

## Successful Natural Hazard Risk Management



Awareness and concern for natural hazards has increased significantly in the past few years, both from internal risk management as well as insurance liability perspectives. Consequently, natural hazard analysis via computer models has been growing in use and popularity, but they have severe limitations. It must be understood that although these modeling tools serve a very useful purpose for insurers with large portfolios of locations based on averages and a wide geographic spread, they are not the tool of choice for risk managers when it comes to providing details and accurate evaluations for individual locations. And the alternative of completing in-depth studies at ALL portfolio locations via field visits by trained engineers will most certainly be cost-prohibitive. **So what is the best approach for successful natural hazard risk management?**

Through discussions with numerous companies that have experienced natural catastrophes firsthand, we have concluded that there are three choices in dealing with overall natural hazard risk management: 1) do nothing and accept the risk; 2) manage some of the risk exclusively through insurance coverage for potential physical damage and business interruption; **3) assess the risk and reduce it to an acceptable level through engineering and strengthening of critical structures and equipment.** The last option is the business approach that makes the most sense to many of our clients, as expressed in a recent interactive survey.

But how do you get started? And how do you do it right within given budgets? In determining the answer to those questions, some common themes exist:

- As evidenced by statements made by modeling companies themselves, computer models cannot be depended upon for understanding site-specific risks, as they were not created for site-specific analysis.
- Minor details, such as lack of equipment bracing or anchoring (as opposed to structural items), cause more than 65% of the damage on average, and these risks cannot be modeled.
- You cannot rely solely on local codes to protect assets and/or prevent business interruption.
- You must validate and quantify your risk in order to know which locations drive the overall portfolio profile and are critical to operations, as well as ensure that the decision-making results are accurate.
- Mitigation and strengthening (not just insurance) has to be considered, especially for critical sites.

Understanding these issues, the **proactive risk manager** needs to take an approach that includes: *defining exposures* and severity levels of facilities; *prioritizing locations* based on value, risk at location, and criticality of facility; *conducting engineering assessments* of key/critical facilities to determine the REAL risks; *making informed management decisions* on transfer and mitigation strategies and *implementing the plan*.

An excellent example of this proactive approach is a recent project undertaken for a client involving three phases. The *first phase* consisted of a desktop review, simply identifying which facilities were exposed

to a natural hazard risk and to what level. In the *second phase*, facilities that were identified as exposed were prioritized based on severity of exposure, criticality of the operations, insurable value of the facility, and other client-specific criteria. (Even though a client portfolio may consist of hundreds of locations, generally only a few are the real drivers of the portfolio profile and can be readily identified and prioritized in the first two phases.) Finally, in the *third phase*, the facilities that were identified as critical and drivers of the portfolio were visited by our experts to conduct a thorough analysis, gather critical detailed information and develop expected actual loss scenarios/amounts, as well as mitigation recommendations on a site-specific basis. **This information is needed for successful natural hazard risk management in order to make informed decisions regarding mitigation and risk transfer based on individual client circumstances - potentially saving thousands of dollars in premiums and millions of dollars in losses.**

Our goal is to put clients in a better position to understand exposures and be in control of negotiations for coverage, while simultaneously planning for expected/outlined scenarios. Having complete and up-to-date information will provide the necessary tools to achieve this goal. We provide the risk management community with accurate, site-specific risk identification, loss estimation and risk mitigation recommendations for natural perils (earthquake, hurricane/windstorm and flood) in a phase-option process that allows a client to select the depth of the overall study based on priorities, exposures, information voids and budgets.

For additional information: [cheaton@grmcat.com](mailto:cheaton@grmcat.com)