TEXAS WINDSTORM
INSURANCE ASSOCIATION

April 29, 2022

Jamie Walker
Deputy Commissioner
Financial Regulation
Texas Department of Insurance
333 Guadalupe
Austin, TX 78701

Dear Ms. Walker:

We enclose information responsive to the requirements set forth in Section 2210.453 of the Texas Insurance Code and 28 Texas Administrative Code §5.4160 relating to the association's determination of the amount equal to the probable maximum loss for the association for a catastrophe year with a probability of one in 100 and the association's method for determining that probable maximum loss. Please contact me with any questions or requests for additional information.

Sincerely,

James Murphy
Chief Actuary

Texas Windstorm Insurance Association 2022 Catastrophe Year Disclosure to the Commissioner
Section 2210.453 of the Texas Insurance Code and 28 Texas Administrative Code §5.4160

Disclosure Requirement		Model #1	Model #2
§5.4160(d)(1)	The hurricane model or models the Association relied on, including the model vendors, the model names, and the versions of each model;	**Model Vendor:** Risk Management Solutions, Inc. (RMS) **Model Name:** North Atlantic Windstorm Model **Model Version:** RMS RiskLink 21.0 Windstorm/Hurricane and Convective Storm (WS/CS)	**Model Vendor:** AIR Worldwide Corporation **Model Name:** AIR Tropical Cyclone Model for the United States **Model Version:** AIR Touchstone 9.0 Tropical Cyclone (TC) and Severe Thunderstorm (ST)
§5.4160(d)(2)	The in-force date and the total amount of direct exposures in force for the policy data used as the input for each hurricane model the association relied on;	**In-force Date:** 11/30/2021 **Direct Exposures:** Total Insured Values (TIV): $70,833,471,461 Total Policy Limits: $65,223,101,644 Risk Count: 202,136	**In-force Date:** 11/30/2021 **Direct Exposures:** Total Insured Values (TIV): $70,833,471,461 Total Policy Limits: $65,223,101,644 Risk Count: 202,136
§5.4160(d)(3)	All user-selected hurricane model input assumptions used with each hurricane model the association relied on;	**Assumptions:** - All Perils (Windstorm/Hurricane and Severe Convective Storms). - Aggregate Annual Loss estimate. - Windstorm frequency –RMS 2021 Stochastic (Near Term) Event Rates. - Severe Convective Storm frequency –RMS 2013 Stochastic Event Rates (High and Low frequency). - With post-event loss amplification (PLA) ("Demand Surge") for Windstorm /Hurricane; Severe Convective Storm excludes loss amplification. - Without Storm Surge.	**Assumptions:** - All Perils (Tropical Cyclone - Wind and Severe Thunderstorm). - Aggregate Annual Loss estimate. - Tropical Cyclone frequency - 10K US AP (2020) Warm Sea Surface Temperatures (WSST) frequency set. - Severe Thunderstorm frequency - 10K US AP (2020) – Standard. - With Demand Surge for Tropical Cyclone - Wind and Severe Thunderstorm. - Without Storm Surge.
§5.4160(d)(4)	The one-in-100-year probable maximum loss model output produced by each hurricane model the Association relied on;	**One-in-100-year PML:** $3,091,511,058	**One-in-100-year PML:** $4,540,357,178
§5.4160(d)(5)	If the association relied on more than one hurricane model, the methodology the association used to blend or average the hurricane model outputs, including all weighting factors used;	**Blending methodology:** The aggregate annual loss output from each of the two models described herein were combined using a weighting of 25% RMS, 25% AIR, 25% IF, and 25% RQE to produce a combined one-in-100-year aggregate loss estimate of $3,683,719,259 excluding any provision for estimated loss adjustment expenses.	**Blending methodology:** The aggregate annual loss output from each of the two models described herein were combined using a weighting of 25% RMS, 25% AIR, 25% IF, and 25% RQE to produce a combined one-in-100-year aggregate loss estimate of $3,683,719,259 excluding any provision for estimated loss adjustment expenses.
§5.4160(d)(6)	Any adjustments the association or another party made to the one-in-100-year probable maximum loss model outputs or the blended or averaged output, including any adjustments to include loss adjustment expenses.	**Adjustments:** The combined one-in-100-year aggregate loss estimate described in §5.4160(d)(5) was increased by a factor of 15% to account for estimated loss adjustment expenses to yield $4,236,277,148. This amount was rounded to the nearest $1 million to derive the one-in-100-year probable maximum loss for the calendar year 2022 of **$4,236,000,000.**	**Adjustments:** The combined one-in-100-year aggregate loss estimate described in §5.4160(d)(5) was increased by a factor of 15% to account for estimated loss adjustment expenses to yield $4,236,277,148. This amount was rounded to the nearest $1 million to derive the one-in-100-year probable maximum loss for the calendar year 2022 of **$4,236,000,000.**

Texas Windstorm Insurance Association 2022 Catastrophe Year Disclosure to the Commissioner
Section 2210.453 of the Texas Insurance Code and 28 Texas Administrative Code §5.4160

Disclosure Requirement		Model #3	Model #4
§5.4160(d)(1)	The hurricane model or models the Association relied on, including the model vendors, the model names, and the versions of each model;	**Model Vendor:** Impact Forecasting **Model Name:** Atlantic Tropical Cyclone and Severe Convective Storm Models **Model Version:** Impact Forecasting ELEMENTS 15.0 Atlantic Tropical Cyclone and Severe Convective Storm	**Model Vendor:** CoreLogic **Model Name:** CoreLogic North Atlantic Hurricane and Severe Convective Storm Models **Model Version:** CoreLogic Risk Quantification & Engineering (RQE) v21 North Atlantic Hurricane (HU) and Severe Convective Storm (SCS)
§5.4160(d)(2)	The in-force date and the total amount of direct exposures in force for the policy data used as the input for each hurricane model the association relied on;	**In-force Date:** 11/30/2021 **Direct Exposures:** Total Insured Values (TIV): $70,833,471,461 Total Policy Limits: $65,223,101,644 Risk Count: 202,136	**In-force Date:** 11/30/2021 **Direct Exposures:** Total Insured Values (TIV): $70,833,471,461 Total Policy Limits: $65,223,101,644 Risk Count: 202,136
§5.4160(d)(3)	All user-selected hurricane model input assumptions used with each hurricane model the association relied on;	**Assumptions:** - All Perils (Atlantic Tropical Cyclone - Wind and Severe Convective Storms). - Aggregate Annual Loss estimate. - Atlantic Tropical Cyclone v2.0 – Wind Only Stochastic (Near Term) Event Rates. - 48-State Severe Convective Storm v1.0 – All sub-perils. - With Demand Surge for Tropical Cyclone and Severe Convective Storm. - Without Storm Surge.	**Assumptions:** - All Perils (North Atlantic Hurricane and Severe Convective Storm). - Aggregate Annual Loss estimate. - North Atlantic Hurricane v21 – Wind Only 300k Stochastic (Near Term) Event Set. - Severe Thunderstorm frequency - Standard. - With Demand Surge for North Atlantic Hurricane and Severe Convective Storm. - Without Storm Surge.
§5.4160(d)(4)	The one-in-100-year probable maximum loss model output produced by each hurricane model the Association relied on;	**One-in-100-year PML:** $3,600,975,648	**One-in-100-year PML:** $3,502,033,152
§5.4160(d)(5)	If the association relied on more than one hurricane model, the methodology the association used to blend or average the hurricane model outputs, including all weighting factors used;	**Blending methodology:** The aggregate annual loss output from each of the two models described herein were combined using a weighting of 25% RMS, 25% AIR, 25% IF, and 25% RQE to produce a combined one-in-100-year aggregate loss estimate of $3,683,719,259 excluding any provision for estimated loss adjustment expenses.	**Blending methodology:** The aggregate annual loss output from each of the two models described herein were combined using a weighting of 25% RMS, 25% AIR, 25% IF, and 25% RQE to produce a combined one-in-100-year aggregate loss estimate of $3,683,719,259 excluding any provision for estimated loss adjustment expenses.
§5.4160(d)(6)	Any adjustments the association or another party made to the one-in-100-year probable maximum loss model outputs or the blended or averaged output, including any adjustments to include loss adjustment expenses.	**Adjustments:** The combined one-in-100-year aggregate loss estimate described in §5.4160(d)(5) was increased by a factor of 15% to account for estimated loss adjustment expenses to yield $4,236,277,148. This amount was rounded to the nearest $1 million to derive the one-in-100-year probable maximum loss for the calendar year 2022 of **$4,236,000,000.**	**Adjustments:** The combined one-in-100-year aggregate loss estimate described in §5.4160(d)(5) was increased by a factor of 15% to account for estimated loss adjustment expenses to yield $4,236,277,148. This amount was rounded to the nearest $1 million to derive the one-in-100-year probable maximum loss for the calendar year 2022 of **$4,236,000,000.**