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# Preservation Tips

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## Special points of interest:

- NIST report outlines changes necessary to prepare your institution's building to survive. Download the report and determine if you are really prepared.
- The Jones Lang LaSalle report provides similar recommendations for business continuity and staff preparedness.
- Additional websites provide assistance dealing with mold problems.

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[www.chicora.org](http://www.chicora.org)

Preserving the Past  
for the Future

## NIST Releases Hurricane Reconnaissance Report

The National Institute of Standards and Technology (NIST) has just released its findings on building failures caused by 2005's Hurricanes Katrina and Rita. Tasked with establishing the likely causes of building failures and evaluating the technical aspects of emergency response and evacuation procedures, one initial finding is the critical importance of state and local authorities adopting—and then rigorously enforcing—building standards, model codes, and practices. Some of the worst hit areas, such as Mississippi and Alabama had no minimum state-wide codes in place.

The study is pointing out that storm surge heights and flooding, in general, exceeded the levels defined by existing maps and historical records. Many flood hazard maps were outdated and were not consistent



with the risks posed by storm surges.

The NIST is also suggesting that the Saffir-Simpson Scale, which is often used by emergency managers, is poorly suited for evaluating risk. NOAA, which does not rely on the storm surge data projected by the scale, uses its own projections

which are far more accurate.

Some buildings were rendered inoperable because critical equipment, such as backup generators, chillers, and electrical equipment, were located at or below grade and damaged due to inundation by floodwaters.

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## New Help in Fighting Mold

A new website, [www.getmoldfacts.com](http://www.getmoldfacts.com), from USG Corp. provides another resource in fighting mold problems. The website includes facts about fighting mold, provides details on specific USG products, and provides a useful list of additional resources.

Of special interest, the website takes you through pre-

construction, construction, and maintenance issues associated with preventing mold problems. USG has built a new organization, the Responsible Solutions to Mold Coalition — likely as a result of many mold-related lawsuits that are plaguing the building supply and construction industries.

Although this website has a

distinct orientation and promotes the company's products, it does contain a number of useful resources. In particular it should be carefully reviewed by architects and building committees, as well as anyone involved in preservation.

PS—take the mold IQ quiz for a free T-shirt!



Roller doors frequently failed as a result of wind-induced damage and poor design (photo credit: Christopher Letchford, Texas Tech)

*Masonry wall failures observed during the reconnaissance may have been prevented had the walls been properly anchored and reinforced as required by model codes.*



Brick veneer failure due to wind forces.

## Hurricane Study Released by NIST

As a result of this study the NIST is making 23 recommendations in three broad categories: immediate impact on practice for rebuilding, standards, codes, and practices, and needed further study. Museum, library, and archives should pay particular attention to the first two since they affect day-to-day business and the institution's ability to survive the next storm.

They urge institutions to get critical facilities above the anticipated flood waters; to use

better building practices with regard to masonry walls; avoid the use of aggregate roofing materials; and ensure that roofing is designed and installed to survive high wind events.

Communities and agencies must develop risk-based storm surge maps — and these maps must be used appropriately (don't locate a museum in an area that we know will be destroyed by the next hurricane). The NIST points out the need to improve the structural integrity of precast reinforced

concrete structures (until then cultural institutions would do well to avoid the use of this material). Similarly, engineered metal buildings are problematic and need stricter codes for attaching cladding elements.

We should be looking carefully at means of providing alternative or backup emergency power. There should be isolation valves for water and gas lines.

The full report is available online at <http://www.bfrl.nist.gov>.

## Another View of Hurricane Preparedness

The Chicago-based Jones Lang LaSalle firm manages a broad range of commercial structures affected by the 2005 hurricane season. They have recently released a detailed report that offers facility managers and building owners with advice on disaster planning strategies. One of the most fundamental recommendations is to plan for the scenario and anticipate the impacts will have on your building, collections, staff, and pub-

lic.

They recommend updating disaster plans, making pre-event arrangements with service providers, stockpiling critical necessities, checking into emergency housing for employees, establishing a response team with clearly defined roles and special training, reviewing legal responsibilities, and preparing a shut-down plan.

These are recommendations

repeatedly voiced by those in preservation, yet there are still institutions that haven't learned these essential lessons — perhaps this document will help them recognize the importance of basic planning.

The document is available on the company website, <http://www.research.joneslanglasalle.com/>. You will need to register, which is a hassle, but the report is worth the effort.

## Basic Facts About Mold

- ◆ According to the US Department of Housing and Urban Development, an estimated "25 percent of airways disease and 60 percent of interstitial lung-disease may be associated with moisture in the home or work environment."
- ◆ Exposure to mold may potentially cause health problems in some people, such as allergies, asthma, hypersensitivity pneumonitis and other immunological effects.
- ◆ The US EPA states that "potential health concerns are an important reason to prevent mold growth and to remediate and clean up any existing indoor mold growth."
- ◆ Recent studies also have identified *Aspergillus*, *Cladosporium*, *Penicillium* and *Alternaria* as the most common molds found in indoor environments with mold problems.
- ◆ For mold to grow indoors, a source of sufficient moisture must be present. The best way to prevent indoor mold growth is to eliminate sources of excess moisture.
- ◆ Mold problems in your building or collections? Contact Chicora today.