

**Form S-5: Average Annual Zero Deductible Statewide Loss Costs—Historical versus Modeled  
Percentage Difference Between Touchstone 6.1.0 Form S-5 and Touchstone 7.3.0 Form S-5**

**Modeling Organization:** AIR Worldwide  
**Model Name & Version Number:** The AIR Hurricane Model for the United States v17.0.1 implemented in Touchstone v7.3.0  
**Model Release Date:** 6/14/2019

A. Provide the average annual zero deductible statewide personal and commercial residential hurricane loss costs produced using the list of hurricanes in the Base Hurricane Storm Set as defined in Standard M-1, Base Hurricane Storm Set, based on the 2012 Florida Hurricane Catastrophe Fund personal and commercial zero deductible residential exposure data found in the file named "hlp2012c.exe."

Time Period - 2012 FHCF Data	Historical Hurricanes	Produced by Model
Current Submission	3.478	4.325
Previously Accepted Hurricane Model* (2017 Standards)	3.478	4.325
Percentage Change Current Submission/Previously-Accepted Hurricane Model	0.000%	0.000%
Second Previously Accepted Hurricane Model* (2015 Standards)	3.505	4.331
Percentage Change Current Submission/Second Previously-Accepted Hurricane Model	-0.770%	-0.139%

\*NA if no previously accepted hurricane model

B. Provide a comparison with the statewide personal and commercial residential hurricane loss costs produced by the hurricane model on an average industry basis.

The average annual zero deductible statewide loss cost produced using the list of hurricanes in the Base Hurricane Storm Set and the 2012 FHCF aggregate personal and commercial residential exposure data is \$3.478 billion ( $\mu H$ ). The statewide loss cost produced on an average industry basis is \$4.325 billion ( $\mu S$ ).

C. Provide the 95% confidence interval on the differences between the mean of the historical and modeled personal and commercial residential loss.

Touchstone 7.3.0: The 95% confidence interval on the difference between the mean historical and modeled losses is  $(-2.501 \text{ billion} \leq (\mu H - \mu S) \leq +0.806 \text{ billion})$ .  
 Touchstone 6.1.0: The 95% confidence interval on the difference between the mean historical and modeled losses is  $(-2.501 \text{ billion} \leq (\mu H - \mu S) \leq +0.806 \text{ billion})$ .  
 Percent Change  $0.000\% \leq (\mu H - \mu S) \leq 0.000\%$

D. Provide the average annual zero deductible statewide personal and commercial residential hurricane loss costs produced using the list of hurricanes in the Base Hurricane Storm Set as defined in Standard M-1, Base Hurricane Storm Set, based on the 2017 Florida Hurricane Catastrophe Fund personal and commercial residential zero deductible exposure data found in the file named "hlp2017c.exe."

Time Period - 2017 FHCF Data	Historical Hurricanes	Produced by Model
Current Submission	3.104	3.919
Previously Accepted Hurricane Model* (2017 Standards)	3.104	3.919
Percentage Change Current Submission/Previously-Accepted Hurricane Model	0.000%	0.000%

E. Provide a comparison with the statewide personal and commercial residential hurricane loss costs produced by the hurricane model on an average industry basis.

The average annual zero deductible statewide loss cost produced using the list of hurricanes in the Base Hurricane Storm Set and the 2017 FHCF aggregate personal and commercial residential exposure data is \$3.104 billion ( $\mu H$ ). The statewide loss cost produced on an average industry basis is \$3.919 billion ( $\mu S$ ).

F. Provide the 95% confidence interval on the differences between the means of the historical and modeled personal and commercial residential hurricane loss costs.

Touchstone 7.3.0: The 95% confidence interval on the difference between the mean historical and modeled losses is  $(-2.274 \text{ billion} \leq (\mu H - \mu S) \leq +0.642 \text{ billion})$ .  
 Touchstone 6.1.0: The 95% confidence interval on the difference between the mean historical and modeled losses is  $(-2.274 \text{ billion} \leq (\mu H - \mu S) \leq +0.642 \text{ billion})$ .  
 Percent Change  $0.000\% \leq (\mu H - \mu S) \leq 0.000\%$

G. If the data are partitioned or modified, provide the average annual zero deductible statewide personal and commercial residential hurricane loss costs for the applicable partition (and its complement) or modification, as well as the modeled average annual zero deductible statewide personal and commercial residential hurricane loss costs in additional copies of Form S-5, Average Annual Zero Deductible Statewide Hurricane Loss Costs – Historical versus Modeled.

The data has not been partitioned or modified in any way.