

**PROFESSIONAL TEAM REPORT
TO THE FLORIDA COMMISSION ON HURRICANE LOSS PROJECTION
METHODOLOGY ON INQUIRIES OR INVESTIGATIONS FROM THE
2008 REPORT OF ACTIVITIES
JULY 2009**

Multi-Decadal Variability and Its Impact on Expected Loss

(Note: Reports were provided to the Florida Commission on Hurricane Loss Projection Methodology (Commission), July 2006, and are available at www.sbafla.com/methodology/pdf/2006/PT%20Issues%20Report%20July%202006.pdf and www.sbafla.com/methodology/pdf/2006/Multidecadal%20Report%20July%202006.pdf)

A body of literature has accumulated since 1990 that focuses on multi-decadal variability of hurricanes. The hypothesis is that we are in an enhanced period of activity that can be expected to last another 10-15 years and then decrease to activity levels like the low frequency and landfall times of the 1980s. Can the models take account of this, or should they?

Modelers expressed the view that the effects of multi-decadal oscillation (MDO) provide “valuable insights” into the sensitivity of the models.

- a. Provides a different view of the associated risk
- b. Uses a separate data set (or partitioning of the HURDAT data set)

Modelers discussed changes they would like to see in the Commission process to account for MDO.

Modelers may wish to submit multiple models or multiple results from a particular model to account for different hurricane frequency criteria.

Modeler comments:

- The Commission should allow the use of multiple models from a single modeling company.
- The Commission should provide acceptable methods to “blend” models.
- The Commission rules should not be “too limiting.”
- One modeler’s view – “The more opinions you have, the better the result.”
- The effects of other climate factors may also fit into this category.
- Modelers expressed a concern that Commission decisions are only part of the rules under which they must live.
- If model results are not permitted in rate filings, there are minimal benefits to different modeling assumptions.
- Modelers expressed their opinion that MDO has less of an impact on Florida hurricane frequencies than those of other areas.
- Modelers produce “uncertainty estimates,” but believe they are of little use because insurers “must use the output ranges.”
- Modelers expressed their desire that the Commission provide for a preliminary review phase for the Professional Team to assess what the modelers have done, prior to the mandate that specific standards be met or specific forms be required.

Professional Team Comments – MDO:

Modelers have differences in opinion regarding the accounting for MDO in determining the expected hurricane frequencies used by their particular model. One modeler desires to spend more time exploring the means to permit the use of different models, accounting for different historical hurricane frequency periods while another modeler expresses the “very limited” ability of scientists to predict MDO, and that the necessary skill associated with forecasting MDO does not currently exist.

The Professional Team believes that the current Commission procedures are sufficient in light of all the information available at this time. The process allows a modeler to submit one model with support showing that the model meets all Commission standards. In fact, the Commission standards have been expanded to incorporate the possibility of models that consider MDO. The current state of meteorological science does not in and of itself support the use of MDO. This is evident from the diversity of modeler opinions on this issue. Modelers noted that the use of MDO is a market driven issue.

Section 627.062, Florida Statutes requires a model used in Florida insurance rate filings to have been found acceptable by the Commission. The Professional Team highly recommends that each modeler should submit only one model that purports to produce that modeler’s best estimate of future loss costs. The Commission procedure has withstood a most challenging fourteen year history by adhering to its process. Changes in the process should be made with great care.

Retrofit or Remodeled Structures

How are retrofit or remodeled buildings treated in the model? For year built data provided by insurance companies, is the year built or the year remodeled reflected?

The Professional Team questioned the modelers regarding how the models treat retrofitted and remodeled structures.

- a. Modelers noted that remodeling is not the same as retrofitting.
- b. Modelers responded that, while retrofitting or remodeling may provide a benefit, the amount of such benefit decreases over time as the specific retrofitting or remodeling ages.
- c. Modelers communicated that the difficulties involved in accounting for these deteriorations in the mitigating ability of retrofitting or remodeling include a serious lack of viable information related to the age of specific modifications to a building.
 - Typically, property owners do not provide information to the insurer relating to the history of retrofitting to a particular home.
 - Even when information is provided by the policyholder, it is often of poor or unknown quality.
 - The impact of individual retrofitting measures is highly dependent on

- the rest of the building; such as the impact of shutters may be minimized by the effects of old nails, an old roof, or other unmitigated parts of the building.
- “Year built” is generally accounted for if the property is made building code compliant.
 - Variability also applies to the amount of deterioration of roofing, cladding, and other structural criteria in a new building over time.
- d. Modelers mentioned the potential benefits to be obtained by pushing insurers to improve data quality and mitigation credit criteria in ways along the lines of the MySafeFloridaHome program.
- There are currently a few insurers that include “effective year of construction” which takes into account some basic elements of the necessary data.

Professional Team Comments – Retrofit or Remodeled Structures:

The Professional Team believes the expense involved in tracking the temporal effects of individual retrofit and remodeling actions would be far greater than the benefits derived in refining the models. Models generally are capable and do consider the age of the structure when it is provided by the user. Models also produce credits for specific retrofitting and remodeling criteria that are expected to produce a decrease in damage from a covered event. It is recommended that this inquiry item be tabled until more detailed information relating to the date of specific mitigation criteria is typically included in the exposure data.

Storm Surge

How do modelers look at storm surge in different areas? Should there be a Storm Surge Standard similar to the Demand Surge Standard?

Proposed new Audit item 3 to Standard A-1

3. The model will be reviewed to determine that damages, weakening, or destruction attributable to flood or storm surge are excluded and not permitted to further affect the modeled loss costs and probable maximum loss levels for wind related damage in hurricanes for the state of Florida.

Proposed new language for Standard A-3.C

C. Loss cost projections and probable maximum loss levels shall not include any provision for direct hurricane storm surge losses or losses on properties that have been previously destroyed or substantially weakened by hurricane storm surge.

Modeler comments:

- Some modelers already have a “Storm Surge Model.”
 - ◆ To simulate timing and magnitude of surge, the model uses information on

inland elevations, wind speeds, central pressures, forward speed, storm track, basin bathymetry, terrain level, and roughness. Models may also include wave damage, rising water damage, etc.

- Modelers recommend rather than creating a “Storm Surge Standard,” the Commission should be prepared for an entire new set of “Storm Surge” standards.
- Storm Surge losses should be completely separated from wind losses.
- Insurers generally collect data related to wind losses.
- Modelers currently account for the temporal effects of storm surge versus wind damage through validations with insurer claims data. To more scientifically account for the temporal effects of wind versus storm surge is currently a computationally difficult process and may be cost prohibitive for the modelers submitting to the Commission.
- Models are currently in an “awkward position” as insurance claims relating to wind versus water are frequently determined in judicial proceedings.

Professional Team Comments – Storm Surge:

The Professional Team agrees with the modelers that there is a great deal of additional information needed before the Commission creates a separate set of Water Intrusion (storm surge plus wave action) standards. Nevertheless, the issue of wind versus water damage is an important one for the evolution of the modeling process. The Commission may wish to schedule future workshops to pursue the issue of advancing the process whereby the temporal effects of wind versus water damage may be appropriately considered in acceptable models.

Commercial Residential

Modelers were asked for comments relating to the Commission's discussions to add commercial residential standards to its review process.

Proposed new Standard A-2 language to require models to account for the “contractual obligations” of the insured resident and the condominium association.

Proposed new paragraph under Standard A-2, Purpose:

The determination of insurance coverage for a commercial residential policy is dependent upon the contractual responsibility of the owner and that of the condominium association or the renter and the building owner. It is important that these responsibilities be appropriately accounted for in modeling loss costs and probable maximum loss levels.

Proposed new Standard A-7 language to include “coinsurance” to the list of items that must be determined to be actuarially sound.

Modelers related several caveats regarding the Commission's adoption of commercial residential standards.

- a. Less data available for risks with far greater variability in expected losses.
- b. Insurance companies do not always disclose all the nuances of their risks.
- c. Need for a normative reference relating to commercial residential vulnerability.
- d. Very limited claims data available.
- e. Important information may not be included in the data.
 - Number of floors
 - Construction specifics
- f. Modeling may end up being cumbersome, complex with no supporting data.
- g. Claims adjusting for multi-unit properties may be done by many different adjusters.
 - Different insurer practices
 - Different adjusters
 - Different policy provisions

Modelers expressed their concern that the process is already a challenge to perform every year. The addition of commercial residential standards will place an even greater burden on modelers each year.

Modelers requested that the Commission create the commercial residential process slowly in recognition of the many problems and potential problems that are present; perhaps by initially adding commercial residential loss costs in the output ranges. Initially, the current personal residential standards, disclosures, and audit items could be expanded to include commercial residential.

Modelers suggested that the term coinsurance may be defined differently by different insurance companies, but that they generally consider coinsurance in developing commercial loss costs.

Professional Team Comments – Commercial Residential:

The Professional Team suggests that commercial residential insurance policies are within the responsibilities assigned to the Commission and encourages the continued development of commercial residential standards. The Professional Team recommends that the addition of commercial residential standards be accomplished gradually as information becomes clearer relative to the amount and quality of information available to appropriately audit the processes used to produce commercial residential loss costs.

The Professional Team suggests that there is not enough information provided by insurers to allow for an effective monitoring of how contractual obligations are specifically incorporated in the models. Therefore, the proposed addition of "contractual obligations" to Standard A-2 is premature at this time.

The Professional Team suggests that the term "coinsurance" be added to the requirements list in Standard A-7, C.

Personal and Commercial Residential Acceptability Process

The notification by a modeler must include whether the modeler desires to be reviewed for compliance with both the personal and commercial residential Standards or only for the personal residential Standards. The Commission will review models separately for compliance with the personal residential and commercial residential Standards. Models will initially be reviewed for compliance with the personal residential Standards. If a model is determined to be acceptable under the personal residential Standards, the Commission will review the model (if requested by the modeler) for compliance with the commercial residential Standards.

Modelers were divided regarding the addition to the Acceptability Process as stated above. Some modelers preferred to submit personal and commercial output ranges separately while others stated that they currently handle them together anyway. Modelers desired to have the option of submitting personal residential and commercial residential or only personal residential. Modelers expressed the desire to withdraw commercial residential following the Professional Team’s on-site review.

Professional Team Comments – Personal and Commercial Residential Acceptability Process:

The Professional Team recommends that the Acceptability Process be amended as cited above: If a model is determined to be acceptable under the personal residential standards, the Commission will review the model (if requested by the modeler) for compliance with the commercial residential standards.

Costs Associated with Additional Verification Review

If an additional verification review is requested, the modeler will be required to reimburse the FHCF for all the usual and customary expenses connected to the additional verification review.

As might be expected, modelers were not in favor of this additional cost. In addition, Florida SBA legal staff provided the following information.

The statute does not provide for such payments or reimbursements. Reviewing models is the job of the Commission. Section 626.0628(2)(f), F.S., provides as follows: “The State Board of Administration shall, as a cost of administration of the Florida Hurricane Catastrophe Fund, provide for travel, expenses, and staff support for the commission.” There is no authority for requiring modelers to pay for the expenses of verification review, whether regular or “additional.” The Commission, may, of course, decline to conduct such “additional” verification reviews.

Professional Team Comments – Additional Verification Review Costs:

In light of the research results provided by SBA legal staff, the Professional Team recommends that no action be taken on this issue at this time.

Proposed New Disclosure 6 to Standard G-1

6. Provide a chronological list of editorial changes using page numbers from the current year's initial submission. All changes subsequent to the current year's initial submission shall be included in this list.

Modelers suggested that this additional disclosure would be unnecessarily burdensome on the Commission as well as the modelers. They also suggested that this requirement would result in additional costs to an already expensive process.

Professional Team Comments – New Disclosure 6 to Standard G-1:

Much time and effort is expended by the Professional Team, modelers, and the Commission, dealing with grammatical and typographical errors in the modeler's communications with the Commission. While progress has been made in the last few years, there are still an inordinate amount of typos in the submissions.

The Professional Team recommends that this issue be tabled at the present time to see if these improvements continue. In the absence of continued improvements, the Commission may wish to add this disclosure in the future.

Additional comments received from modelers:

1. Modelers requested more time between reviews.
2. Modelers requested the Commission revisit its "all or nothing" pass fail Acceptability Process.