

Storm Recovery Guide Update July 2006

(For Guide Published in October 2005)



New Building Codes

Following hurricanes Katrina and Rita, Louisiana enacted a statewide building code to build a stronger, safer and more energy-efficient housing supply. The wind and flood provisions of the 2003 International Residential Code (IRC) went into effect in 11 coastal parishes in early 2006. In January 2007, the IRC 2006 is expected to go into effect statewide.

When restoring or building your home, it's important to seek out and carefully choose a licensed contractor who has studied the new codes, especially if you are in a high-wind zone (as defined in the code), and obtain a building permit. This is crucial to protect your home's insurability, market value, quality and resistance to damage from future storms as well as your eligibility for disaster assistance.

Mold Testing and Remediation Services

(Update to page 7)

Mold testing in a home is not usually needed and is rarely useful to answer health concerns. Some insurance companies and legal services may require sampling for evidence. Professional remediation contractors may test before and after cleanup to verify the cleanup's effectiveness.

To protect your health and home, make sure the mold cleanup process is done as safely and thoroughly as possible – as soon as possible. Using a trained and properly equipped professional can offer the safest remediation, but this is often not possible for many. If you hire a contractor to remove mold, seek a licensed mold remediation contractor with special training and equipment such as HEPA vacuums and dehumidifiers. Get in writing the cost, methods and steps to be used. Compare their procedures with EPA's *Mold Remediation In Schools and Commercial Buildings* available online at www.epa.gov/mold.

Do-It-Yourself Mold Removal Guidelines

(Add these tips to the steps on pages 7-8.)

Clean and Disinfect: After cleaning, you may choose to use a disinfectant to kill any mold missed by the cleaning. If there was sewage contamination, disinfection is a must. If you disinfect, follow label directions and warnings, handle carefully, wear rubber gloves, and never mix bleach with ammonia or acids. Many disinfectants, including bleach, can kill molds but do not prevent re-growth of new colonies.

- Remove any sediment. Hose out opened wall cavities, if necessary.
- Wash dirty or moldy materials with non-phosphate cleaners, because phosphate residue is mold food. Scrub rough surfaces. Rinse, but avoid pressure spray that can force water into materials.
- If available, use a HEPA-filtered vacuum (not a regular vacuum) to remove dust and mold residue.
- Disinfect after cleaning to kill any remaining fungi and bacteria. Soil can make some disinfectants, including bleach, less effective. On color-fast, non-metal surfaces, you can disinfect with a solution of 1/2 - 1 cup household chlorine bleach per gallon of water. Do not use in the air conditioning system. Milder, less corrosive disinfectants include alcohols, phenolics and hydrogen peroxide.

Consider Borate Treatment: Applying a borate treatment to wood can provide some resistance to termites, decay and mold. The type of borate solution that penetrates the wood over time is more expensive but offers greater protection. Other mold inhibitors such as latex zinc paints and fungicides may also help inhibit mold growth during drying.

Do NOT apply sealants that can reduce drying. Framing materials that are difficult to clean or replace (such as "blackboard," OSB sheathing, rough surfaces, etc.) can be painted with latex paint to "encapsulate" any remaining mold and prevent its release to the air.

Restore with Flood-Resistant Materials: If possible, "wet floodproof" your home so it can withstand a flood with less damage. Use closed-cell spray foam insulation in walls or rigid foam insulating sheathing that does not absorb water. Choose solid wood or water-resistant composite materials. Elevate wiring and equipment. Consider removable, cleanable wainscoting or paneling. Use paperless drywall that does not provide a food source for mold. Use restorable flooring such as ceramic tile, solid wood, stained concrete, etc.

Dry Well to Prevent Decay

(Update to pages 15-16)

Mold is likely to grow on materials that stay wet for more than two to three days, but mold does not penetrate or break down solid wood. However, if untreated wood stays wet for weeks or months, decay fungi can grow and break down its cell structure, causing wood rot and loss of its structural strength. Wetness can damage many other materials, too – even steel. That is why it is crucial to not only clean and remove mold but also speed the drying process and postpone restoration until all materials are dry and wood framing has a moisture content under 20%.

- Remove wet carpets, pads, rugs, upholstery and fabrics as soon as possible. Carpets wet from leaks may be cleaned, dried and restretched during installation. Carpets that were flooded with contaminated water should be discarded. You may be able to clean, disinfect and restore valuable rugs, but always replace wet carpet pads.
- Remove flooded vinyl sheet flooring, laminate flooring and other floorings with paper or other moisture-sensitive components.
- Remove loose or crumbly plaster, drywall and wet ceiling tiles. Plaster and paperless drywall can survive flooding if it can dry out and be cleaned or sanitized. Remove all vinyl wallpaper and any thick built-up layers of interior paint to allow walls to dry toward the interior.
- Flooded wiring should be replaced. Check with your building permit office to see if wiring wet from leaks can be salvaged.
- Continuously air condition or heat the space and use fans until materials are dry. Also using a dehumidifier will speed drying and is highly recommended to avoid regrowth.
- Do not use sealants, vinyl wallpaper or other materials on the interior side of walls. In air conditioned homes, walls must be able to dry through materials toward the inside. Use only latex paint on new drywall.

Do More than Restore

Once it's dry, instead of just restoring your home, improve it. A silver lining of storm damage is the opportunity to make your home better than before. Make it more energy-efficient to increase comfort and lower utility costs. Make it more durable to avoid so much damage and ordeal after future storms.

- Apply a penetrating borate treatment to the bottom two feet of wood framing to provide termite and decay protection.

- Caulk to seal the gap between sill plates and a slab foundation, a major source of air leakage.
- Seal holes and penetrations in framing with expanding foam sealant.
- Replace damaged outlet boxes, recessed can lights and other fixtures with “air-tight” types.
- Replace damaged windows, appliances and equipment with Energy Star-labeled types.
- Replace damaged doors with insulated doors (fiber-glass or steel skin).
- Consider upgrading to impact-resistant windows and doors in high-wind zones.
- Before installing new windows or doors, make sure openings are well flashed to drain water leaks to the outside.
- Insulate wall cavities for higher R-value and better coverage than before (R-13 to R-19). Consider spray cellulose with borates, spray foam or high-density friction fit fiberglass batts in non-flood hazard areas and closed cell spray foam or rigid foam sheathing in areas at risk of flooding.
- For raised floor systems, use insulation methods that both insulate and protect floor joists from moisture; consider spray foam or foil-faced rigid foam with taped seams.
- Choose more flood-resistant wall and floor materials. Consider removable wainscoting, paperless drywall, ceramic tile, decorative concrete, solid wood and other restorable options.
- If replacing all your drywall or ceilings, use gaskets or drywall adhesive to seal the drywall to framing at top and bottom plates and around openings – the “Airtight Drywall Approach.”

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