

CONSUMER, RESTORER AND ADJUSTER RIGHT-TO-KNOW BULLETIN #105

**What is the IICRC S500 Standard and how should it
Be Used to Manage Water Damage Claims?**



(See Caption on Page 4)

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TABLE OF CONTENTS:

TABLE OF CONTENTS.....	Page 2
Notice.....	Page 3
Preface.....	Page 4
IICRC and S500 History.....	Page 6
Industry Standard Conflicts	Page 6
S500 Standard 2006 edition Basic Information	Page 7
Water Damage Claims are put into One of Three Categories	Page 7
Building Wetness involves One of Four Classes of Water Damage	Page 8
The S500 Standard puts Compliance Requirements on the Restorer	Page 9
The S500 Standard puts Obligations of Responsibility on the Restorer.....	Page 9
Specialized Experts.....	Page 11
Indoor Environmental Professionals.....	Page 11
Commentary.....	Page 12
About the Author	Page 13

Notice:

Often property adjusters are at odds with water damage cleanup contractors. This education bulletin provides valuable information to consumers, insurance adjusters and restorers about current water damage restoration industry standards of care and the role of experts and environmental professionals.

This bulletin is not intended to replace or amend ANSI/IICRC S500 2006 edition. As a procedural document the S500 is over 300 pages in length. Adjusters and restorers who are not up to date on the information contained in the S500 Standard 2006 edition should take a continuing education class.

Patrick Moffett

Preface:

Once a covered water damage claim occurs, restorers and insurance adjusters are responsible for ensuring the insured (consumer's) property is brought back to a pre-loss condition. As part of emergency remediation activities, restorers and adjusters and sometimes environmental professionals oversee the claims management process from cleanup, restoration through renovation.

To have a working knowledge about what is required to mitigate water damage claims, restorers and adjusters are expected to follow industry standards of care. They follow a consensus document written by the Institute of Inspection, Cleaning and Restoration Certification (IICRC); reviewed and approved by the American National Standards Institute (ANSI). This document is called the ANSI/IICRC S500 2006 edition, Standard and Reference Guide for Professional Water Damage Restoration.

As the science of water damage restoration and equipment improves, industry standards must keep up. Already, taskforces are assessing changes in the science of drying and the development of new drying equipment that will benefit consumers in the next S500 revision.

The cover page picture is an example of a hardwood floor and subfloor that was damaged because too much moisture exists, allowing wood rot to grow. The picture below is a water damaged hardwood floor with delamination of its plywood layers. It is believed both hardwood floors and the two hardwood floors on the next page could have been dried and salvaged if restorers and adjusters relied on the current IICRC S500 Standard and state of the art drying equipment.





IICRC and S500 History

IICRC is the Institute of Inspection, Cleaning and Restoration Certification. IICRC is a non-profit education, training certification and standards organization that represents restorers and certified technicians in 30 countries.

The first water damage restoration standard was published in 1994; it was revised in 1999, with the current edition published in 2006. Since 1999, there have been monumental changes in the industry as related to restoration equipment, procedures and training. In fact, many professionals and experts felt the 1999 Standard was outdated by 2003, and it should have been updated at that time. In 2003 what was occurring in background, committees and taskforces across the U.S. were meeting and discussing upcoming changes. Industry was developing an entirely new standard of care based on the core-principles of science taken from the 1999 standard.

The S500 2006 edition has been completely updated and rewritten. The Standard has additional sections and chapters. New language is inserted into the Standard that complies with and allows the Standard to be accredited by ANSI (Approved American National Institute). While the Standard requires restorers to follow core-principles, the Standard is voluntary, in that it allows the restorer to deviate from the Standard based on each unique situation and circumstance, since no two water damage situations are exactly the same. Deviating from the Standard requires the restorer to document why deviation was necessary.

The S500 Standard is a procedural standard that is a consensus document developed by restorers, building scientists, environmental professionals, insurance industry, equipment and chemical manufacturers and training schools. The Standard was not just written for restorers and adjusters to follow, the Standard was written to building owners and engineers, specialty contractors, indoor environmental professionals and others, such as property managers who require a working knowledge of water damage restoration industry.

Industry Standard Conflicts

Industry developed standards and guidelines to aid all parties understand what is required to mitigate water damage claims in a professional and timely manner. When parties require clarification about why it is necessary to complete restoration in a particular order; they don't understand why it is important to clean and dry materials; they have a different agenda unknown to the restorer or adjuster; all parties are expected to consult the S500 Standard 2006 edition to provide clarification. IICRC S500 Standard is sometimes referred to as the "industry bible." The Standard will cover most situations a restorer or adjuster will experience. When the consumer, restorer or adjuster is at odds with each other, an independent 3rd party expert (remediation professional and sometime an environmental expert) who thoroughly understands current industry standards should be hired to oversee that portion of the claim.

S500 Standard, 2006 edition Basic Information

The S500 is defined in two parts: a Standard Section and a Reference Guide. Both the 2006 Standard and Reference Guide are rewritten with new information since the 1999 edition. The 2006 edition is almost three times thicker since it contains new sections and chapters.

Water damage claims are put into one of three Categories:

Determining the Category of Water is an essential part of assessing the procedures necessary to manage how the restoration phase will proceed.

Category of Water	General Description	Example
Category 1	Water originating from a sanitary source (potable water) and it stays fairly clean until it can be removed. Category 1 water is generally thought of as coming from potable water from a broken pipe, a sink overflow to rainwater entering the window of a building. From a biological prospective, Category 1 water will not pose a substantial risk to building occupants and restorers.	Removing all surface water from a sheet vinyl or vinyl tile flooring followed by cleaning and drying; and if necessary, applying a protective floor finish.
Category 2	Water contains some form of pollutant contamination such as excessively dirty flooring, overflowing clothes washing machine, broken fish tank or water bed. In a Category 2 situation there is an increase of microbial activity capable of causing physical discomfort or sickness in some persons.	The presence of dirty water and chemicals from a washing machine will result in the restorer removing and disposing wet carpet pad followed by cleaning, sanitizing and drying carpet on both sides.
Category 3	Water represents grossly unsanitary water. Category 3 water can contain pathogenic, toxigenic and other harmful agents. Category 3 water has the potential for causing major illness and infections in some persons. Its presence and lingering effects can cause the building's environment to become unhealthy. Thus, highly porous and most semi-porous building materials are expected to be removed and replaced.	Sewage or unsanitary water entering a building from outdoors or from a toilet bowl overflow. Wastewater will be extracted and carpet and pad will be removed and disposed. Cabinets and vanities will be carefully detached and removed while the surrounding wet walls and insulation will be cutout and disposed. The remaining building materials and framing will be cleaned, sanitized and dried before the building is reconstructed.
Special Situations	The potential for chemical or biological agents (including moldy building materials) to cause a health concern is based in part on regulations, human exposure and the difficulty in cleaning up and disposing regulated, hazardous and unsanitary waste.	Any Category of water that comes in contact with regulated waste such as asbestos and lead-base paint; hazardous waste such as chemicals, fuel, pesticides and other agents (e.g, mold) that are directly involved with the water damage claim.

Building Wetness involves One of Four Classes of Water Damage

Determining the Class of water damage is an essential part of assessing the procedures necessary to manage how the drying phase job will proceed.

Classes of Water – Don't get the "Class of Water" mixed up with the "Category of Water," because they are not related. Determining the Class of Water in a flooded building directly relates to the initial *structural dehumidification requirements*. Understanding the relative degree of saturation affecting a wet building helps the restorer determine the approximate amount of dehumidification necessary for an efficient drying system.

Unless adjusters are specially trained in the science of building drying, more than likely they will not have the skills to properly assess the extent of building saturation and what is required to bring the building back to a pre-loss condition before secondary and ensuing damage occurs. However, adjusters are expected to be familiar with the four Classes of Water Damage:

Classes of Water Damage	General Description	Example
Class 1	<u>The least amount of water, absorption and evaporation:</u> Situations that affect the least amount of building materials in a room or area. Generally, only surface water is present where very little or no carpet and pad are wet.	A spill on a hardwood floor where water damage is minimal; a concrete slab has a small amount of standing water on it; a wet area on a continuous sheet vinyl, stone or marble floor.
Class 2	<u>Large amount of water, absorption and evaporation:</u> Situations that affect an entire room or many rooms: Water has absorbed into building materials including carpet and pad and walls that wicked up water less than 24-inches.	Water has migrated across a large area of flooring and has absorbed into walls and framing; water saturated subflooring, walls and insulation; water migrated under vinyl, tile or hardwood flooring; water is behind cabinets.
Class 3	<u>The greatest amount of water, absorption and evaporation:</u> Situations that affect an entire room or many rooms from water that may have come from overhead, such as a roof and ceiling leak, from storms or pipe break.	Virtually the entire interior of an affected room or building is wet including upper walls and ceiling.
Class 4	Specialty situations where wet materials having low permeance and porosity.	Deep pockets of saturation exist including reservoirs of trapped moisture.

Note: Determining the Class of Water is an essential part of calculating the amount of initial air movement and dehumidification capacity required to manage the anticipated moisture saturation condition.

The S500 Standard Puts Compliance Requirements on the Restorer

When the adjuster adjusts the loss and sets damage and repair costs based on the restorer's estimate the adjuster moves on to the next property loss claim. This situation can leave the restorer assuming responsibility for unforeseen to unanticipated jobsite complications. The adjuster assumes the restorer will take care of the damage from this point forward to a point of gaining closure and providing the insured with a proof of satisfaction. The restorer should contact the adjuster and insured anytime hidden damage and jobsite complications and complexities occur. Complications in ASTM/IICRC S500 Standard and my experience in overseeing water damage claims may include:

- Industry Standards and Guidelines (not complying with ASTM/IICRC S500)
- OSHA Regulations (worker safety problems that result in injuries)
- Construction codes and regulations (damaged electrical and shear paneling)
- Environmental Regulations (EPA Asbestos and Lead-based Paint)
- State and Local Government (fish and game for disposing of waste into storm drains; cities citing for illegal dumping; landfills not accepting certain types of waste; permits for trash bins, waste handling, demolition)
- Other agency requirements (HUD and BLM)
- Local law enforcement (parking and access to the building)
- Health Department Regulations (HACCP food service)
- Hospital and Critical Care Facilities (JCAHO, CDC, APIC not complying with facility management for contractors certification requirements)

The S500 Standard Puts Obligations of Responsibility on the Restorer

Usually it is the restorer, not the adjuster that assumes a greater burden of responsibility and liability in managing the water damage claim. They may include:

- Providing appropriate technician training and certification so technicians can appropriately execute a "key set of restoration and remediation core values" involving each particular work task they will be exposed to or required to mitigate.
- Ensuring safety hazards have been identified and eliminated before proceeding with water damage restoration.
- Ensuring workers are provided with and maintain a safe work environment.
- Ensuring workers are provided with sanitary washing and bathroom facilities including eyewash and first aid.
- Responsible for identifying the Category of Water damage.
- Identifying other conditions and types of environmental contamination.
- Documenting the extent of the loss for all materially interested parties including insurance adjusters.

- As part of documentation, the contractor is expected to provide a system of recordkeeping that documents:
 - The calculation of moisture measurements, temperature and humidity readings on a daily basis, throughout the drying phase;
 - Moisture mapping (floor plan sketch) of the affected areas as compared to non-affected areas.
- Identifying safety hazards and document how they were eliminated.
- Equipment Tracking:
 - Ensuring clean and good working equipment are brought to the project;
 - Monitoring the placement and movement of drying equipment including its use and location, from the beginning to the end of the project.
- Contents Tracking:
 - Movement (manipulation) and the relocation of contents;
 - When moving contents from one area to another it is suggested to inventory contents;
 - Determining what contents have been damaged by the loss as compared to pre-loss conditions;
 - Ensuring that all equipment used in a Category 2 or 3 project is cleaned and decontaminated at the job site before bring the equipment back to the warehouse or sent to the next project;
 - When equipment is contaminated and it must be trucked back to the warehouse, that equipment is to be segregated from all other equipment until it is brought back to a clean and sanitary state.
- Contents Cleaning:
 - When contents have been exposed to a Category 2 and 3 level of contamination, they are to be brought back to a clean and sanitary state or condition;
 - Determining what degree of cleaning is acceptable and has been achieved, may require independent verification by an IEP;
 - Tracking of Equipment and Contents for Adjusting and Billing Purposes.
- Getting individual contracts signed by building owners and tenants, since there may be:
 - Multiple insured's;
 - Differences in coverage and claims management;
 - Structure may be on one policy; while
 - Contents and tenant improvements may be on a separate policy;
 - Certain items may not have coverage.
- Changes to the contract:
 - Updates and deletions, and why they were necessary.
- Establishing the initial cleanup and restoration cost estimate based on visual observations and scientific detection.
- Determining the most appropriate and safe methods of restoration.

- Pre-established drying goals, because it is the drying goals that will be looked upon at the end of the drying phase for determining successful building drying and billing.
- Adapting risk management procedures involving the cleanup and restoration of continually occupied buildings and contaminated spaces.
- Documenting pre-loss conditions:
 - So they can be brought to the attention of the adjuster and building owner;
 - So they do not become a liability issue for the insurer and restorer on a later date.
- It is recommended, have the customer sign a consent form approving for the removal of carpet, pad to building materials that are damaged or contaminated because they are:
 - Beyond reasonable repair;
 - Not cost effective to attempt restoration;
 - Contaminated and cannot be sanitized;
 - Contaminated to where they cannot be reasonably decontaminated to a scientific degree of certainty.
- It is recommended, have the customer sign a consent form approving the use specific chemicals:
 - Cleaners, Deodorizers, Sanitizers, Disinfectants, Other types of surface and aerosolized chemical sprays and treatments.

Specialized Experts

Insurance adjusters are not contractors even though some adjusters may do a better job assessing building damage than some restorers. One of the adjusters job is to rely on a number of specialists to determine cause and origin, extent of damage, setting reserves based on a damage assessment. It may be necessary for the adjuster and consumer to rely on the advice of forensic experts such as roofers, plumbers, electricians, engineers and indoor environmental professionals.

Indoor Environmental Professionals

Indoor environmental professionals (IEPs) should be qualified to assess any one of a number of environmental issues from asbestos, mold, bacteria, lead-based paint, pesticides and chemicals; fire smoke and soot; poor air quality, consumer and occupant complaints; clearance certification.

Besides being required to provide cutting edge technology to stop property damage, restorers are required to comply with EPA and other agencies codes and regulations. For example, in performing emergency cleanup work they need to know if asbestos is present; and as of April 2010, complying with new federal regulations will require adjusters and restorers to determine if lead-based paint is present in pre-1978 buildings.

Commentary

Once restoration work is complete, IEPs are becoming responsible for providing a “certificate of clearance” for water, mold and sewage damage claims; asbestos and lead-based paint exposures; fire damages that are capable of releasing chemical toxins and carcinogens.

In today’s insurance settlement marketplace, where conflicts of interest, risk and liability are high, IEPs are becoming more important in assuming responsibility in the management of claims to ensure:

- The workplace is free of hazards and hazardous materials;
- The work prescribed meets cleanup and restoration objectives;
- An independent scope of work is justified;
- Thermal imaging scanning and digital moisture mapping;
- Overseeing various phases of remediation;
- The building is brought back to a pre-loss condition.

The responsibility of an IEP requires them to have no vested role or financial connection with the restorer or adjuster or other materially interested parties. Their inspection must be a fair, thorough and an objective evaluation, and their findings must be unbiased. Because the IEP plays a critical role as an expert in settling claims, they are expected to have errors and omission insurance.

In California, where toxic tort laws and disclosure requirements are on the rise, the IEP has an even more important role in reporting the conditions of damage to the insured and insurer; coordinating with all parties how the restoration and remediation work is completed; documenting how property damage or a pollutant was successfully removed. Per codes, HUD properties and rental properties may require environmental clearance before they are rented or re-occupied.

New to many consumers is the fact their property insurance claim is put in a national database called CLUE or A-PLUS, where the insurance company gives you a score based on insurance claims and credit history (PrivacyRights.org). Not having a certificate of completion that the property and its environment is brought back to a pre-loss condition can affect the renewal of the building’s insurance policy, mortgage and refinance, and it can result in a diminution (loss) of property value. In most states the transfer or sale of property requires disclosure of property damage and what was required to bring the property back to its pre-loss condition. If this document is not available, the seller calls the adjuster who may call the restorer. A certificate of work clearance or environmental clearance is nowhere to be found. To avoid these complications I recommend a qualified IEP provide clearance of all claim damage.

About the Author:

Patrick Moffett is a senior consultant and partner of Environmental Management & Engineering, Inc., located in Huntington Beach California.

Patrick is a licensed general contractor in several states, a California registered environmental assessor, certified hazardous materials manager, master restorer, senior environmental/industrial hygienist, certified building science thermographer; and he holds other certifications in water, mold and fire damage building remediation and restoration.

For over 25 years Patrick lectures and teaches classes across the U.S., Canada and U.K., on remediating chemical and biological contamination in buildings; OSHA safety codes and regulations.

Patrick has published over 50 articles and 5 books on environmental and building remediation practices.

Patrick provides mediation, arbitration and expert witness testimony across the U.S. involving causation associated with water, mold, sewage and fire damaged properties; Patrick also provides expert testimony in industry standards of care and OSHA compliance.

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