additional premium.

C. Stand Alone Coverage

Coverage may be written without Coverage **A, B, C, D** or **E**.

D. Premium Computation

1. Fire, Extended Coverage, Broad And Special Forms

a. If the policy includes Coverage **A, B, C, D** or **E**, refer to the state company rates/ISO loss costs Rule **500**. Miscellaneous Rates.

b. If the policy does not include Coverage **A, B, C, D** or **E**, multiply the Coverage **A**, Four Family, Owner-occupied Key Premium (for the territory, protection and construction applying to the Described Location) by the Coverage **A** Key Factor for the amount of insurance desired.

2. Vandalism And Malicious Mischief (DP 00 01)

Refer to the state company rates/ISO loss costs Rule **302**. Vandalism And Malicious Mischief.

E. Endorsement

1. To provide Named Perils Coverage, use Improvements, Alterations And Additions Endorsement **DP 04 31**.

2. To provide Special Coverage, use Improvements, Alterations And Additions Endorsement **DP 04 31** and Special Coverage Endorsement **DP 04 65**.

**RULE 505.
BUILDING ITEMS CONDO UNIT-OWNER – DP 00 01 OR
DP 00 02**

A. Coverage Description

Unit-owners building items are not covered in the forms.

However, for an additional premium, coverage is available on a Named Perils or Special Coverage basis.

B. Stand Alone Coverage

Coverage may be written without Coverage **A, B, C, D** or **E**.

C. Premium Computation

1. Fire, Extended Coverage, Broad And Special Forms

a. If the policy includes Coverage **A, B, C, D** or **E**, refer to the state company rates/ISO loss costs Rule **500**. Miscellaneous Rates.

b. If the policy does not include Coverage **A, B, C, D** or **E**, multiply the Coverage **A**, Four Family, Owner-occupied Key Premium (for the territory, protection and construction applying to the Described Location) by the Coverage **A** Key Factor for the amount of insurance desired.

2. Vandalism And Malicious Mischief (DP 00 01)

Refer to the state company rates/ISO loss costs Rule **302**. Vandalism And Malicious Mischief.

D. Endorsement

1. To provide Named Perils Coverage, use Form **DP 00 01** or **DP 00 02** and Unit-owners Coverage Endorsement **DP 17 66**.

2. To provide Special Coverage, use Form **DP 00 02** and Unit-owners Coverage Endorsement **DP 17 66** and Special Coverage Endorsement **DP 04 65**.

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**RULE 506.
LOSS ASSESSMENT PROPERTY COVERAGE CO-OP
OR CONDO UNIT-OWNER OR TENANT – DP 00 01 OR
DP 00 02 DWELLING BUILDING OWNER – ALL FORMS**

A. Coverage Description

1. Coverage for property loss assessment, for which the insured may be liable, is not included in the forms.
2. Coverage is available for an additional premium for all insured perils.
3. When coverage is desired for the peril of Earthquake, refer to Rule **509.C.** for policy writing and rating instructions.

B. Stand Alone Coverage

Coverage may be written without Coverage **A, B, C, D** or **E.**

C. Endorsement

Use Loss Assessment Property Coverage Endorsement **DP 04 63.**

D. Premium Computation

1. **Fire, Extended Coverage, Broad And Special Forms**
 - a. If the policy includes Coverage **A, B, C, D** or **E**, refer to the state company rates/ISO loss costs Rule **500.** Miscellaneous Rates.
 - b. If the policy does not include Coverage **A, B, C, D,** or **E**, multiply the Coverage **A.**, Four Family, Owner-Occupied Key Premium (for the territory, protection and construction applying to the described location) by the Coverage **A** Key Factor for the amount of insurance desired.
2. **Vandalism And Malicious Mischief (DP 00 01)**

Refer to the state company rates/ISO loss costs Rule **302.** Vandalism And Malicious Mischief.

**RULE 507.
FIRE DEPARTMENT SERVICE CHARGE**

The limit of \$500 may be increased subject to the rules and rates of the company.

**RULE 508.
TREES, SHRUBS AND OTHER PLANTS**

A. Form DP 00 01

1. Coverage Description

Coverage for trees, shrubs and other plants is not provided in this form. However, for an additional premium, coverage is available for specified perils on two bases, with and without the peril of windstorm or hail. Coverage is limited to a \$500 per item maximum.

Declare on the endorsement or elsewhere in the policy, as directed by the company, whether the peril of windstorm or hail applies.

2. Stand Alone Coverage

This coverage may be written without Coverage **A, B, C, D** or **E.**

3. Endorsement

Use Trees, Shrubs And Other Plants Endorsement **DP 04 17.**

B. Forms DP 00 02 Or DP 00 03

1. Coverage Description

Up to 5% of the Coverage **A** limit is available in the form (subject to a \$500 per item maximum) for specified perils as additional insurance.

2. Windstorm Or Hail Coverage

Coverage for Windstorm or Hail is available up to 5% of Coverage **A** limit (subject to a \$500 per item maximum) for an additional premium.

3. Endorsement

Use Windstorm Or Hail Endorsement **DP 04 18.**

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**RULE 508.
TREES, SHRUBS AND OTHER PLANTS (Cont'd)**

C. Premium Computation

1. Fire, Extended Coverage, Broad And Special Forms

Refer to state company rates/ISO loss costs Rule **508**.

2. Vandalism And Malicious Mischief (DP 00 01)

Refer to state company rates/ISO loss costs Rule **302**. Vandalism And Malicious Mischief.

**RULE 509.
EARTHQUAKE COVERAGE**

A. Coverage Description

The policy may be endorsed to provide coverage against a loss resulting from the peril of Earthquake. This peril shall apply to all Property Coverages for the same limits provided in the policy. When added to the Fire policy, this peril shall apply to the same coverages and for the same limits that apply to the peril of Fire. Use Earthquake Endorsement **DP 04 69**.

B. Earthquake Only Coverage

When a policy is written to cover only the peril of Earthquake:

1. Use Form **DP 00 01** for Actual Cash Value Loss Settlement or **DP 00 02** for Replacement Cost;
2. Use Earthquake And Volcanic Eruption Endorsement **DP 16 13**; and
3. Multiply the rates in this rule by a **factor** of 1.10.

C. Loss Assessment Coverage

When the policy is extended to cover loss assessment resulting from loss by this peril, the limit of liability shall be based on the insured's proportionate interest in total value of all collectively owned buildings and structures of the corporation or association of property owners. Refer to company for rates. Use Loss Assessment Coverage For Earthquake Endorsement **DP 04 68**.

D. Deductible

Deductible percentage amounts of 5%, 10%, 15%, 20% and 25% of the limit of liability for Coverage **A** and Coverage **C** are included in this rule.

In the event of an Earthquake loss to covered property, the dollar amount is deducted from the total of the loss for Coverages **A, B** and **C**.

Earthquake rates/loss costs are displayed for the 5% and 10% deductible in the state company rates/ISO loss costs Rule **509**. Credit factors for deductible percentage amounts of 15%, 20% and 25% are provided in Paragraph **F. Premium For Higher Deductibles** of this rule.

E. Premium For Base Deductible

Develop the Base Premium as follows:

1. Determine whether Construction Table **A, B,** and/or **C** applies for the appropriate deductible. Refer to state company rates/ISO loss costs.
2. Determine the Earthquake territory according to the ZIP code of the residence premises from the State Territory Definitions section in this manual.
3. Add the results of the following three steps:
 - a. Multiply the Coverage **A** limit by the state company rates/ISO loss costs for Coverage **A** in the table;
 - b. Multiply the Coverage **C** limit by the state company rates/ISO loss costs for Coverage **C** in the table; and
 - c. Multiply the sum of the Additional Coverage **D** and **E** limits by the state company rates/ISO loss costs for Coverages **D** and **E** in the table.
4. For Building or Non-building Structure Items – All Forms:

Multiply the state company rates/ISO loss costs for Coverage **B** in the table by the appropriate limit of liability for the following Other Building Coverage options, as applicable, and add to the applicable premium determined in Paragraph **E.3**.

 - a. Coverage **B** – Specific Structures;
 - b. Improvements, Alterations and Additions – Increased Limits;
 - c. Building Items Coverage;
5. For Ordinance or Law – Basic and Increased Limit – All Forms:

When the basic Ordinance or Law Coverage limit is added or increased, the earthquake premium is developed based on the added or increased limit of insurance.

- a. For Forms **DP 00 01, DP 00 02** and **DP 00 03**, multiply the rate determined in Paragraph **E.3.a.** by the appropriate factor selected from Rule **303.B.3.a.**
- b. For Coverage **B** – Specific Structures, Improvements, Alterations and Additions and Building Items Coverage, the premium for this additional coverage is determined based on the dollar amount of added or increased coverage, represented by the increased percentage amount selected above the basic limit. The rate for each additional \$1,000 of insurance is determined as follows: multiply the state company rates/ISO loss costs for Coverage **B** in the table by .30 and add to the applicable premium determined in Paragraph **E**.

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**RULE 509.
EARTHQUAKE COVERAGE (Cont'd)**

F. Premium For Higher Deductibles

Multiply the Earthquake base premium determined in Paragraph **E.** for the 10% deductible by the appropriate factor from the following table:

Deductible Percentage	Frame	Masonry	Superior
15%	.80	.85	.75
20%	.65	.70	.60
25%	.50	.60	.45

Table 509.F. Higher Deductibles Factors

G. Building Code Effectiveness Grading

Refer to General Rule **410.** Building Code Effectiveness Grading for information which may affect Earthquake rating.

**RULE 510.
THEFT COVERAGE**

A. Introduction

A Fire policy insuring Coverage **A** or **C** may be extended, for an additional premium, to provide On and Off-Premises Coverage for the perils of Theft and Vandalism and Malicious Mischief (V.&M.M.) resulting from theft.

1. Owner-Occupied Dwellings, Co-Op Or Condo Units; And Apartments Occupied By Tenant (Named Insured)

a. Coverage Description

The policy may be extended to provide On or Off-Premises Coverage.

b. Minimum Limit Of Liability

The minimum limit of liability is \$1,000 each for On and Off-Premises Coverage.

c. Off-Premises Coverage

Off-Premises Coverage is **only** available when On-Premises Coverage is purchased.

The limit of liability shall not be greater than that selected for On-Premises Coverage.

d. Endorsement

Use Broad Theft Coverage Endorsement **DP 04 72.**

2. Non-Owner-Occupied Dwellings, Co-op Or Condo Units; And Apartments Occupied By Tenant (Other Than Named Insured)

a. Coverage Description

The policy may be extended to provide On-Premises Coverage **only.**

b. Limit Of Liability

The minimum limit of liability is \$1,000.

c. Endorsement

Use Limited Theft Coverage Endorsement **DP 04 73.**

B. Premium Computation

Refer to state company rates/ISO loss costs for the Base Deductible.

Compute the premiums separately for each premises in the manner and sequence that follows:

1. Theft And Vandalism And Malicious Mischief

a. Owner-Occupied Dwellings

Compute the premiums for the desired limit of liability separately for On and Off-Premises Coverage.

b. Non-Owner-Occupied Dwellings, (On-Premises Only)

Multiply the On-Premises premium computed above by a factor of 1.50.

2. Burglar Alarm Discount (On-Premises Only)

a. Approved and properly maintained installations of burglar alarms in the dwelling may be recognized for a reduced premium – developed by applying the selected factors to the premiums computed in Paragraph **B.1.a.** or **B.1.b.**

Type Of Installation*	Factor
Central Station Reporting Burglar Alarm	.95 to 1.00
Police Station Reporting Burglar Alarm	.97 to 1.00
Local Burglar Alarm	.98

* Refer to company for eligibility, types of systems and devices, installations and available credits.

Table 510.B.2.a. Factors

b. Use Premises Alarm Or Fire Protection System Endorsement **DP 04 70.**

C. Deductibles

1. Base Deductible

\$500 Deductible.

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**RULE 510.
THEFT COVERAGE (Cont'd)**

2. Optional Deductibles

To compute the premium for this provision, multiply the premium for the Base Deductible computed in Paragraph **B.1.** by the factor listed in the following table:

Deductible*	Factor
\$ 100	1.26
\$ 250	1.05
\$ 1,000	.84
\$ 2,500	.68

* Refer to the state company rates pages for the minimum annual additional premium charge that applies per policy.

Table 510.C.2 Factors

**RULE 511.
SINKHOLE COLLAPSE COVERAGE**

A. Coverage Description

The policy may be endorsed to provide Sinkhole Collapse Coverage.

B. Premium Computation

1. Refer to state company rates/ISO loss costs; and
2. Multiply the rate per \$1,000 by:
 - a. Coverage **A**, **B** and/or **C** amounts of insurance;
 - b. Improvements, Alterations and Additions – Increased Limits;
 - c. Other Building or Structure Options (for example, Bldg. Items Coverage);
 - d. Other Personal Property Coverage Options (for example, Merchandise in Storage); or
 - e. Ordinance or Law Coverage, basic amount and, if applicable, increased amount of coverage.

C. Endorsement

Use Sinkhole Collapse Endorsement **DP 04 99**.

**RULE 512.
WINDSTORM OR HAIL COVERAGE – AWNINGS, SIGNS
AND OUTDOOR RADIO AND TELEVISION EQUIPMENT**

A. Coverage Description

The peril of Windstorm or Hail does **not** cover:

1. Awnings, Signs and Outdoor Radio and Television Equipment in **DP 00 01** or **DP 00 02**;
2. Outdoor Radio and Television Equipment in **DP 00 03**;

whether or not attached to a Dwelling Building or Other Structure.

B. Premium Computation

Coverage may be provided for an additional premium. Refer to the state company rates/ISO loss costs.

C. Endorsement

Use Windstorm Or Hail – Radio And Television Antennas, Awnings And Signs Endorsement **DP 04 19**.

**RULE 513.
LIMITED WATER BACK-UP AND SUMP DISCHARGE OR
OVERFLOW COVERAGE**

A. Coverage Description

The policy forms exclude coverage for loss resulting from water or waterborne material which backs up through sewers or drains or which overflows or is discharged from a sump, sump pump or related equipment.

When the optional Limited Water Back-up And Sump Discharge Or Overflow Coverage endorsement is attached to the policy, coverage is provided with respect to direct physical loss, not caused by the negligence of an insured, to property covered, caused by water or waterborne material which originates from within the dwelling on the Described Location and backs up through sewers or drains or which overflows or is discharged from a sump, sump pump or related equipment. The basic limit is \$5,000. Unless increased limits are selected, the basic limit must be entered on the coverage endorsement or the policy Declarations.

B. Increased Limits

The limit may be increased to \$10,000, \$15,000, \$20,000 or \$25,000. The limit selected is entered on the coverage endorsement or the policy Declarations.

C. Premium Computation

Refer to state company rates/ISO loss costs.

D. Endorsement

Use Limited Water Back-up And Sump Discharge Or Overflow Coverage Endorsement **DP 04 95**.

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**RULE 514.
ASSISTED LIVING CARE COVERAGE**

A. Introduction

The policy provides coverage to named insureds and resident relatives who are members of the insured's household.

B. Coverage Description

1. The policy may be endorsed to provide personal property and additional living expense coverage to a person regularly residing in an Assisted Living Care facility, provided such person:
 - a. Is related to an insured by blood, marriage or adoption; and
 - b. Is not a member of that insured's household.
2. An assisted living care facility is a facility that provides assisted living services such as dining, therapy, medical supervision, housekeeping and social activities. It is **not** a hospice, prison or rehabilitation facility.
3. The endorsement provides the following basic limits of coverage:
 - a. \$10,000 for Coverage **C** – Personal Property with limitations ranging from \$100 to \$500 for certain items of property; and
 - b. \$6,000, at \$500 per month, for Additional Living Expenses.

C. Premium

Refer to state company rates/ISO loss costs.

D. Endorsement

Use Assisted Living Care Coverage Endorsement **DP 04 59**.

**RULE 515.
MOTORIZED GOLF CART – PHYSICAL LOSS
COVERAGE**

A. Coverage Description

The policy may be endorsed to provide coverage for physical loss to a motorized golf cart, including permanently installed accessories, equipment and parts, owned by an insured.

Also covered, for an amount equal to 10% of the limit of the highest scheduled cart, are accessories, equipment or parts designed or made solely for the cart that are **not** permanently installed provided such property is at the Described Location or in or upon the cart off the Described Location at the time of loss.

Coverage for loss caused by collision is optional and only applies if declared on the schedule of the endorsement.

B. Eligibility

To be eligible for coverage, the motorized golf cart shall be of the type designed to carry up to four people on a golf course for the purpose of playing golf and shall not have been built, or modified after manufacture, to exceed a speed of 25 m.p.h. on level ground.

Read the endorsement for all conditions of coverage.

C. Limit Of Liability

The limit of liability shall be selected by the insured. However, that limit should be representative of the actual cash value of the motorized golf cart including any permanently installed accessories, etc.

D. Deductible

A \$500 deductible replaces any other deductible in the policy with respect to any one loss covered under the endorsement.

E. Premium Computation

Rate each cart separately using the rate per \$500 of insurance. Refer to state company rates/ISO loss costs.

F. Endorsement

Use Owned Motorized Golf Cart – Physical Loss Coverage Endorsement **DP 05 28**.

**RULE 516.
GRAVEMARKERS**

A. Coverage Description

Coverage for gravemarkers, including mausoleums, is not included in the forms. The policy may be endorsed to provide \$5,000 in coverage for gravemarkers, including mausoleums, on the Described Location.

B. Premium Computation

1. Fire, Extended Coverage, Broad And Special Forms

Refer to the state company rates/ISO loss costs Rule **500**. Miscellaneous Rates.

2. Vandalism And Malicious Mischief (DP 00 01)

Refer to the state company rates/ISO loss costs Rule **302**. Vandalism And Malicious Mischief.

C. Endorsement

Use Gravemarkers Endorsement **DP 04 58**.

**DWELLING POLICY PROGRAM MANUAL
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**RULE 517.
LIMITED FUNGI, WET OR DRY ROT, OR BACTERIA
COVERAGE**

A. Coverage Description

When the optional Limited Fungi, Wet Or Dry Rot, Or Bacteria Coverage Endorsement is attached to the policy, limited amounts of insurance are automatically provided as follows:

\$10,000, on an aggregate basis, to pay for loss and associated costs to covered real or personal property, owned by an insured, that is damaged by fungi, wet or dry rot, or bacteria on the Described Location as defined in the coverage endorsement. If the basic limit is selected, it is entered on the coverage endorsement or the policy Declarations.

This Coverage applies only for the policy period in which the loss or costs occur.

If more than one location is insured under this policy, enter the address of such locations on this endorsement or the policy Declarations.

B. Increased Limits

Limits may be increased to \$25,000 or \$50,000. The limit selected is entered on the coverage endorsement or the policy Declarations.

C. Premium Computation

1. Basic Limits

There is no premium adjustment.

2. Increased Limits

Refer to state company rates/ISO loss costs for an additional charge.

D. Endorsement

Use Limited Fungi, Wet Or Dry Rot, Or Bacteria Coverage Endorsement **DP 04 22**.

**RULES 518. – 600.
RESERVED FOR FUTURE USE**



Notice to Manualholders

PERSONAL LINES

DWELLING POLICY PROGRAM MANUAL – NORTH CAROLINA RULES

NOTICE DP-NC-2021-RU-003

REFERENCE INFORMATION (FOR COMPANY USE ONLY)

Circular Reference(s):

- P-21-6 (03/24/2021) Revised Dwelling Fire And Extended Coverage Insurance Rates – North Carolina

Filing Reference(s):

- DP-2020-RLA1

ADDITIONAL RULE(S)

**RULE A1.
SPECIAL STATE REQUIREMENTS**

A. Special Provisions Endorsement DP 32 32

Use this endorsement with all Dwelling Policies.

B. Windstorm Exterior Paint And Waterproofing Exclusion Endorsement DP 32 61

Use this endorsement with **all** Dwelling Policies covering Extended Coverage in Territories 110 and 120.

C. Company Rates/State Rates

References in the manual to "state company rates" means "state rates" in North Carolina.

D. Flood, Earthquake, Mudslide, Mudflow, Landslide, Or Windstorm Or Hail Insurance Notice

North Carolina law provides that an insurer selling property insurance that does not provide coverage for the perils of flood, earthquake, mudslide, mudflow, landslide, or windstorm or hail shall provide a specific notice (a "warning" set forth in the related statute) to the policyholder as to which of the listed perils are not covered under the policy.

The required notice must be:

1. Provided upon issuance and renewal of each policy;
2. In Times New Roman 16-point font or another equivalent font; and
3. Must be included in the policy on a separate page immediately before the Declarations page.

The following warning, citing which peril is not covered, must be furnished with each new policy and upon each renewal:

"WARNING: THIS PROPERTY INSURANCE POLICY DOES NOT PROTECT YOU AGAINST LOSSES FROM [FLOODS], [EARTHQUAKES], [MUDSLIDES], [MUDFLOWS], [LANDSLIDES], [WINDSTORM OR HAIL]. YOU SHOULD CONTACT YOUR INSURANCE COMPANY OR AGENT TO DISCUSS YOUR OPTIONS FOR OBTAINING COVERAGE FOR THESE LOSSES. THIS IS NOT A COMPLETE LISTING OF ALL OF THE CAUSES OF LOSSES NOT COVERED UNDER YOUR POLICY. YOU SHOULD READ YOUR ENTIRE POLICY TO UNDERSTAND WHAT IS COVERED AND WHAT IS NOT COVERED."

E. North Carolina Endorsement DP 32 46

Use this endorsement with all Dwelling Policies.

**RULE A2.
RESTRICTION OF INDIVIDUAL POLICIES**

If a Dwelling Policy would not be issued because of unusual circumstances or exposures, the named insured may request a restriction of the policy provided no reduction in premium is allowed. Such request shall be referred to the company.

**RULE A3.
WINDSTORM OR HAIL EXCLUSION – TERRITORIES
110, 120, 130, 140, 150 AND 160 ONLY**

A. Introduction

The peril of Windstorm or Hail may be excluded if:

1. The property is located in an area eligible for such coverage from the North Carolina Insurance Underwriting Association; and
2. A Windstorm or Hail Rejection Form is secured and maintained by the company.

B. Premium Computation

1. To compute the Extended Coverage Non-seasonal or Seasonal Base Premium or the Broad or Special Form Non-seasonal Base Premium:
 - (a) Determine the Extended Coverage, Broad or Special Form Key Premium as described in Rule **301**.
 - (b) Subtract the Windstorm Or Hail Exclusion Credit shown on the state rates from the Extended Coverage, Broad or Special Form Key Premium.
 - (c) Multiply the Extended Coverage, Broad or Special Form Key Premium excluding Windstorm or Hail Coverage developed in Paragraph **B.1.(b)** by the Key Factor for the desired limit of liability.
2. To compute the Seasonal Broad or Special Form Base Premium:
 - (a) Determine the **DP 00 01** Extended Coverage Key Premium as described in Rule **301**.
 - (b) Multiply the **DP 00 01** Extended Coverage Key Premium by the appropriate Seasonal factor shown in Table **301.A.#42(R)** or Table **301.A.#45(R)** to determine the Seasonal Broad or Special Form Key Premium.
 - (c) Subtract the Windstorm Or Hail Exclusion Base Credit shown on the state rates from the Seasonal Broad or Special Form Key Premium determined in Paragraph **B.2.(b)**.
 - (d) Multiply the Seasonal Broad or Special Form Key Premium excluding Windstorm Or Hail Coverage developed in Paragraph **B.2.(c)** by the Key Factor for the desired limit of liability.

**RULE A3.
WINDSTORM OR HAIL EXCLUSION – TERRITORIES
110, 120, 130, 140, 150 AND 160 ONLY (Cont'd)**

C. Endorsement

Use Windstorm Or Hail Exclusion – North Carolina Endorsement **DP 32 87**.

When Windstorm Or Hail Exclusion – North Carolina Endorsement **DP 32 87** is attached to the policy, enter the following in Declarations:

"This policy does not provide coverage for the peril of Windstorm or Hail."

**RULE A4.
REPLACEMENT COST COVERAGE – DP 00 01 ONLY**

A. The policy may be endorsed to provide replacement cost coverage on buildings without deduction for depreciation.

B. This rule is intended to have limited application. Use it **only** on those **DP 00 01** policies that currently use it. Do **not** use it on any new policies.

Use Replacement Cost – North Carolina Endorsement **DP 32 62**.

**RULE A5.
INSTALLMENT PAYMENT PLAN**

When an annual policy is issued on an installment basis, the following rules apply:

A. The first installment shall be due on the effective date of the policy and the due date of the last installment shall be no later than one month prior to the policy anniversary date.

B. The premium calculated for the first installment payment, exclusive of installment charges, shall not be less than the pro rata charge for the period from the inception date of the policy to the due date of the next installment.

C. Refer to the state rates for the additional charge that shall be made for each installment.

**RULE A6.
UNPROTECTED DWELLINGS – PROTECTION CLASS 9,
9E, 9S OR 10**

A. Unprotected Dwellings

Unprotected dwellings are dwellings located in areas:

1. With no fire protection, in which case, Class 10 premiums apply; or
2. Designated as protection Class 9, 9E, 9S or 10, in which case, the premiums shown for these classifications apply.

B. Seasonal Dwelling

1. When the heating, plumbing and telephone facilities are suspended during the period of seasonal unoccupancy, attach Seasonal Dwelling – North Carolina Endorsement **DP 32 47** to the policy.
2. To determine the premium, multiply the premium developed in Paragraph **A.** by a factor of 1.10.

C. Vacancy Period Extension

The policy provides coverage for a vacant dwelling only if the period of vacancy does not exceed 60 consecutive days. This period may be extended by use of one of the two following options:

1. Vacancy And/Or Unoccupancy Permit Unprotected Dwellings – North Carolina Endorsement **DP 32 52**

The additional premium for this option shall be the lower of the following calculations:

- a. Multiply the limits of liability shown in the policy for Coverages **A**, **B** and **C** and for other coverages by the rate displayed on the state rates Table **A6.C.1.a.(R)**.
- b. Multiply the policy premium for all perils and coverages by a factor of .10 for each additional 30 consecutive day period (or fraction thereof) of vacancy.

2. Two Thirds Vacancy Clause Unprotected Dwellings – North Carolina Endorsement **DP 32 53**

There is no additional premium for this option, but, during the additional period of vacancy, policy limits are reduced by 33 1/3%.

D. Unoccupancy Period Extension

The policy provides coverage for an unoccupied dwelling only if the period of unoccupancy does not exceed 90 consecutive days. This period may be extended – at no additional charge – for successive periods of up to:

1. 90 consecutive days each, for non-seasonal dwellings, or
2. 10 months each, for seasonal dwellings.

Use Vacancy And/Or Unoccupancy Permit – Unprotected Dwellings – North Carolina Endorsement **DP 32 52**.

**RULE A7.
PRIMARY INSURANCE NOTICE**

A. Endorsement

Coverage	DP 00 01	DP 00 02 And DP 00 03
A	DP 32 80	DP 32 83
B	DP 32 81	DP 32 84
C	DP 32 82	DP 32 85

Table A7.A. Primary Insurance Notice

Use the appropriate Primary Insurance Endorsement(s), specified in Table **A7.A.**, only with a North Carolina Joint Underwriting Association (NCJUA) or North Carolina Insurance Underwriting Association (NCIUA) policy insuring a dwelling building covered under Coverage **A**, structures covered under Coverage **B** or personal property covered under Coverage **C**.

These endorsements replace the Other Insurance Condition in the policy form and make the NCJUA or NCIUA policy primary insurance for the insured property specified on the endorsement. Primary Insurance may be written for Coverages **A**, **B** and/or **C**. When a Primary Insurance Endorsement is not attached to the policy, the Other Insurance Condition in the policy form is unchanged.

B. Rating

1. Primary Insurance

- a. When the Coverage **A**, **B** or **C** Limit of Liability is less than 100% of actual cash value or replacement value, divide the selected limit by the ACV or replacement value, whichever applies. The result is the "Percent of Total Value".
- b. Go to the First Loss Table and select the factor that corresponds to the "Percent of Total Value" computed in Paragraph **1.a**.
- c. Multiply the total value of the dwelling (actual or replacement) by the factor selected in Paragraph **1.b**.
- d. Use the resulting product as the limit for computing the Coverage **A**, **B** or **C** premium.

2. Coverage A Example

Replacement Value of Dwelling: \$6,000,000

Primary Policy – Coverage **A** Limit: \$1,500,000

- a. Divide Coverage **A** Limit by Replacement Value limit ($\$1,500,000/\$6,000,000 = 25\%$ or 25.00 Percent of Total Value).
- b. Find Factor that corresponds to Percent of Total Value.
- c. Multiply Replacement Value by Factor from Column **2** ($\$6,000,000)(.712) = \$4,272,000$.
- d. Use resulting product to compute Coverage **A** premium. (Rate the policy as if \$4,272,000 is the Coverage **A** limit to be insured.)

Note

This procedure is used to determine the appropriate exposure basis for primary insurance. It does not increase the amount of coverage available.

RULE A7.
PRIMARY INSURANCE NOTICE Cont'd)

FIRST LOSS TABLE

(Used When Primary Coverage Provided)

% Of Total Value	Factor
1.00	.224
1.10	.229
1.20	.235
1.30	.241
1.40	.247
1.50	.252
1.60	.258
1.70	.264
1.80	.270
1.90	.275
2.00	.281
2.10	.284
2.20	.287
2.30	.290
2.40	.293
2.50	.296
2.60	.298
2.70	.301
2.80	.304
2.90	.307
3.00	.310
3.10	.316
3.20	.321
3.30	.327
3.40	.333
3.50	.339
3.60	.344
3.70	.350
3.80	.356
3.90	.362
4.00	.367
4.10	.373
4.20	.379
4.30	.385
4.40	.390
4.50	.396
4.60	.402
4.70	.408
4.80	.413
4.90	.419
5.00	.425
6.00	.448
7.00	.471
7.50	.482
8.00	.494
9.00	.517

% Of Total Value	Factor
10.00	.540
11.00	.551
12.00	.563
13.00	.574
14.00	.586
15.00	.597
16.00	.609
17.00	.620
18.00	.632
19.00	.643
20.00	.655
21.00	.660
22.00	.678
23.00	.689
24.00	.701
25.00	.712
26.00	.720
27.00	.721
28.00	.734
29.00	.741
30.00	.748
31.00	.756
32.00	.763
33.00	.770
34.00	.773
35.00	.776
36.00	.780
37.00	.784
38.00	.788
39.00	.792
40.00	.795
41.00	.799
42.00	.802
43.00	.804
44.00	.808
45.00	.811
46.00	.815
47.00	.818
48.00	.821
49.00	.824
50.00	.827
51.00	.830
52.00	.832
53.00	.834
54.00	.837
55.00	.839

% Of Total Value	Factor
56.00	.841
57.00	.844
58.00	.846
59.00	.848
60.00	.850
61.00	.853
62.00	.855
63.00	.857
64.00	.860
65.00	.862
66.00	.864
67.00	.867
68.00	.869
69.00	.871
70.00	.873
71.00	.876
72.00	.878
73.00	.880
74.00	.883
75.00	.885
76.00	.890
77.00	.894
78.00	.899
79.00	.903
80.00	.908
81.00	.913
82.00	.917
83.00	.922
84.00	.926
85.00	.931
86.00	.936
87.00	.940
88.00	.945
89.00	.949
90.00	.954
91.00	.959
92.00	.963
93.00	.968
94.00	.972
95.00	.977
96.00	.982
97.00	.986
98.00	.991
99.00	.995
100.00	1.000

**RULE A8.
OPTIONAL RATING CHARACTERISTICS**

Companies may use the following optional rating characteristics or any combination of such optional rating characteristics and Bureau filed characteristics to determine rates, as long as applicable legal requirements are satisfied. The resulting premium shall not exceed the premium that would have been determined using the rates, rating plans, classifications, schedules, rules and standards promulgated by the Bureau, except as provided by statute. The rating factor for any combination of the following optional risk characteristics cannot exceed 1.00, unless the resulting premium does not exceed the Bureau premium.

- A.** Policy characteristics not otherwise recognized in this manual. Examples include: account or multi-policy credit; tiers; continuity of coverage; coverages purchased; intra-agency transfers; payment history; payment options; prior insurance; and new and renewal status.
- B.** Policyholder/Insured personal characteristics not otherwise recognized in this manual. Examples include: smoker/non-smoker status; credit information; loss history; loss prevention training/education; age; work status; marital status; number of years owned; household composition; and good student/education.
- C.** Dwelling characteristics not otherwise recognized in this manual. Examples include: gated community; retirement community; limited access community; revitalized/renovated home; security, safety or loss deterrent systems or devices; age of home; and construction type and quality.
- D.** Affinity group or other group not otherwise recognized in this manual.
- E.** Any other rating characteristics or combination of characteristics if filed by a company and approved by the Commissioner.

**RULE A9.
WINDSTORM MITIGATION PROGRAM**

A. Introduction

With respect to risks located in Territories 110, 120, 130, 140, 150 and 160, premium credits shall be made available for insureds who build, rebuild or retrofit certain residential dwellings, in accordance with specified standards, to better resist hurricanes and other catastrophic windstorm events.

B. Eligibility

- 1.** A dwelling may be eligible for a premium credit if:
 - a.** The dwelling has been designed and constructed in conformity with, and has been certified as meeting, the Hurricane, Tornado and Hail and High Wind requirements of the Hurricane Fortified for Safer Living® (Fortified) program promulgated by the Institute for Business and Home Safety® (IBHS) prior to March 31, 2019;
 - b.** The dwelling has been certified as meeting, either the Bronze, Silver or Gold hurricane mitigation measures in the Hurricane Fortified for Existing Homes® program promulgated by the IBHS prior to March 31, 2019;
 - c.** The dwelling has been designed and constructed in conformity with, and has been certified as meeting, the Hurricane, Tornado and Hail and High Wind requirements of the FORTIFIED for Safer Living® program promulgated by the IBHS for use on or after March 31, 2019;
 - d.** The dwelling has been certified as meeting either the Roof, Silver or Gold hurricane mitigation measures in the FORTIFIED Home™ program promulgated by the IBHS for use on or after March 31, 2019;
 - e.** The dwelling contains Opening Protection in accordance with the qualification requirements set forth in Paragraph **D.1.c.**; or
 - f.** The dwelling contains a Total Hip Roof.
- 2.** The provisions of this rule do not apply:
 - a.** To condominiums or tenant policies.
 - b.** If the policy excludes the peril of Windstorm or Hail.
 - c.** To dwellings under construction.
 - d.** To Coverage **C** – Personal Property unless the policy also provides Coverage **A** – Dwelling.
 - e.** To mobile homes certified under the Hurricane Fortified for Safer Living® or Hurricane Fortified for Existing Homes® programs promulgated by the IBHS prior to March 31, 2019.

**RULE A9.
WINDSTORM MITIGATION PROGRAM (Cont'd)**

3. To be eligible for a premium credit, mitigation features are not required for adjacent structures including, but not limited to, detached garages, storage sheds, barns, apartments, etc. located on the insured premises.

C. Proof of Compliance

The named insured must submit proof that the windstorm loss mitigation features and/or construction techniques have been implemented for each of the following:

1. **IBHS Hurricane Fortified for Safer Living®**
The named insured shall provide a copy of the proper designation certificate from the IBHS issued for the dwelling.
2. **IBHS Hurricane Fortified for Existing Homes®**
The named insured shall provide a copy of the proper designation certificate from the IBHS issued for the dwelling. The credit will apply for five years from the date of designation. In order to continue receiving the mitigation credit after five years, the dwelling must be re-inspected and re-designated by the IBHS. If the IBHS designation expires, the applicable mitigation credit will expire upon renewal.
3. **IBHS FORTIFIED for Safer Living®**
The named insured shall provide a copy of the proper designation certificate from the IBHS issued for the dwelling.
4. **IBHS FORTIFIED Home™**
The named insured shall provide a copy of the proper designation certificate from the IBHS issued for the dwelling. The credit will apply for five years from the date of designation. In order to continue receiving the mitigation credit after five years, the dwelling must be re-inspected and re-designated by the IBHS. If the IBHS designation expires, the applicable mitigation credit will expire upon renewal.
5. **Opening Protection**
The existence of Opening Protection may be verified by proof of installation.
6. **Total Hip Roof**
The existence of a hip roof may be verified through photographs of the roof.

D. Description of Mitigation Credit Tables

With respect to dwellings to which this rule applies and subject to all other provisions of this Windstorm Mitigation Program, the following approved and properly maintained windstorm mitigation features shall be recognized for a premium credit.

1. Mitigation Features

- a. **IBHS Hurricane Fortified Homes (designations prior to March 31, 2019):**
 - (1) A home designated by the IBHS as Hurricane Fortified for Safer Living®.
 - (2) A home designated by the IBHS as Hurricane Fortified for Existing Homes®, including:
 - (i) Hurricane Fortified for Existing Homes Bronze, Option 1
 - (ii) Hurricane Fortified for Existing Homes Bronze, Option 2
 - (iii) Hurricane Fortified for Existing Homes Silver, Option 1
 - (iv) Hurricane Fortified for Existing Homes Silver, Option 2
 - (v) Hurricane Fortified for Existing Homes Gold, Option 1
 - (vi) Hurricane Fortified for Existing Homes Gold, Option 2
- b. **IBHS FORTIFIED programs (designations on or after March 31, 2019):**
 - (1) A home designated by the IBHS as FORTIFIED for Safer Living®.
 - (2) A home designated by the IBHS as FORTIFIED Home™, including:
 - (i) FORTIFIED Roof – Hurricane – Existing Roof
 - (ii) FORTIFIED Roof – Hurricane – New Roof
 - (iii) FORTIFIED Home – Hurricane – Silver – Existing Roof
 - (iv) FORTIFIED Home – Hurricane – Silver – New Roof
 - (v) FORTIFIED Home – Hurricane – Gold – Existing Roof
 - (vi) FORTIFIED Home – Hurricane – Gold – New Roof
- c. **Opening Protection**
 - (1) Building opening protective features must have been certified as having met the Large Missile Test (Missile D) of the American Society for Testing and Materials ASTM E 1886 (standard test method) and ASTM E 1996 (standard specification) or other standards that are determined to be equivalent, including the American Architectural Manufacturers Association (AAMA), AAMA 506 or the Florida Building Code Testing Application Standards TAS 201 and 203. Such opening protective features shall be considered qualified.

**RULE A9.
WINDSTORM MITIGATION PROGRAM (Cont'd)**

- (2) Qualifying opening protection must be present at all exterior envelope openings (such as windows, garage doors, sliding doors, swinging doors, glass block, door sidelights, and skylights) on the dwelling structure. For the credit to apply, the following conditions must be met:
- (i) In accordance with the qualification requirements set forth in Paragraph **D.1.c.(1)**:
 - (a) All exterior building envelope openings with glazing (e.g. glass) shall have qualified impact-resistant and wind pressure-resistant opening protection;
 - (b) All exterior building envelope openings without glazing shall have qualified wind pressure-resistant opening protection; and
 - (c) All garage doors (with and without glazing) shall meet or exceed a qualified minimum pressure resistance.
 - (ii) Opening protection must be installed by a qualified contractor, according to the manufacturer's specifications.
 - (iii) Impact-resistant protective devices must not be made of wood structural panels, such as OSB or plywood, or be homemade.

d. Total Hip Roof

A Total Hip Roof is a roof that slopes in four directions such that the end formed by the intersection of slopes is a triangle.

E. Premium Determination

1. To compute the Extended Coverage Non-seasonal or Seasonal Base Premium or the Broad or Special Form Non-seasonal Base Premium:
 - a. Determine the Extended Coverage, Broad or Special Form Key Premium as described in Rule **301**.

- b. Subtract the Coverage **A** Windstorm Loss Mitigation Credit shown on the state rates from the Coverage **A** Extended Coverage, Broad or Special Form Key Premium. If applicable, also subtract the Coverage **C** Windstorm Loss Mitigation Credit, shown on the state rates from the Coverage **C** Extended Coverage, Broad or Special Form Key Premium.
 - c. Multiply the Extended Coverage, Broad or Special Form Key Premium excluding Windstorm Loss Mitigation Coverage developed in Paragraph **E.1.b.** by the Key Factor for the desired limit of liability.
2. To compute the Seasonal Broad or Special Form Base Premium:
 - a. Determine the **DP 00 01** Extended Coverage Key Premium as described in Rule **301**.
 - b. Multiply the **DP 00 01** Extended Coverage Key Premium by the appropriate Seasonal factor shown in Table **301.A.#42(R)** or Table **301.A.#45(R)** to determine the Seasonal Broad or Special Form Key Premium.
 - c. Subtract the Coverage **A** Windstorm Loss Mitigation Credit shown in the state rates from the Coverage **A** Seasonal Broad or Special Form Key Premium determined in Paragraph **E.2.b.** If applicable, also subtract the Coverage **C** Windstorm Loss Mitigation Credit, shown on the state rates from the Coverage **C** Seasonal Broad or Special Form Key Premium.
 - d. Multiply the Seasonal Broad or Special Form Key Premium excluding Windstorm Loss Mitigation Coverage developed in Paragraph **E.2.c.** by the Key Factor for the desired limit of liability.
 3. Mitigation Feature credits cannot be combined, except for Total Hip Roof and Opening Protection.
 4. If mitigation measures are installed midterm, premium adjustment is required on a pro rata basis.

**RULE A10.
FORTIFIED ROOF – HURRICANE – NEW ROOF
EXPENSE COVERAGES****A. Coverage Description**

FORTIFIED Home™ is an engineering and building standard developed by the Insurance Institute for Business & Home Safety (IBHS) to mitigate wind-related hurricane damage. The program also includes evaluation and inspection requirements to ensure the technical standards are properly implemented, resulting in the designation of a home as meeting the FORTIFIED Home requirements.

With respect to a risk located in Territory **110, 120, 130, 140, 150** or **160**, a policy may be endorsed to provide the following optional coverages:

1. FORTIFIED Roof – Hurricane – New Roof Expense Coverage

This coverage will pay up to \$5,000, without application of a deductible, for certain expenses necessary to obtain the **FORTIFIED Roof – Hurricane – New Roof** designation from the IBHS for the roof of the insured dwelling damaged by a covered peril, which requires the roof to be fully replaced. This coverage applies only if:

- a. The amount of the covered loss to the roof covering of the insured dwelling is greater than 50% of the replacement cost value of the entire roof covering;
- b. The roof sheathing on that dwelling is (or was immediately prior to the loss) a minimum of 7/16-inch Oriented Strand Board (OSB) or plywood; and
- c. That dwelling is not (or was not immediately prior to the loss) on an unreinforced dry stacked foundation or is otherwise ineligible for FORTIFIED Home Review as defined by the IBHS.

2. IBHS Certified Evaluator Expense Coverage

If the **FORTIFIED Roof – Hurricane – New Roof** Expense Coverage described in Paragraph **A.1.** does not apply, this coverage will pay up to \$600, without application of a deductible, for the direct expenses incurred by the named insured for the services of an IBHS certified evaluator. This coverage applies only if:

- a. The entire roof covering of the insured dwelling is replaced to the **FORTIFIED Roof – Hurricane – New Roof** standard as recognized by the IBHS during the policy period;
- b. The named insured obtains the IBHS designation **FORTIFIED Roof – Hurricane – New Roof** from the IBHS; and
- c. Satisfactory proof of the IBHS designation **FORTIFIED Roof – Hurricane – New Roof** for the insured dwelling is submitted to the insurer.

The insured will be responsible for arranging and coordinating the roof replacement work, as well as the inspections, assessments and verifications required by the IBHS. Nothing in Rule **A10.** is intended to change the applicable loss settlement provisions of the policy, other than to pay the IBHS costs as referenced previously in Rule **A10.**, subject to the maximum coverage limits of the endorsement.

C. Premium

1. Multiply the Fire Coverage **A** Base Premium by .006.
2. For policies with Extended Coverage, including Windstorm or Hail Coverage, multiply the Extended Coverage **A** Base Premium by .042.
3. For policies with Extended Coverage, excluding Windstorm or Hail Coverage, multiply the Extended Coverage **A** Base Premium by .019.

D. Endorsement

Use **FORTIFIED Roof – Hurricane – New Roof** Expense Coverages – North Carolina Endorsement **DP 32 04.**

**RULE A11.
AGE OF CONSTRUCTION**

- A. Determine the age of construction based on the calendar year that the dwelling was completed and first occupied. If the year first occupied is different than the year completed, the later year would apply.
- B. Multiply the Coverage **A** Base Premium by the appropriate factor selected from the following table:

Age Of Construction	Fire	E.C., Broad & Special Forms
0*	0.860	0.860
1	0.869	0.869
2	0.878	0.878
3	0.886	0.886
4	0.895	0.895
5	0.904	0.904
6	0.914	0.914
7	0.923	0.923
8	0.932	0.932
9	0.941	0.941
10	0.951	0.951
11	0.961	0.961
12	0.970	0.970
13	0.980	0.980
14	0.990	0.990
15+	1.000	1.000

* Age 0 applies to homes built within the last year as well as homes under construction.
 + Applies to dwellings built at least 15 years ago.

Table A11.B. Age Of Construction Factors

**PART I
COVERAGE AND DEFINITION TYPE RULES**

**RULE 100.
INTRODUCTION**

Paragraph **C.** does not apply.

**RULE 103.
ELIGIBILITY**

Paragraphs **B.1** and **B.4.** are replaced by the following:

1. Using Form **DP 00 01** only or **DP 00 02** in conjunction with Actual Cash Value Loss Settlement Endorsement **DP 04 76**;
4. For a policy period of not longer than three years; and

**PART II
SERVICING TYPE RULES**

**RULE 201.
POLICY PERIOD**

Paragraph **C.** is replaced by the following:

- C.** Three years in annual installments. Each annual installment shall be the annual premium then in effect for the company.

**RULE 206.
MINIMUM PREMIUM**

Paragraphs **D.** and **E.** are replaced by the following:

- D.** Refer to state company rates for the minimum premium.

**RULE 208.
WAIVER OF PREMIUM**

Paragraph **B.** is replaced by the following:

- B.** Refer to state company rates for amount that may be waived.

**RULE 210.
REFER TO COMPANY**

Rule **210.** is replaced by the following:

Whenever a risk is rated on a refer to company basis each company is responsible for complying with regulatory or statutory rate filing requirements.

**PART III
BASE PREMIUM COMPUTATION RULES**

**RULE 302.
VANDALISM AND MALICIOUS MISCHIEF – DP 00 01**

The following is added to Rule **302.:**

The 60 day limit of vacancy may be extended. The charge for the additional period of vacancy shall be based on the difference between the premiums for vacant and non-vacant buildings, and shall be figured pro rata for the period allowed in the endorsement.

Use Vandalism And Malicious Mischief Vacancy Endorsement **DP 04 40.**

**RULE 303.
ORDINANCE OR LAW COVERAGE – ALL FORMS**

Paragraph **B.3.a.** is replaced by the following:

B. New Or Increased Coverage

3. Premium Determination

a. Described Location Including Coverage A

(1) Form DP 00 01

(a) Fire And Extended Coverage

The premium is computed by multiplying the Base Premium by the appropriate factor selected from the following table:

Percentage Of Coverage A	
Total Amount	Factors
10%	1.10
25%	1.25
50%	1.45
75%	1.70
100%	1.90
For each add'l 25% increment, add:	.20

Table 303.B.3.a.(1)(a) Factors

(b) Vandalism And Malicious Mischief

Multiply the rate per \$1,000 used to determine the Vandalism and Malicious Mischief Base Premium, by the dollar amount of coverage added.

**RULE 303.
ORDINANCE OR LAW COVERAGE – ALL FORMS
(Cont'd)**

(2) DP 00 02 Or DP 00 03 – Fire, Broad Or Special Forms

The premium is computed by multiplying the Base Premium by the appropriate factor selected from the following table:

Percentage Of Coverage A		
Increase In Amount	Total Amount	Factors
15%	25%	1.15
40%	50%	1.35
65%	75%	1.60
90%	100%	1.80
For each add'l 25% increment, add		.20

Table 303.B.3.a.(2) Factors

**RULE 305.
LOSS SETTLEMENT OPTIONS**

Paragraph **A.4.** is replaced by the following:

A. Functional Replacement Cost Loss Settlement – Forms DP 00 02 And DP 00 03 Only

4. Endorsement

Use Functional Replacement Cost Loss Settlement – North Carolina Endorsement **DP 32 63.**

Paragraph **B.** is replaced by the following:

B. Actual Cash Value Loss Settlement – Forms DP 00 02 And DP 00 03 Only

1. Introduction

The policy provides building loss settlement on a replacement cost basis if, at the time of loss, the amount of insurance on the damaged building represents at least 80% of the full replacement cost of the building immediately before the loss.

2. Coverage Description

The policy may be endorsed to provide building loss settlement exclusively on an actual cash value basis if, on the inception date of the policy, the Coverage **A** limit of liability selected by the insured is less than 80% of the full replacement cost of the dwelling.

3. Mobile Or Trailer Home

When written in conjunction with this endorsement, Form **DP 00 02** may be used to insure a mobile or trailer home.

To develop the Base Premium, multiply the premium developed in Rule **301.** by a factor of .98.

4. Dwelling Building Other Than Mobile Or Trailer Home

The premium is computed as follows:

- a. Multiply the Coverage **A** limit of liability by the appropriate factor from the following table and round to the nearest \$1,000:

% Of Replacement Value*	Factor
20%	4.00
30%	2.67
40%	2.00
50%	1.60
60%	1.33
70%	1.14

Table 305.B.4.a. Factors

- b. Develop a Base Premium in accordance with Rule **301.** for the amount of insurance computed in Paragraph **B.4.a.**
- c. Multiply the premium determined in Paragraph **B.4.b.** by the appropriate factor from the following table:

% Of Replacement Value*	Factor
20%	.73
30%	.74
40%	.75
50%	.76
60%	.77
70%	.78
80%	.80

Table 305.B.4.c. Factors

5. Endorsement

Use Actual Cash Value Loss Settlement Endorsement **DP 04 76.**

**PART IV
ADJUSTED BASE PREMIUM COMPUTATION RULES**

**RULE 401.
SUPERIOR CONSTRUCTION**

Table **401.C.** is replaced by the following:

Classifications	Fire	E.C., Broad & Special Forms
Fire Resistive & Masonry Non-combustible	.50	.75
Non-combustible	.50	1.00

Table 401.C. Superior Construction Factors

RULE 404.
MOBILE OR TRAILER HOMES – DP 00 01 ONLY OR
DP 00 02 WITH DP 04 76

The title of Rule **404.**, Mobile Or Trailer Homes – **DP 00 01**, is replaced by the preceding title.

RULE 406.
DEDUCTIBLES

The introductory text in Rule **406.** is replaced by the following:

All policies are subject to a deductible that applies to loss from all perils, except Earthquake. A separate deductible type applies to Earthquake Coverage as described in Rule **509.**

Refer to the Earthquake Coverage rule for the applicable deductible provision.

The following tables are added to Paragraph **B.1.:**

Fire				
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures				
Deductible Amount	Coverages A, B, D Or E Limit			
	Up To \$125,000	\$125,001 To 175,000	\$175,001 To 250,000	\$250,001 And Above
\$ 100*	1.080	1.070	1.060	1.050
250*	1.040	1.035	1.030	1.025
1,000	0.981	0.987	0.988	0.992
1,500	0.965	0.976	0.978	0.986
2,000	0.949	0.964	0.969	0.979
2,500	0.933	0.953	0.959	0.973
3,000	0.919	0.944	0.951	0.967
4,000	0.892	0.925	0.935	0.956
5,000	0.865	0.906	0.919	0.945
7,500	0.809	0.866	0.884	0.922
10,000	0.759	0.829	0.854	0.901
1%	1.016	0.976	0.967	0.959

* Refer to state rates for the minimum annual additional premium charge that applies per location for all \$100 and \$250 Fire Deductibles.

Table 406.B.1.#1 Fire Coverage A, B, D Or E Deductibles

**RULE 406.
DEDUCTIBLES (Cont'd)**

Fire	
Coverage C And Other Personal Property Coverage Options	
Deductible Amount	Factor
\$ 100*	1.070
250*	1.035
1,000	0.989
1,500	0.980
2,000	0.970
2,500	0.961
3,000	0.953
4,000	0.938
5,000	0.923
7,500	0.891
10,000	0.862
1%	1.057

* Refer to state rates for the minimum annual additional premium charge that applies per location for all \$100 and \$250 Fire Deductibles.

Table 406.B.1.#2 Fire Coverage C Deductibles

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)				
E.C., V. & M.M., Broad And Special Forms				
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures				
Deductible Amount	Coverages A, B, D Or E Limit			
	Up To \$125,000	\$125,001 To 175,000	\$175,001 To 250,000	\$250,001 And Above
\$ 100*	1.072	1.047	1.035	1.022
250*	1.040	1.027	1.021	1.011
1,000	0.935	0.957	0.967	0.980
1,500	0.890	0.924	0.941	0.965
2,000	0.845	0.890	0.914	0.950
2,500	0.800	0.857	0.888	0.935
3,000	0.773	0.834	0.869	0.923
4,000	0.719	0.787	0.830	0.898
5,000	0.665	0.741	0.791	0.874
7,500	0.582	0.660	0.719	0.825
10,000	0.530	0.599	0.662	0.784
1%	0.997	0.924	0.910	0.901

* Refer to state rates for the minimum annual additional premium charge that applies per location for all \$100 and \$250 E.C., V. & M.M., Broad And Special Forms Deductibles.

**Table 406.B.1.#3 E.C., V. & M.M., Broad And Special
Forms Coverage A, B, D Or E Deductibles**

RULE 406.
DEDUCTIBLES (Cont'd)

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)	
E.C., V. & M.M., Broad And Special Forms	
Coverage C And Other Personal Property Coverage Options	
Deductible Amount	Factor
\$ 100*	1.030
250*	1.016
1,000	0.973
1,500	0.952
2,000	0.931
2,500	0.910
3,000	0.895
4,000	0.864
5,000	0.833
7,500	0.775
10,000	0.728
1%	1.021

* Refer to state rates for the minimum annual additional premium charge that applies per location for all \$100 and \$250 E.C., V. & M.M., Broad And Special Forms Deductibles.

**Table 406.B.1.#4 E.C., V. & M.M., Broad And Special
Forms Coverage C Deductibles**

Territories 170 – 390 (Inland)				
E.C., V. & M.M., Broad And Special Forms				
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures				
Deductible Amount	Coverages A, B, D Or E Limit			
	Up To \$125,000	\$125,001 To 175,000	\$175,001 To 250,000	\$250,001 And Above
\$ 100*	1.108	1.083	1.073	1.056
250*	1.060	1.047	1.044	1.034
1,000	0.910	0.928	0.939	0.948
1,500	0.849	0.876	0.893	0.911
2,000	0.788	0.825	0.848	0.875
2,500	0.727	0.773	0.802	0.838
3,000	0.691	0.739	0.771	0.813
4,000	0.620	0.671	0.708	0.762
5,000	0.548	0.603	0.645	0.711
7,500	0.451	0.500	0.541	0.621
10,000	0.393	0.436	0.472	0.555
1%	0.997	0.877	0.840	0.780

* Refer to state rates for the minimum annual additional premium charge that applies per location for all \$100 and \$250 E.C., V. & M.M., Broad And Special Forms Deductibles.

**Table 406.B.1.#5 E.C., V. & M.M., Broad And Special
Forms Coverage A, B, D Or E Deductibles**

**RULE 406.
DEDUCTIBLES (Cont'd)**

Territories 170 – 390 (Inland)	
E.C., V. & M.M., Broad And Special Forms	
Coverage C And Other Personal Property Coverage Options	
Deductible Amount	Factor
\$ 100*	1.077
250*	1.045
1,000	0.936
1,500	0.891
2,000	0.845
2,500	0.800
3,000	0.770
4,000	0.711
5,000	0.651
7,500	0.555
10,000	0.489
1%	1.067
* Refer to state rates for the minimum annual additional premium charge that applies per location for all \$100 and \$250 E.C., V. & M.M., Broad And Special Forms Deductibles.	

Table 406.B.1.#6 E.C., V. & M.M., Broad And Special Forms Coverage C Deductibles

The introductory text in Paragraph **B.2.** is replaced by the following:

B. Optional Deductibles

2. Windstorm Or Hail Deductibles

When the policy covers the peril of Windstorm or Hail, the following deductible options may be used in conjunction with a deductible applicable to all other perils covered under Extended Coverage, Broad or Special Forms. They may not be used on a policy in conjunction with a Named Storm deductible as described in Paragraph **3.**

Paragraph **B.2.a.(7)** is replaced by the following:

a. Percentage Deductibles

(7) Deductible Factors

When the property is located in an area serviced by the North Carolina Insurance Underwriting Association (NCIUA – Territories 110, 120, 130, 140, 150 and 160), additional calculations must be performed to ensure that the premium credit applied to the deductible is **not** greater than the premium credit that would be applied if the peril of Windstorm or Hail were excluded from the policy.

(a) Property Not Located in Area Serviced by the NCIUA

To compute the premium for this provision, multiply the Extended Coverage, Broad or Special Form Base Premium for the Base Deductible for each coverage insured under the policy by the factor selected for the desired windstorm or hail deductible options from the following tables.

(b) Property Is Located in Area Serviced by the NCIUA

To determine if an "adjusted deductible credit" or the calculated deductible credit applies, complete each of the following steps:

- Step 1.** Multiply the windstorm or hail exclusion credit shown in the state rates, under Additional Rule **A3.** Windstorm Or Hail Exclusion – Territories 110, 120, 130, 140, 150 And 160 Only, by the Key Factor for the same amount of insurance used to determine the Extended Coverage, Broad or Special Form Base Premium.
- Step 2.** Multiply the result determined in Step 1. by .9 to determine the "adjusted deductible credit".
- Step 3.** Select the factor for the desired windstorm or hail deductible option from the following tables and subtract the factor from unity (1.00).
- Step 4.** Multiply the factor determined in Step 3. by the Extended Coverage, Broad or Special Form Base Premium. The result is the windstorm or hail deductible credit.
- Step 5.** Compare the results in Steps 2. and 4. If the result in:
 - Step 2. is **less than** the result in Step 4., to compute the premium, subtract the "adjusted deductible credit" from the Extended Coverage, Broad or Special Form Base Premium.
 - Step 2. is **greater than or equal to** Step 4., multiply the Extended Coverage, Broad or Special Form Base Premium by the factor for the desired windstorm or hail deductible option.

RULE 406.
DEDUCTIBLES (Cont'd)

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Windstorm Or Hail Deductible Percentage	All Other Perils Deductible Amount	Coverage A, B, D Or E Limit			
		Up To \$125,000	\$125,001 To 175,000	\$175,001 To 250,000	\$250,001 And Above
1%	\$ 100	0.956	0.926	0.916	0.899
	250	0.952	0.925	0.915	0.898
	500	0.946	0.924	0.913	0.897
	1,000	0.933	0.921	0.911	0.895
	1,500	-	0.918	0.909	0.890
	2,000	-	-	0.907	0.884
	2,500	-	-	-	0.879
	3,000	-	-	-	0.879
	4,000	-	-	-	0.878
	5,000	-	-	-	0.878
	7,500	-	-	-	0.872
	10,000	-	-	-	0.855
2%	\$ 100	0.868	0.841	0.832	0.818
	250	0.866	0.840	0.832	0.817
	500	0.863	0.838	0.830	0.816
	1,000	0.856	0.836	0.828	0.815
	1,500	0.849	0.834	0.826	0.813
	2,000	0.842	0.832	0.825	0.812
	2,500	-	0.830	0.823	0.810
	3,000	-	0.828	0.821	0.809
	4,000	-	-	0.818	0.807
	5,000	-	-	-	0.805
	7,500	-	-	-	0.797
	10,000	-	-	-	0.792
3%	\$ 100	0.862	0.834	0.824	0.807
	250	0.814	0.787	0.780	0.767
	500	0.812	0.786	0.779	0.766
	1,000	0.809	0.785	0.778	0.765
	1,500	0.803	0.782	0.775	0.764
	2,000	0.797	0.780	0.774	0.762
	2,500	0.791	0.778	0.772	0.761
	3,000	0.785	0.776	0.770	0.759
	4,000	0.779	0.775	0.769	0.758
	5,000	-	0.771	0.766	0.756
	7,500	-	0.768	0.763	0.754
	10,000	-	-	-	0.747
1%	-	-	-	0.743	
1%	0.808	0.780	0.772	0.756	

**RULE 406.
DEDUCTIBLES (Cont'd)**

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Windstorm Or Hail Deductible Percentage	All Other Perils Deductible Amount	Coverage A, B, D Or E Limit			
		Up To \$125,000	\$125,001 To 175,000	\$175,001 To 250,000	\$250,001 And Above
4%	\$ 100	0.759	0.734	0.727	0.716
	250	0.758	0.733	0.727	0.715
	500	0.755	0.731	0.725	0.714
	1,000	0.750	0.729	0.723	0.712
	1,500	0.745	0.727	0.721	0.711
	2,000	0.740	0.725	0.719	0.709
	2,500	0.736	0.723	0.718	0.708
	3,000	0.731	0.721	0.716	0.707
	4,000	0.721	0.718	0.714	0.705
	5,000	–	0.715	0.711	0.703
	7,500	–	–	0.704	0.698
	10,000	–	–	–	0.695
1%	0.754	0.727	0.719	0.705	
5%	\$ 100	0.705	0.680	0.675	0.665
	250	0.704	0.679	0.674	0.664
	500	0.701	0.678	0.673	0.663
	1,000	0.697	0.675	0.670	0.661
	1,500	0.693	0.673	0.668	0.660
	2,000	0.690	0.671	0.667	0.658
	2,500	0.686	0.669	0.665	0.657
	3,000	0.683	0.668	0.664	0.656
	4,000	0.677	0.665	0.661	0.654
	5,000	0.671	0.663	0.659	0.652
	7,500	–	0.657	0.655	0.648
	10,000	–	–	0.651	0.646
1%	0.701	0.673	0.666	0.654	
7.5%	\$ 100	0.622	0.599	0.594	0.585
	250	0.620	0.598	0.593	0.585
	500	0.618	0.596	0.592	0.584
	1,000	0.615	0.594	0.590	0.582
	1,500	0.612	0.592	0.588	0.580
	2,000	0.609	0.590	0.587	0.579
	2,500	0.606	0.588	0.585	0.577
	3,000	0.604	0.587	0.584	0.576
	4,000	0.599	0.584	0.581	0.574
	5,000	0.594	0.581	0.578	0.572
	7,500	0.585	0.578	0.574	0.569
	10,000	–	0.574	0.572	0.566
1%	0.618	0.592	0.586	0.574	

RULE 406.
DEDUCTIBLES (Cont'd)

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Windstorm Or Hail Deductible Percentage	All Other Perils Deductible Amount	Coverage A, B, D Or E Limit			
		Up To \$125,000	\$125,001 To 175,000	\$175,001 To 250,000	\$250,001 And Above
10%	\$ 100	0.557	0.535	0.531	0.522
	250	0.555	0.534	0.530	0.522
	500	0.553	0.533	0.529	0.521
	1,000	0.550	0.530	0.527	0.519
	1,500	0.547	0.528	0.525	0.518
	2,000	0.545	0.526	0.523	0.516
	2,500	0.542	0.524	0.521	0.515
	3,000	0.540	0.523	0.520	0.514
	4,000	0.536	0.520	0.517	0.512
	5,000	0.532	0.518	0.515	0.510
	7,500	0.524	0.514	0.511	0.506
	10,000	0.518	0.511	0.509	0.504
1%	0.553	0.528	0.523	0.512	

Table 406.B.2.a.(7)#1 Coverage A, B, D Or E Windstorm Or Hail Percentage Deductibles

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)													
Coverage C And Other Personal Property Coverage Options*													
Windstorm Or Hail Deductible Percentage	All Other Perils Deductible Amount												
	\$100	\$250	\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$4,000	\$5,000	\$7,500	\$10,000	1%
1 %	0.909	0.908	0.906	0.902	0.898	0.894	0.890	0.887	0.882	0.876	0.870	0.853	—
2	0.827	0.826	0.825	0.822	0.820	0.817	0.815	0.813	0.808	0.804	0.795	0.791	0.826
3	0.775	0.774	0.773	0.770	0.768	0.766	0.764	0.762	0.758	0.754	0.747	0.742	0.774
4	0.723	0.722	0.721	0.719	0.717	0.715	0.713	0.711	0.708	0.705	0.698	0.694	0.722
5	0.671	0.670	0.669	0.667	0.665	0.664	0.662	0.661	0.658	0.655	0.650	0.645	0.670
7.5	0.591	0.590	0.589	0.587	0.585	0.584	0.582	0.581	0.578	0.575	0.571	0.568	0.590
10	0.528	0.527	0.526	0.523	0.521	0.520	0.518	0.517	0.515	0.513	0.508	0.505	0.527

* Only use when policy also covers building or non-building structures.

Table 406.B.2.a.(7)#2 Coverage C And Other Personal Property Windstorm Or Hail Percentage Deductibles

**RULE 406.
DEDUCTIBLES (Cont'd)**

Territories 170 – 390 (Inland)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Windstorm Or Hail Deductible Percentage	All Other Perils Deductible Amount	Coverage A, B, D Or E Limit			
		Up To \$125,000	\$125,001 To \$175,000	\$175,001 To \$250,000	\$250,001 And Above
1%	\$ 100	0.990	0.947	0.926	0.885
	250	0.975	0.937	0.917	0.878
	500	0.949	0.921	0.902	0.867
	1,000	0.903	0.893	0.878	0.848
	1,500	–	0.865	0.854	0.833
	2,000	–	–	0.830	0.817
	2,500	–	–	–	0.802
	3,000	–	–	–	0.784
	4,000	–	–	–	0.747
	5,000	–	–	–	0.711
	7,500	–	–	–	0.654
	10,000	–	–	–	0.608
1%	–	–	–	–	
2%	100	0.916	0.866	0.843	0.802
	250	0.902	0.855	0.833	0.795
	500	0.879	0.840	0.819	0.784
	1,000	0.841	0.812	0.794	0.765
	1,500	0.803	0.791	0.775	0.749
	2,000	0.765	0.769	0.756	0.734
	2,500	–	0.748	0.737	0.718
	3,000	–	0.727	0.718	0.707
	4,000	–	–	0.680	0.686
	5,000	–	–	–	0.664
	7,500	–	–	–	0.605
	10,000	–	–	–	0.567
1%	0.874	0.791	0.753	0.693	
3%	\$ 100	0.872	0.821	0.799	0.764
	250	0.858	0.810	0.789	0.757
	500	0.836	0.795	0.775	0.746
	1,000	0.799	0.767	0.750	0.727
	1,500	0.765	0.745	0.731	0.711
	2,000	0.730	0.724	0.712	0.696
	2,500	0.696	0.703	0.693	0.680
	3,000	0.662	0.684	0.676	0.669
	4,000	–	0.646	0.642	0.647
	5,000	–	0.608	0.608	0.626
	7,500	–	–	–	0.574
	10,000	–	–	–	0.539
1%	0.831	0.746	0.709	0.655	

RULE 406.
DEDUCTIBLES (Cont'd)

Territories 170 – 390 (Inland)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Windstorm Or Hail Deductible Percentage	All Other Perils Deductible Amount	Coverage A, B, D Or E Limit			
		Up To \$125,000	\$125,001 To \$175,000	\$175,001 To \$250,000	\$250,001 And Above
4%	\$ 100	0.829	0.775	0.755	0.726
	250	0.815	0.765	0.745	0.719
	500	0.792	0.750	0.731	0.707
	1,000	0.757	0.721	0.707	0.688
	1,500	0.726	0.700	0.687	0.673
	2,000	0.696	0.679	0.668	0.657
	2,500	0.665	0.657	0.649	0.642
	3,000	0.634	0.641	0.634	0.631
	4,000	0.573	0.608	0.604	0.609
	5,000	–	0.575	0.573	0.587
	7,500	–	–	0.498	0.542
	10,000	–	–	–	0.511
5%	1%	0.788	0.700	0.665	0.617
	100	0.785	0.730	0.711	0.688
	250	0.771	0.720	0.701	0.681
	500	0.749	0.705	0.687	0.669
	1,000	0.715	0.676	0.663	0.650
	1,500	0.688	0.655	0.644	0.635
	2,500	0.634	0.612	0.605	0.604
	3,000	0.615	0.598	0.592	0.593
	4,000	0.578	0.570	0.565	0.571
	5,000	0.540	0.542	0.539	0.549
	7,500	–	0.495	0.496	0.511
	10,000	–	–	0.464	0.483
7.5%	1%	0.745	0.655	0.621	0.579
	100	0.729	0.681	0.667	0.650
	250	0.715	0.670	0.658	0.643
	500	0.693	0.655	0.643	0.632
	1,000	0.659	0.626	0.619	0.613
	1,500	0.633	0.605	0.600	0.597
	2,000	0.608	0.584	0.580	0.582
	2,500	0.582	0.563	0.561	0.566
	3,000	0.565	0.549	0.548	0.555
	4,000	0.532	0.520	0.521	0.534
	5,000	0.498	0.492	0.495	0.512
	7,500	0.444	0.449	0.453	0.474
10,000	–	0.421	0.423	0.446	
1%	0.689	0.605	0.577	0.541	

**RULE 406.
DEDUCTIBLES (Cont'd)**

Territories 170 – 390 (Inland)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Windstorm Or Hail Deductible Percentage	All Other Perils Deductible Amount	Coverage A, B, D Or E Limit			
		Up To \$125,000	\$125,001 To \$175,000	\$175,001 To \$250,000	\$250,001 And Above
10%	100	0.692	0.650	0.640	0.626
	250	0.678	0.639	0.630	0.619
	500	0.656	0.624	0.616	0.608
	1,000	0.623	0.596	0.591	0.589
	1,500	0.598	0.575	0.572	0.573
	2,000	0.573	0.553	0.553	0.558
	2,500	0.548	0.532	0.534	0.542
	3,000	0.532	0.518	0.521	0.531
	4,000	0.499	0.489	0.494	0.509
	5,000	0.466	0.461	0.468	0.487
	7,500	0.417	0.419	0.425	0.449
	10,000	0.384	0.391	0.396	0.422
	1%	0.652	0.575	0.550	0.517

Table 406.B.2.a.(7)#3 Coverage A, B, D Or E Windstorm Or Hail Percentage Deductibles

Territories 170 – 390 (Inland)													
Coverage C And Other Personal Property Coverage Options*													
Windstorm Or Hail Deductible Percentage	All Other Perils Deductible Amount												
	\$100	\$250	\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$4,000	\$5,000	\$7,500	\$10,000	1%
1 %	0.927	0.917	0.901	0.873	0.845	0.817	0.789	0.770	0.731	0.693	0.634	0.587	–
2	0.845	0.836	0.821	0.796	0.775	0.754	0.733	0.716	0.681	0.646	0.585	0.548	0.842
3	0.803	0.794	0.779	0.754	0.734	0.714	0.694	0.678	0.646	0.614	0.558	0.522	0.800
4	0.761	0.751	0.737	0.713	0.693	0.674	0.655	0.640	0.611	0.582	0.531	0.495	0.758
5	0.719	0.709	0.695	0.671	0.653	0.634	0.616	0.603	0.576	0.550	0.504	0.469	0.716
7.5	0.674	0.665	0.650	0.626	0.608	0.591	0.573	0.560	0.535	0.510	0.467	0.436	0.671
10	0.646	0.636	0.621	0.598	0.580	0.563	0.545	0.533	0.508	0.483	0.441	0.412	0.643

* Only use when policy also covers building or non-building structures.

Table 406.B.2.a.(7)#4 Coverage C And Other Personal Property Windstorm Or Hail Percentage Deductibles

RULE 406.
DEDUCTIBLES (Cont'd)

Paragraph **B.2.b.(7)** is replaced by the following:

b. Higher Fixed-dollar Deductibles

(7) Deductible Factors

When the property is located in an area serviced by the North Carolina Insurance Underwriting Association (NCIUA – Territories 110, 120, 130, 140, 150 and 160), additional calculations must be performed to ensure that the premium credit applied to the deductible is **not** greater than the premium credit that would be applied if the peril of Windstorm or Hail were excluded from the policy.

(a) Property **Not Located in Area Serviced by the NCIUA**

Multiply the Extended Coverage, Broad or Special Form Base Premium for the Base Deductible for each coverage insured under the policy by the factor selected for the desired windstorm or hail deductible options from the following tables.

(b) Property **Is Located in Area Serviced by the NCIUA**

To determine if an "adjusted deductible credit" or the calculated deductible credit applies, complete each of the following steps:

Step 1. Multiply the windstorm or hail exclusion credit shown in the state rates under Additional Rule **A3**. Windstorm Or Hail Exclusion – Territories 110, 120, 130, 140 150 And 160 Only, by the Key Factor, for the same amount of insurance used to determine the Extended Coverage, Broad or Special Form Base Premium.

Step 2. Multiply the result determined in Step 1. by .9 to determine the "adjusted deductible credit".

Step 3. Select the factor for the desired windstorm or hail deductible option from the following tables and subtract the factor from unity (1.00).

Step 4. Multiply the factor determined in Step 3. by the Extended Coverage, Broad or Special Form Base Premium. The result is the windstorm or hail deductible credit.

Step 5. Compare the results in Steps 2. and 4. If the result in:

Step 2. is **less than** the result in Step 4., to compute the premium, subtract the "adjusted deductible credit" from the Extended Coverage, Broad or Special Form Base Premium.

Step 2. is **greater than or equal to** Step 4., multiply the Extended Coverage, Broad or Special Form Base Premium by the factor for the desired windstorm or hail deductible option.

**RULE 406.
DEDUCTIBLES (Cont'd)**

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Windstorm Or Hail Deductible Amount	All Other Perils Deductible Amount	Coverage A Or B Limit			
		Up To \$125,000	\$125,001 To \$175,000	\$175,001 To \$250,000	\$250,001 And Above
\$ 1,000	\$ 100	0.942	0.962	0.972	0.984
	250	0.940	0.961	0.971	0.983
	500	0.938	0.959	0.970	0.982
2,000	100	0.850	0.896	0.921	0.955
	250	0.849	0.895	0.920	0.954
	500	0.847	0.893	0.918	0.953
	1,000	0.843	0.891	0.916	0.952
	1,500	0.839	0.889	0.914	0.951
	5,000	0.685	0.758	0.807	0.887
5,000	250	0.683	0.757	0.806	0.886
	500	0.681	0.756	0.805	0.885
	1,000	0.678	0.753	0.803	0.883
	1,500	0.676	0.751	0.801	0.882
	2,000	0.674	0.749	0.799	0.880
	2,500	0.672	0.747	0.797	0.879
	3,000	0.670	0.745	0.795	0.878
	4,000	0.666	0.741	0.791	0.875
	7,500	0.606	0.681	0.738	0.841
	250	0.605	0.680	0.738	0.841
7,500	500	0.603	0.679	0.736	0.840
	1,000	0.600	0.676	0.734	0.838
	1,500	0.598	0.674	0.732	0.836
	2,000	0.595	0.672	0.731	0.835
	2,500	0.593	0.670	0.729	0.833
	3,000	0.592	0.669	0.728	0.832
	4,000	0.589	0.666	0.725	0.830
	5,000	0.586	0.664	0.723	0.828
	10,000	0.556	0.623	0.684	0.803
	250	0.555	0.622	0.684	0.802
10,000	500	0.553	0.621	0.682	0.801
	1,000	0.550	0.618	0.680	0.799
	1,500	0.548	0.616	0.678	0.798
	2,000	0.545	0.614	0.677	0.796
	2,500	0.543	0.612	0.675	0.795
	3,000	0.542	0.611	0.674	0.794
	4,000	0.539	0.608	0.671	0.792
	5,000	0.536	0.606	0.669	0.790
	7,500	0.532	0.602	0.665	0.786

**Table 406.B.2.b.(7)#1 Coverage A, B, D Or E Windstorm
Or Hail Fixed-dollar Deductibles**

RULE 406.
DEDUCTIBLES (Cont'd)

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)											
Coverage C And Other Personal Property Coverage Options*											
Windstorm Or Hail Deductible Amount	All Other Perils Deductible Amount										
	\$100	\$250	\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$4,000	\$5,000	\$7,500
\$ 1,000	0.977	0.977	0.975	–	–	–	–	–	–	–	–
2,000	0.937	0.936	0.935	0.933	0.931	–	–	–	–	–	–
5,000	0.848	0.847	0.846	0.844	0.842	0.841	0.839	0.837	0.834	–	–
7,500	0.793	0.792	0.791	0.789	0.787	0.786	0.784	0.783	0.780	0.778	–
10,000	0.750	0.749	0.747	0.745	0.743	0.742	0.740	0.739	0.737	0.735	0.731

* Only use when policy also covers building or non-building structures.

Table 406.B.2.b.(7)#2 Coverage C And Other Personal Property Windstorm Or Hail Fixed-dollar Deductibles

Territories 170 – 390 (Inland)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Windstorm Or Hail Deductible Amount	All Other Perils Deductible Amount	Coverage A Or B Limit			
		Up To \$125,000	\$125,001 To \$175,000	\$175,001 To \$250,000	\$250,001 And Above
\$ 1,000	\$ 100	0.979	0.983	0.987	0.985
	250	0.965	0.972	0.978	0.978
	500	0.943	0.957	0.963	0.967
2,000	100	0.900	0.917	0.930	0.940
	250	0.886	0.907	0.921	0.933
	500	0.864	0.892	0.906	0.922
	1,000	0.831	0.863	0.882	0.903
5,000	1,500	0.798	0.834	0.858	0.884
	100	0.766	0.791	0.817	0.849
	250	0.752	0.781	0.808	0.842
	500	0.730	0.766	0.793	0.831
	1,000	0.697	0.737	0.769	0.812
	1,500	0.673	0.716	0.750	0.796
	2,000	0.648	0.694	0.730	0.781
	2,500	0.624	0.673	0.711	0.765
3,000	0.600	0.652	0.692	0.749	
4,000	0.551	0.609	0.653	0.718	

**RULE 406.
DEDUCTIBLES (Cont'd)**

Territories 170 – 390 (Inland)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Windstorm Or Hail Deductible Amount	All Other Perils Deductible Amounts	Coverage A Or B Limit			
		Up To \$125,000	\$125,001 To \$175,000	\$175,001 To \$250,000	\$250,001 And Above
7,500	100	0.712	0.731	0.756	0.797
	250	0.698	0.721	0.747	0.790
	500	0.676	0.706	0.732	0.779
	1,000	0.643	0.677	0.708	0.760
	1,500	0.618	0.656	0.689	0.744
	2,000	0.594	0.634	0.669	0.729
	2,500	0.569	0.613	0.650	0.713
	3,000	0.554	0.599	0.637	0.702
	4,000	0.524	0.571	0.610	0.681
10,000	5,000	0.494	0.543	0.584	0.659
	100	0.681	0.695	0.716	0.759
	250	0.666	0.684	0.706	0.752
	500	0.645	0.669	0.692	0.741
	1,000	0.611	0.640	0.668	0.722
	1,500	0.587	0.619	0.649	0.706
	2,000	0.562	0.598	0.629	0.691
	2,500	0.538	0.577	0.610	0.675
	3,000	0.523	0.563	0.597	0.664
	4,000	0.492	0.534	0.570	0.642
5,000	0.462	0.506	0.544	0.620	
7,500	0.420	0.463	0.501	0.582	

Table 406.B.2.b.(7)#3 Coverage A, B, D Or E Windstorm Or Hail Fixed-dollar Deductibles

Territories 170 – 390 (Inland)											
Coverage C And Other Personal Property Coverage Options*											
Windstorm Or Hail Deductible Amounts	All Other Perils Deductible Amount										
	\$100	\$250	\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$4,000	\$5,000	\$7,500
\$ 1,000	0.983	0.974	0.959	–	–	–	–	–	–	–	–
2,000	0.924	0.915	0.900	0.877	0.854	–	–	–	–	–	–
5,000	0.813	0.803	0.789	0.765	0.747	0.730	0.712	0.694	0.659	–	–
7,500	0.756	0.747	0.732	0.708	0.690	0.673	0.655	0.643	0.619	0.595	–
10,000	0.718	0.709	0.694	0.671	0.653	0.636	0.618	0.606	0.581	0.557	0.517

* Only use when policy also covers building or non-building structures.

Table 406.B.2.b.(7)#4 Coverage C And Other Personal Property Windstorm Or Hail Fixed-dollar Deductibles

RULE 406.
DEDUCTIBLES (Cont'd)

The following is added to Paragraph **B.**:

3. Named Storm Deductibles – Territories 110, 120, 130, 140, 150 And 160

When the policy covers the peril of Windstorm or Hail, the following deductible options may be used in the listed territories in conjunction with the deductible applicable to all other Perils under Extended Coverage, Broad or Special Forms. They may not be used on a policy in conjunction with a Windstorm or Hail deductible as described in Paragraph 2.

a. Percentage Deductibles – Territories 110, 120, 130, 140, 150 And 160 Only**(1) Deductible Amounts**

This option provides for higher Named Storm percentage deductibles of 1%, 2%, 5%, 7.5% and 10% of the limit of liability that applies to Coverage **A, B, D** or **E**, whichever is greatest, when the dollar amount of the percentage deductible selected exceeds the amount of the All Other Perils deductible. This option is not available for policies covering only personal property.

(2) Endorsement

Use Named Storm Deductible – North Carolina Endorsement **DP 32 18.**

(3) Declarations Instructions

Enter, on the policy Declarations, the percentage amount that applies to Named Storm and the dollar amount that applies to All Other Section I Perils. For example:

Deductible – Named Storm 2% of Coverage **A** limit and \$500 for all other perils.

(4) Deductible Application

In the event of a Named Storm loss to covered property, the dollar amount is deducted from the total of the loss for all coverages.

(5) Coverage Options

The deductible factors for Coverage **A, B, D** or **E** and Coverage Options For Buildings and Non-building Structures differ by the deductible percentage amounts that apply to Named Storm, deductible amounts that apply to other perils and the Coverage **A, B, D** or **E** limit.

The deductible factors for Coverage **C** and Other Personal Property Coverage Options differ by the deductible percentage amounts that apply to Named Storm and the deductible amounts that apply to other perils.

(6) Use Of Factors

The factors displayed in Paragraph **B.3.a.(7)** incorporate the factors for the All Perils Deductibles. Do not use the factors for the All Perils Deductibles when rating a policy with a higher Named Storm deductible.

(7) Deductible Factors

When the property is located in an area serviced by the North Carolina Insurance Underwriting Association (NCIUA – Territories 110, 120, 130, 140, 150 and 160), additional calculations must be performed to ensure that the premium credit applied for the deductible is **not** greater than the premium credit that would be applied if the peril of Windstorm or Hail were excluded from the policy.

To determine if an "adjusted deductible credit" or the calculated deductible credit applies, complete each of the following steps:

Step 1. Multiply the windstorm or hail exclusion credit shown in the state rate pages, under Additional Rule **A3**, Windstorm Or Hail Exclusion – Territories 110, 120, 130, 140, 150 and 160 Only, by the Key Factor for the same amount of insurance used to determine the Extended Coverage, Broad or Special Form Base Premium.

Step 2. Multiply the result determined in Step 1. by .9 to determine the "adjusted deductible credit".

Step 3. Select the factor for the desired named storm deductible option from the following table and subtract that factor from unity (1.00).

Step 4. Multiply the factor determined in Step 3. by the Extended Coverage, Broad or Special Form Base Premium. The result is the named storm deductible credit.

Step 5. Compare the results in Steps 2. and 4. If the result in:

Step 2. is **less** than the result in Step 4., to compute the premium, subtract the "adjusted deductible credit" from the Extended Coverage, Broad or Special Form Base Premium.

Step 2. is **greater than or equal to** the result in Step 4., multiply the Extended Coverage, Broad or Special Form Base Premium by the factor for the desired named storm deductible option.

**RULE 406.
DEDUCTIBLES (Cont'd)**

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Named Storm Deductible Percentage	All Other Perils Deductible Amounts	Coverage A, B, D Or E Limit			
		Up To \$125,000	\$125,001 To \$175,000	\$175,001 To \$250,000	\$250,001 And Above
1%	\$ 100	0.958	0.928	0.918	0.902
	250	0.954	0.927	0.917	0.901
	500	0.947	0.925	0.915	0.900
	1,000	0.933	0.922	0.912	0.897
	1,500	–	0.919	0.910	0.893
	2,000	–	–	0.908	0.889
	2,500	–	–	–	0.886
	3,000	–	–	–	0.884
	4,000	–	–	–	0.881
	5,000	–	–	–	0.878
	7,500	–	–	–	0.872
	10,000	–	–	–	0.855
1%	–	–	–	–	
2%	\$ 100	0.872	0.845	0.837	0.824
	250	0.869	0.844	0.836	0.823
	500	0.865	0.842	0.834	0.821
	1,000	0.857	0.838	0.831	0.819
	1,500	0.850	0.835	0.828	0.817
	2,000	0.843	0.833	0.826	0.815
	2,500	–	0.831	0.824	0.813
	3,000	–	0.829	0.822	0.811
	4,000	–	–	0.819	0.809
	5,000	–	–	–	0.806
	7,500	–	–	–	0.798
	10,000	–	–	–	0.792
1%	0.866	0.835	0.826	0.809	
5%	\$ 100	0.711	0.688	0.683	0.673
	250	0.709	0.687	0.682	0.672
	500	0.707	0.685	0.680	0.671
	1,000	0.702	0.681	0.677	0.668
	1,500	0.697	0.678	0.674	0.666
	2,000	0.693	0.676	0.672	0.664
	2,500	0.689	0.674	0.670	0.663
	3,000	0.685	0.672	0.668	0.662
	4,000	0.678	0.668	0.665	0.659
	5,000	0.671	0.665	0.662	0.656
	7,500	–	0.657	0.656	0.651
	10,000	–	–	0.652	0.647
1%	0.708	0.678	0.672	0.659	

RULE 406.
DEDUCTIBLES (Cont'd)

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Named Storm Deductible Percentage	All Other Perils Deductible Amounts	Coverage A, B, D Or E Limit			
		Up To \$125,000	\$125,001 To \$175,000	\$175,001 To \$250,000	\$250,001 And Above
7.5%	\$ 100	0.629	0.608	0.603	0.594
	250	0.628	0.606	0.602	0.594
	500	0.625	0.605	0.600	0.592
	1,000	0.621	0.601	0.597	0.590
	1,500	0.617	0.598	0.594	0.588
	2,000	0.613	0.595	0.592	0.586
	2,500	0.609	0.593	0.590	0.584
	3,000	0.606	0.591	0.588	0.582
	4,000	0.600	0.587	0.585	0.579
	5,000	0.595	0.584	0.582	0.577
	7,500	0.585	0.579	0.577	0.572
10,000	-	0.575	0.573	0.569	
1%		0.625	0.598	0.592	0.579
10%	\$ 100	0.565	0.545	0.541	0.532
	250	0.563	0.543	0.539	0.531
	500	0.561	0.541	0.538	0.530
	1,000	0.557	0.538	0.535	0.527
	1,500	0.553	0.535	0.532	0.525
	2,000	0.549	0.532	0.530	0.523
	2,500	0.546	0.530	0.528	0.521
	3,000	0.543	0.528	0.526	0.519
	4,000	0.538	0.524	0.522	0.517
	5,000	0.534	0.521	0.519	0.515
	7,500	0.525	0.516	0.514	0.510
10,000	0.519	0.512	0.510	0.506	
1%		0.561	0.535	0.530	0.517

Table 406.B.3.a.(7)#1 Coverage A, B, D Or E Named Storm Percentage Deductibles

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)													
Coverage C And Other Personal Property Coverage Options*													
Named Storm Deductible Percentage	All Other Perils Deductible Amount												
	\$100	\$250	\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$4,000	\$5,000	\$7,500	\$10,000	1%
1 %	0.912	0.910	0.908	0.904	0.899	0.894	0.890	0.887	0.882	0.876	0.869	0.852	-
2	0.832	0.831	0.829	0.825	0.822	0.819	0.817	0.814	0.809	0.804	0.795	0.790	0.831
5	0.679	0.678	0.676	0.673	0.670	0.668	0.666	0.664	0.661	0.658	0.651	0.646	0.678
7.5	0.600	0.599	0.597	0.594	0.591	0.589	0.587	0.585	0.582	0.579	0.573	0.569	0.599
10	0.537	0.536	0.534	0.531	0.529	0.527	0.525	0.523	0.519	0.516	0.511	0.507	0.536

* Only use when policy also covers building or non-building structures.

Table 406.B.3.a.(7)#2 Coverage C And Other Personal Property Named Storm Percentage Deductibles

**RULE 406.
DEDUCTIBLES (Cont'd)**

b. Higher Fixed-dollar Deductibles – Territories 110, 120, 130, 140, 150 and 160 Only

(1) Deductible Amounts

This option provides for higher Named Storm Fixed-dollar deductible amounts of \$1,000, \$2,000, \$5,000, \$7,500 and \$10,000 when the dollar amount of the higher fixed-dollar deductible selected exceeds the amount of the All Other Perils deductible. This option is not available for policies covering only personal property.

(2) Endorsement

Use Named Storm Deductible – North Carolina Endorsement **DP 32 18**.

(3) Declarations Instructions

Enter, on the policy Declarations, the deductible amounts that apply to Named Storm and All Other Perils. For example: \$1,000 for Named Storm and \$500 for All Other Perils.

(4) Deductible Application

In the event of a Named Storm loss to covered property, the dollar amount is deducted from the total of the loss for all coverages.

(5) Coverage Options

The deductible factors for Coverage **A, B, D** or **E** and Coverage Options For Buildings And Non-building Structures differ by the deductible amounts that apply to Named Storm and to other perils and the Coverage **A, B, D** or **E** limit.

The deductible factors for Coverage **C** and Other Personal Property Coverage Options differ by the deductible amounts that apply to Named Storm and to other perils.

(6) Use Of Factors

The factors displayed in Paragraph **B.3.b.(7)** incorporate the factors for the All Perils Deductibles. Do not use the factors for the All Perils Deductibles when rating a policy with a higher Named Storm deductible.

(7) Deductible Factors

When the property is located in an area serviced by the North Carolina Insurance Underwriting Association (NCIUA – Territories 110, 120, 130, 140, 150 and 160), additional calculations must be performed to ensure that the premium credit applied for the deductible is not greater than the premium credit that would be applied if the peril of Windstorm or Hail were excluded from the policy.

To determine if an "adjusted deductible credit" or the calculated deductible credit applies, complete each of the following steps:

Step 1. Multiply the windstorm or hail exclusion credit shown in the state rate pages, under Additional Rule **A3**, Windstorm Or Hail Exclusion – Territories 110, 120, 130, 140, 150 And 160 Only, by the Key Factor for the same amount of insurance used to determine the Extended Coverage, Broad or Special Form Base Premium.

Step 2. Multiply the result determined in Step 1. by .9 to determine the "adjusted deductible credit".

Step 3. Select the factor for the desired named storm deductible option from the following table and subtract that factor from unity (1.00).

Step 4. Multiply the factor determined in Step 3. by the Extended Coverage, Broad or Special Form Base Premium. The result is the named storm deductible credit.

Step 5. Compare the results in Steps 2. and 4. If the result in:

Step 2. is **less** than the result in Step 4., to compute the premium, subtract the "adjusted deductible credit" from the Extended Coverage, Broad or Special Form Base Premium.

Step 2. is **greater than or equal to** the result in Step 4., multiply the Extended Coverage, Broad or Special Form Base Premium by the factor for the desired named storm deductible option.

RULE 406.
DEDUCTIBLES (Cont'd)

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)					
Coverage A, B, D Or E And Coverage Options For Buildings And Non-building Structures					
Named Storm Deductible Amount	All Other Perils Deductible Amounts	Coverage A, B, D Or E Limit			
		Up To \$125,000	\$125,001 To \$175,000	\$175,001 To \$250,000	\$250,001 And Above
\$ 1,000	\$ 100	0.943	0.963	0.973	0.985
	250	0.942	0.962	0.972	0.984
	500	0.939	0.960	0.970	0.983
2,000	\$ 100	0.853	0.899	0.923	0.957
	250	0.852	0.897	0.922	0.956
	500	0.849	0.895	0.920	0.955
	1,000	0.845	0.892	0.917	0.953
	1,500	0.841	0.890	0.915	0.952
5,000	\$ 100	0.692	0.764	0.812	0.891
	250	0.690	0.763	0.811	0.890
	500	0.687	0.761	0.810	0.889
	1,000	0.683	0.757	0.807	0.887
	1,500	0.680	0.754	0.804	0.885
	2,000	0.677	0.752	0.802	0.883
	2,500	0.674	0.750	0.800	0.881
	3,000	0.671	0.748	0.798	0.879
7,500	\$ 100	0.667	0.744	0.794	0.876
	250	0.614	0.689	0.745	0.847
	500	0.613	0.687	0.744	0.846
	1,000	0.610	0.686	0.743	0.845
	1,500	0.606	0.682	0.740	0.842
	2,000	0.603	0.679	0.737	0.840
	2,500	0.600	0.676	0.735	0.838
	3,000	0.597	0.674	0.733	0.837
	4,000	0.595	0.672	0.731	0.836
10,000	\$ 100	0.591	0.668	0.727	0.833
	250	0.587	0.665	0.724	0.830
	500	0.565	0.631	0.692	0.809
	1,000	0.563	0.630	0.691	0.809
	1,500	0.561	0.628	0.690	0.807
	2,000	0.557	0.625	0.687	0.805
	2,500	0.554	0.622	0.684	0.803
	3,000	0.551	0.619	0.682	0.801
	4,000	0.548	0.617	0.680	0.799
	5,000	0.546	0.615	0.678	0.797
10,000	4,000	0.542	0.611	0.674	0.794
	5,000	0.538	0.608	0.671	0.792
	7,500	0.533	0.602	0.666	0.787

Table 406.B.3.b.(7)#1 Coverage A, B, D Or E Named Storm Higher Fixed-dollar Deductibles

**RULE 406.
DEDUCTIBLES (Cont'd)**

Territories 110, 120, 130, 140, 150 And 160 (Beach & Coastal)											
Coverage C And Other Personal Property Coverage Options*											
Named Storm Deductible Amount	All Other Perils Deductible Amount										
	\$100	\$250	\$500	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$4,000	\$5,000	\$7,500
\$ 1,000	0.979	0.978	0.976	–	–	–	–	–	–	–	–
2,000	0.940	0.939	0.937	0.934	0.932	–	–	–	–	–	–
5,000	0.853	0.852	0.850	0.848	0.845	0.843	0.841	0.839	0.835	–	–
7,500	0.800	0.799	0.797	0.794	0.792	0.790	0.788	0.786	0.783	0.780	–
10,000	0.757	0.756	0.754	0.752	0.749	0.747	0.745	0.743	0.740	0.737	0.732

* Only use when policy also covers building or non-building structures.

**Table 406.B.3.b.(7)#2 Coverage C And Other Personal
Property Named Storm Higher Fixed-dollar Deductibles**

**RULE 407.
AUTOMATIC INCREASE IN INSURANCE**

Rule 407. is replaced by the following:

A. Automatic Increase In Insurance Endorsement – DP 32 11

- The policy may be endorsed to provide automatic annual increases in the Coverage **A**, **B** and **C** limits of liability. Apply a factor to the Base Premium as follows:

Amount Of Annual Increase	Factor
4%	1.02
6%	1.03
8%	1.04
Each Additional 4% over 8% add:	.02

Table 407.A.1. Factors

- The premium for a 3 year policy is 3.2 times the annual policy premium.
- Use Automatic Increase In Insurance Endorsement **DP 32 11**.

B. Inflation Guard Endorsement – DP 32 70

- The policy may be extended to automatically adjust the limit of liability applicable to Coverage **A** under the Dwelling Policy. This limit will be adjusted at the same rate as the change in the Index shown on the Declarations, billing notice or named on the form.
- There is no additional charge for this endorsement. Companies electing to use this endorsement must use it exclusively and are required to notify the North Carolina Rate Bureau of their election.
- The following Indexes have been approved by the Department of Insurance and may be used with the approved Inflation Guard Endorsement:
 - Marshall & Swift Boeckh (MS/B) Residential Cost Index published by the American Appraisal Company, Inc.;
 - Composite Construction Cost Index published by the U.S. Department of Commerce;
 - Consumer Price Index published by the U.S. Department of Labor;
 - Marshall & Swift Boeckh (MS/B) Construction Cost Index published Marshall & Swift Boeckh (MS/B);
 - RSMMeans CostWorks Valuator published by RSMMeans.
 - Xactware Inflation Index published by Xactware Solutions, Inc.
- Use Inflation Guard Endorsement **DP 32 70**.

**RULE 408.
ALARMS, SMOKE DETECTORS, FIRE EXTINGUISHERS
AND AUTOMATIC SPRINKLERS**

The title of Rule 408. Protective Devices is replaced by the preceding title.

Rule 408. is replaced by the following:

- Approved and properly maintained installations of fire alarms, smoke detectors, automatic sprinklers and fire extinguishers in the dwelling may be recognized for a reduced premium – computed by multiplying the fire Base Premium by the selected factors as follows.

Type Of Installation*	Dwelling Factor	Mobile Or Trailer Home Factor
Central Station Reporting Fire Alarm	.90	.92
Fire Department Reporting Fire Alarm	.93	.95
Local Fire Alarm Smoke Detectors	.95	.97
Automatic Sprinklers in all areas including attics, bathrooms, closets, attached structures	.80	.90
Automatic Sprinklers in all areas except attic, bathroom, closet and attached structure areas that are protected by a fire detector	.90	.95
Fire Extinguishers	.95	.95
* Refer to Company for eligibility, types of systems and devices, installation, and available credits.		

Table 408.A. Protective Devices Factors

- A premium credit for Fire Extinguishers shall be allowed if the dwelling has, installed on each floor and basement in a readily accessible place, at least:
 - One fire extinguisher classified and labeled as 2-A (classified as A-1 prior to July 1, 1956), or
 - Two fire extinguishers classified and labeled as 1-A (classified as A-2 prior to July, 1956).

The extinguishers must be maintained in good, working order.
- Use Premises Alarm Or Fire Protection System Endorsement **DP 32 50**.

**RULE 409.
ACTUAL CASH VALUE LOSS SETTLEMENT
WINDSTORM OR HAIL LOSSES TO ROOF SURFACING
– DP 00 02, DP 00 03 AND DP 00 01 WITH DP 00 08**

Rule 409. does not apply.

**RULE 410.
BUILDING CODE EFFECTIVENESS GRADING**

Rule 410. does not apply.

**PART V
ADDITIONAL COVERAGES AND INCREASED LIMITS
RULES**

**RULE 502.
COVERAGE D – FAIR RENTAL VALUE COVERAGE E –
ADDITIONAL LIVING EXPENSE**

Paragraph **A.** is replaced by the following:

A. Introduction

Coverage is automatically provided in the forms on a limited basis as follows:

1. Form DP 00 01

a. Coverage D

Up to 10% of the Coverage **A** limit is available. Use of this option reduces the Coverage **A** limit for the same loss. No entry is needed in the policy Declarations for this coverage to apply.

b. Coverage E

Not automatically included in form. It may be added as noted in Paragraph **B.**

2. Form DP 00 02 Or DP 00 03

Coverage **D** and **E** combined – Up to 10% of the Coverage **A** limit is available for Coverage **D** and Coverage **E** combined as additional insurance. No entry is needed in the policy Declarations for this coverage to apply.

Table 502.B.1.c. is replaced by the following:

DP 00 01 Example

Factors
\$5,200 = Rental Value Coverage in Form (10% of Coverage A limit of \$52,000)
+2,000 = Additional Insurance (Shown under Coverage D in policy Declarations)
\$7,200 = Total Rental Value Amount Insured
Scenario A
If dwelling is rented for entire year, then fraction = 1/12. \$7,200 X 1/12 = Up to \$600 available each month.
Scenario B
If dwelling is rented 8 months per year, then fraction = 1/8. \$7,200 X 1/8 = Up to \$900 available each month.

Table 502.B.1.c. DP 00 01 Example

**RULE 503.
ORDINANCE OR LAW COVERAGE FOR COVERAGE B –
SPECIFIC STRUCTURES, BUILDING ITEMS AND
IMPROVEMENTS, ALTERATIONS AND ADDITIONS**

Paragraph **C.2.** is replaced by the following:

C. Premium Determination

2. Refer to the state company rates/ISO loss costs Rule 500. Miscellaneous Rates.

**RULE 507.
FIRE DEPARTMENT SERVICE CHARGE**

Rule 507. is replaced by the following:

The limit of \$500 provided under the policy may be increased. Refer to the state rates.

**RULE 509.
EARTHQUAKE COVERAGE**

Rule 509. is replaced by the following:

A. Coverage Description

When added to the Fire policy, this peril shall apply to the same coverages and for the same limits that apply to the peril of Fire.

Use Earthquake Coverage Endorsement **DP 04 69.**

B. Loss Assessment Coverage

When the policy is extended to cover loss assessment resulting from loss by this peril, the limit of liability shall be based on the insured's proportionate interest in total value of all collectively owned buildings and structures of the corporation or association of property owners. Refer to company for rates.

Use Loss Assessment Coverage For Earthquake Endorsement **DP 04 68.**

C. Deductible

The base deductible is 5% of the limit of liability for Coverage **A, B** or **C**, whichever is greatest and is subject to a \$500 minimum.

This deductible may be increased for a premium credit. In the event of an Earthquake loss to covered property, the dollar amount is deducted from the total of the loss for Coverages **A, B** and **C.**

D. Premium For Base Deductible

Develop the premium as follows:

1. From the state rates:
 - a. Determine the Earthquake Zone;
 - b. Determine if Rate Table **A**, and/or **B** applies;
 - c. Select the rate according to construction from the Rate Table; and

**RULE 509.
EARTHQUAKE COVERAGE (Cont'd)**

2. Multiply the rate determined in Paragraph **D.1.c.** by the amounts of insurance for:
 - a. Coverages **A, B, C, D** and **E**;
 - b. Improvements, Alterations and Additions – Increased Limits;
 - c. Other Building Coverage options (i.e. Bldg. Items Coverage);
 - d. Other Personal Property Coverage (i.e. Merchandise in Storage);
 - e. Ordinance or Law total amount of insurance (includes basic, and if applicable, increased amounts).

E. Premium For Higher Deductibles

Multiply the Base Premium determined in Paragraph **D.** by a factor from the following table:

Deductible Percentage	Frame And Superior	Masonry
10%	.89	.95
15%	.78	.89
20%	.67	.84
25%	.56	.79

Table 509.E. Higher Deductibles Factors

**RULE 510.
THEFT COVERAGE**

This rule is deleted.

Refer to the Theft Insurance program filed by or on behalf of the company insuring the risk.

**RULE 512.
WINDSTORM OR HAIL COVERAGE – MISCELLANEOUS PROPERTIES**

The title of Rule **512.** Windstorm Or Hail Coverage - Awnings, Signs And Outdoor Radio And Television Equipment is replaced by the preceding title.

Rule **512.** is replaced by the following:

A. Property Not Covered

The peril of Windstorm or Hail does **not** cover damage to the following properties whether attached to or separated from a dwelling or other structure on the Described Location:

1. Signs or cloth awnings, including their supports;
2. Radio or television antennas or aerials, including their lead-in wiring, masts or towers;
3. Swimming pools;

4. Screens, including their supports, around a swimming pool, patio or other areas;
5. Fences, property line and similar walls, including seawalls;
6. Bathhouses, cabanas, greenhouses, hothouses, pergolas, slathouses, trellises;
7. Outdoor equipment used to service the Described Location; or
8. Structures located over water, whether or not permanently attached to the ground, including the property in or on the structure.

B. Endorsement

Damage to these properties may be covered for an additional premium. Separately describe each property item and corresponding limit of liability on Windstorm Or Hail – Miscellaneous Properties Endorsement **DP 32 19** or the Declarations.

C. Greenhouses And/Or Hothouses

1. When the structure, greenhouse (hothouse) glass and any flowers and plants contained in the structure are insured as a single item:
 - a. Include, in the limit of liability for each structure, the value of all glass, as computed in Paragraph **1.c.**, and the value of any flowers and plants in that structure;
 - b. Add the "Glass Condition of Insurance", in Paragraph **3.a.** of this rule, to Windstorm Or Hail – Miscellaneous Properties Endorsement **DP 32 19** or the Declarations; and
 - c. Specify, in the "Glass Condition of Insurance", the dollar amount of all glass being insured. This amount is determined by multiplying the agreed value per square foot of glass by the number of square feet of all insured glass.
2. When the structure, greenhouse (hothouse) glass or the flowers and plants contained in the structure are **separately** insured, specify the limit of liability **separately** for each structure, all glass and the flowers and plants in that structure.

When glass is separately insured:

- a. Add the "Glass Condition of Insurance", in Paragraph **3.b.** of this rule, to Windstorm Or Hail – Miscellaneous Properties Endorsement **DP 32 19** or the Declarations; and
- b. Specify, in the "Glass Condition of Insurance", the agreed value per square foot of glass and the number of square feet of all glass. The limit of liability of all glass being insured is determined by multiplying these two amounts.

RULE 512.
WINDSTORM OR HAIL COVERAGE – MISCELLANEOUS
PROPERTIES (Cont'd)

3. Glass Condition of Insurance

- a.** Use this Condition when glass is **not** separately insured:

"Windstorm or Hail Coverage for Greenhouse (Hothouse) Glass

It is understood by you and us that, in the event greenhouse (hothouse) glass is broken or destroyed by the peril of Windstorm or Hail, we will pay no more than the least of the following amounts:

- A.** \$____. This dollar amount for greenhouse (hothouse) glass is determined by multiplying:

1. The agreed value per square foot of greenhouse (hothouse) glass, \$____, by
2. The number of square feet of all insured greenhouse (hothouse) glass, ____;

- B.** An amount computed by:

1. Dividing the number of square feet of all broken or destroyed greenhouse (hothouse) glass by the total number of square feet of insured greenhouse (hothouse) glass, and
2. Multiplying the amount computed in **B.1.** above by the dollar amount for greenhouse (hothouse) glass stated in **A.** above; or

- C.** The actual cost to repair or replace the broken or destroyed greenhouse (hothouse) glass.

Also, if greenhouse (hothouse) glass is covered by other insurance, we will pay no more than the proportion of a loss that the dollar amount for such greenhouse (hothouse) glass stated in **A.** above bears to the total amount of insurance covering that glass".

- b.** Use this Condition when glass is separately insured:

"Windstorm or Hail Coverage for Greenhouse (Hothouse) Glass

It is understood by you and us that, in the event greenhouse (hothouse) glass is broken or destroyed by the peril of Windstorm or Hail, we will pay no more than the least of the following amounts:

- A.** The limit of liability declared above for greenhouse (hothouse) glass, which is determined by multiplying:

1. The agreed value per square foot of greenhouse (hothouse) glass, \$____, by
2. The number of square feet of all insured greenhouse (hothouse) glass, ____;

- B.** An amount computed by:

1. Dividing the number of square feet of all broken or destroyed greenhouse (hothouse) glass by the total number of square feet of insured greenhouse (hothouse) glass, and
2. Multiplying the amount computed in **B.1.** above by the limit of liability for greenhouse (hothouse) glass declared above; or

- C.** The actual cost to repair or replace the broken or destroyed greenhouse (hothouse) glass.

Also, if greenhouse (hothouse) glass is covered by other insurance, we will pay no more than the proportion of loss that our limit of liability for such greenhouse (hothouse) glass bears to the total amount of insurance covering that glass".

D. Premium

Refer to the state rates.

**RULE 515.
MOTORIZED GOLF CART – PHYSICAL LOSS
COVERAGE**

Rule **515.** does not apply.

**RULE 517.
LIMITED FUNGI, WET OR DRY ROT, OR BACTERIA
COVERAGE**

Rule **517.** does not apply.

ADDITIONAL RULE(S)

**RULE A3.
WINDSTORM OR HAIL EXCLUSION – TERRITORIES
110, 120, 130, 140, 150 AND 160 ONLY**

Territory	Const.*	Building Credit	Contents Credit
110	M	\$ 145	\$ 17
	F	153	18
	MH	191	23
120	M	172	24
	F	181	25
	MH	226	31
130	M	107	19
	F	113	20
	MH	141	25
140	M	121	16
	F	127	17
	MH	159	21
150	M	102	8
	F	107	8
	MH	134	10
160	M	104	10
	F	109	11
	MH	136	14

* M = Masonry, F = Frame. MH = Mobile Homes.
Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table A3.B.2.(R) Windstorm Or Hail Exclusion – Territories 110, 120, 130, 140, 150 And 160 Only

**RULE A5.
INSTALLMENT PAYMENT PLAN**

C. The additional charge per installment is \$3.00.

**RULE A6.
UNPROTECTED DWELLINGS – PROTECTION CLASS 9,
9E, 9S OR 10**

Rates Per \$1,000	
Additional rate of insurance	\$ 1.50

Table A6.C.1.a.(R) Unprotected Dwellings – Protection Class 9, 9E, 9S Or 10

**RULE A9.
WINDSTORM MITIGATION PROGRAM**

Mitigation Feature	Const.	Territory 110	Territory 120	Territory 130	Territory 140	Territory 150	Territory 160
Total Hip Roof	M	\$ 8	\$ 9	\$ 6	\$ 6	\$ 5	\$ 4
	F	8	9	6	6	5	4
Opening Protection	M	8	9	6	6	5	4
	F	8	9	6	6	5	4
Total Hip Roof and Opening Protection	M	16	17	10	10	10	10
	F	17	18	11	11	11	10
IBHS Designation prior to March 31, 2019:							
<i>Hurricane Fortified for Safer Living®</i>	M	26	31	11	21	13	17
	F	27	33	12	22	14	18
<i>Hurricane Fortified for Existing Homes® Bronze Option 1</i>	M	6	7	3	3	4	3
	F	6	7	3	3	4	3
<i>Hurricane Fortified for Existing Homes® Bronze Option 2</i>	M	10	10	6	8	5	6
	F	10	11	6	8	5	6
<i>Hurricane Fortified for Existing Homes® Silver Option 1</i>	M	16	20	8	13	6	10
	F	17	21	8	14	6	11
<i>Hurricane Fortified for Existing Homes® Silver Option 2</i>	M	20	23	9	15	9	12
	F	21	24	9	16	9	13
<i>Hurricane Fortified for Existing Homes® Gold Option 1</i>	M	20	23	10	15	10	12
	F	21	24	11	16	11	13
<i>Hurricane Fortified for Existing Homes® Gold Option 2</i>	M	22	27	11	20	11	16
	F	23	28	12	21	12	17
IBHS Designation on or after March 31, 2019:							
<i>FORTIFIED for Safer Living®</i>	M	26	31	11	21	13	17
	F	27	33	12	22	14	18
FORTIFIED Roof – Hurricane – Existing Roof	M	6	7	3	3	4	3
	F	6	7	3	3	4	3
FORTIFIED Roof – Hurricane – New Roof	M	10	10	6	8	5	6
	F	10	11	6	8	5	6
FORTIFIED Home – Hurricane – Silver – Existing Roof	M	16	20	8	13	6	10
	F	17	21	8	14	6	11
FORTIFIED Home – Hurricane – Silver – New Roof	M	20	23	9	15	9	12
	F	21	24	9	16	9	13
FORTIFIED Home – Hurricane – Gold – Existing Roof	M	20	23	10	15	10	12
	F	21	24	11	16	11	13
FORTIFIED Home – Hurricane – Gold – New Roof	M	22	27	11	20	11	16
	F	23	28	12	21	12	17

Table A9.E.#1(R) – Windstorm Loss Mitigation Credit – Coverage A – Dwelling

**RULE A9.
WINDSTORM MITIGATION PROGRAM (Cont'd)**

Mitigation Feature	Const.	Territory 110	Territory 120	Territory 130	Territory 140	Territory 150	Territory 160
Total Hip Roof	M	\$ 1	\$ 2	\$ 2	\$ 1	\$ 1	\$ 1
	F	1	2	2	1	1	1
Opening Protection	M	1	2	2	1	1	1
	F	1	2	2	1	1	1
Total Hip Roof and Opening Protection	M	1	3	2	1	1	1
	F	1	3	2	1	1	1
IBHS Designation prior to March 31, 2019:							
<i>Hurricane Fortified for Safer Living®</i>	M	4	6	3	4	2	3
	F	4	6	3	4	2	3
<i>Hurricane Fortified for Existing Homes® Bronze Option 1</i>	M	1	2	2	1	1	1
	F	1	2	2	1	1	1
<i>Hurricane Fortified for Existing Homes® Bronze Option 2</i>	M	1	3	2	1	1	1
	F	1	3	2	1	1	1
<i>Hurricane Fortified for Existing Homes® Silver Option 1</i>	M	2	3	2	3	1	2
	F	2	3	2	3	1	2
<i>Hurricane Fortified for Existing Homes® Silver Option 2</i>	M	2	5	2	3	1	2
	F	2	5	2	3	1	2
<i>Hurricane Fortified for Existing Homes® Gold Option 1</i>	M	3	5	2	3	1	2
	F	3	5	2	3	1	2
<i>Hurricane Fortified for Existing Homes® Gold Option 2</i>	M	3	5	3	3	2	2
	F	3	5	3	3	2	2
IBHS Designation on or after March 31, 2019:							
<i>FORTIFIED for Safer Living®</i>	M	4	6	3	4	2	3
	F	4	6	3	4	2	3
FORTIFIED Roof – Hurricane – Existing Roof	M	1	2	2	1	1	1
	F	1	2	2	1	1	1
FORTIFIED Roof – Hurricane – New Roof	M	1	3	2	1	1	1
	F	1	3	2	1	1	1
FORTIFIED Home – Hurricane – Silver – Existing Roof	M	2	3	2	3	1	2
	F	2	3	2	3	1	2
FORTIFIED Home – Hurricane – Silver – New Roof	M	2	5	2	3	1	2
	F	2	5	2	3	1	2
FORTIFIED Home – Hurricane – Gold – Existing Roof	M	3	5	2	3	1	2
	F	3	5	2	3	1	2
FORTIFIED Home – Hurricane – Gold – New Roof	M	3	5	3	3	2	2
	F	3	5	3	3	2	2

**Table A9.E.#2(R) – Windstorm Loss Mitigation Credit –
Coverage C – Personal Property**

**RULE 206.
MINIMUM PREMIUM**

D. Minimum Premium – \$50.

**RULE 208.
WAIVER OF PREMIUM**

B. Amount that may be waived – \$3 or less.

**RULE 301.
BASE PREMIUM COMPUTATION**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 110, 120, 130				
Fire – Coverage A – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 110	Territory 120	Territory 130
1	M	\$ 11	\$ 11	\$ 21
	F	16	16	29
2	M	12	12	21
	F	16	16	29
3	M	12	12	22
	F	16	16	30
4	M	12	12	22
	F	17	17	30
5	M	12	12	23
	F	17	17	32
6	M	13	13	24
	F	18	18	34
7	M	14	14	26
	F	19	19	36
8	M	16	16	30
	F	22	22	41
8B, 9, 9E, 9S	M	18	18	34
	F	24	24	45
10	M	22	22	41
	F	30	30	55

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#1(R) Fire – Coverage A – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
\$ 1*	.38	\$ 27	1.48
2	.42	28	1.52
3	.47	29	1.56
4	.51	30	1.60
5	.56	31	1.64
6	.60	32	1.68
7	.65	33	1.72
8	.69	34	1.76
9	.74	35	1.80
10	.78	36	1.84
11	.82	37	1.88
12	.87	38	1.92
13	.92	39	1.96
14	.96	40	2.00
15	1.00	41	2.04
16	1.04	42	2.08
17	1.08	43	2.12
18	1.12	44	2.16
19	1.16	45	2.20
20	1.20	46	2.24
21	1.24	47	2.28
22	1.28	48	2.32
23	1.32	49	2.36
24	1.36	50	2.40
25	1.40	Each Additional \$1,000	.04
26	1.44		

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#2(R) Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 140, 150, 160				
Fire – Coverage A – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 140	Territory 150	Territory 160
1	M	\$ 19	\$ 20	\$ 22
	F	26	27	30
2	M	19	20	22
	F	26	27	31
3	M	20	20	23
	F	27	28	32
4	M	20	21	23
	F	27	28	32
5	M	21	21	23
	F	29	29	33
6	M	22	23	25
	F	31	31	35
7	M	23	24	27
	F	33	33	37
8	M	27	28	32
	F	37	38	43
8B, 9, 9E, 9S	M	30	31	35
	F	41	42	47
10	M	37	37	42
	F	50	52	57

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#3(R) Fire – Coverage A – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
\$ 1*	.38	\$ 27	1.48
2	.42	28	1.52
3	.47	29	1.56
4	.51	30	1.60
5	.56	31	1.64
6	.60	32	1.68
7	.65	33	1.72
8	.69	34	1.76
9	.74	35	1.80
10	.78	36	1.84
11	.82	37	1.88
12	.87	38	1.92
13	.92	39	1.96
14	.96	40	2.00
15	1.00	41	2.04
16	1.04	42	2.08
17	1.08	43	2.12
18	1.12	44	2.16
19	1.16	45	2.20
20	1.20	46	2.24
21	1.24	47	2.28
22	1.28	48	2.32
23	1.32	49	2.36
24	1.36	50	2.40
25	1.40	Each Additional \$1,000	.04
26	1.44		

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#4(R) Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 170, 180, 190				
Fire – Coverage A – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 170	Territory 180	Territory 190
1	M	\$ 30	\$ 30	\$ 31
	F	40	41	42
2	M	30	31	32
	F	41	42	43
3	M	31	32	32
	F	42	43	44
4	M	32	32	33
	F	43	44	45
5	M	32	33	34
	F	44	45	46
6	M	35	36	36
	F	47	48	49
7	M	37	37	38
	F	50	51	52
8	M	42	43	44
	F	57	6059	60
8B, 9, 9E, 9S	M	46	47	48
	F	63	6564	66
10	M	57	5958	59
	F	77	8079	81

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#5(R) Fire – Coverage A – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
\$ 1*	.38	\$ 27	1.48
2	.42	28	1.52
3	.47	29	1.56
4	.51	30	1.60
5	.56	31	1.64
6	.60	32	1.68
7	.65	33	1.72
8	.69	34	1.76
9	.74	35	1.80
10	.78	36	1.84
11	.82	37	1.88
12	.87	38	1.92
13	.92	39	1.96
14	.96	40	2.00
15	1.00	41	2.04
16	1.04	42	2.08
17	1.08	43	2.12
18	1.12	44	2.16
19	1.16	45	2.20
20	1.20	46	2.24
21	1.24	47	2.28
22	1.28	48	2.32
23	1.32	49	2.36
24	1.36	50	2.40
25	1.40	Each Additional \$1,000	.04
26	1.44		

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#6(R) Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 200, 210, 220				
Fire – Coverage A – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 200	Territory 210	Territory 220
1	M	\$ 42	\$ 28	\$ 28
	F	57	38	38
2	M	43	28	28
	F	58	39	39
3	M	44	29	29
	F	60	39	39
4	M	45	29	29
	F	61	40	40
5	M	46	30	30
	F	62	41	41
6	M	49	32	32
	F	67	44	44
7	M	52	34	34
	F	70	47	48
8	M	59	39	39
	F	81	53	54
8B, 9, 9E, 9S	M	65	43	43
	F	89	59	60
10	M	80	53	54
	F	109	72	73

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#7(R) Fire – Coverage A – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
\$ 1*	.38	\$ 27	1.48
2	.42	28	1.52
3	.47	29	1.56
4	.51	30	1.60
5	.56	31	1.64
6	.60	32	1.68
7	.65	33	1.72
8	.69	34	1.76
9	.74	35	1.80
10	.78	36	1.84
11	.82	37	1.88
12	.87	38	1.92
13	.92	39	1.96
14	.96	40	2.00
15	1.00	41	2.04
16	1.04	42	2.08
17	1.08	43	2.12
18	1.12	44	2.16
19	1.16	45	2.20
20	1.20	46	2.24
21	1.24	47	2.28
22	1.28	48	2.32
23	1.32	49	2.36
24	1.36	50	2.40
25	1.40	Each Additional \$1,000	.04
26	1.44		

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#8(R) Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 230, 240, 250				
Fire – Coverage A – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 230	Territory 240	Territory 250
1	M	\$ 43	\$ 28	\$ 27
	F	59	39	36
2	M	44	29	27
	F	60	39	37
3	M	45	30	28
	F	61	40	37
4	M	46	30	28
	F	63	41	38
5	M	47	31	29
	F	64	42	39
6	M	51	33	31
	F	69	45	42
7	M	53	35	33
	F	73	48	44
8	M	61	40	37
	F	84	55	50
8B, 9, 9E, 9S	M	67	44	41
	F	93	60	56
10	M	82	54	50
	F	113	75	69

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#9(R) Fire – Coverage A – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
\$ 1*	.38	\$ 27	1.48
2	.42	28	1.52
3	.47	29	1.56
4	.51	30	1.60
5	.56	31	1.64
6	.60	32	1.68
7	.65	33	1.72
8	.69	34	1.76
9	.74	35	1.80
10	.78	36	1.84
11	.82	37	1.88
12	.87	38	1.92
13	.92	39	1.96
14	.96	40	2.00
15	1.00	41	2.04
16	1.04	42	2.08
17	1.08	43	2.12
18	1.12	44	2.16
19	1.16	45	2.20
20	1.20	46	2.24
21	1.24	47	2.28
22	1.28	48	2.32
23	1.32	49	2.36
24	1.36	50	2.40
25	1.40	Each Additional \$1,000	.04
26	1.44		

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#10(R) Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 260, 270, 280				
Fire – Coverage A – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 260	Territory 270	Territory 280
1	M	\$ 32	\$ 20	\$ 19
	F	43	29	26
2	M	32	21	19
	F	44	29	26
3	M	33	21	20
	F	45	30	27
4	M	34	22	20
	F	46	30	27
5	M	34	22	21
	F	47	31	28
6	M	37	25	22
	F	51	33	30
7	M	39	26	23
	F	53	35	32
8	M	45	30	27
	F	61	40	36
8B, 9, 9E, 9S	M	49	33	29
	F	67	44	40
10	M	60	40	36
	F	82	54	50

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#11(R) Fire – Coverage A – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
\$ 1*	.38	\$ 27	1.48
2	.42	28	1.52
3	.47	29	1.56
4	.51	30	1.60
5	.56	31	1.64
6	.60	32	1.68
7	.65	33	1.72
8	.69	34	1.76
9	.74	35	1.80
10	.78	36	1.84
11	.82	37	1.88
12	.87	38	1.92
13	.92	39	1.96
14	.96	40	2.00
15	1.00	41	2.04
16	1.04	42	2.08
17	1.08	43	2.12
18	1.12	44	2.16
19	1.16	45	2.20
20	1.20	46	2.24
21	1.24	47	2.28
22	1.28	48	2.32
23	1.32	49	2.36
24	1.36	50	2.40
25	1.40	Each Additional \$1,000	.04
26	1.44		

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#12(R) Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 290, 300, 310				
Fire – Coverage A – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 290	Territory 300	Territory 310
1	M	\$ 25	\$ 32	\$ 24
	F	33	43	32
2	M	25	32	24
	F	34	44	33
3	M	26	33	25
	F	35	45	34
4	M	26	34	25
	F	35	46	34
5	M	27	34	26
	F	36	47	35
6	M	29	37	28
	F	39	51	38
7	M	30	39	29
	F	41	53	40
8	M	34	45	33
	F	47	61	46
8B, 9, 9E, 9S	M	38	49	37
	F	51	67	50
10	M	46	60	45
	F	62	82	61

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#13(R) Fire – Coverage A – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
\$ 1*	.38	\$ 27	1.48
2	.42	28	1.52
3	.47	29	1.56
4	.51	30	1.60
5	.56	31	1.64
6	.60	32	1.68
7	.65	33	1.72
8	.69	34	1.76
9	.74	35	1.80
10	.78	36	1.84
11	.82	37	1.88
12	.87	38	1.92
13	.92	39	1.96
14	.96	40	2.00
15	1.00	41	2.04
16	1.04	42	2.08
17	1.08	43	2.12
18	1.12	44	2.16
19	1.16	45	2.20
20	1.20	46	2.24
21	1.24	47	2.28
22	1.28	48	2.32
23	1.32	49	2.36
24	1.36	50	2.40
25	1.40	Each Additional \$1,000	.04
26	1.44		

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#14(R) Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 320, 330, 340				
Fire – Coverage A – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 320	Territory 330	Territory 340
1	M	\$ 23	\$ 24	\$ 21
	F	31	33	29
2	M	23	25	21
	F	32	34	29
3	M	24	25	22
	F	33	35	30
4	M	24	26	22
	F	33	35	30
5	M	25	26	23
	F	34	36	31
6	M	27	28	24
	F	37	39	33
7	M	28	30	26
	F	39	41	35
8	M	32	34	30
	F	44	47	40
8B, 9, 9E, 9S	M	36	38	33
	F	49	52	44
10	M	44	46	40
	F	60	63	55

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#15(R) Fire – Coverage A – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
\$ 1*	.38	\$ 27	1.48
2	.42	28	1.52
3	.47	29	1.56
4	.51	30	1.60
5	.56	31	1.64
6	.60	32	1.68
7	.65	33	1.72
8	.69	34	1.76
9	.74	35	1.80
10	.78	36	1.84
11	.82	37	1.88
12	.87	38	1.92
13	.92	39	1.96
14	.96	40	2.00
15	1.00	41	2.04
16	1.04	42	2.08
17	1.08	43	2.12
18	1.12	44	2.16
19	1.16	45	2.20
20	1.20	46	2.24
21	1.24	47	2.28
22	1.28	48	2.32
23	1.32	49	2.36
24	1.36	50	2.40
25	1.40	Each Additional \$1,000	.04
26	1.44		

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#16(R) Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 350, 360, 370				
Fire – Coverage A – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 350	Territory 360	Territory 370
1	M	\$ 24	\$ 20	\$ 22
	F	32	27	29
2	M	24	20	22
	F	33	27	30
3	M	25	20	23
	F	34	28	31
4	M	25	21	23
	F	34	28	31
5	M	26	21	23
	F	35	29	32
6	M	28	23	25
	F	38	31	34
7	M	29	24	27
	F	40	33	36
8	M	33	28	31
	F	46	38	42
8B, 9, 9E, 9S	M	37	31	34
	F	50	42	46
10	M	45	37	41
	F	61	51	56

Table 301.A.#17(R) Fire – Coverage A – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
\$ 1*	.38	\$ 27	1.48
2	.42	28	1.52
3	.47	29	1.56
4	.51	30	1.60
5	.56	31	1.64
6	.60	32	1.68
7	.65	33	1.72
8	.69	34	1.76
9	.74	35	1.80
10	.78	36	1.84
11	.82	37	1.88
12	.87	38	1.92
13	.92	39	1.96
14	.96	40	2.00
15	1.00	41	2.04
16	1.04	42	2.08
17	1.08	43	2.12
18	1.12	44	2.16
19	1.16	45	2.20
20	1.20	46	2.24
21	1.24	47	2.28
22	1.28	48	2.32
23	1.32	49	2.36
24	1.36	50	2.40
25	1.40	Each Addi-	
26	1.44	tional \$1,000	.04

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#18(R) Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 380, 390			
Fire – Coverage A – All Forms – Non-seasonal And Seasonal			
Protection Class	Const.*	1 – 5 Families	
		Territory 380	Territory 390
1	M	\$ 20	\$ 20
	F	27	28
2	M	20	21
	F	27	28
3	M	20	21
	F	28	29
4	M	21	22
	F	28	29
5	M	21	22
	F	29	30
6	M	23	24
	F	31	32
7	M	24	25
	F	33	34
8	M	28	29
	F	38	39
8B, 9, 9E, 9S	M	31	32
	F	43	43
10	M	37	39
	F	52	53

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#19(R) Fire – Coverage A – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
\$ 1*	.38	\$ 27	1.48
2	.42	28	1.52
3	.47	29	1.56
4	.51	30	1.60
5	.56	31	1.64
6	.60	32	1.68
7	.65	33	1.72
8	.69	34	1.76
9	.74	35	1.80
10	.78	36	1.84
11	.82	37	1.88
12	.87	38	1.92
13	.92	39	1.96
14	.96	40	2.00
15	1.00	41	2.04
16	1.04	42	2.08
17	1.08	43	2.12
18	1.12	44	2.16
19	1.16	45	2.20
20	1.20	46	2.24
21	1.24	47	2.28
22	1.28	48	2.32
23	1.32	49	2.36
24	1.36	50	2.40
25	1.40	Each Additional \$1,000	.04
26	1.44		

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#20(R) Fire – Coverage A – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 110, 120, 130				
Fire – Coverage C – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 110	Territory 120	Territory 130
1	M	\$ 3	\$ 3	\$ 6
	F	4	4	8
2	M	3	3	6
	F	4	4	8
3	M	3	3	6
	F	4	4	9
4	M	3	3	6
	F	4	4	9
5	M	3	3	7
	F	4	4	9
6	M	3	3	7
	F	4	4	10
7	M	3	3	7
	F	5	5	10
8	M	4	4	9
	F	5	5	12
8B, 9, 9E, 9S	M	4	4	9
	F	6	6	13
10	M	5	5	12
	F	7	7	16

Table 301.A.#21(R) Fire – Coverage C – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage C	Limit Of Liability (000's)	Coverage C
\$ 1*	.35	\$ 27	3.73
2	.48	28	3.86
3	.61	29	3.99
4	.74	30	4.12
5	.87	31	4.25
6	1.00	32	4.38
7	1.13	33	4.51
8	1.26	34	4.64
9	1.39	35	4.77
10	1.52	36	4.90
11	1.65	37	5.03
12	1.78	38	5.16
13	1.91	39	5.29
14	2.04	40	5.42
15	2.17	41	5.55
16	2.30	42	5.68
17	2.43	43	5.81
18	2.56	44	5.94
19	2.69	45	6.07
20	2.82	46	6.20
21	2.95	47	6.33
22	3.08	48	6.46
23	3.21	49	6.59
24	3.34	50	6.72
25	3.47	Each Addi-	
26	3.60	tional \$1,000	.13

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#22(R) Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 140, 150, 160				
Fire – Coverage C – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 140	Territory 150	Territory 160
1	M	\$ 6	\$ 6	\$ 7
	F	8	8	10
2	M	6	6	8
	F	8	8	10
3	M	6	6	8
	F	9	9	11
4	M	6	6	8
	F	9	9	11
5	M	7	7	8
	F	9	9	11
6	M	7	7	9
	F	10	10	12
7	M	7	7	9
	F	10	10	12
8	M	9	9	10
	F	12	12	14
8B, 9, 9E, 9S	M	9	9	12
	F	13	13	16
10	M	12	12	14
	F	16	16	19

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#23(R) Fire – Coverage C – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage C	Limit Of Liability (000's)	Coverage C
\$ 1*	.35	\$ 27	3.73
2	.48	28	3.86
3	.61	29	3.99
4	.74	30	4.12
5	.87	31	4.25
6	1.00	32	4.38
7	1.13	33	4.51
8	1.26	34	4.64
9	1.39	35	4.77
10	1.52	36	4.90
11	1.65	37	5.03
12	1.78	38	5.16
13	1.91	39	5.29
14	2.04	40	5.42
15	2.17	41	5.55
16	2.30	42	5.68
17	2.43	43	5.81
18	2.56	44	5.94
19	2.69	45	6.07
20	2.82	46	6.20
21	2.95	47	6.33
22	3.08	48	6.46
23	3.21	49	6.59
24	3.34	50	6.72
25	3.47	Each Addi-	
26	3.60	tional \$1,000	.13

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#24(R) Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 170, 180, 190				
Fire – Coverage C – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 170	Territory 180	Territory 190
1	M	\$ 9	\$ 9	\$ 9
	F	12	13	13
2	M	9	10	10
	F	12	13	13
3	M	9	10	10
	F	12	13	13
4	M	9	10	10
	F	13	14	14
5	M	10	10	10
	F	13	14	14
6	M	10	11	11
	F	14	15	15
7	M	11	12	12
	F	15	16	16
8	M	12	13	13
	F	17	18	18
8B, 9, 9E, 9S	M	14	15	15
	F	19	20	20
10	M	17	18	18
	F	23	25	25

Table 301.A.#25(R) Fire – Coverage C – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage C	Limit Of Liability (000's)	Coverage C
\$ 1*	.35	\$ 27	3.73
2	.48	28	3.86
3	.61	29	3.99
4	.74	30	4.12
5	.87	31	4.25
6	1.00	32	4.38
7	1.13	33	4.51
8	1.26	34	4.64
9	1.39	35	4.77
10	1.52	36	4.90
11	1.65	37	5.03
12	1.78	38	5.16
13	1.91	39	5.29
14	2.04	40	5.42
15	2.17	41	5.55
16	2.30	42	5.68
17	2.43	43	5.81
18	2.56	44	5.94
19	2.69	45	6.07
20	2.82	46	6.20
21	2.95	47	6.33
22	3.08	48	6.46
23	3.21	49	6.59
24	3.34	50	6.72
25	3.47	Each Addi-	
26	3.60	tional \$1,000	.13

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#26(R) Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 200, 210, 220				
Fire – Coverage C – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 200	Territory 210	Territory 220
1	M	\$ 11	\$ 9	\$ 8
	F	15	12	11
2	M	11	9	8
	F	15	12	11
3	M	11	9	8
	F	15	12	12
4	M	12	9	9
	F	16	13	12
5	M	12	10	9
	F	16	13	12
6	M	13	10	9
	F	17	14	13
7	M	13	11	10
	F	18	15	14
8	M	15	12	11
	F	21	17	16
8B, 9, 9E, 9S	M	17	14	13
	F	23	19	17
10	M	21	17	15
	F	28	23	21

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#27(R) Fire – Coverage C – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage C	Limit Of Liability (000's)	Coverage C
\$ 1*	.35	\$ 27	3.73
2	.48	28	3.86
3	.61	29	3.99
4	.74	30	4.12
5	.87	31	4.25
6	1.00	32	4.38
7	1.13	33	4.51
8	1.26	34	4.64
9	1.39	35	4.77
10	1.52	36	4.90
11	1.65	37	5.03
12	1.78	38	5.16
13	1.91	39	5.29
14	2.04	40	5.42
15	2.17	41	5.55
16	2.30	42	5.68
17	2.43	43	5.81
18	2.56	44	5.94
19	2.69	45	6.07
20	2.82	46	6.20
21	2.95	47	6.33
22	3.08	48	6.46
23	3.21	49	6.59
24	3.34	50	6.72
25	3.47	Each Addi-	
26	3.60	tional \$1,000	.13

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#28(R) Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 230, 240, 250				
Fire – Coverage C – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 230	Territory 240	Territory 250
1	M	\$ 11	\$ 9	\$ 8
	F	16	12	11
2	M	12	9	8
	F	16	12	11
3	M	12	9	8
	F	16	12	12
4	M	12	9	9
	F	17	13	12
5	M	12	10	9
	F	17	13	12
6	M	13	10	9
	F	18	14	13
7	M	14	11	10
	F	19	15	14
8	M	16	12	11
	F	22	17	16
8B, 9, 9E, 9S	M	18	14	13
	F	24	19	17
10	M	22	17	15
	F	30	23	21

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#29(R) Fire – Coverage C – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage C	Limit Of Liability (000's)	Coverage C
\$ 1*	.35	\$ 27	3.73
2	.48	28	3.86
3	.61	29	3.99
4	.74	30	4.12
5	.87	31	4.25
6	1.00	32	4.38
7	1.13	33	4.51
8	1.26	34	4.64
9	1.39	35	4.77
10	1.52	36	4.90
11	1.65	37	5.03
12	1.78	38	5.16
13	1.91	39	5.29
14	2.04	40	5.42
15	2.17	41	5.55
16	2.30	42	5.68
17	2.43	43	5.81
18	2.56	44	5.94
19	2.69	45	6.07
20	2.82	46	6.20
21	2.95	47	6.33
22	3.08	48	6.46
23	3.21	49	6.59
24	3.34	50	6.72
25	3.47	Each Additional \$1,000	
26	3.60		.13

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#30(R) Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 260, 270, 280				
Fire – Coverage C – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 260	Territory 270	Territory 280
1	M	\$ 9	\$ 7	\$ 6
	F	12	9	8
2	M	9	7	6
	F	12	9	8
3	M	9	7	6
	F	12	10	9
4	M	9	7	6
	F	13	10	9
5	M	10	7	7
	F	13	10	9
6	M	10	8	7
	F	14	11	10
7	M	11	8	7
	F	15	11	10
8	M	12	10	9
	F	17	13	12
8B, 9, 9E, 9S	M	14	11	9
	F	19	14	13
10	M	17	13	12
	F	23	18	16

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#31(R) Fire – Coverage C – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage C	Limit Of Liability (000's)	Coverage C
\$ 1*	.35	\$ 27	3.73
2	.48	28	3.86
3	.61	29	3.99
4	.74	30	4.12
5	.87	31	4.25
6	1.00	32	4.38
7	1.13	33	4.51
8	1.26	34	4.64
9	1.39	35	4.77
10	1.52	36	4.90
11	1.65	37	5.03
12	1.78	38	5.16
13	1.91	39	5.29
14	2.04	40	5.42
15	2.17	41	5.55
16	2.30	42	5.68
17	2.43	43	5.81
18	2.56	44	5.94
19	2.69	45	6.07
20	2.82	46	6.20
21	2.95	47	6.33
22	3.08	48	6.46
23	3.21	49	6.59
24	3.34	50	6.72
25	3.47	Each Additional \$1,000	
26	3.60		.13

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#32(R) Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 290, 300, 310				
Fire – Coverage C – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 290	Territory 300	Territory 310
1	M	\$ 7	\$ 10	\$ 7
	F	10	14	10
2	M	8	10	8
	F	10	14	10
3	M	8	11	8
	F	11	14	11
4	M	8	11	8
	F	11	15	11
5	M	8	11	8
	F	11	15	11
6	M	9	12	9
	F	12	16	12
7	M	9	12	9
	F	12	17	12
8	M	10	14	10
	F	14	20	14
8B, 9, 9E, 9S	M	12	16	12
	F	16	21	16
10	M	14	19	14
	F	19	26	19

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#33(R) Fire – Coverage C – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage C	Limit Of Liability (000's)	Coverage C
\$ 1*	.35	\$ 27	3.73
2	.48	28	3.86
3	.61	29	3.99
4	.74	30	4.12
5	.87	31	4.25
6	1.00	32	4.38
7	1.13	33	4.51
8	1.26	34	4.64
9	1.39	35	4.77
10	1.52	36	4.90
11	1.65	37	5.03
12	1.78	38	5.16
13	1.91	39	5.29
14	2.04	40	5.42
15	2.17	41	5.55
16	2.30	42	5.68
17	2.43	43	5.81
18	2.56	44	5.94
19	2.69	45	6.07
20	2.82	46	6.20
21	2.95	47	6.33
22	3.08	48	6.46
23	3.21	49	6.59
24	3.34	50	6.72
25	3.47	Each Addi-	
26	3.60	tional \$1,000	.13

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#34(R) Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 320, 330, 340				
Fire – Coverage C – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 320	Territory 330	Territory 340
1	M	\$ 7	\$ 8	\$ 6
	F	10	11	8
2	M	8	8	6
	F	10	11	8
3	M	8	8	6
	F	11	12	9
4	M	8	9	6
	F	11	12	9
5	M	8	9	7
	F	11	12	9
6	M	9	9	7
	F	12	13	10
7	M	9	10	7
	F	12	14	10
8	M	10	11	9
	F	14	16	12
8B, 9, 9E, 9S	M	12	13	9
	F	16	17	13
10	M	14	15	12
	F	19	21	16

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#35(R) Fire – Coverage C – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage C	Limit Of Liability (000's)	Coverage C
\$ 1*	.35	\$ 27	3.73
2	.48	28	3.86
3	.61	29	3.99
4	.74	30	4.12
5	.87	31	4.25
6	1.00	32	4.38
7	1.13	33	4.51
8	1.26	34	4.64
9	1.39	35	4.77
10	1.52	36	4.90
11	1.65	37	5.03
12	1.78	38	5.16
13	1.91	39	5.29
14	2.04	40	5.42
15	2.17	41	5.55
16	2.30	42	5.68
17	2.43	43	5.81
18	2.56	44	5.94
19	2.69	45	6.07
20	2.82	46	6.20
21	2.95	47	6.33
22	3.08	48	6.46
23	3.21	49	6.59
24	3.34	50	6.72
25	3.47	Each Additional \$1,000	
26	3.60		.13

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#36(R) Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 350, 360, 370				
Fire – Coverage C – All Forms – Non-seasonal And Seasonal				
Protection Class	Const.*	1 – 5 Families		
		Territory 350	Territory 360	Territory 370
1	M	\$ 7	\$ 6	\$ 7
	F	10	8	9
2	M	8	6	7
	F	10	8	9
3	M	8	6	7
	F	11	9	10
4	M	8	6	7
	F	11	9	10
5	M	8	7	7
	F	11	9	10
6	M	9	7	8
	F	12	10	11
7	M	9	7	8
	F	12	10	11
8	M	10	9	10
	F	14	12	13
8B, 9, 9E, 9S	M	12	9	11
	F	16	13	14
10	M	14	12	13
	F	19	16	18

Table 301.A.#37(R) Fire – Coverage C – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage C	Limit Of Liability (000's)	Coverage C
\$ 1*	.35	\$ 27	3.73
2	.48	28	3.86
3	.61	29	3.99
4	.74	30	4.12
5	.87	31	4.25
6	1.00	32	4.38
7	1.13	33	4.51
8	1.26	34	4.64
9	1.39	35	4.77
10	1.52	36	4.90
11	1.65	37	5.03
12	1.78	38	5.16
13	1.91	39	5.29
14	2.04	40	5.42
15	2.17	41	5.55
16	2.30	42	5.68
17	2.43	43	5.81
18	2.56	44	5.94
19	2.69	45	6.07
20	2.82	46	6.20
21	2.95	47	6.33
22	3.08	48	6.46
23	3.21	49	6.59
24	3.34	50	6.72
25	3.47	Each Addi-	
26	3.60	tional \$1,000	.13

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#38(R) Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

**RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)**

Owner-occupied And Non-owner-occupied Key Premiums – Territories 380, 390			
Fire – Coverage C – All Forms – Non-seasonal And Seasonal			
Protection Class	Const.*	1 – 5 Families	
		Territory 380	Territory 390
1	M	\$ 6	7
	F	8	9
2	M	6	7
	F	8	9
3	M	6	7
	F	9	10
4	M	6	7
	F	9	10
5	M	7	7
	F	9	10
6	M	7	8
	F	10	11
7	M	7	8
	F	10	11
8	M	9	10
	F	12	13
8B, 9, 9E, 9S	M	9	11
	F	13	14
10	M	12	13
	F	16	18

* M = Masonry, F = Frame. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame.

Table 301.A.#39(R) Fire – Coverage C – All Forms – Non-seasonal And Seasonal Owner-occupied And Non-owner-occupied Key Premiums

Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal			
Key Factors			
Limit Of Liability (000's)	Coverage C	Limit Of Liability (000's)	Coverage C
\$ 1*	.35	\$ 27	3.73
2	.48	28	3.86
3	.61	29	3.99
4	.74	30	4.12
5	.87	31	4.25
6	1.00	32	4.38
7	1.13	33	4.51
8	1.26	34	4.64
9	1.39	35	4.77
10	1.52	36	4.90
11	1.65	37	5.03
12	1.78	38	5.16
13	1.91	39	5.29
14	2.04	40	5.42
15	2.17	41	5.55
16	2.30	42	5.68
17	2.43	43	5.81
18	2.56	44	5.94
19	2.69	45	6.07
20	2.82	46	6.20
21	2.95	47	6.33
22	3.08	48	6.46
23	3.21	49	6.59
24	3.34	50	6.72
25	3.47	Each Addi-	
26	3.60	tional \$1,000	.13

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#40(R) Fire – Coverage C – All Forms Owner And Non-owner-occupied – Non-seasonal And Seasonal Key Factors

RULE 301.
BASE PREMIUM COMPUTATION (Cont'd)

Extended Coverage, Broad And Special Forms – Coverage A Key Premiums*				
Territory	Const.*	Forms		
		DP 00 01	DP 00 02	DP 00 03
110	M	181	192	200
	F	191	202	211
	MH	239	254	n/a
120	M	203	216	224
	F	214	227	236
	MH	268	285	n/a
130	M	146	155	161
	F	154	163	170
	MH	192	205	n/a
140	M	158	168	174
	F	167	177	183
	MH	208	222	n/a
150	M	133	141	147
	F	140	149	155
	MH	176	186	n/a
160	M	139	147	152
	F	145	154	160
	MH	182	194	n/a
170	M	65	88	98
	F	69	93	103
	MH	86	116	n/a
180	M	71	97	108
	F	75	102	112
	MH	94	127	n/a
190	M	73	99	111
	F	77	105	116
	MH	97	130	n/a
200	M	92	125	138
	F	97	130	146
	MH	121	164	n/a
210	M	60	80	90
	F	63	84	94
	MH	78	106	n/a
220	M	53	71	80
	F	56	76	84
	MH	70	95	n/a
230	M	84	113	127
	F	89	121	134
	MH	111	149	n/a
240	M	53	72	80
	F	57	77	85
	MH	71	95	n/a

Extended Coverage, Broad And Special Forms – Coverage A Key Premiums*				
Territory	Const.*	Forms		
		DP 00 01	DP 00 02	DP 00 03
250	M	56	75	84
	F	59	79	89
	MH	74	100	n/a
260	M	53	72	80
	F	55	75	83
	MH	70	94	n/a
270	M	39	53	60
	F	42	56	63
	MH	52	70	n/a
280	M	39	52	59
	F	41	56	62
	MH	51	69	n/a
290	M	49	66	74
	F	52	70	78
	MH	65	88	n/a
300	M	45	62	68
	F	47	65	73
	MH	61	82	n/a
310	M	32	43	49
	F	34	46	52
	MH	43	59	n/a
320	M	35	48	53
	F	38	51	56
	MH	48	64	n/a
330	M	39	52	58
	F	41	55	62
	MH	51	68	n/a
340	M	31	42	47
	F	32	43	49
	MH	40	54	n/a
350	M	32	43	49
	F	33	45	50
	MH	42	56	n/a
360	M	31	42	47
	F	32	43	49
	MH	40	54	n/a
370	M	32	43	49
	F	34	47	52
	MH	43	59	n/a
380	M	29	39	43
	F	30	40	46
	MH	38	51	n/a

**RULE 301.
PREMIUM COMPUTATION (Cont'd)**

Extended Coverage, Broad And Special Forms – Coverage A Key Premiums*				
Territory	Const.*	Forms		
		DP 00 01	DP 00 02	DP 00 03
390	M	29	39	43
	F	30	40	45
	MH	38	51	n/a

* **DP 00 01** Key Premiums are Non-seasonal and Seasonal. **DP 00 02** and **DP 00 03** Key Premiums are Non-seasonal only and include the charge for Extended Coverage and Vandalism and Malicious Mischief perils. M = Masonry, F = Frame, MH = Mobile Home. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame. **DP 00 02** Key Premiums for MH should be used in conjunction with Actual Cash Value Loss Settlement Endorsement **DP 04 76** Only; see Rule **305**.

Table 301.A.#41(R) Extended Coverage, Broad And Special Forms – Coverage A Key Premiums

To develop the Seasonal Base Premiums, multiply the following factors by the **DP 00 01** Extended Coverage Base Premiums:

Territory	DP 00 02	DP 00 03
110-160	1.10	1.20
170-390	1.50	1.55

Table 301.A.#42(R) Extended Coverage, Broad And Special Forms – Coverage A Seasonal Key Premiums Forms DP 00 02 And DP 00 03

Extended Coverage, Broad And Special Forms – Coverage A			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
\$ 1*	.24	\$ 27	1.64
2	.29	28	1.69
3	.34	29	1.74
4	.40	30	1.79
5	.45	31	1.84
6	.51	32	1.89
7	.56	33	1.94
8	.62	34	1.99
9	.67	35	2.04
10	.72	36	2.09
11	.78	37	2.14
12	.83	38	2.19
13	.89	39	2.24
14	.94	40	2.29

Extended Coverage, Broad And Special Forms – Coverage A			
Key Factors			
Limit Of Liability (000's)	Coverage A	Limit Of Liability (000's)	Coverage A
15	1.00	41	2.34
16	1.05	42	2.39
17	1.10	43	2.44
18	1.16	44	2.49
19	1.21	45	2.54
20	1.27	46	2.59
21	1.32	47	2.64
22	1.37	48	2.69
23	1.43	49	2.74
24	1.48	50	2.79
25	1.54	Each Additional \$1,000	.05
26	1.59		

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#43(R) Extended Coverage, Broad And Special Forms – Coverage A Key Factors

Extended Coverage, Broad And Special Forms – Coverage C Key Premiums*				
Territory	Const.*	Forms		
		DP 00 01	DP 00 02	DP 00 03
110	M	25	26	28
	F	26	28	29
	MH	34	36	n/a
120	M	30	33	34
	F	31	34	35
	MH	40	42	n/a
130	M	22	23	24
	F	23	24	25
	MH	29	30	n/a
140	M	22	23	24
	F	23	24	25
	MH	29	30	n/a
150	M	10	11	11
	F	11	12	12
	MH	14	15	n/a
160	M	14	15	15
	F	15	16	16
	MH	19	20	n/a
170	M	6	8	9
	F	6	8	9
	MH	7	9	n/a

**RULE 301.
PREMIUM COMPUTATION (Cont'd)**

Extended Coverage, Broad And Special Forms – Coverage C Key Premiums*				
Territory	Const.*	Forms		
		DP 00 01	DP 00 02	DP 00 03
180	M	7	9	10
	F	7	9	10
	MH	9	12	n/a
190	M	9	11	14
	F	9	11	14
	MH	11	15	n/a
200	M	12	18	19
	F	12	18	19
	MH	17	23	n/a
210	M	4	6	7
	F	4	6	7
	MH	6	8	n/a
220	M	3	4	6
	F	3	4	6
	MH	4	6	n/a
230	M	10	13	15
	F	10	13	15
	MH	12	17	n/a
240	M	3	4	6
	F	3	4	6
	MH	4	6	n/a
250	M	3	4	6
	F	3	4	6
	MH	4	6	n/a
260	M	2	3	3
	F	2	3	3
	MH	3	4	n/a
270	M	2	3	3
	F	2	3	3
	MH	3	4	n/a
280	M	2	3	3
	F	2	3	3
	MH	3	4	n/a
290	M	2	3	3
	F	2	3	3
	MH	3	3	n/a
300	M	4	6	7
	F	4	6	7
	MH	6	8	n/a

Extended Coverage, Broad And Special Forms – Coverage C Key Premiums*				
Territory	Const.*	Forms		
		DP 00 01	DP 00 02	DP 00 03
310	M	1	1	2
	F	1	1	2
	MH	1	1	n/a
320	M	1	1	2
	F	1	1	2
	MH	1	1	n/a
330	M	1	1	2
	F	1	1	2
	MH	1	1	n/a
340	M	1	1	2
	F	1	1	2
	MH	1	1	n/a
350	M	1	1	2
	F	1	1	2
	MH	1	1	n/a
360	M	2	3	3
	F	2	3	3
	MH	3	3	n/a
370	M	2	3	3
	F	2	3	3
	MH	3	3	n/a
380	M	1	1	2
	F	1	1	2
	MH	1	1	n/a
390	M	1	1	2
	F	1	1	2
	MH	1	1	n/a

* **DP 00 01** Key Premiums are Non-seasonal and Seasonal. **DP 00 02** and **DP 00 03** Key Premiums are Non-seasonal only and include the charge for Extended Coverage and Vandalism and Malicious Mischief perils. M = Masonry, F = Frame, MH = Mobile Home. Masonry Veneer is rated as masonry. Aluminum or plastic siding over frame is rated as frame. **DP 00 02** Key Premiums for MH should be used in conjunction with Actual Cash Value Loss Settlement Endorsement **DP 04 76** Only; see Rule **305**.

Table 301.A.#44(R) Extended Coverage, Broad And Special Forms – Coverage C Key Premiums

**RULE 301.
PREMIUM COMPUTATION (Cont'd)**

To develop the Seasonal Base Premiums, multiply the following factors by the **DP 00 01** Extended Coverage Base Premiums:

Territory	DP 00 02	DP 00 03
110-160	1.10	1.20
170-390	1.50	1.55

Table 301.A.#45(R) Extended Coverage, Broad And Special Forms – Coverage C Seasonal Key Premiums Forms DP 00 02 And DP 00 03

Extended Coverage, Broad And Special Forms – Coverage C			
Key Factors			
Limit Of Liability (000's)	Coverage C	Limit Of Liability (000's)	Coverage C
\$ 1*	.17	\$ 27	4.51
2	.33	28	4.68
3	.50	29	4.85
4	.67	30	5.02
5	.83	31	5.19
6	1.00	32	5.36
7	1.17	33	5.53
8	1.34	34	5.70
9	1.50	35	5.87
10	1.67	36	6.04
11	1.84	37	6.21
12	2.00	38	6.38
13	2.17	39	6.55
14	2.33	40	6.72
15	2.50	41	6.89
16	2.67	42	7.06
17	2.84	43	7.23
18	3.00	44	7.40
19	3.17	45	7.57
20	3.34	46	7.74
21	3.51	47	7.91
22	3.67	48	8.08
23	3.84	49	8.25
24	4.00	50	8.42
25	4.17	Each Addi-	
26	4.34	tional \$1,000	.17

* Use this limit of liability to develop premiums for policy amounts less than \$1,000.

Table 301.A.#46(R) Extended Coverage, Broad And Special Forms – Coverage C Key Factors

**RULE 302.
VANDALISM AND MALICIOUS MISCHIEF – (DP 00 01)**

Rates Per \$1,000	
Not Seasonal or Vacant	\$.17
Seasonal and Not Vacant	1.40
Vacant	9.30
In Course of Construction	.19

Table 302.(R) Vandalism And Malicious Mischief (DP 00 01)

**RULE 404.
MOBILE OR TRAILER HOMES – (DP 00 01 ONLY OR DP 00 02 WITH DP 04 76)**

Multiply the Frame Construction, Coverage **A** or **C** Base Premium by .9 for Fire and multiply the Mobile Home Construction, Coverage **A** or **C** Base Premium by 1.00 for Extended Coverage.

**RULE 406.
DEDUCTIBLES**

B. Optional Deductibles

The Minimum Additional Charge is \$25.00.

**RULE 500.
MISCELLANEOUS LOSS COSTS**

Rates Per \$1,000*	
Exposure	Rates
A. Fire: Protection Class 1 – 8	\$ 2.50
Fire: Protection Class 8B, 9, 9E, 9S & 10	4.50
B. Extended Coverage (DP 00 01)	1.00
C. Broad Form (DP 00 02)	1.50
D. Special Form (DP 00 03)	2.00
E. Broad Form (DP 00 02) with Endorsement DP 04 65	2.00
* These rates apply to all occupancies, territories, construction and protection classifications, unless otherwise specified. Rates for A. are cumulative with either B., C., D., or E.	

Table 500.(R) Miscellaneous Rates

**RULE 507.
FIRE DEPARTMENT SERVICE CHARGE**

The Additional Rate per \$1,000 of insurance is \$15.00.

**RULE 508.
TREES, SHRUBS AND OTHER PLANTS**

C. Premium Computation

1. Fire, Extended Coverage, Broad And Special Forms

The rates in the following table apply to all occupancies, territories, construction and protection classifications, unless otherwise specified:

Fire (DP 00 01)		
Protection Class	Rates Per \$1,000	
1 – 8	\$ 2.50	
8B, 9, 9E, 9S & 10	4.50	
Extended Coverage (DP 00 01) – All Specified Perils		
Territory	Rates Per \$1,000	
	Including Wind Or Hail	Excluding Wind Or Hail
110-120	\$ 57.00	\$ 1.00
130-160	29.00	1.00
170-290	15.00	1.00
300-390	13.10	1.00
Windstorm Or Hail (DP 00 02 And DP 00 03)		
Territory	Rates Per \$1,000	
110-120	\$ 56.00	
130-160	28.00	
170-290	14.00	
300-390	12.10	

Table 508.C.1.(R) Premium Computation

**RULE 509.
EARTHQUAKE COVERAGE**

D. Premium For Base Deductible

Rate per \$1000				
	Zone	Frame*	Masonry*	Superior
Table A				
Coverages A, B, D Or E	3	\$.36	\$ 1.72	\$.68
Improvements, etc.	4	.23	1.05	.39
& Other Building Options	5	.18	.57	.27
Table B				
Coverage C & Other	3	\$.36	\$ 1.43	\$.36
Personal Property	4	.23	.82	.23
Options	5	.18	.57	.18
* If exterior Masonry Veneer is covered, rate as Masonry; if not covered – rate as Frame.				
Zone Definitions				
Zone 3				
Anson	Davie	Richmond		
Brunswick	Gaston	Robeson		
Cabarrus	Iredell	Rowan		
Catawba	Lincoln	Scotland		
Cleveland	Mecklenburg	Stanly		
Columbus	Montgomery	Union		
Zone 4				
Alexander	Forsyth	Pender		
Alleghany	Graham	Polk		
Ashe	Haywood	Randolph		
Avery	Henderson	Rutherford		
Bladen	Hoke	Surry		
Buncombe	Jackson	Swain		
Burke	Macon	Transylvania		
Caldwell	Madison	Watauga		
Cherokee	McDowell	Wilkes		
Clay	Mitchell	Yadkin		
Cumberland	Moore	Yancey		
Davidson	New Hanover			
Zone 5				
Balance of State				

**Table 509.D.1.(R) Premium For Base Deductible 5%
Deductible**

**RULE 511.
SINKHOLE COLLAPSE COVERAGE**

Rates Per \$1,000	
Cov. A or B and Other Bldg. Options	\$.30
Cov. C or Personal Property Options	.10

Table 511.B.1.(R) Premium Computation

**RULE 512.
WINDSTORM OR HAIL COVERAGE – MISCELLANEOUS
PROPERTIES**

Rates Per \$1,000				
	Territories			
	110-120	130-160	170-290	300-390
1. Signs				
All Metal	\$ 33.60	\$ 16.80	\$ 12.10	\$ 11.20
Other Construction	112.00	56.00	44.30	38.70
2. Cloth Awnings	56.00	28.00	14.00	12.10
3. Radio Or Television Equipment	112.00	56.00	44.30	32.70
4. Swimming Pools – Construction Of Pool And Related Structures*				
Masonry, Uncovered	.94	.47	.37	.28
Masonry, With Combustible Superstructures (Including Roof) And/Or Fencing – Pool Only	.94	.47	.37	.28
Masonry, With Combustible Superstructures (Including Roof) And/Or Fencing – Superstructure And/Or Fencing	32.60	16.30	11.20	8.40
Other Construction With Or Without Roof	32.60	16.30	11.20	8.40
Inflated Enclosure Or Covering Of Plastic Material	168.00	84.00	65.30	56.00
5. Screens (Including Supports)	32.60	16.30	11.20	8.40
6. Fences And Walls				
Masonry, Iron Or Reinforced Concrete	2.80	1.40	1.12	1.03
Other Construction	56.00	28.00	14.00	12.10
7. Bathhouses, Cabanas, Pergolas, Slathouses, Trellises; Structures Over Water				
Masonry	4.67	2.33	1.49	1.31
Other Construction – Fully Enclosed	6.53	3.27	1.96	1.68
Other Construction – Not Fully Enclosed	17.72	8.86	7.00	6.53
8. Outdoor Equipment	4.80	2.40	2.12	2.03
9. Greenhouses Or Hothouses				
Structures Including Glass, Flowers And Plants	130.60	65.30	61.10	60.60
If insured separately: Structure	11.56	5.78	4.67	4.48
Glass	66.20	33.10	31.30	30.80
Flowers And Plants	87.80	43.90	40.60	40.10
* If any part of a pool's enclosure or roof is made of plastic film or cloth, supported on wood framing, the entire pool is subject to the rates displayed for Inflated Enclosure or Covering of Plastic Material.				

Table 512.D.(R) Premium Windstorm Or Hail Coverage – Miscellaneous Properties

**RULE 513.
LIMITED WATER BACK-UP AND SUMP DISCHARGE OR
OVERFLOW COVERAGE**

C. Premium Computation

Charge per location is:

Limit	Rate
\$ 5,000	\$ 8.00
10,000	15.00
15,000	19.00
20,000	22.00
25,000	24.00

Table 513.C.(R) Premium Computation

**RULE 514.
ASSISTED LIVING CARE**

C. Premium

For Basic Limits, the rate per unit is \$55.38.

For increased Coverage **C** Limit, the rate per \$1,000 is \$6.38.

1. TERRITORY ASSIGNMENTS

If a territory shown is defined in terms of United States Postal Service (USPS) ZIP code:

- A.** Determine the applicable rating territory based on the location of the dwelling.
- B.** An insured's rates shall not be changed solely because the USPS changed his or her ZIP code and the physical boundaries of a rating territory shall be determined by the ZIP code boundaries in effect at the time of the latest rate filing defining the territory.

Territory boundaries in North Carolina are concurrent with USPS ZIP code boundaries in effect as of **July 1, 2013**. If the USPS introduces a new ZIP code or realigns a ZIP code boundary after **July 1, 2013**, the new ZIP code may not yet be listed in Rule **2.C**. If this is the case, assign the rating territory based on the ZIP code boundary that formerly applied to the dwelling before the USPS changed the ZIP code.

2. TERRITORY DEFINITIONS – (For all Coverages and Perils Other than Earthquake).

Assign the applicable territory using the following order of priority:

A. Counties

County of	Code
Alamance	310
Alexander	340
Alleghany	360
Anson	300
Ashe	360
Avery	370
Beaufort	150
Bertie	180
Bladen	230
Buncombe	360
Burke	360
Cabarrus	320
Caldwell	360
Camden	150
Caswell	310
Catawba	360
Chatham	280
Cherokee	390
Chowan	150
Clay	390
Cleveland	350
Columbus	200
Craven	150
Cumberland	220

County of	Code
Currituck (other than Beach Areas)	130
Dare (other than Beach Areas)	130
Davidson	320
Davie	310
Duplin	190
Durham	270
Edgecombe	210
Forsyth	310
Franklin	240
Gaston	350
Gates	170
Graham	390
Granville	260
Greene	180
Guilford	310
Halifax	240
Harnett	250
Haywood	380
Henderson	360
Hertford	170
Hoke	250
Hyde (other than Beach Areas)	130
Iredell	340
Jackson	390
Johnston	240
Jones	150
Lee	290
Lenoir	190
Lincoln	350
Macon	390
Madison	380
Martin	180
McDowell	360
Mecklenburg	340
Mitchell	370
Montgomery	300
Moore	290

County of	Code
Nash	240
Northampton	240
Orange	280
Pamlico	130
Pasquotank	150
Perquimans	150
Person	260
Pitt	180
Polk	360
Randolph	320
Richmond	300
Robeson	230
Rockingham	310
Rowan	320
Rutherford	350
Sampson	220
Scotland	250
Stanly	340
Stokes	310
Surry	310
Swain	380
Transylvania	380
Tyrrell	150
Union	340
Vance	260
Wake	270
Warren	260
Washington	150
Watauga	360
Wayne	180
Wilkes	340
Wilson	210
Yadkin	330
Yancey	360

B. Beach Areas

Beach Area – Localities south and east of the Inland Waterway from the South Carolina Line to Fort Macon (Beaufort Inlet), thence south and east of Core, Pamlico, Roanoke and Currituck Sounds to the Virginia Line, being those portions of land generally known as the "Outer Banks".

Beach Areas in Currituck, Dare and Hyde Counties: 110

Beach Areas in Brunswick, Carteret, New Hanover, Onslow and Pender Counties: 120

C. Other Than Beach Areas of Brunswick, Carteret, New Hanover, Onslow and Pender Counties

For areas of Brunswick, Carteret, New Hanover, Onslow and Pender Counties, other than the Beach Areas, refer to the following ZIP codes. If portions of these ZIP codes fall in Counties other than Brunswick, Carteret, New Hanover, Onslow and Pender Counties use the territory code for those counties.

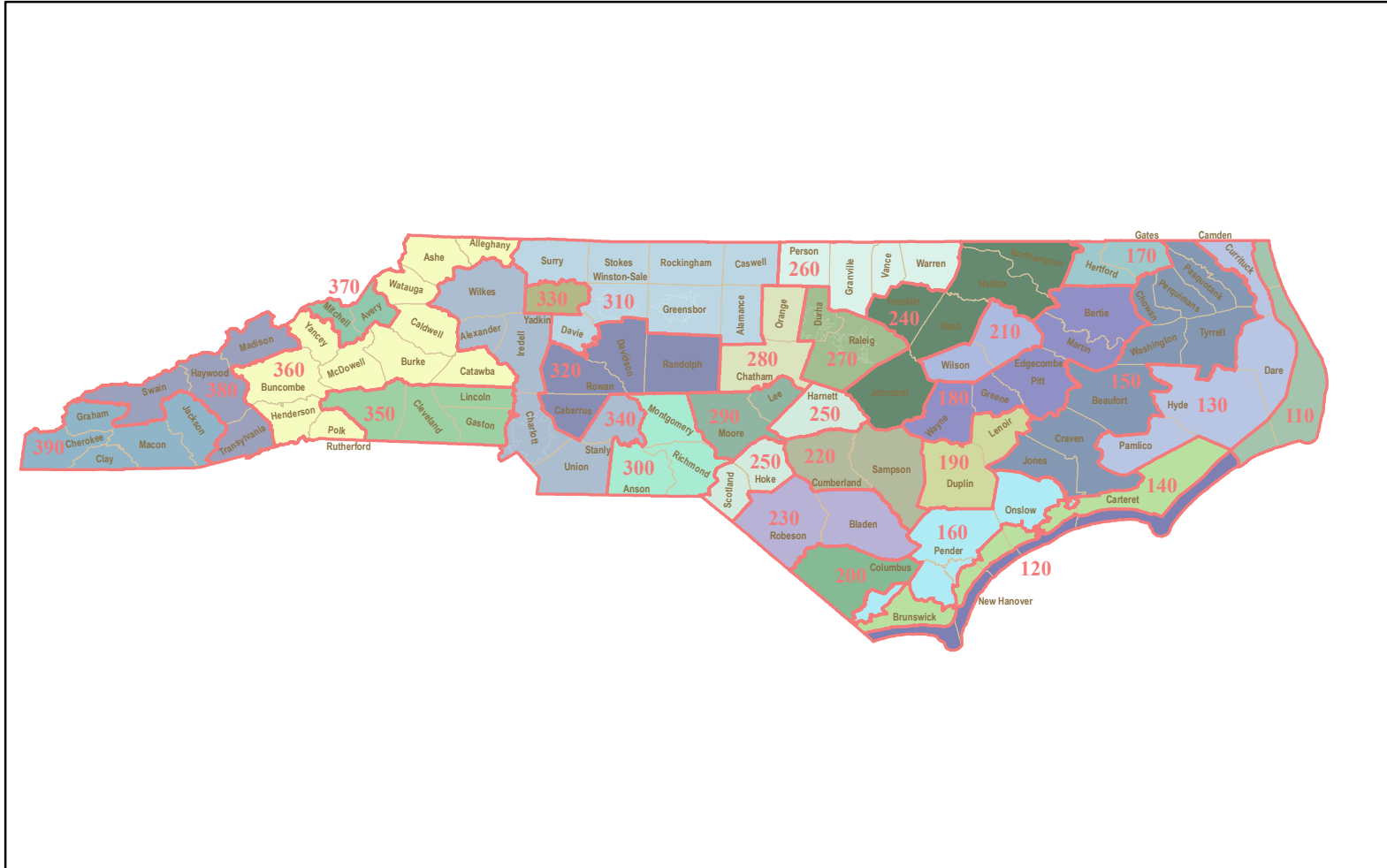
1. Eastern Coastal Territory

ZIP Code	USPS ZIP Code Name	Code
28403	Wilmington	140
28404	Wilmington	140
28405	Wilmington	140
28406	Wilmington	140
28407	Wilmington	140
28408	Wilmington	140
28409	Wilmington	140
28410	Wilmington	140
28411	Wilmington	140
28412	Wilmington	140
28422	Bolivia	140
28428	Carolina Beach	140
28443	Hampstead	140
28445	Holly Ridge	140
28459	Shallotte	140
28460	Sneads Ferry	140
28461	Southport	140
28462	Supply	140
28467	Calabash	140
28468	Sunset Beach	140
28469	Ocean Isle Beach	140
28470	Shallotte	140
28480	Wrightsville Beach	140
28511	Atlantic	140
28516	Beaufort	140
28520	Cedar Island	140
28524	Davis	140
28528	Gloucester	140
28531	Harkers Island	140
28532	Havelock	140
28533	Cherry Point	140
28539	Hubert	140
28553	Marshallberg	140
28557	Morehead City	140
28570	Newport	140
28577	Sealevel	140
28579	Smyrna	140
28581	Stacy	140
28584	Swansboro	140
28589	Williston	140

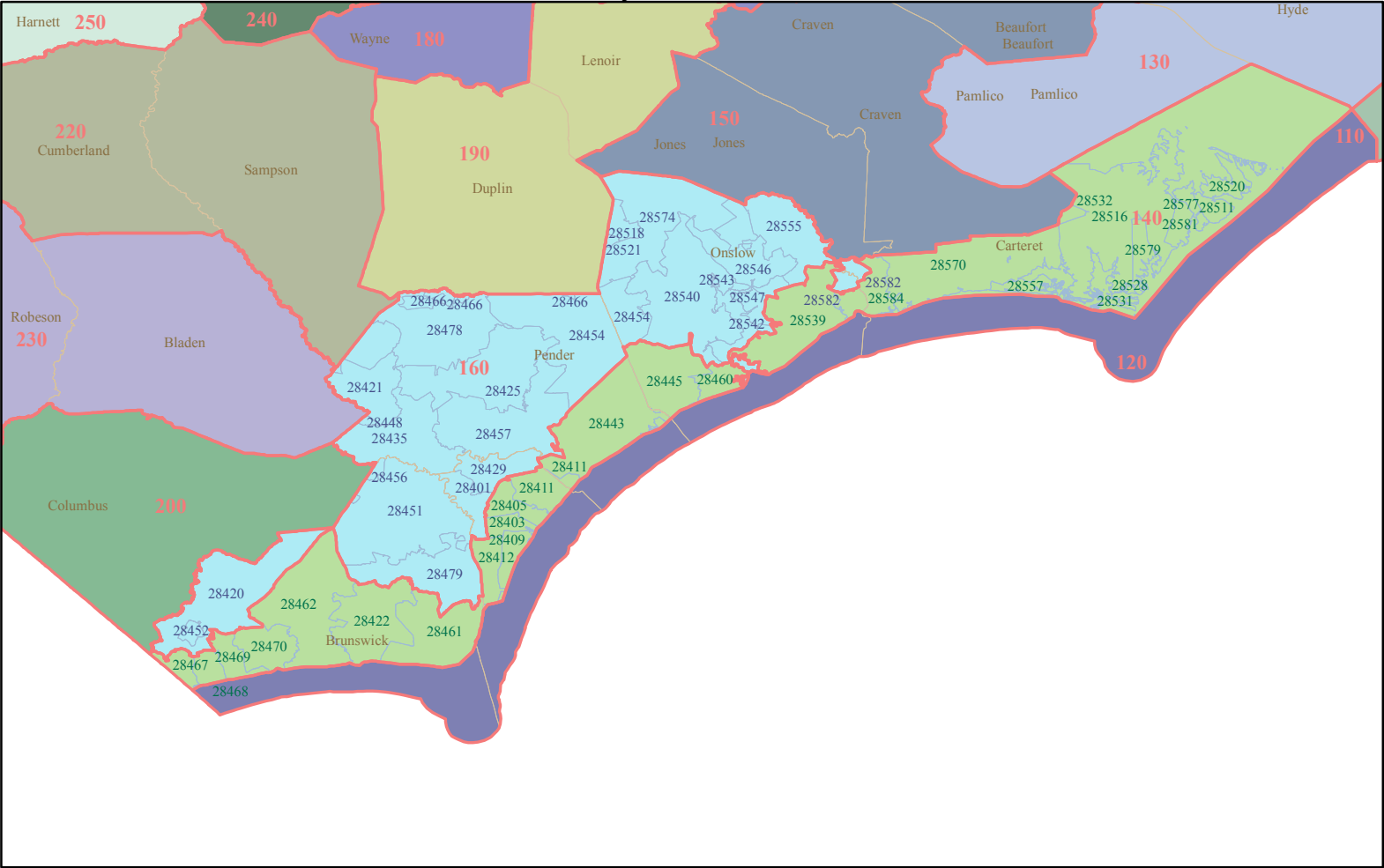
2. Western Coastal Territory

ZIP Code	USPS ZIP Code Name	Code
28401	Wilmington	160
28402	Wilmington	160
28420	Ash	160
28421	Atkinson	160
28425	Burgaw	160
28429	Castle Hayne	160
28435	Currie	160
28436	Delco	160
28447	Ivanhoe	160
28448	Kelly	160
28451	Leland	160
28452	Longwood	160
28454	Maple Hill	160
28456	Riegelwood	160
28457	Rocky Point	160
28466	Wallace	160
28478	Willard	160
28479	Winnabow	160
28518	Beulaville	160
28521	Chinquapin	160
28540	Jacksonville	160
28541	Jacksonville	160
28542	Camp Lejeune	160
28543	Tarawa Terrace	160
28544	Midway Park	160
28545	McCutcheon Field	160
28546	Jacksonville	160
28547	Camp Lejeune	160
28555	Maysville	160
28574	Richlands	160
28582	Stella	160

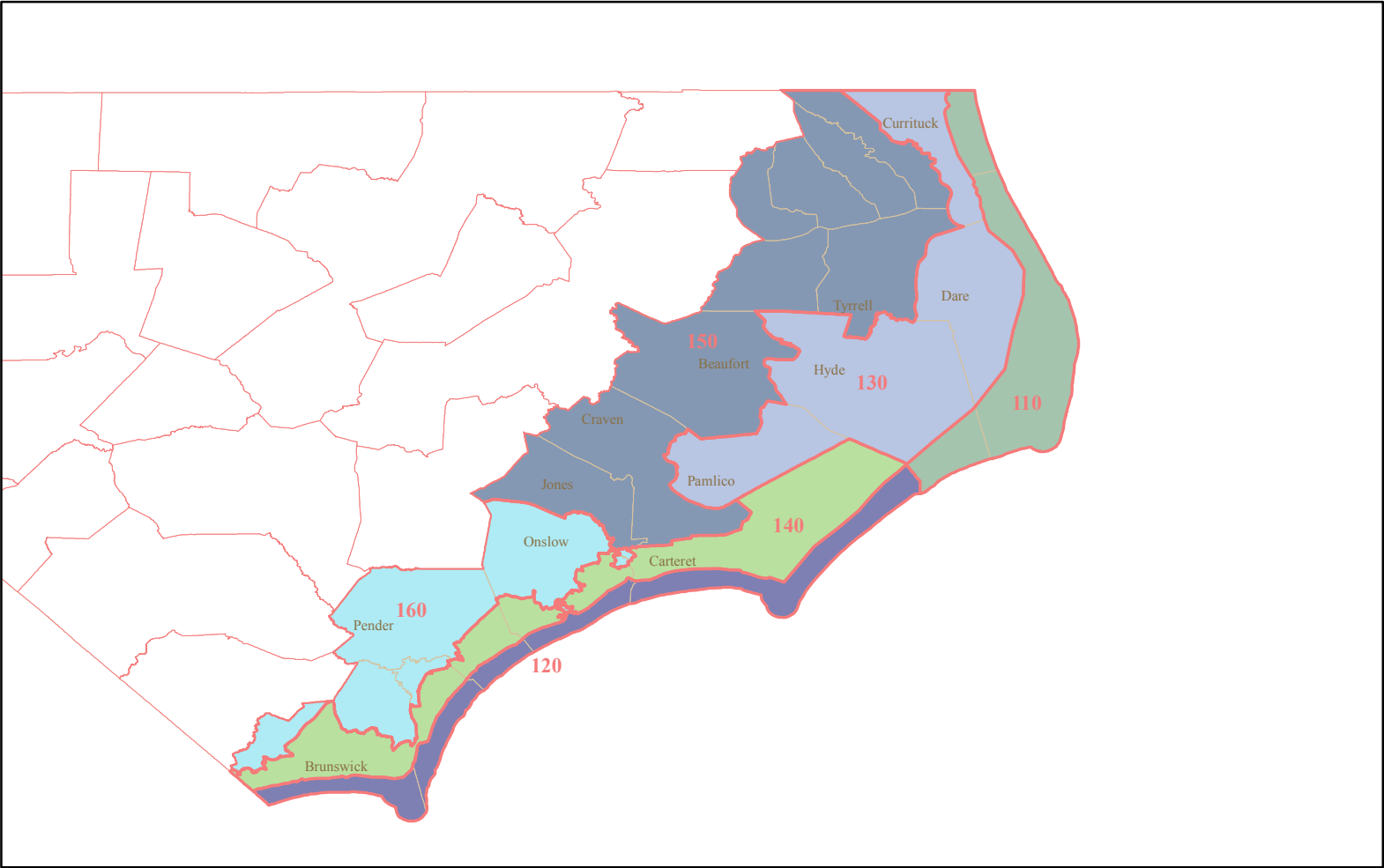
Dwelling and Homeowner Territories Statewide



Dwelling and Homeowner Territories Southern Beach and Coastal Area By ZIP Code Effective 6-1-15



Dwelling and Homeowner Territories
Beach and Coastal Area
Effective 6-1-15



**PRE-FILED TESTIMONY
OF
JOANNA BILIOURIS**

AUGUST 2022

**2022 NORTH CAROLINA DWELLING INSURANCE RATE FILING
BY THE NORTH CAROLINA RATE BUREAU**

Q. Would you state your full name and business address?

A. My name is Joanna Biliouris. My business address is 2910 Sumner Blvd, Raleigh, North Carolina 27616.

Q. Are you employed by the North Carolina Rate Bureau ("Bureau")?

A. Yes.

Q. In what capacity?

A. I am the General Manager.

Q. What is the Bureau's function with respect to rates for residential Dwelling insurance?

A. The Bureau promulgates rates for residential dwelling insurance in North Carolina.

Q. Can you identify Exhibits RB-1 through RB-27?

A. Yes. Exhibit RB-1 sets forth the filed rates for the residential dwelling market in North Carolina, as well as the data and calculations underlying those rates and the dwelling rate manual changes that accompany the filed rate changes. RB-1 also includes the supplemental data and exhibits required by statute and by regulation for this filing. Exhibit RB-2 is the current residential dwelling rate manual. Exhibits RB-3 through RB-27 contain the required accompanying pre-filed testimony and exhibits. Together, these materials constitute a filing (the "Filing") that is dated August 18, 2022 submitted by the Bureau to the Honorable Mike Causey, Commissioner of Insurance, with respect to residential dwelling rates in North Carolina.

Q. Do you know how the expense data underlying the Filing were compiled?

A. Yes. The underwriting expense provisions included in the Filing were derived from the results of a special call for expense experience that is issued on an annual basis to all member companies of the Bureau. The responses received from that special call were compiled, reviewed, and furnished to Insurance Services Office ("ISO") for incorporation into the Filing.

- Q. Was the information from the special call for expense experience that was furnished to ISO and utilized in the Filing correct and accurate to the best of your knowledge, information and belief?
- A. Yes.
- Q. To the extent that actuarial expertise was necessary in the preparation of this Filing, where did the Bureau obtain that expertise?
- A. Actuarial expertise was obtained from ISO and Milliman. ISO is retained by the Bureau to provide actuarial services for, among numerous other tasks, preparation of this Filing. The individual company representatives serving on the Bureau's Property Rating Subcommittee are mostly actuaries. The Bureau's Property Rating Subcommittee reviewed the data underlying the Filing and made recommendations to the Property Committee, which then made recommendations to the Bureau's Governing Committee as to the items contained in the Filing. In addition, the Bureau has an actuary on its staff who assisted in the review and the preparation of the Filing.
- Q. Can you identify Exhibit RB-2 entitled the North Carolina Dwelling Policy Program Manual?
- A. Yes. The North Carolina Dwelling Policy Program Manual marked Exhibit RB-2 is the current manual of the rules, rates, and classifications used to write residential dwelling insurance in North Carolina. The manual and any approved amendments are on file with the North Carolina Department of Insurance and a copy is maintained at the offices of the Bureau.
- Q. What is the proposed effective date of the rates in the Filing?
- A. The rate review was prepared with the assumption that the effective date of any rate changes would be February 1, 2023, and therefore that is the "assumed effective date" in the Filing materials. However, to comply with the 210-day notice provision in NCGS 58-36-15(a), and because the Bureau proposes that the indicated rate changes be implemented in two phases over a two year period, the Bureau proposes that the new rates for Year 1 apply to all policies becoming effective on or after April 1, 2023, and the new rates for Year 2 apply to all policies becoming effective on or after April 1, 2024.
- Q. Does the Filing submitted to the Commissioner include, to the extent available, the information to be furnished in connection with filings under Article 36 of Chapter 58 of the General Statutes?
- A. Yes. Those data that were available have been submitted to the Commissioner as part of the Filing. As shown and explained in that submission, some data were not collected or, if collected, were not retrievable from the statistical data in the form requested. The individual circumstances with respect to such data are explained in the submission.

Q. Does that conclude your pre-filed testimony?

A. Yes.

**PREFILED TESTIMONY
OF
PAUL ERICKSEN**

**2022 DWELLING INSURANCE
RATE FILING BY THE
NORTH CAROLINA RATE BUREAU**

Q: Please state your name and business address.

A: My name is Paul Ericksen. My business address is Insurance Services Office, 545 Washington Boulevard, Jersey City, New Jersey.

Q: Please describe your educational background and your background in actuarial science.

A: I graduated from Princeton University in 1992 with a B.A. in mathematics.

I became a Fellow of the Casualty Actuarial Society (CAS) in 1995 and am a member of the American Academy of Actuaries (AAA). I am in good standing with those organizations.

I served as a member of the CAS Examination Committee from 1996 through 2009, and I have given multiple presentations at CAS meetings.

Q: By whom are you employed?

A: I am employed by Insurance Services Office (ISO) and started employment at ISO in 1992.

Q: What are your current responsibilities at ISO?

A: I lead the Actuarial Consulting unit at ISO. ISO's Actuarial Consulting unit specializes in providing a wide array of consulting services to individual companies. I have been responsible for managing, overseeing, and developing customized actuarial analyses including ratemaking, reserving, and other miscellaneous studies. I have provided services to insurers, captives, managing general agents, law firms, and insurance departments.

Q: What is your employment background?

A: I started my career in 1992 as an actuarial assistant in the increased limits division of ISO. In 1993, I left ISO and spent a year as a consulting actuary in the New York office of Milliman, working primarily on medical malpractice projects. I returned to ISO in 1994 as an actuarial associate in the Financial Analysis division. In 1999, I

transferred to ISO's Actuarial Consulting unit and assisted clients as a consulting actuary. In 2007, I was promoted to Principal of the Actuarial Consulting unit.

During the past 23 years that I have provided actuarial consulting services, I have worked on a wide range of projects involving several different lines of insurance within the property/casualty insurance industry. I have prepared rate analyses for Homeowners, Dwelling, and other lines of insurance. I have also conducted reserve analyses as the Appointed Actuary for several insurers.

A large part of my consulting experience has dealt with property insurance in areas of the country that have exposure to hurricane losses. For example, I was the Appointed Actuary for Citizens Property Insurance Corporation of Florida ("Citizens") for four years (2004, 2005, 2007 and 2009), and was also responsible for preparing rate analyses for Citizens' Homeowners, Mobile Home, Dwelling, and Commercial Property programs. Citizens is the insurer of last resort in Florida, and has been one of the largest property insurers in the state. In addition to work performed on behalf of Citizens, I have also conducted ratemaking and reserving projects for several voluntary insurers that write Homeowners and Dwelling business in Florida. I have developed indicated rates for both multi-peril policies and wind-only policies. I have extensive experience working with multiple hurricane models (including both AIR and RMS) and developing provisions for the cost of reinsurance.

In North Carolina, I have provided actuarial consulting services to both the North Carolina Insurance Underwriting Association ("NCIUA") and the North Carolina Joint Underwriting Association ("NCJUA"). Those organizations rely upon the rates set in filings by the North Carolina Rate Bureau ("Bureau").

Q: Are you familiar with dwelling insurance ratemaking in North Carolina and other states?

A: Yes. ISO has provided actuarial consulting to the Bureau on North Carolina dwelling rate filings since the Bureau was created. I have extensive knowledge of the methodologies employed by ISO and the Bureau in this filing as well as in past Bureau dwelling filings. I provided written testimony in support of the Bureau's 2019 and 2020 dwelling rate filings.

As part of a consulting assignment that I performed for the NCIUA and NCJUA, I have also reviewed prior filings by the Bureau on which ISO provided actuarial consulting and filing preparation assistance. I have prepared many dwelling rate analyses in several different states. In addition, I have testified as an expert witness in support of my clients' dwelling rate filings in various hearings that were held in Florida and Massachusetts. In Florida, I have testified in support of rate filings submitted by Citizens.

Q. Based on your experience with other states, from the standpoint of individual companies, how does ratemaking in North Carolina differ from other states?

A. In almost every other state, each company files its own Dwelling rates independently. However, in North Carolina, the Bureau has the responsibility to file rates on behalf of the entire industry. The filing process in North Carolina establishes a system of "Bureau rates" (often called "manual" rates) for use on all Dwelling policies written in the state.

In essence, the Bureau makes rates based on the aggregate policyholder attributes and loss experience of all the Dwelling policies written in the state. Those policies include characteristics such as the dollar amount of insurance written on each home, the geographic location of the home, the protection class of the area in which the house is located, the type of construction, the deductible amount, etc.

Once the Bureau rate has been set through the filing and approval process, Bureau companies must charge that rate unless they file their own deviations with the Commissioner or engage in the consent to rate process. A company's proposed premium may exceed the Bureau rate through the consent to rate process only if that higher premium is charged in accordance with rules adopted by the Commissioner.

Q: What work has ISO performed with respect to the Bureau's 2022 dwelling rate filing in North Carolina?

A: First, ISO, as a licensed statistical agent in North Carolina, collects dwelling insurance data from a significant number of the companies writing that line in North Carolina, as well as from the North Carolina Insurance Underwriting Association (commonly called the "NCIUA" or the "Beach Plan") and the North Carolina Joint Underwriting Association (commonly called the "NCJUA" or the "Fair Plan") which are the residual market mechanisms.

Second, ISO collects, reviews and compiles data from three other statistical organizations licensed in North Carolina that collect residential dwelling data from Bureau member companies. All companies writing dwelling insurance in North Carolina must report to one of these four organizations. The other three organizations are: the Independent Statistical Service (ISS), the American Association of Insurance Services (AAIS) and the National Independent Statistical Service (NISS).

Third, ISO provides consulting actuarial services directly to the Bureau. As in the past, ISO staff compiled the ratemaking data to be reviewed by the Bureau's Property Rating Subcommittee, Property Committee and Governing Committee in preparation of rate reviews and filings.

Fourth, ISO staff put together much of the data, information and calculations contained in Exhibit RB-1. This lengthy process was performed under the direction of the Bureau committees. ISO staff attended meetings of those Bureau committees.

Finally, I have reviewed the filed rates to determine if they are calculated in accordance with the CAS guidance, including the Statement of Principles Regarding Property and Casualty Insurance Ratemaking and the Actuarial Standards of Practice. In accordance with Actuarial Standard of Practice No. 17 Expert Testimony by Actuaries, I conducted my review in terms of reasonableness rather than solely in terms of whether there is precise agreement on each issue. In addition, I applied the applicable rate standards set forth in Article 36 of Chapter 58 of the North Carolina General Statutes, including but not limited to N.C.G.S. 58-36-10, i.e., that rates must not be excessive, inadequate or unfairly discriminatory and that certain statutory rating factors must be considered.

Q: Please describe the overall ratemaking equation in the Filing.

A: The approach in this Filing is consistent with prior property filings of the Bureau. Premiums should equal expected losses, plus expected expenses, plus a margin for a fair and reasonable profit. This is the fundamental insurance ratemaking equation to comply with the statutory ratemaking standard. In this Filing, the required base rate per policy is developed by adding the appropriate profit and contingencies to the estimated costs associated with the policy. The required base rate is then compared to the current base rate to determine the "indicated" rate change. For residential Dwelling filings, this is done separately for the two types of coverage afforded by the policy, the Fire portion and the Extended Coverage portion.

The indicated rate change is the actuarially sound percentage change necessary to make the rates comply with the statutory standards that they not be excessive, inadequate or unfairly discriminatory. The Bureau's goal is to have rates eventually reach the indicated rate level, but the Bureau has in the past engaged in a process of gradualism to reach the actuarially sound rate level.

Q: What is the source of the data utilized in Exhibit RB-1?

A: The Bureau has the responsibility of filing forms and making rates for all residential dwelling insurance policies written in North Carolina (with the exception of such policies that may be written by county farm mutuals pursuant to N.C.G.S. 58-36-50). For purposes of Bureau rate filings for residential Dwelling, all Dwelling loss and exposure data written on NCRB policy forms in the state is consolidated to essentially assume a single insurance entity (often called the "hypothetical one company"). ISO, on behalf of the Bureau, combines the data as to those policies in its filings as if there were a single company with the aggregate loss experience of all those policies. Rates are then analyzed in rate filings as if those rates were

being made for this hypothetical one company. The ratemaking data reflected in Exhibit RB-1 is, in general, based on the aggregate dwelling experience of the individual insurance companies that write residential dwelling policies in North Carolina, together with the experience written on dwelling insurance policies in the residual market as described below. Those entities submit their data to one of the four statistical agents described above. The four statistical agents subject each entity's data to a series of verification edits and then consolidate the individual company data. The non-ISO statistical agents then transmit their consolidated data to ISO for final review and consolidation with the ISO data. After consolidating the data, ISO produces exhibits of the combined data in a format and detail necessary for review by the Bureau committees and ultimately for use in rate filings.

The latest year of available statistical data used in the Filing is 2020. In 2020, the total earned premium (at current rate level) for the Fire portion of Dwelling policies was approximately \$72 million. In 2020, the total earned premium (at current rate level) for the Extended Coverage portion of Dwelling policies was approximately \$247 million. These dollar amounts include both residual market mechanisms that write residential Dwelling policies.

The statistical agents are licensed by the Commissioner of Insurance in North Carolina. They have collected, reviewed, compiled and submitted the data underlying this filing in the regular course of their business responsibilities. Note that the statistical data provided by NISS has been excluded from the NCRB's dwelling rate analysis since over 98% of its reported premium is not written using the Rate Bureau's policy program.

Also, let me note that, any time I reference dwelling insurance, dwelling policies, or dwelling experience in this testimony, I am referring to residential dwelling insurance written using the Bureau's program.

Q. Please describe what are commonly called the "Beach Plan" and the "FAIR Plan" and the role of their loss data in this filing?

A. They are both residual market organizations that write policies for those policyholders who can't obtain insurance in the voluntary market.

The term "Beach Plan" is a commonly used name for the North Carolina Insurance Underwriting Association. It is a residual market organization created by the North Carolina legislature in Article 45 of Chapter 58. It writes dwelling, homeowners, and other types of insurance for policyholders in the 18 coastal counties. It uses forms, rules and rates filed by the Bureau. Although voluntary insurers have chosen not to accept the risk of writing policies that have been written by the Beach Plan, North Carolina law requires voluntary insurers to pay any losses that exceed the Beach Plan's resources, up to an aggregate statutory cap of \$1 billion annually. The significance of such non-recoupable assessments on the companies is discussed later in my testimony.

The Beach Plan uses the same dwelling forms that are used by voluntary companies. Those forms have been prepared and filed by the Bureau on behalf of all member companies. The Beach Plan writes policies in its own name. The Beach Plan receives and retains premiums, adjusts losses, reports statistics and operates in a manner similar to voluntary insurance companies in many respects. It uses dwelling forms and rates filed by the Bureau, except that it applies a 5% statutory surcharge on the wind and hail rate where it writes only the wind and hail coverage on dwelling policies. When the Beach Plan reports its statistical data to ISO, ISO reviews those statistical data in the same manner that it does for voluntary companies.

The second residual market mechanism in North Carolina is the called the North Carolina Joint Underwriting Association or Fair Access to Insurance Requirements organization (commonly called the "FAIR Plan.") It writes in all areas of the state except the beach. It writes dwelling fire and extended coverage policies but does not write homeowners policies. No surcharge is applied to FAIR Plan policies. Full residential dwelling policies written by the Beach Plan and FAIR Plan are written at the Bureau rate.

When a prospective policyholder seeks Dwelling insurance, it is not predetermined whether the policyholder will be written by the Beach Plan or FAIR Plan, or instead by a voluntary company. Policyholders can switch back and forth between the residual market and a voluntary company depending on which option works best for them and depending on whether a voluntary company will write them. In computing the exposures and the loss experience of the hypothetical one company in North Carolina for which rates are being made in this Filing, the exposures and loss experience of the Beach Plan and the FAIR Plan must be combined with the rest of the data as if the Beach Plan and FAIR Plan were private insurance companies.

North Carolina statutes distinguish between the "beach" and "coastal" areas under the Beach Plan's jurisdiction. In the 18 beach and coastal counties, the residual market is the largest writer of Dwelling policies. Dwelling policies have increasingly been written by the FAIR Plan in the rest of the state. Approximately 96% of dwelling premium in the "beach" territories (territories 110 and 120) was written by the Beach Plan in 2020. In the "coastal" territories (territories 130, 140, 150 and 160), approximately 80% of the dwelling premium was written in either the Beach Plan or the FAIR Plan. On a statewide basis, approximately 63% of dwelling premium was written in either the Beach Plan or FAIR Plan in 2020. This represents an increase from the 61% statewide market share observed in 2018.

Individual companies can charge more or less than the approved Bureau rates through consent to rate and deviations, respectively. Such actions by individual companies are outside of the Bureau's jurisdiction. In recent years, there has

also been a significant growth in the use of consent to rate, by which companies may charge higher premiums on individual policies through compliance with the consent to rate procedures.

Over the years, the Beach and FAIR Plan's large market share reflects the fact that voluntary companies are unwilling to write in coastal areas where the manual rate level is inadequate. Otherwise, with numerous companies competing in the state, normal competitive market forces would prevail, and companies would write voluntarily. This high market share has occurred despite the fact that the legislature intended the Beach Plan to be the "market of last resort" in those areas.

Loss and exposure data from these two residual market organizations have always been included in Bureau property filings for the line of insurance (the homeowners line of insurance or the dwelling fire and extended coverage line of insurance) under review, in the same manner as loss and exposure data from voluntary insurance companies that write that line of insurance. It is actuarially appropriate and necessary to include the residual market data with the voluntary data to ensure that the rates developed are representative of the entire market, since every policy has the potential to be written in the voluntary market.

The fact that rates at the beach and coast are inadequate creates a dilemma for the Beach Plan and FAIR Plan. On the one hand, the inadequate rates diminish their ability to build up sufficient surplus in the "good" years when there are no hurricanes in order to provide a cushion to pay losses in the "bad" years when severe hurricanes occur. Even in the good years, they have to pay claims for higher frequency insured events such as fires, etc.

The Beach Plan's and FAIR Plan's approach has been to purchase both reinsurance and catastrophe bonds. Whatever amounts they spend in the reinsurance and catastrophe bond markets is at the expense of building up their surplus in those years when hurricanes do not affect North Carolina.

- Q. What are some of the other consequences of the inadequacy of Bureau manual rates, both at the coast and in the rest of the state?
- A. The prospect of Beach Plan and FAIR Plan assessments affects the willingness of a company to write property insurance in North Carolina. A company knows that, following a powerful hurricane, it will be subject to residual market assessments for huge losses on business that the company did not choose to write in the first place, and those assessments are based on the company's market share throughout the state. Therefore, companies that elect to write in the state must consider the extent that they will do so in various areas of the state, particularly in the beach and coastal territories where the risk of hurricane losses is greater.
- Q: What statistical data supporting the filing are contained in Exhibit RB-1?

A: In general, the supporting data for the rate level changes are contained in Section C. The most recent five years of experience are displayed in Section C. Using five years is consistent with prior filings, North Carolina statutes, and generally accepted ratemaking practices.

The loss experience used in the filing is what we call “accident year” experience for the years ended December 31, 2016 through December 31, 2020. This is the most recent five years of data available. I can explain what is meant by accident year experience by providing an example. The losses for the accident year ended December 31, 2020 consist of all losses caused by accidents which occurred during the one-year period ended December 31, 2020. If an accident occurred on December 29, 2020 and resulted in either a loss being paid or a reserve being established after January 1, 2021, that loss would be a part of the accident year losses for the period ended December 31, 2020. The basis for assigning losses to individual accident years is the date the accident occurred. The term “accident year” is an insurance accounting term that includes the various incidents that give rise to a dwelling insurance claim, including fires, hurricanes, tornados, etc. during a 12-month period.

Q: What is the reason for using five years of data to determine the indicated rate level change?

A: Ratemaking is prospective in nature. The objective is to set rates at the level that is sufficient to pay expected losses, expected expenses, and to allow insurance companies to earn a reasonable margin for profit. This is the fundamental equation in insurance ratemaking for determining an adequate rate level; i.e., a rate level that is not “excessive, inadequate or unfairly discriminatory” as required by law.

Rates are set for the period when they will be in effect, which is often the year after the effective date of the filing. I am aware that, in order to comply with certain statutes and to spread the Extended Coverage indication over two years, the Bureau is proposing an effective date of April 1, 2023 for the Year 1 change and an effective date of April 1, 2024 for the Year 2 change. However, the rate review underlying this filing was performed with the assumption that the effective date would be February 1, 2023, and that the proposed rates would be in effect for a one-year time-period. When I use the term “assumed effective date” in this testimony, I am referring to the February 1, 2023 date. Historical loss data are generally used for the purpose of projecting expected losses. The North Carolina statutes allow the Bureau to review five years of experience in its rate level filings in addition to other factors that are to be considered. For non-catastrophic types of loss, the use of five years of data balances the stability of the rates with responsiveness to more recent conditions. For catastrophic hurricane losses, the average of modeled losses from two hurricane models is used.

Traditional ratemaking for the fire coverage of a dwelling policy has relied on five years of experience with weights of 0.10, 0.15, 0.20, 0.25 and 0.30 being given to

each year respectively. For the Fire portion of the policy, accident year 2020, the most recent year for which data is available, receives a weight of 30%. Accident year 2019 receives a weight of 25%. Accident year 2018 receives a weight of 20%. Accident year 2017 receives a weight of 15%. Accident year 2016 receives a weight of 10%. Those weights are used in this filing as in past Bureau dwelling filings. The weights used by the Bureau are identical to those used by ISO in all other states for dwelling Fire insurance. These weights are generally accepted in all jurisdictions in which ISO makes dwelling filings. For the extended coverage portion of the dwelling policy, which by nature is more likely to be unstable because of weather events, equal weights are given to each year to help promote stability. This treatment is a common and accepted ratemaking practice used countrywide.

Q: How is the Bureau proposing to implement the indicated rate changes for Fire?

A: The Bureau's Governing Committee has decided to file the full indicated territory rate changes for Fire in Year 1. Page A-3 shows the indicated rate changes for Fire. Under the proposed two year implementation, the Bureau will not implement a rate change for Fire in Year 2.

Q: How is the Bureau proposing to implement the indicated rate changes for Extended Coverage?

A: The Bureau's Governing Committee has decided to phase in the indicated rate changes for Extended Coverage over a two-year period. Page A-4 shows the indicated rate changes for Extended Coverage separately for Year 1 and Year 2. Within each territory, the percentage rate change will be the same in Year 1 and Year 2. Spreading the indicated rate change over a two-year time period will reduce the immediate effect of rate changes on policyholders.

Q: Please turn to page C-2 of Exhibit RB-1. Would you explain what that page shows?

A: Page C-2 is what is called a statewide rate level calculation for the Fire portion of a dwelling policy in North Carolina. Page C-2 determines the actuarially indicated rate level change for dwelling Fire. The data shown are for business written in the voluntary market and business written by the North Carolina Beach and FAIR Plans.

The overall dwelling program to which this filing applies consists of both a Fire and an Extended Coverage ("EC") component. Page C-2 shows the calculation of the indicated rate change for the Fire component, and Page C-4 shows the corresponding indicated rate change for the EC component. I will first focus on describing Page C-2. However, later parts of my testimony will refer to the EC calculations on Page C-4.

Q: Referring to column 1 on page C-2, what are "Adjusted Incurred Losses"?

A: The incurred losses in column 1 are the losses from insured events that occurred during each of the five respective accident years. The figure includes losses which have already been paid, losses which are not yet paid and are represented by outstanding claim reserves, and losses which have been incurred but for which no individual reserve yet exists because they have not yet been reported.

Q: Have the losses as shown in column (1) been adjusted in any way?

A: Yes, as explained below, there are two adjustments. First, these losses have been adjusted to a common \$500 deductible level. Second, these losses have been developed to ultimate by applying loss development factors.

Q: Please explain what is done to adjust losses to a common deductible level.

A: In order to properly analyze losses for ratemaking, it is necessary to adjust losses from all policies to some common deductible level. The common deductible level that is assumed for dwelling is the base deductible of \$500. Loss elimination ratios (LERs) are applied to the reported losses in order to account for the difference between the reported deductible and the assumed common deductible.

Q: What is the purpose of adjusting the reported losses by applying loss development factors?

A: The losses in column 1 of page C-2 include losses from events which have happened but which have not yet been reported. Such events are included by what is known as an adjustment for IBNR (incurred but not reported) losses.

In addition, adjustments must be made to reflect that loss payments occur over time. The losses, as they are reported to statistical agents, cover all accidents which occur during the respective accident years ended December 31. When they are reported to the statistical agent, they are evaluated as of March 31 of the next year. As of March 31, some of the losses have already been paid and some have not. Those that have not are represented by loss reserves. Loss reserves are estimates of what will ultimately be paid on these outstanding claims.

Since we want the losses used in the filing to be as accurate as possible, we look at history to see how losses have changed, or “developed,” from the time they were initially reported to the time they were ultimately paid. For example, if we want to evaluate how losses reported in 2020 will eventually turn out, we look back and see what has happened in the past. If historically there has been a 5% increase in the dollar amount of losses from the time they were initially reported as reserves until the time they were ultimately paid, we would logically assume that the same development will hold true for losses incurred during the accident year ended December 31, 2020. Accordingly, we would make an adjustment by increasing the losses as they are initially reported to us by 5%.

Q: What causes losses to change or develop as you have described?

A: Changes to the reserve portion of the losses typically result from the fact that the ultimate loss payments turn out to be more or less than estimated at the time of the initial report that led to the reserve. Another factor that could lead to changes in losses is the late reporting of claims. For example, if a loss event occurred in late December of any given year and for some reason was not timely reported to the company by the end of the year, it might very well be that the losses as initially reported would not include any provision for that particular claim. By next year's evaluation, however, the claim would have worked its way into the system and the total loss would include either the paid amount or the reserved amount for that particular claim. This would cause an upward development in the losses as initially reported.

Q: Please refer to page D-12 of RB-1 and explain how the loss development factors used in the filing were calculated.

A: Page D-12 shows the calculation of loss development factors for the fire portion of a dwelling policy. The top section of that page shows the incurred losses evaluated as of 15, 27, 39, 51, 63, 75 and 87 months for the accident years for which available data are shown. In calculating loss development factors, we have used the data of companies reporting to ISO. For instance, the 15-month entry for the accident year ended December 31, 2016 is \$11,975,398. This is the first evaluation of the losses caused by loss events which occurred during the year which ended December 31, 2016. The evaluation was made as of March 31, 2017, 15 months after the beginning of the accident year. Twelve months later (March 31, 2018) the losses caused by accidents which occurred during the year ended December 31, 2016 had decreased to \$11,674,797. This is the evaluation as of 27 months after the beginning of the accident year. This decrease represents a reduction in losses, or negative development, of -2.5% (or 0.975) as shown in the column under Link Ratios located lower on that page labeled "27:15." As shown on page D-12, we have looked at the development from 15 months to 27 months for eleven different years. The average development for those years was 0.962, or -3.8%.

Q: Does page D-12 also show development figures for periods longer than 27 months?

A: Yes. We also calculate loss development factors for the periods from 27 months to 39 months, 39 months to 51 months, 51 months to 63 months, 63 months to 75 months, and 75 months to 87 months. Studies have shown that for dwelling fire virtually all losses have been paid by the time of the evaluation at 87 months after the beginning of an accident year. For example, by the time of the 63-month evaluation, the losses for the accident year ended December 31, 2016 had become \$11,529,440. This amount is the same as the value of the losses for the same accident year evaluated as of 51 months. The average development over the

period 51 months to 63 months for the years for which the data are available was 1.000, or 0.0%.

Q: Please explain how the loss development factor used to determine the ultimate payment value of the accident year ended December 31, 2020 losses was determined.

A: For dwelling fire, the loss development factors for each of the applicable periods, as shown on page D-12, are:

<u>Development Period</u>	<u>Factor</u>
15 to 27	0.962
27 to 39	0.996
39 to 51	0.997
51 to 63	1.000
63 to 75	1.000
75 to 87	1.000

If you multiply all of these factors together, you will get a factor of 0.955 to apply to the year ended December 31, 2020 losses.

Q: Please refer to column (2) of page C-2. With reference to the column headed "Adjusted Incurred Losses Including LAE," please tell us what the figure 42,629,336 represents.

A: These are the losses and loss adjustment expenses associated with claims that occurred in the accident year ended December 31, 2020. It is equal to the adjusted incurred losses found in Column (1), multiplied by a trended loss adjustment expense factor of 1.086.

Q: How is the trended loss adjustment expense factor of 1.086 developed?

A: Each year the Bureau sends a call to its member companies for expense-related data. These calls showed that loss adjustment expenses for the calendar years December 31, 2016, December 31, 2017, December 31, 2018, December 31, 2019 and December 31, 2020, after dropping the high and low values, averaged 8.7% for the period, as shown on page D-24.

This factor of 8.7% must be adjusted for the change in cost levels of the items that go into loss adjustment expenses. These expenses include items such as adjusters' salaries, rents and overhead items related to claims settlement. In essence, these items will vary as general economic trends vary.

Q: Please explain how the expense trend used to adjust the loss adjustment expense factor is developed.

A: The expense trend used to adjust the loss adjustment expense factor is based on an analysis of the Current Expense Index, which is an index based on a 50% weighting to the Compensation Cost Index, a 25% weight to the all items CPI (less energy) and a 25% weight to the all items CPI (including energy). The latest available information for marine, fire and casualty insurance was used. The data for this index are shown on pages D-20-21. Based on an analysis of these data, an annual rate of change of 4.0% was selected by the Property Rating Subcommittee of the Bureau.

Q: Please explain the development and application of the expense trend factor in arriving at the loss adjustment expense factor.

A: The loss adjustment expense factor of 8.7% is equal to the five-year average (excluding the high and low values). As such, the factor is representative of the time period corresponding to July 1, 2018.

Since the Loss Adjustment Expense ratio is at the cost level corresponding to July 1, 2018, it is necessary to project this cost to the average date of accident for the period during which our rates are assumed to be effective, February 1, 2024 (one year beyond our assumed effective date of February 1, 2023). This calculation is displayed on page D-28.

Q: What other adjustments must be made to the Loss Adjustment Expense factor in order to use it?

A: The Loss Adjustment Expense Factor is determined as the ratio of loss adjustment expenses to losses. Having adjusted the expense portion of the factor in the numerator, we also need to adjust the losses in the denominator by the relevant loss trend. This calculation is performed on page D-28.

Q: Please explain the purpose of trending losses.

A: Since ratemaking is prospective in nature, historical losses need to be adjusted to reflect the cost levels anticipated to prevail during the period that the proposed rates are expected to be in effect. This adjustment to historical losses is made by applying loss trend factors. For the calculations in this filing, the assumed effective date is February 1, 2023. Historical losses are trended to reflect an average accident date of February 1, 2024 (which is one year after the assumed effective date of February 1, 2023). The loss trend factors are shown in Column (3) of page C-2 of Exhibit RB-1.

Q: Please describe how the loss trend factors are calculated for non-hurricane losses.

A: For non-hurricane losses, loss trend factors are calculated on pages D-14 to D-16 of Exhibit RB-1.

Page D-14 shows historical growth in claim frequencies, loss severities, and pure premiums that occurred during the historical experience period for fire. Based on this information, the Bureau's Property Rating Subcommittee selected annual rates of change in frequencies, severities, and pure premiums. Separate annual rates of change were selected for two different time periods –the historical time period and the prospective time period. Annual rates of change for the historical time period are used to trend the historical loss experience to the average accident date of the latest year (July 1, 2020). Annual rates of change for the prospective time period are used to trend losses from the latest year to an average accident date of February 1, 2024 (which is one year after the assumed effective date of February 1, 2023).

When selecting the prospective annual trend for loss severities, the Bureau's Property Rating Subcommittee considered the impact of increases in inflation that has occurred after the time period associated with the historical experience period. The historical experience period that reflects accident years 2016 through 2020 wouldn't capture the impact of higher rates of inflation observed during 2021 and 2022.

Page D-16 shows how the selected annual change in losses was converted to loss trend factors that can be applied to each of the accident years. The loss trend factors shown in Column (7) reflect the combined impact of loss trend over the historical and the prospective time periods. These loss trend factors also appear in Column (3) of page C-2.

Q: Please explain the purpose of premium trend factors in Column (5) of page C-2.

A: Since ratemaking is prospective in nature, it is important to adjust historical experience so that it will be reflective of future conditions. Due to the impact of inflation, insureds generally purchase higher policy limits over time. Premium trend factors are used to adjust historical experience to reflect subsequent changes in average policy limits over time.

Q: Please describe the calculation of the premium trend factors in Column (5) of page C-2.

A: The premium trend procedure is based on the annual growth in average policy amount relativities during the experience period. This procedure is displayed on pages D-17 and D-18.

The premium trend factors are calculated in a two-step process. The first step involves calculating Current Amount Factors for each year. The Current Amount Factors trend the average policy amount relativity from a given historical year to the average date of writing for the latest accident year of the review (January 1, 2020).

The Current Amount Factors are calculated by taking the ratio of the average policy size relativity for the most recent year to the average policy size relativity for each of the five years in the experience period. For a given year, the average policy size relativity is calculated by taking a weighted average of the policy size relativity factor for each amount of insurance, using the exposures for each amount of insurance as weights.

The second step involves accounting for the trend in average policy size relativities from January 1, 2020 (which is the average date of writing for accident year 2020) to August 1, 2023 (which is six months beyond the assumed effective date of February 1, 2023). The prospective annual change in policy size relativities was selected by the Bureau's Property Rating Subcommittee after reviewing the fitted annual rate of change in policy size relativities during the historical experience period. As with loss trend, the Bureau's Property Rating Subcommittee selected prospective annual changes in policy size relativities after considering the effect of increases in inflation that have occurred after the time period associated with the historical experience period.

Q: Could you please explain the average rating factor Column (7) on page C-2?

A: Column (7) is the average rating factor for the policies purchased in each year. The average rating factor is the ratio of the average rate at manual level to the average current base rate. For example, let's assume that the current territory base rate for frame construction with \$75,000 buildings coverage is \$100, that the rating factor for masonry is 0.9 and that the rating factor to purchase an additional \$25,000 of coverage A is 1.2. Then the average rating factor for a \$100,000 masonry policy is calculated as:

$$(100 * 1.2 * 0.9) / 100 = 1.08$$

This factor is needed to adjust the average trended loss costs in Column (6) to a base class level. Since most policyholders do not purchase exactly the base amount of coverage, the average trended loss cost is divided by the average rating factor to convert this average trended loss cost into a trended base class loss cost which is shown in Column (8). The derivation of the average rating factors for fire is shown on pages D-32 to D-41.

Q: Please explain the Weighted Trended Base Class Loss Cost, page C-2 Line 10.

A: Line 10 is the resulting Weighted Trended Base Class Loss Cost obtained by applying the accident year weights shown in Column (9) to the Trended Base Class Loss Cost for each year shown in Column (8). This Weighted Trended Base Class Loss Cost is the forecasted Base Class Loss Cost for policies written during the one-year period after the assumed effective date of February 1, 2023.

Q: Please explain credibility on Line 11, page C-2.

A: Line 11 is the credibility of the experience based on the number of house years during the 5-year period. The full credibility standard is based on a procedure that considers the frequency of claims and the variability of the size of those claims. The procedure is explained in a CAS Proceedings Paper “Credibility of the Pure Premium” by Mayerson, Jones and Bowers. The full credibility standard is based on a normal distribution with a 90% probability of the pure premium being within 10% of the expected value. The full credibility standard for Fire is 500,000 house years and 330,000 house years for Extended Coverage.

Q: Please explain what Line 12 entitled “fixed expense per policy” on page C-2 refers to and what it represents.

A: Line 12 “fixed expense per policy” refers to the amount of the prospective premium dollar needed to cover general and other acquisition expenses on policies written in the prospective period. General expenses along with other acquisition expenses constitute the so-called fixed expenses. They are fixed in that they do not vary as a direct function of the premium dollar. For example, the cost of office equipment, rent and other overhead-type expenses are fixed expenses. Expenses such as commissions and premium taxes, on the other hand, are examples of expenses that rise or fall directly with premium.

The number shown on Line 12, \$3.62, represents the dollars of general and other acquisition expenses trended to the levels anticipated to prevail during the prospective period. This is appropriate because general and other acquisition expenses are normally incurred at the time a policy is written.

Q: Please explain how the figure \$3.62 on Line 12 of page C-2 was derived.

A: The derivation of the figure \$3.62 is shown on page D-28. Based on reviewing the 2018 to 2020 experience on page D-22, the Bureau’s Property Rating Subcommittee selected an untrended general expense ratio of 0.057 and an untrended other acquisition expense ratio of 0.085.

In order to trend these to the cost levels anticipated to prevail, we project these forward to the prospective period. The average selected expense trend of 4.0% is applied over the time period from July 1, 2019 (the average date of the experience on which the general expense ratio is based) to August 1, 2023 (the average date of writing under the proposed rates). Since this ratio is relative to premium, we must also project the amount of insurance from 2019 levels to the level anticipated to be in effect on business written between February 1, 2023 and January 31, 2024. This is done by using the Premium Trend Factor for 2019 of 1.204, which I have previously discussed.

This trended fixed expense ratio is then multiplied by the latest year current base rate of \$26.02. The result is a statewide dwelling fire fixed expense loading of \$3.62.

Q: What does Line 13 show on page C-2?

A: Line 13 is a combination of the Trended Base Class Loss Cost and the Trended General Expense and Other Acquisition expenses. The figure \$20.99 is the dollar amount that is required to cover the portion of the base rate that is needed to cover anticipated losses, loss adjustment expenses, general expenses and other acquisition expenses.

Q: What does Line 14 on page C-2 show?

A: Line 14 takes into account the variable expenses, which include commission and brokerage, taxes, licenses and fees, profit, contingencies and dividends. From page D-22, we see that the commission and brokerage ratio is 11.5% and the taxes, licenses and fees ratio is 2.9%. The provision for dividends is 0.5%. The provision for underwriting profit is 8.0%. The contingency provision is 1.0%.

As in past dwelling filings, Bureau committees reviewed the latest available policyholder dividends payment data as well as the multi-year history of companies consistently paying dividends to policyholders. The Bureau's subcommittee concluded that a factor for expected dividends is appropriate to include in this filing. The data contained on page D-22 show that the dividends, though constituting a small percentage of premium, have been paid consistently and in material amounts over the years. Based on these facts, the Bureau has included a provision of 0.5% of premium to reflect anticipated dividends during the experience period. Given the consistency of the historical data as to the payment of dividends, this is a reasonable assumption. Reflecting dividends in a filing by a rating bureau is an actuarially sound methodology, and doing so is consistent with the Statement of Principles Regarding Property and Casualty Insurance Company Ratemaking, which provides that rates should contemplate the cost of policyholder dividends. Policyholder dividends are returns of premium to a company's policyholders and are not the same as dividends that publicly traded stock companies (owned by shareholders) pay to their shareholders. If dividends were not reflected in the Bureau's rates, the profit level in the filing would not be achieved because of dividends paid to policyholders.

The 8.0% underwriting profit provision was selected by the Bureau's committees based on reviewing the analysis by Dr. George Zanjani. This filing also contains a 1% provision for contingencies. The profit and contingency factors are applied equally across the state.

The items known as variable expenses are reflected in Line 14. They vary in direct proportion with the premium dollar.

Combining variable expenses, profit, contingencies, and dividends results in 23.9 cents of every premium dollar being paid for these expenses. The remaining 76.1 cents pays for losses, loss adjustment expenses, general expenses and other acquisition expenses.

Q: What is the source of the percentages on page D-22 with respect to commissions and brokerage and taxes, licenses, and fees?

A: The Bureau conducts special expense data calls annually. Companies individually complete the special expense call, which includes reporting expense dollars as well as premiums at collected level and adjusted to manual level. The Bureau checks and compiles this information for all companies and sends it to ISO for use in the rate review and the Filing. The percentages on page D-22 were calculated from the 2016, 2017, 2018, 2019 and 2020 North Carolina expense calls for data undertaken by the Bureau.

The percentages for Commissions and Brokerage, and Taxes, Licenses, and Fees are a function of written premium. The determination of whether to select expenses as a percentage of written premium or as a percentage of earned premium is influenced by which premium best matches the time at which the expenses are incurred. For commissions & brokerage, the selection was 11.5% for Fire and 9.2% for Extended Coverage (see page D-25). For taxes, licenses and fees, the selection was 2.9% for Fire and 2.6% for Extended Coverage (see page D-25). General and other acquisition expenses are determined based on a ratio to earned premium at manual level. The North Carolina special calls for 2016, 2017, 2018, 2019, and 2020 were used for these as well. The selected general expense provision was 5.7% for Fire and 4.5% for Extended Coverage (see page D-25). The selected other acquisition expense provision was 8.5% for Fire and 7.5% for Extended Coverage (see page D-25). These selections are then adjusted by ISO to reflect trend.

Q: What is the source of the percentage on page D-22 for contingencies?

A: The Bureau committees selected that factor, and I agree with it. A 1% factor has been consistently employed in past Bureau property insurance rate filings. A 1% contingency factor is a standard factor that has been used for many years across the country in property insurance ratemaking. The factor was selected by the Bureau committees based upon recognition of the systematic bias that causes actual underwriting results, analyzed over time, to be worse than the provision assumed in the rates. Reasons for this bias are many.

One reason is that property insurance involves many risks, but not all of them are observable in the experience or adequately recognized in normal ratemaking.

In addition, the writing of property insurance in North Carolina is subject to law changes, court interpretations, jury verdicts and judicial decisions that expand losses beyond what was contemplated when the policies were written. In addition, major unexpected losses can and do come from large and infrequent events of a type and magnitude that are not reflected in the experience period. One historical example is the sudden surge of mold claims around the early 2000's that far exceeded the amounts seen in experience periods.

Additional considerations justifying a contingency factor include the delay, uncertainty and difficulty in obtaining needed rate increases in North Carolina. In North Carolina and a very few other states, insurance companies writing dwelling insurance are required to go through rating bureaus in order to achieve needed rate increases. This regulatory system can cause significant delay in obtaining needed rate level increases. North Carolina differs from states that rely more on competition to set rates. The system in this state requires that data be collected from many companies writing dwelling insurance and then aggregated and analyzed prior to making a filing for adequate rates on behalf of all companies. As the physical size of this 2022 filing demonstrates, the amount of information required to be submitted is massive, and it takes significant time to compile that information. Mr. Anderson of Milliman (see his pre-filed testimony and exhibits) has concluded that a 1% contingency provision is fully supported by this single issue regarding the delay in obtaining needed rate increases in North Carolina.

Q: Would you explain Line 15 on page C-2 entitled "Base Class Rate Excluding Comp. for Assess. Risk & Dev."?

A: The net base rate per policy is calculated by dividing the Loss and Fixed Expenses in Line 13 by the expected loss and expense ratio in line 14. This is the net base rate before incorporating the factors for deviations and the compensation for assessment risk per policy.

Q: Would you explain Line 16 on page C-2 entitled "Compensation for Assessment Risk per Policy"?

A: Compensation for assessment risk is a provision that is calculated by Mr. Anderson of Milliman (see his prefiled testimony and exhibits) to reflect the cost to voluntary market insurers of maintaining sufficient capital to pay the assessments for residual market losses, to the extent required by law. If the two residual market mechanisms (the Beach Plan and the FAIR Plan) do not have sufficient capital, reinsurance and reserves to pay losses for a catastrophic hurricane event or series of events, then companies writing homeowners, dwelling and other lines of property insurance in the voluntary market will be assessed for such losses even if they had chosen not to write in the coastal or beach areas where the losses occurred. In effect, the voluntary market companies are being required to provide free reinsurance to the residual market and its policyholders who can only find coverage in the residual market. The

voluntary market companies must therefore maintain capital sufficient to cover such losses, in addition to their own losses, even though those companies have elected not to write the policies that generate those losses. The compensation for assessment risk factor is the provision that must be included in the rates in order to compensate voluntary market insurers for bearing this risk of assessments from the Beach/FAIR Plans.

As a result of legislative action in 2009, some of the exposure of the voluntary market companies to residual market assessments has been capped at one billion dollars per year. Milliman's analysis of the necessary compensation for the risk of residual market assessments incorporates this cap.

It should be noted that the \$1 billion cap only applies to assessments by the Beach Plan (which writes business in the beach and coastal areas) and does not apply to assessments to pay for losses in the FAIR Plan (which writes business in all areas of the state except the beach areas). In the recent several years, the FAIR Plan has rapidly increased its writings statewide. As the number of policies and amount of uncapped exposure in the FAIR Plan grows, that growth could impact the compensation for assessment risk. Those policies are vulnerable to losses from catastrophic hurricanes, and companies are subject to unlimited assessments from these losses.

The compensation for assessment risk amount of 0.49 per policy is calculated by first multiplying the 1.6% provision by the current average statewide base rate of 26.14, resulting in a value of 0.42. To be incorporated in the rates, however, this provision must be adjusted to account for the commissions and taxes, licenses and fees that the companies will need to pay on this additional premium. That is done by dividing the 0.42 by 1 minus the sum of commission and brokerage expense and taxes, licenses and fees expense as shown below.

$$\frac{0.42}{1 - 0.115 - 0.029} = 0.49$$

Q: What is the source of the percentages used on Line 18 for anticipated deviations?

A: As in past dwelling filings, the Bureau committees reviewed deviations. Deviations are a cost of doing business in North Carolina for the insurers that have them approved by the Department. They are a cost of risk transfer and therefore need to be contemplated in the rates according to the Statement of Principles Regarding Property and Casualty Insurance Ratemaking. They constitute "savings" that must be considered pursuant to statute. Companies are required to report their approved deviations. If rates were set without contemplating deviations, the industry would not achieve the profit provision included in the rates. The Bureau reviewed deviations in conjunction with consent to rate data and surcharges on dwelling policies written in the Beach Plan. The Bureau and ISO believe that it is actuarially appropriate for filings made by rating bureaus to contain

a factor to reflect expected deviations and other variations from the manual rate that would result in the filed profit level not being achieved. The Bureau also recognizes that the reflection of expected deviations has been a contentious issue in previous rate filings. However, in this filing the Bureau elected to file a provision of zero for deviations.

Q: Would you explain Line 20 on page C-2 entitled "Required Base Class Rate per Policy"?

A: Line 20 is the required base rate that is needed to ensure that sufficient revenue is collected to cover the losses and expenses that are expected to result from the policies written during the year following the effective date of this filing.

Q: Would you explain line 21 on page C-2 entitled "Current Average Base Class Rate"?

A: Line 21 is the current average base class rate for Fire on all dwelling policies included in the review. This rate assumes that each policyholder is buying only the base coverage.

Q: Would you explain Line 22 on page C-2 entitled "Indicated Rate Level Change"?

A: Line 22 is the percentage change in the current rates that will be necessary to make the rates adequate for the cost levels that are expected to prevail in the one-year period following the effective date of the filing. The percentage change is determined by taking the required base rate per policy on Line 20 and dividing it by the current base rate from Line 19. This results in an indicated rate level change of 7.4% for the fire portion of dwelling policies.

Q. How are these changes distributed by class?

A. On page C-7, the calculations of the indicated change for fire buildings and contents classes are shown. Column (1) displays the Trended Adjusted Incurred Losses for each of the two classes - buildings and contents. The losses shown are for the latest five years. Column (2) gives the Five-Year Earned House Years total, which is the sum of the exposures by class for the five-year period. Column (3) provides the Trended Average Rating Factor. Column (4) gives the Base Class Loss Cost for each class and total. This loss cost is obtained by dividing the five-year total trended adjusted incurred losses by the five-year total house years times the trended average rating factor. Column (5) is the credibility assigned to each class's experience, based on the full credibility standard of 500,000 house years for fire. Column (6) is the Credibility Weighted Loss Cost for each class. The complement of credibility for use in this calculation is the Total Base Class Loss Cost multiplied by the ratio of the current base rate for each class to the total current base rate.

The statewide credibility weighted loss cost is obtained by weighting the class credibility weighted loss cost by the individual class house years. Column (7) provides the Indicated Base Loss Cost by class.

This is the statewide base loss cost adjusted by the class relativity indicated by the credibility weighted loss cost. Column (8) shows the Current Base Rate by class. Column (9) displays the Expected Loss and Fixed Expense Ratio. The Indicated Base Rate is shown in Column (10). The indicated base rate is the sum of the loss cost and fixed expenses divided by the expected loss and fixed expense ratio. Column (11) is the Compensation for Assessment Risk Per Policy. Column (12) is the Base Rate Excluding Deviations. Column (14) is the deviation amount per policy that is needed to be reflected in the required base rate. Column (15) is the sum of the indicated base rate before deviations in Column (12) and the deviation amount in Column (14). Column (17) shows the Indicated Base Rate Change by class. Column (18) shows the Indicated Rate Change Balanced to Statewide Level. This rate change balances to the indicated statewide change of 7.4%.

Q: Does the filing contain a revision to the present territory rate levels?

A: Yes. In connection with the statewide rate level change we have been discussing, new territory rate changes are displayed on page A-3 for the fire portion of dwelling.

The development of the indicated relative change by territory is completed in such a way that the overall effect is to balance to the indicated statewide change. The allocation of the statewide rate change to individual territories is done on pages C-9 and C-10 for the fire portion of dwelling.

Q: How has the Bureau treated general and other acquisition expense by territory?

A: General and other acquisition expenses are treated as fixed expenses. The trended fixed expense per policy by territory is calculated by first distributing the statewide trended fixed expense ratio to each territory. This is accomplished by multiplying the statewide trended fixed expense ratio by the ratio of the statewide latest-year average rate to the territory latest-year average rate. Finally, the trended fixed expense per policy by territory is calculated as the product of the territory trended fixed expense ratio and the latest-year average territory base rate. This calculation is shown on pages D-29 and D-30 of the filing.

Q: Please turn to page C-4 of Exhibit RB-1. Would you explain what that page shows?

A: Page C-4 shows the statewide rate level calculation for the extended coverage portion on a dwelling policy in North Carolina. As page C-2 did for fire, Page C-4 determines the actuarially indicated rate level change for dwelling extended coverage.

- Q. Is the indicated statewide rate change for extended coverage calculated in the same general manner as for fire?
- A. Although the statewide methodology for extended coverage is similar to that used for fire, there are three main areas where the methodology differs for these two coverages. First, actual hurricane losses for extended coverage, while reviewed and considered, have been excluded from the losses shown in Column (1) and are later replaced by the "Trended Modeled Hurricane Base Class Loss Cost", which is displayed in Line 13 of page C-4. Second, the actual excess non-modeled losses in Column (2) have been replaced by an excess factor loading included in Column (3) of page C-4. The excess loss factor is shown on page D-47. Third, a provision for the net cost of reinsurance is included in Line 20 of page C-4.
- Q. Other than on page C-4, have actual hurricane losses been excluded anywhere else in the filing?
- A. Yes, they have been excluded in the development of the indications for extended coverage by class and by territory, and in the calculation of the non-hurricane excess factor.
- Q. How have these hurricane losses been identified in order to be excluded?
- A. The method to remove hurricane losses from the derivation of the excess factor depends on the detail of the available data during different periods of time.

For the beginning of the period through 1995, territory losses by month are available for ISO data only. The territory non-hurricane losses for this period are calculated as follows: first, the average losses for the month in which the hurricane occurred are calculated based on the non-hurricane years. The average monthly losses are then added to the eleven remaining months of the hurricane year and divided by the hurricane year annual losses resulting in a non-hurricane adjustment factor. This factor is then applied to either reported losses or adjusted losses by territory for all statistical agents to obtain non-hurricane losses. For hurricanes, wind losses are sometimes reported as water losses or "all other" property damage losses. To accurately estimate the non-hurricane losses, the above non-hurricane factors are calculated for water and all other property damage and then applied to the water losses and the all other property damage losses.

For the period 1996 to 2002, based on information from NOAA and other sources, the specific dates on which a given hurricane was active in North Carolina are determined. The loss experience for ISO is then examined by date and cause-of-loss. Wind losses and losses for other weather-related perils which occurred on these dates are assumed to be hurricane losses. For ISO data, the percentage of hurricane losses to total losses is calculated. To estimate the hurricane losses for statistical agents other than ISO, the percentage of hurricane

losses in the ISO data (relative to the ISO yearly total) is applied to the total loss amounts for the other statistical agents.

For the period 2003 to 2020, the data described above (for the period from 1996 to 2002) is also available from ISS and has been examined together with the ISO data. For the combined ISO and ISS data, the percentage of hurricane losses to total losses is calculated. To estimate the hurricane losses for statistical agents other than ISO and ISS, the combined percentage of hurricane losses from ISO and ISS data (relative to the ISO and ISS yearly total) is applied to the total loss amounts for the other statistical agents.

Actual hurricane losses of \$64,400,529 were removed from 2016; \$264,976 were removed from 2017; \$577,649,889 were removed from 2018; \$27,038,100 were removed from 2019; and \$30,051,099 were removed from 2020. This information is shown in a footnote on page C-4.

- Q. Do you have an opinion as to whether the incurred losses excluding hurricanes shown in Column (1) on page C-4 of Exhibit RB-1 accurately represent the anticipated value of dwelling extended coverage incurred losses, excluding actual hurricane losses, that resulted from claims which took place during each of the years ended December 31 in North Carolina?
- A. Yes, I do.
- Q. What is that opinion?
- A. I believe that the losses excluding actual hurricane losses shown in Column (1) do accurately represent the expected ultimate value of those losses.
- Q: Please explain the figure contained on Line 13 of page C-4 labeled "Trended Modeled Hurricane Base Class Loss Cost".
- A: That figure is the expected hurricane losses for a base risk written during the prospective time period. Aon provided the average modeled hurricane losses from running two hurricane simulation models -- one developed by AIR Worldwide (AIR) and one developed by Risk Management Solutions (RMS). The average modeled hurricane losses were then loaded with catastrophe loss adjustment expenses (LAE). To obtain an average loss cost value, the modeled loss amounts are divided by earned house years for calendar year 2020. To convert the average trended modeled hurricane losses with LAE to base class level, it is divided by the latest year trended average rating factor. The trended average rating factor is calculated as the product of 2020 average rating factor and the premium trend factor for calendar year 2020. The derivation of the modeled hurricane base class loss cost is shown on page D-79.

- Q: How were the modeled hurricane losses calibrated so they would be applicable to the prospective time period that the proposed rates will be in effect?
- A: The exposures that were used in the hurricane model runs were trended to six months beyond the assumed effective date of February 1, 2023. Page D-19 shows the calculation of the annual rate of change that was used to trend the exposures that were used as inputs to the hurricane models.
- Q: Did the Bureau consider actual hurricane losses?
- A: Yes. The actual hurricane losses during the five years of experience were reviewed and considered; however, as has been done in prior Bureau filings, those losses have been excluded from the historical losses used in the filing and have been replaced by modeled losses.
- Q. Why were models used to develop the projected hurricane losses instead of using actual hurricane losses?
- A. The catastrophic nature of the hurricane peril makes it a very volatile peril in terms of loss severity, frequency and location of occurrence. Catastrophe losses in general tend to be high severity, low frequency events. Since we use five years of loss experience data in dwelling ratemaking calculations, it is likely that there will be scenarios ranging from no hurricane losses to extremely severe hurricane losses during the experience period. Also, if a hurricane were to hit a particular area of the state, the losses might be reflected only in that area of the state, with little or no reflection in other areas of the state. Therefore, if we analyze hurricane losses without any adjustment, the indicated rate level need will be subject to large yearly fluctuations resulting in rates beyond the actuarially sound level.

Devastating hurricanes are relatively uncommon events compared to other causes of loss. The occurrence or non-occurrence of actual hurricane events is not predictive of the range of hurricane events that can occur or the probability of their occurrence. In addition, there is not enough experience with hurricanes since accurate insurance loss records began to be maintained for actuaries to employ actual losses as opposed to models. For the older years, much of the past insurance data is outdated for the purpose of examining hurricane exposure and is of limited utility in projecting future hurricane losses. It includes losses from hurricanes that occurred when housing patterns were different, population density was lower, houses were built differently, building codes were different, construction prices were different, houses had fewer and less expensive contents, and labor costs and practices were different, etc.

The hurricane models are based on publicly available scientific data, mathematical and empirical models, and the experience of engineering, geological, meteorological, economic and insurance experts. Actual hurricane loss experience is also used to calibrate the models. The models are run for a large number of

simulated events (e.g. 100K years) to estimate what would be the expected long-term average hurricane losses for a given risk profile. The modeled hurricane losses are accurate, stable, and represent projections of the long-term average annual hurricane losses. There are several advantages of using models to project hurricane losses over using actual hurricane losses, including the following. First, the models improve the accuracy of hurricane loss projection in a long-term average view as described above. Second, replacing the volatile actual hurricane losses with modeled hurricane losses will smooth out the periodic spikes in the indications following hurricanes. Hurricane modeling is the widely accepted and most accurate way of considering the hurricane exposure. Modeling has become the standard practice in the insurance industry for insurers to estimate long term expected hurricane losses for ratemaking purposes, and has been widely accepted by the regulatory bodies in the United States. Modeling is also uniformly employed in the reinsurance industry, financial markets and meteorological field to determine expected prospective hurricane losses. Scientists who work on the models update those models frequently to reflect the latest understanding of meteorological science.

An example of the need and value of models in producing stable loss costs can be seen from the hurricane season of 2018. In 2018, North Carolina was significantly impacted by Hurricane Florence. If the current rate analysis included the losses due to Hurricane Florence, rather than losses generated by hurricane models, rates would spike. Conversely, if the rates were based on there being no major hurricane strikes during the preceding five-year experience period, it would not be actuarially appropriate to assume that the absence of hurricane losses would be the expectation for a future prospective rating period.

From a practical and public policy standpoint, raising rates significantly following a devastating and often tragic hurricane is the worst time for the policyholder. The use of simulation models produces a stable and actuarially sound projection of the true loss potential both in terms of statewide exposure values and in terms of territorial distribution of that exposure. Modeling is far preferable to any analysis based on the happenstance nature of historical hurricane loss data.

The Property Rating Subcommittee and ISO Staff have examined actual hurricane losses in North Carolina and have excluded those losses from the incurred losses in filings for a number of years. As done for the 2020 dwelling filing, we have replaced the actual hurricane losses with the average modeled hurricane losses from two hurricane models for the rate review underlying this filing, which I deem to be the actuarially sound practice for the hurricane peril.

- Q. Does the Filing in any manner require policyholders in North Carolina to pay the losses or subsidize the rates of policyholders in other states, particularly hurricane prone states such as the Gulf Coast states?

A. No, it would be actuarially inappropriate to do so. Each state is evaluated separately, and rates in North Carolina are based only on North Carolina's loss potential. Imposing such a subsidy would not be fair to North Carolina policyholders and would not be permitted by North Carolina regulators. There is a greater risk of hurricane losses in Florida and some other Gulf states than in North Carolina, and it would not be fair or actuarially sound for North Carolina policyholders to pay for those losses or subsidize the insurance costs for persons in those areas. For the same reason, it would not be fair or actuarially sound for the Bureau to attempt to spread the hurricane exposure of the hypothetical one company in North Carolina to persons in other states such as in the Midwest where there is little hurricane exposure. Policyholders and regulators in Iowa, for example, would not be willing to share that risk. To summarize, using other states' losses to determine North Carolina rates is unfair and inequitable, and the Bureau does not do this for these reasons.

Q: As an actuary, how have you determined that it is reasonable to rely on output from the hurricane models for purposes of the Bureau's Dwelling rate filing?

A. Hurricane models incorporate specialized knowledge (including meteorology and engineering) that is outside the area of expertise of most actuaries, including myself. Actuarial Standard of Practice ("ASOP") 38 titled "Using Models Outside the Actuary's Area of Expertise (Property Casualty)" provides guidance to actuaries in this situation.

I have reviewed the pre-filed testimony of Minchong Mao, including her statement of compliance with ASOP 38 for both the RMS and AIR hurricane models for purposes of the Bureau's Dwelling rate filing. Ms. Mao is employed by Aon and is an FCAS with extensive experience using catastrophe models. As documented in her testimony, Ms. Mao has conducted an evaluation of the RMS and AIR hurricane models and has concluded that the modeled hurricane losses are reasonable and appropriate projections of expected hurricane losses for use by the Bureau in its dwelling rate filing.

In addition to relying on the work conducted by Ms. Mao, I have independently evaluated the RMS and AIR hurricane models for purposes of compliance with ASOP 38 with respect to including output from the RMS and AIR hurricane models as part of the Bureau's dwelling rate filing. Some of the conclusions of my ASOP 38 investigation include the following:

- Both the RMS and AIR models were developed and maintained by experts in a wide range of disciplines. This is illustrated by the numerous employees with expertise in key aspects of the models, including meteorology, vulnerability, actuarial science, statistics, and computer science.

- Both the RMS and AIR models have gone through rigorous external review, including being found acceptable by the Florida Commission on Hurricane Loss Projection Methodology.
- Results from the RMS and AIR models yield projected hurricane frequencies and severities that are reasonable when compared to actual hurricane experience observed in North Carolina.

Q. Who performed the hurricane modeling for the Bureau?

A. Aon.

Q. What did the Bureau furnish to Aon to enable Aon to perform its analysis?

A. At the direction of the Bureau, ISO furnished to Aon the North Carolina extended coverage insurance exposure data on the total number of earned house years and earned insurance years by territory for the most recent year in the experience period. The data provided to Aon are correct to the best of my knowledge, information and belief.

ISO provided both actual (un-trended) and trended coverage limits to Aon. As discussed earlier in my testimony, the trended exposures were used as inputs when Aon ran the hurricane models.

Q. How were modeled hurricane losses derived?

A. Aon ran two hurricane models, one from RMS and one from AIR. These two models are the most widely used and relied upon hurricane models. The use of multiple models is required by statute starting with filings made on or after October 1, 2017, though I understand that the Bureau started using two models with its Dwelling filing in 2016.

The hurricane models simulate many years of hurricanes and resulting losses for the portfolio of North Carolina exposures. The results of the two models were averaged by Aon. The Property Rating Subcommittee reviewed the blended model results provided by Aon and found them to be actuarially sound. By averaging the two models, the Bureau has elected to give each model equal weight. Given the legislature's mandate to use more than one model, it would be inappropriate to employ the results of just a single model. Using an average of the two models also produces an unbiased estimate for future hurricane losses.

Aon accounted for loss adjustment expenses (LAE). Aon's data shows that LAE, as a percentage of hurricane losses, is lower than the LAE percentage for non-hurricane losses. Therefore, after review of Aon's data, the Property Rating Subcommittee selected a 6% LAE provision to be applied to the modeled hurricane losses.

The modeled hurricane losses (including LAE) are shown on page D-79.

Q. How is the amount of insurance in effect determined?

A. For the purpose of developing the hurricane loss cost, the amount of insurance that is in effect is determined as the sum of the various internal limits found in the extended coverage portion of a dwelling policy. There are four coverages involved: Coverage A (building), Coverage B (other structures), Coverage C (contents) and Coverage D (loss of use). The total amount of coverage can vary by policy form. For DP form 1 (Basic Form), the total limit for buildings is the Coverage A amount, and neither Coverage B nor Coverage D provides additional limits because any Coverage B or D losses are applied against the Coverage A limit. The coverage C limit is as reported on the individual policy record.

For DP form 2 (Broad Form) and DP form 3 (Special Form), the total limit for buildings is the sum of Coverage A, Coverage B, and Coverage D limits. The Coverage B limit is 10% of Coverage A, and the Coverage D limit is also 10% of Coverage A. The coverage C limit is as reported on the individual policy record. These differences in total amounts were reflected by Aon in running the models.

Q: You referred earlier to a separate procedure for dealing with non-hurricane excess losses. Please describe that procedure.

A: At a high-level, the excess procedure involves removing actual excess non-hurricane losses during the 5-year experience period and replacing these values with a provision that is based on reviewing a much longer 30-year time period.

An adjustment was made to the non-hurricane losses in the years in which there were very severe storms such as tornadoes, thunderstorms and other damaging wind storms. The adjustment caps average losses by territory in years where abnormally high losses coincide with severe non-hurricane storm activity. The adjustment relies on a factor developed by using a statewide average. As a result of this procedure, a long-term excess factor of 1.057 was calculated and therefore applied to the losses. This calculation is shown on page D-47. This general procedure has been employed in past dwelling filings and is customarily employed to smooth out and appropriately reflect prospective non-hurricane wind losses.

Q: Was it necessary to exclude hurricane losses in calculating the excess factor?

A: Yes, it is necessary to exclude hurricane losses when calculating the excess factor because the provision for hurricane losses is developed separately by way of hurricane models. Hurricane losses have been excluded in the calculation of the excess factor as derived on page D-47.

Q: What is the source of the \$28.24 for net cost of reinsurance in Line 20 of page C-4?

A: The source of the \$28.24 for net cost of reinsurance is an analysis performed for the Bureau by Aon. In that analysis, Aon determined the expected net cost of reinsurance for the composite one company writing dwelling insurance in North Carolina. Companies buy catastrophe reinsurance due to North Carolina's significant hurricane exposure. The net cost of that reinsurance is the expense and profit component of the reinsurance premium paid by insurers (the loss component is in the direct losses used in the overall rate determination). More details of the analysis are included in the testimony of other witnesses.

The Bureau relies upon the data that Aon has accumulated as to the actual cost of purchasing reinsurance in the current reinsurance market. Aon is one of the largest reinsurance brokers in the world.

To calculate the net cost of reinsurance per policy, the amount of total dollars of reinsurance is divided by the number of house years for 2020 times the 2020 trended average rating factor. This quantity is then divided by the expected loss and fixed expense ratio. For extended coverage, the actual calculation is:

$$\frac{126,272,086}{622,453 * 9.163 * 0.784} = 28.24$$

Q. Can reinsurance payments by each company writing in North Carolina be allocated and aggregated for use in this Filing?

A. No. It is not possible to measure reinsurance costs of the various insurance companies applicable specifically to Dwelling insurance written in North Carolina. The first reason is that companies often do not enter reinsurance treaties exclusive to only one line of insurance. The approximately 40 individual insurance companies writing Dwelling insurance in North Carolina have hundreds of different treaties that cover many different lines of insurance (automobile, commercial property, other residential property, etc.) as well as dwelling. Second, reinsurance treaties often are not exclusive to just North Carolina or for only one peril. Companies negotiate reinsurance treaties in many different geographical areas (portion of a state, single state, multiple states, Atlantic Basin areas, countrywide, international, etc.), and covering many different perils (such as automobile flooding, hurricanes, direct earthquake losses, tornados, wildfires, etc.). Finally, reinsurance for a given set of risk exposure (such as North Carolina Residential Dwelling) is often not limited to one treaty. An individual company will purchase reinsurance from different reinsurers for different layers of loss under different types of treaties, or also use catastrophe bonds for different layers of loss. For these reasons, it is not feasible to measure reinsurance costs specific to North Carolina, much less specific to the line of Dwelling insurance, in each individual treaty or bond or for each individual company.

It is important to note that the calculation of the net cost of reinsurance in this Filing relates exclusively to the residential Dwelling loss costs in North Carolina. It would not be appropriate for North Carolina insureds to assume the reinsurance costs of exposures in other states and vice-versa. Aon's database is based on actual reinsurance transactions and on conditions in the current reinsurance market and is updated regularly to reflect changes in actual market conditions. Aon's database and expertise are a great source of information as to actual reinsurance practices and costs for the hypothetical one company writing residential Dwelling insurance in North Carolina.

Q. Are the remaining portions of the rate level calculation for extended coverage similar to that for fire insurance?

A. Yes, they are.

Q. Does the filing revise the credits for the Windstorm or Hail Exclusion and for Wind Mitigation?

A. Yes. The filing revises the credits for the Windstorm or Hail Exclusion and for Wind Mitigation that are available in Territories 110, 120, 130, 140, 150 and 160. The derivation of these credits is shown on pages C-18 to C-23.

Q: Please turn to page A-2 of Exhibit RB-1 and explain what is shown on that page.

A: Page A-2 of Exhibit RB-1 shows the indicated and filed statewide rate level changes. For Extended Coverage, the indicated rate change is being phased in over a two-year time period.

Q: What is shown on Pages A-3 and A-4 of Exhibit RB-1?

A: Page A-3 shows the indicated and filed rate level change for each territory for fire. Similarly, page A-4 shows the indicated and filed rate level changes for each territory for Extended Coverage. Separate rate changes are shown for fire buildings, fire contents, extended coverage buildings, and extended coverage contents. In addition, separate filed rate changes are shown for Year 1 and Year 2.

Q: Do you have an opinion as to whether the data utilized and the methods of calculating the indicated rate level changes and other changes contained in the filing are actuarially sound and reliable and if so, what is that opinion?

A: Yes, I have an opinion. In my opinion, the data utilized and the ratemaking methodologies used by the Bureau are based on and consistent with generally accepted actuarial principles and procedures, and the indicated rates are actuarially sound and reliable. In my opinion, the ratemaking methodology is actuarially sound and produces indicated rates that meet the statutory standard of being not excessive, inadequate or unfairly discriminatory.

Q: Do you have an opinion as to whether the indicated rate level changes contained in Exhibit RB-1 are fully justified and, if so, what is that opinion?

A: In my opinion, the indicated rate level changes are fully justified and are not excessive or unfairly discriminatory in any respect.

Q: Are there any qualifications you wish to attach to your opinion?

A: Yes. In reaching my opinion, I have relied on the accuracy of the data supplied by the Bureau, by the various statistical agents, by the individual companies that reported their data to ISO and the other statistical agents, and by the Beach Plan and FAIR Plan. I have relied on Dr. Zanjani for the determination of the appropriate profit. I have relied on Mr. Anderson as to the compensation for assessment risk component of the rates. I have relied on Aon for the net cost of reinsurance component of the rates. Additionally, I have relied upon Aon for the blended output of the AIR and RMS models. I have relied on Ms. Mao for her review of the AIR and RMS hurricane models and her testimony that supports the provision for the net cost of reinsurance. I have also relied upon and concur with the decisions and the actuarial judgments of the persons on the Bureau's committees, who in many cases are actuaries. I have also reviewed, approved and rely on the work conducted by ISO staff with regards to the preparation of the ISO portions of the rate filing. I have applied appropriate actuarial standards when reviewing these various data sources.

Q: Does that conclude your testimony?

A: Yes, it does.

PAUL ERICKSEN, FCAS, MAAA
PRINCIPAL, ACTUARIAL CONSULTING
INSURANCE SERVICES OFFICE

CURRENT RESPONSIBILITIES

Leads actuarial consulting at Insurance Services Office, Inc. Responsible for providing actuarial consulting services to a wide array of clients including property/casualty insurers, residual market insurers, captives, managing general agents, law firms, and insurance departments. He has 30 years of actuarial experience in the insurance industry.

Responsible for a wide array of customized actuarial analyses prepared for individual clients, including ratemaking, reserving, program development, and other miscellaneous studies. Testified at several venues on behalf of his clients.

PROFESSIONAL EXPERIENCE

2007 to 2022: Principal of Actuarial Consulting at ISO
1999 to 2006: Consulting Actuary in the Actuarial Consulting unit of ISO
1994 to 1998: Senior Actuarial Associate in the Financial Analysis unit of ISO
1993: Consulting Actuary in the New York office of Milliman
1992: Actuarial Assistant in the Increased Limits unit of ISO

PROFESSIONAL DESIGNATIONS AND ACTIVITIES

Became a Fellow of the Casualty Actuarial Society in 1995, and is a Member of the American Academy of Actuaries.

Member of the CAS Examination Committee from 1996 through 2009.

Gave multiple presentations at CAS Meetings, including a presentation titled “The Actuary as an Expert Witness” at the following venues:

- CAS Ratemaking and Project Management Seminar in March of 2013
- Casualty Actuaries of New England in September of 2011
- CAS Ratemaking and Project Management Seminar in March of 2011

EDUCATION

Graduated from Princeton University in 1992 with a B.A. in mathematics.

EXPERT WITNESS TESTIFYING

Cases involving expert witness testimony regarding property insurance ratemaking:

- Prepared written testimony in support of the NCRB's 2018 and 2020 Homeowners rate filings and 2019 Dwelling rate filing.
- In 2008, provided expert witness testimony to the insurance subcommittee of the Florida House of Representatives regarding the adequacy of rates charged by Citizens Property Insurance Corporation. Citizens is the residual market insurer in Florida for property insurance and has been the largest writer of Homeowners insurance in the state.
- Testified at several rate hearings in support of filings submitted by Citizens Property Insurance Corporation.
- From 2005 through the present, provided extensive expert witness testimony on behalf of the Massachusetts Fair Plan regarding their Homeowners, Dwelling and Commercial Property rate filings. The Massachusetts Fair Plan is the insurer of last resort for property insurance in Massachusetts with a large coastal exposure.
- In 2007, provided expert witness testimony during a wind-only voluntary insurer's successful rate arbitration case where they were awarded a 75.4% rate increase to their hurricane rates.
- Provided expert witness testimony involving a civil litigation case.

SELECT WORK EXPERIENCES

Preparation of Homeowners, Dwelling, and Personal Auto Rate Analyses:

- Developed comprehensive actuarial rate analyses that his clients have filed with regulatory authorities.
- Experience with using output from multiple hurricane models (including AIR, RMS, and other models).
- Developed actuarial support for the provision for the cost of catastrophe reinsurance.
- Developed indicated underwriting profit provisions.

Preparation of New Homeowners and Personal Auto Programs:

- Developed the rating structure and actuarial support for new Homeowners and Personal Auto programs. This work involved companies expanding into new states, along with established insurers that wanted to replace their existing program.

Reserve Analyses:

- Prepared loss reserve analyses for both Property/Casualty insurers and self-insured entities, with an emphasis in property insurance.
- Appointed Actuary for Citizens for four years (2004, 2005, 2007, 2009)
- Appointed Actuary for Heritage Property & Casualty Insurance Company (a large publicly traded Homeowners insurer that concentrates in the Florida market) from 2012 through 2019.
- Responsible for annual reserve analysis for a large national Commercial Auto trucking company.

1 **PRE-FILED DIRECT TESTIMONY OF MINCHONG MAO**

2
3 **2022 DWELLING INSURANCE RATE FILING**

4 **by the**

5 **NORTH CAROLINA RATE BUREAU**

6
7
8 **Q. Please state your full name and business address for the record.**

9
10 A. My name is Minchong Mao. My business address is Aon, 200 East Randolph
11 Street, 11th Floor, Chicago, Illinois 60601.

12
13 **Q. What is your involvement in this matter?**

14
15 A. My employer, Aon, has been retained by the North Carolina Rate Bureau
16 (NCRB) to provide catastrophe and reinsurance analytics with respect to the
17 expected hurricane losses and net cost of reinsurance provision utilized in the
18 NCRB 2022 Dwelling Insurance rate filing. I manage the catastrophe analytics
19 team at Aon that performed these services.

20
21 **Q. Who is Aon, and what are your primary responsibilities for them?**

22
23 A. Aon is a leading global professional services firm that provides advice and
24 solutions to clients focused on risk, retirement, and health. Aon is one of the

1 world's largest reinsurance brokers and has extensive experience in catastrophe
2 modeling. I am a Senior Managing Director and a Catastrophe Actuary at Aon's
3 Reinsurance Solutions - Catastrophe Risk Analytics group. I manage an analytics
4 group within the Catastrophe Management area which focuses on catastrophe
5 actuarial and predictive analytics as it relates to ratemaking and underwriting.
6 I advise clients on catastrophe actuarial services, such as rate indications, rate
7 filing strategy, underwriting strategy, and use of catastrophe models in risk
8 management. I am responsible for Aon's compliance with ASOP 38 regarding
9 use of catastrophe models. I am a consulting actuary for Aon's in-house model,
10 Impact Forecasting, LLC. I work with a group of catastrophe modelers to provide
11 catastrophe modeling support for reinsurance placements. Our client services
12 include but are not limited to: support for multi-model analytics, customized view
13 of risks, catastrophe pricing, catastrophe risk selections, data augmentation,
14 model evaluation, real-time event response, portfolio optimization, actuarial
15 support, reinsurance cost allocations, and rating agency questionnaire support.

16

17 **Q. Describe your professional and educational background.**

18

19 A. I have been with Aon since September 2018. Prior to joining Aon, I worked at
20 State Farm Insurance Companies for over 17 years from 2001 to 2018 where I
21 led the catastrophe modeling functions since 2005. During my tenure at State
22 Farm, I was responsible for State Farm's use of catastrophe models in pricing,

1 underwriting, claims, reinsurance, securitization, enterprise risk management,
2 and rating agency reporting.

3 I have 2 years of ratemaking experience as a pricing actuary for Homeowner
4 lines at State Farm. I am familiar with the development and implementation of
5 property insurance rates and rules. I understand the challenges for an insurer to
6 balance rate adequacy, competitiveness, and meet financial objectives at the
7 same time.

8

9 I have a Bachelor's degree in Biochemical Engineering from Beijing University of
10 Chemical Technology, a Master's degree in Chemistry from Eastern Illinois
11 University, and a Master's degree in Computer Science from the University of
12 Missouri - Columbia.

13

14 **Q. Are you a member of any professional actuarial organizations?**

15

16 A. Yes. I am a Fellow of the Casualty Actuarial Society (FCAS) and a Member of
17 the American Academy of Actuaries (MAAA). I am a Certified Catastrophe Risk
18 Management Professional (CCRMP), a new designation created by the CAS
19 Institute (iCAS) and International Society of Catastrophe Managers (ISCM). I am
20 currently serving on the Casualty Actuarial Society's Climate Change Committee,
21 the American Academy of Actuaries' Extreme Event Risk Committee, and on the
22 advisory board for CCRMP designation. I am in good standing with the
23 requirements of these organizations.

1 I am part of a working group that authored the following monographs for the
2 American Academy of Actuaries:

- 3 • The National Flood Insurance Program: Challenges and Solutions (2017)
- 4 • Uses of Catastrophe Model Output (2018)
- 5 • Wildfire: An Issue Paper - Lessons Learned from the 2017–2018
6 California Events (2019)

7 I am one of the recipients of the Casualty Actuarial Society's Above and Beyond
8 Achievement Award in 2019 to recognize my leadership and contributions to
9 establish the CCRMP designation for the insurance industry.

10

11 **Q. Please describe your relevant experience and qualifications for this**
12 **proceeding.**

13

14 A. I started practicing in the catastrophe risk management field in 2005. During
15 my tenure at State Farm, I managed State Farm's catastrophe modeling function
16 from 2005 to 2018. I managed vendor relationships with AIR, EQECAT, ARA,
17 and RMS. I provided filing support and helped my employer through many
18 regulatory challenges related to the use of models in insurance operations. I
19 provided actuarial opinions on State Farm's use of catastrophe models. I
20 established the due diligence and model validation framework to ensure
21 catastrophe modeling practices at State Farm met the actuarial standards and
22 complied with laws and regulatory requirements. My team provided various
23 catastrophe risk measures and analytics for State Farm Fire and affiliates for

1 ratemaking, exposure management, claims, ERM, rating agency reporting,
2 reinsurance and securitization purposes.

3

4 From 2010 to 2013, I was a member of an advisory group to the Insurance
5 Bureau of Canada (IBC) and the Office of the Superintendent of Financial
6 Institutions (OSFI) to provide expert opinions on insurance and the economic
7 impact of major earthquakes in Canada. From 2011 to 2013, I was a member of
8 an advisory group for IBC and OSFI to revise OSFI Guideline B-9 (Earthquake
9 Exposure Management Sound Practice Guideline for insurance companies). I
10 led a State Farm team to establish the compliance framework to meet OSFI B-9
11 regulation requirements.

12

13 In January 2015, I was appointed by Florida CFO Jeff Atwater to serve on the
14 Florida Commission on Hurricane Loss Projection Methodology (FCHLPM) as
15 the industry actuary. From January 2015 to September 2018, I represented the
16 property insurance industry on the FCHLPM to review and accept hurricane
17 models for use in ratemaking in the State of Florida. My term on the FCHLPM
18 ended in September 2018 due to my job change.

19

20 **Q. Are the hurricane models used in this filing certified by the FCHLPM?**

21

22 A. Yes. The hurricane models used for this rate filing, AIR Touchstone V9 (a.k.a
23 Touchstone 2021) and RMS RiskLink V21, are both certified by FCHLPM.

1 FCHLPM has scrutinized hurricane models over many years and authorized their
2 use in Florida rate filings. FCHLPM retains experts in relevant fields who review
3 the meteorological, wind engineering, damageability, claims, statistical, computer
4 programming, economic and other aspects of modeling in great detail. Over the
5 years, FCHLPM has recognized advancements in various scientific disciplines
6 related to hurricane modeling and has required modelers to incorporate such
7 advancements. FCHLPM approves only those models that meet its rigorous
8 standards.

9

10 **Q. Please describe how ASOP 38 is applicable in this rate filing?**

11

12 A. The Actuarial Standard of Practice Number 38 (ASOP 38) has been in effect
13 since December 2000. ASOP 38 was created, to some extent, to address the
14 use of stochastic computer hurricane simulation models in the insurance
15 ratemaking process. ASOP 38 established certain requirements for actuaries
16 who use output from a model that is outside of that actuary's area of expertise.
17 Hurricane models are developed by a group of experts including meteorologists,
18 structural engineers, actuaries, statisticians, and computer scientists. Some
19 model components are outside of the area of expertise of actuaries. Due to the
20 models' complexity and reliance on different science disciplines, many actuaries
21 are not as knowledgeable about these models as they are about traditional
22 ratemaking methodologies.

23

1 Hurricane models are utilized to establish the hurricane loss costs and
2 reinsurance cost allocation for this NCRB filing. Therefore, compliance with
3 ASOP 38 is relevant to the filing.

4

5 **Q. Is Aon's use of catastrophe models in compliance with ASOP 38?**

6

7 A. Yes. Aon's catastrophe modeling practice in general and as it relates to this
8 NCRB filing is in compliance with ASOP 38. ASOP 38 provides guidance to the
9 actuary in using models that incorporate specialized knowledge outside the
10 actuary's own area of expertise when developing an actuarial work product and
11 has been included as Exhibit RB-9. When using such a model, the standard
12 requires that the actuary perform five specific tasks:

13

- 14 a. Determine appropriate reliance on experts;
- 15 b. Have a basic understanding of the model;
- 16 c. Evaluate whether the model is appropriate for the intended application;
- 17 d. Determine that appropriate validation has occurred; and
- 18 e. Determine the appropriate use of the model.

19

20 In addition to relying on vendors' experts, Aon has an in-house model evaluation
21 team. This team consists of members with advanced degrees in meteorology,
22 structural engineering, and statistics. Soon after models are released, the model
23 evaluation team performs sensitivity testing to identify key drivers of model

1 changes and potential anomalies. I work closely with the model evaluation team
2 at Aon to ensure the sensitivity testing covers all aspects of ASOP 38
3 requirements. I review the testing results through an analytics dashboard. I
4 document my reviews for each peril model. Upon completion of the review, I sign
5 an ASOP 38 attestation. Copies of the current ASOP 38 attestations for the AIR
6 and RMS models are included in the filing as Exhibits RB-10 and RB-11,
7 respectively.

8

9 **Q. Describe the role of Aon Reinsurance Solutions Analytics and**
10 **Catastrophe Risk Analytics.**

11

12 A. Aon Reinsurance Solutions Analytics (a.k.a Reinsurance Analytics) provides
13 consultative services to Aon's clients who place catastrophe reinsurance through
14 Aon. These clients are primary insurers selling property insurance products in
15 catastrophe prone areas. Aon Reinsurance Analytics provides a value-added
16 service that is above and beyond reinsurance brokering transactions. Our client
17 services include but are not limited to: support for multi-model analytics,
18 customized view of risks, catastrophe pricing, catastrophe risk selections, data
19 augmentation, model evaluation, real-time event response, portfolio optimization,
20 reinsurance cost allocations, actuarial support, and rating agency questionnaire
21 support.

22

1 Within the Reinsurance Analytics division, there is a team specialized in
2 catastrophe risk analytics. I am part of the Catastrophe Risk Analytics team that
3 provides clients with catastrophe risk management information and assists them
4 with their reinsurance purchasing decisions.

5

6 **Q. Describe your experience with catastrophe models.**

7

8 A. From 2005 to 2006, I performed the catastrophe modeling analyst's role at
9 State Farm, which includes hands-on experience with multiple models - from
10 data preparation to running the models to post model aggregation. My daily work
11 involved data preparation and converting exposure data into model input files. I
12 gained knowledge about how different models handle building characteristics and
13 insurance terms. I used RMS RiskLink, AIR Clasic/2, and EQECAT models on a
14 daily basis. I developed an understanding of the models' back-end database and
15 output. I performed post model analysis and wrote computer programs to
16 develop risk metrics such as probable maximum loss (PMLs), average annual
17 losses (AALs), and total value at risk (TVaR) to help State Farm assess and
18 manage catastrophe risks. Later in my career, I supervised many modeling tasks
19 that were delegated to my colleagues. I continued to provide guidance and
20 managed the day-to-day work of the catastrophe modeling unit.

21

22 **Q. Describe your experience with catastrophe reinsurance.**

23

1 A. My experience with reinsurance started in 2005 at State Farm. State Farm is
2 a reinsurance buyer, and I was a part of the company's reinsurance buying team.
3 I supported the reinsurance function at multiple levels. My work included using
4 catastrophe model output and financial information to help my employer in
5 structuring reinsurance, conducting technical pricing, drafting and reviewing
6 reinsurance contracts, and participating in reinsurance buying trips. I evaluated
7 catastrophe risks and cost of capital from both ceding and assuming parties. I
8 worked closely with our reinsurance broker to validate our view of risks using
9 external benchmarks. At Aon, I work directly with our clients who are seeking to
10 purchase catastrophe reinsurance. Output from models is used by our brokers,
11 clients, and capital markets to determine the reinsurance structure and pricing.
12 We customize reinsurance solutions based on clients' risk appetite and risk
13 profile.

14

15 **Q. Do you speak on topics pertaining to catastrophe modeling?**

16

17 A. Yes. I have presented at CAS Ratemaking, Product and Modeling
18 Conferences. I am a frequent speaker at Reinsurance Association of America's
19 annual catastrophe modeling conference. My topics have included model
20 blending, model regulation, and wildfire modeling, among others. From 2012 to
21 2018, I was a visiting instructor for the Illinois State University Math Department
22 Actuarial Science program. I presented catastrophe modeling and regulatory
23 topics to actuarial students. From 2016 to 2018, I was a member of the planning

1 committee for the Reinsurance Association of America's annual catastrophe
2 modeling conference. I organized and moderated panels and engaged speakers
3 to cover a variety of catastrophe topics.

4

5 **Q. What was Aon's role in this filing with respect to expected hurricane**
6 **losses?**

7

8 A. Aon performed data validation and shared control totals with NCRB. Aon's
9 catastrophe modelers ran the AIR Touchstone V9 and RMS RiskLink V21
10 models based on exposure data provided by NCRB. Aon
11 blended the model results for NCRB based on well-established methodology and
12 provided the modeled average annual loss to NCRB. Aon conducted industry
13 research, recommended, and applied catastrophe loss adjustment factors for
14 NCRB.

15

16 **Q. Are catastrophe simulation models commonly used by insurers for**
17 **ratemaking in catastrophe-exposed lines and jurisdictions?**

18

19 A. Yes. Hurricane losses are so extreme and volatile that, for many years now,
20 the accepted actuarial procedure for estimating catastrophe risk in rate filings
21 and in the reinsurance market has been through the use of catastrophe models
22 rather than actual hurricane losses. Such volatility is greatly compounded in
23 hurricane prone states such as North Carolina. In North Carolina and other

1 hurricane prone states, a significant percentage of the prospective long-term
2 average annual losses in certain territories of the state are caused by intense
3 hurricanes, which are relatively infrequent but are devastating when they do
4 occur. It would be actuarially unsound to rely on a few years of actual hurricane
5 losses to estimate prospective hurricane losses because of the volatility of these
6 losses driven by low frequency and high severity. We have provided data and
7 analysis from catastrophe simulation models for Aon clients to use in their rate
8 filings in multiple states.

9

10 **Q. Did the NCRB ask Aon to run the AIR and RMS models?**

11

12 A. Yes. Aon ran AIR Touchstone and RMS RiskLink for the NCRB under the
13 NCRB's direction. AIR and RMS are the most commonly used catastrophe
14 models in the insurance and reinsurance industries. Aon runs these two models
15 on all of Aon clients' exposure data pertinent to reinsurance transactions. The
16 majority of Aon's clients use one or both of these two models when evaluating
17 their catastrophe risk.

18

19 **Q. Why did the NCRB ask Aon to run two models?**

20

21 A. My understanding is that the NCRB has been using two models since 2016
22 and also that running two models complies with N.C.G.S. 58-36-10(3), which
23 became effective in 2017 and requires the NCRB to present data from more than

1 one model if modeled hurricane losses are based upon a commercial hurricane
2 simulation model. The NCRB weights the results of each model equally.

3

4 **Q. How are losses from the two models blended?**

5

6 A. Model results are blended by taking a straight average toward the end of the
7 process. This means that we run the individual models and determine the
8 appropriate loss costs and reinsurance cost allocation independently for each
9 model. Then the outcome from the two models is averaged.

10

11 **Q. Is it common that modeled losses will differ between the various model
12 vendors?**

13

14 A. Yes. Catastrophe models are complex. When modeling vendors develop a
15 hurricane model, they start with similar underlying information, such as the
16 National Hurricane Center's historical hurricane dataset, land use/land cover
17 database, similar wind engineering principles and statistical theories. However,
18 there are differences between modeling vendors in their approaches to
19 interpreting and supplementing the data to build a robust model. Different
20 assumptions and judgments are made by model developers. Vendors may also
21 use claims data from different data sources to calibrate their model. These
22 varying assumptions, judgments, and methodologies will result in different model
23 results. Model results deviate more at the location level than at the state level.

1 When models generate different results, it does not necessarily mean any model
2 is wrong. The spread among different views of the same risk reflects the
3 inherent uncertainties of catastrophe modeling.

4

5 Given the number of variables involved in the development of a catastrophe
6 model and the degree of uncertainty associated with each variable, we would not
7 expect that two independently developed models would result in the same output
8 or conclusions on a given set of data.

9

10 **Q. Does hurricane modeling produce artificially high rate levels?**

11

12 A. No. Models help stabilize rate levels. Without modeling, rate levels would
13 fluctuate wildly following the occurrence or non-occurrence of significant
14 hurricanes. Modeling is relied upon by all stakeholders in insurance,
15 reinsurance, catastrophe bond, and other financial transactions to give the best
16 and most unbiased projection of future hurricane losses. Different parties to
17 those transactions often have opposing economic interests, but, nevertheless,
18 uniformly rely on models in their negotiations with each other.

19

20 **Q. How do the models change over time?**

21

22 A. Catastrophe models are built based on state-of-the art science and
23 technology. As science continues to evolve and computing powers continue to

1 advance, modeling technology is updated and improved. In addition, research
2 into historical and recent events, updates to building practices and building
3 codes, and data from engineering experiments also provides insight to enable
4 model developers to enhance their models. Each modeling vendor takes a
5 different approach on how frequently it updates its models and which perils and
6 regions will be updated. As noted above, because different assumptions and
7 judgments are made when information is applied, the impact of an update could
8 vary greatly between models. Changes due to model updates are to be
9 expected.

10

11 **Q. Is using multiple models to determine catastrophe risk actuarially**
12 **sound?**

13

14 A. Yes. Using multiple models allows users to incorporate different views of risk
15 into their exposure management. Using multiple models can effectively mitigate
16 modeling volatility and smooth out significant model changes. Using multiple
17 models is a practice endorsed by major rating agencies such as AM Best and
18 S&P.

19

20 **Q. How does the NCRB exposure data impact model output?**

21

22 A. The following data factors impact model output:

- 1 • Changes in coverage and/or policy conditions such as deductible and
- 2 limits, and the underlying policies-in-force
- 3 • Changes in an insurer's portfolio composition, such as geographic
- 4 concentration
- 5 • Changes in building characteristics, such as loss mitigation features and
- 6 age of roof
- 7 • Changes in data quality, such as replacing unknown building
- 8 characteristics with known building characteristics

9

10 **Q. Please describe the client data that was employed as input for the model**
11 **runs?**

12

13 A. The underlying exposure data was provided to Aon by the NCRB. To the best
14 of my knowledge, the data was compiled on behalf of the NCRB by Insurance
15 Services Office (ISO). NCRB's exposure data sent to Aon consisted of the
16 trended aggregate exposure information for all residential Dwelling risks in North
17 Carolina, including those written voluntarily by insurance companies and those
18 written by the residual market (NCIUA and NCJUA). NCRB instructed Aon to run
19 the models using the aggregate data at zip code and territory level for the entire
20 North Carolina portfolio in a single model run. Model results were aggregated at
21 the territory level.

22

1 **Q. Please describe what Aon Reinsurance Solutions then did with the data**
2 **provided by the NCRB.**

3

4 A. We reviewed the data for completeness and reasonableness before we input it
5 into the AIR and RMS models. Since the two models have different formats for
6 inputting data, we worked with the NCRB to ensure that the exposure data was
7 properly and consistently mapped in the required format for each model. NCRB
8 provided earned insurance years (EIY), which is the sum of primary coverage
9 amount expressed in thousands, and earned house years (EHY), which is the
10 number of risks. Limit by coverage is calculated from EIY and EHY as instructed
11 by the NCRB. A comparison of this year's data with the data in the last Dwelling
12 filing was conducted. Any anomalies were investigated.

13

14 The next step was to input the data and run the models. We ran the AIR
15 Standard model using the 100K event catalogue and the RMS Historical model
16 (both are long term views of the hurricane risk) to determine the modeled
17 hurricane loss costs. We also ran the AIR Warm Sea Surface Temperature
18 (WSST) model using the 10K event catalogue and the RMS Medium Term Rate
19 model (both are near term views of hurricane risk) to analyze the cost of
20 reinsurance. It is a standard practice throughout the reinsurance industry to rely
21 upon the models we used to determine modeled hurricane loss costs and
22 reinsurance placements, and this has been true since the 1990s.

23

1 After the models were run, we reviewed each model's output separately to
2 ensure data integrity. We then blended the results of the two models by taking a
3 straight average of the results. Additional reviews were conducted of the
4 blended results to ensure that the blending procedures were correctly performed
5 and that the blended results were reasonable. The blended modeled hurricane
6 loss results were provided to the NCRB for use in its Dwelling rate review.
7 Exhibit RB-8 sets forth the blended modeled hurricane losses resulting from the
8 work I have described. Based on my knowledge and experience, and the input
9 data provided by the NCRB, these modeled hurricane losses are reasonable and
10 appropriate projections of expected hurricane losses for use by the NCRB in its
11 Dwelling rate review and rate filing.

12

13 Also, we employed the modeled hurricane losses as part of our work in
14 determining and allocating the cost of reinsurance.

15

16 **Q. What are the differences and similarities between using the AIR**
17 **Touchstone's 10K event set and the 100K event set?**

18

19 A. AIR Touchstone's 10K hurricane event set is a subset of the 100K event set.
20 These two event sets are designed to have the same theoretical frequency and
21 intensity distributions in coastal segments, and to produce similar results with
22 minimal variabilities. Using the 10K event set provides benefits in performance
23 and storage. AIR Touchstone's 10K event set is standard for use in a majority of

1 catastrophe modeling exercises – including reinsurance renewal data distribution
2 for quoting and placement purposes. The 100K event set is used to determine
3 hurricane loss costs for ratemaking purposes.

4

5 **Q. Did Aon make adjustments to modeled results?**

6

7 A. Yes. A 6% catastrophe loss adjustment expense (LAE) factor was applied to
8 modeled losses. This factor was recommended by Aon based on a broad
9 industry study at the state level. The results of that study are shown in Exhibit
10 RB-14. The application of the LAE factor was reviewed and approved by the
11 NCRB, and the 6% catastrophe LAE factor was selected by the NCRB. The 6%
12 catastrophe LAE factor is lower than the factor based on data in non-catastrophe
13 situations for extended coverage, which is 11.7%.

14

15 **Q. What is demand surge?**

16

17 A. Demand surge is a social economic phenomenon defined by ASOP 39,
18 Treatment of Catastrophe Losses in Property/Casualty Insurance Ratemaking,
19 as “a sudden and usually temporary increase in the cost of materials, services
20 and labor due to the increased demand for them following a catastrophe.”
21 Demand surge usually occurs after large-scale disasters such as earthquakes,
22 tsunamis, cyclones or flooding. The models incorporate demand surge into their
23 loss estimates.

1

2 **Q. Should model output include demand surge?**

3

4 A. Yes. All applications of catastrophe model output should reflect demand
5 surge. Demand surge is a real social economic phenomenon. Insurance
6 companies' claims experience includes the effect of demand surge. Excluding
7 demand surge would underestimate catastrophe losses.

8

9 **Q. Does the model output include demand surge?**

10

11 A. Yes. As is the customary and accepted practice in the insurance, reinsurance,
12 and catastrophe bond industries, the models were run with aggregate demand
13 surge (AIR) and loss amplification (RMS) included. The FCHLPM has approved
14 the use of aggregate demand surge and loss amplification for the AIR and RMS
15 models, respectively. These aspects of the models account for the expected
16 additional cost for supplies and labor if a very large hurricane event or series of
17 events occurs. Experience demonstrates that when such catastrophic events
18 have occurred, there is significant increase in demand for the limited supply of
19 plywood, shingles, labor, hotel rooms and other necessities. The high demand
20 for specialized labor often requires contractors to come in from out of state.
21 Fundamental economic principles dictate that such a spike in demand increases
22 prices, and consequently results in larger than normal claims payments in the
23 aggregate. Additionally, there are delays in repairing properties, which can

1 directly lead to longer stays in hotels, and there are other increased costs beyond
2 those that occur after smaller hurricanes. Loss amplification also factors in
3 claims inflation. Claims adjusters may not investigate every claim if it is under a
4 certain threshold, given the volume of claims they have to settle post-event in a
5 limited amount of time.

6

7 **Q. Does any state prohibit the inclusion of demand surge in modeled**
8 **losses for rate filings?**

9

10 A. I am not aware of any prohibitions against the use of demand surge in rate
11 filings in any jurisdiction. The South Carolina Department of Insurance Bulletin
12 2014-03 states “Demand surge may be included in the modeled results as long
13 as the company provides the impact it has on the modeled losses.” The
14 FCHLPM’s actuarial standards require hurricane models to incorporate demand
15 surge based on relevant data and actuarially sound methods and assumptions.

16

17 **Q. North Carolina has laws prohibiting “price gouging” following a**
18 **hurricane. Does that eliminate demand surge?**

19

20 A. No. Florida has a similar law (Fla. Stat. Ann. § 501.160). Demand surge
21 occurs due to supply and demand economics in situations that would not be
22 considered price gouging and/or that would not be prevented by statutes
23 prohibiting price gouging.

1

2 **Q. Does it make sense for North Carolina hurricane losses to include**
3 **demand surge for very large events impacting other states even if those**
4 **events were less significant in North Carolina?**

5

6 A. Yes. The intent of the model is to reflect economic conditions that will
7 influence construction prices and other aspects of insured losses (for example,
8 the increased period of time a carrier has to pay for hotel rooms for insureds
9 while their damaged homes are repaired) in the time period shortly after a
10 catastrophe event occurs. Since labor and materials resources are exchanged
11 by people across state lines, it is logical that the effect of demand surge on prices
12 in other states will impact North Carolina.

13

14 **Q. Is the net cost of reinsurance considered in the Filing?**

15

16 A. Yes. Large catastrophe losses present a very real risk to the long-term viability
17 of Dwelling insurers and their ability to follow through on their promise to
18 policyholders to pay losses when they occur. There are numerous scenarios
19 where the potential losses due to a single hurricane are far greater than the
20 entire premium collected by all the companies for the entire state of North
21 Carolina. To remain viable long-term and protect against insolvency, the industry
22 must purchase reinsurance to help cover this risk. The costs associated with
23 such reinsurance are costs of doing business in the state. To reflect the portion

1 of those costs that is not already covered in the Filing, a provision for the net cost
2 or reinsurance is included in the Filing.

3

4 **Q. What is reinsurance?**

5

6 A. Simply, reinsurance is insurance for insurers. When insurers are aware of
7 scenarios in which the potential losses are greater than the company is willing or
8 able to tolerate, they will frequently purchase reinsurance to mitigate the risk in
9 those situations. Additionally, insurers may issue catastrophe bonds to protect
10 themselves in those situations. Essentially the insurers will use a portion of the
11 premium to purchase reinsurance. This is common across the industry.

12

13 **Q. What was your role in this filing with respect to Net Cost of**
14 **Reinsurance?**

15

16 A. I worked with my colleagues within the Aon Catastrophe Actuarial team to
17 determine a suitable provision for the net cost of reinsurance for the state overall
18 and an allocation of that cost by territory. The net cost of reinsurance provision
19 used exposure data from all the Dwelling risks in the state, so that a cost
20 provision would be appropriate to use in a uniform rate schedule applicable to all
21 insurers in the state.

22

23 **Q. What is catastrophe reinsurance, who buys it, and why do they buy it?**

24

1 A. Catastrophe reinsurance is a contract purchased by a primary insurance
2 company and sold by a reinsurer, or a group of reinsurers, to transfer risk from
3 loss due to large catastrophic events. The most common type of contract used
4 for catastrophe risk is called "Portfolio Excess of Loss" ("Portfolio XOL"), or just
5 "XOL." A single XOL contract has an "attachment" and a "limit." An XOL covers
6 the amount of portfolio loss caused by a single event in the amount which
7 exceeds the XOL attachment with a maximum equal to the XOL limit. In some
8 instances, there is co-participation, which means that only a percentage of the
9 amount of loss in the XOL layer is covered. Portfolio XOL contracts, which are
10 often referred to as "treaties" since there are typically multiple reinsurers
11 involved, cover the first event within a year of coverage. It is standard for treaties
12 to include a provision for the primary carrier to automatically purchase a
13 "reinstatement" if it has a loss which triggers a reinsurance payment. The
14 reinstatement premium allows for the full limit to be reinstated after the first event
15 exhausts the limit provided. There are cases where a limit is provided, and if an
16 event exhausts that limit, then there is no coverage available for the remainder of
17 the contract period. It is typical for primary carriers to buy multiple treaties that
18 stack on top of each other. In other words, a treaty will have an attachment
19 equal to the attachment plus limit of another treaty. Primary carriers select
20 reinsurance programs that best fit their particular situations and buy reinsurance
21 to ensure that money is available to pay claims and remain financially viable after
22 very large and uncommon to rare events.
23

1 **Q. Are the reasons that the Beach Plan and FAIR Plan purchase**
2 **reinsurance similar to the reasons that the hypothetical one company must**
3 **purchase reinsurance?**

4

5 A. Yes. The Beach Plan/FAIR Plan and Bureau member companies must
6 purchase reinsurance for essentially the same reasons. Likewise, for ratemaking
7 purposes, the hypothetical “one company” for which the Bureau files rates must
8 purchase reinsurance. That hypothetical one company is faced with numerous
9 realistic hurricane loss scenarios that far exceed its ability to pay.

10

11 The hypothetical one company (voluntary companies plus the Beach Plan and
12 FAIR Plan) receives about \$318 million in residential Dwelling earned current
13 level premium annually in North Carolina. There are many scenarios in which
14 hurricane losses are projected to be many multiples of that amount. If an
15 individual company experienced a loss many multiples of its collected premium, it
16 would first look to its surplus and reinsurance. If the surplus and reinsurance
17 were not sufficient, then that company would become insolvent. Individual
18 companies do not have a backstop like the Beach Plan and FAIR Plan have,
19 which can call upon the companies and policyholders across the state to pay
20 their claims and keep them afloat. There has been a history of company
21 insolvencies following major hurricanes in the United States. Following
22 Hurricane Hugo that hit Charleston, South Carolina and Hurricane Andrew that
23 hit Florida, there were multiple insolvencies.

1

2 It would be irresponsible and imprudent for the hypothetical one company not to
3 purchase reinsurance. The net cost of reinsurance analysis prepared by Aon
4 reflects the need for that hypothetical one company to purchase and maintain
5 reinsurance.

6

7 **Q. Please describe how the reinsurance program was designed and priced**
8 **for purposes of NCRB rate filings? Do you think it is reasonable?**

9

10 A. Aon advises the Bureau as to the parameters of the reinsurance program that
11 the hypothetical one company for which rates are being made in the Filing would
12 reasonably select. The parameters reflect the amount of reinsurance that the
13 hypothetical one company should purchase to protect its solvency. The Aon
14 Catastrophe Actuarial team, under my management, designed the reinsurance
15 program for this rate filing and advised the Bureau as to the parameters of the
16 reinsurance program that the hypothetical one company for which rates are being
17 made in the Filing would reasonably select. The basis of the reinsurance
18 program structure and pricing is determined by an analysis of reinsurance
19 programs placed by Aon for its reinsurance clients. I believe the design and
20 price of the reinsurance program designed for the NCRB is reasonable. Three
21 components of the analysis are described below:

22

1 **Program attachment and total limit** describes the total amount of reinsurance
2 coverage. Since companies vary substantially in size, so does their limit
3 purchase and attachment for their bottom layers. To normalize for company size,
4 we looked at the frequency with which a single event would trigger a recovery
5 and the frequency with which a single event would exhaust the limit of the entire
6 reinsurance program for each company. This was calculated separately for the
7 AIR and the RMS models. We then calculated the median attachment and
8 exhaustion (exhaustion = bottom layer attachment + total program limit)
9 frequencies by model and by region (Southeast and nationwide). The
10 frequencies for attachment and exhaustion were averaged across the regions,
11 which resulted in an attachment and exhaustion frequency by model. We used
12 the portfolio loss distributions by model to calculate the dollar amount of
13 attachment and exhaustion (and therefore limit) by model. The attachment of the
14 reinsurance program in the filing is the average of the AIR indicated attachment
15 and the RMS indicated attachment. The exhaustion of the reinsurance program
16 in the filing is the average of the AIR indicated exhaustion and the RMS indicated
17 exhaustion.

18

19 **Reinsurance Market Pricing Model.** For AIR and RMS, a log-linear regression
20 model was built to calculate the fitted reinsurance price based on modeled
21 expected ceded loss. Using these regression models, an indicated price for any
22 layer can be calculated based on each catastrophe model (AIR and RMS). The

1 selected prices by layer used in this rate filing are the averages of the AIR
2 indicated prices and the RMS indicated prices.

3

4 Note: Because insight into reinsurance market pricing is an important proprietary
5 asset for Aon, the log-linear models are considered a trade secret and, therefore,
6 are not disclosed in this public filing.

7

8 **Program Structure.** After the market pricing model and the program's
9 attachment and limit are determined, the program is then broken into layers. We
10 run an optimization analysis to find the five-layer cat program that has the lowest
11 possible deposit premium. This method is designed to calculate an indicated
12 reinsurance premium that is as low as possible, subject to the market pricing
13 model and program attachment and limit specifications.

14

15 The reinsurance structure determined by the method described above is shown
16 in Exhibit RB-12. The pricing with loss analysis is shown in Exhibit RB-13.

17

18 **Q. Have you done anything different for this filing on reinsurance analysis?**

19

20 A. The global reinsurance market has experienced some extraordinary volatilities
21 since 2019. Aon noticed the price of reinsurance has increased significantly in
22 the Southeast region for the past three years. The main driver of the increase is
23 Florida, which has distinct insurance challenges due to things like its one-way

1 attorney fee statute, its high rate of litigated property loss claims, and its wide
2 abuse of the assignment of benefits provision in the insurance policy. For
3 example, from 2019 to 2020, many FL-only insurers' reinsurance Rate on Line
4 increased about 25% for the 6/1/2020 placements. The other non- FL southeast
5 insurers experienced only low to mid-range single digit increases. A similar
6 trend continued in year 2021. We believe it is prudent to apply a smoothing
7 methodology to stabilize North Carolina's reinsurance analysis, so it is not unduly
8 influenced by Florida. The two smoothing techniques we used are:

9

10 **The Program Layers (structure)** used for the 2020 NCRB Dwelling filing was
11 carried forward to 2022. This decision was made after we evaluated some non-
12 FL insurers' year-over-year reinsurance structures and annual statements.

13

14 **The Rate on Line (ROL) for the 2022 rate filing** was determined by credibility
15 weighting the 2022 and 2020 market pricing parameters. Equal credibility was
16 applied to the ROL used in the 2020 Dwelling filing and the ROL developed in
17 2022 based on Reinsurance Market Pricing Model.

18

19 **Q. How was the reinsurance premium allocated?**

20

21 A. Reinsurance premium by layer is allocated to a territory based on that
22 territory's share of expected ceded loss and loss adjustment expense (LAE) by
23 layer. Exhibit RB-13 shows the total expected ceded loss and LAE by layer.

1 Exhibit RB-15 shows the proportion of hurricane peril reinsurance premium,
2 ceded average annual loss, and reinsurance margin (“net cost of reinsurance”)
3 allocated to each territory segment for each layer. Other perils were used in the
4 calculation, but because they contributed such a small amount of expected
5 ceded loss, they were not shown on the exhibits. Exhibit RB-16 shows the dollar
6 amount of reinsurance margin allocated by territory.

7

8 **Q. How was the net cost of reinsurance calculated?**

9

10 A. Net cost of reinsurance is Deposit Premium plus Expected Reinstatement
11 Premium less Expected Ceded Loss & Loss Adjustment Expense (LAE). The
12 reinsurance program, the loss distribution from the portfolio as determined by
13 event loss tables (ELTs) from cat models, and the LAE assumptions are input
14 into a DFA (Dynamic Financial Analysis) program to calculate the average ceded
15 loss and LAE and average reinstatement premium over a specified number of
16 simulated years. The loss distribution produced by the AIR model is already in
17 the form of simulated loss experience for 100,000 years. The DFA program
18 calculates for each year the total reinsurance recoveries and reinstatement
19 premium paid. The DFA program then calculates the average annual ceded loss
20 & LAE and the average reinstatement premium. The loss distribution from the
21 RMS model is a list of possible catastrophic events. Unlike the AIR model, which
22 provides the specific year and amount of loss from each event, each event in the
23 RMS model has a parametric distribution for frequency and severity. The DFA

1 program creates a simulation of 1,000,000 years of loss experience to make a
2 table containing year, event id, and specific amount of loss. From that point, the
3 calculation works the same as for the AIR model.

4

5 For the NCRB filing, our analysis shows that expected reinsurance premium is
6 \$175,597,512, expected ceded loss & LAE is \$49,325,426, and the net cost of
7 reinsurance is \$126,272,086, as shown on Exhibit RB-16 and the summary on
8 Exhibit RB-13. Allocation by territory is done using the method described in
9 previous question.

10

11 **Q. Given your experience in catastrophe reinsurance, do you find this**
12 **approach to be reasonable?**

13

14 A. Yes. Aon's approach is based on detailed information on current reinsurance
15 market rates and underlying model output. The smoothing techniques we used
16 this year helped stabilize the results.

17

18 **Q. Do you know whether the Rate Bureau has used in its 2022 Dwelling**
19 **filing the Aon net cost of reinsurance results you provided?**

20

21 A. Yes. I am advised that the Rate Bureau has used in the filing both our
22 statewide net cost of reinsurance results and those results allocated to the
23 territory level.

1

2 **Q. Are you aware of the following North Carolina statute N.C.G.S. 58-36-**3 **10(7):**

4 *Property insurance rates established under this Article may include a provision to*
5 *reflect the cost of reinsurance to protect against catastrophic exposure within this*
6 *State. Amounts to be paid to reinsurers, ceding commissions paid or to be paid*
7 *to insurers by reinsurers, expected reinsurance recoveries, North Carolina*
8 *exposure to catastrophic events relative to other states' exposure, and any other*
9 *relevant information may be considered when determining the provision to reflect*
10 *the cost of reinsurance.*

11

12 A. Yes, I am. The above North Carolina statute is consistent with ASOP 53,
13 Estimating Future Costs of Prospective Property/Casualty Risk Transfer and Risk
14 Retention, which “applies to actuaries when performing actuarial services with
15 respect to developing or reviewing future cost estimates (commonly known as
16 actuarial indications) for prospective property/casualty risk transfer and risk
17 retention. For example, this standard applies when actuaries are developing
18 future cost estimates underlying product prices, estimating funding requirements
19 for self-insured programs and captives, and developing reinsurance prices.”

20

21 **Q. Do you have an opinion whether the net cost of reinsurance analysis**
22 **you performed on behalf of the Rate Bureau for this filing has considered**
23 **the provisions of that statute?**

24

1 A. Yes. Based on my experience with hurricane models, catastrophe
2 reinsurance, and determining catastrophe reinsurance costs for rate filings, it is
3 my opinion that the net cost of reinsurance analysis for this filing properly
4 considers all of the items set forth by the statute. Further, based on my
5 experience in the marketplace, it is my opinion that a reasonable and appropriate
6 provision for the net cost of reinsurance must be incorporated into North Carolina
7 Dwelling insurance rates to properly reflect and protect against the catastrophe
8 exposure in this state.

9

10 **Q. Do you have an opinion regarding the appropriateness of the net cost of**
11 **reinsurance provision incorporated into this Dwelling filing?**

12

13 A. Yes. Based on my experience with hurricane models, catastrophe
14 reinsurance, and determining catastrophe reinsurance costs for rate filings, it is
15 my opinion that the provision for the net cost of reinsurance in the filing, at the
16 statewide and territory levels, is reasonable and appropriate.

17

18 **Q. Does that conclude your testimony?**

19

20 A. Yes.

Minchong Mao, FCAS, CCRMP, MAAA, Actuary

Reinsurance Solutions, Aon plc
200 E Randolph Street
Chicago, IL 60601
Phone: 312-381-2009(O) 312-581-7425 (C)
Email: minchong.mao@aon.com

Summary

- Over twenty years of experience with insurance, reinsurance, catastrophe risk management, actuarial pricing and management at State Farm Insurance Companies and Aon plc
- Commission Member, actuary representing the property insurance industry on the Florida Commission on Hurricane Loss Projection Methodology (FCHLPM) 2015-2018
- Strong leadership, work ethic, communication and teamwork skills
- Deep knowledge and experience in Insurance operations, including Actuary, Underwriting, and Claims.
- Extensive experience and understanding with catastrophe models, underlying science and methodologies

Experience

Senior Managing Director, Actuary

Aon Reinsurance Solutions

April 2021– Present

Managing Director, Actuary

Aon Reinsurance Solutions

September 2018– April 2021

Major Responsibilities include:

- Manage the catastrophe actuarial and predictive analytics group within Aon Reinsurance Solutions which focuses on supporting Aon clients' ratemaking and underwriting needs.
- Implement and sign off Aon's ASOP 38 compliance framework.
- Provide rate filing support for Aon's clients through regulatory challenges.
- Serve on Impact Forecasting leadership steering committee to oversee Impact Forecasting's product strategies and priorities.
- Serve as Aon Impact Forecasting's signatory actuary during Florida Commission on Hurricane Loss Projection Methodology submissions.
- Manage Homeowner Return on Equity (ROE) Outlook study. Aon's Homeowners ROE Outlook calculates risk-adjusted returns for the US homeowners industry, provides the insurance industry with market reality diagnostics and profitability insights.
- Manage Residual Market Industry study. This product provides a holistic view of the residual market's impact on the property insurance industry and the individual company's risk profile.
- Serve as Aon's key corporate contact for China business development and expansion.

**Catastrophe Modeling Manager, Actuary
State Farm Insurance Companies**

Feb. 2005– Sept. 2018

Major Responsibilities included:

- Manage State Farm’s catastrophe modeling unit. State Farm’s catastrophe modeling practice grew into the industry’s leading practice with high quality and productivity under my leadership.
- Manage vendor relationships with AIR, EQECAT, ARA, and RMS. Negotiate contract terms and conditions, engage vendors’ support through regulatory challenges.
- Provide Actuarial opinions on State Farm’s use of catastrophe models. Oversee the due diligence and model validation work to ensure catastrophe modeling practices at State Farm meet the Actuarial Standards and comply with laws and regulatory requirements.
- Serve as a resource to the Corporate Law department for litigation and legislative issues.
- Provide various catastrophe risk measures and analytics (PML, TVaR, Standard Deviations, etc.) for State Farm Fire and Affiliates for exposure management and reinsurance purposes.
- Provide catastrophe information to rating agencies such as AM Best, S&P and Moody’s.
- Develop and deploy hazard analysis tools across the Enterprise for exposure underwriting and management.
- Utilize catastrophe data in Dynamic Financial Analysis projects to analyze capital adequacy and capital allocation; develop simulation tools to incorporate catastrophe risk into Enterprise Risk Management.
- Provide exposure information, technical support, risk analysis and documentation reviews for all State Farm’s issuances of catastrophe bonds.
- Lead State Farm’s compliance work to meet Office of the Superintendent of Financial Institutions (OSFI) B-9 - Earthquake Sound Practice requirements.
- Monitor modeling regulations in several jurisdictions (FL, LA, SC, HI, MD, etc.). Work with State Farm counsel to provide revisions to bills related to coastal issues and catastrophe risk management during legislative sessions.
- Represent the Actuarial department on State Farm Enterprise Catastrophe Response Team. Provide real time analysis for actual catastrophe events to assist Catastrophe Claims’ resources deployment, Catastrophe Reserving and communicate with Senior Management about the potential impact.
- Serve as a homeowner pricing manager for Mississippi for two years, with major responsibilities including:
 - Manage the development and implementation of rates and rules for several personal lines which satisfy the financial objectives of the enterprise.
 - Coordinate the analyses of actuarial ratemaking process
 - Review rate proposals.
 - Serve as a key Actuarial resource for Market Areas and regulators.

Actuarial/Statistics/Modeling Analyst

Jan 2001– Feb. 2005

- Conducted homeowner rate revisions for Maine, Kansas, and Mississippi.
- Developed and maintained State Farm’s rate revision tool for property lines.

Other Professional Activities

- 2015 – 2018, Commission Member, Industry Actuary, Florida Commission on

Hurricane Loss Projection Methodology (FCHLPM). I was appointed by Florida CFO Jeff Atwater to this position in Jan. 2015.

- 2010 – 2013, advisory group member to the Insurance Bureau of Canada (IBC) and Office of the Superintendent of Financial Institutions (OSFI) to provide expert opinions on a study for insurance and economic impact of major earthquakes in Canada.
- 2011- 2013, advisory group member for the Insurance Bureau of Canada (IBC) and Office of the Superintendent of Financial Institutions (OSFI) to revise OSFI Guideline B-9 (Earthquake Exposure Management Sound Practice Guideline for insurance companies).
- 2012-2016, organized nine State Farm senior executives delegation (including State Farm’s CEO, COO, CFO, CMO, General Counsel, CTO, CSO) visits to China. Established relationship and set up meetings with Chinese regulators and senior executives of top Chinese insurance companies. Participated in discussions, served as advisor and interpreter for State Farm delegations.
- 2012-2018, visiting instructor for Illinois State University Math Department Actuarial Science program. Present catastrophe modeling and regularity topics to actuarial graduate students.
- 2014- 2018, board member of the International Society of Catastrophe Managers (ISCM). Promote education and career development for Catastrophe Modeling professionals.
- 2016- Present, co-chair of a taskforce to create a credential and certificate program for catastrophe risk management professionals on behalf of Institute of Casualty Actuarial Society (iCAS) and International Society of Catastrophe Managers (ISCM).
- 2016- Present, Member of Property /Casualty Extreme Events Committee, American Academy of Actuaries. This committee identifies issues relevant to the treatment of extreme catastrophe risks including sizing, insurability, pricing, funding, reserving, capital management, and loss mitigation. The committee also monitors federal and state catastrophe legislation and interacts with NAIC on these issues.
- 2016 – 2018, member of planning committee for the Reinsurance Association of America’s annual catastrophe modeling conference.
- 2016 – Present, member of CAS Climate Change Committee. This committee recommends, supports and performs research on climate change and assesses the potential risk management implications for the insurance industry.

Designations

- Fellow of Casualty Actuarial Society (FCAS, 2007)
- Certified Catastrophe Risk Management Professional (CCRMP, 2019)
- Associate of Society of Actuaries (ASA, 2010) Currently, I am not an active member at SOA.
- Member of American Academy of Actuaries (MAAA,2005)
- Microsoft Certified Solution Developer (MCSD)
- Microsoft Certified Professional (MCP)

Education

- Master’s degree in Computer Science, University of Missouri-Columbia, 2000
- Master’s degree in Chemistry, Eastern Illinois University, 1997
- Bachelor’s degree in Chemical Engineering, Beijing University of Chemical Technology, 1993

Award

- Special Achievement awards for excellent performance and exceptional business achievements, Property and Casualty Actuarial Department, State Farm Insurance in 2002, 2009, 2011, 2012, 2014, 2015, and 2016.
- Casualty Actuarial Society (CAS) Above and Beyond Achievement Award in 2019 to recognize my leadership role to establish Certified Catastrophe Risk Management Professional (CCRMP) designation for CAS Institute. The "Above & Beyond Achievement Award" is made annually, to one or more members of the CAS, who have made extraordinary contributions to the society.

Publications

- As a member of the American Academy of Actuaries Flood Working Group, I am one of the authors for the **Monograph on Issues Surrounding National Flood Insurance Program - The National Flood Insurance Program: Challenges and Solutions**. *American Academy of Actuaries*, April, 2017
- Akram Hazeen, Yan Zhang, **Minchong Mao**, Kraig A. Wheeler, a and Mark E. McGuire, 6-[(4-Hydroxy-phen-yl)diazonyl]-1,10-phenanthroline-1-ium chloride monohydrate, *US National Library of Medicine, National Institutes of Health (NIH)*, Dec. 1, 2011.
- As a member of the American Academy of Actuaries Flood Working Group, I am one of the authors of the following Monographs:

The National Flood Insurance Program: Challenges and Solutions (2017)
American Academy of Actuaries, April, 2017

Uses of Catastrophe Model Output (2018). American Academy of Actuaries, July, 2018

Wildfire: An Issue Paper - Lessons Learned from the 2017–2018 California Events (2019), American Academy of Actuaries, June, 2019

Reference

- Available upon request.

North Carolina Rate Bureau
 Gross Modeled Hurricane Expected Losses including Cat LAE

Grand Total	95,900,346
<u>Territory</u>	<u>Total</u>
110	20,312,545
120	23,158,672
130	2,376,361
140	19,642,839
150	4,495,092
160	5,034,069
170	231,634
180	3,001,436
190	1,555,373
200	976,330
210	671,385
220	2,844,893
230	1,618,248
240	1,571,418
250	1,138,622
260	494,317
270	1,703,368
280	286,835
290	397,560
300	388,164
310	1,162,686
320	628,930
330	35,359
340	1,203,094
350	370,593
360	483,909
370	21,339
380	51,300
390	43,974

Modeled hurricane expected losses for North Carolina Rate Bureau, net of limits and deductibles. Results include demand surge and exclude storm surge. Losses represent 50/50 blend of AIRv9 100k Standard event set and RMSv21 Historical event set. Results also include provisions for LAE.

North Carolina Rate Bureau
Gross Modeled Hurricane Expected Losses including Cat LAE

Grand Total	27,326,246	68,574,100	95,900,346
-------------	------------	------------	------------

Territory	Policy Form 1	Policy Form 2	Total
110	1,510,295	18,802,250	20,312,545
120	4,222,284	18,936,388	23,158,672
130	945,834	1,430,527	2,376,361
140	7,532,585	12,110,254	19,642,839
150	1,959,525	2,535,567	4,495,092
160	1,834,821	3,199,248	5,034,069
170	128,990	102,644	231,634
180	1,459,644	1,541,792	3,001,436
190	900,596	654,777	1,555,373
200	703,938	272,392	976,330
210	359,448	311,937	671,385
220	896,027	1,948,866	2,844,893
230	1,266,982	351,265	1,618,248
240	894,894	676,524	1,571,418
250	491,130	647,492	1,138,622
260	268,941	225,376	494,317
270	208,001	1,495,367	1,703,368
280	92,344	194,491	286,835
290	150,090	247,470	397,560
300	219,453	168,710	388,164
310	339,588	823,097	1,162,686
320	245,502	383,428	628,930
330	20,826	14,533	35,359
340	259,084	944,011	1,203,094
350	142,480	228,113	370,593
360	218,969	264,940	483,909
370	12,225	9,115	21,339
380	22,959	28,341	51,300
390	18,791	25,183	43,974

Modeled hurricane expected losses for North Carolina Rate Bureau, net of limits and deductibles. Results include demand surge and exclude storm surge. Losses represent 50/50 blend of AIRv9 100k Standard event set and RMSv21 Historical event set. Results also include provisions for LAE.



ACTUARIAL STANDARDS BOARD

**Actuarial Standard
of Practice
No. 38**

Revised Edition

**Catastrophe Modeling
(for All Practice Areas)**

**Developed by the
Catastrophe Modeling Task Force of the
General Committee of the
Actuarial Standards Board**

**Adopted by the
Actuarial Standards Board
July 2021**

Doc. No. 201

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July 2021

TO: Members of Actuarial Organizations Governed by the Standards of Practice of the Actuarial Standards Board and Other Persons Interested in Catastrophe Modeling (for All Practice Areas)

FROM: Actuarial Standards Board (ASB)

SUBJ: Actuarial Standard of Practice (ASOP) No. 38

This document contains the revision of ASOP No. 38, *Catastrophe Modeling (for All Practice Areas)*.

History of the Standard

The ASB first began work on a standard for modeling in the late 1990s. Motivated primarily to address the role catastrophe modeling of earthquakes and hurricanes played in casualty ratemaking, this work was focused on the use of specialized models where the actuary would have to rely on a model that was developed by professionals other than actuaries. As a result of this work, the ASB approved ASOP No. 38, *Using Models Outside the Actuary's Area of Expertise*, in June 2000 with the scope of the standard limited to the Property/Casualty area of practice. At the time, this was the only ASOP that specifically addresses modeling.

Over the ensuing years, the number and importance of modeling applications in actuarial science has increased, with the results of actuarial models often entering financial statements directly. Recognizing this trend, the ASB asked the Life Committee in 2010 to begin work on an ASOP focused on modeling. The Life Committee formed a task force to address this issue and, in February 2012, a discussion draft titled *Modeling in Life Insurance and Annuities* was released. Nineteen comment letters were received.

Based upon this feedback and numerous other discussions on the topic of modeling, in December 2012 the ASB created two multidisciplinary task forces under the direction of the General Committee: i) a general Modeling Task Force, charged with developing an ASOP to address modeling applications in all practice areas, and ii) a Task Force to consider expanding ASOP No. 38 to all practice areas while focusing exclusively on using catastrophe models.

An exposure draft titled *Modeling* was released in June 2013 with a scope that provides guidance to actuaries when selecting, designing, building, modifying, developing, or using models when performing actuarial services. ASOP No. 56, *Modeling*, was adopted by the ASB in December 2019. Changes have been made to this exposure draft of ASOP No. 38 to be consistent with ASOP No. 56 and other recent ASOPs.

The exposure draft of this revision of ASOP No. 38 was the work of the Catastrophe Modeling Task Force, whose membership has experience in life insurance, health insurance, property/casualty insurance, and enterprise risk management.

At the direction of the ASB, this standard was developed to apply to all practice areas and all forms of catastrophe models, including natural catastrophes such as hurricanes, earthquakes, and severe convective storms, and other catastrophes such as terrorist acts and pandemics.

Exposure Draft

The exposure draft was approved in September 2020 with a comment deadline of January 15, 2021. Four comment letters were received and considered in making changes that were reflected in the final ASOP.

Notable Changes from the Exposure Draft

Notable changes made to the exposure draft are summarized below. Additional changes were made to improve readability, clarity, or consistency.

1. Section 1.2, Scope, was revised to provide additional guidance to actuaries whose actuarial services involve reviewing or evaluating models.
2. In section 2, Definitions, the definition of “catastrophe model” was expanded to include a definition of model.
3. Section 3.2, Appropriate Reliance on Experts (now titled Catastrophe Models Developed by Experts), was revised to adopt language from ASOP No. 56, section 3.5(b).
4. An existing ASOP No. 38 example regarding validation to evaluate results derived from other models was reinserted into section 3.5.
5. A disclosure requirement for the extent of reliance on experts was added to section 4.1(b) and (c).

Notable Changes from the Existing ASOP

A cumulative summary of the notable changes from the existing ASOP are summarized below. Notable changes do not include additional changes made to improve readability, clarity, or consistency.

1. The ASOP was revised to apply to catastrophe models only and to all practice areas.
2. The scope was expanded to include the activities “selecting, reviewing, and evaluating” models in addition to the existing activity of “using” a model when performing actuarial services.
3. The scope was expanded to clarify that if the actuary determines that the guidance in the ASOP conflicts with the guidance in ASOP No. 56, the guidance of this ASOP will govern.

4. A new section specifically addressing reliance on data or other information supplied by others (section 3.8) was added.
5. The guidance on documentation (section 3.9) was updated and expanded to be consistent with current ASOPs.

The ASB thanks everyone who took the time to contribute comments and suggestions on the exposure draft.

The ASB would like to posthumously thank Martin M. Simons for his contribution to the ASOP No. 38 task force.

The ASB voted in July 2021 to adopt this standard.

Catastrophe Modeling Task Force

Shawna S. Ackerman, Chairperson

David A. Brentlinger

Bradley J. Davis

General Committee of the ASB

Susan E. Pantely, Chairperson

Geoff Bridges

Brian J. Mullen

Andrew M. Erman

Keith A. Passwater

Julianne H. Fried

Hal Tepfer

Robert S. Miccolis

Christian J. Wolfe

Actuarial Standards Board

Darrell D. Knapp, Chairperson

Elizabeth K. Brill

Cande J. Olsen

Robert M. Damler

Kathleen A. Riley

Kevin M. Dyke

Judy K. Stromback

David E. Neve

Patrick B. Woods

The Actuarial Standards Board (ASB) sets standards for appropriate actuarial practice in the United States through the development and promulgation of Actuarial Standards of Practice (ASOPs). These ASOPs describe the procedures an actuary should follow when performing actuarial services and identify what the actuary should disclose when communicating the results of those services.

ACTUARIAL STANDARD OF PRACTICE NO. 38

CATASTROPHE MODELING
(FOR ALL PRACTICE AREAS)

STANDARD OF PRACTICE

Section 1. Purpose, Scope, Cross References, and Effective Date

- 1.1 Purpose—This actuarial standard of practice (ASOP or standard) provides guidance to actuaries when performing actuarial services with respect to selecting, using, reviewing, or evaluating **catastrophe models**.
- 1.2 Scope—This ASOP applies to actuaries in any practice area when performing actuarial services with respect to selecting, using, reviewing, or evaluating **catastrophe models** to assess risk, including but not limited to **models** of hurricanes, earthquakes, severe convective storms, terrorist acts, and pandemics. This standard applies to the selection, use, review, or evaluation of **catastrophe models**, whether or not they are proprietary in nature.

If the actuary's actuarial services involve reviewing or evaluating **catastrophe models**, the reviewing or evaluating actuary should apply the guidance in this standard to the extent practicable within the scope of the actuary's assignment.

In addition to this standard, the actuary should follow the guidance in ASOP No. 56, *Modeling*, when selecting, using, reviewing, or evaluating **catastrophe models**. If the actuary determines that the guidance in this ASOP conflicts with the guidance in ASOP No. 56, the guidance of this ASOP will govern.

This standard does not apply to **models** of operational risks. This standard also does not apply to **models** of economic risks that deal with instances of extreme events such as hyperinflation or a stock market collapse.

This standard also does not apply when the actuary is only designing, developing, or modifying a **catastrophe model** (or a portion of a **catastrophe model**).

If the actuary departs from the guidance set forth in this ASOP in order to comply with applicable law (statutes, regulations, and other legally binding authority), or for any other reason, the actuary should refer to section 4. If a conflict exists between this standard and applicable law, the actuary should comply with applicable law.

- 1.3 Cross References—When this ASOP refers to the provisions of other documents, the reference includes the referenced documents as they may be amended or restated in the future, and any successor to them, by whatever name called. If any amended or restated document differs materially from the originally referenced document, the actuary should consider the guidance in this ASOP to the extent it is applicable and appropriate.
- 1.4 Effective Date—This standard is effective for work performed on or after December 1, 2021.

Section 2. Definitions

The terms below are defined for use in this actuarial standard of practice and appear in bold throughout the ASOP.

- 2.1 Assumption—A type of explicit **input** to a **catastrophe model** that is derived from **data**, represents possibilities based on professional judgment, or may be prescribed by law or others. When derived from **data**, an **assumption** may be statistical, financial, economic, mathematical, or scientific in nature, and may be described as a **parameter**.
- 2.2 Catastrophe Model—A **model** of low-frequency events with high-severity or widespread potential effects. **Catastrophe models** may be used to explain a system, to study effects of different components, or to derive estimates.
- 2.3 Data—Facts or information that are either direct **input** to a **catastrophe model** or inform the selection of **input**. **Data** may be collected from sources such as records, experience, experiments, surveys, observations, benefit plan or policy provisions, or **output** from other **models**.
- 2.4 Expert—One who is qualified by knowledge, skill, experience, training, or education to render an opinion concerning the matter at hand.
- 2.5 Input—**Data** or **assumptions** used in a **catastrophe model** to produce **output**.
- 2.6 Intended Purpose—The goal or question, whether generalized or specific, addressed by the **catastrophe model** within the context of the assignment.
- 2.7 Model—A simplified representation of relationships among real world variables, entities, or events using statistical, financial, economic, mathematical, non-quantitative, or scientific concepts and equations. A **model** consists of three components: an information **input** component, which delivers **data** and **assumptions** to the **model**; a processing

component, which transforms **input** into **output**; and a results component, which translates the **output** into useful business information.

- 2.8 Output—The results of the **catastrophe model** including, but not limited to, point estimates, likely or possible ranges, and **data** or **assumptions** (as **input** for other **models**), behavioral expectations, or qualitative criteria on which decisions could be based.
- 2.9 Parameter—A type of statistical, financial, economic, mathematical, or scientific value that is used as **input** to **catastrophe models**. Examples of **parameters** include expected values in probability distributions and coefficients of formula variables.

Section 3. Analysis of Issues and Recommended Practices

- 3.1 Introduction—In performing actuarial services, the actuary may find it appropriate to select, use, review, or evaluate **catastrophe models**. When selecting, using, reviewing or evaluating a **catastrophe model**, the actuary should do the following:
- a. determine the appropriate level of reliance on **experts**;
 - b. have a basic understanding of the **catastrophe model**;
 - c. evaluate whether the **catastrophe model** is appropriate for the **intended purpose**;
 - d. determine that appropriate validation of the **catastrophe model** and **output** has occurred; and
 - e. determine the appropriate use of the **catastrophe model** and **output**.

The actuary's level of effort in understanding and evaluating a **catastrophe model** should be consistent with the **intended purpose** and the **catastrophe model output's** materiality to the results of the actuarial analysis.

- 3.2 Catastrophe Models Developed by Experts—When selecting, using, reviewing, or evaluating a **catastrophe model** developed by **experts**, the actuary should take into account the following:
- a. whether the individual or individuals who developed the **catastrophe model** are **experts** in the applicable field;
 - b. the extent to which the **catastrophe model** has been reviewed or validated by **experts** in the applicable field, including known differences of opinion among

experts concerning aspects of the **catastrophe model** that could be material to the actuary's use of the **catastrophe model**; and

- c. whether there are industry or regulatory standards that apply to the **catastrophe model** or to the testing or validation of the **catastrophe model**, and whether the **catastrophe model** has been certified as having met such standards.

The actuary may rely on **experts** in the applicable field in the evaluation of items in section 3.2(a)-(c) and should disclose the extent of such reliance.

- 3.3 Understanding of the Catastrophe Model—The actuary should be familiar with the basic components of the **catastrophe model** and understand both the user **input** and the **catastrophe model output**, as discussed below.

- 3.3.1 Catastrophe Model Components—The actuary should be familiar with the basic components of the **catastrophe model** and have an understanding of how such components interrelate within the **catastrophe model**. In addition, the actuary should identify which fields of expertise were used in developing or updating the **catastrophe model** and should make a reasonable effort to determine if the **catastrophe model** is based on generally accepted practices within the applicable fields of expertise. The actuary should also be familiar with how the **catastrophe model** was tested or validated and the level of independent **expert** review and testing.

- 3.3.2 User Input—The actuary should take reasonable steps to confirm that the precision and accuracy of the user **input** are consistent with the **intended purpose** and should refer, as applicable, to ASOP No. 23, *Data Quality*, when selecting, using, or evaluating **data** used in the **catastrophe model**. Certain user **input** may be required to produce **catastrophe model output** for the specific application. User **input** can include **assumptions** or **data**. If the **catastrophe model** requires user **input**, the actuary should evaluate the reasonableness of the user **input** and should have an understanding of the relationship between the user **input** and **catastrophe model output**.

- 3.3.3 Catastrophe Model Output—The actuary should determine that the **catastrophe model output** is consistent with the **intended purpose**.

- 3.4 Appropriateness of the Catastrophe Model for the Intended Purpose—The actuary should evaluate whether the **catastrophe model** is appropriate for the **intended purpose** and take into account the following:

- 3.4.1. Applicability of Historical Data—To the extent historical **data** are used in the development of the **catastrophe model** or the establishment of **catastrophe model parameters**, the actuary should take into account the adequacy of the historical **data** in representing the range of reasonably expected outcomes consistent with current knowledge about the phenomena being analyzed.
- 3.4.2. Developments in Relevant Fields—The actuary should make a reasonable effort to be aware of significant developments in relevant fields of expertise that are likely to materially affect the **catastrophe model**.
- 3.5 Output Validation— The actuary should validate that the **output** reasonably represents that which is being modeled. Depending on the **intended purpose**, **output** validation may include the following:
- a. comparing **output** to those of an alternative **model(s)**, where appropriate;
 - b. comparing the **output** produced by the **catastrophe model** with historical observations, if applicable;
 - c. comparing the consistency and reasonableness of relationships within the **output**; and
 - d. evaluating the reasonableness of changes in the **output** due to variations in the user **input**.
- 3.6 Appropriate Use of the Catastrophe Model and Output—The actuary should evaluate the reasonableness of the **catastrophe model output**, considering the **input** and the **intended purpose**. The actuary should take into account the limitations of the **catastrophe model** and use professional judgment to determine whether it is appropriate to use the **catastrophe model output**. The actuary should also use professional judgment to determine whether any adjustments to the **catastrophe model output** are needed to meet the **intended purpose**. The actuary should disclose any such adjustments in accordance with section 4.1.
- 3.7 Reliance on Another Actuary—The actuary may rely on another actuary who has selected, used, reviewed, or evaluated the **catastrophe model**. However, the relying actuary should be reasonably satisfied that the other actuary is qualified to select, use, review, or evaluate the **catastrophe model** in accordance with applicable ASOPs, and the **catastrophe model** is appropriate for the **intended purpose**. The actuary should disclose the extent of any such reliance.

- 3.8 Reliance on Data or Other Information Supplied by Others—When relying on **data** or other information supplied by others, the actuary should refer to ASOP No. 23 and ASOP No. 41, *Actuarial Communications*, for guidance.
- 3.9 Documentation—The actuary should consider preparing and retaining documentation to support compliance with the requirements of section 3 and the disclosure requirements of section 4. If preparing documentation, the actuary should prepare such documentation in a form such that another actuary qualified in the same practice area could assess the reasonableness of the actuary’s work and should document the steps taken to comply with this standard in light of proprietary aspects of the **catastrophe model**, if any. The degree of such documentation should be based on the professional judgment of the actuary and may vary with the complexity and purpose of the actuarial services. In addition, the actuary should refer to ASOP No. 41 for guidance related to the retention of file material other than that which is to be disclosed under section 4.

Section 4. Communications and Disclosures

- 4.1 Required Disclosures in an Actuarial Report—When issuing an actuarial report to which this standard applies, the actuary should refer to ASOP Nos. 23, 41, and 56. In addition, the actuary should disclose the following in such actuarial reports, as appropriate:
- a. the **catastrophe model** used and the **intended purpose**;
 - b. the methodology used to validate the **catastrophe model** developed by **experts** (see section 3.2);
 - c. the extent of reliance on **experts** (see section 3.2);
 - d. a description of the user **input** that was incorporated into the **catastrophe model** (see section 3.3.2);
 - e. a description of adjustments made to the **catastrophe model output** (see section 3.6); and
 - f. the extent of any reliance placed upon the work of another actuary (see section 3.7).
- 4.2 Additional Disclosures in an Actuarial Report—The actuary also should include disclosures in accordance with ASOP No. 41 in an actuarial report for the following circumstances:
- a. if any material **assumption** or method was prescribed by applicable law;

- b. if the actuary states reliance on other sources and thereby disclaims responsibility for any material **assumption** or method selected by a party other than the actuary; and
 - c. if in the actuary’s professional judgment, the actuary has deviated materially from the guidance of this ASOP.
- 4.3 Confidential Information—Nothing in this ASOP is intended to require the actuary to disclose confidential information.

Appendix 1

Background and Current Practices

Note: This appendix is provided for informational purposes and is not part of the standard of practice.

Background

Hurricane Andrew in 1992 and the Northridge Earthquake in 1994 led actuaries involved in evaluating hurricane and earthquake exposures to recognize the severe inadequacy of the traditional, empirical actuarial methods used for ratemaking for these exposures. Recognizing the need to replace these methods, many actuaries began using stochastic computer simulation models for their actuarial analysis of hurricane and earthquake exposure. Computer simulation models had been commonly used for some time by actuaries and others for the purpose of evaluating probable maximum loss but had not been widely used for ratemaking.

Over time, the output from catastrophe models became commonly used by property/casualty actuaries in developing rates for catastrophic perils as well as many other risk management purposes.

Current Practices

Catastrophe models are now widely used by actuaries in all practice areas for risk management analyses and calculating expected losses due to hurricanes, earthquakes, and terrorist acts. More recently, catastrophe models have also been developed to simulate wildfires, severe convective storms, tsunamis, and pandemics.

In addition, due to changes in regulations and financial reporting requirements, the number and importance of modeling applications in actuarial science has increased, with the results of actuarial models often entering financial statements directly.

Lastly, due to the evolution of enterprise risk management (ERM) practices and regulations, there has been increased use of catastrophe modeling as part of insurer stress testing and risk management across all practice areas. This trend is likely to continue to evolve and heighten in light of the emergence of the novel coronavirus and the COVID-19 pandemic.

Appendix 2

Comments on the Exposure Draft and Responses

The exposure draft of the proposed revision of ASOP No. 38, *Catastrophe Modeling (for All Practice Areas)*, was issued in September 2020 with a comment deadline of January 15, 2021. Four comment letters were received, some of which were submitted on behalf of multiple commentators, such as by firms or committees. For purposes of this appendix, the term “commentator” may refer to more than one person associated with a particular comment letter. The ASOP No. 38 Task Force carefully considered all comments received, and the ASB reviewed (and modified, where appropriate) the changes proposed by the ASOP No. 38 Task Force and the ASB General Committee.

Summarized below are the significant issues and questions contained in the comment letters and the responses. Minor wording or punctuation changes that were suggested but not significant are not reflected in the appendix, although they may have been adopted.

The term “reviewers” in appendix 2 includes the ASOP No. 38 Task Force, the ASB General Committee, and the ASB. Also, the section numbers and titles used in appendix 2 refer to those in the exposure draft, which are then cross referenced with those in the final ASOP.

SECTION 1. PURPOSE, SCOPE, CROSS REFERENCES, AND EFFECTIVE DATE	
Section 1.2, Scope	
Comment	One commentator requested a clearer definition of what is excluded from the scope of ASOP No. 38, noting that catastrophe models can be used to infer economic impacts beyond direct claims and that novel catastrophic perils may fall into a gray area in which ASOP No. 38 may or may not apply.
Response	The reviewers believe the guidance is appropriate and made no change in response to this comment. The reviewers note that section 1.2 does not limit the reason why a catastrophe model is used to perform actuarial services or whether the catastrophe model is a mature or novel catastrophe model.
Comment	One commentator suggested that section 1.2 should state that the guidance in the standard applies to the extent practicable within the scope of the actuary’s assignment when the actuary is reviewing or evaluating a catastrophe model.
Response	The reviewers agree and made the change.
Comment	One commentator suggested that “review or evaluation” be removed from the scope of the standard or alternatively that the scope be changed to exclude an actuary performing a regulatory review.
Response	The reviewers believe the revised guidance is appropriate and made no change in response to this comment.

Comment	One commentator recommended that section 1.2 should state that the application of the standard be based on the actuary’s professional judgement as to the materiality of the model output for the intended user.
Response	The reviewers believe the guidance is appropriate and made no change in response to this comment. The reviewers note that section 3.1 addresses materiality.
Comment	One commentator recommended that section 1.2 should state that the guidance in the standard applies only to the extent of the actuary’s responsibilities and adopt the language from ASOP No. 56 section 1.2.
Response	The reviewers believe the guidance is appropriate and made no change in response to this comment.
Comment	One commentator suggested that the scope of the standard be expanded to include elements similar to ASOP No. 56.
Response	The reviewers believe the revised guidance is appropriate and made no change in response to this comment.
Comment	Several commentators questioned what constituted a conflict between ASOP No. 38 and ASOP No. 56 versus what constituted a difference and asked how potential conflicts are meant to be resolved.
Response	The reviewers believe the revised guidance is appropriate and made no change in response to this comment. The reviewers note that ASOP No. 1, <i>Introductory Standard of Practice</i> , section 4.4, states, “When an actuary believes that multiple ASOPs have conflicting provisions when applied to a specific situation and none provide explicit guidance concerning which governs, the actuary should apply professional judgment and may wish to contact the ABCD for confidential guidance on appropriate practice.”
SECTION 2. DEFINITIONS	
Section 2.2, Catastrophe Model	
Comment	Two commentators suggested clarifying the definition of catastrophe model.
Response	The reviewers agree and made changes similar to those suggested by the commentators to improve clarity.
Comment	One commentator suggested a definition for “model” be added to ASOP No. 38.
Response	The reviewers agree and made the change.
SECTION 3. ANALYSIS OF ISSUES AND RECOMMENDED PRACTICES	
Section 3.1, Introduction	
Comment	One commentator suggested that the use of the term “validation” used in sections 3.1(d) and 3.5 be clarified to distinguish if the terms are being used differently.
Response	The reviewers believe the guidance is appropriate and made no change in response to this comment. The reviewers note section 3.1 introduces validation and section 3.5 provides details on the validation of catastrophe model output.

Section 3.2, Appropriate Reliance on Experts (now titled Catastrophe Models Developed by Experts)	
Comment	One commentator recommended changing “should consider” to “may consider” regarding the appropriate level of reliance on experts to be consistent with the corresponding language in ASOP No. 56, section 3.5.
Response	The reviewers believe the guidance is appropriate and made no change in response to this comment.
Comment	One commentator recommended changing the language in section 3.2(b) to mirror ASOP No. 56, section 3.5(b).
Response	The reviewers agree and made the change.
Comment	One commentator noted that this section, does not include the language of ASOP No. 56, section 3.5(d), which considers whether the science underlying the expertise is likely to produce useful models for the intended purpose.
Response	The reviewers believe the guidance is appropriate and made no change in response to this comment.
Comment	One commentator recommended that ASOP No. 38 be expanded to require disclosure of reliance on experts.
Response	The reviewers agree and made the change.
Comment	One commentator suggested that the ASOP be expanded to explicitly allow reliance on an expert to select, use, review, or evaluate the catastrophe model.
Response	The reviewers believe the guidance is appropriate and consistent with the suggestion, and made no change in response to this comment.
Section 3.5, Appropriate Validation (now titled Output Validation)	
Comment	One commentator requested that results derived from alternate models or methods, where available and appropriate, which is part of current ASOP No. 38, be added.
Response	The reviewers partially agree and modified the language.
Section 3.7, Reliance on Another Actuary	
Comment	One commentator suggested that ASOP No. 56 be added to the requirements for reliance on another actuary.
Response	The reviewers believe the revised guidance is appropriate and made no change in response to this comment.



Statement of Compliance with Actuarial Standard of Practice 38

Minchong Mao, FCAS, MAAA

Background

Actuarial Standard of Practice 38 provides guidance to the actuary in using models that incorporate specialized knowledge outside the actuary's own area of expertise when developing an actuarial work product. When using such a model, the standard requires that the actuary perform five specific tasks, as described below using the numbering system of the standard. This document certifies that Minchong Mao, FCAS, MAAA, has performed these tasks for the catastrophe loss model(s) relied upon in the actuarial work product to which it is attached. It is intended that actuaries utilizing the actuarial work product in their insurance ratemaking efforts can rely on my model evaluation in accordance with Section 3.7 of the standard of practice. In July 2021, Actuarial Standards Board(ASB) adopted revision of ASOP No. 38. This document reflected the most current requirements in the 2021 revision.

Model Versions Covered by this document

- AIR Hurricane model for the United States v1.0.0 utilized in Touchstone versions 2020, 2021 and later, released in 2021
- AIR Severe Thunderstorm Model for the United States v7.0 implemented in Touchstone version 5, 6, 7, 8, 2020, 2021 and later
- AIR Winter Storm Model for the United States v1.5 implemented in Touchstone version 5, 6, 7, 8, 2020, 2021 and later
- AIR Wildfire Model for the United States v2 implemented in Touchstone version 6, 7, 8, 2020, 2021 and later
- AIR Earthquake and Fire Following Model for the United States v10.1 implemented in Touchstone version 6, 7, 8, 2020, 2021 and later. This version included Time Dependent Earthquake Hazard Adjustment.

3.2 Appropriate Reliance on Experts

Catastrophe Models Developed by Experts—When selecting, using, reviewing, or evaluating a catastrophe model developed by experts, the actuary should take into account the following:

- a. whether the individual or individuals who developed the catastrophe model are experts in the applicable field;*
- b. the extent to which the catastrophe model has been reviewed or validated by experts concerning aspects of the catastrophe model that could be material to the actuary's use of the catastrophe model; and*
- c. whether there are industry or regulatory standards that apply to the catastrophe model or to the testing or validation of the catastrophe model, and whether the catastrophe model has been certified as having met such standards.*



For those aspects of the model that are outside my area of expertise, I have relied on the list of experts provided by the modeler. Please see the modeler's ASOP 38 document and supporting documentation for additional information.

- a. The individuals listed as employees of the modeler appear to be experts in their respective fields.
- b. The modeler has provided documentation of reviews by outside experts. Many of these reviewers are well-recognized experts in their fields. I have reviewed the findings of the outside experts and found no significant differences of opinion with respect to the validity of the model.
- c. Standards for catastrophe loss models have been promulgated by a few states. Most notably, the Florida Commission on Hurricane Loss Projection Methodology was created to review catastrophe loss models. The model(s) used in this work product, or derivatives thereof, have been certified by the Florida Commission on Hurricane Loss Projection Methodology.

3.3 Understanding of the Model

The actuary should be familiar with the basic components of the catastrophe model and understand both the user input and the catastrophe model output, as discussed below.

I have reviewed the modeler's ASOP 38 document and supporting documentation describing the model's components, input, and output, as well as other documentation, to comply with this requirement. In addition, I have specialized in actuarial applications of catastrophe model output since 2005.

3.3.1 Catastrophe Model Components—The actuary should be familiar with the basic components of the catastrophe model and have an understanding of how such components interrelate within the catastrophe model. In addition, the actuary should identify which fields of expertise were used in developing or updating the catastrophe model and should make a reasonable effort to determine if the catastrophe model is based on generally accepted practices within the applicable fields of expertise. The actuary should also be familiar with how the catastrophe model was tested or validated and the level of independent expert review and testing.

I am reasonably familiar with the basic components of the model and have a basic understanding of how such components interrelate within the model. I have identified the fields of expertise used in developing and updating the model and have determined that the model is based on generally accepted practices within the applicable fields of expertise. I am reasonably familiar with how the model was validated and have reviewed the documentation of reviews by outside experts.

3.3.2 User Input—The actuary should take reasonable steps to confirm that the precision and accuracy of the user input are consistent with the intended purpose and should refer, as applicable, to ASOP No. 23, Data Quality, when selecting, using, or evaluating data used in the catastrophe model. Certain user input may be required to produce catastrophe model output for the specific application. User input can include assumptions or data. If the catastrophe model requires user input, the actuary should evaluate the reasonableness of the user input and should have an understanding of the relationship between the user input and catastrophe model output.

I understand the user input required to produce model output, including the level of detail required to produce results that are consistent with insurance ratemaking and risk management applications.



3.3.3 Catastrophe Model Output—The actuary should determine that the catastrophe model output is consistent with the intended purpose.

I have determined that the model output is consistent with the insurance ratemaking applications for which it was used. We most often use event loss detail in our work, so we are always careful that our results balance to the model's prepared exhibits.

3.4 Appropriateness of the Model for the Intended Application

The actuary should evaluate whether the catastrophe model is appropriate for the intended purpose and take into account the following:

3.4.1. Applicability of Historical Data—To the extent historical data are used in the development of the catastrophe model or the establishment of catastrophe model parameters, the actuary should take into account the adequacy of the historical data in representing the range of reasonably expected outcomes consistent with current knowledge about the phenomena being analyzed.

3.4.2. Developments in Relevant Fields—The actuary should make a reasonable effort to be aware of significant developments in relevant fields of expertise that are likely to materially affect the catastrophe model.

The catastrophe model(s) we have relied upon were developed for purposes related to the management of risk. I have evaluated the model(s) in light of available alternatives and determined that the catastrophe loss model is the most appropriate method of estimating expected catastrophe loss distributions for insurance ratemaking.

Some additional considerations include the following:

3.4.1. Applicability of Historical Data: Historical data is relied upon extensively in the development and validation of catastrophe loss models. Smoothing procedures are applied in cases where reasonably foreseeable events are underrepresented in the historical data.

3.4.2. Developments in Relevant Fields: Catastrophe loss models are typically updated on an annual basis in order to incorporate the most current scientific research and information from recent catastrophe events.

I have made a reasonable effort to be aware of significant developments in the relevant fields of expertise. In particular, meteorological studies related to the current period of elevated hurricane activity are important in determining which of a model's frequency assumptions should be utilized in insurance ratemaking applications involving hurricane-exposed risk portfolios. Aon maintains a documentation library containing current research in the science of catastrophe perils.

3.5 Output Validation

The actuary should validate that the output reasonably represents that which is being modeled. Depending on the intended purpose, output validation may include the following:

- a. comparing output to those of an alternative model(s), where appropriate;*
- b. comparing the output produced by the catastrophe model with historical observations, if applicable;*
- c. comparing the consistency and reasonableness of relationships within the output; and*
- d. evaluating the reasonableness of changes in the output due to variations in the user input.*

a. Aon conducts extensive testing of each model that we license whenever a new model is released. Output from Model output is checked for reasonability against other models and for consistency with the modeler's representations as to changes incorporated in the current version. I have reviewed the results of these tests and found the model used in this analysis to provide reasonable output.

b. Catastrophes, by their nature, involve significant uncertainty in the amount of insured losses they produce. In light of this uncertainty, the model has been shown to produce reasonable estimates of losses incurred from historical events.

I have reviewed the modeler's ASOP 38 document and supporting documentation describing comparisons of model output to historical observations and found that the model produces reasonable estimates.

c. I have reviewed the relationships among output results and found them to be consistent and reasonable.

d. Aon conducts extensive testing of each model that we license with respect to the sensitivity of model output to variations in the user input and model assumptions. I have reviewed the results of these tests and obtained an understanding of the model's sensitivity.

3.6 Appropriate Use of the Model

The actuary should evaluate the reasonableness of the catastrophe model output, considering the input and the intended purpose. The actuary should take into account the limitations of the catastrophe model and use professional judgment to determine whether it is appropriate to use the catastrophe model output. The actuary should also use professional judgment to determine whether any adjustments to the catastrophe model output are needed to meet the intended purpose. The actuary should disclose any such adjustments in accordance with section 4.1.

In my professional judgment, it is appropriate to use the model results, without adjustment, for the purposes of the actuarial work product to which this document is attached.

3.7 Reliance on Another Actuary

The actuary may rely on another actuary who has selected, used, reviewed, or evaluated the catastrophe model. However, the relying actuary should be reasonably satisfied that the other actuary is qualified to select, use, review, or evaluate the catastrophe model in accordance with applicable ASOPs, and the catastrophe model is appropriate for the intended purpose. The actuary should disclose the extent of any such reliance.

Actuaries utilizing the actuarial work product to which this document is attached can rely on my complete evaluation of the model(s) used as described above. In doing so, they should document the extent of such reliance in their work.

Minchong Mao FCAS, MAAA



Nov. 1 2021



Statement of Compliance with Actuarial Standard of Practice 38

Minchong Mao, FCAS, MAAA

Background

Actuarial Standard of Practice 38 provides guidance to the actuary in using models that incorporate specialized knowledge outside the actuary's own area of expertise when developing an actuarial work product. When using such a model, the standard requires that the actuary perform five specific tasks, as described below using the numbering system of the standard. This document certifies that Minchong Mao, FCAS, MAAA, has performed these tasks for the catastrophe loss model(s) relied upon in the actuarial work product to which it is attached. It is intended that actuaries utilizing the actuarial work product in their insurance ratemaking efforts can rely on my model evaluation in accordance with Section 3.7 of the standard of practice. In July 2021, Actuarial Standards Board(ASB) adopted revision of ASOP No. 38. This document reflected the most current requirements in the 2021 revision.

Model Versions Covered by this document

- RMS North Atlantic Hurricane Model v21, released in 2021, implemented in RiskLink V21
- RMS North America Earthquake Model v17.0, released in 2017, implemented in RiskLink V17, 18, 18.1 and 21
- RMS Sever Convective Strom Model for the United States, released in 2014, implemented in RiskLink V17,18, 18.1 and 21
- RMS Winter Storm Model for the United States, release in 2013, implemented in RiskLink V17,18, 18.1 and 21

3.2 Appropriate Reliance on Experts

Catastrophe Models Developed by Experts—When selecting, using, reviewing, or evaluating a catastrophe model developed by experts, the actuary should take into account the following:

- a. whether the individual or individuals who developed the catastrophe model are experts in the applicable field;*
- b. the extent to which the catastrophe model has been reviewed or validated by experts concerning aspects of the catastrophe model that could be material to the actuary's use of the catastrophe model; and*
- c. whether there are industry or regulatory standards that apply to the catastrophe model or to the testing or validation of the catastrophe model, and whether the catastrophe model has been certified as having met such standards.*

For those aspects of the model that are outside my area of expertise, I have relied on the list of experts provided by the modeler. Please see the modeler's ASOP 38 document and supporting documentation for additional information.



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- a. The individuals listed as employees of the modeler appear to be experts in their respective fields.
- b. The modeler has provided documentation of reviews by outside experts. Many of these reviewers are well-recognized experts in their fields. I have reviewed the findings of the outside experts and found no significant differences of opinion with respect to the validity of the model.
- c. Standards for catastrophe loss models have been promulgated by a few states. Most notably, the Florida Commission on Hurricane Loss Projection Methodology was created to review catastrophe loss models. The model(s) used in this work product, or derivatives thereof, have been certified by the Florida Commission on Hurricane Loss Projection Methodology.

3.3 Understanding of the Model

The actuary should be familiar with the basic components of the catastrophe model and understand both the user input and the catastrophe model output, as discussed below.

I have reviewed the modeler's ASOP 38 document and supporting documentation describing the model's components, input, and output, as well as other documentation, to comply with this requirement. In addition, I have specialized in actuarial applications of catastrophe model output since 2005.

3.3.1 Catastrophe Model Components—The actuary should be familiar with the basic components of the catastrophe model and have an understanding of how such components interrelate within the catastrophe model. In addition, the actuary should identify which fields of expertise were used in developing or updating the catastrophe model and should make a reasonable effort to determine if the catastrophe model is based on generally accepted practices within the applicable fields of expertise. The actuary should also be familiar with how the catastrophe model was tested or validated and the level of independent expert review and testing.

I am reasonably familiar with the basic components of the model and have a basic understanding of how such components interrelate within the model. I have identified the fields of expertise used in developing and updating the model and have determined that the model is based on generally accepted practices within the applicable fields of expertise. I am reasonably familiar with how the model was validated and have reviewed the documentation of reviews by outside experts.

3.3.2 User Input—The actuary should take reasonable steps to confirm that the precision and accuracy of the user input are consistent with the intended purpose and should refer, as applicable, to ASOP No. 23, Data Quality, when selecting, using, or evaluating data used in the catastrophe model. Certain user input may be required to produce catastrophe model output for the specific application. User input can include assumptions or data. If the catastrophe model requires user input, the actuary should evaluate the reasonableness of the user input and should have an understanding of the relationship between the user input and catastrophe model output.

I understand the user input required to produce model output, including the level of detail required to produce results that are consistent with insurance ratemaking and risk management applications.

3.3.3 Catastrophe Model Output—The actuary should determine that the catastrophe model output is consistent with the intended purpose.



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I have determined that the model output is consistent with the insurance ratemaking applications for which it was used. We most often use event loss detail in our work, so we are always careful that our results balance to the model's prepared exhibits.

3.4 Appropriateness of the Model for the Intended Application

The actuary should evaluate whether the catastrophe model is appropriate for the intended purpose and take into account the following:

3.4.1. Applicability of Historical Data—To the extent historical data are used in the development of the catastrophe model or the establishment of catastrophe model parameters, the actuary should take into account the adequacy of the historical data in representing the range of reasonably expected outcomes consistent with current knowledge about the phenomena being analyzed.

3.4.2. Developments in Relevant Fields—The actuary should make a reasonable effort to be aware of significant developments in relevant fields of expertise that are likely to materially affect the catastrophe model.

The catastrophe model(s) we have relied upon were developed for purposes related to the management of risk. I have evaluated the model(s) in light of available alternatives and determined that the catastrophe loss model is the most appropriate method of estimating expected catastrophe loss distributions for insurance ratemaking.

Some additional considerations include the following:

3.4.1. Applicability of Historical Data: Historical data is relied upon extensively in the development and validation of catastrophe loss models. Smoothing procedures are applied in cases where reasonably foreseeable events are underrepresented in the historical data.

3.4.2. Developments in Relevant Fields: Catastrophe loss models are typically updated on an annual basis in order to incorporate the most current scientific research and information from recent catastrophe events.

I have made a reasonable effort to be aware of significant developments in the relevant fields of expertise. In particular, meteorological studies related to the current period of elevated hurricane activity are important in determining which of a model's frequency assumptions should be utilized in insurance ratemaking applications involving hurricane-exposed risk portfolios. Aon maintains a documentation library containing current research in the science of catastrophe perils.

3.5 Output Validation

The actuary should validate that the output reasonably represents that which is being modeled. Depending on the intended purpose, output validation may include the following:

a. comparing output to those of an alternative model(s), where appropriate;



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- b. comparing the output produced by the catastrophe model with historical observations, if applicable;*
- c. comparing the consistency and reasonableness of relationships within the output; and*
- d. evaluating the reasonableness of changes in the output due to variations in the user input.*

a. Aon conducts extensive testing of each model that we license whenever a new model is released. Output from Model output is checked for reasonability against other models and for consistency with the modeler's representations as to changes incorporated in the current version. I have reviewed the results of these tests and found the model used in this analysis to provide reasonable output.

b. Catastrophes, by their nature, involve significant uncertainty in the amount of insured losses they produce. In light of this uncertainty, the model has been shown to produce reasonable estimates of losses incurred from historical events.

I have reviewed the modeler's ASOP 38 document and supporting documentation describing comparisons of model output to historical observations and found that the model produces reasonable estimates.

c. I have reviewed the relationships among output results and found them to be consistent and reasonable.

d. Aon conducts extensive testing of each model that we license with respect to the sensitivity of model output to variations in the user input and model assumptions. I have reviewed the results of these tests and obtained an understanding of the model's sensitivity.

3.6 Appropriate Use of the Model

The actuary should evaluate the reasonableness of the catastrophe model output, considering the input and the intended purpose. The actuary should take into account the limitations of the catastrophe model and use professional judgment to determine whether it is appropriate to use the catastrophe model output. The actuary should also use professional judgment to determine whether any adjustments to the catastrophe model output are needed to meet the intended purpose. The actuary should disclose any such adjustments in accordance with section 4.1.

In my professional judgment, it is appropriate to use the model results, without adjustment, for the purposes of the actuarial work product to which this document is attached.

3.7 Reliance on Another Actuary

The actuary may rely on another actuary who has selected, used, reviewed, or evaluated the catastrophe model. However, the relying actuary should be reasonably satisfied that the other actuary is qualified to select, use, review, or evaluate the catastrophe model in accordance with applicable ASOPs, and the



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catastrophe model is appropriate for the intended purpose. The actuary should disclose the extent of any such reliance.

Actuaries utilizing the actuarial work product to which this document is attached can rely on my complete evaluation of the model(s) used as described above. In doing so, they should document the extent of such reliance in their work.

Minchong Mao FCAS, MAAA

A handwritten signature in black ink that reads "Minchong Mao". The signature is written in a cursive style.

Nov. 1 2021

**North Carolina Rate Bureau
Dwelling Insurance Rate Filing
Support for Selected Reinsurance Structure**

Layer	Return Periods	
	Attachment	Exhaustion
612M XS 1616M	88	155
500M XS 1116M	48	88
400M XS 716M	24	48
300M XS 416M	12	24
200M XS 216M	6	12

The table above shows the All Peril 50/50 RMSv21/TSv9 blend attachment and exhaustion points which combine modeled loss with Catastrophe LAE for the North Carolina Rate Bureau portfolio, along with the selected reinsurance program.

North Carolina Rate Bureau Dwelling Insurance Rate Filing Reinsurance Program Summary

Reinsurance Layer	Rate-On-Line	Deposit Premium	Reinstatement Premium	Expected Total Premium	Expected Ceded Loss	Net Cost of Reinsurance
612M XS 1616M	4.20%	25,643	190	25,833	4,594	21,239
500M XS 1116M	6.20%	31,200	412	31,612	6,683	24,929
400M XS 716M	8.90%	35,440	823	36,263	9,489	26,774
300M XS 416M	13.00%	39,150	1,630	40,780	12,921	27,859
200M XS 216M	19.10%	38,280	2,830	41,110	15,638	25,472
Total		169,713	5,885	175,598	49,325	126,273

Dollar amounts are in thousands

The table above shows indicated rates-on-line for the filing's reinsurance structure along with analysis of modeled catastrophe losses. Rate-on-Line values have been selected using the current Loss-On-Line approach, which is a benchmarking analysis done using reinsurance treaties placed by Aon.

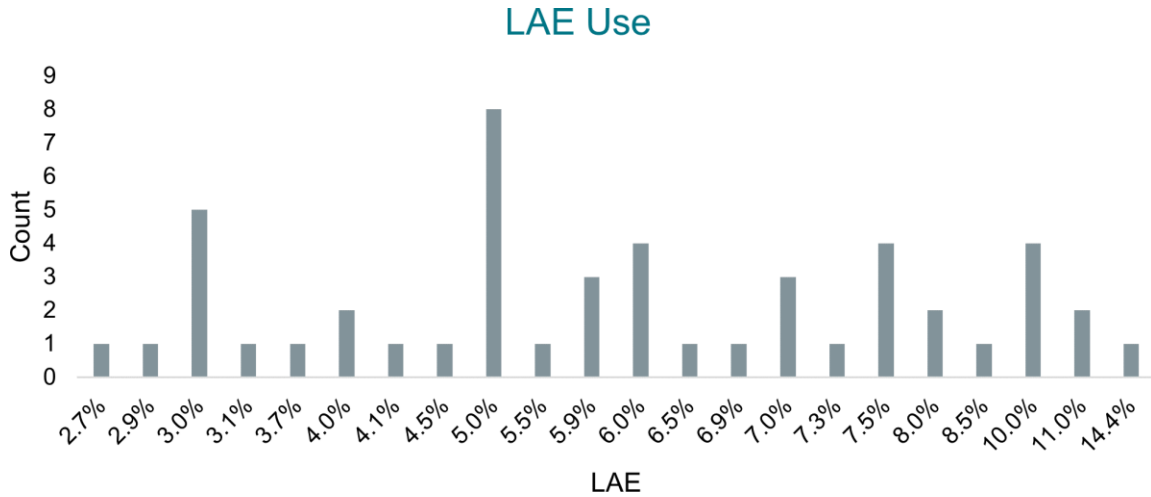
Deposit Premium is Rate-On-Line * Layer Limit

Expected Ceded Loss and Expected Reinstatement premium are the average annual amounts of each based on a simulation of catastrophe losses subject to the reinsurance program.

Expected Total Premium = Deposit Premium + Expected Reinstatement Premium

Net Cost of Reinsurance = Expected Total Premium - Expected Ceded Loss

North Carolina Rate Bureau Dwelling Insurance Rate Filing Support for Selected Catastrophe LAE Factor



This chart shows Catastrophe LAE factors applied to modeled catastrophe event losses in AM Best SRQ Submissions by Aon clients in 2021

- Factors were rounded to the nearest 0.5
- A weighted average was used where factors varied by peril
- Multiple factors were counted where factors varied by company within a group
- Reflects all clients that included a provision for LAE

The mean factor is 6.40%, the median is 6.00%, and the mode is 5.00%.

**North Carolina Rate Bureau
Reinsurance Cost Allocation
CY 2021
RMSv21/TSv9**

Layer 1: 200M XS 216M

Peril/Territory	Premium	Ceded AAL	Reins Margin
HU	98.27%	98.10%	98.38%
110	21.18%	20.80%	21.42%
120	23.27%	23.32%	23.24%
130	2.58%	2.55%	2.60%
140	19.68%	20.02%	19.46%
150	4.92%	4.94%	4.91%
160	5.21%	5.17%	5.23%
170	0.26%	0.26%	0.26%
180	3.26%	3.23%	3.28%
190	1.65%	1.63%	1.66%
200	1.03%	1.00%	1.05%
210	0.73%	0.72%	0.73%
220	2.94%	2.88%	2.98%
230	1.66%	1.65%	1.66%
240	1.68%	1.68%	1.69%
250	1.17%	1.15%	1.18%
260	0.52%	0.53%	0.52%
270	1.77%	1.77%	1.77%
280	0.29%	0.29%	0.29%
290	0.41%	0.40%	0.41%
300	0.39%	0.39%	0.39%
310	1.14%	1.15%	1.13%
320	0.61%	0.61%	0.60%
330	0.03%	0.03%	0.03%
340	1.15%	1.15%	1.15%
350	0.32%	0.32%	0.32%
360	0.36%	0.37%	0.36%
370	0.02%	0.02%	0.02%
380	0.02%	0.03%	0.02%
390	0.02%	0.02%	0.02%
OW	1.52%	1.73%	1.39%
WT	0.21%	0.17%	0.23%
Grand Total	100.00%	100.00%	100.00%

**North Carolina Rate Bureau
Reinsurance Cost Allocation
CY 2021
RMSv21/TSv9**

Layer 2: 300M XS 416M

Peril/Territory	Premium	Ceded AAL	Reins Margin
HU	99.46%	99.37%	99.51%
110	19.11%	18.46%	19.41%
120	24.37%	24.59%	24.27%
130	2.42%	2.36%	2.44%
140	20.48%	21.09%	20.19%
150	4.88%	4.89%	4.88%
160	5.61%	5.59%	5.62%
170	0.25%	0.25%	0.25%
180	3.39%	3.36%	3.40%
190	1.76%	1.74%	1.76%
200	1.10%	1.06%	1.11%
210	0.76%	0.75%	0.77%
220	3.21%	3.13%	3.24%
230	1.77%	1.76%	1.77%
240	1.78%	1.77%	1.78%
250	1.26%	1.24%	1.27%
260	0.55%	0.56%	0.55%
270	1.94%	1.93%	1.94%
280	0.32%	0.32%	0.32%
290	0.44%	0.43%	0.45%
300	0.41%	0.40%	0.41%
310	1.24%	1.24%	1.24%
320	0.63%	0.63%	0.63%
330	0.03%	0.03%	0.03%
340	1.10%	1.09%	1.11%
350	0.29%	0.29%	0.29%
360	0.33%	0.34%	0.32%
370	0.01%	0.02%	0.01%
380	0.02%	0.02%	0.02%
390	0.01%	0.01%	0.01%
OW	0.45%	0.56%	0.40%
WT	0.08%	0.06%	0.09%
Grand Total	100.00%	100.00%	100.00%

North Carolina Rate Bureau
Reinsurance Cost Allocation
CY 2021
RMSv21/TSv9

Layer 3: 400M XS 716M

Peril/Territory	Premium	Ceded AAL	Reins Margin
HU	99.80%	99.76%	99.82%
110	16.86%	15.86%	17.21%
120	25.62%	26.03%	25.47%
130	2.20%	2.10%	2.23%
140	21.24%	22.12%	20.92%
150	4.70%	4.66%	4.72%
160	5.98%	5.98%	5.98%
170	0.23%	0.23%	0.23%
180	3.43%	3.40%	3.44%
190	1.83%	1.83%	1.83%
200	1.15%	1.12%	1.16%
210	0.78%	0.77%	0.78%
220	3.41%	3.33%	3.43%
230	1.84%	1.85%	1.84%
240	1.81%	1.81%	1.81%
250	1.32%	1.31%	1.33%
260	0.56%	0.57%	0.55%
270	2.04%	2.03%	2.04%
280	0.33%	0.34%	0.33%
290	0.47%	0.45%	0.47%
300	0.41%	0.39%	0.41%
310	1.29%	1.28%	1.29%
320	0.64%	0.63%	0.64%
330	0.03%	0.03%	0.03%
340	1.05%	1.01%	1.06%
350	0.26%	0.26%	0.26%
360	0.30%	0.31%	0.29%
370	0.01%	0.01%	0.01%
380	0.02%	0.02%	0.02%
390	0.01%	0.01%	0.01%
OW	0.16%	0.22%	0.14%
WT	0.03%	0.02%	0.04%
Grand Total	100.00%	100.00%	100.00%

**North Carolina Rate Bureau
Reinsurance Cost Allocation
CY 2021
RMSv21/TSv9**

Layer 4: 500M XS 1116M

Peril/Territory	Premium	Ceded AAL	Reins Margin
HU	99.99%	99.99%	100.00%
110	15.04%	13.75%	15.39%
120	26.67%	27.16%	26.54%
130	2.02%	1.88%	2.05%
140	21.84%	22.84%	21.58%
150	4.51%	4.41%	4.53%
160	6.28%	6.29%	6.27%
170	0.22%	0.22%	0.22%
180	3.43%	3.41%	3.43%
190	1.87%	1.88%	1.86%
200	1.18%	1.16%	1.19%
210	0.78%	0.78%	0.78%
220	3.56%	3.52%	3.57%
230	1.90%	1.94%	1.89%
240	1.83%	1.85%	1.83%
250	1.38%	1.37%	1.38%
260	0.56%	0.58%	0.56%
270	2.12%	2.14%	2.12%
280	0.35%	0.36%	0.35%
290	0.48%	0.48%	0.49%
300	0.41%	0.40%	0.41%
310	1.34%	1.35%	1.33%
320	0.64%	0.65%	0.64%
330	0.03%	0.04%	0.03%
340	1.00%	0.98%	1.01%
350	0.23%	0.23%	0.23%
360	0.27%	0.30%	0.27%
370	0.01%	0.01%	0.01%
380	0.01%	0.02%	0.01%
390	0.01%	0.01%	0.01%
OW	0.01%	0.01%	0.00%
Grand Total	100.00%	100.00%	100.00%

**North Carolina Rate Bureau
Reinsurance Cost Allocation
CY 2021
RMSv21/TSv9**

Layer 5: 612M XS 1616M

Peril/Territory	Premium	Ceded AAL	Reins Margin
HU	100.00%	100.00%	100.00%
110	13.15%	11.28%	13.56%
120	27.30%	27.98%	27.15%
130	1.87%	1.66%	1.92%
140	22.38%	23.53%	22.13%
150	4.35%	4.15%	4.39%
160	6.62%	6.69%	6.60%
170	0.20%	0.19%	0.20%
180	3.46%	3.43%	3.47%
190	1.95%	1.98%	1.95%
200	1.20%	1.20%	1.19%
210	0.80%	0.79%	0.80%
220	3.73%	3.78%	3.72%
230	1.95%	2.03%	1.94%
240	1.87%	1.89%	1.87%
250	1.43%	1.47%	1.42%
260	0.58%	0.60%	0.57%
270	2.22%	2.27%	2.20%
280	0.37%	0.39%	0.36%
290	0.51%	0.51%	0.51%
300	0.42%	0.42%	0.42%
310	1.41%	1.46%	1.40%
320	0.68%	0.70%	0.67%
330	0.04%	0.04%	0.03%
340	1.00%	1.00%	1.00%
350	0.22%	0.23%	0.21%
360	0.27%	0.30%	0.26%
370	0.01%	0.01%	0.01%
380	0.01%	0.02%	0.01%
390	0.01%	0.01%	0.01%
Grand Total	100.00%	100.00%	100.00%

**North Carolina Rate Bureau
Reinsurance Margin Allocation
CY 2021
RMSv21/TSv9**

Territory	Policy Form 1	Policy Form 2	Total
110	1,533,516	20,730,668	22,264,184
120	5,095,257	26,825,748	31,921,005
130	1,079,273	1,780,903	2,860,177
140	9,287,623	17,000,395	26,288,019
150	2,474,283	3,485,436	5,959,719
160	2,604,688	4,897,957	7,502,644
170	162,790	133,062	295,852
180	2,035,224	2,284,343	4,319,567
190	1,299,025	985,604	2,284,629
200	1,020,400	415,684	1,436,084
210	512,466	463,394	975,860
220	1,303,848	3,064,196	4,368,044
230	1,771,217	524,216	2,295,433
240	1,261,294	1,006,694	2,267,988
250	693,354	984,396	1,677,751
260	369,533	330,124	699,657
270	305,077	2,264,612	2,569,690
280	128,143	289,548	417,690
290	212,701	374,459	587,161
300	284,519	237,062	521,581
310	461,824	1,199,192	1,661,016
320	308,971	513,205	822,176
330	24,649	18,339	42,988
340	289,534	1,120,232	1,409,766
350	126,556	222,327	348,882
360	180,346	238,080	418,426
370	9,380	7,818	17,198
380	10,368	13,970	24,338
390	5,757	8,804	14,561
Total	34,851,616	91,420,468	126,272,086

**PREFILED TESTIMONY
OF
PAUL D. ANDERSON**

**2022 DWELLING PROPERTY INSURANCE RATE FILING BY THE
NORTH CAROLINA RATE BUREAU
AUGUST 2022**

Q. Please state your name and business address.

A. My name is Paul D. Anderson. My business address is 17335 Golf Parkway, Brookfield, WI 53045.

Q. By whom are you employed?

A. I am employed by Milliman, Inc. (Milliman) and have been employed by Milliman since February 1, 2007.

Q. What is your educational background?

A. I received a Bachelor of Science in Actuarial Science from Drake University in Des Moines, Iowa in 1993.

Q. Do you have any additional certifications or qualifications?

A. Yes. I have been a Fellow of the Casualty Actuarial Society (CAS) since 2002 and a Certified Specialist in Predictive Analytics of the CAS Institute (iCAS) since 2018. Since 2002, I have served on several committees of the Casualty Actuarial Society, including the following:

- Syllabus & Examination Committee: April 2004 to July 2006;
- Volunteer Support Task Force: February 2012 to April 2013;
- Volunteer Resources Committee: April 2013 to March 2020;
- Vehicle Technology & Impact on Loss Trends Planning Committee: October 2017 to August 2018;
- Participation Survey Task Force: January 2018 to January 2019;
- Crash Course in Vehicle Technology & Driverless Cars Committee (chairperson): February 2020 to Present; and
- Volunteer Resources Advisory Committee: June 2020 to Present.

I have also been a member of the American Academy of Actuaries since 2002 and meet all of the continuing education requirements of that organization as well as those of the Casualty Actuarial Society.

Q. What is your employment background?

A. I was employed by Allstate Insurance Company from June 1993 until January 2007. While at Allstate, I held various actuarial roles. I began my career as an Auto Pricing Analyst and, over time, I assumed increasing responsibility in various departments that included Property Pricing, Auto Pricing, Property Research, and Auto Research. On the pricing teams, I assisted in developing rates for property and auto insurance products in most states across the country. On the research teams, I assisted in developing new property and auto risk classification plans to be implemented by Allstate's pricing teams. From 2006 until January 2007, I served as a Senior Manager for Allstate's Eastern region, which included assisting in the oversight of the pricing strategies for approximately half the country, including North Carolina.

In February 2007 I began my career at Milliman. Since 2007, I have completed, managed, or overseen numerous property and auto pricing analyses for a variety of clients. My clients have included small single-state insurance companies, industry-leading national insurance companies, start-up InsurTech insurance companies, government entities, the North Carolina Rate Bureau, and other entities with similar coastal property exposure in states such as Florida, Hawaii, and Texas. These client assignments have included such projects as pricing analyses to evaluate overall rate adequacy, predictive modeling assignments to develop new risk classification plans, and analyses of catastrophe losses to evaluate the adequacy and allocation of property premiums corresponding to catastrophe risk.

Q. What is Milliman?

A. Milliman is among the world's largest providers of actuarial, risk management, and related technology and data solutions. Milliman was founded in Seattle in 1947 as Milliman & Robertson and today has offices in principal cities worldwide, covering markets in North America, Latin America, Europe, Asia and the Pacific, the Middle East, and Africa. Milliman employs more than 4,600 people, including actuaries and specialists ranging from clinicians to economists. The firm has consulting practices in employee benefits, financial services, healthcare, life insurance, and property and casualty insurance. Milliman serves the full spectrum of business, education, financial, governmental, union, and nonprofit organizations.

Q. What are your current responsibilities at Milliman?

A. I am responsible for managing and overseeing the personal lines and insurance-related predictive analytics portion of Milliman's Milwaukee Casualty practice. The personal lines and predictive analytics team conducts a variety of property and auto pricing, product development, and predictive modeling assignments, primarily for insurance companies. Over the last five years, we have completed property analyses for nearly every state in the country, including North Carolina.

Q. Were you engaged to provide actuarial services to the North Carolina Rate Bureau (the Rate Bureau) in relation to its 2022 dwelling rate filing?

A. Yes, I was.

Q. What was the scope of that engagement?

A. Milliman was engaged for several aspects of the 2022 dwelling rate filing. My role was to prepare the compensation for assessment risk provision and review the contingency provision in this filing. I was also engaged to conduct an independent review and provide feedback on the actuarial analyses underlying the filing. In this role, I participated in many of the discussions in which ISO presented preliminary data and analyses to the Rate Bureau. In addition, my role also included participating in the Rate Bureau's Property Rating Subcommittee meetings in which the 2022 dwelling filing was discussed. During these discussions, I offered feedback and insights to assist in the Subcommittee's selections and decisions related to this filing.

Q. Is your firm being compensated for this engagement?

A. Yes, it is.

Q. Is that compensation in any way contingent on the provision of favorable testimony in support of the proposed filing?

A. No, it is not.

Q. Have you completed your review of the 2022 dwelling rate filing?

A. Yes, I have.

Q. Were there any constraints placed on your review, such as limited or delayed access to data or limited time that may have hindered your complete review?

A. No, I was provided all the data and information that were necessary, and I had adequate time for a complete review. My review was not limited in any way.

Q. What is the overall indicated change in dwelling rates in this filing?

A. This filing shows the need for an overall 42.6% statewide average rate increase. This includes a 7.4% change to Fire rates and a 52.8% change to Extended Coverage rates.

Q. Please describe the overall ratemaking methodology that underlies the filing.

- A. The approach in this filing is generally consistent with prior dwelling filings submitted by the Rate Bureau. Consistent with the *Statement of Principles Regarding Property and Casualty Insurance Ratemaking* as published by the Casualty Actuarial Society, the indicated rates reflect the expected value of future costs associated with insuring residential real property on dwelling policies. These expected costs include claims, claim settlement expenses, operational and administrative expenses, and the cost of capital. I also note that the dwelling insurance addressed in this filing is insurance on residential real property using Rate Bureau forms, rules, and rates, and that is what I am addressing when I refer to dwelling insurance in this testimony.

The statewide rate-level indications for dwelling insurance are developed based on a loss cost methodology (instead of a loss ratio methodology). The indicated rate-level change is calculated for each segment by comparing the required base class rate per policy to the current average base class rate. The required base class rate per policy is calculated by first projecting the losses and loss adjustment expenses for the policy period for which the filed rates are expected to be in effect. For Extended Coverage, losses are projected excluding historical hurricane losses. In addition to the exclusion of those hurricane losses, the projected losses for Extended Coverage are adjusted to remove excess losses and an excess factor is applied based on an average of the excess losses over 30 years of historical experience. Base class loss costs are calculated by dividing the adjusted incurred losses and loss adjustment expenses for each historical accident year by the corresponding earned house years and trended average rating factors. The base class loss costs by year are weighted together to develop a weighted trended base class loss cost for Fire and a weighted trended non-hurricane base class loss cost for Extended Coverage. For the Extended Coverage portion of the filing, a trended modeled hurricane base class loss cost is also developed and added to the weighted trended non-hurricane base class loss cost to determine the total base class loss cost.

Following the development of the base class loss cost, a per-policy fixed expense provision and other expected underwriting expenses associated with issuing dwelling insurance policies are incorporated to determine the required base rate per policy. These expected underwriting expenses include provisions for underwriting profit, contingencies, dividends, compensation for assessment risk, net cost of reinsurance, and deviations. As mentioned above, the required base class rate per policy is compared to the current average base class rate to develop the overall statewide indicated rate-level change. This comparison of the required and current base class rates is consistent with the *Statement of Principles* referenced above, is commonly used throughout the industry, and as such, is an actuarially sound method of developing an indicated rate-level change.

Q. How are the expected losses determined?

- A. This filing uses the latest available five years of historical loss experience, which is accident years ending December 31, 2016 through December 31, 2020, to determine expected losses other than hurricane losses. Using five years of experience is consistent with North Carolina statutes and prior dwelling Fire and Extended Coverage rate filings. It is also consistent with generally accepted ratemaking practices because the use of five years of historical experience balances stability of the overall rate level with responsiveness to the most recent conditions. Because severe weather-related events can cause volatility in the loss experience, hurricane losses and excess losses (for Extended Coverage only) have been removed from the base loss experience. Each year of losses has been developed to ultimate amounts and has been adjusted to a common \$500 deductible level. Losses are developed to ultimate because the final incurred losses for an accident year are often different than initial loss estimates due to the late reporting of claims or as yet unknown settlement amounts on known claims.

After these initial adjustments, a provision for excess losses is applied to each accident year for Extended Coverage, and a provision for loss adjustment expenses is applied to each accident year for all dwelling forms. The excess factor of 1.057 for the Extended Coverage section of the filing is determined using ISO's standard excess loss procedure, using a 30-year experience period as noted earlier. This procedure evaluates historical non-hurricane loss experience back to 1991 to develop a ratio of the long-term average excess loss ratio to the long-term average normal loss ratio.

Following these additional adjustments, in order to reflect the expected change in costs, the losses are trended from the midpoint of each experience period to the policy period for which the filed rates are assumed to be in effect. Similar to prior dwelling filings, historical claim frequency, loss severity, and pure premium experience, Fast Track data, and external cost indices were considered in the evaluation of loss trends. Similar to the 2020 dwelling filing, the historical experience is adjusted to the prospective period using selected loss trends that are based on the data described above.

In addition to reflecting a loss trend, a premium trend is also determined by combining current amount factors with premium projection factors for each accident year. The current amount factors are developed by comparing the average policy size relativity for each accident year to the comparable relativity for the most recent year in the experience period. The premium projection factors are calculated based on the fitted annual change in the average policy size relativity for each policy form.

In my opinion, the selections and methodologies referenced above, including the excess factor, the loss adjustment expense factors, the loss trend factors, and the premium trend factors, are reasonable and actuarially sound.

After adjusting the losses for each of the items mentioned above, each year's trended losses and loss adjustment expenses are divided by the earned house years to determine the average trended loss cost. The average trended loss costs are converted to Trended Base Class Loss Costs by dividing by the Average Rating Factor applicable to each accident year. Finally, these base class loss costs are weighted together to develop a Weighted Trended Base Class Loss Cost for Fire and a Weighted Trended Non-Hurricane Base Class Loss Cost for Extended Coverage. The weights applied to each accident year differ between Fire and Extended Coverage because there tends to be more variation in the Extended Coverage loss costs as compared to the Fire loss costs. As a result, to avoid giving too much weight to an unusually high or low loss cost, an even distribution of weights is applied to the historical experience for Extended Coverage. By contrast, a distribution that assigns more weight to the more recent years is used for Fire, since that segment typically has more stable base loss costs.

In my opinion, the methodology used to develop average loss costs and the weights assigned to each of the dwelling policy forms are reasonable and are consistent with widely used actuarial ratemaking practices.

Let me point out also that I am aware that the assumed effective date used in the rate review (February 1, 2023) differs from the effective date requested by the Rate Bureau for the filed rates (April 1, 2023). Unless I specifically note otherwise, when I refer in this testimony to the assumed effective date or to the period the rates will be in effect, I am referring to the February 1, 2023 effective date assumed during the rate review and the various trend periods corresponding to that date.

Q. In the previous response, you mentioned a loss adjustment expense provision. How are the dwelling provisions for loss adjustment expense determined?

A. The allocated and unallocated loss adjustment expenses are included with non-hurricane losses by applying a trended loss adjustment expense factor. Using information received from the Rate Bureau's data call for expense experience, loss adjustment expenses are summarized for calendar years 2016 through 2020. Consistent with prior dwelling filings, a three-year average is calculated after removing the highest and lowest ratio of expenses to losses. By excluding the highest and lowest ratios observed in the historical experience period, this methodology reduces the volatility in the average loss adjustment expense ratio that may result from variation in the underlying incurred losses from year to year. After the average loss adjustment expense ratio is calculated, it is adjusted to reflect the difference in the loss adjustment expense trend and the loss trend.

A separate provision for hurricane-related loss adjustment expenses is included in the modeled hurricane losses based on data and a recommendation provided by Aon.

Q. In your opinion, are the provisions for loss adjustment expenses reasonable?

A. Yes, the loss adjustment expense provisions are reasonable. It is common practice in the industry to use an average of historical experience to determine a loss adjustment expense provision, and it is reasonable to adjust that provision for expected differences in the loss adjustment expense trend and the loss trend, as we have done here.

Q. Is credibility considered in the rate-level indication?

A. Yes, credibility is considered. At the statewide level, based on the volume of data supporting the statewide rate-level indications, both Fire and Extended Coverage are considered fully credible. The full credibility standards are 500,000 house years for fire and 330,000 house years for extended coverage. When the territorial rate-level indications are calculated, partial credibility is determined using the square root rule, which is a long-standing actuarial methodology used throughout the industry.

Q. How is hurricane exposure reflected in each policy form's rate-level indication?

A. Similar to the Rate Bureau's 2020 dwelling filing, this filing reflects hurricane exposure in the Extended Coverage rate-level indications by using modeled hurricane losses rather than actual hurricane loss experience. Although there are actual hurricane losses in the experience period, the hurricane and excess losses have been removed from the base loss experience, as noted in my testimony above. Actual hurricane losses have a significant amount of variability even when evaluating twenty or more years of historical loss experience in a state. As such, it is universally accepted by the property and casualty insurance industry that hurricane models provide the most reliable approach to determining anticipated average annual hurricane losses over an extended time period. Hurricane models can be used to simulate 100,000 or more years of events, which provides a broader perspective on potential insured losses as compared to only evaluating the last several decades of losses. This broader perspective provides a more reliable estimate of the average frequency and severity of insured hurricane losses. Similarly, it provides a more reliable estimate of the frequency and severity of rare, but very severe events that may not have occurred within the last 100 years of recorded history, but have the potential to occur next year.

Q. How is the provision for expected hurricane losses determined?

A. The provision for average annual hurricane losses in this filing is consistent with the 2020 dwelling filing in that expected hurricane losses are developed through the use of hurricane models of two independent catastrophe modelers. To facilitate the use of two hurricane models, the Rate Bureau retained Aon to run both models

and to develop modeled hurricane losses using the blended results of these two models. I reviewed the exposure data provided as input to each model, and it is my opinion that the data was reasonable and consistent with other sections of this filing. I am also familiar with the assumptions selected as inputs to each model, and it is my opinion that the assumptions were applied consistently in both the AIR and RMS models such that the resulting output of both models is comparable. However, because Aon ran both models, I am relying on the work and opinions of Minchong Mao of Aon as it relates to specific details about the modeling process. The reliance on Aon to run both models and to develop modeled hurricane losses using the blended results of these two models is consistent with the 2020 dwelling filing.

The Rate Bureau requested that Aon combine the results of the two hurricane models by averaging the results from each model. This approach of giving equal weight to each model is intuitive, easy to understand, and the most reasonable method of blending two hurricane models. This blending approach (i.e., averaging) is also a common practice among insurance companies that consider multiple hurricane models. Based on my review of the blended model results, it is my opinion that the resulting hurricane losses reflected in this filing are reasonable and can be relied upon for the various purposes for which modeled hurricane losses are used in this filing. Additionally, since both models are equally credible, it is also my opinion that assigning equal weight to each model is the most reliable blending method and the most actuarially sound approach to consider two hurricane models.

Q. What model versions and modeling assumptions were used to develop estimated hurricane losses?

- A. The current AIR model is Touchstone v9 and the current RMS model is RiskLink v21. To develop the expected hurricane losses, Aon relied on AIR's Standard event set and on RMS' Historical event set. These event sets were used instead of AIR's Warm Sea-Surface Temperature (WSST) event set and RMS' Medium-Term Rate event set. Although many primary insurance companies consider the WSST and Medium-Term Rate event sets when developing expected hurricane losses for indicated rates in states other than North Carolina, the event sets selected for this filing are reasonable and actuarially sound.

Both the AIR and RMS models were run with aggregate demand surge included, which was identified as loss amplification in the RMS model. This standard procedure accounts for the expected additional cost for labor and materials after a very large hurricane occurs. Historical experience shows that, when major catastrophic events occur, the increased demand for building materials, labor, temporary housing, and other basic necessities can exceed the supply of these same items, which consequently increases their cost. Running models with demand surge is consistent with the Rate Bureau's prior dwelling filings and is the common practice by insurance companies when developing rates based on

modeled hurricane losses. Although the demand surge component of each model was used in this filing, the storm surge component of each model was not used to develop hurricane losses.

Q. Were any other calculations applied to the hurricane losses derived from the models?

A. Yes. Before providing the blended hurricane losses, Aon applied a hurricane-specific provision for loss adjustment expense. After Aon provided the modeled hurricane losses (including LAE), ISO calculated a Trended Modeled Hurricane Base Class Loss Cost for the extended coverage segment. The Trended Modeled Hurricane Base Class Loss Cost has been adjusted for LAE and trended such that the resulting amount is evaluated at a point in time consistent with the amount developed for the Weighted Trended Non-Hurricane Base Class Loss Cost.

Q. How are the provisions for commission and brokerage determined?

A. The provisions for commission and brokerage are determined based on the latest three-year average of the ratio of each segment's commission and brokerage expense relative to each segment's written premium including deviations. Deviations are included in the premium amounts underlying this calculation in order to be consistent with the actual calculation of commission and brokerage amounts paid by individual companies within the industry.

Q. In your opinion, are the provisions for commission and brokerage reasonable?

A. Yes, the commission and brokerage provisions are reasonable. It is common practice in the industry to use a three-year average to determine a commission and brokerage provision.

Q. How are the provisions for taxes, licenses, and fees determined?

A. The provisions for taxes, licenses, and fees are determined based on the latest three-year average of the ratio of each segment's taxes, licenses, and fees expense relative to each segment's written premium including deviations. Deviations are included in the premium amounts underlying this calculation in order to be consistent with the actual calculation of taxes, licenses, and fees paid by individual companies within the industry.

Q. In your opinion, are the provisions for taxes, licenses, and fees reasonable?

A. Yes, the taxes, licenses, and fees provisions are reasonable. As with the commission and brokerage provisions, it is common practice in the industry to use a three-year average to determine a taxes, licenses, and fees provision.

Q. How are the provisions for other acquisition expense determined?

- A. The provisions for other acquisition expense are determined by evaluating the latest five years of each segment's other acquisition expense and each segment's earned premium excluding deviations. Due to recent changes in each segment's ratio of other acquisition expense relative to earned premium, the selected provision for Fire is based on all five years of experience and the selected provision for Extended Coverage gives more consideration to the latest two years of experience.

The selected provisions are then trended from the midpoint of the experience period to the midpoint of the trend period based on an expense trend derived from cost indices. Following this, the trended other acquisition expense provisions are added to the trended general expense provisions and applied to the statewide average current base rates (adjusted for premium trend) to develop an average fixed expense per policy for Fire and for Extended Coverage.

Q. In your opinion, are the provisions for other acquisition expense reasonable?

- A. Yes, the other acquisition expense provisions are reasonable. It is common practice in the industry to evaluate five years of experience to determine an other acquisition expense provision after giving consideration to recent changes in the ratio of other acquisition expense relative to earned premium, and to trend fixed expense provisions to account for inflation.

Q. How are the provisions for general expense determined?

- A. The provisions for general expense are determined based on the latest three-year average of the ratio of each segment's general expense relative to each segment's earned premium excluding deviations.

The three-year average provisions are then trended from the midpoint of the experience period to the midpoint of the trend period based on an expense trend derived from cost indices. As noted above, the trended general expense provisions are added to the trended other acquisition expense provisions and applied to the statewide average current base rates (adjusted for premium trend) to develop an average fixed expense per policy for Fire and for Extended Coverage.

Q. In your opinion, are the provisions for general expense reasonable?

- A. Yes, the general expense provisions are reasonable. It is common practice in the industry to use a three-year average to determine a general expense provision, and to trend fixed expense provisions to account for inflation.

Q. Is a provision for policyholder dividends included in the filing?

- A. Yes, the Rate Bureau reviewed historical data for Fire and Extended Coverage and developed provisions for expected policyholder dividends separately for each segment. The Rate Bureau evaluated five years of historical experience and selected provisions for policyholder dividends of 0.50% for Fire and 0.80% for Extended Coverage. These provisions were based on five-year average ratios of the total policyholder dividends issued by dwelling insurers in North Carolina to the total direct written premium of those same companies.

The Actuarial Standard of Practice (ASOP) No. 29 regarding *Expense Provisions in Property/Casualty Insurance Ratemaking* states:

The Statement of Principles Regarding Property and Casualty Insurance Ratemaking of the Casualty Actuarial Society (CAS) classifies policyholder dividends as an expense to operations. When the actuary determines that policyholder dividends are a reasonably expected expense and are associated with the risk transfer, the actuary may include a provision in the rate for the expected amount of policyholder dividends. In making this determination, the actuary should consider the following: the company's dividend payment history, its current dividend policy or practice, whether dividends are related to loss experience, the capitalization of the company, and other considerations affecting the payment of dividends.

As stated in ASOP NO. 29, policyholder dividends are classified as an operating expense. In addition to the above excerpt from the *Statement of Principles Regarding Property and Casualty Insurance Ratemaking*, the Statement also provides that indicated rates should reflect the expected costs associated with insuring dwelling policies, including all operating expenses. As such, since policyholder dividends are classified as an operating expense, it is consistent with the *Statement of Principles Regarding Property and Casualty Insurance Ratemaking* and ASOP No. 29 to include a provision for policyholder dividends in the proposed rates reflected in this filing.

Q. In your opinion, are the provisions for policyholder dividends reasonable?

- A. Yes, the provisions for policyholder dividends are reasonable. It is reasonable and actuarially sound to calculate a five-year average ratio to determine a provision for policyholder dividends, and to treat this provision in a similar manner as a variable underwriting expense.

By reviewing five years of historical experience to determine provisions for policyholder dividends, the Rate Bureau is complying with the *Statement of Principles Regarding Property and Casualty Insurance Ratemaking* by considering the dividend payment history and ensuring that the selected provisions are reasonably expected expenses.

Q. Is a contingency provision included in the filing?

- A. Yes, the Rate Bureau is including a 1% contingency provision in this filing. This is consistent with the prior dwelling rate filings submitted by the Rate Bureau.

In addition to being consistent with prior Rate Bureau filings, the use of a contingency provision is common within the property and casualty insurance industry. According to the *Actuarial Standard of Practice No. 30: Treatment of Profit and Contingency Provisions and the Cost of Capital in Property/Casualty Insurance Ratemaking*, “the actuary should include a contingency provision if the assumptions used in the ratemaking process produce cost estimates that are not expected to equal average actual costs, and if this difference cannot be eliminated by changes in other components of the ratemaking process.” There are several reasons why expected cost estimates may not be equal to actual costs. Some of these reasons include adverse court decisions, extension of coverage for unforeseen or unintended exposures, regulatory delay or reduction in filed rate changes, and unexpected large losses not sufficiently recognized in the normal ratemaking process. For these reasons, among others, a contingency provision is appropriate and necessary in my opinion.

Included with this filing as Exhibit RB-20 is an exhibit I prepared that summarizes the estimated impact of delays in the filing process within the State of North Carolina. The delay in obtaining rate changes, whether caused by the regulatory review process or other delays inherent in the filing process, is merely one of several items listed above that supports the use of a contingency provision in a rate-level indication. Exhibit RB-20 lists the eighteen property rate filings submitted by the Rate Bureau between 2008 and 2021. For each filing, I compared the effective date assumed in the rate filing to the actual effective date. This difference, which reflects the delay due to the filing process, ranges from 0 months in the 2019 dwelling filing, to 22 months in the 2011 dwelling filing. After determining the length of delay for each filing, I applied the net trend (i.e., the loss trend offset by the premium trend) in that filing for the number of months of delay to determine the estimated impact of the delay in the filing process on the overall rate level. The estimated impact of delay varies across the eighteen filings, ranging from -1.9% in the 2021 MH(C) mobile homeowners filing to +5.9% in the 2008 MH(C) mobile homeowners filing, with an average impact of +0.9%.

Based on prior filings submitted by the Rate Bureau, my experience with property filings submitted by insurance companies in other states, and the 0.9% estimated impact of delays in the North Carolina filing process, it is my opinion that a 1% contingency provision is reasonable, consistent with common actuarial practice, and appropriate based on fundamental actuarial principles. Again, the impact of delays in the filing process is only one of many reasons that justifies a contingency provision.

Q. Are you providing expert testimony concerning the underwriting profit provision?

A. No, I am relying on the work and opinions of Dr. Zanjani as to the underwriting profit provision. The scope of my analysis and testimony relates to other aspects of the proposed rate filing.

Q. Earlier you said that one of your roles related to this filing was to prepare the compensation for assessment risk provision. Can you please explain this issue?

A. Yes. There is considerable risk to primary insurers that is attributable to the exposures written in the North Carolina Insurance Underwriting Association (i.e., the Coastal Property Insurance Pool, or “Beach Plan”) and the North Carolina Joint Underwriting Association (i.e., the FAIR Plan). Together, the Beach Plan and FAIR Plan serve as the “residual market” for residential property insurance in North Carolina. These two entities provide property insurance when policyholders are unable to purchase insurance coverage from companies in the voluntary market. In states with significant exposure to catastrophic events, property insurance residual markets may grow to represent a sizable portion of the total insured risk in the exposed regions of the state. In North Carolina, the Beach Plan and FAIR Plan have become the predominant writers of dwelling insurance in the 18 coastal counties.

Similar to voluntary insurance companies, the Beach and FAIR Plans use the premiums collected from policies they issue to pay the losses and expenses attributable to the coverages they insure. When premiums are greater than losses and expenses during a fiscal year, the Beach and FAIR Plans accumulate surplus. That surplus is available to pay losses in the event that future losses and expenses exceed collected premiums plus investment income. However, if the surplus of either the Beach Plan or FAIR Plan is exhausted, then additional losses are passed through to property insurers in North Carolina in the form of an assessment. The potential overall industry assessment each year from the Beach Plan is capped at \$1 billion, but the potential assessment from the FAIR Plan is unlimited. If losses in the Beach Plan exceed the retained surplus, the \$1 billion industry assessment, and any other resources of the Beach Plan (such as reinsurance), any additional losses are passed through directly to residential property insurance policyholders in North Carolina.

This risk of potential assessment by the Beach Plan or FAIR Plan on property insurers in North Carolina requires that insurance companies be compensated for the additional risk to their capital. To quantify this risk, I have applied a procedure developed by Milliman to incorporate a provision in the dwelling rates that compensates insurers for that risk.

Q. Can you please explain the procedure you applied?

- A. Yes. The methodology developed by Milliman to quantify the compensation for assessment risk relies on two estimates. The first estimate is based on historical compensation for assessment risk provisions, and the second estimate is to reflect the proportion of North Carolina insurance companies that retain exposure to assessments from the Beach Plan or FAIR Plan. Included with this filing as Exhibit RB-19 is an exhibit I prepared that summarizes these estimates and develops the resulting compensation for assessment risk provision.

In previous dwelling filings, I relied on modeled hurricane data corresponding to the Beach Plan and FAIR Plan exposures. However, updated versions of that data are no longer available to Milliman or the Rate Bureau, and relying on the older data would add uncertainty and variability to my analysis, which would not be appropriate for use in my analysis.

Because the necessary current modeled hurricane data is not available, I reviewed Rate Bureau property filings from the last several years to develop a compensation for assessment risk provision. From the 2017 homeowners filing to the 2021 mobile homeowners filings, the compensation for assessment risk provision ranged from 2.8% to 3.8%. I grouped the various property filings into rate review seasons, so that each historical compensation for assessment risk analysis received equal weight and determined an average historical compensation for assessment risk provision to be 3.2%.

Based on discussions during the rate review process, Milliman and the Rate Bureau were made aware that some reinsurance contracts provide coverage for residual market assessments, including the potential non-recoupable assessments from the Beach Plan and FAIR Plan. As a result, it is possible that the reinsurance contracts purchased by North Carolina property insurance companies include this coverage for assessments and the exposure to Beach Plan or FAIR Plan assessments is no longer retained by the primary carrier. Because the Rate Bureau does not have information about company-specific reinsurance programs, I estimated that 50% of the North Carolina property insurance companies retain their exposure to assessments from the Beach Plan or FAIR Plan.

Next, I multiplied this estimated 50% market share by the 3.2% average historical compensation for assessment risk provision to determine an overall compensation for assessment risk provision of 1.6%.

Q. In your opinion, is it appropriate to include a 1.6% provision for the compensation for assessment risk in dwelling rates in North Carolina?

- A. Yes. Insurance companies writing dwelling policies in North Carolina are exposed to the risk of Beach Plan or FAIR Plan assessments as a result of writing voluntary

market property insurance in the state. As such, for those insurance companies that retain this exposure, they are entitled to receive fair compensation for bearing that risk and it is appropriate to include that compensation in the dwelling rates. The current provision is based on historical provisions developed by Milliman that rely on a widely accepted measure of compensation that will fairly compensate insurers for bearing this additional risk to their capital. Moreover, the North Carolina statutes provide that prospective exposure to non-recoupable assessments shall be considered as an appropriate factor in the making of rates by the Rate Bureau.

Q. Earlier, when describing the overall ratemaking methodology that underlies this filing, you said that the expected underwriting expenses include a provision for the net cost of reinsurance. Can you please explain this issue?

A. Yes. Dwelling insurance is one of several types of coverages that has exposure to potential catastrophic events. In such coverages (dwelling, homeowners, and other property coverages), individual catastrophic events can result in significant losses that exceed the amount of liability the typical insurer can reasonably assume for solvency and financial stability considerations and that can jeopardize the insurer's ability to pay claims. As a result, in these lines of business, insurers routinely purchase reinsurance to mitigate their exposure to extreme events. In order to accurately reflect the expected costs associated with insuring property policies, as discussed in the *Statement of Principles Regarding Property and Casualty Insurance Ratemaking*, it is appropriate to include the cost of this reinsurance in the ratemaking process for these lines of insurance.

Q. Please elaborate on why it is appropriate to include a provision for the net cost of reinsurance in dwelling rates in North Carolina?

A. Insurance companies writing dwelling policies in North Carolina incur a significant cost for bearing the risk of properties exposed to catastrophic events. Regardless of whether the risk of catastrophic losses is retained by the primary insurer or transferred to a reinsurer, the market cost of bearing that risk must be included in the rates. As I mentioned, this is a foundational actuarial principle included in the *Statement of Principles Regarding Property and Casualty Insurance Ratemaking* and is a legitimate cost of the risk transfer inherent in the purchase of property insurance. As such, the net cost of reinsurance should be included in the North Carolina dwelling rates.

Q. How does this filing reflect the net cost of reinsurance?

A. For many years, the Rate Bureau has included a provision for the net cost of reinsurance. For this filing, the Rate Bureau engaged Aon, one of the world's largest reinsurance brokers, to develop the provision for the net cost of reinsurance. It is my understanding that Aon was retained by the Rate Bureau based on their ability to access relevant data and experience from the reinsurance

market, their expertise with catastrophe-related issues, and their prominence with respect to the reinsurance industry.

Q. In your opinion, is it appropriate to allocate reinsurance costs within North Carolina in a way that is proportional to risk?

A. Yes. The risk associated with insuring properties exposed to catastrophic events varies geographically within North Carolina. As such, the cost for bearing that risk should be allocated proportionally to the measurement of risk. In its analysis of reinsurance costs for this filing, Aon provides the statewide provision for the net reinsurance cost and allocates the reinsurance costs to each policy form and each territory. This allocation is appropriate and consistent with the objective of producing rates that are not inadequate, not excessive, and not unfairly discriminatory across policyholders.

Q. Are you providing expert testimony concerning the development of the net cost of reinsurance provision?

A. No, I am relying on the work and opinion of Minchong Mao of Aon as to the development of the net cost of reinsurance provision.

Q. Is a provision for deviations included in the filing?

A. No, the Rate Bureau reviewed historical data and considered whether to apply a provision for deviations but elected not to include one in this filing.

Q. Does the filing review the rate-level adequacy by class?

A. Yes. With this filing, the Rate Bureau developed indicated rate-level changes by class (i.e., Buildings or Contents) using a similar methodology as the statewide indication. A base class loss cost is calculated for each class using the historical loss experience. In addition, a credibility value is assigned to each class based on the number of house years underlying each loss cost. As mentioned above, the full credibility standards are 500,000 house years for fire and 330,000 house years for extended coverage. Using the credibility for each class, a credibility-weighted loss cost is determined by class. Additional calculations are applied to each class to reflect expenses, dividends, and reinsurance in a similar manner as applied at a statewide level. The result of these calculations is an indicated rate change by class.

In my opinion, the methodology used to develop the indicated rate-level change by class is reasonable and is consistent with widely used actuarial ratemaking practices.

Q. Does the filing review the rate-level adequacy by territory?

- A. Yes. With this filing, the Rate Bureau developed indicated rate-level changes by territory using a similar methodology as the statewide indication. A base class loss cost is calculated for each territory using the historical loss experience. In addition, a credibility value is assigned to each territory based on the number of house years underlying each loss cost. As mentioned above, the full credibility standards are 500,000 house years for Fire and 330,000 house years for Extended Coverage. Using the credibility for each territory, a credibility-weighted base class loss cost is determined by territory. Additional calculations are applied to each territory to reflect expenses, dividends, and reinsurance in a similar manner as applied at a statewide level. The result of these calculations is an indicated rate-level change by territory, which is allocated to each class based on the statewide indicated rate-level change by class.

In my opinion, the methodology used to develop the indicated rate-level change by territory and by class is reasonable and is consistent with widely used actuarial ratemaking practices.

Q. Does the filing review the wind exclusion credits and wind mitigation credits?

- A. Yes. Based on the indicated rates by territory (for Territories 110 to 160) and by class that are being proposed with this filing, the wind exclusion credits and wind mitigation credits are being updated in a corresponding manner. Using the underlying formula for the statewide rate-level indication, an adjustment is made to the appropriate components of the indication formula to reflect the non-wind losses as a percent of the total losses. The indicated non-wind rate is subtracted from the indicated overall rate to determine the indicated wind exclusion credit for each territory. The wind mitigation credits for Territories 110 to 160 are being revised in a manner proportional to the wind exclusion credits.

In my opinion, the methodology used to develop the revised wind exclusion credits and wind mitigation credits is reasonable and is consistent with widely used actuarial ratemaking practices.

Q. Does the filing review any other rating factors used in the premium calculation process?

- A. No. The only changes reflected in this filing are to base rates, wind exclusion credits, and wind mitigation credits as discussed above.

Q. What are the indicated rate levels for this filing?

- A. The indicated rate level is the actuarially sound and correct rate level for each territory, each segment, and each class. It is the indicated rate change by territory

that is needed to cover the expected losses and expenses while still providing a fair and reasonable profit. The indicated rate level is also the rate level that complies with the statutory requirement that rates not be excessive, inadequate, or unfairly discriminatory.

For Extended Coverage, the statewide indicated rate-level change is 52.8%. Due to differences by territory in historical loss experience, modeled hurricane losses, and other expenses, the indicated change by territory varies throughout the state. For many of the western territories, the indicated change is less than 52.8%, but for several of the territories closer to the coast, the indicated change is greater than 52.8%. The indicated rate-level change by territory is further divided into an indicated Buildings rate-level change and an indicated Contents rate-level change based on the indicated rate change by class (discussed above) relative to the total indicated rate change. For Extended Coverage, the statewide indicated Contents rate-level change is significantly lower than the statewide indicated Buildings rate-level change. As such, the indicated Contents rate-level change for each territory is also significantly lower than the corresponding indicated Buildings rate-level change.

In contrast to Extended Coverage, the statewide indicated rate-level change for Fire is 7.4%. Similar to the Extended Coverage segment, the indicated change by territory varies across the state, but the variation is less significant. Also similar to the Extended Coverage segment, the indicated rate-level change by territory is further divided by class such that the indicated Contents rate-level changes are lower than the indicated Buildings rate-level changes in each territory. When the indicated rate changes for Fire and Extended Coverage are combined, the total statewide indicated dwelling rate-level change is 42.6% and several territories have a combined rate-level change in excess of 50%.

In order to mitigate the impact of these indicated rate changes on policyholders, the Rate Bureau has filed the indicated rates to be implemented over a two-year time period rather than a one-year period. For Extended Coverage, the Year 1 rate change for each territory and each class is equal to half of the indicated rate change, where half of the indicated rate change is equal to the square root of the sum of 1.00 and the indicated rate change, minus 1.00 (e.g., half of a 77% indicated rate change = $\sqrt{1 + 0.77} - 1 = 0.33 = 33\%$). Similarly, the Year 2 rate change for Extended Coverage is equal to the remaining half of the indicated rate change. For Fire coverage, the Year 1 rate change for each territory and each class is equal to the indicated rate change and there is no additional change in Year 2.

In my opinion, the Rate Bureau's selected rate change for Fire and the two-year rate change for Extended Coverage are reasonable and are an effective strategy to mitigate the impact of this filing on policyholders. However, to the extent the loss trends and premium trends are not projected to the time period reflected by the

Year 2 change, it should be noted that the filed rates may not keep pace with the net trends during Year 2.

Q. I understand that you are not providing an opinion concerning the underwriting profit (profit) provision or the net cost of reinsurance (NCOR) provision. If I ask you to assume that the provisions for profit and NCOR are reasonable and actuarially sound, then in your opinion, is the overall rate-level indication shown in the dwelling filing by the North Carolina Rate Bureau reasonable?

A. Yes, if I assume that the provisions for profit and NCOR are reasonable, then in my opinion, the overall dwelling rate-level indication shown by the Rate Bureau, and the rate-level indications for each segment and each class, are reasonable and actuarially sound.

Q. Again, assuming that the provisions for profit and NCOR are reasonable, do you have an opinion whether the proposed rates reasonably provide for the expected costs for dwelling insurance in North Carolina?

A. If I assume that the provisions for profit and NCOR are reasonable, then in my opinion, the proposed rates in this filing reasonably reflect the expected costs for dwelling insurance. However, as mentioned above, to the extent the loss trends and premium trends are not projected to the time period reflected by the Year 2 change, the proposed rates do not reflect all expected costs for Year 2. The expected costs for Year 2 can be quantified by projecting the loss trends and premium trends to dates further in the future that correspond to Year 2 and comparing the resulting indicated rate changes to the rate changes included in this filing.

Q. Assuming that the provisions for profit and NCOR are reasonable, what is your opinion on whether the proposed dwelling rates are not excessive, not inadequate, and not unfairly discriminatory?

A. If I assume that the provisions for profit and NCOR are reasonable, then in my opinion, the proposed dwelling rates in this filing are not excessive or unfairly discriminatory. However, to the extent the loss trends and premium trends are not projected to the time period reflected by the Year 2 change, the proposed rates are at risk of being slightly inadequate at the time the Year 2 change is implemented.

Q. Does this conclude your testimony?

A. Yes, it does.

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SUMMARY

Property & Casualty (P&C) actuary with more than 29 years of experience in actuarial applications and related fields including ratemaking, product development, predictive modeling, state pricing, field proposals, rate filings, actuarial and statistical research, classification analysis, data analytics, and economic modeling. Experienced in Private Passenger Automobile (including preferred, standard, and non-standard), Personal Property (including homeowners, renters, condominium owners, mobile home, and dwelling), other miscellaneous Personal Lines (including boats, motorcycles, recreational vehicles, and personal umbrella), and various Commercial Lines of Business. Has sound knowledge of product development, product pricing, product implementation, and project management for Personal Lines products. Has working knowledge of other key insurance functions including claims, corporate finance, marketing, reinsurance, sales, and underwriting. Has demonstrated the ability to lead and manage teams of employees to achieve desired business results in various capacities. Has unique combination of analytic ability, business intuition, project management, leadership, and communication skills.

EMPLOYMENT HISTORY

Milliman, Inc. Brookfield, Wisconsin	2007 - Present
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Principal and Consulting Actuary

Specialize in personal lines insurance company clients and predictive analytics of both personal and commercial lines of insurance. Experience has included ratemaking and pricing analyses for insurance companies, product development and implementation, classification analysis using multivariate statistical techniques, catastrophe reinsurance analysis, loss reserving, segmentation analysis to support sales and marketing initiatives, impact analysis of proposed state and federal legislation, and merger and acquisition analysis. Has also provided expert testimony to support Auto and Property regulatory issues.

Allstate Insurance Company Northbrook, Illinois	1993 - 2007
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Senior Manager – Auto & Property Pricing (2006-2007)

Oversaw and directed all personal lines Auto and Property pricing, rate filings, and other actuarial work related to the pricing function for 10 states accounting for over \$4 billion of premium. Assisted in the oversight of all personal lines actuarial work related to the pricing function for an additional 12 states. Served as the primary department expert on all Property pricing initiatives. Directly managed a staff of 10 to 12 employees and participated in the leadership team that oversaw the management of a department with more than 130 employees.

Team Leader – Property & Specialty Lines Research (2005-2006)

Managed all research projects for personal lines Property and for Specialty Lines, all of which were completed using multivariate statistical analyses. Measured the impact of rating algorithm changes as they were implemented in various states. Oversaw the enhancement and improvement of analysis techniques used within the team. Led a team of 8 to 10 staff.

Research Manager (1999-2001, 2003-2005)

At different times, managed research teams for personal lines Auto, Economics & Modeling, and personal lines Property. Oversaw the development of countrywide pricing models based on multivariate statistical techniques, the evaluation of risk characteristics to be used as new rating elements, and the development of implementation tools to be used by pricing teams. Oversaw the development of Auto and Property economic models that measured the lifetime profitability of personal lines insurance customers. Led teams of staff ranging in size from 3 to 6 analysts.

Pricing Manager (1997-1999, 2001-2003)

Managed all personal lines Auto and Property pricing, rate filings, and other actuarial work related to the pricing function for California. Managed all personal lines Property pricing, rate filings, and other actuarial work related to the pricing function for 14 states including Alabama, Florida, Louisiana, and Mississippi. Led teams of staff ranging in size from 3 to 6 analysts.

Pricing Analyst, Research Analyst (1993-1997)

Produced rate proposals, rate filings, and quarterly rate-level indications for various states. Retrieved, manipulated, and analyzed large volumes of data to evaluate countrywide rating plans using multivariate statistical analyses.

EXPERT WITNESS EXPERIENCE

Pre-filed Expert Testimony – Various Private Passenger Automobile and Residential Property Insurance Rate Filings submitted by the North Carolina Rate Bureau

- *2021 Mobile Homeowners MH(C) Insurance Filing*
- *2021 Mobile Homeowners MH(F) Insurance Filing*
- *2020 Dwelling Insurance Filing*
- *2020 Homeowners Insurance Filing*
- *2019 Dwelling Insurance Filing*
- *2019 Mobile Homeowners MH(C) Insurance Filing*
- *2019 Mobile Homeowners MH(F) Insurance Filing*
- *2019 Private Passenger Automobile Insurance Filing*
- *2018 Homeowners Insurance Filing*
- *2018 Dwelling Insurance Filing*
- *2017 Homeowners Insurance Filing*
- *2016 Dwelling Insurance Filing*

EDUCATION

BS in Actuarial Science from Drake University, Des Moines, Iowa

PROFESSIONAL QUALIFICATIONS

Certified Specialist in Predictive Analytics (CSPA), 2018
Fellow of the Casualty Actuarial Society (FCAS), 2002
Member of the American Academy of Actuaries (MAAA), 2002
Associate of the Casualty Actuarial Society (ACAS), 1998
Member of the Midwest Actuarial Forum, 1998

PROFESSIONAL ACTIVITIES

Volunteer Chairperson, CAS Crash Course Seminar Task Force, 2021 - Present
Member, CAS Volunteer Resources Task Force, 2021 - Present
Chairperson, CAS Crash Course in Vehicle Technology & Driverless Cars Committee, 2020 - 2021
Member, CAS Volunteer Resources Advisory Committee, 2020 - 2021
Member, CAS Participation Survey Task Force, 2018 - 2019
Member, Vehicle Technology & Impact on Loss Trends Planning Committee, 2017 - 2018
Member, iCAS Predictive Analytics Syllabus Committee, 2017 - 2018
Member, CAS Volunteer Resources Committee, 2013 - 2020
Member, CAS Volunteer Support Task Force, 2012 - 2013
Member, CAS Examination Committee, 2004 - 2006

PUBLICATIONS

"Keep on trucking: COVID-19 and its impact on commercial auto"
Milliman Insight, April 2020.
"PIP PIP hooray! The changing Michigan auto market"
Milliman Insight, April 2020.
"Nowhere to drive: The impact of COVID-19 on the auto insurance industry"
Milliman Insight, March 2020.
"Better Visibility: Predictive modeling helps to steady medical malpractice underwriting"
Best's Review, February 2008.

PRESENTATIONS

Numerous presentations at Casualty Actuarial Society (CAS) and other Property & Casualty insurance industry meetings and seminars from 2007 through the present with a focus on personal lines Auto and Property issues, as well as predictive analytics topics.

**NORTH CAROLINA
DWELLING PROPERTY INSURANCE**

Development of Compensation for Assessment Risk Provision

(1)	(2)	(3)	(4)
Rate Review Season	NCRB Rate Filing	Date Submitted	Compensation for Assessment Risk Provision
2020-2021	2021 MH(C)	2/26/21	2.9%
	2021 MH(F)	2/26/21	
	2020 Dwelling	12/14/20	
	2020 HO	11/9/20	
2019-2020	2019 Dwelling	8/14/19	3.4%
2018-2019	2019 MH(C)	2/13/19	2.8%
	2019 MH(F)	2/13/19	
	2018 HO	12/20/18	
2017-2018	2018 Dwelling	2/7/18	3.8%
	2017 HO	11/17/17	
(5)	Average Historical Compensation for Assessment Risk Provision		3.2%
(6)	Estimated Market Share of Companies that Retain Exposure to NCIUA & NCJUA Assessments		50.0%
(7)	Compensation for Assessment Risk Provision		1.6%

(3), (4) From historical NCRB rate filings

(5) = Average of column (4)

(6) Estimated based on judgment

(7) = (5) x (6)

**NORTH CAROLINA
DWELLING PROPERTY INSURANCE**

Estimated Impact of Delays in Rate Filing Process

NCRB Rate Filing	Policy Type / Coverage	Premium Weight	(1) Assumed Effective Date	(2) Actual Effective Date	(3) # of Months of Delay	(4) Selected Loss Trend	(5) Selected Premium Trend	(6) Estimated Impact of Delay in Filing Process
2020 HO	Owners	\$2,161,073,789	8/1/21	6/1/22	10	6.0%	1.1%	4.0%
	Tenants	76,318,464	8/1/21	6/1/22	10	0.5%	-2.0%	2.1%
	Condos	31,251,398	8/1/21	6/1/22	10	5.0%	0.0%	4.1%
	Total	\$2,268,643,651						4.0%
2021 MH(C)	Mobile Home Structures	\$55,402,780	11/1/21	5/1/22	6	-2.0%	2.7%	-2.3%
	Adjacent Structures	4,435,898	11/1/21	5/1/22	6	10.2%	4.4%	2.7%
	Personal Effects	10,600,963	11/1/21	5/1/22	6	-2.0%	4.4%	-3.1%
	Liability	2,198,331	11/1/21	5/1/22	6	8.0%	0.7%	3.5%
Total	\$72,637,972						-1.9%	
2021 MH(F)	Owners	\$41,984,133	11/1/21	5/1/22	6	1.0%	2.7%	-0.8%
	Tenants	95,516	11/1/21	5/1/22	6	-2.0%	1.0%	-1.5%
	Total	\$42,079,649						-0.8%
2020 Dwelling	Fire	\$71,555,474	9/1/21	11/1/21	2	0.0%	1.2%	-0.2%
	EC	229,061,439	9/1/21	11/1/21	2	9.0%	1.5%	1.2%
	Total	\$300,616,913						0.9%
2019 Dwelling	Fire	\$83,923,771	7/1/20	7/1/20	0	2.0%	1.1%	0.0%
	EC	241,506,295	7/1/20	7/1/20	0	3.2%	0.8%	0.0%
	Total	\$325,430,066						0.0%
2019 MH(C)	Mobile Home Structures	\$52,069,226	2/1/20	6/1/20	4	3.5%	1.6%	0.6%
	Adjacent Structures	4,212,665	2/1/20	6/1/20	4	4.0%	2.8%	0.4%
	Personal Effects	10,255,303	2/1/20	6/1/20	4	2.0%	4.1%	-0.7%
	Liability	2,410,058	2/1/20	6/1/20	4	5.0%	n/a	1.6%
	Total	\$68,947,252						0.5%
2019 MH(F)	Owners	\$51,661,941	2/1/20	6/1/20	4	0.7%	-0.5%	0.4%
	Tenants	66,881	2/1/20	6/1/20	4	2.0%	2.1%	0.0%
	Total	\$51,728,822						0.4%
2018 HO	Owners	\$2,017,285,314	10/1/19	5/1/20	7	4.6%	1.0%	2.0%
	Tenants	72,370,871	10/1/19	5/1/20	7	-3.1%	-1.4%	-1.0%
	Condos	29,047,171	10/1/19	5/1/20	7	1.9%	0.2%	1.0%
	Total	\$2,118,703,356						1.9%
2018 Dwelling	Fire	\$102,088,428	6/1/18	2/1/19	8	0.2%	2.3%	-1.3%
	EC	187,663,877	6/1/18	2/1/19	8	0.4%	2.1%	-1.1%
	Total	\$289,752,305						-1.2%
2017 HO	Owners	\$2,010,516,565	6/1/18	10/1/18	4	3.1%	1.1%	0.7%
	Tenants	62,551,401	6/1/18	10/1/18	4	-3.1%	-1.0%	-0.7%
	Condos	24,591,783	6/1/18	10/1/18	4	1.9%	0.5%	0.5%
	Total	\$2,097,659,749						0.6%
2014 HO	Owners	\$2,257,970,589	7/1/14	6/1/15	11	5.3%	2.3%	2.7%
	Tenants	45,065,871	7/1/14	6/1/15	11	2.9%	-1.0%	3.6%
	Condos	22,629,842	7/1/14	6/1/15	11	5.4%	0.0%	5.0%
	Total	\$2,325,666,302						2.7%
2014 MH(C)	Property	\$77,349,418	6/1/15	10/1/15	4	3.0%	2.8%	0.1%
	Liability	1,546,804	6/1/15	10/1/15	4	2.8%	n/a	0.9%
	Total	\$78,896,222						0.1%
2014 MH(F)	Owners	\$44,750,216	6/1/15	10/1/15	4	4.6%	2.2%	0.8%
	Tenants	100,658	6/1/15	10/1/15	4	2.5%	-0.2%	0.9%
	Total	\$44,850,874						0.8%
2012 HO	Owners	\$2,168,814,729	6/1/13	7/1/13	1	5.4%	3.0%	0.2%
	Tenants	32,405,190	6/1/13	7/1/13	1	4.0%	0.0%	0.3%
	Condos	18,252,996	6/1/13	7/1/13	1	4.0%	2.0%	0.2%
	Total	\$2,219,472,915						0.2%
2011 Dwelling	Fire	\$84,664,174	6/1/11	4/1/13	22	3.6%	2.9%	1.3%
	EC	150,823,062	6/1/11	4/1/13	22	4.1%	2.8%	2.3%
	Total	\$235,487,236						2.0%
2008 HO	Owners	\$1,498,766,325	1/1/09	5/1/09	4	4.4%	3.9%	0.2%
	Tenants	24,074,875	1/1/09	5/1/09	4	0.2%	2.7%	-0.8%
	Condos	13,213,524	1/1/09	5/1/09	4	0.2%	2.9%	-0.9%
	Total	\$1,536,054,724						0.1%
2008 MH(C)	Property	\$76,284,985	10/1/07	12/1/08	14	7.5%	2.4%	5.9%
	Liability	1,161,840	10/1/07	12/1/08	14	4.0%	n/a	4.7%
	Total	\$77,446,825						5.9%
2008 MH(F)	Owners	\$43,659,180	10/1/07	12/1/08	14	6.6%	5.8%	0.9%
	Tenants	158,638	10/1/07	12/1/08	14	0.4%	-4.1%	5.5%
	Total	\$43,817,818						0.9%

Average Estimated Impact of Delays in Filing Process: 0.9%

(1), (3), (4) From historical NCRB rate filings

(2) From historical NCRB settlement agreements or circulars

(5) = $\{[1 + (3)] / [1 + (4)]\}^{\{[(2) - (1)]/365\}} - 1$

**PREFILED TESTIMONY
OF
GEORGE ZANJANI**

DWELLING INSURANCE RATE FILING

**NORTH CAROLINA RATE BUREAU
AUGUST, 2022**

I. Qualifications and Summary

Q: What is your name, occupation, and business address?

A: My name is George Zanjani. I am Professor of Finance and the holder of the Frank Park Samford Chair of Insurance at the University of Alabama. My business address is 1074 Alderwood Lane NE, Marietta, Georgia 30068.

Q: Please describe your educational and employment background.

A: A complete curriculum vitae is attached as Exhibit RB-22 with this testimony. To summarize, my undergraduate studies were at Stanford University from 1987-1990, where I earned an A.B./B.S in Economics and Biology. I joined the commercial lines actuarial department of Fireman's Fund Insurance Companies in 1990 as an Assistant Actuarial Analyst. Upon leaving in 1994, I was a Senior Actuarial Analyst, an Associate of the Casualty Actuarial Society, and the head of the company's Workers Compensation actuarial unit. I did my graduate studies in Economics at the University of Chicago, earning a Ph.D. in 2000. I joined the Research Department of the Federal Reserve Bank of New York in the Capital Markets Function as a Research Economist in 2000, leaving as a Senior Economist in 2008. I joined the Robinson College of Business of Georgia State University in 2008 as an Associate Professor of Risk Management and Insurance and was honored as the inaugural holder of the AAMGA Distinguished Chair in Risk Management and Insurance in 2011. I started my current position in 2017.

Q: Please elaborate on some of your professional activities.

A: My professional career has been focused on insurance. After four years of actuarial work in commercial lines insurance, my dissertation addressed the economics of insurance pricing. I specialized on insurance issues while at the Federal Reserve Bank of New York. In particular, I served for the Bank on the Presidential Working Group on Financial Markets during its review of the renewal of the Terrorism Risk Insurance Act in 2006 and on the Committee on the Global Financial System Task Force on Institutional Investors, Global Savings, and Asset Allocation.

My academic service activities include 1) service as referee for various academic journals, 2) service as an associate editor of the *Journal of Insurance Issues*, and 3) (current) service as a senior editor for the *Journal of Risk and Insurance*. In addition, I have served on the Board of the American Risk and Insurance Association and served as President of that association. I have

also served as President of the Risk Theory Society. I currently serve on the International Research Advisory Board of National Chengchi University.

As an academic, I continue to write on insurance pricing, participate in academic conferences on insurance, and engage in various sponsored research and consulting activities related to insurance. The latter activities include two research projects on capital allocation sponsored by the Casualty Actuarial Society during the last decade and a project on the financial crisis and the insurance industry sponsored by the Society of Actuaries in 2009. In addition, I have taught various courses at the undergraduate and graduate levels over the past decade, including classes on financial risk management, risk modeling, and property-casualty insurance.

Q: Have you published any papers or books?

A: Yes. I have published various articles, book chapters, reviews, and white papers on insurance pricing and other aspects of insurance markets. Published or forthcoming work includes articles on insurance topics in the *American Economic Review*, *Insurance: Mathematics and Economics*, the *Journal of Banking and Finance*, the *Journal of Financial Economics*, the *Journal of Public Economics*, the *Journal of Risk and Insurance*, *Management Science*, and the *North American Actuarial Journal*. My co-authors and I have two chapters in the 2013 edition of the Handbook of Insurance, one on capital allocation for insurance companies, and the other on the financial pricing of insurance. Two papers have won awards for their contributions to the field of actuarial science: I received the 2010 ARIA award from the Casualty Actuarial Society and shared the 2015 Charles A. Hachemeister Prize (also from the Casualty Actuarial Society) with a co-author.

Q: Are you a member of any professional organizations?

A: I am a member of the American Economic Association, the American Finance Association, the American Risk and Insurance Association, and the Risk Theory Society. I am also an Associate of the Casualty Actuarial Society. I served on the Board of Directors of the American Risk and Insurance Association from 2007 to 2014 and served as President in 2012-2013. I served as President of the Risk Theory Society in 2012.

Q: Have you ever testified in insurance rate regulatory proceedings?

A: Yes. I have offered testimony in Workers Compensation insurance rate filings in Florida (2015 and 2017), Massachusetts (2020 and 2022), and Virginia (2016). In addition, I have supplied testimony for various rate filings in North Carolina starting in 2019, including Workers Compensation, Private Passenger Auto, Homeowners, Mobile Homeowners, Flood, and Dwelling.

Q: What was the nature of your testimony in those previous cases?

A: In the Florida, Massachusetts, and Virginia cases, I offered testimony on the underwriting profit factors used in the rates. Specifically, I evaluated the suitability of the methods and assumptions used to develop those factors, as well as whether the rate of return on capital implied by those factors was reasonable. For the North Carolina filings, I estimated the rate of

return on capital implied by the selected underwriting profit factors and assessed whether that rate of return was reasonable.

Q: What is the purpose of your testimony?

A: I was asked by the North Carolina Rate Bureau, as a financial economist with expertise in insurance, 1) to assist the Bureau with the underwriting profit factor selection, 2) to determine the expected return on insurance net worth implicit in the filing, and 3) to assess whether the expected return on net worth constitutes a reasonable rate of return and thus whether the selected underwriting profit factor satisfies North Carolina's statutory requirements.

Q: Please summarize the main findings of your testimony.

A: The first task was to determine the range for a reasonable rate of return on capital. I started by creating a set of estimates of the cost of insurance equity relevant for the North Carolina Dwelling Fire and Extended Coverage insurance markets. I consulted various third party estimates of the cost of equity for the property-casualty insurance industry. I also generated my own estimates using a single-factor risk premium approach, where the cost of equity was determined by 1) the historical excess return of the overall stock market over bonds, 2) the historical correlation of the equity prices of the firms serving the North Carolina Dwelling Fire and Extended Coverage markets with the overall stock market, and 3) the current level of bond yields. Finally, I adjusted the cost of equity to account for the significant presence of private companies in the North Carolina market. The cost of equity estimates resulting from this exercise ranged from about 8.0% to 14.7% for the Dwelling Fire market and 8.1% to 14.9% for the Dwelling Extended Coverage market.

Next, I calculated a weighted average cost of capital (WACC) by estimating the fraction of debt in the typical insurance holding company capital structure and weighting together the cost of equity with cost of debt based on this fraction. The WACC estimates from this exercise ranged from about 7.1% to 12.6% for the Dwelling Fire market and 7.2% to 12.7% for the Dwelling Extended Coverage market.

The next task was to determine the projected rate of return on capital associated with the selected underwriting profit provision. Using a pro forma return model similar to that used in previous filings, I analyzed how the selected underwriting profit provisions used in the filing translate into expected returns on net worth. Consistent with previous filings, and with North Carolina law stipulating that the investment income earned on capital and surplus is not to be considered in determining the appropriate rate of return for the insurance industry, I refer to the expected return on net worth without including investment income on capital and surplus as the *statutory return*. When calculating the expected return on net worth including investment income earned on capital and surplus, I refer to the figure as the *total return*. My calculations are detailed in Exhibits RB-23 and RB-24 and are summarized below:

Return Definition	Fire	Extended Coverage
Statutory Return	7.00%	6.64%
Total Return	10.06%	9.63%

I next considered an adjustment to the model that I believe produces a more accurate representation of the rate of return produced by the selected underwriting profit factor. Specifically, I adjusted the prospective portfolio yields to reflect current market conditions, as opposed to the average of current market yields and embedded yields. This change increases the statutory return to 7.12% and the total return to 10.43% in the Dwelling Fire market. In the Dwelling Extended Coverage market, the statutory return would increase to 6.74%, and the total return increases to 9.98%.

I then compared the projected returns on capital associated with the selected underwriting factors with the cost of equity and WACC ranges described above. The projected total returns fell comfortably within the range of cost of equity estimates and within the range of WACC estimates. I therefore conclude that the projected total returns in both the Dwelling Fire and Dwelling Extended Coverage markets are reasonable and not excessive. The statutory returns fell below the lower end of the ranges of cost of equity estimates and of WACC estimate. Thus, I conclude that the statutory returns are not excessive. The conclusions still hold after adjusting the prospective yields as described above.

II. Expected Return on Net Worth

Q: In general terms, how did you determine the expected return on net worth implied by the underwriting profit provision used in the filing?

A: I used a *pro forma* return model similar to that used in previous filings in North Carolina. The model accounts for underwriting income, investment income on unearned premium and loss/loss adjustment expense (LAE) reserves, and taxes as a percentage of premium. Total after-tax income from these sources (as a percentage of premium) is then related to net worth (as a percentage of premium) to obtain an expected return on net worth.

Q: What do you mean by *pro forma*?

A: The model is *pro forma* in the sense that it assumes 1) that the indicated rate change will be implemented and 2) that all loss, expense, and investment return realizations will coincide with their projected expected values.

The results of the model and supporting information are presented in Exhibits RB-23 and RB-24.

Q: Could you state what you mean by "net worth"?

A: Net worth is the book value of equity of a company under Generally Accepted Accounting Principles (GAAP) rather than Statutory Accounting Principles (SAP).

Q: Did you account for investment income on capital and surplus in calculating the expected return?

A: It is my understanding that North Carolina law provides that insurance rates are to be set such that those rates are expected to provide a return to insurers that is equal to the returns of industries of comparable risk and that, in calculating that expected return, the investment

income on capital and surplus is to be excluded from consideration. Therefore, I present the expected return projected to result from the selected underwriting profit provision excluding investment income on capital and surplus. However, for informational purposes, I also present the expected return projected to result from the selected underwriting profit provision including investment income on capital and surplus.

Q: Would you please elaborate on the elements of the return and how they are calculated?

A: The return is composed of underwriting profit (Line 2 of Exhibits RB-23/RB-24, Pages 1 and 1A), installment fee income (Line 3 of Exhibits RB-23/RB-24, Pages 1 and 1A) and investment gain on insurance transaction (Line 7 of Exhibits RB-23/RB-24, Pages 1 and 1A). In the calculation that includes investment income on surplus for informational purposes, I additionally include investment gain on surplus (Line 8 of Exhibits RB-23/RB-24, Page 1A). (Please note that, in my exhibits and sometimes in my testimony, I refer to investment income on surplus as a shorthand reference to investment income on capital and surplus.) All of the foregoing income components are adjusted for taxes. The components are discussed in greater detail below:

Underwriting profit - As a matter of arithmetic and definition, the underwriting profit as a percentage of premium matches the underwriting profit provision selected by the NCRB. It is the percentage of premium left over after accounting for the loss and expense provisions, with the projected loss and LAE ratio and fixed expense (Other Acquisition and General) ratios being adjusted to reflect the indicated rate change. Installment fee income is based on the average installment charges as a percentage of premium over the past five years (Exhibits RB-23/RB-24, Page 3). The underwriting profit and installment fee income is assumed to be taxed at the current corporate rate of 21% (Line 4 of Exhibits RB-23/RB-24, Pages 1 and 1A), as revised in the Tax Cut and Jobs Act of 2017. I also account for additional tax liabilities relating to IRS rules regarding the treatment of unearned premium reserves and of loss reserves (Line 5 of Exhibits RB-23/RB-24, Pages 1 and 1A). Details of the calculation of these additional tax liabilities are found on Pages 4 to 6 of Exhibits RB-23/RB-24.

Net Investment Gain on Insurance Transaction – This portion of the return reflects investment income on investible funds generated by the insurance transaction. Specifically, this quantity is estimated as the product of an investment yield and the average loss/LAE and unearned premium reserves. An adjustment is made for investment income on agents' balances (specifically, to account for the fact that agents' balances, which are premiums held by agents and not yet remitted to the company, are not available for investment by the insurance company). In the case of Dwelling Extended Coverage analyzed in Exhibit RB-24, where a provision for reinsurance is included in the rate, I also adjust for investment income on reinsurance balances. This accounts for the additional income that the company receives on funds that have not yet been remitted to the reinsurer, as well as the investment income that it is not able to collect on funds that have not yet been recovered from the reinsurer. The details of the estimation of investible reserves and the pre-tax investment income generated from those reserves are found on Pages 7 to 9 of Exhibits RB-23 and 24. The tax liability is based on a weighted average of estimated tax rates on the different sources of investment income, with the weights based on the composition of the overall North Carolina industry portfolio.

Investment Gain on Surplus – This portion of the return reflects investment income generated from surplus. The pre-tax investment yield is applied to investible surplus, the amount of which is based on the ten-year average premium-to-surplus ratio for groups writing Dwelling insurance in North Carolina from Page 14 of Exhibits RB-23/RB-24. The tax liability is again based on a weighted average of estimated tax rates on the different sources of investment income, with the weights based on the composition of the overall North Carolina industry portfolio.

These components of after-tax return, all denominated as a percent of premium, are then summed and related to net worth. This is accomplished by multiplying the returns as percent of premium by the product of the premium-to-surplus ratio from Page 14 of Exhibits RB-23/RB-24 and the inverse of the industry-wide net worth-to-surplus ratio from Page 15 of Exhibits RB-23/RB-24.

Q: Please explain how the investment yield is calculated.

A: My understanding is that the accepted approach in North Carolina, based on a decision by the Commissioner in the 1990's, is to estimate the investment yield as an average of the "embedded yield" based on the industry statutory annual statement reports and a "current yield" based on current market rates. I have followed this convention in the analysis presented in Exhibits RB-23/RB-24, though I contemplate the consequences of this convention in more detail later in my testimony.

For the current yield, I start with the weighted average invested asset portfolio for the North Carolina insurance market (using total North Carolina DPW for weights) and use various sources to estimate the current market yields for those assets. Sources for current market rates, and a summary of the overall calculation, are provided on Page 11 of Exhibit RB-23/RB-24. For each of the bond subcategories, I obtain a maturity distribution for the North Carolina industry portfolio in that subcategory from the Schedule D summary exhibits and match each maturity level from the exhibits to a corresponding bond yield of similar maturity, so that the average yield shown on Page 11 is a weighted average across maturities according to the North Carolina industry portfolio. The overall pre-tax current yield on the industry portfolio as thus determined is 4.22%. The embedded yield calculations, based on the actual investment income reported by the industry, are shown on Pages 12 and 13 of Exhibits RB-23/RB-24; the pre-tax embedded yield is 3.42%. For the pro forma calculations, I average these two figures to obtain 3.82% (shown on Page 10 of Exhibits RB-23/RB-24).

The tax liability for investment income is determined for each asset class, reflecting tax advantages as appropriate on municipal bond interest, preferred and common stock dividends, and capital gains on stock. The expected return on equity is split into a capital gain and dividend component, for tax purposes, based on the experience of the S&P 500 over the 1998-2021 period.

Q: What is the expected return on net worth?

A: To calculate the implied return on insurance company equity, components of after-tax return are summed and related to net worth, which, as a percentage of premium, is calculated based on the product of the premium-to-surplus ratio from Page 14 of Exhibits RB-23/RB-24 and the

inverse of the industry-wide net worth-to-surplus ratio from Page 15 of Exhibits RB-23/RB-24. This approach indicates that the selected underwriting profit factor of 8.0%, if achieved, would yield an expected statutory return on net worth of 7.00% (without including investment income on surplus) and a total return on net worth of 10.06% (when including investment income on surplus) in the Dwelling Fire market. The corresponding figures for the 8.0% underwriting profit factor selected for Dwelling Extended Coverage are a statutory return of 6.64% and a total return of 9.63%.

Q: Have you considered the impact of any other alternative assumptions on your estimates?

A: Yes, I have considered the impact of basing the investment yield on current yields alone rather than an average of current yields and embedded yields.

The practice of averaging embedded yields with current yields makes little difference when the yields are relatively close together. But there is a significant divergence between the current yields on investments and embedded yields. The pre-tax current yield is 4.22%, and the pre-tax embedded yield is 3.42%. The current yield, in my opinion, is the better indicator of investment yields for a prospective ratemaking exercise, where the relevant questions concern the terms on which money will be invested today and in the future. If we calculate the returns on net worth using the current yield alone rather than the average, the statutory rate of return increases to 7.12% in the Dwelling Fire market and 6.74% in the Dwelling Extended Coverage market; the total rate of return increases to 10.43% in the Dwelling Fire market and 9.98% in the Dwelling Extended Coverage market.

Q: How was the underwriting profit factor determined?

A: The Bureau selected the 8.0% provision for both Fire and Extended Coverage. I participated in the Bureau's Property Rating Subcommittee meeting for the discussion of the profit portion of the rate review. I described for the Subcommittee my pro forma profit analysis and provided an array of underwriting profit provisions and their associated returns on net worth, both without including investment income on surplus and including investment income on surplus. The returns shown in that array spanned the ranges for the cost of equity and the WACC that I had established and viewed as reasonable, which I will describe in more detail below. Following my presentation and the Subcommittee discussion, the Subcommittee selected the underwriting profit factor.

III. Rate of Return on Capital

Q: What steps did you take in the course of assessing whether the returns described above would produce a reasonable rate of return on capital?

A: I first established ranges for reasonable estimates of the cost of capital. I then compared the estimated statutory and total returns on net worth determined in Section II above to these cost of capital ranges.

Q: How did you establish ranges for reasonable estimates of the cost of capital?

A: The cost of capital for an industry is a difficult figure to pin down, and part of my approach is based on a belief in the wisdom of crowds. I started by gathering various third-party estimates

of the cost of capital for property-casualty firms associated with publicly traded holding companies. I also made an independent set of estimates of the same tailored specifically for the North Carolina Dwelling markets. I then made adjustments to all of these estimates to account for the presence of private companies in the North Carolina market.

Q: Please describe the third-party estimate sources and methodologies.

A: Duff & Phelps (a consultancy that took over the pioneering Ibbotson Cost of Capital franchise) and Damodaran Online (an open-access website maintained by Aswath Damodaran, a valuation expert affiliated with New York University) both publish estimates for the property-casualty industry. Duff & Phelps updates the estimates quarterly (the estimates reported below are from 3/31/2022), while Damodaran Online updates the estimates annually (1/1/2022).

Duff & Phelps reports estimates from a variety of methodologies. Some estimates are produced using factor models, where the industry's sensitivity to a pricing factor (or sensitivities to a set of factors) are measured and used to generate a cost of capital. For example, single factor models (such as the CAPM) typically mark the overall stock market return in excess of a "base" fixed income return as the pricing factor. The cost of capital is generated in this case by estimating a risk premium for each factor, adjusting that risk premium to account for the sensitivity of the industry in question to that factor, and then adding the adjusted risk premium to the current yield of the "base" fixed income instrument to produce a cost of capital. In addition to CAPM estimates, Duff & Phelps also reports a "CAPM + size premium" estimate to recognize the higher cost of capital endured by smaller firms and thus correct for the average size of firms within an industry. The "Buildup Method" employs a related approach, adding a size premium and an industry premium to the standard market risk premium. The Fama-French-5-factor model extends the single risk factor framework of the CAPM to a five factor risk framework, thus pricing an industry's equity on the basis of its sensitivity to four additional factors in addition to overall market returns. Duff & Phelps also utilizes discounted cash flow (DCF) models, where free cash flow or dividends are forecasted into the future, with the cost of capital estimate being the implied discount rate on the future cash flows that explains the current equity valuation. In general, the two classes of methods---factor models and DCF models---are perhaps the two most widely accepted and widely deployed methods for estimating the cost of equity.

Damodaran reports estimates from a single-factor CAPM model. However, rather than estimating the risk premium associated with the stock market on the basis of simple averages of historical excess returns (as is typically done), he attempts to modify the premium to account for the current level of stock market valuation. This distinction is one example of the substantial variation in implementation of factor models, which can have significant effects on the estimates. There is also substantial methodological variation in implementation of the DCF model, which is estimated with different time period stages, with time-varying growth rates. All of this underscores the importance of consulting multiple sources of estimates and testing sensitivities where possible.

The approaches described above all produce estimates of the cost of equity. This cost of equity is then weighted together with an estimated cost of debt for the industry to produce a WACC for publicly traded firms. The weights are based on the composition of the capital structure (equity versus debt) for the industry.

Q: Please describe how you derived your independent estimates of the cost of equity capital for publicly traded firms.

A: I used a single factor model, also referred to as a “risk premium” approach in previous filings in North Carolina. This approach estimates the cost of equity as

$$r + \beta * (ERP)$$

where r is the current yield on a reference fixed income instrument, ERP is the estimated expected excess return of the stock market over that fixed income yield, and β is the estimated covariation between the equity of the property-casualty industry and the overall stock market (more precisely, the covariance of property-casualty equities with the S&P 500, divided by the variance of the S&P 500).

For the reference interest rate, I tried four different fixed income assets---the 3-month Treasury Bill, the 10-year Treasury Note, the Moody’s Seasoned Aaa Corporate Bond Index, and the Moody’s Seasoned Baa Corporate Bond Index. In each case, I estimated the equity risk premium as the average excess return of the S&P 500 over the return on the reference fixed income asset over the 1928-2021 period. To calculate the average returns, I used the formula from Blume (1974)¹ by weighting together the arithmetic average and the geometric average, as in:

$$\left[\frac{N - T}{N - 1} (1 + \pi_A) + \frac{T - 1}{N - 1} (1 + \pi_G) \right]^{\frac{1}{T}}$$

where N is the sample size, T is the return horizon (corresponding to the maturity of the fixed income asset), π_A is the arithmetic average return in the sample, and π_G is the geometric average return in the sample.

For β (beta), I estimated a weighted average beta for the North Carolina Dwelling Fire and Extended Coverage markets. For each publicly traded holding company associated with an operating subsidiary underwriting Dwelling insurance in North Carolina in 2021, I pulled the betas provided by S&P Global (based on 1-year and 3-year daily returns). I then calculated weighted averages based on 2021 North Carolina Dwelling Fire DPW and 2021 Dwelling Extended Coverage DPW.

Given current yields for the reference fixed income assets and estimates for the equity risk premium and beta, I then calculate a cost of equity according to the formula given above.

Next, I estimated a WACC for the North Carolina market. For the capital structure, I estimated weighted average debt percentages for the North Carolina Dwelling Fire and Extended Coverage markets. For each publicly traded holding company, I calculated the percentage of debt in the capital structure based on the latest fiscal year report. For the cost of debt, I used the figure for the industry from Damodaran Online. I again calculated weighted averages separately for the

¹ Blume, M.E. (1974), “Unbiased Estimates of Long-Run Expected Rates of Return,” *Journal of the American Statistical Association* (September), pp. 634-8.

Dwelling Fire and the Dwelling Extended Coverage markets, based on the North Carolina DPW in those respective markets.

Q: What were the results?

A: The following table lists the cost of equity and the WACC for publicly traded companies, including the estimates I produced and those reported by Duff & Phelps and Damodaran Online for the property-casualty industry.

Cost of Capital Estimates for Publicly Traded Firms							
Source	Method	Market	Dwelling Fire		Dwelling EC		
			Cost of Equity	WACC	Cost of Equity	WACC	
Duff & Phelps	CAPM	Property-Casualty	6.8	6.1	6.8	6.1	
Duff & Phelps	CAPM + Size Premium	Property-Casualty	7.1	6.3	7.1	6.3	
Duff & Phelps	Build-Up	Property-Casualty	7.8	6.9	7.8	6.9	
Duff & Phelps	DCF (1-stage)	Property-Casualty	7.5	6.7	7.5	6.7	
Duff & Phelps	DCF (3-stage)	Property-Casualty	11.8	10.2	11.8	10.2	
Duff & Phelps	Fama-French 5-factor	Property-Casualty	6.4	5.8	6.4	5.8	
Damodaran Online	Implied Premium		6.7	6.1	6.7	6.1	
Zanjani	Risk Premium over T-Bill	North Carolina Dwelling	8.0 - 9.9	7.3 - 8.9	8.3 - 10.2	7.5 - 9.1	
Zanjani	Risk Premium over T-Note	North Carolina Dwelling	8.0 - 9.5	7.2 - 8.5	8.2 - 9.7	7.4 - 8.7	
Zanjani	Risk Premium over Baa Bond	North Carolina Dwelling	8.6 - 9.6	7.8 - 8.6	8.8 - 9.8	7.9 - 8.7	
Zanjani	Risk Premium over Aaa Bond	North Carolina Dwelling	8.4 - 9.7	7.6 - 8.7	8.7 - 9.9	7.8 - 8.9	

The ranges associated with my own estimates are driven by differences between the 1-year and 3-year betas.

To illustrate a calculation, the upper bound of the cost of equity for my “Risk Premium over T-Bill” method is:

$$1.73\% + 0.9635 \times 8.49\% = 9.9\%,$$

where 1.73% is the T-Bill rate on 6/24/2022, .9635 is the 3-year weighted average beta for the North Carolina Dwelling Fire market, and 8.49% is the average risk premium of the equity market over the T-Bill rate. The upper bound for the WACC is:

$$(1 - .1599) \times 9.9\% + .1599 \times 3.49\% = 8.9\%,$$

where .1599 is the weighted average share of debt in the capital structure for the North Carolina Dwelling Fire market, 9.9% is the cost of equity as calculated in the previous step, and 3.49% is the after-tax cost of debt as estimated using Damodaran Online.

Note that the estimates for capital structure and the cost of debt differ across sources, so the relationship between the cost of equity and the WACC for Duff & Phelps and Damodaran Online will not follow the exact formula listed above.

Q: Do you believe any adjustments are necessary to the estimated cost of equity in the context of this filing?

A: Yes. All of the foregoing estimates are based on the data of publicly traded companies, which have the easiest access to financing and thus the lowest costs of capital. However, I found that operating companies affiliated with publicly traded holding companies only wrote about 26.4% of the 2021 direct premiums written for North Carolina Dwelling Fire insurance; for Dwelling Extended Coverage, the figure was 20.6%. The remainder in both markets was underwritten by companies associated with private, often mutual, ownership---a segment well-known to have more difficulty in accessing the capital markets. The industry average cost of equity needs to be adjusted upward to account for this non-public ownership.

Q: How much higher is the cost of equity for non-public firms?

A: Research dating back at least as far as the 1960's has demonstrated that private equity trades at a substantial discount to public equity. The discount is thought to derive from a variety of factors, including the illiquid nature of private equity stakes (also known as a "lack of marketability") as well as information, monitoring, and control issues. The discount translates into a higher cost of equity. For example, if a public firm's cost of equity is estimated at 10% and the equity of a comparable private firm is selling at a 20% discount to that of the public firm, the private firm's cost of equity would be estimated as:

$$12.5\% = 10\% / (1 - 20\%)$$

The discount is difficult to estimate. Exhibit RB-25 summarizes some of the academic research on the private firm discount. Studies have taken a variety of approaches to measurement. "IPO" studies compare the prices of pre-IPO share transactions in a private company with post-IPO share prices after the company is public. "Acquisition" studies compare the valuations of acquired private companies versus the valuations of acquired public companies. "Restricted stock" and "private placement" studies compare the prices of restricted stock issued by public companies with the prices of their traded shares.

All the approaches have their flaws. IPO studies, for example, are thought to have a bias toward overstating the discount because of the differences in timing of transactions. Restricted stock and private placement studies tend to understate the discount: Since they confine their attention to public companies, they do not account for factors other than the discount for lack of marketability (DLOM), and, moreover, the actual restrictions on marketability for private placements have been loosened significantly over the years by the Securities and Exchange Commission.

On balance, however, the studies point to a substantial discount. For purposes of this testimony, I use a discount of 25%, which is slightly below the average of the averages of the three groups in Exhibit RB-25 (when taking the midpoint of the ranges for the studies with ranges of estimates).

Q: How would this affect the estimated cost of equity for the industry?

A: Assuming a 25% private company discount and a X% market share for non-public companies (where X% is 26.4% in Dwelling Fire and 20.6% in Dwelling Extended Coverage), I calculate the

adjusted estimate of the cost of equity as a weighted average of the private cost of equity and the public cost of equity:

$$(1 - X\%) * \left(\frac{COE}{(1 - 0.25)} \right) + (X\%) * (COE),$$

where *COE* is the estimated cost of equity for public companies. The adjusted estimate of the cost of equity is then weighted together with the cost of debt to produce an adjusted WACC. The adjusted estimates are as follows:

Cost of Capital Estimates, Adjusted for Non-Public Ownership							
Source	Method	Market	Dwelling Fire		Dwelling EC		
			Cost of Equity	WACC	Cost of Equity	WACC	
Duff & Phelps	CAPM	Property-Casualty	8.5	7.5	8.6	7.6	
Duff & Phelps	CAPM + Size Premium	Property-Casualty	8.8	7.7	9.0	7.8	
Duff & Phelps	Build-Up	Property-Casualty	9.7	8.5	9.9	8.6	
Duff & Phelps	DCF (1-stage)	Property-Casualty	9.3	8.2	9.5	8.3	
Duff & Phelps	DCF (3-stage)	Property-Casualty	14.7	12.6	14.9	12.7	
Duff & Phelps	Fama-French 5-factor	Property-Casualty	8.0	7.1	8.1	7.2	
Damodaran Online	Implied Premium		8.4	7.5	8.5	7.6	
Zanjani	Risk Premium over T-Bill	North Carolina Dwelling	9.9 - 12.3	8.9 - 10.9	10.5 - 12.9	9.4 - 11.3	
Zanjani	Risk Premium over T-Note	North Carolina Dwelling	9.9 - 11.8	8.9 - 10.4	10.4 - 12.2	9.3 - 10.8	
Zanjani	Risk Premium over Baa Bond	North Carolina Dwelling	10.7 - 12.0	9.5 - 10.6	11.1 - 12.3	9.9 - 10.9	
Zanjani	Risk Premium over Aaa Bond	North Carolina Dwelling	10.5 - 12.1	9.4 - 10.7	10.9 - 12.5	9.7 - 11.1	

Q: How do these figures speak to the issue of whether or not the pro forma expected return on net worth is reasonable and not excessive?

A: There are at least two schools of thought on this issue.

The first is that the “net worth” in the pro forma return exhibit should be interpreted as an equity investment akin to the equity considered in the cost of equity analysis. Thus, it should be entitled to a similar rate of return. Under this school of thought, the return on net worth calculated in the previous section should be compared directly with the figures in the table above. If one does this, the projected returns are, in my opinion, reasonable and not excessive, even when including investment income on surplus in the calculation of the return. Even before making the adjustments to the investment return projections that I believe are appropriate for the North Carolina Dwelling Fire market, the projected total return of 10.06% is within the span of estimates, which range from 8.0% to 14.7%. If one instead focuses on the statutory return by excluding investment income on surplus, the projected return is below the lower end of the range of estimates---so it is clearly not excessive and arguably below the level warranted for this market. When adjusting the prospective investment yield to the current yield (rather than the average of current and embedded yields), the total return rises to 10.43%, and the statutory return rises to 7.12%. Thus, the previous conclusions are unchanged after considering this adjustment.

For the Dwelling Extended Coverage market, the total return of 9.63% is toward the lower end of the span of estimates in the table, which range from 8.1% to 14.9%. Thus, the total return seems reasonable and not excessive. The statutory return of 6.64% is also below the lower end of the range of estimates, so it clearly does not seem excessive and is arguably lower than the level warranted for this market. These conclusions also hold after making the prospective investment yield adjustment described above.

A second school of thought is that, although the capital of the operating subsidiaries may be fully financed by equity, the holding companies are the source of that equity. Thus, one should “look through” the operating subsidiaries to the level of the holding companies to determine a cost of capital, which is important because the holding companies---unlike the insurance subsidiaries---typically hold significant debt in the capital structure. Holding companies that are typically classified as property-casualty companies have, in recent history and on average, had in the neighborhood of 20% debt. Thus, the cost of capital for the holding company is, under this school of thought, calculated as a weighted average of the cost of equity and the cost of debt, with the weights based on each component’s share of the capital structure. The result is the WACC discussed above, which, as can be seen above, is typically lower than the cost of equity due to the lower cost of debt. On the other hand, the market value of the capital of the holding company will be different from the book value of the capital invested in the insurance subsidiaries. Thus, a particular return on net worth at the level of the operating subsidiary will translate into a lower (higher) return on holding company capital if the market value of the holding company capital exceeds (is less than) the net worth of the insurance subsidiaries.

The market-to-net worth ratio of the public companies underwriting Dwelling Insurance in North Carolina is typically well above 1. However, even if one sets this ratio to 1, the total return of 10.06% for Dwelling Fire falls comfortably within the range of estimates (7.1% to 12.6%) for that market. The same assessment applies to the total return of 9.63% for Dwelling Extended Coverage, which also falls comfortably within the range of estimates (7.2% to 12.7%) for that market. By this standard, the total returns are reasonable and not excessive. The same conclusion applies when adjusting prospective investment yields to match the current yields rather than an average of current and embedded yields.

The statutory returns of 7.00% in the Dwelling Fire market and 6.64% in the Dwelling Extended Coverage market are a bit below the lower end of the range of WACC estimates. Adjusting the prospective investment yield to current levels raises the Dwelling Fire statutory return to 7.12%, which is just above the lower bound of its respective range, and the Dwelling Extended Coverage statutory return rises to 6.74%, which is still below the lower end of the range of WACC estimates. Thus, if investment income is excluded from consideration, the projected statutory returns are still obviously not excessive, though they could be argued to be close to or---in the case of Dwelling Extended Coverage---even below the levels warranted for this market.

IV. Conclusion

Q: Based on your knowledge and experience and on the studies and analyses you have performed, have you come to any conclusions regarding the underwriting profit factor selected by the Bureau and used in its indicated rate level calculations in this filing?

A: Yes. When using the pro forma return model with inputs selected in a manner consistent with previous filings, I found that the expected statutory return on net worth implied by the selected 8.0% underwriting profit factor was 7.00% (not including investment income on surplus) in the Dwelling Fire market; the expected total return on net worth was 10.06% (including investment income on surplus). For Dwelling Extended Coverage, the corresponding figures were 6.64% and 9.63%. When adjusting the prospective investment yield to reflect current market conditions, the expected statutory and total returns rose slightly. After reviewing the cost of capital estimates for the industry produced by third parties and producing my own estimates tailored to the North Carolina markets, and adjusting all estimates for the presence of private companies, I found the expected returns on net worth resulting from the selected underwriting profit factors to be consistent with a reasonable and not excessive return on invested capital when viewed from the perspective of total return (including investment income on surplus). The statutory returns (not including investment income on surplus) were at or below the lower bound of the estimate ranges I produced and thus were clearly not excessive. From an economic perspective, I believe that the selected underwriting profit factors are reasonable and not excessive.

An important caveat to this analysis, however, is that all conclusions are predicated on the assumption that the indicated rate level is achieved. In the event that a lower rate level is implemented, the expected rate of return could be inadequate.

Q. Does that conclude your testimony?

A. Yes.

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Publications: Refereed Scholarly

"Economic Capital and RAROC in a Dynamic Model," (with Daniel Bauer), *Journal of Banking and Finance*, 125: Article 106071, (2021) [Winner of Casualty Actuarial Society Hachemeister Prize, 2015]

"Capital Allocation Techniques: Review and Comparison," (with Daniel Bauer and Qiheng Guo), *Variance*, 14(2), (2021)

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- “Egalitarian Equivalent Capital Allocation,” (with Shinichi Kamiya), *North American Actuarial Journal* 21: 382-96, (2017)
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- “Financial Pricing of Insurance,” (with Daniel Bauer and Richard D. Phillips), in *Handbook of Insurance* (2nd edition), Georges Dionne (ed.), New York: Springer (2013)
- “Insurance Risk, Risk Measures, and Capital Allocation: Navigating a Copernican Shift,” (with Michael R. Powers), *Annual Review of Financial Economics* 5: 201-223 (2013)
- “Catastrophe Bonds, Reinsurance, and the Optimal Collateralization of Risk Transfer,” (with Darius Lakdawalla), *Journal of Risk & Insurance* 79, pp. 449-76 (2012)
- “An Economic Approach to Capital Allocation,” *Journal of Risk and Insurance* 77, pp. 523-549 (2010) [Winner of Casualty Actuarial Society ARIA Award, 2010]
- “Federal Financial Exposure to Catastrophic Risk,” (with J. David Cummins and Michael Suher), in *Measuring and Managing Federal Financial Risk*, Deborah Lucas (ed.), Chicago: University of Chicago Press (2010)
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- “Regulation, Capital, and the Evolution of Organizational Form in U.S. Life Insurance,” *American Economic Review* 97, pp. 973-983 (2007)

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“Pricing and Capital Allocation in Catastrophe Insurance,” *Journal of Financial Economics* 65, pp. 283-305 (2002) [reprinted in *Insurance and Risk Management Volume I: Economics of Insurance Markets*, Gregory Niehaus (ed.), Northampton: Edward Elgar Publishing, (2008)]

Publications: Professional/Practitioner

Book review of “Moral Hazard in Health Insurance,” *Journal of Economic Literature* 53, pp. 682-3 (2015)

“Microinsurance Lessons from History,” (with Rick Koven), *Microinsurance Learning and Knowledge (MILK)* (2013)

“Institutional Investors and Asset Allocations: Accounting and Regulation of Private Defined Benefit Pension Plans and Other Institutional Investors in the United States, Mexico, and Australia,” (with John Broadbent, Michael Palumbo, and Julio Santaella), *CGFS Publication No. 27, Working Group on Institutional Investors, Global Savings, and Asset Allocation* (2006)

“An Overview of Political Risk Insurance” (with Kausar Hamdani and Elise Liebers), *CGFS Publication No. 22, Working Group on Foreign Direct Investment in the Financial Sector of Emerging Market Economies* (2005)

Work in Progress

“Life Insurance and Annuity Pricing During the Financial Crisis, Revisited,” (with Daniel Bauer, Lars Powell, and Boheng Su), working paper, 2022

“Dynamic Capital Allocation in General Insurance,” (with Daniel Bauer and Qiheng Guo), working paper, 2022

“The Ignorance of Crowds: Understanding Reserving Errors in the Liability Crisis of 1997-2001,” (with Eren Cifci, Qianlong Liu, Steve Mildenhall, Lars Powell, and Kenny Wunder), working paper, 2022

- “Market Discipline and Guaranty Funds in Life Insurance,” (with Martin Grace, Shinichi Kamiya, and Robert W. Klein), working paper, 2019
- “The Effect of Government Guarantees on Market Discipline in the Property-Casualty Insurance Industry,” (with Yiling Deng, Ty Leverty, and Kenny Wunder), working paper, 2019
- “An Integrated Approach to Measuring Asset and Liability Risks in Financial Institutions,” (with Daniel Bauer), working paper, 2019
- “Optimal Insurance Contracts with Insurer Background Risk,” (with Xiaohu Ping), working paper, 2015
- “The Effect of Banking Crises: Evidence from Non-Life Insurance Consumption,” (with Shinichi Kamiya and Jackie Li), working paper, 2015
- “Bankruptcy in the Core and Periphery of Financial Groups: The Case of the Property-Casualty Insurance Industry” working paper, 2010
- “The Rise and Fall of the Fraternal Life Insurer: Law and Organizational Form in U.S. Life Insurance, 1870-1920,” working paper, (*revise and resubmit, Journal of Law & Economics*), 2007
- “Organizational Form and the Underwriting Cycle: Theory with Evidence from the Pennsylvania Fire Insurance Market, 1873-1909,” working paper, 2004
- “Consumption versus Production of Insurance,” (with Tomas Philipson), *NBER Working Paper #6225*, 1997

External Research Projects and Consulting

- 2021 Expert Witness, Workers’ Compensation Rate Filings, Massachusetts
- 2021 Expert Witness, Insurance Rate Filings, North Carolina
- 2020 Expert Witness, Insurance Rate Filings, North Carolina
- 2019 NCCI Review of Cost of Capital Methodology
- 2019 Expert Witness, Workers’ Compensation Rate Filings, Massachusetts
- 2019 Expert Witness, Insurance Rate Filings, North Carolina
- 2018 NCCI Review of TCJA
- 2017 Expert Witness, Workers’ Compensation Rate Hearing, Florida
- 2016 Expert Witness, Assigned Risk Workers’ Compensation Rate Hearing, Virginia
- 2015 Expert Witness, Workers’ Compensation Rate Hearing, Florida
- 2015 NCCI Revision of Underwriting Profit and Contingency Internal Rate of Return Model
- 2015 An Extension of the Project on the Costs of Holding Capital, sponsored by the CAS
- 2013 Microinsurance Centre Lessons from History Project
- 2012 Allocation of the Costs of Holding Capital, sponsored by the CAS,
- 2011 CRO Risk Index Project, co-sponsored by SOA and Bloomberg, co-founder
- 2009 “The Financial Crisis and Lessons for Insurers,” \$50,000 SOA grant, role: report co-author

Papers Presented at Professional Meetings

- 2020 “Life Insurance and Annuity Pricing During the Financial Crisis, Revisited” WRIEC, virtual meeting
- 2019 “An Integrated Approach to Measuring Asset and Liability Risks in Financial Institutions,” EGRIE Annual Meeting, Rome, Italy
- 2019 “An Integrated Approach to Measuring Asset and Liability Risks in Financial Institutions,” ARIA Annual Meeting, San Francisco, CA
- 2019 “An Integrated Approach to Measuring Asset and Liability Risks in Financial Institutions,” RTS Annual Seminar, Tuscaloosa, AL
- 2017 “The Effect of Government Guarantees on Market Discipline in the Property-Casualty Insurance Industry,” NBER Insurance Project Workshop, Boston, MA
- 2015 “The Marginal Cost of Risk in a Multi-Period Model,” NBER Insurance Project Workshop, Stanford, CA
- 2015 “The Marginal Cost of Risk in a Multi-Period Model,” CAS Annual Meeting, Philadelphia, PA
- 2015 “Dynamic Capital Allocation,” IME Annual Conference, Liverpool UK
- 2015 “What Drives Tort Reform Legislation? Economics and Politics of the State Decisions to Restrict Liability Torts,” ASSA Annual Meeting, Boston, MA
- 2014 “The Marginal Cost of Risk in a Multi-Period Model,” CAS Centennial, New York, NY
- 2014 “Market Discipline and Guaranty Funds in Life Insurance,” EGRIE Annual Seminar, St. Gallen, CH
- 2014 “Dynamic Capital Allocation with Irreversible Investments,” EGRIE Annual Seminar, St. Gallen, CH
- 2014 “What Drives Tort Reform Legislation? Economics and Politics of the State Decisions to Restrict Liability Torts,” ARIA Annual Meeting, Seattle, WA
- 2014 “The Marginal Cost of Risk in a Multi-Period Model,” ARIA Annual Meeting, Seattle, WA
- 2014 “Market Discipline and Guaranty Funds in Life Insurance,” ARIA Annual Meeting, Seattle, WA
- 2014 “The Marginal Cost of Risk in a Multi-Period Model,” IME Conference, Shanghai, CN
- 2014 “The Effect of Banking Crises: Evidence from Non-Life Insurance Consumption,” Risk Theory Seminar, Munich, Germany
- 2013 “The Effect of Banking Crises: Evidence from Non-Life Insurance Consumption,” ASSA Annual Meeting, Philadelphia, PA
- 2013 “Optimal Insurance Contracts with Insurer Background Risk,” EGRIE Annual Meeting, Paris, FR
- 2013 “The Effect of Banking Crises: Evidence from Non-Life Insurance Consumption,” ARIA Annual Meeting, Washington D.C.
- 2013 “The Marginal Cost of Risk, Risk Measures, and Capital Allocation,” IRFRC Catastrophe Risk Conference, Singapore
- 2013 “Optimal Insurance Contracts with Insurer Background Risk,” ARIA Annual Meeting, Washington D.C.
- 2013 “The Marginal Cost of Risk, Risk Measures, and Capital Allocation,” CEAR/ETH Indices of Risk and New Risk Measures Conference, Zurich, CH
- 2012 “The Marginal Cost of Risk, Risk Measures, and Capital Allocation,” CAS Spring Meeting, Phoenix, AZ
- 2012 “The Marginal Cost of Risk, Risk Measures, and Capital Allocation,” Symposium: Risk and Catastrophic Events, State College, PA
- 2012 “The Marginal Cost of Risk, Risk Measures, and Capital Allocation,” ASSA Annual Meeting, Chicago, IL
- 2011 “The Marginal Cost of Risk, Risk Measures, and Capital Allocation,” NBER Insurance Project Workshop, Cambridge, MA
- 2010 “Bankruptcy in the Core and Periphery of Financial Groups: The Case of the Property-Casualty Insurance Industry,” ASSA Annual Meeting, Atlanta, GA
- 2009 “Bankruptcy in the Core and Periphery of Financial Groups: The Case of the Property-Casualty Insurance Industry,” Risk Management and Corporate Governance Conference, Loyola University of Chicago
- 2009 “Bankruptcy in the Core and Periphery of Financial Groups: The Case of the Property-Casualty Insurance Industry,” ARIA Annual Meeting, Providence, RI
- 2008 “An Economic Approach to Capital Allocation,” Risk Theory Society, Annual Meeting, Fort Collins, CO
- 2007 “Federal Financial Exposure to Catastrophic Risk,” ARIA Annual Meeting, Quebec City, CA
- 2007 “Catastrophe Bonds, Reinsurance, and the Optimal Collateralization of Risk Transfer,” EFMA Annual Meeting, Vienna, AT

- 2007 “Catastrophe Bonds, Reinsurance, and the Optimal Collateralization of Risk Transfer,” 5th Infiti Conference on International Financial Integration, Dublin, IE
- 2007 “Federal Financial Exposure to Catastrophic Risk,” NBER Conference on Measuring and Managing Federal Financial Risk, Evanston, IL
- 2006 Insuring Catastrophic Losses: The Status of TRIA and Proposed Natural Disaster Backstops, Wash., D.C.
- 2006 “Catastrophe Bonds, Reinsurance, and the Optimal Collateralization of Risk Transfer,” Risk Theory Society, Annual Meeting, Richmond, VA
- 2006 “Public versus Private Underwriting of Catastrophe Risk: Lessons from the California Earthquake Authority,” Berkeley Symposium on Real Estate, Catastrophic Risk, and Public Policy
- 2006 “Catastrophe Bonds, Reinsurance, and the Optimal Collateralization of Risk Transfer,” NBER Insurance Project Workshop, Cambridge, MA
- 2005 “Regulation, Capital, and the Evolution of Organizational Form in U.S. Life Insurance,” NBER Insurance Project Workshop, Cambridge, MA
- 2004 “The Rise and Fall of the Fraternal Life Insurer: Law and Organizational Form in U.S. Life Insurance,” NBER Insurance Project Workshop, Cambridge, MA
- 2004 “Regulation, Capital, and the Evolution of Organizational Form in U.S. Life Insurance,” American Finance Association, Annual Meeting, San Diego, CA
- 2003 “Insurance, Self-Protection, and the Economics of Terrorism,” Risk Theory Society, Annual Meeting, Atlanta, GA
- 2003 “Terrorism Insurance Policy and the Public Good,” St. John’s Journal of Legal Commentary 10th Annual Legal Symposium: Terrorism and its Impact on Insurance: Legislative Responses and Coverage Issues, Queens, NY
- 2003 “Insurance, Self-Protection, and the Economics of Terrorism,” NBER Insurance Project Workshop, Cambridge, MA
- 2002 “Pricing and Capital Allocation in Catastrophe Insurance,” CAS Risk and Capital Management Seminar, Toronto, CA
- 2002 “Market Discipline and Government Guarantees in U.S. Life Insurance,” Risk Theory Society, Annual Meeting, Urbana-Champaign, IL
- 2001 “Pricing and Capital Allocation in Catastrophe Insurance,” Risk Theory Society, Annual Meeting, Montreal

Other Conferences Talks and Panel Participation

- 2018 Surplus Lines Automation Conference, Florida
- 2017 International Conference on Business Sciences, Cairo University, Egypt
- 2016 IIF Insurance Colloquium, Basel, Switzerland
- 2016 Surplus Lines Association of California, California (keynote)
- 2014 Surplus Lines Automation Conference, Florida
- 2011 PRMIA Annual Risk Leadership Conference, Atlanta, GA
- 2011 7th International Microinsurance Conference, Rio de Janeiro, Brazil
- 2010 Property Loss Research Bureau Eastern Adjusters Conference, Atlanta, GA (keynote)
- 2008 NCOIL Annual Meeting, Duck Key, FL
- 2007 Capital Markets Symposium on Securitizing Insurance Risk, New York, NY
- 2006 Insuring Catastrophic Losses: The Status of TRIA and Proposed Natural Disaster Backstops, Wash., D.C.
- 2006 Catastrophe Bonds and Insurance Linked Securities Summit, New York, NY
- 2005 12th Annual International Conference Promoting Business Ethics, New York, NY

Service Activities in Academic and Professional Organizations

- American Risk & Insurance Association President (2012-13)
- Risk Theory Society President (2011-2012)
- American Risk & Insurance Association Board Member (2007-2014)
- International Research Advisory Board, Risk and Insurance Research Center, NCCU, Taiwan

Editorial Board, *Journal of Insurance Issues* (2012-2014)
Senior Editor, *Journal of Risk and Insurance* (2019-)
Huebner Colloquium Panelist (2016-2019)

External Committees

American Risk & Insurance Association Program Committee, various years; ARIA Nominations Committee, 2015, 2016, 2018; Kulp-Wright Book Award Committee, 2005

Discussant: *WRIEC 2020; EGRIE Annual Meeting, Rome, 2019; ARIA Annual Meeting, San Francisco, 2019; ARIA Annual Meeting, Chicago, 2018; ARIA Annual Meeting, Boston, 2016; SIFR Insurance Conference, Stockholm, 2015; EGRIE Annual Seminar, St. Gallen, 2014; ARIA Annual Meeting, Seattle, 2014; ARIA Annual Meeting, San Diego, 2011; CEAR Workshop on Insurance for the Poor, Atlanta, 2010; CEAR Workshop on Risk Perception and Subjective Beliefs, Atlanta, 2010; Midwest Finance Association Annual Meeting, Chicago, 2009; 5th Infiniti Conference, Dublin, 2007; EFMA Annual Meeting, Vienna, 2007; AEA Annual Meeting, San Diego, 2004*

Session Chair: *ARIA Annual Meeting, Chicago, 2018, ARC, Atlanta, 2017; IME, Atlanta, 2017; ARIA Annual Meeting, San Diego, 2011; Midwest Finance Association Annual Meeting, Chicago, 2009; ARIA Annual Meeting, Quebec City, 2007; EFMA Annual Meeting, Vienna, 2007;*

Referee for *Asia-Pacific Journal of Risk and Insurance, Astin Bulletin, Australian Social Monitor, Contemporary Economic Policy, Current Issues in Economics and Finance, Defense and Peace Economics, European Economic Review, Financial Review, Geneva Papers: Issues and Practice, Geneva Risk and Insurance Review, Health Affairs, Insurance: Mathematics and Economics, Journal of Banking and Finance, Journal of Business, Journal of Finance, Journal of Financial Intermediation, Journal of Financial Services Research, Journal of Law and Economics, Journal of Mathematical Economics, Journal of Money, Credit, and Banking, Journal of Political Economy, Journal of Risk and Insurance, Management Science, Mathematical Social Sciences, North American Actuarial Journal, Proceedings of the National Academy of Sciences, Review of Financial Studies, Risk Management and Insurance Review, Scandinavian Actuarial Journal, and Science.*

Working Group Participation

Committee on the Global Financial System, Working Group on Institutional Investors, Global Savings, and Asset Allocation (2006); Presidential Working Group on Financial Markets, Working Group on Terrorism Insurance (2006)

Continuing Education Activities

2004-2007	Central Banking Seminar, Federal Reserve Bank of New York, Topics: Introduction to U.S. Financial Markets; Introduction to Non-bank Financial Institutions
2009	Texas Farm Bureau Program, Georgia State University, Topic: Securitization, the Insurance Industry, and the Panic of 2007
2009-2012	Horst K. Jannott Visiting Fellows Program, Georgia State University, Topics: Securitization, the Insurance Industry, and the Panic of 2007; Introduction to Statistics

NCRB - Pro Forma Statutory Rate of Return Dwelling Fire			
	Pre-Tax	Tax Liability	Post-Tax
1 Premiums	100.00%		
Loss & LAE	62.88%		
Commissions	11.50%		
Other Acquisition & General	12.90%		
Taxes, Licenses, & Fees	2.90%		
Policyholder Dividends	0.50%		
Compensation for Assessment Risk	1.32%		
2 Pro Forma Underwriting Profit	8.00%		
3 Installment Fee Income	0.58%		
4 Regular Tax		1.80%	
5 Additional Tax Due to IRS Treatment of Reserves		-0.15%	
6 Total Return from Underwriting Post-Tax			6.93%
7 Investment Gain on Insurance Transaction	3.17%		
Less Investment Income on Agents Balances	0.77%		
Net Investment Gain on Insurance Transaction	2.40%	0.39%	2.01%
8 Total Return as a Percent of Premium (post-tax)			8.95%
9 Premium-to-Net Worth Ratio			0.78
10 Total Return as a Percent of Net Worth (post-tax)			7.00%
<i>Lines (1) to (8) are expressed as a percentage of premium.</i>			

Assumptions and Parameters

(a) Underwriting Income Tax Rate	21.00%
(b) Investment Income Tax Rate	16.16%
(c) Pre-tax Investment Yield	3.82%
(d) Premium-to-Surplus Ratio	0.89
(e) Net Worth-to-Surplus Ratio	1.14
(f) Installment Fee Income	0.58%
(g) Additional Tax Due to IRS Treatment of Loss Reserves and UEPR	-0.15%
(h) Compensation for Assessment Risk	1.32%

Notes to Exhibit RB-23 Page 1

- 1 The expense provisions are those used in the filing, adjusted for the indicated rate change.
- 2 Selected by North Carolina Rate Bureau
- 3 See Exhibit RB-23, Page 3
- 4 $[(2) + (3)] \times (a)$
- 5 See Exhibit RB-23, Pages 4-6
- 6 $(2) + (3) - (4) - (5)$
- 7 Investment income on agents balances is calculated as $0.1982 \times 1.021 \times (c)$, where 0.1982 is the factor for agents balances held for less than 90 days and 1.021 is a factor to correct for overdue balances. The figures are sourced from North Carolina Rate Bureau and ISO.
- 8 $(6) + (7)$
- 9 $(d) / (e)$
- 10 $(8) \times (9)$

Assumptions

- (a) Current corporate tax rate, based on the Tax Cut and Jobs Act of 2017.
- (b) See Exhibit RB-23, Pages 11-13. Calculated as 1- average post-tax yield/average pre-tax yield.
- (c) See Exhibit RB-23, Page 10
- (d) See Exhibit RB-23, Page 14
- (e) See Exhibit RB-23, Page 15
- (f) See Exhibit RB-23, Page 3
- (g) See Exhibit RB-23, Pages 4-6
- (h) Compensation for Assessment Risk based on the analysis of Milliman incorporated in the filing, adjusted for the indicated rate change.

NCRB - Pro Forma Statutory Rate of Return (Including Investment Income on Surplus) Dwelling Fire			
	Pre-Tax	Tax Liability	Post-Tax
1 Premiums	100.00%		
Loss & LAE	62.88%		
Commissions	11.50%		
Other Acquisition & General	12.90%		
Taxes, Licenses, & Fees	2.90%		
Policyholder Dividends	0.50%		
Compensation for Assessment Risk	1.32%		
2 Pro Forma Underwriting Profit	8.00%		
3 Installment Fee Income	0.58%		
4 Regular Tax		1.80%	
5 Additional Tax Due to IRS Treatment of Reserves		-0.15%	
6 Total Return from Underwriting Post-Tax			6.93%
7 Investment Gain on Insurance Transaction	3.17%		
Less Investment Income on Agents Balances	0.77%		
Net Investment Gain on Insurance Transaction	2.40%	0.39%	2.01%
8 Investment Gain on Surplus	4.67%	0.75%	3.91%
9 Total Return as a Percent of Premium (post-tax)			12.86%
10 Premium-to-Net Worth Ratio			0.78
11 Total Return as a Percent of Net Worth (post-tax)			10.06%
<i>Lines (1) to (8) are expressed as a percentage of premium.</i>			

Assumptions and Parameters

(a) Underwriting Income Tax Rate	21.00%
(b) Investment Income Tax Rate	16.16%
(c) Pre-tax Investment Yield	3.82%
(d) Premium-to-Surplus Ratio	0.89
(e) Net Worth-to-Surplus Ratio	1.14
(f) Installment Fee Income	0.58%
(g) Additional Tax Due to IRS Treatment of Loss Reserves and UEPR	-0.15%
(h) Compensation for Assessment Risk	1.32%

Notes to Exhibit RB-23 Page 1A

1 The expense provisions are those used in the filing, adjusted for the indicated rate change.

2 Selected by North Carolina Rate Bureau

3 See Exhibit RB-23, Page 3

4 $[(2) + (3)] \times (a)$

5 See Exhibit RB-23, Pages 4-6

6 $(2) + (3) - (4) - (5)$

7 Investment income on agents balances is calculated as $0.1982 \times 1.021 \times (c)$, where 0.1982 is the factor for agents balances held for less than 90 days and 1.021 is a factor to correct for overdue balances. The figures are sourced from North Carolina Rate Bureau and ISO.

8 $(c) \times [1 / (d) + 0.2036 \times 0.4803]$, where 0.2036 is the prepaid expense ratio from Page 7 and 0.4803 is the UEPR ratio from Page 7.

9 $(6) + (7) + (8)$

10 $(d) / (e)$

11 $(9) \times (10)$

Assumptions

(a) Current corporate tax rate, based on the Tax Cut and Jobs Act of 2017.

(b) See Exhibit RB-23, Pages 11-13. Calculated as $1 - \text{average post-tax yield} / \text{average pre-tax yield}$.

(c) See Exhibit RB-23, Page 10

(d) See Exhibit RB-23, Page 14

(e) See Exhibit RB-23, Page 15

(f) See Exhibit RB-23, Page 3

(g) See Exhibit RB-23, Pages 4-6

(h) Compensation for Assessment Risk based on the analysis of Milliman incorporated in the filing, adjusted for the indicated rate change.

**NORTH CAROLINA
Dwelling Fire
INSTALLMENT CHARGES AS A PERCENT OF PREMIUM**

Year	Percentage
2020	0.56%
2019	0.52%
2018	0.57%
2017	0.64%
2016	0.59%
Average	0.58%

Source: NCRB

**North Carolina
Dwelling Fire
Calculation of Additional Tax Liability**

1. Collected Earned Premium for Current Year	100.00%
2. Unearned Premium Reserve 12/31/Current	50.03%
3. Unearned Premium Reserve 12/31/Prior	53.09%
4. Increase: (2) - (3)	-3.06%
5. 20% of Increase = Taxable Income	-0.61%
6. Additional Tax Liability due to Unearned Premium Reserve	-0.13%
7. Unpaid Loss Current Year	38.80%
8. Discounted Unpaid Loss Prior Year	37.86%
9. Unpaid Loss Prior Year	41.18%
10. Discounted Unpaid Loss Prior Year	40.12%
11. Additional Income	-0.12%
12. Additional Tax Liability due to Loss Reserve Discounting	-0.02%
13. Total Additional Tax Liabilities (6) + (12)	-0.15%

**NORTH CAROLINA
Dwelling Fire
Calculation of Taxable Income**

Calculation of Unpaid Loss for Current Accident Year (AY)					Calculation of Discounted Unpaid Loss for Current AY			Calculation of Discounted Unpaid Loss for Prior AY			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
AY Avg Acc Date	AY Pay Pattern	Percent Unpaid	Total Losses	Unpaid Losses	AY at 12/31 yr t	Discount Factor	Discounted Unpaid Loss	AY at 12/31/yr t-1	Unpaid Losses	Discount Factor	Discounted Unpaid Loss
0.5	55.61%	44.39%	62.876	27.91	2021	0.975958	27.2370				
1.5	89.33%	10.67%	66.725	7.12	2020	0.97011	6.9050	2020	29.616	0.973985	28.8459
2.5	94.67%	5.33%	70.810	3.78	2019	0.985513	3.7220	2019	7.553	0.969916	7.3262
3.5	100.00%	0.00%	75.144	0.00	2018	0.985513	0.0000	2018	4.008	0.985513	3.9498
4.5	100.00%	0.00%	79.744	0.00	2017	0	0.0000	2017	0.000	0.985513	0.0000
5.5	100.00%	0.00%	84.626	0.00	2016	0	0.0000	2016	0.000	0	0.0000
6.5	100.00%	0.00%	89.806	0.00	2015	0	0.0000	2015	0.000	0	0.0000
7.5	100.00%	0.00%	95.303	0.00	2014	0	0.0000	2014	0.000	0	0.0000
								2013	0.000	0	0.0000
Totals				38.80	37.86			41.18		40.12	

Notes to Pages 4 and 5

Page 4

- 2 Page 8, line (2) divided by Page 8, line (1)
- 3 (2) divided by 1 plus the 10 year average growth rate of Dwelling Fire premiums in North Carolina.
- 4 (2) - (3)
- 5 (4) x 20%
- 6 (5) x current corporate tax rate
- 7 Unpaid current-year losses at year-end as a percent of current year premium.
Sum of Page 5, Column (5)
- 8 Discounted unpaid current-year losses at year-end as a percent of current year premium.
Sum of Page 5, Column (8)
- 9 Unpaid prior-year losses at year-end as a percent of current year premium.
Sum of Page 5, Column (10)
- 10 Discounted unpaid prior-year losses at year-end as a percent of current year premium.
Sum of Page 5, Column (12)
- 11 Change in loss reserve discount: [(7) - (8)] - [(9) - (10)]
- 12 (11) x current corporate tax rate
- 13 (6) + (12)

Page 5

- 1 Midpoint of number of years since end of accident period
- 2 Special Property payout pattern from IRS Rev. Proc 2016-58
- 3 1 - (2)
- 4 Latest period losses are based on projected loss ratio from Page 1. For previous years,
losses are detrended at the 10 year average premium growth rate for Dwelling Fire in North Carolina.
- 5 (3) x (4)
- 6 Accident Year at current year end
- 7 IRS discount factors for Special Property from Rev. Proc 2021-54
- 8 (5) x (7)
- 9 Accident Year at prior year end
- 10 Column (3), previous period x Column (4), current period
- 11 IRS discount factors for Special Property from Rev. Proc 2020-48
- 12 (10) x (11)

NCRB Investment Income Calculation		
Dwelling Fire		
Projected Investment Earnings on Loss, Loss		
Adjustment Expense and Unearned Premium Reserves		
A. UNEARNED PREMIUM RESERVES		
1. Direct Earned Premiums		1,000,000
2. Mean Unearned Premium Reserve	48.03%	480,300
3. Deductions for Prepaid Expenses		
Commissions & Brokerage	11.50%	
Taxes, Licenses, & Fees (5/6)	2.42%	
Other Acquisition & General (1/2)	6.45%	
Total	20.36%	
4. Deduction for Prepaid Expense: (2) x (3)		97,789
5. Net Unearned Premium Reserve Subject to Investment (2) - (4)		382,511
B. Loss and Loss Expense Reserves		
1. Direct Earned Premiums		1,000,000
2. Expected Incurred Loss & LAE-to-Premium Ratio	62.88%	628,763
3. Expected Mean Loss and LAE Reserve-to-Incurred Ratio	71.21%	447,757
C. Net Policyholder Funds Subject to Investment (A5 + B3)		830,268
D. Average Rate of Return		3.82%
E. Investment Earnings from Net Reserves: (C) x (D)		31,720
F. Average Rate of Return as a Percent of Direct Earned Premiums: (E) / (A1)		3.17%

**NORTH CAROLINA
Dwelling Fire**

**ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES**

EXPLANATORY NOTES

Line A-1

Calculations displayed are per million of direct earned premiums.

Line A-2

The mean unearned premium reserve (UEPR) is determined by multiplying the direct earned premiums in line A-1 by the ratio of the mean unearned premium reserve to the direct earned premium for the current calendar year ended 12/31. The data are for North Carolina Fire insurance (from statutory Page 14 of the Annual Statement) for all companies which wrote Dwelling Fire in the most recent calendar year.

1 NC Fire Direct Earned Premium for most recent calendar year	243,038,711
2 NC Fire UEPR at end of most recent calendar year	121,594,938
3 NC Fire UEPR at end of previous calendar year	111,854,920
4 Mean NC Fire UEPR	116,724,929
5 Ratio [(4) / (1)]	48.03%

Line A-3

Deduction for prepaid expenses

Certain production expenses, such as commissions and reinsurance, are assumed to be incurred when the policy is written and before the premium is paid. In addition, half of Other Acquisition and General expenses and 5/6 of Taxes, Licenses and Fees are assumed to be prepaid.

**NORTH CAROLINA
Dwelling Fire**

**ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES**

EXPLANATORY NOTES

Line B-2

The expected loss and loss adjustment expense ratio is consistent with the expense provisions used in the filing.

Line B-3

The mean loss reserve is calculated by multiplying the incurred losses in line B-2 by the ratio for mean loss reserves to incurred losses. The latter figures are based on total statutory Page 14 figures for North Carolina Fire direct losses incurred and direct losses unpaid for all companies writing Dwelling Fire in North Carolina in 2020. The adjustment for loss expense reserves is based on nationwide industry aggregates for the Homeowners line.

6 Direct Losses Incurred	2016	70,550,363
7 Direct Losses Incurred	2017	123,225,922
8 Direct Losses Incurred	2018	147,266,683
9 Direct Losses Incurred	2019	67,537,148
10 Direct Losses Incurred	2020	104,935,680
11 Direct Losses Unpaid	2015	78,177,895
12 Direct Losses Unpaid	2016	55,733,024
13 Direct Losses Unpaid	2017	66,350,617
14 Direct Losses Unpaid	2018	71,679,352
15 Direct Losses Unpaid	2019	51,559,349
16 Direct Losses Unpaid	2020	61,323,461
17 Mean Loss Reserve	2016	66,955,460
18 Mean Loss Reserve	2017	61,041,821
19 Mean Loss Reserve	2018	69,014,985
20 Mean Loss Reserve	2019	61,619,351
21 Mean Loss Reserve	2020	56,441,405
22 Ratio	2016	0.949
23 Ratio	2017	0.495
24 Ratio	2018	0.469
25 Ratio	2019	0.912
26 Ratio	2020	0.538
27 Average Loss Reserve		0.673
28 Ratio of LAE Reserves to Loss Reserves		0.209
29 Ratio of Incurred LAE to Incurred Loss		0.142
30 Loss & LAE Reserve [(27) x (1+(28))/(1+(29))]		0.712

**NORTH CAROLINA
Dwelling Fire**

**ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES**

EXPLANATORY NOTES

Line E

The average rate of return is the average of the pretax current yield calculated on Page 11 and the pretax embedded yield. The embedded yield (see Page 12) is the sum of the ratio of investment income to invested assets for the most recent year plus the ten year average ratio of capital gains to invested assets (see Page 13). The current yield is the estimated currently available rate of return (including both income and capital gains) on the industry investment portfolio (see Page 11).

Embedded Yield	3.42%
Current Yield	4.22%
Average	3.82%

Portfolio Yield and Tax Rate - Current Yield				
Investable Asset	Percent of Assets	Estimated	Tax Rate	Estimated
		Prospective Pre-Tax Return		Prospective Post-Tax Return
Bonds				
US Gov't	8.47%	2.74%	21.00%	2.16%
Municipal	21.43%	2.33%	5.25%	2.21%
Industrial	33.42%	3.23%	21.00%	2.55%
Preferred Stock	0.51%	4.74%	13.13%	4.12%
Common Stock	20.82%	9.72%	19.60%	7.82%
Mortgage Loans	1.30%	5.13%	21.00%	4.05%
Real Estate	0.80%	6.97%	21.00%	5.51%
Cash & Short-term Investments	5.48%	1.23%	21.00%	0.97%
Other Long Term Investments	7.78%	5.89%	18.85%	4.78%
Rate of Return Before Expenses	100.00%	4.51%	18.36%	3.68%
Investment Expenses		0.29%	21.00%	0.23%
Portfolio Rate of Return		4.22%	18.18%	3.45%

Sources

Preferred Stock	Current yield on iShares Preferred Stock Index ETF, 6/24/22
Real Estate	REIT Sector WACC; source: Damodaran Online
Cash	3 month Treasury rate, averaged over 3 months (source: US Treasury)
Municipal	Maturity weighted avg of 3 month avg MBIS Investment Grade yield curve; linearly interpolated
Industrial	Three month average of HQM par yields (source: FRED); linearly interpolated
Treasury	Three month average of Treasury yields; linearly interpolated (source: US Treasury)
Common Stock	0.0849 ERP (source: Damodaran Online) plus 3 month average T-Bill Rate
Other LTI	Average of yields on bond portfolio, preferred stock, common stock, mortgages, and real estate.
Investment Expenses	Investment Expenses from statutory Page 12 of the Annual Statement (Exhibit of Net Investment Income) divided by Cash and Invested Assets from statutory Page 2 of the Annual Statement (Assets), as compiled in the 2021 edition of A.M. Best's Aggregates and Averages.

Portfolio Yield and Tax Rate			
Embedded Yield			
		Income	Tax Rate
Bonds			
	Taxable	28,332,003	21.00%
	Non-Taxable	7,245,882	5.25%
Stocks			
	Taxable	8,486,504	13.13%
	Non-Taxable	2,429,550	5.25%
Mortgage Loans		1,029,624	21.00%
Real Estate		1,999,576	21.00%
Contract Loans		17,597	21.00%
Cash & Short Term Inv		819,448	21.00%
All Other		9,860,358	21.00%
Total		60,220,542	17.36%
Inv. Expenses		5,835,453	21.00%
Net Inv. Income		54,385,089	16.97%
Mean Invested Assets		1,975,605,647	
Inv. Inc. Yield Rate		2.75%	16.97%
Capital Gains (10 yr. avg.)		0.67%	0.00%
(% of Inv. Assets)			
Invest. Yield Rate (pre-tax)		3.42%	13.67%
Invest. Yield Rate (post-tax)		2.95%	

Source: A.M. Best's Aggregates and Averages, 2021 Edition, statutory Page 12 of the Annual Statement - Exhibit of Net Investment Income (Column 2 - Earned During Year). For capital gains, see Exhibit RB-23, Page 13.

**Realized Capital Gains or Losses
As a Percentage of Mean Invested Assets
(Amounts in Thousands of Dollars)**

Calendar Year	Mean Invested Assets	Realized Capital Gains Amount	Percent
2011	1,366,568,026	7,563,305	0.55%
2012	1,400,656,619	9,035,405	0.65%
2013	1,473,600,834	12,163,890	0.83%
2014	1,543,882,375	12,093,078	0.78%
2015	1,567,611,077	9,887,732	0.63%
2016	1,596,937,470	8,086,268	0.51%
2017	1,676,831,258	15,725,303	0.94%
2018	1,733,729,297	10,825,733	0.62%
2019	1,822,857,949	11,238,484	0.62%
2020	1,975,605,647	10,933,304	0.55%
Total	16,158,280,550	107,552,502	0.67%

"Mean Invested Assets" is the average of current and prior year values for Cash & Invested Assets from statutory Page 2 of the Annual Statement (Assets). Source for data is 2011-2021 editions of A.M. Best's Aggregates and Averages. Figures are net of capital gains taxes.

North Carolina**Dwelling Fire****Premium-to-Surplus Ratios**

Year	Ratio
2020	0.87
2019	0.93
2018	0.82
2017	0.86
2016	0.80
2015	0.78
2014	0.80
2013	0.86
2012	1.06
2011	1.14
Average	0.89

Data from NAIC Statutory Filings for all groups writing Dwelling Fire insurance in North Carolina. Weighted average is calculated using North Carolina Dwelling Fire insurance premiums.

**North Carolina
Dwelling Fire
Calculation of Ratio of GAAP Net Worth to Statutory Surplus**

	2016	2017	2018	2019	2020
Policyholder Surplus	700,833,588,840	750,700,298,191	742,079,084,495	847,278,658,173	910,066,482,410
+ Deferred Acquisition Costs	33,046,102,666	34,674,341,556	43,991,738,565	46,002,606,289	48,118,482,109
+ Non-Admitted DTA Provision	11,544,280,333	5,482,491,430	6,314,927,861	6,045,409,090	6,001,020,602
+ Non-admitted Assets (non-tax part)	43,722,898,341	46,932,629,941	46,502,063,197	50,520,441,190	51,971,123,366
+ Provision for Reinsurance	2,185,395,913	2,595,884,443	2,737,598,756	2,944,031,835	3,290,710,172
+ Provision for FASB 115(after-tax)	10,015,172,605	14,432,773,013	912,505,274	32,483,869,271	57,249,505,836
- Surplus Notes	(12,027,889,160)	(11,859,500,848)	(11,660,367,237)	(11,606,263,627)	(13,225,869,920)
GAAP-adjusted Net Worth	789,319,549,538	842,958,917,726	830,877,550,911	973,668,752,221	1,063,471,454,574
Ratio of Net Worth to Surplus	1.126	1.123	1.120	1.149	1.169
Five Year Average	1.137				

Source: ISO

NCRB - Pro Forma Statutory Rate of Return Dwelling Insurance - Extended Coverage			
	Pre-Tax	Tax Liability	Post-Tax
1 Premiums	100.00%		
Loss & LAE	43.48%		
Commissions	9.20%		
Other Acquisition & General	7.49%		
Taxes, Licenses, & Fees	2.60%		
Policyholder Dividends	0.80%		
Net Cost of Reinsurance	27.49%		
Compensation for Assessment Risk	0.93%		
2 Pro Forma Underwriting Profit	8.00%		
3 Installment Fee Income	0.58%		
4 Regular Tax		1.80%	
5 Additional Tax Due to IRS Treatment of Reserves		0.03%	
6 Total Return from Underwriting Post-Tax			6.75%
7 Investment Gain on Insurance Transaction	2.68%		
Less Investment Income on Agent and Reinsurance Balances	0.55%		
Net Investment Gain on Insurance Transaction	2.12%	0.34%	1.78%
8 Total Return as a Percent of Premium (post-tax)			8.53%
9 Premium-to-Net Worth Ratio			0.78
10 Total Return as a Percent of Net Worth (post-tax)			6.64%

Lines (1) to (8) are expressed as a percentage of premium.

Assumptions and Parameters

(a) Underwriting Income Tax Rate	21.00%
(b) Investment Income Tax Rate	16.16%
(c) Pre-tax Investment Yield	3.82%
(d) Premium-to-Surplus Ratio	0.884559
(e) Net Worth-to-Surplus Ratio	1.137
(f) Installment Fee Income	0.58%
(g) Additional Tax Due to IRS Treatment of Loss Reserves and UEPR	0.03%
(h) Net Cost of Reinsurance	27.49%
(i) Compensation for Assessment Risk	0.93%

Notes to Exhibit RB-24 Page 1

1 The expense provisions are those used in the filing, adjusted for the indicated rate change.

2 Selected by North Carolina Rate Bureau

3 See Exhibit RB-24, Page 3

4 $[(2) + (3)] \times (a)$

5 See Exhibit RB-24, Pages 4-6

6 $(2) + (3) - (4) - (5)$

7 Investment income on agents balances is calculated as $0.1782 \times 1.021 \times (c)$, where 0.1782 is a factor for agents balances held for less than 90 days and 1.021 is a factor to correct for overdue balances. From this figure, we deduct investment income on net reinsurance balances, which we estimate at 0.096 of the total cost of reinsurance times (c). The estimate for net reinsurance balances is based on ceded balances payable plus funds held plus other amounts due reinsurers minus reinsurance recoverables. These amounts are taken from the aggregated Schedule F as reported in the latest available edition of A.M. Best Aggregates & Averages.

8 $(6) + (7)$

9 $(d) / (e)$

10 $(8) \times (9)$

Assumptions

(a) Current corporate tax rate, based on the Tax Cut and Jobs Act of 2017.

(b) See Exhibit RB-24, Pages 11-13. Calculated as $1 - \text{average post-tax yield} / \text{average pre-tax yield}$.

(c) See Exhibit RB-24, Page 10

(d) See Exhibit RB-24, Page 14

(e) See Exhibit RB-24, Page 15

(f) See Exhibit RB-24, Page 3

(g) See Exhibit RB-24, Pages 4-6

(h) Net Cost of Reinsurance based on the analysis of Aon and incorporated in the filing, adjusted for the indicated rate change.

(i) Compensation for Assessment Risk based on the analysis of Milliman incorporated in the filing, adjusted for the indicated rate change.

NCRB - Pro Forma Statutory Rate of Return (Including Investment Income on Surplus) Dwelling Insurance - Extended Coverage			
	Pre-Tax	Tax Liability	Post-Tax
1 Premiums	100.00%		
Loss & LAE	43.48%		
Commissions	9.20%		
Other Acquisition & General	7.49%		
Taxes, Licenses, & Fees	2.60%		
Policyholder Dividends	0.80%		
Net Cost of Reinsurance	27.49%		
Compensation for Assessment Risk	0.93%		
2 Pro Forma Underwriting Profit	8.00%		
3 Installment Fee Income	0.58%		
4 Regular Tax		1.80%	
5 Additional Tax Due to IRS Treatment of Reserves		0.03%	
6 Total Return from Underwriting Post-Tax			6.75%
7 Investment Gain on Insurance Transaction	2.68%		
Less Investment Income on Agent and Reinsurance Balances	0.55%		
Net Investment Gain on Insurance Transaction	2.12%	0.34%	1.78%
8 Investment Gain on Surplus	4.60%	0.74%	3.85%
9 Total Return as a Percent of Premium (post-tax)			12.39%
10 Premium-to-Net Worth Ratio			0.78
11 Total Return as a Percent of Net Worth (post-tax)			9.63%
<i>Lines (1) to (8) are expressed as a percentage of premium.</i>			

Assumptions and Parameters

(a) Underwriting Income Tax Rate	21.00%
(b) Investment Income Tax Rate	16.16%
(c) Pre-tax Investment Yield	3.82%
(d) Premium-to-Surplus Ratio	0.88
(e) Net Worth-to-Surplus Ratio	1.137
(f) Installment Fee Income	0.58%
(g) Additional Tax Due to IRS Treatment of Loss Reserves and UEPR	0.03%
(h) Net Cost of Reinsurance	27.49%
(i) Compensation for Assessment Risk	0.93%

Notes to Exhibit RB-24 Page 1A

- 1 The expense provisions are those used in filing, adjusted for the indicated rate change.
- 2 Selected by North Carolina Rate Bureau
- 3 See Exhibit RB-24, Page 3
- 4 $[(2) + (3)] \times (a)$
- 5 See Exhibit RB-24, Pages 4-6
- 6 $(2) + (3) - (4) - (5)$
- 7 Investment income on agents balances is calculated as $0.1782 \times 1.021 \times (c)$, where 0.1782 is a factor for agents balances held for less than 90 days and 1.021 is a factor to correct for overdue balances. From this figure, we deduct investment income on net reinsurance balances, which we estimate at 0.096 of the total cost of reinsurance times (c). The estimate for net reinsurance balances is based on ceded balances payable plus funds held plus other amounts due reinsurers minus reinsurance recoverables. These amounts are taken from the aggregated Schedule F as reported in the latest available edition of A.M. Best Aggregates & Averages.
- 8 $(c) \times [1 / (d) + 0.1511 \times 0.4826]$, where 0.1511 is the prepaid expense ratio minus the total cost of reinsurance from Page 7 and 0.4826 is the UEPR ratio from Page 7.
- 9 $(6) + (7) + (8)$
- 10 $(d) / (e)$
- 11 $(9) \times (10)$

Assumptions

- (a) Current corporate tax rate, based on the Tax Cut and Jobs Act of 2017.
- (b) See Exhibit RB-24, Pages 11-13. Calculated as $1 - \text{average post-tax yield} / \text{average pre-tax yield}$.
- (c) See Exhibit RB-24, Page 10
- (d) See Exhibit RB-24, Page 14
- (e) See Exhibit RB-24, Page 15
- (f) See Exhibit RB-24, Page 3
- (g) See Exhibit RB-24, Pages 4-6
- (h) Net Cost of Reinsurance based on the analysis of Aon and incorporated in the filing, adjusted for the indicated rate change.
- (i) Compensation for Assessment Risk based on the analysis of Milliman incorporated in the filing, adjusted for the indicated rate change.

NORTH CAROLINA
Dwelling Insurance - Extended Coverage
INSTALLMENT CHARGES AS A PERCENT OF PREMIUM

Year	Percentage
2020	0.56%
2019	0.52%
2018	0.57%
2017	0.64%
2016	0.59%
Selected Value	0.58%

Source: NCRB

**North Carolina
Dwelling Insurance - Extended Coverage
Calculation of Additional Tax Liability**

1. Collected Earned Premium for Current Year	100.00%
2. Unearned (Net) Premium Reserve 12/31/Current	30.88%
3. Unearned (Net) Premium Reserve 12/31/Prior	30.11%
4. Increase: (2) - (3)	0.77%
5. 20% of Increase = Taxable Income	0.15%
6. Additional Tax Liability due to Unearned Premium Reserve	0.03%
7. Unpaid Loss Current Year	19.60%
8. Discounted Unpaid Loss Prior Year	19.12%
9. Unpaid Loss Prior Year	19.10%
10. Discounted Unpaid Loss Prior Year	18.61%
11. Additional Income	-0.02%
12. Additional Tax Liability due to Loss Reserve Discounting	0.00%
13. Total Additional Tax Liabilities (6) + (12)	0.03%

NORTH CAROLINA
Dwelling Insurance - Extended Coverage
Calculation of Taxable Income

Calculation of Unpaid Loss for Current Accident Year (AY)					Calculation of Discounted Unpaid Loss for Current AY			Calculation of Discounted Unpaid Loss for Prior AY			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
AY Avg Acc Date	AY Pay Pattern	Percent Unpaid	Total Losses	Unpaid Losses	AY at 12/31 yr t	Discount Factor	Discounted Unpaid Loss	AY at 12/31/yr t-1	Unpaid Losses	Discount Factor	Discounted Unpaid Loss
0.5	55.61%	44.39%	43.483	19.30	2021	0.975958	18.8361				
1.5	89.33%	10.67%	42.388	4.52	2020	0.97011	4.3864	2020	18.814	0.973985	18.3245
2.5	94.67%	5.33%	41.320	2.20	2019	0.985513	2.1719	2019	4.408	0.969916	4.2751
3.5	100.00%	0.00%	40.279	0.00	2018	0.985513	0.0000	2018	2.148	0.985513	2.1172
4.5	100.00%	0.00%	39.265	0.00	2017	0	0.0000	2017	0.000	0.985513	0.0000
5.5	100.00%	0.00%	38.276	0.00	2016	0	0.0000	2016	0.000	0	0.0000
6.5	100.00%	0.00%	37.312	0.00	2015	0	0.0000	2015	0.000	0	0.0000
7.5	100.00%	0.00%	36.372	0.00	2014	0	0.0000	2014	0.000	0	0.0000
								2013	0.000	0	0.0000
Totals				26.03	25.39			25.37		24.72	

Notes to Pages 4 and 5Page 4

- 2 [Page 8, line (2) divided by Page 8, line (1)] times one minus the Cost of Reinsurance from Page 7
- 3 (2) divided by 1 plus the 10 year average growth rate of Dwelling Insurance - Extended Coverage premiums in North Carolina.
- 4 (2) - (3)
- 5 (4) x 20%
- 6 (5) x current corporate tax rate
- 7 Unpaid current-year losses at year-end as a percent of current year premium.
Sum of Page 5, Column (5)
- 8 Discounted unpaid current-year losses at year-end as a percent of current year premium.
Sum of Page 5, Column (8)
- 9 Unpaid prior-year losses at year-end as a percent of current year premium.
Sum of Page 5, Column (10)
- 10 Discounted unpaid prior-year losses at year-end as a percent of current year premium.
Sum of Page 5, Column (12)
- 11 Change in loss reserve discount: [(7) - (8)] - [(9) - (10)]
- 12 (11) x current corporate tax rate
- 13 (6) + (12)

Page 5

- 1 Midpoint of number of years since end of accident period
- 2 Special Property payout pattern from IRS Rev. Proc 2016-58
- 3 1 - (2)
- 4 Latest period losses are based on projected loss ratio from Page 1. For previous years, losses are detrended at the 10 year average premium growth rate for Dwelling Insurance - Extended Coverage in North Carolina.
- 5 (3) x (4)
- 6 Accident Year at current year end
- 7 IRS discount factors for Special Property from Rev. Proc 2021-54
- 8 (5) x (7)
- 9 Accident Year at prior year end
- 10 Column (3), previous period x Column (4), current period
- 11 IRS discount factors for Special Property from Rev. Proc 2020-48
- 12 (10) x (11)

**NCRB Investment Income Calculation
Dwelling Insurance - Extended Coverage**

**Projected Investment Earnings on Loss, Loss
Adjustment Expense and Unearned Premium Reserves**

A. UNEARNED PREMIUM RESERVES

1. Direct Earned Premiums		1,000,000
2. Mean Unearned Premium Reserve	48.26%	482,600
3. Deductions for Prepaid Expenses		
Commissions & Brokerage	9.20%	
Taxes, Licenses, & Fees (5/6)	2.17%	
Other Acquisition & General (1/2)	3.74%	
Cost of Reinsurance	38.23%	
Total	53.34%	
4. Deduction for Prepaid Expense: (2) x (3)		257,419
5. Net Unearned Premium Reserve Subject to Investment (2) - (4)		225,181

B. Loss and Loss Expense Reserves

1. Direct Earned Premiums		1,000,000
2. Expected Net Incurred Loss & LAE-to-Direct Premium Ratio	32.74%	327,429
3. Expected Mean Loss and LAE Reserve-to-Incurred Ratio	145.22%	475,489

C. Net Policyholder Funds Subject to Investment (A5 + B3) 700,670

D. Average Rate of Return 3.82%

E. Investment Earnings from Net Reserves: (C) x (D) 26,769

F. Average Rate of Return as a Percent of Direct Earned Premiums: (E) / (A1) 2.68%

NORTH CAROLINA
Dwelling Insurance - Extended Coverage

ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES

EXPLANATORY NOTES

Line A-1

Calculations displayed are per million of direct earned premiums.

Line A-2

The mean unearned premium reserve (UEPR) is determined by multiplying the direct earned premiums in line A-1 by the ratio of the mean unearned premium reserve to the direct earned premium for the current calendar year ended 12/31. The data are for North Carolina Allied Lines insurance (from statutory Page 14 of the Annual Statement) for all companies which wrote Dwelling Insurance - Extended Coverage in the most recent calendar year.

1 NC Allied Lines Direct Earned Premium for most recent calendar year	319,147,476
2 NC Allied Lines UEPR at end of most recent calendar year	159,573,973
3 NC Allied Lines UEPR at end of previous calendar year	148,478,317
4 Mean NC Allied Lines UEPR	154,026,145
5 Ratio [(4) / (1)]	48.26%

Line A-3

Deduction for prepaid expenses

Certain production expenses, such as commissions and reinsurance, are assumed to be incurred when the policy is written and before the premium is paid. In addition, half of Other Acquisition and General expenses and 5/6 of Taxes, Licenses and Fees are assumed to be prepaid.

NORTH CAROLINA
Dwelling Insurance - Extended Coverage

**ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES**

EXPLANATORY NOTES

Line B-2

Ratio is calculated as the expected direct loss and LAE ratio from Page 1 minus the difference between the total cost of reinsurance from Line A-3 and the net cost of reinsurance from Page 1.

Line B-3

The mean loss reserve is calculated by multiplying the incurred losses in line B-2 by the ratio for mean loss reserves to incurred losses. The latter figures are based on total statutory Page 14 figures for NC Allied Lines direct losses incurred and direct losses unpaid for all companies writing Dwelling Insurance - Extended Coverage in North Carolina in 2019. The adjustment for loss expense reserves is based on nationwide industry aggregates for the Homeowners line.

6 Direct Losses Incurred	2016	126,737,675
7 Direct Losses Incurred	2017	74,001,415
8 Direct Losses Incurred	2018	703,738,774
9 Direct Losses Incurred	2019	64,562,157
10 Direct Losses Incurred	2020	130,492,323
11 Direct Losses Unpaid	2015	33,833,302
12 Direct Losses Unpaid	2016	68,978,452
13 Direct Losses Unpaid	2017	55,475,077
14 Direct Losses Unpaid	2018	417,341,717
15 Direct Losses Unpaid	2019	140,237,570
16 Direct Losses Unpaid	2020	109,778,079
17 Mean Loss Reserve	2016	51,405,877
18 Mean Loss Reserve	2017	62,226,765
19 Mean Loss Reserve	2018	236,408,397
20 Mean Loss Reserve	2019	278,789,644
21 Mean Loss Reserve	2020	125,007,825
22 Ratio	2016	0.406
23 Ratio	2017	0.841
24 Ratio	2018	0.336
25 Ratio	2019	4.318
26 Ratio	2020	0.958
27 Average Loss Reserve		1.372
28 Ratio of LAE Reserves to Loss Reserves		0.209
29 Ratio of Incurred LAE to Incurred Loss		0.142
30 Loss & LAE Reserve [(27) x (1+(28))/(1+(29))]		1.452

NORTH CAROLINA
Dwelling Insurance - Extended Coverage

**ESTIMATED INVESTMENT EARNINGS ON UNEARNED
PREMIUM RESERVES AND ON LOSS RESERVES**

EXPLANATORY NOTES

Line E

The average rate of return is the average of the pretax current yield calculated on Page 11 and the pretax embedded yield. The embedded yield (see Page 12) is the sum of the ratio of investment income to invested assets for the most recent year plus the ten year average ratio of capital gains to invested assets (see Page 13). The current yield is the estimated currently available rate of return (including both income and capital gains) on the industry investment portfolio (see Page 11).

Embedded Yield	3.42%
Current Yield	4.22%
Average	3.82%

Portfolio Yield and Tax Rate - Current Yield					
Investable Asset	Percent of Assets	Estimated Prospective Pre-Tax Return	Tax Rate	Estimated Prospective Post-Tax Return	
Bonds					
US Gov't	8.47%	2.74%	21.00%	2.16%	
Municipal	21.43%	2.33%	5.25%	2.21%	
Industrial	33.42%	3.23%	21.00%	2.55%	
Preferred Stock	0.51%	4.74%	13.13%	4.12%	
Common Stock	20.82%	9.72%	19.60%	7.82%	
Mortgage Loans	1.30%	5.13%	21.00%	4.05%	
Real Estate	0.80%	6.97%	21.00%	5.51%	
Cash & Short-term Investments	5.48%	1.23%	21.00%	0.97%	
Other Long-Term Investments	7.78%	5.89%	18.85%	4.78%	
Rate of Return Before Expenses	100.00%	4.51%	18.36%	3.68%	
Investment Expenses		0.29%	21.00%	0.23%	
Portfolio Rate of Return		4.22%	18.18%	3.45%	

Sources

Preferred Stock	Current yield on iShares Preferred Stock Index ETF, 6/24/22
Real Estate	REIT Sector WACC; source: Damodaran Online
Cash	3 month Treasury rate, averaged over 3 months (source: US Treasury)
Municipal	Maturity weighted avg of 3 month avg MBIS Investment Grade yield curve; linearly interpolated
Industrial	Three month average of HQM par yields (source: FRED); linearly interpolated
Treasury	Three month average of Treasury yields; linearly interpolated (source: US Treasury)
Common Stock	0.0849 ERP (source: Damodaran Online) plus 3 month average T-Bill Rate
Other LTI	Average of yields on bond portfolio, preferred stock, common stock, mortgages, and real estate.
Investment Expenses	Investment Expenses from statutory Page 12 of the Annual Statement (Exhibit of Net Investment Income) divided by Cash and Invested Assets from statutory Page 2 of the Annual Statement (Assets), as compiled in the 2021 edition of A.M. Best's Aggregates and Averages.

Portfolio Yield and Tax Rate Embedded Yield			
		Income	Tax Rate
Bonds			
	Taxable	28,332,003	21.00%
	Non-Taxable	7,245,882	5.25%
Stocks			
	Taxable	8,486,504	13.13%
	Non-Taxable	2,429,550	5.25%
Mortgage Loans		1,029,624	21.00%
Real Estate		1,999,576	21.00%
Contract Loans		17,597	21.00%
Cash & Short Term Inv		819,448	21.00%
All Other		9,860,358	21.00%
Total		60,220,542	17.36%
Inv. Expenses		5,835,453	21.00%
Net Inv. Income		54,385,089	16.97%
Mean Invested Assets		1,975,605,647	
Inv. Inc. Yield Rate		2.75%	16.97%
Capital Gains (10 yr. avg.) (% of Inv. Assets)		0.67%	0.00%
Invest. Yield Rate (pre-tax)		3.42%	13.67%
Invest. Yield Rate (post-tax)		2.95%	

Source: A.M. Best's Aggregates and Averages, 2021 Edition, statutory Page 12 of the Annual Statement - Exhibit of Net Investment Income (Column 2 - Earned During Year). For capital gains, see Exhibit RB-24, Page 13.

**Realized Capital Gains or Losses
As a Percentage of Mean Invested Assets
(Amounts in Thousands of Dollars)**

Calendar Year	Mean Invested Assets	Realized Capital Gains Amount	Percent
2011	1,366,568,026	7,563,305	0.55%
2012	1,400,656,619	9,035,405	0.65%
2013	1,473,600,834	12,163,890	0.83%
2014	1,543,882,375	12,093,078	0.78%
2015	1,567,611,077	9,887,732	0.63%
2016	1,596,937,470	8,086,268	0.51%
2017	1,676,831,258	15,725,303	0.94%
2018	1,733,729,297	10,825,733	0.62%
2019	1,822,857,949	11,238,484	0.62%
2020	1,975,605,647	10,933,304	0.55%
Total	16,158,280,550	107,552,502	0.67%

"Mean Invested Assets" is the average of current and prior year values for Cash & Invested Assets from statutory Page 2 of the Annual Statement (Assets). Source for data is 2011-2021 editions of A.M. Best's Aggregates and Averages. Figures are net of capital gains taxes.

North Carolina**Dwelling Insurance - Extended Coverage****Premium-to-Surplus Ratios**

Year	Ratio
2020	0.82
2019	0.88
2018	1.05
2017	0.85
2016	0.78
2015	0.78
2014	0.82
2013	0.85
2012	0.98
2011	1.04
Average	0.88

Data from NAIC Statutory Filings for all groups writing Dwelling Insurance - Extended Coverage insurance in North Carolina. Weighted average is calculated using North Carolina Dwelling Insurance - Extended Coverage insurance premiums.

North Carolina
Dwelling Insurance - Extended Coverage
Calculation of Ratio of GAAP Net Worth to Statutory Surplus

	2016	2017	2018	2019	2020
Policyholder Surplus	700,833,588,840	750,700,298,191	742,079,084,495	847,278,658,173	910,066,482,410
+ Deferred Acquisition Costs	33,046,102,666	34,674,341,556	43,991,738,565	46,002,606,289	48,118,482,109
+ Non-Admitted DTA Provision	11,544,280,333	5,482,491,430	6,314,927,861	6,045,409,090	6,001,020,602
+ Non-admitted Assets (non-tax part)	43,722,898,341	46,932,629,941	46,502,063,197	50,520,441,190	51,971,123,366
+ Provision for Reinsurance	2,185,395,913	2,595,884,443	2,737,598,756	2,944,031,835	3,290,710,172
+ Provision for FASB 115(after-tax)	10,015,172,605	14,432,773,013	912,505,274	32,483,869,271	57,249,505,836
- Surplus Notes	(12,027,889,160)	(11,859,500,848)	(11,660,367,237)	(11,606,263,627)	(13,225,869,920)
GAAP-adjusted Net Worth	789,319,549,538	842,958,917,726	830,877,550,911	973,668,752,221	1,063,471,454,574
Ratio of Net Worth to Surplus	1.13	1.12	1.12	1.15	1.17
Five Year Average	1.137				

Source: ISO

Sample of Findings on the Private Company Discount

Study	Years	Discount	Type
Emory (1994)	1992-1993	45%	IPO
Willamette Management Associates (various)	1975-1997	29% to 60%	IPO
Garland and Reilly (2004)	1998-2002	35%	IPO
Larcker et al. (2018)	2017	39% to 47%	IPO
Koeplin et al. (2000)	1984-1998	20% to 30%	Acquisitions
Block (2007)	1999-2006	20% to 25%	Acquisitions
Officer (2007)	1979-2003	15% to 30%	Acquisitions
Paglia and Harjoto (2010)	1993-2008	65% to 70%	Acquisitions
Jaffe et al. (2018)	1985-2014	0%	Acquisitions
Lohrey (2020)	2005-2015	48% to 62%	Acquisitions
Silber (1991)	1981-1988	34%	Restricted Stock
Johnson (1999)	1991-1995	20%	Restricted Stock
Bajaj et al. (2001)	1990-1995	7%	Private placements
Comment (2012)	2004-2010	5% to 6%	Private placements
Finnerty (2013)	1991-1997	21%	Private placements
Finnerty (2013)	1997-2007	15%	Private placements
Chen et al. (2015)	1999-2012	10%	Private placements

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* The Willamette research studies were unpublished but reported in [Business Valuation Discounts and Premiums](#), Chapter 5, by Shannon Pratt (New York: John Wiley & Sons, Inc., p. 85).