

# Instrat® Analysis

## North Carolina FAIR Plan Results

### Per Occurrence PMLs:

Return Period	<i>RMS</i>		
	Commercial	Personal	Combined
1,000	\$20,203,990	\$444,101,360	\$463,858,687
500	\$15,765,248	\$335,852,904	\$351,228,373
250	\$11,005,264	\$220,384,353	\$230,710,561
100	\$6,473,531	\$125,829,487	\$131,641,757
50	\$4,349,242	\$88,324,397	\$92,201,951
20	\$2,305,619	\$50,131,384	\$52,279,832
10	\$1,077,562	\$24,906,280	\$26,068,931

### Annual Aggregate PMLs:

Return Period	<i>RMS</i>		
	Commercial	Personal	Combined
1,000	\$20,673,921	\$454,228,095	\$474,377,029
500	\$16,220,406	\$345,388,144	\$361,201,531
250	\$11,480,501	\$231,710,387	\$242,533,767
100	\$6,870,621	\$135,365,679	\$141,604,930
50	\$4,631,235	\$94,948,304	\$99,150,463
20	\$2,441,114	\$53,482,228	\$55,795,373
10	\$1,128,070	\$26,359,051	\$27,587,983

Average Annual Loss	\$422,388	\$9,324,105	\$9,746,494
Standard Deviation	\$1,596,371	\$33,684,475	\$35,183,623
100 Yr PML:Premium	7.4	9.3	9.19
Implied HU Loss Ratio	48.4%	69.3%	68.0%

<u>Exposure Summary:</u>	<u>Commercial</u>	<u>Personal</u>	<u>Combined</u>
TIV	\$101,988,626	\$2,265,362,437	\$2,367,351,063
Premium	\$872,332	\$13,458,521	\$14,330,853
Policy Count	540	28,159	28,699
Location Count	786	32,323	33,109

### Modeling Notes:

1. Frequency represents the near term ("stochastic") view for all models
2. Demand surge ("loss amplification") is included for all models
3. Storm surge is excluded for all models

# Instrat® Analysis

## North Carolina IUA Beach Results

### Per Occurrence PMLs:

Return Period	<i>RMS</i>		
	Commercial	Personal	Combined
1,000	\$1,154,614,859	\$4,724,333,241	\$5,855,997,122
500	\$945,452,700	\$3,732,574,333	\$4,684,467,969
250	\$684,674,886	\$2,533,564,129	\$3,198,077,004
100	\$400,323,091	\$1,367,641,063	\$1,762,435,835
50	\$268,115,370	\$861,911,389	\$1,123,144,788
20	\$145,714,932	\$492,922,216	\$636,312,998
10	\$76,272,742	\$288,358,777	\$366,035,764

### Annual Aggregate PMLs:

Return Period	<i>RMS</i>		
	Commercial	Personal	Combined
1,000	\$1,184,933,205	\$4,835,648,659	\$5,995,341,338
500	\$975,405,707	\$3,836,837,941	\$4,817,584,716
250	\$715,736,131	\$2,646,353,962	\$3,344,015,626
100	\$427,714,246	\$1,473,392,332	\$1,895,550,735
50	\$289,184,597	\$951,688,504	\$1,234,429,041
20	\$156,706,842	\$539,257,234	\$694,075,848
10	\$80,869,804	\$309,103,168	\$391,606,918
Average Annual Loss	\$28,089,320	\$105,196,514	\$133,285,834
Standard Deviation	\$95,233,607	\$362,171,128	\$455,303,502
100 Yr PML:Premium	19.5	15.5	16.21
Implied HU Loss Ratio	136.7%	119.3%	122.6%

<u>Exposure Summary:</u>	<u>Commercial</u>	<u>Personal</u>	<u>Combined</u>
TIV	\$2,968,920,379	\$18,503,770,323	\$21,472,690,702
Premium	\$20,550,827	\$88,144,532	\$108,695,359
Policy Count	3,009	49,357	52,366
Location Count	6,908	51,400	58,308

### Modeling Notes:

1. Frequency represents the near term ("stochastic") view for all models
2. Demand surge ("loss amplification") is included for all models
3. Storm surge is excluded for all models

# Instrat® Analysis

## North Carolina IUA Coastal Results

### Per Occurrence PMLs:

Return Period	<i>RMS</i>		
	Commercial	Personal	Combined
1,000	\$823,296,846	\$4,654,857,482	\$5,473,860,026
500	\$626,384,508	\$3,295,536,202	\$3,924,286,717
250	\$404,617,925	\$1,943,266,731	\$2,342,925,360
100	\$230,416,835	\$1,078,013,533	\$1,303,488,639
50	\$154,526,636	\$737,774,858	\$888,001,344
20	\$81,347,079	\$403,471,759	\$483,709,739
10	\$37,641,466	\$184,672,628	\$223,386,574

### Annual Aggregate PMLs:

Return Period	<i>RMS</i>		
	Commercial	Personal	Combined
1,000	\$839,407,805	\$4,733,293,089	\$5,567,417,788
500	\$641,649,712	\$3,369,307,419	\$4,012,987,775
250	\$422,622,003	\$2,033,387,937	\$2,451,464,827
100	\$244,534,122	\$1,150,084,500	\$1,389,964,342
50	\$164,587,016	\$787,151,013	\$947,791,819
20	\$86,282,848	\$427,171,807	\$512,551,187
10	\$39,596,436	\$194,568,235	\$235,350,676

Average Annual Loss	\$15,386,662	\$76,640,907	\$92,027,569
Standard Deviation	\$60,612,699	\$325,091,723	\$384,467,845
100 Yr PML:Premium	16.9	18.1	17.79
Implied HU Loss Ratio	112.5%	128.6%	125.6%

<u>Exposure Summary:</u>	<u>Commercial</u>	<u>Personal</u>	<u>Combined</u>
TIV	\$4,401,730,661	\$26,403,884,918	\$30,805,615,579
Premium	\$13,674,483	\$59,598,382	\$73,272,865
Policy Count	5,294	77,597	82,891
Location Count	13,641	78,879	92,520

### Modeling Notes:

1. Frequency represents the near term ("stochastic") view for all models
2. Demand surge ("loss amplification") is included for all models
3. Storm surge is excluded for all models

# Instrat® Analysis

## North Carolina IUA Beach and Coastal Results

### Per Occurrence PMLs:

Return Period	<i>RMS</i>		
	Commercial	Personal	Combined
1,000	\$1,957,679,889	\$9,342,548,968	\$11,280,876,612
500	\$1,581,432,632	\$7,020,759,244	\$8,614,022,089
250	\$1,073,336,252	\$4,352,084,601	\$5,421,592,132
100	\$623,973,423	\$2,348,690,674	\$2,966,971,175
50	\$417,425,173	\$1,550,620,871	\$1,962,510,992
20	\$225,657,367	\$880,381,214	\$1,104,184,141
10	\$114,967,535	\$486,112,977	\$602,196,350

### Annual Aggregate PMLs:

Return Period	<i>RMS</i>		
	Commercial	Personal	Combined
1,000	\$2,003,888,068	\$9,532,974,673	\$11,516,751,592
500	\$1,624,308,785	\$7,192,690,039	\$8,828,201,227
250	\$1,124,412,836	\$4,558,690,443	\$5,681,373,855
100	\$666,145,208	\$2,533,745,923	\$3,194,416,742
50	\$448,776,101	\$1,691,594,572	\$2,134,996,133
20	\$241,908,187	\$953,993,412	\$1,194,373,818
10	\$121,725,328	\$518,737,996	\$641,740,491

Average Annual Loss	\$43,475,982	\$181,837,421	\$225,313,403
Standard Deviation	\$154,122,536	\$671,360,205	\$823,170,153
100 Yr PML:Premium	18.2	15.9	16.30
Implied HU Loss Ratio	127.0%	123.1%	123.8%

<u>Exposure Summary:</u>	<u>Commercial</u>	<u>Personal</u>	<u>Combined</u>
TIV	\$7,370,651,040	\$44,907,655,241	\$52,278,306,281
Premium	\$34,225,310	\$147,742,914	\$181,968,224
Policy Count	8,303	126,954	135,257
Location Count	20,549	130,279	150,828

### Modeling Notes:

1. Frequency represents the near term ("stochastic") view for all models
2. Demand surge ("loss amplification") is included for all models
3. Storm surge is excluded for all models