

Cleaning & Restoration™

\$9.00

May 2009 • Vol. 46 No. 5

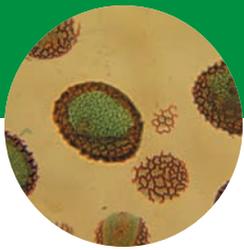
Published by the Restoration Industry Association

Palm Springs Convention Highlights



Inside:

**Convention Recap
Five Stages of Business
Remediation of Fire Retardants**



By Michael A. Pinto, CSP, CMP

Cleaning Contaminated Contents — The Neglected Aspect of Remediation (Part 1)

A Large and Complex Challenge for Restoration Professionals

The challenge of properly dealing with damaged contents is present in just about every loss. The cumulative effect is quite astounding from a monetary standpoint with the latest available estimate of the annual cost of damaged contents in the U.S. from fire and floods at \$2.7 billion.¹ Nor does that represent the total cost. Unfortunately, getting an estimate of the cost of contents

damaged from sewage backflows and trauma incidents is difficult because many of those losses are not covered by insurance. As State Farm insurance company bluntly states in their website factsheet entitled, *Reduce sewer and drain losses in your basement:*

“Each year, sewer and drain backups cause millions of dollars in damage to the homes owned by State Farm® policyholders. State Farm homeowner policies do not cover losses incurred from sewer or drain backup.”

Cleaning of hard, non-porous contents that are subjected to fire and smoke damage, flooding, sewage backflow, or bloodborne pathogens is fairly straight-forward. However, considerably more time and effort is expended on the cleaning of soft contents to the point where cash out of such materials has become the norm for the industry. The difficulty in salvaging soft contents is related to both the concerns of the contractors, as well as the claimant and other individuals involved in the restoration process. Specifically, the

Regardless of the type of loss, professional restoration contractors should have standardized procedures in place for properly dealing with contents which protects the workers handling the objects, as well as the valuables themselves.

difficulty in salvaging soft contents is related to four different concerns:

- Anxiety of the contractors about their ability to properly clean a wide variety of items.
- Hesitancy of safety and health professionals to document that the cleaning was conducted appropriately.
- Perception of the claimant that such items cannot be restored.
- Reluctance of insurance adjusters to undertake cleaning rather than cash-out

if the insured is going to resist accepting the items.



Dealing with fire, flood, sewage or blood contaminated contents raises a host of safety and health questions for both the contractors responding to the situation and the occupants who must live with the consequences of decisions made in the field. Because of the wide variation in cleaning effectiveness of standard processes for such losses (such as onsite vacuuming and hot water extraction or off site cleaning using standard laundry or dry cleaning techniques), it has been difficult for restoration professionals to determine if such impacted contents have been properly cleaned without destructive testing or massive testing protocols. As such, the response to these losses has generally involved the cash out of any damaged soft goods or porous materials. While this conservative approach does protect the occupants, it is expensive and wasteful if a proven alternative is available.

Know Your Enemy

Sun Tzu, the great Chinese military strategist who wrote *The Art of War*, advised that the individual who “knows his enemy” is more successful in battle.

This counsel is certainly applicable to the restoration professional who wants to provide safe and cost efficient content recovery services to clients following a fire or similar loss. In this case, the enemy is not human, but the odorous and hazardous residues that permeate valuable contents after they have been exposed to unexpected circumstances.

While there are general similarities between handling contents that are contaminated by fire, flood, sewage or trauma incidents, there are important differences as well. For example, fire and smoke contaminants include soot, carbon particles, polynuclear aromatic hydrocarbons (PNAs), corrosives (such as nitric and hydrochloric acids), sulfur compounds, aldehydes, and vaporized metal residues. Many of these compounds combine to create the universally recognized smoke odors and discoloration that is so typical of fire damaged materials.

In contrast, sewage contaminants are primarily biological in nature. Nearly 100 different types of disease-causing viruses have been identified in sewage including rotaviruses, the hepatitis A virus, and adenoviruses. Bacteria, the other main class of biological contamination found in sewage, also have a diverse representation in typical household waste water. Bacteria types such as *Escherichia coli* (often referred to as *E. coli*), *salmonella* (as many as 1,700 different types), and a variety of *shigella* species are typically found in samples collected from sewage sources.

Floodwater contaminants are a veritable “witch’s brew” of widely varying contaminants depending on the location and cause of the flooding. Extensive environmental studies conducted by the Federal Emergency Management Association (FEMA) to assess the impact

of hurricane Katrina on New Orleans showed that most flood damaged contents were contaminated with bacteria, mold, heavy metals, pesticides, and oil.² In contrast, trauma scene contaminants are more similar to the hazardous materials found in sewage as the bloodborne pathogens are primarily viruses (hepatitis strains, TB, HIV, etc.) and bacteria (Coliforms, Enterococcus, etc.)

Contents Cleaning is a Process

This extreme variety in contaminants, from objectionable but nonhazardous odors to life threatening viruses, is what makes dealing with contaminated contents so challenging. If we build on the thinking of these contaminants as the enemy, then Sun Tzu’s further advice to never underestimate your opponent can be valuable. Regardless of the type of loss or physical appearance of the materials, professional restoration contractors should have standardized procedures in place for properly dealing with contents which protects the workers handling the objects, as well as the valuables themselves. Treating all contents from loss situations as if they are contaminated also means that the transport vehicles and the facility where the items are cleaned and processed are also protected.

An additional benefit to adopting a comprehensive process for contents which treats them as if they are contaminated is that it opens up the range of services that a restoration contractor can offer. With minor adjustments to meet the various regulatory requirements for employee training, a well thought out content processing system could be used for other types of contamination such as asbestos, bird droppings, illicit drugs like methamphetamines or cocaine, bed bugs/dust mites, lead, mold, and public outbreaks of avian flu or Norwalk virus.

Next month we will continue this series by looking at both traditional approaches to contents cleaning, particularly soft goods, as well as some of the newer techniques that I categorize as “specialized laundry.” Parts three and four will finish with a detailed explanation of the 12 steps that any restoration or remediation contractor should incorporate when adding or expanding into contents cleaning services. ■

Michael A. Pinto, CSP, CMP, currently serves as chief executive officer of Wonder Makers Environmental, Inc. Pinto has authored three books including Fungal Contamination: A Comprehensive Guide for Remediation, over 120 technical articles, as well as 18 commercial training programs. He can be reached at map@wondermakers.com.

References

¹ Cost estimates were compiled from two sources. Fire/smoke damage figures are from the 2005 NFPA estimate of direct damage from fires. Twenty percent of the total for fire damage was assigned to contents for an estimate of approximately \$2.0 billion. Water/flood damage estimates are from the 2003 U.S. National Weather Service report with 30 percent of the total estimate for loss assigned to contents (*i.e.*, \$0.7 billion). Note that different years were used to compile the total since 2005 is the latest year for which NFPA estimates are available, but that was the year of hurricanes Katrina and Rita, which skewed the estimate of flood-damaged contents substantially higher. As such, 2003 figures for flood damage were matched with the 2005 fire damage figures to produce a cost average for a more “normal” year. The proportion of the damage estimates assigned to contents (*i.e.*, 20 percent for fires and 30 percent for floods) is based on discussions with a number of industry experts who concur that, in general, costs for structural damage as compared to contents are more extensive in fires than in floods.

² See *Hurricane Katrina in the Gulf Coast: Mitigation Assessment Team Report; Building Performance Observations, Recommendations, and Technical Guidance* released in July 2006 as FEMA publication #549 for details regarding the types and levels of contaminants identified in flooded houses.