

MULTIFAMILY TRENDS



CREATIVE FINANCE

Multifamily developers are turning to a diverse group of funding sources.

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PROJECT WATCH

...New Weapons in the War against Mold

Hurricanes in the Southeast, floods in the Northeast, massive rainfall in the Pacific Northwest: water is everywhere – and where there is excessive water, mold often follows.

Mold growth causes major problems for property owners, residents, and insurers alike. According to the Insurance Information Institute, insurance payments for mold-related claims more than doubled to \$3 billion from 2001 to 2002. At the same time, new products that remediate mold damage have been coming into the market at a rapid pace. The following are two recent additions.

ThermaPureHeat

A new heat treatment process developed by E-Therm, an environmental remediation innovator based in Ventura, California, ThermaPureHeat has proven to be an effective alternative to traditional demolition-based remediation and building drying methods. The process uses super-heated ... air to disinfect, decontaminate, and dry out buildings much in the same way heat is used to pasteurize milk and kill bacteria in wine.

In the ThermaPureHeat process, technicians use propane-powered heaters and air blowers to inject superheated air into the affected space, raising the temperature of a single room or an entire structure as high as 160 degrees Fahrenheit for several hours. Heat has been shown to be effective in destroying active mold growth sites and killing viable mold spores, bacteria, viruses, insects, and other heat-sensitive pests and organisms. Heat also accelerated the off-gassing of odors and toxins, even in inaccessible areas, without the use of chemicals. One of the main benefits of heat is that its proper application can dry out wet buildings much quicker than can the air movement and dehumidification processes typically used by flood restoration contractors.



Used in conjunction with limited remove-and-replace remediation – or as an alternative to it in some instances – the heat treatment process could save U.S. insurers \$1 billion or more annually while minimizing liability and increasing clearance testing success rates. Heat also allows the contractor to treat many building materials in place, thereby enabling the owner to avoid the trouble and expense of unnecessary removal of walls, flooring, cabinets, and furnishings.

Traditional mold remediation involves limited or extensive demolition of affected building materials and extensive cleaning using techniques such as wire brushing, sanding, high-efficiency particulate absorbing (HEPA) vacuuming, and microbial wipe-down. As with all response actions, the more extensive the demolition, the higher the rebuilding costs.

“Cost escalates when suspected mold requires the teardown and build-back of structures that may be salvageable,” says Joe McLean, CEO of Alliance, a California-based environmental contractor that deals extensively with mold and asbestos remediation. “For instance, if a consultant specifies removal of a four-foot perimeter on four walls because moisture has wicked up one, the teardown and build-back of showers, cabinets, countertops, and such significantly increase costs.”

Because insurers often cover building structures, their contents, as well as loss of use, long remediation projects forcing the occupants to leave for weeks or months can also rack up high secondary costs. The cost for meals, replacement housing, or, more significant, insuring lost business can sometimes exceed remediation costs.

Inaccessible areas such as wall cavities, crawl spaces, headers, doorjambs, and vapor barriers present another dilemma for owners: either spend a large amount of money to reach, remove, and replace building structures in these areas, or leave them with potential live mold or mold spores that could lead to reinfestation.

Removal and replacement of mold-affected areas can also be complicated by other factors, such as when building structures like studs or floor joists are affected, or when historic features such as frescoes, carved wood, or decorative plasters prove difficult or prohibitively expensive to replace. "If physical removal is the only acceptable remediation method,



you may as well demolish the building, because you can't simply scrub mold off the surface when its roots grow into the substrate," says Michael Geyer, president of Kerntec Industries, a California-based environmental consulting firm. Mold, as a fungus, is a plant whose roots grow into the substrate of building materials and whose spores are like the seed-bearing fruit of a tree, he explains.

"To properly handle mold, you have to handle the moisture problem," adds Geyer. "Applying heat through a process like ThermaPure's is not only lethal to mold and other biohazards like bacteria and insects, but it also dries out the substrate, structure, and architectural elements. This helps

prevent future recurrences since the substrate is no longer hospitable to growth.

"Mold in a wall cavity doesn't necessarily need to be removed as long as it's effectively killed and not part of the occupied space," says Geyer. "In instances of mold to moderate water intrusion of short duration, substrate removal is usually unnecessary and unwarranted except when visibly contaminated or when architectural elements are compromised."

Recently, a large investment group purchased a student housing complex at a major Southern California university. During the due diligence period, building inspections revealed water damage or elevated moisture levels in 109 of 122 residential units, along with an extensive termite problem. Complications included an accelerated restoration schedule, budget constraints, and a summer occupancy schedule which was already booked. The client was faced with a very difficult problem as moisture survey readings indicated significantly elevated levels in building materials within almost every bathroom in the complex. Traditional remediation efforts would have required destructive openings in every location where moisture readings were significantly above background levels. This would have required complete closure of the facility and several months of demolition and reconstruction affecting virtually 90 percent of the units in the complex.

Instead, the consultant recommended the ThermaPureHeat process to restrict demolition to only those areas where physical damage or visible mold growth was present. Of the 109 units needing remediation, only ten units required extensive demolition, including cabinetry or shower stall removal. ThermaPure effectively killed the mold in inaccessible areas, allowing minimal removal and replacement as part of site remediation.

This significantly cut required restoration time and costs. All units were HEPA cleaned and sampled as part of traditional post remediation testing, with all 122 units passing. By working in selected buildings and moving quickly through the complex, the university was able to house specialty groups and camps throughout the summer, meeting its stated obligations and generating revenue without interruption.

Total savings were estimated at \$4 million using ThermaPure compared to traditional remove and replace remediation, and the heat treatment simultaneously eradicated the termite infestation. The complex owner is repeating the process at another large multi-residential property in Texas.

While ThermaPure cannot eliminate traditional remediation when mold is visible, it is now an option that insurance companies and property owners can consider in order to shrink escalating water damage and mold liability costs. Multiplied by the 1 million-plus residences and businesses affected by water damage and mold in the last year alone ThermaPure could create savings of \$1 billion dollars annually by salvaging existing structures and speeding recovery to minimize loss of business and reduce secondary expenses.