

# Restoring Trust

*Post-Katrina, the largest concentration of historic homes in any U.S. city remains largely intact*

**N**ew Orleans will never be the same. But its best hope for a future — any future — appears to lie with its past.

Despite the widespread destruction throughout the city, the incomparable concentration of historic homes and buildings in New Orleans came through the storm far better than many feared. And in a time of chaos, when city and state officials often seem confused or working at cross-purposes, preservationists appear to have a clear agenda, methods in place to reach their goals, and assistance from national foundations and others with significant means.

“There’s such a resurgence of interest in our historic structures in the city,” notes Meg Lousteau, director of the Louisiana Landmarks Society in New Orleans.

When Katrina bore down on Louisiana, many people feared catastrophe for a city that may have the largest historic housing stock for its size of any in the country. New Orleans has 20 National Register of Historic Places districts, containing at least 37,000 historic homes, explains Peter Brink, senior vice president at the Washington, D.C.-based National Trust for Historic Preservation. An additional 13 locally designated districts add thousands to that figure, with the New Orleans archetypal “shotgun” houses (so-called because the narrow, rectangular homes have no hallways, so each room opens into the next all the way through the house) surrounded by homes portraying a panoply of 18<sup>th</sup>-, 19<sup>th</sup>-, and early 20<sup>th</sup>-century styles.

Tremé and other historic neighborhoods may contain Greek Revival, double-galleried Italianate, Arts & Crafts, and other styles — sometimes many on one block.

Although as of late January preserva-



The early “shotgun” homes (above) of New Orleans (so-called because they had no hallways and each room opened into the next all the way through the house), were built on piers at least 3 feet high in anticipation of flooding, and they traditionally included wind-resistant hip roofs.

tionists remained unsure of exactly how many homes wouldn’t survive Katrina, everyone agreed that, in Brink’s words, “overall, historic homes did well.” One measure: In all of the 20 National Register districts and a scattering of the local districts, fewer than 500 homes had appeared on city demolition lists, notes Patricia Gay, executive director of the Preservation Resource Center of New Orleans.

In general, the older the homes were, the better they withstood Katrina. Preservationists and architects said this seeming irony was due in part to the fact that the earliest New Orleans residents built on the highest ground near the banks of the Mississippi and along several natural ridges that stretch into the city. “All the

Early 20<sup>th</sup>-century Cottage-style homes, such as the one below, were often elevated on a “throwaway floor” that could be flooded without damage to the main living area.



LIBRARY OF CONGRESS HABS

neighborhoods that developed prior to 1900 were not flooded,” Gay reports.

But the experts also chalked up the resilience of the historic homes to the wisdom of their builders and the materials they used. In the era before levees and pumps gave the appearance of protection, New Orleans builders were well aware of the potential for floods. As a result, “they had the good sense to build off the ground,” explains Frank Masson, a New Orleans architect who specializes in restoring historic homes and buildings.

He notes that builders placed shotgun homes atop piers with first-floor joists elevated 3 feet above the ground “almost without exception.” What’s more, builders of 19<sup>th</sup>-century homes used water- and rot-

resistant cypress framing and full 3- by 4-inch studs. Homes were “very substantially built,” he points out. Walled with lime-based plaster instead of mold-attracting dry-wall, older homes even resisted mold better.

All that said, yesterday’s builders didn’t get *everything* right. Historic homes typically were not constructed with the hurricane tie-downs that connect rafters, walls, and foundations in their newer counterparts, Masson says. So when they did flood, the water pushed some off their foundations, he reports.

And there was no question that flooding did major damage in some historic neighborhoods. This was true, for example, in Holy Cross, a neighborhood of several hundred homes in the lower 9th Ward that flooded heavily despite a relatively elevated perch near the river. As a result, Holy Cross was one of a notably few historic neighborhoods that Brink characterized as “precarious.”

“I think of it as a tipping district where there could be a lot of demolition or everything could be saved,” he says.

But Holy Cross, and historic neighbor-

hoods with a similar plight, has Brinks and other preservationists working on its behalf — a powerful ally the thousands of 20th-century slab-built homes elsewhere in the lower 9th and in east New Orleans do not share. Among other activities, the

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Preservation Resource Center is seeking to restore “Demonstration Homes” in eight different historic neighborhoods to serve as examples for residents unsure of whether or not they want to rebuild. The center has also assembled teams of construction and architectural experts to scrutinize every historic home the city tagged for demolition and, if possible, fight that designation.

“We see a lot of buildings that we can’t

understand why they should be candidates for demolition,” Gay notes.

The preservationists’ efforts have also garnered national and international assistance. The National Trust, for example, asked Congress for \$60 million in grants to help homeowners in historic districts rebuild. Organizations such as the World Monuments Fund and Credit Suisse bank contributed to restoration efforts. Even Wilco, the rock band, staged a benefit concert for historic preservation.

All the activity gives the appearance that historic New Orleans will largely come through Katrina, a huge asset for a city that initially had few other reasons for hope. What will be much harder to resuscitate from pre-storm New Orleans is the racial and economic diversity of many historic neighborhoods. The Preservation Resource Center is seeking financial support for grants for low-income homeowners, but gentrification is figured to mushroom as those with the most resources restore, rebuild, or purchase. — *Aaron Hoover*



## Currents

### STUDY ARGUES FOR TOUGHER CODES

Using a wind-damage model based on National Hurricane Center estimates of Katrina’s winds at landfall, researchers at Louisiana State University concluded that upgrading building codes to meet Category 3 force winds would have prevented much of the damage in Mississippi and Louisiana.

The study examined three simple changes to current protection: providing opening impact-resistant windows and doors, upgrading nailing schedules for roof sheathing, and using hurricane straps to



Three basic code protections — opening protection, better nailing for roof sheathing, and hurricane straps — could eliminate 80% of the damage from a Category 3 hurricane, such as the damage shown to this home.

reinforce the connection between roof and wall structures. The researchers found that applying these improvements would add

only 4.5% to new home construction costs but could have prevented the loss of 273,000 homes in Louisiana alone.

According to Frank Lepore of the National Hurricane Center in Miami, about 20% of all the hurricanes are Category 3 or higher but account for 80% of hurricane damage costs, suggesting that focusing on Category 3 protection levels may provide the best target for code revisions in all coastal regions.

### COASTAL HIGH HAZARD STUDY

According to a recent study by the Florida Department of Community Affairs, Florida has the greatest probability of any state in the nation experiencing a Category 3 or higher hurricane. Given the unprecedented

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## Currents

number of hurricanes striking Florida in the last two years — including Hurricanes Charley, Frances, Ivan, and Jeanne in 2004 and Hurricanes Dennis, Katrina, Rita, and Wilma in 2005 — Florida officials are debating with increased fervor the question of how the state should plan to protect residents who increasingly settle along the state's 825 miles of sandy coastline. An estimated 80% of Florida's 18 million residents (projected to increase to around 25 million by the year 2025) live within 10 miles of the coast, inhabiting residential and commercial coastal properties fast approaching \$1 trillion. With property damage from recent storm activity in the billions of dollars, the question carries economic as well as sociological and environmental outcomes.

The DCA's Coastal High Hazard Study Committee (available at [www.dca.state.fl.us](http://www.dca.state.fl.us)) focused its final report on recommendations for managing growth in Coastal High Hazard Areas (CHHA) defined as the Category 1 hurricane evacuation zones. Many of the issues and recommendations tackled the technical issues of measuring and reporting wind and flood conditions from major storms, aiming for a consistent and coordinated model on which to base state policy. But many of the issues covered in the report could have a direct and immediate bearing on builders and developers in the state if they're used to guide many of the state laws currently under review. These laws include those aimed at establishing building and zoning codes,

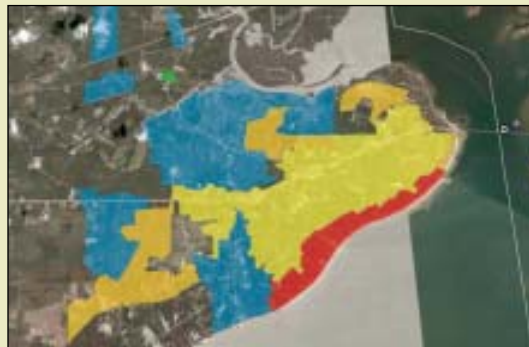
requirements for disclosures during real-estate transaction seaward of the Coastal Construction Control Line (CCCL), and reevaluating property setbacks to provide better protection.

### STORM-TRACKING TOOLS

Combining satellite images with data from NOAA, Google Earth ([earth.google.com](http://earth.google.com)) has become the latest tool for tracking hurricanes. The technol-

ogy is free to any user but requires downloading a program to view the 3-D Earth images.

A simpler, but very effective tool for gathering up-to-the-minute hurricane tracking comes from the Central Florida Hurricane Center, which uses a hybrid (also known as a "hack") of Google maps and NOAA tracking information (see "Storm Data" at [flhurricane.com](http://flhurricane.com)).



A September 6, 2005, image on Google Earth (top) combines satellite images of New Orleans with overlays made with data from the National Geospatial Agency to detail damages from Hurricane Katrina. Above, a dynamic forecast plot of Hurricane Wilma includes round markers along the storm's path. Mouseovers at each marker indicate the position, time, wind speed, air pressure, and predicted direction of the storm's movement.



# School of Demolition

*In the wake of disaster, contractors require specialized knowledge*

**W**ith 210,000 of its homes damaged or destroyed, New Orleans still faces the unprecedented task of clearing away entire neighborhoods.

Combined with the ongoing cleanup and removal of Mississippi's flattened coastline, demolition contractors in the region are lining up for a massive job.

Mike Taylor, executive director of the National Demolition Association, anticipates that Bechtel, Halliburton, and other major infrastructure corporations will coordinate the workload, and demolition firms from around the country have already set up shop as contractors and sub-contractors. The challenges for these firms, large and small, include containing hazardous materials, waste storage and transport, and working around damaged gas and utility lines.

Some demolishers have experience from the '04 hurricanes in Florida and the World Trade Center cleanup. But others may soon get it from professional training: The ability to deal with disasters is becoming so commonplace that the federal Occupational Safety and Health Administration (OSHA) is now testing training and certification programs for demolition workers at disaster sites, Taylor notes.

Disaster certification is the latest sign that the demolition industry is rapidly professionalizing — an important step, considering it faces not only a seemingly increasing number of coastal disasters but also the aging industrial infrastructure of the Midwest.

This past fall, Purdue University became the first university in the nation to offer a demolition specialization within its Construction Management program. Two dozen students signed up for the first of an anticipated three courses in the program, which Texas A&M is already considering copying.

"The biggest challenge in developing the course was that you can't just pick up a textbook and use it as a guide, because there isn't such a thing," says graduate instructor Mark Shaurette, who developed the curriculum. "There's no book, period."

One thing both students and working demolishers are learning more and more about: sorting, packaging, and shipping different waste materials. With billions of tons of debris awaiting demolishers on the Gulf Coast, increasingly restrictive landfill rules coupled with China's demand for scrap has made waste handling a top priority.

"The demolition business is becoming less and less a business of wrecking and more and more a business for handling materials," Shaurette explains. —A.H.



FEMMARVIN NAUMAN

In the aftermath of major disaster, demolition has become its own specialty. Due to the sheer number of buildings that need to be taken down, many demo jobs often require a different skill set than most remodelers are used to, including expertise in containing hazardous materials and working around damaged gas and utility lines.