FLORIDA COMMISSION ON HURRICANE LOSS PROJECTION METHODOLOGY

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Chief Operating Officer,
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Hugh Willoughby, Ph.D.
Meteorology Expert,
Florida International University

Floyd Yager, FCAS, Vice Chair
Actuary,
Florida Hurricane Catastrophe Fund Advisory Council

Vacant
Professional Structural Engineer

May 10, 2017

Brandie Andrews
AIR Worldwide Corporation
131 Dartmouth Street
Boston, MA 02116-7603

Dear Mrs. Andrews:

This will confirm the finding of the Florida Commission on Hurricane Loss Projection Methodology on May 10, 2017, that the AIR Worldwide Corporation model has been determined acceptable for projecting hurricane loss costs and probable maximum loss levels for residential rate filings. The determination of acceptability expires on November 1, 2019.

The Commission has determined that the AIR Hurricane Model for the U.S. Version 16.0.0 as implemented in Touchstone® Version 4.1.0 limited to the options selected in the input form provided in Standard A-1, Modeling Input Data and Output Reports, Disclosure 4 complies with the standards adopted by the Commission on October 13 & 14, 2015, and concludes that the AIR Hurricane Model for the U.S. Version 16.0.0 as implemented in Touchstone® Version 4.1.0 limited to the Florida hurricane model options selected (Standard A-1, Modeling Input Data and Output Reports, Disclosure 4) is sufficiently accurate and reliable for projecting hurricane loss costs and probable maximum loss levels for residential property in Florida.

On behalf of the Commission, I congratulate you and your colleagues. We appreciate your participation and input in this process.

Sincerely,

Lori Medders, Chair
August 2, 2017

Ms. Brandie Andrews
AIR Worldwide Corporation
131 Dartmouth Street, 4th Floor
Boston, MA 02116-5134

Dear Ms. Andrews:

On June 29, 2017, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the updated software platform Touchstone 5.0.0 containing the AIR Hurricane Model for the United States version 16.0.0 found acceptable under the 2015 Standards.

In accordance with the procedures for *Interim Model Updates after a Model has been Determined to be Acceptable by the Commission* in the 2015 Report of Activities, as Chair, I have reviewed and assessed, with input from three Professional Team members, the regression test results provided for Form A-1 (Zero Deductible Personal Residential Loss Costs by ZIP Code), Form A-4 (Output Ranges), Form A-8 (Probable Maximum Loss for Florida), and Form S-5 (Average Annual Statewide Loss Costs – Historical versus Modeled) and have confirmed there were no changes to the underlying acceptable model or in the modeled loss costs and probable maximum loss levels.

This will confirm that the AIR Worldwide Corporation computer model, AIR Hurricane Model for the United States version 16.0.0 as Implemented in Touchstone Version 5.0.0 is acceptable under the 2015 Standards and is considered equivalent to the current acceptable model AIR Hurricane Model for the United States version 16.0.0 as Implemented in Touchstone Version 4.1.0 and is acceptable for projecting hurricane loss costs and probable maximum loss levels for residential rate filings in Florida.

The determination of acceptability expires on November 1, 2019.

Sincerely,

Lorilee Medders, Chair
February 27, 2018

Ms. Brandie Andrews  
AIR Worldwide Corporation  
131 Dartmouth Street, 4th Floor  
Boston, MA 02116-5134

Dear Ms. Andrews:

On January 29, 2018, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the updated model and interim software release, AIR Hurricane Model for the United States version 16.1.0 as implemented in Touchstone 5.1.4, equivalent to the AIR Hurricane Model for the United States version 16.0.0 as implemented in Touchstone 4.1.0 and acceptable under the 2015 Standards.

In accordance with the procedures for Interim Model Updates after a Model has been Determined to be Acceptable by the Commission in the 2017 Report of Activities, as Chair, I have reviewed and assessed, with input from four Professional Team members, all documentation and the regression test results submitted and have confirmed that the model and software updates do not produce significant differences in hurricane loss costs and hurricane probable maximum loss levels from the currently-accepted AIR Hurricane Model for the United States version 16.0.0 as implemented in Touchstone 4.1.0.
This will confirm that the AIR Hurricane Model for the United States version 16.1.0 as implemented in Touchstone version 5.1.4 is functionally equivalent to the currently-accepted AIR Hurricane Model for the United States version 16.0.0 as implemented in Touchstone 4.1.0 and is acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings in Florida. The determination of acceptability expires on November 1, 2019.

Sincerely,

Floyd Yager, Chair
Florida Commission on Hurricane Loss Projection Methodology
March 2, 2018

Ms. Brandie Andrews  
AIR Worldwide Corporation  
131 Dartmouth Street, 4th Floor  
Boston, MA 02116-5134

Dear Ms. Andrews:

On February 13, 2018, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the updated software platform Touchstone Version 5.1.5 containing the AIR Hurricane Model for the United States Version 16.1.0 equivalent to the AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and acceptable under the 2015 Standards.

In accordance with the procedures for Interim Model Updates after a Model has been Determined to be Acceptable by the Commission in the 2017 Report of Activities, as Chair, I have reviewed and assessed, with input from four Professional Team members, all documentation and the regression test results submitted and have confirmed that the software platform update does not produce significant differences in hurricane loss costs and hurricane probable maximum loss levels from the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0.
This will confirm that the AIR Hurricane Model for the United States Version 16.1.0 as implemented in Touchstone Version 5.1.5 is functionally equivalent to the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and is acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings in Florida. The determination of acceptability expires on November 1, 2019.

Sincerely,

Floyd Yager, Chair
Florida Commission on Hurricane Loss Projection Methodology
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Statistics Expert,
Florida State University

Minchong Mao, FCAS, ASA, MAAA
Actuary,
Property and Casualty Industry

Hugh Willoughby, Ph.D.
Meteorology Expert,
Florida International University

July 12, 2018

Ms. Brandie Andrews
AIR Worldwide Corporation
131 Dartmouth Street, 4th Floor
Boston, MA 02116-5134

Dear Ms. Andrews:

On May 15, 2018, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the updated software platform Touchstone Version 5.1.6 containing the AIR Hurricane Model for the United States Version 16.1.0 equivalent to the AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and acceptable under the 2015 Standards.

In accordance with the procedures for Interim Model Updates after a Model has been Determined to be Acceptable by the Commission in the 2017 Report of Activities, as Chair, I have reviewed and assessed, with input from four Professional Team members, all documentation and the regression test results submitted and have confirmed that the software platform update does not produce significant differences in hurricane loss costs and hurricane probable maximum loss levels from the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0.
Ms. Brandie Andrews  
AIR Worldwide Corporation  
July 12, 2018  
Page Two

This will confirm that the AIR Hurricane Model for the United States Version 16.1.0 as implemented in Touchstone Version 5.1.6 is functionally equivalent to the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and is acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings in Florida. The determination of acceptability expires on November 1, 2019.

Sincerely,

Floyd Yager, Chair  
Florida Commission on Hurricane Loss Projection Methodology
July 12, 2018

Ms. Brandie Andrews  
AIR Worldwide Corporation  
131 Dartmouth Street, 4th Floor  
Boston, MA 02116-5134

Dear Ms. Andrews:

On June 21, 2018, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the updated software platform Touchstone Version 5.1.6 TLS containing the AIR Hurricane Model for the United States Version 16.1.0 equivalent to the AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and acceptable under the 2015 Standards.

In accordance with the procedures for Interim Model Updates after a Model has been Determined to be Acceptable by the Commission in the 2017 Report of Activities, as Chair, I have reviewed and assessed, with input from four Professional Team members, all documentation and the regression test results submitted and have confirmed that the software platform update does not produce significant differences in hurricane loss costs and hurricane probable maximum loss levels from the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0.
This will confirm that the AIR Hurricane Model for the United States Version 16.1.0 as implemented in Touchstone Version 5.1.6 TLS is functionally equivalent to the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and is acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings in Florida. The determination of acceptability expires on November 1, 2019.

Sincerely,

[Signature]

Floyd Yager, Chair
Florida Commission on Hurricane Loss Projection Methodology
November 6, 2018

Ms. Brandie Andrews
AIR Worldwide Corporation
131 Dartmouth Street, 4th Floor
Boston, MA 02116-5134

Dear Ms. Andrews:

On August 31, 2018, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the interim software update and the interim geographical data update in Touchstone Version 6.0.0 containing the AIR Hurricane Model for the United States Version 16.1.0 functionally equivalent to the AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and acceptable under the 2015 Standards.

In accordance with the procedures for Interim Model Updates after a Model has been Determined to be Acceptable by the Commission and Interim Updates to Geographical or Other Data after a Model has been Determined to be Acceptable by the Commission in the 2017 Report of Activities, as Chair, I have reviewed and assessed, with input from four Professional Team members, all documentation and the regression test results submitted and have confirmed that the interim software update and the interim geographical data update do not produce significant differences in hurricane loss costs and hurricane probable maximum loss levels from the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0.
Ms. Brandie Andrews  
AIR Worldwide Corporation  
November 6, 2018  
Page Two

This will confirm that the AIR Hurricane Model for the United States Version 16.1.0 as implemented in Touchstone Version 6.0.0 is functionally equivalent to the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and is acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings in Florida. The determination of acceptability expires on November 1, 2019.

Sincerely,

[Signature]

Floyd Yager, Chair  
Florida Commission on Hurricane Loss Projection Methodology
April 11, 2019

Ms. Brandie Andrews
AIR Worldwide Corporation
131 Dartmouth Street, 4th Floor
Boston, MA 02116-5134

Dear Ms. Andrews:

On January 4, 2019, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the interim software updates in Touchstone Version 5.1.8 and Touchstone Version 6.0.4 containing the AIR Hurricane Model for the United States Version 16.1.0 functionally equivalent to the AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and acceptable under the 2015 Standards.

In accordance with the procedures for Interim Model Updates after a Model has been Determined to be Acceptable by the Commission in the 2017 Report of Activities, as Chair, I have reviewed and assessed, with input from four Professional Team members, all documentation and the regression test results submitted and have confirmed that the interim software updates do not produce significant differences in hurricane loss costs and hurricane probable maximum loss levels from the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0.
This will confirm that the AIR Hurricane Model for the United States Version 16.1.0 as implemented in Touchstone Version 5.1.8 and as implemented in Touchstone Version 6.0.4 is functionally equivalent to the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and is acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings in Florida. The determination of acceptability expires on November 1, 2019.

Sincerely,

Floyd Yager, Chair
Florida Commission on Hurricane Loss Projection Methodology
April 17, 2019

Ms. Brandie Andrews  
AIR Worldwide Corporation  
131 Dartmouth Street, 4th Floor  
Boston, MA 02116-5134

Dear Ms. Andrews:

On April 15, 2019, AIR requested the Florida Commission on Hurricane Loss Projection Methodology consider the interim software update in Touchstone Version 6.2.0 containing the AIR Hurricane Model for the United States Version 16.1.0 functionally equivalent to the AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and acceptable under the 2015 Standards.

In accordance with the procedures for Interim Model Updates after a Model has been Determined to be Acceptable by the Commission in the 2017 Report of Activities, as Chair, I have reviewed and assessed, with input from four Professional Team members, all documentation and the regression test results submitted and have confirmed that the interim software update does not produce significant differences in hurricane loss costs and hurricane probable maximum loss levels from the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0.
This will confirm that the AIR Hurricane Model for the United States Version 16.1.0 as implemented in Touchstone Version 6.2.0 is functionally equivalent to the currently-accepted AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone Version 4.1.0 and is acceptable for projecting hurricane loss costs and hurricane probable maximum loss levels for residential rate filings in Florida. The determination of acceptability expires on November 1, 2019.

Sincerely,

Floyd Yager, Chair
Florida Commission on Hurricane Loss Projection Methodology
October 10, 2019

Ms. Brandie Andrews
AIR Worldwide Corporation
131 Dartmouth Street, 4th Floor
Boston, MA 02116-5134

Dear Ms. Andrews:

On September 26, 2019, AIR notified the Florida Commission on Hurricane Loss Projection Methodology (Commission) of editorial errors in Form M-3, Radius of Maximum Winds and Radii of Standard Wind Thresholds, in the submission document under the 2015 Standards for the AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone® 4.1.0, and identified the errors as a Type I difference.

As Chair, I have reviewed and assessed, with input from the Professional Team, the submitted Forms V-2 (Hurricane Mitigation Measures and Secondary Characteristics, Range of Changes in Damage), A-1 (Zero Deductible Personal Residential Loss Costs by ZIP Code), A-4 (Output Ranges), A-8 (Probable Maximum Loss for Florida), and S-5 (Average Annual Zero Deductible Statewide Hurricane Loss Costs – Historical versus Modeled), and the addendum to the final submission document under the 2015 Standards. The documentation and explanations provided are sufficient, and a change in the model version identification is not required.

This will confirm that the AIR Hurricane Model for the United States Version 16.0.0 as implemented in Touchstone® 4.1.0 remains acceptable under the 2015 Standards. The determination of acceptability expires on November 1, 2019.

Sincerely,

Floyd Yager, Chair