

PROPERTY LOSS MITIGATION

Take Action to Reduce Property Losses

By **Harvey Ryland**

At this time of year—when hail storms, hurricanes, tornadoes and wildfires are more likely to occur—property insurance professionals will want to aggressively take advantage of the increasing supply of loss reduction tools and practices.

Last May's severe thunderstorms and deadly tornadoes that struck 18 states are reminders that natural disasters are always in nature's hands, and therefore subject to chance.

But more than ever before, homeowners, businesses—and the insurers that protect them—have the ability to reduce the losses of these events by addressing where and how residential and commercial structures are built.

Property loss mitigation materials and techniques are increasingly affordable and available, and there are encouraging signs that property-related safety measures are receiving needed attention in public policy decision-making. And there is increasing evidence that homeowners, businesses and communities that embrace the use of these materials and techniques are likely to see less damage from natural disasters.

In the public policy arena, we've recently seen a movement toward strengthening disaster-resistant building codes in a number of key jurisdictions, including Texas and North Carolina.

Various organizations, including insurance industry representatives, worked to strengthen the International Residential and Building Codes as the Texas Windstorm Insurance Association adopted it for use along the state's coast. The new requirements for asphalt shingles and mandatory wind-borne debris protection inland—as well as on the barrier islands—provide some of the nation's strongest building code protections against windstorms.

When strong winds enter a building because flying debris has punctured windows or doors, internal pressures can soar, blowing the building apart. When windows and doors are protected, they keep out these damaging winds, as well as water that can cause major damage to a building's contents.

According to a study commissioned by the Institute for Business & Home Safety

and its partners to look at the impact of this stronger code, in 10 years, insured losses after each severe hurricane in the affected parts of Texas could drop about 40 percent, or \$155 million, when compared to potential losses today. The estimated savings from each such storm in 20 years climbs to \$377 million.

A similar public policy achievement recently occurred in North Carolina, where the state's Building Code Council approved a windborne debris region that extends 1,500 feet from the Atlantic Ocean along the state's entire coast. This means buildings in those areas will need to have either built-in window and door protection or be designed to withstand high internal pressures, which is also the case under the new Florida building code.

Insurers should know, however, that if high winds and rains find their way into a structure built only to withstand these pressures, the building may stand, but everything inside it will likely be ruined.

Aside from wind, insurers know that hailstorms also can produce expensive property damage, as they did in April this year in the Dallas/Fort Worth area of Texas. Our research shows the average annual loss from thunderstorms—primarily hail—between 1994 and 1999 was about \$4.7 billion. That is more than the total insured losses from Hurricanes Opal and Floyd combined.

In cooperation with a leading engineering firm, we developed a hail map for the National Fire Protection Association's Model Building Code. The map will be used to implement hail-resistant construction requirements in hail-prone regions of the country.

If just 5,000 homes hit by hail sustain no damage due to roofing work made to these specifications, and the average replacement cost of a residential shingle roof is \$4,000, the savings to insurers would be \$20 million, less deductibles.

Top elected officials in a number of states have decided to take further steps to protect lives and property.

In North Carolina, for instance, the governor last year signed an executive order designating the state as an IBHS Showcase Partnership for Disaster Resistance & Resilience. The order commits the governor's office and state agencies to

cooperate among themselves and with insurers to bring about loss mitigation and disaster planning.

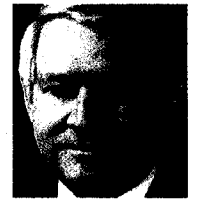
North Carolina joins Oregon and Rhode Island on the Showcase state roster.

Individuals and businesses, themselves, can also take relatively simple and often inexpensive steps to avoid or reduce disaster losses. In addition to using hail-resistant roof coverings and installing storm shutters or impact-resistant glass in windows and doors, they can insist that builders make better connections at the roof, walls and foundation to improve a building's disaster resistance.

For example, new studies we've helped support show that residential roof sheathing is often not attached as well as it should be. But the good news is that a strong roof connection can be more consistently achieved simply by using certain kinds of ring-shanked nails in a prescribed pattern. For a 2,000 square foot home, the upgraded nails could cost just \$7.60.

Even landscaping can play a role in reducing exposure to disaster. For instance, in the case of wildfires, the wrong landscaping designs and materials can actually help these fires spread to buildings.

IBHS is helping to demonstrate these and other techniques in cooperation with our member insurers as part of our "Fortified for safer living" program. This national, all-risk program features connections from the foundation to the roof, together with a series of other disaster-resistant construction methods and materials. The result is a home much better able to withstand whatever local natural hazards threaten it, usually for just a few ex-



Harvey Ryland is the president and CEO of the Institute for Business & Home Safety in Tampa, Fla. IBHS is a national non-profit initiative of the insurance industry to reduce deaths, injuries, property damage, economic losses and human suffering caused by natural disasters.

LOSS MITIGATION: KILLING THE STORM

Hurricane Chaser Intent On Slaying Storm

By Daniel Hays

Sometime this summer, a small cargo aircraft will roar off the runway in Florida, take dead aim at a scorching hurricane cloud, and spray it with a dose of white powder that kills or disables the storm. That's the plan at least.

The effort to slay the tempest is the project of manufacturer Peter Cordani, whose Riviera Beach, Fla., firm, Dyn-O-Mat, makes fluid absorption products. His aim is to use some of the same technology his company works with to absorb the energy of a hurricane.

"We're looking to cut a wedge out of this storm like a pizza pie. By sucking out that energy and turning that wind in, we'll break the momentum and take the punch out of it," he said.

Mr. Cordani explained that the storm will be attacked by spraying it with modified polymer particles that absorb the cloud's moisture. Four eight-inch-diameter pipes will blow the material, which looks like talcum, out the back of the airplane.

In previous tests, he said his team has been successful in eliminating a potential storm that was visible on Doppler radar. "We sprayed a building thunderstorm and wiped it off the radar."

tra dollars a month over the life of a mortgage.

In the case of small commercial lines, we know it's important to mitigate the chance of loss before disaster strikes. And there are often simple nonstructural steps these firms can take to do so, by securing bookshelves and other furniture in an earthquake prone area, for instance. We also know it's critical for them to know what recovery steps to take following a major event, such as where they might secure temporary office space.

The price of not taking such actions can be high. According to our studies, about 25 percent of businesses closed by a natural disaster never reopen. But con-

While some meteorologists have expressed doubts about the feasibility of the project, scientist Peter Ray, who is doing observations and assessment of the project, said he believes it is "potentially feasible" to do something that has an effect.

Mr. Ray, with the Florida State University meteorology program, has studied severe weather for nearly 40 years. "My scientific opinion is it may not be possible to eliminate a hurricane, but to

drop it from hurricane to tropical storm status," he said.

The importance of this, he explained, is that, with hurricanes, "damage goes up as a cube of wind speed."

Professor Ray noted that weather modification has had a "checkered history" with past efforts like the government's 1960's Operation Storm Fury that seeded clouds with silver iodide.

The concept, he said, was to get the storm to grow prematurely and "have the storm release its energy before it got to the center of the hurricane where it would be most destructive."

"Make the cloud big and get it over with. That's the essence of it. We now know that it had no effect," he said.

Mr. Ray said he used radar to monitor how the polymer particulates behave

when dropped in the cloud and how fast they fall.

Mr. Cordani's team, he said, has "demonstrated [that] you can put some of this material in a thunderstorm and it has a dramatic effect, making it disappear and dissipate rapidly."

At this point, however, scientists don't know how long the effect would last if a

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To stop an event that could cause \$40 billion in damage, \$1 million isn't much to spend, scientist says

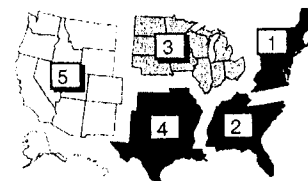
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