

Florida Commission on Hurricane Loss Projection Methodology

Acceptability Process Committee
Recommendations for the
2013 Report of Activities

September 2013

Sections of the Report that are not under the Acceptability Process Committee

- General Standards
- Meteorological Standards
- Vulnerability Standards
- Actuarial Standards
- Statistical Standards
- Computer Standards
- Figures – these are tied to each of the Standards Sections
- Definitions – related to and specific to each of the six Standards Sections above

Sections Addressed

in the *Report of Activities* by the Acceptability Process Committee (Everything Else)

- Letter & Table of Contents – update edits
- Introduction – Moved statutory cites to footnotes, updated language and dates
- Principles – No Changes
- **Commission Structure** – Important Changes
- Findings of the Commission – Minor changes, the order of reviewing standards
- **Process for Determining the Acceptability of a Computer Simulation Model** – Important Changes
- On-Site Review – Minor edits and clarifications
- **Working Definitions of Terms Used in the *Report of Activities*** – Important Changes, input from Committees
- References – Technical additions
- Inquiries or Investigations – New material, report from Professional Team
- **Appendices** – Two new forms (F-1 & F-2), updated statutory changes (new member – licensed structural engineer), s. 627.701(5)-(9), F.S., added for informational purposes – deals with coinsurance and deductibles

Commission Structure

- **Reason for Changes**: Concern over security measures and procedures to ensure that trade secrets and proprietary information are protected. More structure would be beneficial to avoid potential future issues and conflicts. Measures need to be strengthened to avoid unnecessary risk. The Commission is housed in the SBA, and it is everyone's responsibility to ensure that the processes, procedures, and rules are adhered to carefully.
- Page 4 : **On-site Visits** – new Form F-1 (in Appendix), Commission members sign form agreeing to abide by the specified procedures in the 2013 ROA.
 - Helps remind and ensure everyone that the on-site visits will be conducted professionally and legally (i.e., notes and documents are not taken away, proprietary information/trade secrets are respected, public meeting laws are not violated, and the Professional Team has “room to work” while Commission members have full access to the modeler).
- Page 14: **Closed Meetings** – new Form F-2 (in Appendix), Commission members sign form agreeing to abide by requirements of a closed meeting in the 2013 ROA.
 - Helps remind and ensure everyone that closed meetings will be conducted professionally and legally (i.e., only trade secrets are discussed, room security is maintained, computers and/or cell phones are turned off).

Process for Determining the Acceptability of a Computer Simulation Model

1. **“Significant Changes”** – Suggestion by Modelers at Committee meetings rejected. Commission continues to define significant changes as “any changes to the loss costs or probable maximum loss levels” (page 1).
2. **Changes in the review cycle dates** (pages 2-3):
 - June 2013 – Commission Workshop
 - June 2013 – Executive Committee meeting
 - August 2013 – Committee Meetings
 - **September 2013** – Commission Adopts 2013 Standards in the *Report of Activities*
 - **November 1, 2013** – *2013 Report of Activities* is published
 - **March 1, 2014** – First deadline for notification by Modeling Organizations
 - **March-April 2014** – Commission meeting to review submissions
 - **April-May 2014** – On-site reviews
 - **May-June 2014** – Commission meetings to review models for acceptability under 2013 Standards
 - **November 1, 2014** – Second deadline for notification by Modeling Organizations
 - **December 2014** – Commission meeting to review submissions
 - **January-April 2015** – On-site reviews
 - **April-May 2015** – Additional verification reviews, if necessary
 - **April-June 2015** – Commission meetings to review models for acceptability under 2013 Standards
 - **November 1, 2017** – Expiration of a Model found Acceptable under November 1, 2013 ROA

Process for Determining the Acceptability of a Computer Simulation Model (con't)

3. Technical Changes:

- Changed Form numbers to accommodate the transition from 2007 FHCF exposure data to 2012 FHCF exposure data (page 4).
- Clarifications addressing hyperlinks, date & time in footnotes, colors for maps, blank cells indicating no exposure, clear labeling of diagrams (pages 4-5).
- Submission revisions, more than 10 pages of revisions require a new “book” (page 6).
- Annotated list of additional changes, if any, if provided with corrections of deficiencies (page 7).
- Changes dates and Form numbers, hard copies of submissions are to be duplexed (pages 8-9).

4. **Acceptability & Notification:** Updates & Changes to letter involves adding language that model is “limited to options selected in the input form provided in Standard A-1, Disclosure 5” and “limited to the Florida hurricane model options selected in Standard A-1, Disclosure 5.” This is of the nature of a clarification.

Process for Determining the Acceptability of a Computer Simulation Model (con't)

New Organization of Section:

- E. Appeal Process to be Used by a Modeling Organization if a Model is Not Found to be Acceptable by the Commission **(MOVED UP)**
- F. Discovery of Differences in a Model Previously Determined to be Acceptable by the Commission **(NEW TITLE & MAJOR REVISIONS)**
- G. Interim Software Updates after a Model has been Determined to be Acceptable by the Commission **(REVISED)**
- H. Interim Updates to Geographical and/or Other Data after a Model has been Determined to be Acceptable by the Commission **(NEW)**
- I. Review and Acceptance Criteria for Functionally Equivalent Model Software Platforms **(NEW – NO DRAFT LANGUAGE PROVIDED IN COMMITTEE)**
- J. Expiration of a Model Found Acceptable **(DATE REVISED)**

F. Discovery of Differences in a Model Previously Determined to be Acceptable by the Commission (NEW TITLE & MAJOR REVISIONS)

- This section will define how a discovery of model differences will be handled regardless of the reasons for such differences.
- “Differences” – defined as anything that results in the model as used by the Modeling Organization not being the exact same model found acceptable by the Commission. Such differences are unintentional and are discovered following a model’s acceptability determination and prior to its expiration.
- Such “differences” are not due to interim updates, developmental changes (intended to be reviewed during the normal standard revision cycle), or functional equivalent differences associated with various model software platforms. These examples of differences are all intentional in that they are associated with a known change controlled by the Modeling Organization.

F. Discovery of Differences in a Model Previously Determined to be Acceptable by the Commission (NEW TITLE & MAJOR REVISIONS) [Con't]

- The “type of differences” will be classified as falling into one of three categories.
- Type I Differences – Differences are discovered but loss costs and PML levels have not changed.
- Type II Differences – Differences are discovered but no loss cost in any 5 digit ZIP Code area has changed more than +/- 1% and/or no PML has changed at any level for the third significant digit of the number.
Example: For \$103,000,987, the number \$103,897,239 would be within the zone, but \$104,128,337 would exceed the “acceptable tolerance” limit.
- Type III Differences – Differences are discovered and loss cost in any 5 digit ZIP Code area has changed more than +/- 1% and/or one or more PML has changed at a level of the third significant digit of the number.

F. Discovery of Differences in a Model Previously Determined to be Acceptable by the Commission **(NEW TITLE & MAJOR REVISIONS)** [Con't]

- The “acceptable tolerance” concept for the discovery of model differences has to do with a difference that will result in an immediate suspension of the model when discovered (more on this below).
- The Modeling Organization’s obligation upon discovering a “difference” is as follows:
 - Notify the Commission in writing without delay.
 - Describe the differences and impact on loss costs and PMLs if any.
 - Provide Forms A1, A-4, A-8, & S-5.
 - State the type of differences as a Type I, Type II, or Type III.
- Upon receipt of the notification and documentation, the Chair shall consult with at least 3 Professional Team members in order to investigate, determine, and verify the impact of the differences as reported by the Modeling Organization.

F. Discovery of Differences in a Model Previously Determined to be Acceptable by the Commission (NEW TITLE & MAJOR REVISIONS) [Con't]

Modeling Organization:
--Provide Documentation including addendum

Modeling Organization:
--Revise the Model
--Provide Documentation including addendum

Modeling Organization:
--Model Suspended
--Revise the Model
--Provide Documentation including addendum

Type I
No Change in Loss Cost or PML

Type II
Changes in Loss Cost or PML are within the "Acceptable Tolerance"

Type III
Changes in Loss Cost or PML exceed the "Acceptable Tolerance"

Chair: Letter to Accept, no new model version number

OR

Meeting of Commission: Determine documentation needs, vote on Chair's recommendation, new model version number (depending on nature & complexity)

Suspension only if documentation is not provided in time frame established. Lifted when documentation is provided.

Meeting of Commission: If no revisions have been made to comply with standards. Commission adopts a plan of action recommended by Chair.

Meeting of Commission: Once revisions are made, Commission votes on acceptability (all standards met), new model version number, new model supersedes old, expires IAW original time line.

Suspended only if revisions are not made by time frame established. Lifted when revisions are made.

Chair: Letter to Suspend upon notification or discovery.

Meeting of Commission: If no revisions have been made to comply with standards. Commission adopts a plan of action recommended by Chair.

Meeting of Commission: Once revisions are made, Commission votes on acceptability (all Standards met), new model version number, new model supersedes old, expires IAW original time line.

Withdrawal of Acceptability: if revisions are not made within 60 days of the Commission being notified or the Professional Team or Commission discovering Type III differences. Modeling Organization would be allowed to appeal.

F. Discovery of Differences in a Model Previously Determined to be Acceptable by the Commission (**NEW TITLE & MAJOR REVISIONS**) [Con't]

- In the Case of Type I Differences (slide 1 of 2):
 - Chair, in consultation with at least 3 Professional Team members, shall verify the differences and specify any additional documentation needed.
 - Commission shall focus solely on the need for documentation and ensuring that there is no impact on loss costs and PMLs.
 - Modeling Organization's response will only involve providing adequate documentation, not involve changes to the model.
 - Modeling Organization shall submit an addendum to the submission for the model previously found acceptable, documenting the reasons, causes, and explanations for the differences. Also, the addendum will discuss why the loss costs and PMLs remain valid and have not changed.
 - If Chair determines that documentation is sufficient, the Chair shall provide a letter to the Modeling Organization acknowledging the notification of differences and noting that the Commission accepts the addendum. Letter will note that a change in the model's version number is not required. The letter shall also note that the model expires at the original expiration date unless other differences are discovered prior to expiration.

F. Discovery of Differences in a Model Previously Determined to be Acceptable by the Commission **(NEW TITLE & MAJOR REVISIONS)** [Con't]

- In the Case of Type I Differences (slide 2 of 2):
 - If the Chair determines that a new model version is needed and/or the complexity of the reported differences needs to be addressed by the Commission at a special or regularly scheduled meeting, the Chair will provide the members with a detailed recommendation prior to the meeting including what constitutes adequate documentation and when such documentation should be provided to the Commission.
 - If back up information of a proprietary nature involves trade secrets, the Commission shall discuss such information in a closed session.
 - The model shall not be suspended for Type I differences unless the required documentation is not provided within the time frame specified by the Commission. No additional changes to the model shall be required.
 - If the Modeling Organization fails to provide the documentation by the established time frame, the Chair shall send a letter to the Modeling Organization suspending the model until such time that the documentation is provided.
 - Once provided, the Chair in consultation with at least 3 Professional Team members shall determine whether the documentation is appropriate. If so, the Chair shall send a letter to the Modeling Organization noting that the documentation is acceptable and the suspension is lifted.

F. Discovery of Differences in a Model Previously Determined to be Acceptable by the Commission **(NEW TITLE & MAJOR REVISIONS)** [Con't]

- In the Case of Type II Differences (slide 1 of 2):
 - Chair, in consultation with at least 3 Professional Team members, shall determine whether the Modeling Organization has already revised the model to conform to the Standards or is capable of doing so within 14 days.
 - If revisions have been made or can be made within 14 days, the Modeling Organization shall submit an addendum to the submission for the model previously found acceptable noting whether any trade secret information will be involved.
 - The Chair shall place the Modeling Organization's notification on the agenda for a special or regularly scheduled meeting. Commission members will be provided a copy of the notification and the status of the Modeling Organization's revision plan if on-going actions are required.
 - If the Modeling Organization has not made any revisions to conform to the Standards, the Chair shall provide a detailed recommendation for the Commission's consideration. The recommendation shall include specific time frames including deadlines and documentation as to what is needed to conform to the Standards. The purpose of such meeting is for the Commission members to agree on a revision plan and deadline.
 - Once the Modeling Organization has made the appropriate revisions within the specified time frame as verified by the Chair in consultation with at least 3 Professional Team members, the Chair shall call a special meeting or include an agenda item on the next regularly scheduled Commission meeting for the purpose of reviewing the revisions to the model needed to conform the model to the Commission Standards.

F. Discovery of Differences in a Model Previously Determined to be Acceptable by the Commission **(NEW TITLE & MAJOR REVISIONS)** [Con't]

- In the Case of Type II Differences (slide 2 of 2):
 - Information of a proprietary nature involving trade secrets shall only be discussed in a closed session.
 - The Commission shall vote to find the model acceptable under all Standards. The basic process for determining model acceptability shall be followed. The notification letter shall be revised acknowledging the discovery of Type II differences and that model revisions have been found to be acceptable. A new model version number as assigned by the Modeling Organization will be noted. The model's acceptability shall expire as originally provided. The revised model shall supersede the prior model.
 - If the Modeling Organization fails to make the appropriate revisions by the specified deadline, the model shall be suspended. The Chair shall send a letter to the Modeling Organization noting that the model is suspended until the appropriate revisions are made to conform the model to the Standards. Once done, the Commission shall vote to determine the acceptability of the revised model under all Standards.

F. Discovery of Differences in a Model Previously Determined to be Acceptable by the Commission (NEW TITLE & MAJOR REVISIONS) [Con't]

- In the Case of Type III Differences (slide 1 of 2):
 - The acceptability of the model is suspended upon the receipt of the notice of Type III differences or at any time during a Professional Team or the Commission review where the magnitude of such differences are discovered and can be documented.
 - The Chair shall send the Modeling Organization a letter indicating the suspension until the Commission investigates and takes action regarding the Modeling Organization's steps to bring the model into compliance with meeting all Standards.
 - The Chair, in consultation with at least 3 Professional Team members, shall determine whether the Modeling Organization has already revised the model to conform to the Standards or is capable of doing so within 14 days.
 - If revisions have been made or can be made within 14 days, the Modeling Organization shall submit an addendum to the submission for the model previously found acceptable noting whether any trade secret information will be involved.
 - The Chair shall place the Modeling Organization's notification on the agenda for a special or regularly scheduled meeting. Commission members will be provided a copy of the notification and the status of the Modeling Organization's revision plan if on-going actions are required.
 - If the Modeling Organization has not made revisions to conform to the Standards, the Chair shall provide a detailed recommendation for the Commission's consideration. The recommendation shall include specific time frames including deadlines and documentation as to what is needed to conform to the Standards. The purpose of such meeting is for the Commission members to agree on a revision plan and deadline.

F. Discovery of Differences in a Model Previously Determined to be Acceptable by the Commission (NEW TITLE & MAJOR REVISIONS) [Con't]

- In the Case of Type III Differences (slide 2 of 2):
 - Once the Modeling Organization has made the appropriate revisions within the specified time frame as verified by the Chair in consultation with at least 3 Professional Team members, the Chair shall call a special meeting or include an agenda item on the next regularly scheduled Commission meeting for the purpose of reviewing the revisions to the model needed to conform the model to the Commission Standards.
 - Information of a proprietary nature involving trade secrets shall only be discussed in a closed session.
 - The Commission shall vote to find the model acceptable under all Standards. The basic process for determining model acceptability shall be followed. The notification letter shall be revised acknowledging the discovery of Type III differences and that model revisions have been found to be acceptable. A new model version number as assigned by the Modeling Organization will be noted. The model's acceptability shall expire as originally provided. The revised model shall supersede the prior model.
 - If the Modeling Organization fails to make the appropriate revisions within 60 days of notifying the Commission or of the Professional Team or Commission's discovery of such differences, the acceptability of the model shall be permanently withdrawn subject to the appeal process. If there is no appeal or if the appeal is unsuccessful, the Modeling Organization's next opportunity to make a submission will be determined by the time frames established in the Commission's next *Report of Activities* scheduled for publication in 2015.

G. Interim Software Updates after a Model has been Determined to be Acceptable by the Commission (REVISED)

- Interim Software updates
 - Are made where the underlying model as determined acceptable has not been revised.
 - Such updates are unrelated to loss costs or PMLs as derived from the model.
 - No changes to the loss costs or PMLs.
- Modeling Organization notifies the Chair in writing
 - Such notification details the nature of the updates, effect on the model as previously found acceptable, and effect on model results.
 - Notification includes Forms A-1, A-4, A-8, and S-5 for both the current accepted model and the model including the proposed interim software updates.
 - New “software” version number is required under the Modeling Organization’s model revision policy. The model version number shall remain the same.
 - Chair in consultation with the Professional Team may recommend conducting a review which may be a virtual review provided the Modeling Organization is in agreement and can provide access to full modeling material by participating in a telephone conference call with on-line access to the required material.
 - Chair shall notify the Commission members as soon as possible, and assess, with at least 3 Professional Team members the regression test results associated with the analysis of the above forms.

G. Interim Software Updates after a Model has been Determined to be Acceptable by the Commission (REVISED) [Con't]

- Regression test results
 - No change: Chair sends letter to Modeling Organization indicating that the changes associated with the interim software updates are not significantly different from the previously accepted model version and the same expiration date shall apply. The underlying model version number remains the same and a new software version number is assigned by the Modeling Organization. Both version numbers will be noted in the letter.
 - Changes Noted: Chair sends letter to the Modeling Organization notifying that there will be a pending review by the Commission at a special or regularly scheduled meeting.
 - Purpose of the meeting will be to review the interim software updates and any other aspect of the model in order to ensure that the model continues to meet the Commission Standards.
 - Voting on all Standards shall be required.
 - If found acceptable, the Modeling Organization will receive a notification letter regarding the acceptability of the interim software updates. The model's new "software " and "model" version numbers as assigned by the Modeling Organization shall be noted. The previous version of the model shall be considered superseded.
 - If the revised model's proposed interim software changes are not found to be acceptable by the Commission, the Chair shall send the Modeling Organization a letter indicating that the proposed interim updates were not found to be acceptable by the Commission and that the original model and software version shall expire as originally specified.
 - The appeal process shall not be applicable. This will require the Modeling Organization to wait until the next review cycle in accordance with the submission procedures to be specified in the next *Report of Activities* scheduled for publication in 2015.

H. Interim Updates to Geographical and/or Other Data after a Model has been Determined to be Acceptable by the Commission (NEW)

- This section applies when the Modeling Organization wants to make an interim update to the data within the model software. Such data can involve geographical location data within the model or other data. The results produced by the model might change and the model as previously found acceptable may change.
- The modeling organization shall notify the Chair in writing and the notification shall detail the nature of the updates and effect on the model results.
- Notification shall include Forms A-1, A-4, A-8, and S-5 completed for the currently accepted model and the proposed updated version of the model. The two will be compared based on regression test results.
- The notification involving geographic location data shall include:
 - The proposed interim data update designation as assigned under the Modeling Organization’s model revision policy shall be clearly identified.
 - Maps showing ZIP Code centroids for the entire state of Florida (for the proposed and previously accepted model version).
 - A sorted list of all ZIP Code centroid movements of one mile or more, the top 10 movements (if fewer than 10 move at least one mile), and a list of new and retired ZIP Codes.
 - The corresponding primary county for each ZIP Code listed shall be provided.
 - A list of all ZIP Code related databases used by the model and describe the impact on such databases (including roughness factors, building construction, and ZIP Code specific vulnerability functions).

H. Interim Updates to Geographical and/or Other Data after a Model has been Determined to be Acceptable by the Commission (NEW) [Con't]

- The notification involving the possibility of other interim data updates to the previously accepted model should be consistent with information provided in proposed Standard G-1, Disclosure 6. The recommendation is to include an additional disclosure alerting the Commission of the possibilities of other interim updates that the Modeling Organization might bring forward. This should operate such that unless disclosed in proposed Standard G-1, Disclosure 6, the Commission will not consider the type of updates under this section.
 - The notification shall include Forms A-1, A-4, A-8, and S-5 completed for the currently accepted model and the proposed updated version of the model.
 - The proposed interim data update designation as assigned under the Modeling Organization's model revision policy shall be clearly identified.
 - A list of all related databases used by the model and describe the impact on such databases.

H. Interim Updates to Geographical and/or Other Data after a Model has been Determined to be Acceptable by the Commission (NEW) [Con't]

- The Chair shall review the notification and inform Commission members and assess the impact of regression test results with at least 3 Professional Team members.
 - If changes are consistent with the stated data updates, the Chair shall send an updated notification letter to the Modeling Organization denoting that the changes are not significant from the currently accepted model and that the same model version number and a distinction made for the interim data update(s) as assigned by the Modeling Organization shall be noted.
 - If the Chair determines that the changes are inconsistent with the geographic data updates or other interim updates, the Chair shall send a letter to the Modeling Organization notifying of a pending review. In which case, the Chair shall determine the need for a special or regularly scheduled meeting.
 - The purpose of the Commission meeting will be to review the data updates and any other aspect of the model which might have changed in order to ensure that the revised model continues to meet the Commission Standards.
 - Voting on all Standards shall be required.
 - If the Commission finds the revised model with the updated data acceptable, a notification letter shall be sent. The new model version number and a distinction made for interim data updates as assigned by the Modeling Organization shall be noted. The previous version of the model shall be considered superseded.
 - If the revised model is not found to be acceptable by the Commission, a letter shall be sent to the Modeling Organization noting such and that the previously found acceptable model version continues to be acceptable and expires as originally provided.
 - The appeal process shall not be applicable. This will require the Modeling Organization to wait until the next review cycle in order to accomplish the data updates contemplated in accordance with the submission procedures to be specified in the next *Report of Activities* scheduled for publication in 2015.

I. Review and Acceptance Criteria for Functionally Equivalent Model Platforms (NEW – NO DRAFT LANGUAGE PROVIDED IN COMMITTEE)

- For situations where a Modeling Organization designates that its model will be running on two or more software platforms, the Commission may find the various software platforms acceptable under the following circumstances:
 - All software platforms are submitted for review with the same submission at the designated submission deadline and are capable of being reviewed concurrently by the Commission, including the Professional Team on-site review. It is necessary that all platforms be reviewed concurrently as to determine functional equivalence.
 - Functional equivalence will be recognized as long as no loss costs associated with any software platform differs with regard to the third decimal place (no changes in Form A-4, Output Ranges as published) and the probable maximum loss (PML) does not differ by more than $\pm 0.5\%$ for any PML level.
 - The model as implemented shall have the same model version number with a notation to designate the specific model platform(s). The Modeling Organization shall specify in the proposed Standard G-1, Disclosure 1 which software platform is the primary platform and which platform(s) are the functionally equivalent software platforms.
 - The Modeling Organization will not be allowed to make separate or interim submissions during a review cycle and any difference in model platforms shall be required to be noted in the Modeling Organization's original submission in proposed Standard G-1, Disclosure 1.
 - The only differences in the model results shall be demonstrated to be solely due to the nature of the model platform(s) or any other technological constraint that would account for no more than the designated differences noted above.
 - Upon finding the model acceptable, the Chair's letter shall designate specifically which model platform(s) have and have not been found to be acceptable by the Commission as being "functionally equivalent."

J. Expiration of a Model Found Acceptable (DATE REVISED)

- The determination of acceptability of a model found acceptable under the Standards in the *Report of Activities as of November 1, 2013*, expires on November 1, 2017.