



July 12, 2023

Jon Phenix, Attorney
California Department of Insurance
300 Capitol Mall, 17th Floor
Sacramento, CA 95814

Re: Workshop Examining Catastrophe Modeling and Insurance

Dear Jon Phenix:

On behalf of the Committee on Extreme Events and Property Lines (the committee) of the American Academy of Actuaries,¹ I appreciate the opportunity to provide comments to the questions posed by the California Department of Insurance (CDI) in advance of the workshop examining catastrophe modeling and insurance. The committee appreciates and supports the department's continued efforts to listen to and engage with stakeholders on how to improve risk management and make residential and commercial insurance more affordable and reliable.

The committee appreciates your consideration of the following comments:

1. When thinking about incorporating catastrophe models into the rate-level calculation for homeowners and commercial insurance, what is the significance of Insurance Code section 1861.07?

Detailed support for catastrophe models is filed confidentially in many states and protected by trade secret statutes. Insurance Code Section 1861.07 prevents trade secret protection for catastrophe models due to the public inspection provision. The end result is either a lack of ability for regulators to request and receive trade secret support for catastrophe models or an unwillingness of model vendors to provide this information to insurers and regulators for filing in California.

2. To what extent can the methodologies, factors, and inner workings of catastrophe models be publicly disclosed in accordance with Section 1861.07 so that the Department can evaluate those models?

The answer is highly dependent on the catastrophe modeler and the specific request. In general, some modelers are able to provide overviews of the modeling process, data used, and summarized model output in public formats. Detailed factors and selections such as vulnerability curves and event-level hazard information will directly expose modelers' intellectual property and place them at a competitive disadvantage, and as such are not often publicly disclosed.

¹ The American Academy of Actuaries is a 19,500-member professional association whose mission is to serve the public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

Given the question and the impact such information requests have on catastrophe modeling vendors, one potential option in light of Section 1861.07 is that the CDI engage with catastrophe modelers to understand what data can be provided publicly. The CDI and modeling vendors could work toward an agreement of providing standardized information that is useful for model evaluation, but not deemed trade secret by modelers.

3. If the Department requires sensitive information in the course of its model review, what are some potential methods of ensuring the Department can adequately review catastrophe models in accordance with Section 1861.07?

Given the challenges of publicly disclosing confidential and trade secret methodologies, factors, and inner workings of catastrophe models—along with the need for the Department to adequately review catastrophe models in accordance with Section 1861.07—the Department could consider leveraging an objective, neutral third party such as a committee or commission to complete an in-depth model review.

This third party could potentially function similarly to the Florida Commission on Hurricane Loss Projection Methodology (FCHLPM), ensuring that any catastrophe models used in a rate filing are scientifically and actuarially sound, without needing to expose proprietary information. A committee could consist of experts in fields related to the key aspects of wildfire science, including wildfire ignition, spread, suppression, engineering, and mitigation, along with experts in the fields of insurance, finance, actuarial science, and computer science. This committee could then review model details, specifications, and options, ensuring that submitted rate filings that rely on these models are appropriately accounting for the risk, and promoting the actuarial principle that insurance rates are not excessive, inadequate, or unfairly discriminatory.

While the FCHLPM provides an example of a third-party model review process, the process developed for California can and potentially should differ as it aligns with the goal of adequately reviewing wildfire catastrophe models for use in ratemaking in California.

While a third-party model review process may require several years to stand up, this method would allow insurers to utilize the latest science and research in their pricing, while protecting the confidential/trade secret nature of the catastrophe models, all while providing confidence to the Department that the models have been adequately reviewed and are acceptable for use in ratemaking. This process would allow insurers to appropriately rate for wildfire risk, which may further incentivize consumers to pursue mitigation opportunities. It would likely to provide more options to consumers for acquiring property insurance in the long run.

Given recent wildfire events and market reactions, there would likely need to be an interim procedure to continue reviewing catastrophe models and potentially allowing their use in setting overall rate levels. An option for an interim process is described in our answer to question 2.

4. Other states have incorporated alternative methods of structuring model review, such as use of an independent third-party panel. Are there any methods used by other states that would be a viable option in California?

Many states have provisions that allow for the submission of sensitive, confidential information. For example, the State of Illinois Department of Insurance Bulletin# 2012-08 details items relating to the

confidential treatment of information in System for Electronic Rates & Forms Filing filings. Also, Texas Government Code Sec. 552.110 provides exceptions to public disclosure requirement for trade secrets and certain commercial or financial information. Relative to third-party panels, Florida established the FCHLPM, which reviews in detail all Florida hurricane models. Models must be certified prior to being used in Florida to develop rates.

If final model review requires disclosure of intellectual property, it would be recommended that an independent model review team is used, with the appropriate experts in wildfires and modeling. Florida has established the FCHLPM process that provides a deep dive review into the hurricane models, and certification is required (as mentioned in response to item 3). FCHLPM is funded by the Florida Hurricane Catastrophe Fund, which is independent of the Florida Office of Insurance Regulation.

Model review processes/guidelines should follow all applicable standards of practice (catastrophe modeling, actuarial, science, etc.).

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The committee appreciates this opportunity to provide comments on the matter. We hope these observations are helpful, and we welcome further discussion. If you have any questions about our comments, please contact Rob Fischer, the Academy's casualty policy analyst, at fischer@actuary.org.

Sincerely,

Steve Kolk, MAAA, ACAS
Chairperson
Extreme Events and Property Lines Committee
American Academy of Actuaries