

# IICRC Standards

**Lee Senter and  
Howard Wolf**

# IICRC Standards

- IICRC - Institute of Inspection Cleaning and Restoration Certification
- American National Standards Institute (ANSI) Member, Accredited Standards Developer
- Voluntary consensus standards, not mandatory
- IICRC Standards - common, industry-accepted language and terminology that enables us to more universally discuss concepts and procedures regarding cleaning, inspection and restoration.

# IICRC Standards Subscription Site



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# Standards in Development

- **S100: Textile Floorcoverings Cleaning**
  - Chair: Stephen Lewis; Vice Chair: Shawn Forsythe
- **S220: Hard Surface Floor Covering Inspection**
  - Chair: Paul Pleshek; Vice Chair: Brett Miller
- **S300: Upholstery Cleaning**
  - Chair: Ed Hobbs; Vice Chair: Paul Pearce
- **S400: Commercial Built Environment Cleaning**
  - Chair: Bo Bodo; Vice Chair: Dane Gregory

# Important Definitions – Levels of Importance

- **Shall, should** = components of the standard of care
  - Shall: mandatory due to natural law or regulatory requirements.
  - Should: accepted standard of care to be followed, not mandatory by regulatory requirements.
- **Recommended** = not components of the standard of care
  - Recommended: advised or suggested.
- **May, can** = denotes permissive or possible action

# S500: Professional Water Damage Restoration

- Chair: Chris Taylor; Vice Chair: Brandon Burton
- Separate ANSI Standard
- Revision work is ongoing

THE NEWLY REVISED ANSI/IICRC S500

ANSI/IICRC S500

ANSI/IICRC S500-2015  
**STANDARD AND  
REFERENCE GUIDE  
FOR PROFESSIONAL  
WATER DAMAGE  
RESTORATION**  
Fourth Edition

ANSI  
IICRC

**YOUR  
FULLY  
REVISED  
SECRET  
WEAPON**

Newly updated, the ANSI/IICRC S500 is your key to best practices and solid science in water damage remediation. No mere collection of tips or collected wisdom, the S500 is sound, science backed and authoritative. To purchase a copy of the new ANSI/IICRC S500 Standard and the new IICRC R500 Reference Guide, visit the IICRC Standards Subscription website at <http://publications.iicrc.org> or the IICRC webstore at <http://webstore.iicrc.org>.



**IICRC**  
Institute of Inspection, Cleaning  
and Restoration Certification

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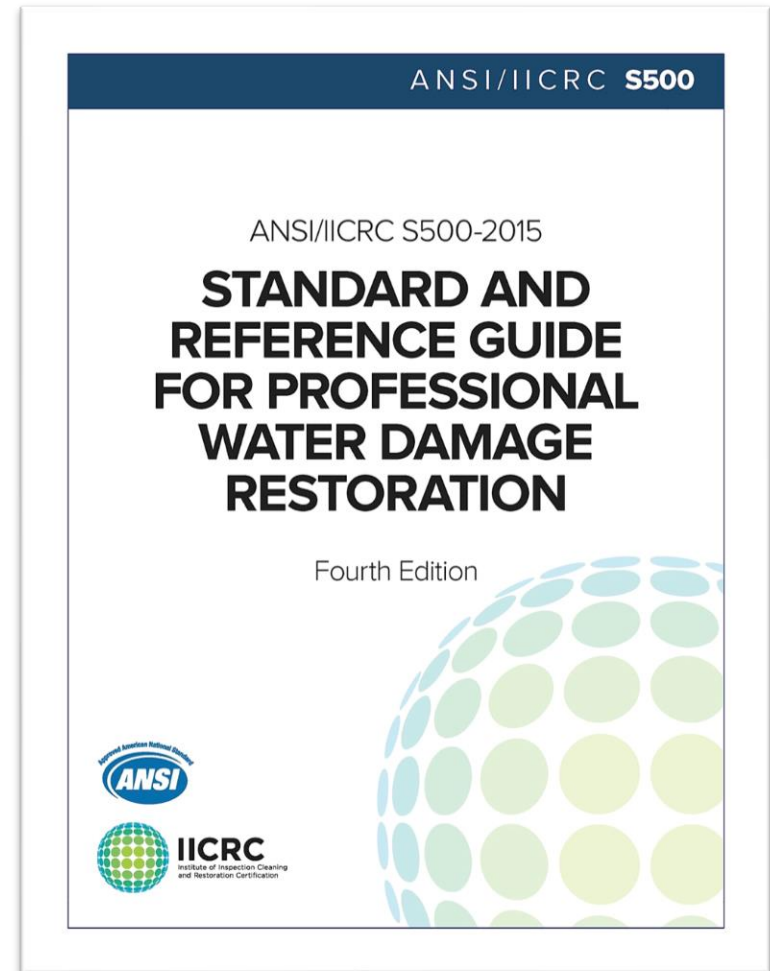
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# ANSI/IICRC S500: 2015

1. Developed as an American National Standard – 2009-2015.
2. Openness, consensus, balance, lack of dominance, notification, and appeals mechanism.
3. Five rounds of public review addressed: 2030 comments; 359 commenters.
4. Published in November 2015 as a combined Standard and Reference Guide document: available at <http://webstore.iicrc.org>
5. Working on finalizing French translation of S500: published in April/May 2016.



## ANSI/IICRC S500: Next Steps

- ANSI Project Initiation Notification (PINs) has been submitted to revise the Standard.
- Goal is to release the next revision in 12-18 months.
- Separation of ANSI/IICRC S500 Standard and IICRC R500 Reference Guide.



## ANSI/IICRC Standard

“... summarizes the significant procedures and methodologies of a water damage restoration project.”

Referred to by “Section...”

## IICRC Reference Guide

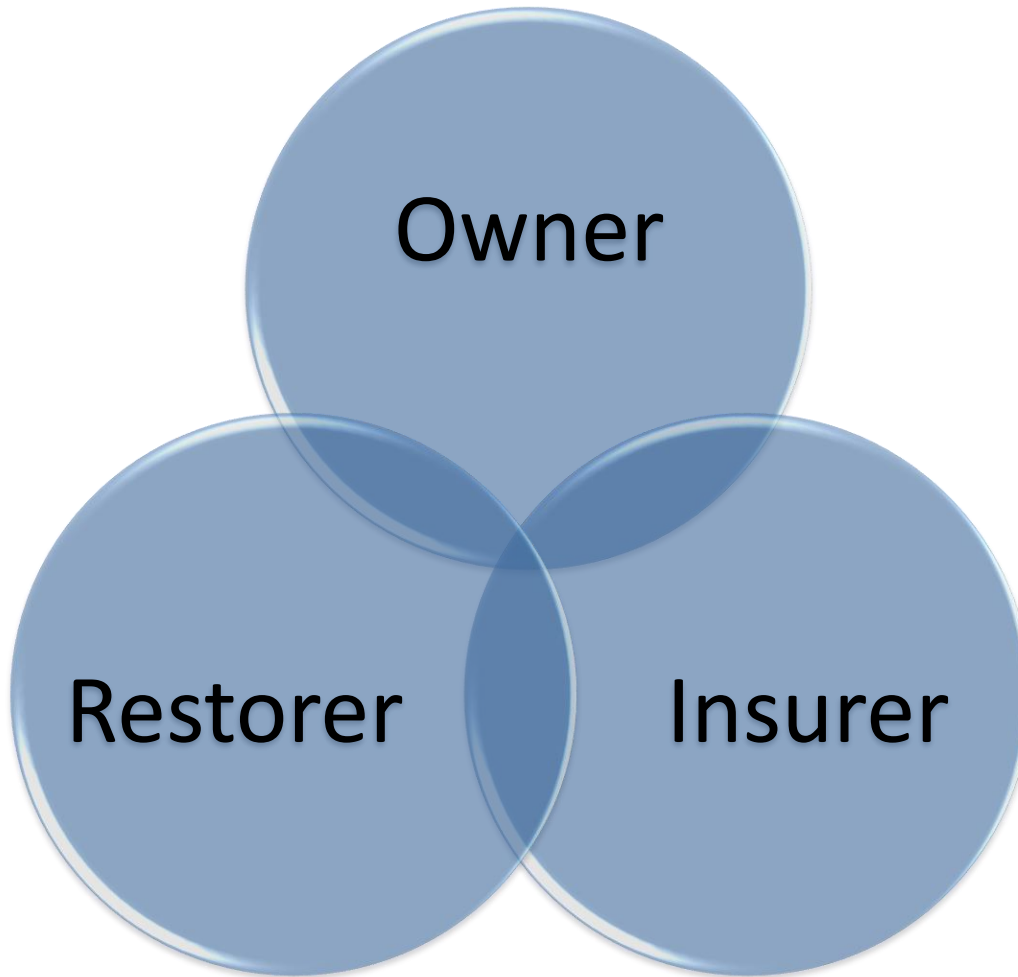
“...restates and further explains those procedures and methodologies, and provides additional background information, which supports the Standard.”

Referred to by “Chapter...”



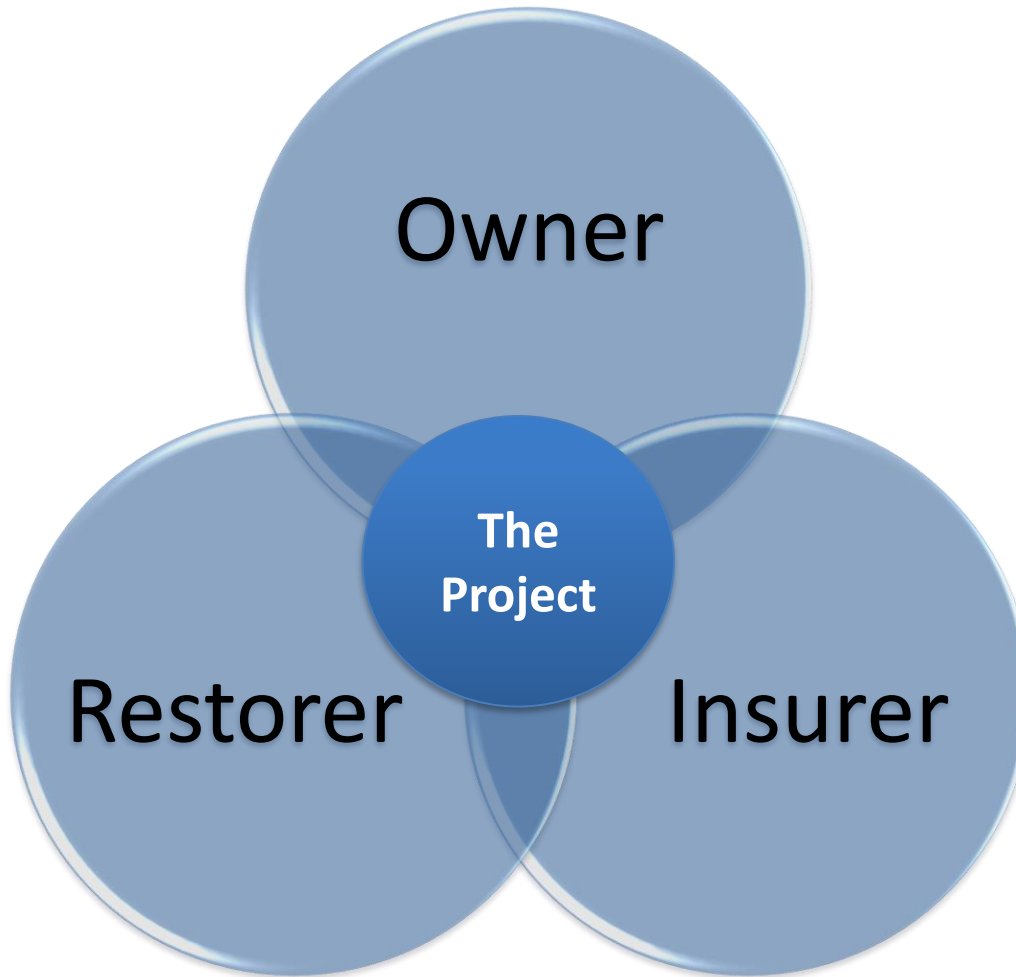
“...complement one another.”

# The Restoration Triangle



Where professionals find training. And consumers find peace of mind.

# The Restoration Triangle



Where professionals find training. And consumers find peace of mind.

# Section 5: Psychrometry & Drying Technology: Overview

- Rewritten to strengthen the scientific and technical foundation for structural drying, basing it on research and published literature
- Important changes or additions:
  - Role of energy in psychrometrics & drying technology
  - Critical laws (thermodynamics, Dalton)
  - Moisture mechanics in materials
  - Constant & Falling drying rate stages
  - Evaporation rate factors

*30 fully referenced footnotes from 21 published sources*

## Section 5: Psychrometry & Drying Technology

“In returning a building to an acceptable condition after a water intrusion, restorers **should manage** the environment within the building and the moisture in the structural materials and contents. To accomplish this, restorers **should understand** how to (1) manage the psychrometric properties of the environment, (2) effect moisture movement through different materials, and (3) promote surface evaporation from the materials.”

**Air**



**Evaporation**



**from the surface**



**into the air**



**Psychrometry**

Where professionals find training. And consumers

**Material**



**Moisture migration**



**in the material**



**to the surface**



**Drying  
Technology**

# Reference Guide, Chapter 5: Overview

## Part 1: Psychrometry

1. CRITICAL LAWS IN PSYCHROMETRY
2. HUMIDITY
3. AIRFLOW
4. TEMPERATURE
5. OTHER RELATED TERMS

## Part 2: Drying Technology

1. MOISTURE HELD IN MATERIALS
2. MOISTURE MIGRATION IN MATERIALS
3. HOW MATERIALS ARE DRIED
4. DRYING RATE STAGES
5. HOW ENERGY IMPACTS MOISTURE MOVEMENT IN MATERIALS
6. EVAPORATION RATE FACTORS

# Psychrometric Chart

BAROMETRIC PRESSURE 29.921 inches of Mercury

- Defined lines on the chart:
1. Dry bulb temperature
  2. Wet bulb temperature
  3. Humidity Ratio
  4. Dew point temperature
  5. Saturation temperature
  6. Vapor pressure
  7. Relative Humidity
  8. Enthalpy
  9. Specific volume

ENTHALPY - BTU PER POUND OF DRY AIR

SATURATION TEMPERATURE - °F

WET BULB TEMPERATURE - °F

SPECIFIC VOLUME (ft³ OF DRY AIR)

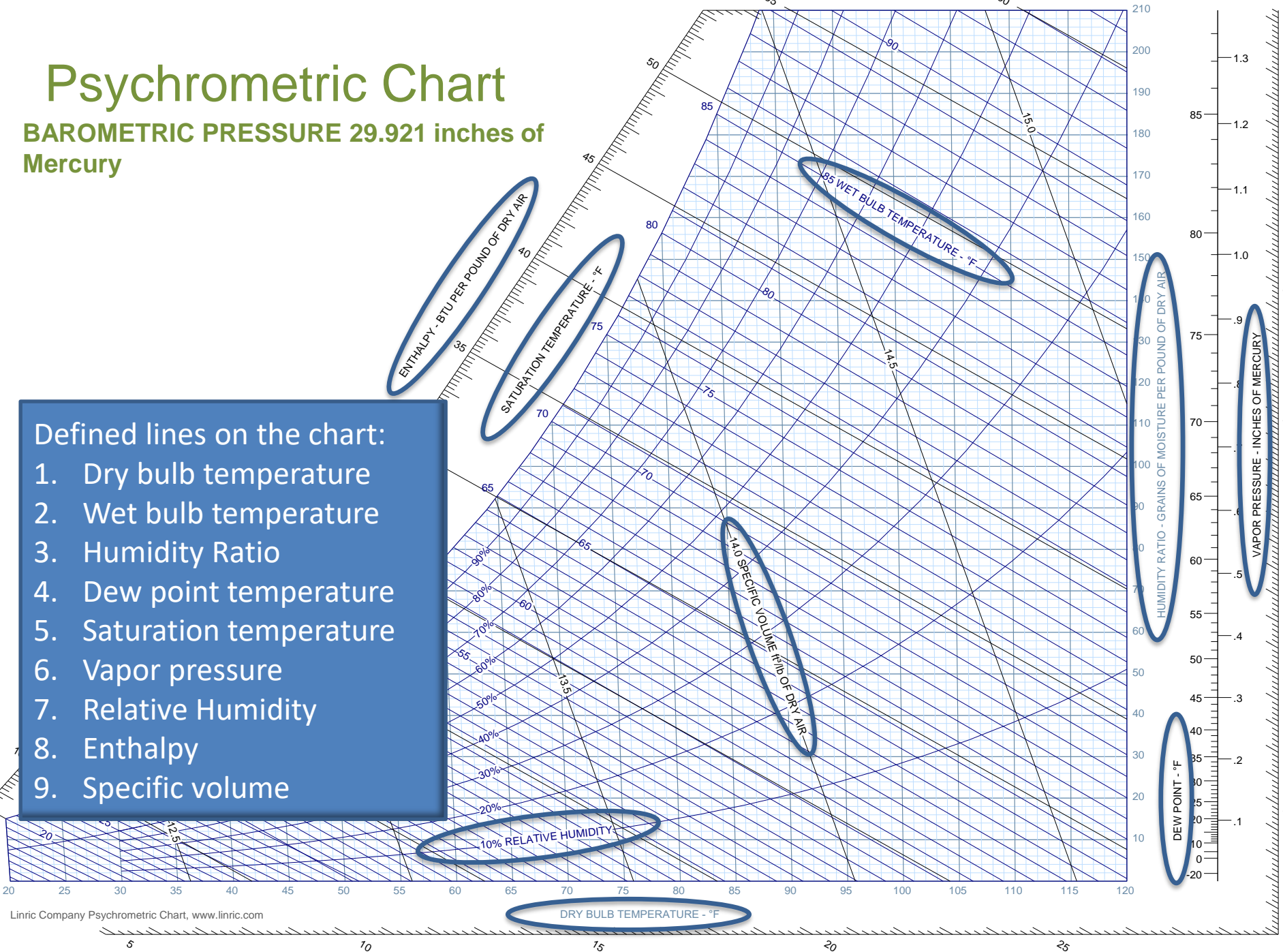
10% RELATIVE HUMIDITY

DRY BULB TEMPERATURE - °F

HUMIDITY RATIO - GRAINS OF MOISTURE PER POUND OF DRY AIR

VAPOR PRESSURE - INCHES OF MERCURY

DEW POINT - °F





# The Restorer's Tools

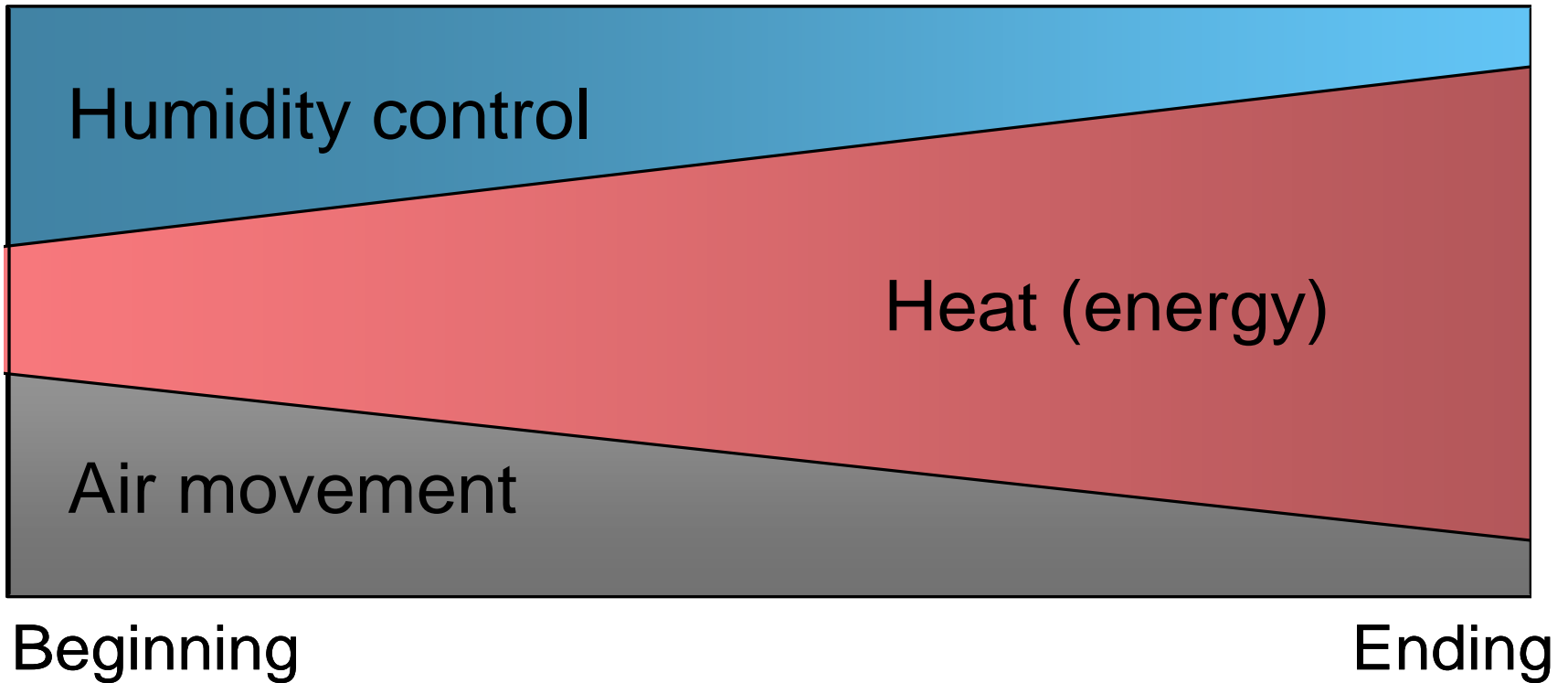
**Humidity Control**

**Air Movement**

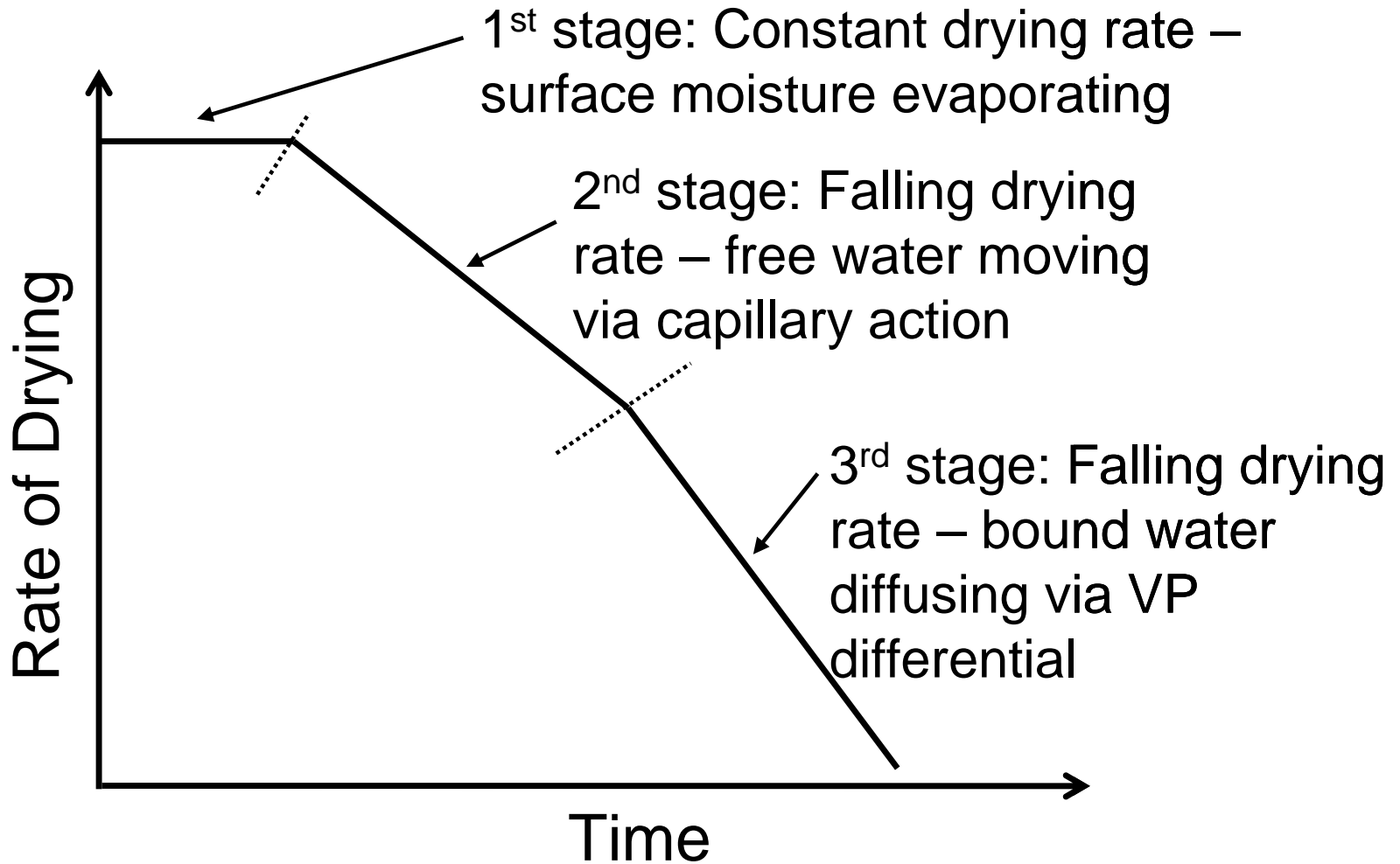
**Heat (energy)**



# Air Management For A Typical Drying Project



# Drying Rate Stages



# Standard Section and RG Chapter 17: Overview

- Consolidates information from “Building Science”, “Inspections” and “Structural Restoration” chapters.
- Objectives:
  - Ensure greater consistency & eliminate contradictions
  - Provide researched information about various M & A
  - Offer helpful information on evaluating and restoring them
  - Make available in a quick-reference table format
- Chapter 17 “Table of M&A” has information and recommended procedures under Cat 1, 2, & 3 intrusions for over 80 different materials and built-up assemblies.

# Descriptions of Restoration Procedures

## Restorability

- A. Restorable**
- B. Generally restorable**
- C. Generally unrestorable**
- D. Unrestorable**

## Bulk Water Removal

- A. Pump bulk water**
- B. Extract/remove water**
- C. Follow-up extraction can be needed due to seepage**

## Cleaning

- A. Initial/bulk removal of debris, contaminated materials**
- B. Controlled demolition, as needed**
- C. Control spread of contaminants**
- D. Biocide can be applied, as appropriate**
- E. Detailed cleaning by damp wiping**
- F. Detailed cleaning, hot water ext.**
- G. Detailed cleaning by vacuuming**
- H. Detailed cleaning by HEPA vac**
- I. Detailed cleaning, low-pressure**
- J. Detailed cleaning, high-pressure**
- K. Final appearance cleaning using appropriate methods**

# Descriptions of Restoration Procedures

## Drying

- A. Open assemblies to access pockets of saturation**
- B. Maintain vapor pressure differential throughout process**
- C. Increase vapor pressure differential for low evaporation materials**

## Airflow

- A. Implement cross-contamination controls**
- B. Provide continuous airflow across all affected surfaces**

## Airflow (cont.)

- C. Reduce velocity of airflow in some situations**
- D. Introduce airflow into interstitial cavities**

## Cautions

- A. Minimize aerosolization of contaminants**
- B. Use specialized experts, as appropriate**
- C. Should receive clearance by specialized expert**

# Chapter 17 – Table of Materials & Assemblies (excerpt)

Assembly	Characteristics	Category 1	Category 2	Category 3
Gypsum Board (aka wallboard, drywall, plasterboard, Sheetrock®)	<ul style="list-style-type: none"> <li>Gypsum board is the generic name for a wide-range of panel products that consist of a noncombustible core, composed primarily of gypsum, and a paper surfacing on the face, back and long edges. All gypsum panel products contain a calcined gypsum core; however, the facing can be a variety of different materials (e.g., paper, fiberglass mat, foil, decorative vinyl)</li> <li>Gypsum board comes in standard 48" wide panels but a variety of thicknesses (e.g., 1/4", 1/2", 5/8"), lengths (e.g., 8', 10', 12'), fire-resistance ratings (Type X), sag-resistance, sound isolation ratings and core characteristics (e.g., standard, water-resistant, mold-resistant, flexible). In most residential construction, 1/2" is used, while in higher-end and commercial construction 5/8" is typical. <sup>36</sup></li> <li>In light commercial and residential construction, single-ply gypsum board systems are the most commonly used while multi-ply systems having two or more layers will often be found in commercial buildings to increase sound isolation and fire resistance.</li> <li>When wet, gypsum board loses most of its structural integrity, but upon drying its strength returns, though generally becoming somewhat more brittle. In Category 1 &amp; 2 intrusions where there is no visible swelling or nail-popping gypsum wallboard can be restorable.</li> </ul>	Restorability: B Extraction: BC Cleaning: ABEGK Drying: AB Airflow: BD	Restorability: B Extraction: BC Cleaning: ABCDHK Drying: AB Airflow: ABD Comments: When there is a question as to the level of contamination, refer to Section 10.6.7. Other issues of restorability might include materials behind the drywall, which may not be restorable.	Restorability: D Extraction: BC Cleaning: ABC Drying: Airflow:

<sup>36</sup>Gypsum Association. <http://www.gypsum.org/using-gypsum-board-for-walls-and-ceilings/using-gypsum-board-for-walls-and-ceilings-section-i/>

# Chapter 17: Table of Materials & Assemblies (excerpt)

Assembly	Characteristics	Category 1	Category 2	Category 3
Engineered Wood (MDF, particle board)	<ul style="list-style-type: none"> <li>Engineered woods in this category or much less water resistant than plywood or OSB.</li> <li>Particleboard (aka K3 in Canada, pressed wood) is manufactured of small particles or sawdust that are hot-pressed and sanded smooth to accept laminated plastics, veneers or paint. It can be found in floors, underlayment, furniture, countertops and cabinetry. Depending on resins used, they have very low or low moisture resistance. Generally manufactured to 4-8% MC.</li> <li>Fiberboard (dry-processed) may be low, medium or high density, depending on degree of heat and pressure used.</li> <li>Wood chips are wet-treated to reduce them to very small cellulosic fibers, then are bonded under pressure, offering very smooth surfaces, clean machining, but have the lowest moisture resistance of all engineered wood products. They are usually found in furniture, underlayment and ready-to-assemble cabinets. Generally manufactured to 4-8%MC.</li> <li>Hardboard (wet-processed), may be tempered or un-tempered and is actually an extension of paper manufacturing technology. They have little to no added resins, using only the lignin within the fibers as a binder under heat and pressure. Tempered hardboard has added oils prior to heat pressing that provides added surface hardness and some additional moisture resistance. Hardboard can be found in prefinished paneling, house siding, floor underlayment and concrete form boards.<sup>33</sup></li> </ul>	Restorability: C Extraction: B Cleaning: BGK Drying: ABC Airflow: BC Comments: If material is a substrate to other finish materials, check for moisture damage. If significantly damaged and unable to dry, remove and replace.	Restorability: C Extraction: B Cleaning: BCDHK Drying: ABC Airflow: ABC Comments: If material is a substrate to other finish materials, check for moisture damage. If significantly damaged and unable to dry and decontaminate , remove and replace.	Restorability: C Extraction: B Cleaning: BCDHK Drying: ABC Airflow: ABC Comments: If material is a substrate to other finish materials, check for moisture damage. If damaged and unable to dry and decontaminate , remove and replace.

<sup>33</sup>Wood Handbook, Wood as an Engineering Material. Forest Products Laboratory. 2010pages 11-7+



# Chapter 17: Table of Materials & Assemblies (excerpt)

Assembly	Characteristics	Category 1	Category 2	Category 3
Hardwood; Residential	<ul style="list-style-type: none"> <li>- Hardwood floors in residential installations are generally manufactured to standards produced by: ...</li> <li>- Standard thicknesses for residential hardwoods range from 3/8" (10mm) to 33/32" (26mm) and may have been installed prefinished or unfinished. Restorers performing reconstruction are cautioned to follow all manufacturers' guidelines pertaining to acclimation time in the built environment and ...</li> <li>- Solid hardwoods are typically kiln-dried to 6 to 9% MC when manufactured, but may change over the course of storage, transport, and ...</li> <li>- All hardwood floors experience moderate seasonal moisture content swings as a result of normal climate changes during the year. From summer to winter, swings of 3-4% MC are typical, depending on location. In a 15' wide room, this can amount to an overall expansion/contraction of the floor by as much as 2". As long as proper acclimation and floor installation is ...</li> <li>- Solid hardwood flooring is generally nailed to a subfloor material, usually plywood, or can be applied to a "sleeper" system of dimensional lumber (e.g., 1x4, 2/3, 2x4). Within the system ...</li> <li>- Once the drying goals have been achieved, additional time may be required to allow for re-acclimation to reach normal moisture content prior to refinishing.</li> <li>- Wood flooring can have various issues occurring after a water intrusion including but not limited to: gaps, cupping, crowning, ...</li> <li>- The construction of the floor, including the presence of interstitial spaces, vapor barriers, and the general condition of the existing finish and floor will help determine the approach to drying. It is recommended that restorers consult with ...</li> <li>- Methods of drying solid hardwood floors can include but are not limited to:               <ul style="list-style-type: none"> <li>- Circulating air in the interstitial space under the hardwood floor, ...</li> </ul> </li> </ul>	Restorability: B Extraction: BC Cleaning: ABEGK Drying: ABC Airflow: CD Comments:	Restorability: B Extraction: BC Cleaning: ABCDEGK Drying: ACD Airflow: ACDE Comments: If Category 2 water has collected in interstitial spaces under the floor, finish flooring should be... If the substrate can be cleaned and sanitized, it should be...	Restorability: C Extraction: BC Cleaning: ABCDEGK Drying: ACD Airflow: ACDE Comments: If Category 3, water has collected in interstitial spaces under the floor, finish flooring should be... If the substrate can be...

[1] United States Department of Agriculture: [Wood Handbook – Wood as an Engineering Material](#). Madison, WI: Forest Products Laboratory, 2010, p. 6-6.

[2] United States Department of Agriculture: [Wood Handbook – Wood as an Engineering Material](#). Madison, WI: Forest Products Laboratory, 2010, p. 13-13.

[3] Maple Flooring Manufacturer's Association, Inc., Moisture Infiltration, Deerfield, IL, 2010. [Bulletin]

# 10 Inspections, Preliminary Determination, and Pre-Restoration Evaluations: Overview

- Reorganized flow of section
  - More chronological with actual work flow
- Refined definitions and terminology
  - Category of Water
  - Drying goals
  - Class of Water Intrusion (Significantly rewritten)
  - Drying capacity (New term)
- Increased emphasis on documentation
- Expanded initial contact and information gathering

## 10.3 - Documentation

- New Section
- Consolidates information from other sections
- Single paragraph
- “Should” document
- General list of areas where documentation is necessary (e.g. ‘all relevant information’)

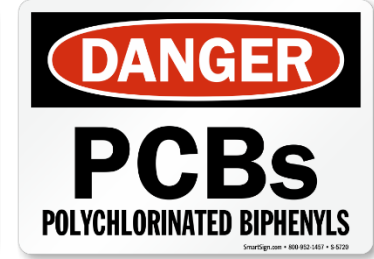


## 10.4 - Definitions: Category

- Category 1:
  - Removed examples of deterioration
  - Added "... that flows into an uncontaminated building does not constitute an immediate change in category."
- Category 2:
  - Removed examples of deterioration
- Category 3:
  - Changed 'toilet' to 'wasteline'
  - Added 'or other weather-related events if they carry trace levels of contaminants (e.g., pesticides, toxic organic substances).'



## 10.4 - Definitions: Category



- Regulated, Hazardous Materials and Mold
- Was 'Special Situations'
- Added 'The presence of any of these substances does not constitute a change in category...'



## 10.4 - Definitions: Class

- Significantly rewritten
- Classes based on type of material and % of surface
- Added terms
  - ‘evaporation load’
  - ‘drying capacity’



# Highlighted Changes – Class of Water Intrusion

Class of Intrusion	Description of “amount of water absorption and evaporation load”	Amount of “wet, <u>porous materials</u> ...as a % of combined floor, wall & ceiling surface area in the space**	Absorption into low evaporation materials or assemblies.
1	“least”	“less than ~5%”	“minimal”
2	“significant”	“~5% to ~40%”	“minimal”
3	“greatest”	“more than ~40%”	“minimal”
4	“deeply held or bound water”		“significant”**

\* The drying environment (e.g. room, “chamber”)

\*\*”Drying may require special methods, longer drying times, or substantial VP differentials”

## 10.9 - Ongoing Inspections and Monitoring: NEW

- 'should' continue gathering information
- 'should' use the same meter throughout a project or establish an in-house method to verify... meters...
- 'should' record and monitor relevant moisture measurements daily
- First of these... 'should' be performed no later than the day following initial...
- Where progress is not acceptable, the restorer 'should' take corrective action



## 13 - Structural Restoration: Highlighted Changes

1. Significantly reworked the flow and procedures.
2. In Cat 2 or 3 water contaminated losses, remediation should be done prior to aggressive restorative drying.
3. Removal of wet, unrestorable materials should be done prior to aggressive restorative drying.
4. Two examples of dehumidifier calculation methods (i.e. “Simple” and “Detailed” are offered.
5. Airmover calculations based on amount of wet, affected surface area, which will provide needed air movement for all classes of intrusions.
6. After “initial” installation of equipment (e.g. DH, airmovers, heaters) adjustments (i.e. increase, reduce, reposition) should be made based on monitored readings.

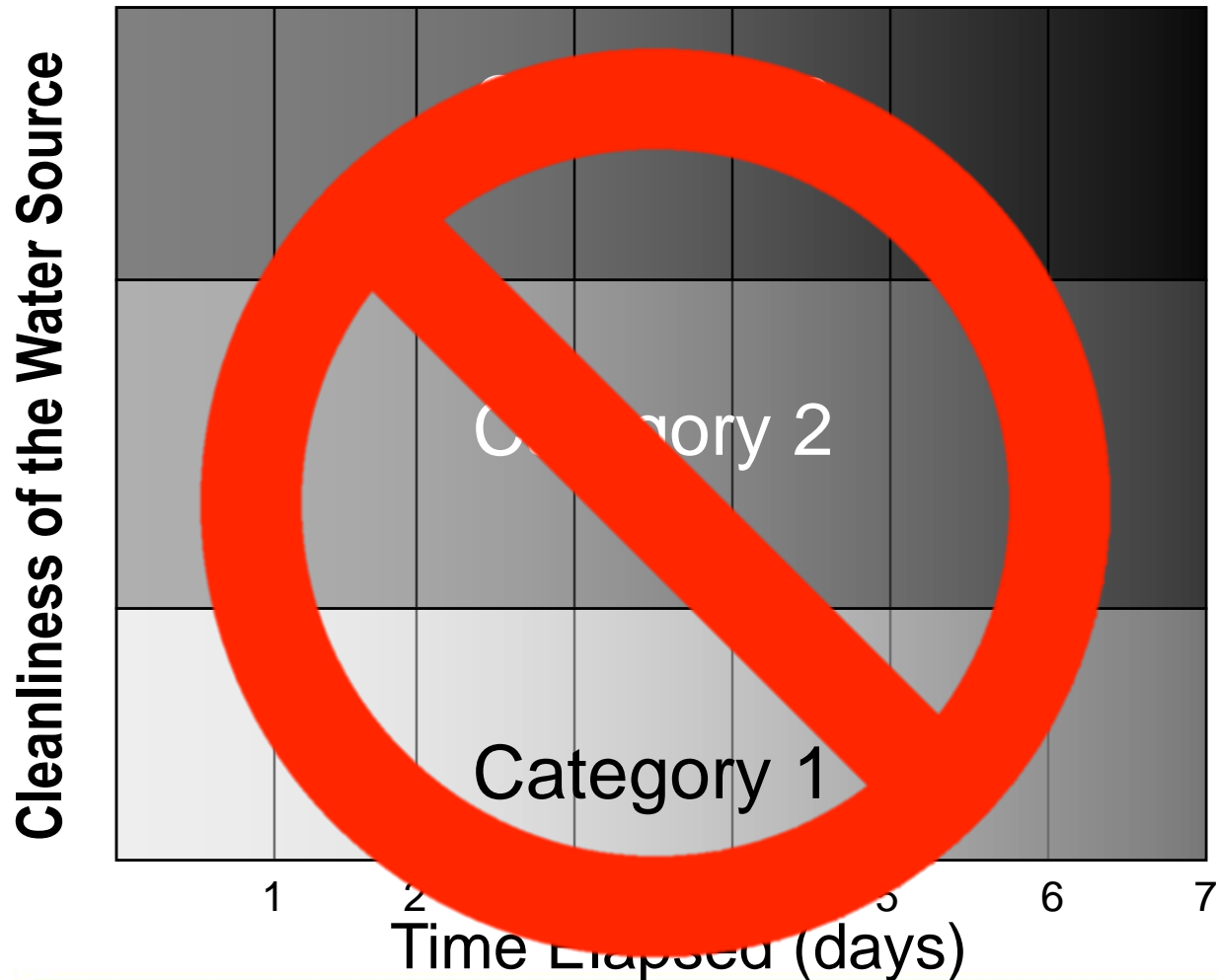
## 13.1 - Introduction

This section is divided into three sections:

- Initial Restoration Procedures;
- Remediation Procedures for Category 2 or 3; and
- Drying and Completion Procedures for Category 1

If the preliminary determination is that the water is Category 1, then the restorer can proceed without contamination controls (e.g., erecting containment barriers, initial cleaning, establishing pressure differentials) and worker protection. With regard to Category 2 or 3 water intrusions, remediation should occur prior to restorative drying. For humidity control in Category 2 or 3 contaminated structures, refer to Section 13.3.5.

# Combined Category & Time Effect



## 13.2.7 - Initial Restoration Procedures: Determining Class of Water Intrusion

Restorers should estimate the amount of humidity control needed to begin the drying process. The term "Class of water" as defined in Section 10.4.3 is a classification of the estimated evaporation load and is used when calculating the initial humidity control (e.g., dehumidification, ventilation). It is based on the approximate amount of wet surface area, and the permeance and porosity of the affected materials left within the drying environment at the time drying is initiated. Initial information to determine Class should be gathered during the inspection process... Depending upon the project, this determination may occur at a different point of the initial restoration procedures.

## 13.2 - Initial Restoration Procedures: Note

Note: For Category 1 drying procedures, proceed to Section 13.5 *Drying and Completion of the Restoration Process (Category 1 and Post Remediation Category 2 and 3).*



## 13.3 - Remediation Procedures for Category 2 or 3

This section covers procedures for remediation of areas that contain or are believed to contain one or more types of contaminants. Remediation should occur prior to restorative drying. Contaminants are defined as the presence of undesired substances the identity, location, and quantity of which are not reflective of a normal indoor environment and can produce adverse health effects; can cause damage to structure or contents; and can adversely affect the operation or function of building systems.

Contaminated environments can result from:

- Category 2 or 3 water;
- Condition 2 or 3 mold contamination;
- Trauma or crime scene; or
- Hazardous or Regulated Materials.

## 13.3.5 - Humidity Control in Contaminated Structures

The priority for restorers is to complete remediation activities before restorative drying. However, the restorer should control the humidity in contaminated buildings to minimize moisture migration, potential secondary damage, and microbial amplification. Restorers should maintain negative pressure in relation to uncontaminated areas. Maintaining negative pressure in an affected area can increase the dehumidification capacity needed to maintain desired psychrometric conditions. This may be implemented before, during, or after decontamination. Restorers should limit the velocity of airflow across surfaces to limit aerosolization of contaminants. Restorers should complete the drying process after the remediation has been completed.

## 13.4.4 - Post Restoration/Remediation Verification

Where the following elevated risk factors are present, an IEP should be retained by one of the materially interested parties. An independent IEP should conduct required post-restoration or post-remediation verifications. Considerations can include, but are not limited to:

- occupants are high risk individuals; (refer to Chapter 3, *Health Effects from Indoor Exposure to Microbial Contamination in Water-Damaged Buildings*);
- a public health issue exists (e.g., elderly care or child care facility, public buildings, hospitals);
- a likelihood of adverse health effects on workers or occupants;
- occupants express a need to identify a suspected contaminant;
- contaminants are believed to have been aerosolized; or
- there is a need to determine that the water actually contains contamination.



## 13.5 - Drying and Completion of the Restoration Process (Category 1 and Post Remediation Category 2 and 3)

### 13.5.2 Controlling Humidity

Humidity within the structure should be controlled as soon as practical, just as steps are taken to control the spread of water. While a spike in the humidity is not uncommon at the outset of a drying project, if it persists beyond the first day, this can indicate an adjustment is necessary (e.g., additional ventilation, dehumidification equipment). Ventilating the structure during the initial stages of processing may be an effective way to reduce the build-up of excess humidity.



## 13.5.3 - Controlled Demolition, as Necessary, to Accelerate Drying

It is recommended that consideration be given to whether demolishing and removing structural materials is appropriate in setting up the drying system. Materials that are unrestorable or that pose a safety hazard should be removed as soon as practical.



## 13.5.6.1 - Controlling Airflow

- After the initial installation, restorers should inspect and make appropriate adjustments (e.g., increase, decrease, reposition) to the number, type and placement of airmovers based on materials' moisture readings. The first of these inspections to monitor and make adjustments should be performed no later than the day following the initiation of restorative drying. The frequency of subsequent monitoring should be daily until drying goals have been met, but may be adjusted by the agreed scope of work, potential for secondary damage, job site accessibility, or by agreement between the materially interested parties.

## 13.5.6.3 - Controlling Temperature to Accelerate Evaporation

The temperature within a work area, and the temperature of wet materials themselves, also impacts the rate of evaporation significantly...The greater the temperature of wet materials, the more energy is available for evaporation to occur.

Restorers should consider the impact of high temperatures on building components and contents. Manufacturer's instructions and safety precautions shall be followed to reduce the potential for fire hazards and occupant safety issues. Restorers should be familiar with drying equipment and how ambient temperatures affect their performance.

## 13.5.8 - Verifying Drying Goals

Restorers should use appropriate moisture meters to measure and record the moisture content of specific structural materials and contents. Drying equipment should remain in operation on site until it has been verified and documented that the drying goals have been achieved in the materials being dried.



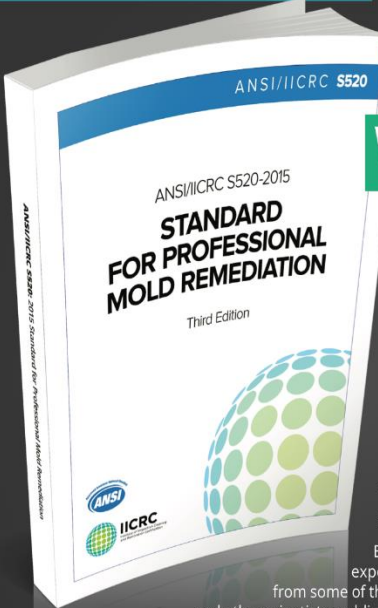
## 13.5.11 - Final Cleaning

Throughout the restoration and reconstruction process, foot traffic and settling of aerosolized particles results in the accumulation of soils on surfaces. As necessary, surfaces should be cleaned following reconstruction using appropriate methods.



# S520: Professional Mold Remediation

- Chair: Jim Pearson; Vice Chair: Scott Armour
- Revision work is ongoing



THE NEWLY REVISED ANSI/IICRC S520

ANSI/IICRC S520 YOUR KEY TO **WORKING SMART** IN MOLD **REMEDICATION**

ANSI/IICRC S520-2015  
**STANDARD FOR PROFESSIONAL MOLD REMEDIATION**  
Third Edition

ANSI  
IICRC

Newly updated, the ANSI/IICRC S520 is your key to best practices and solid science in mold remediation. Blending academic principles with practical experience, the revised standard includes input from some of the top remediation experts, microbiologists and other scientists, public health professionals, industrial hygienists, cleaning and restoration training schools and trade associations. A new reference guide, the R520, is available as well.

If you work with mold, the S520 is your key to working smartly, safely and effectively.

To purchase a copy of the new ANSI/IICRC S520 Standard and the new IICRC R520 Reference Guide, visit the IICRC Standards Subscription website at <http://publications.iicrc.org> or the IICRC webstore at <http://webstore.iicrc.org>.



844-464-4272  
702-694-4272

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Where professionals find training. And consumers find peace of mind.

# Who is the Standard for?

- Those involved in the mold remediation industry, primarily mold remediation companies and workers
- IEPs (Indoor Environmental Professionals) and others investigating mold complaints, preparing remediation specifications, protocols or procedures, and managing remediation projects
- Other materially interested parties (e.g., consumers, occupants, property owners and managers, insurance professionals, government and regulatory bodies)



# The **S520** is the **Standard of Care**

**Standard of care** - *Practices that are common to reasonably prudent members of the trade who are recognized in the industry as qualified and competent.*

## It is **NOT**...

- A **best practice** or a method / technique that has consistently shown results superior to those achieved with other means, and that is used as a benchmark.
- **State of the art** – which refers to the highest level of general development, as of a device, technique, or scientific field achieved at a particular time.

# The **S520** is a **Procedural Standard**

- Establishes industry guidelines based on sound scientific and technical principals, industry information, and practical experience
- It is a voluntary Standard lacking the force of law or regulation
- Intended to provide information about the remediation of mold contaminated structures, systems, and contents
- Provides the principles and foundation for understanding proper remediation practices



the clean trust

2715 E Mill Plain Blvd.  
Vancouver, WA 98661  
P 360 693 5675  
F 360 693 4858

[www.thecleantrust.org](http://www.thecleantrust.org)

# The **S520** is **NOT**...

- Designed to teach remediation nor to be a substitute for remediation training & certification programs
- Intended to be exhaustive or inclusive of all requirements, methods or procedures



Does not establish procedures or criteria for  
the**clean**trust  
assessing mold contamination in an indoor  
environment

2715 E Mill Plain Blvd.  
Vancouver, WA 98661  
P 360 693 5675  
F 360 693 4858

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# Professional Judgment

“This Standard and Reference Guide is not intended to be either exhaustive or inclusive...”

“Restorers should use professional judgment throughout each and every project. However, the use of professional judgment is not a license to not comply with this standard. A project might have unique circumstances that may infrequently allow for a **deviation** from the standard.

“Prior to deviation from the standard of care (i.e., “shall” or “should”) the restorer should **document** the circumstances that led to such a decision, **notify** the materially interested parties, and in the absence of a timely objection, **document the communication** before proceeding.”

# Primary Changes in 3rd Edition S520

Slide 1

- Reference Guide separated from Standard for ANSI review
- Documents are more streamlined for user convenience
- Inclusion of international measurements and information making the Standard more acceptable world wide and compliant with Global Harmonization System (GHS) requirements
- Enhanced rules for Negative Pressure Containments used in sensitive environments
- Lead based paint and coatings clarified to reflect EPA RRP program
- Temperature extremes, either hot or cold, should not be used as an alternative to cleaning procedures and physical removal of mold contamination

# Primary Changes in 3rd Edition S520

Slide 2

- Downgraded: Text related to misting is now less stringent
- Beefed up: Remediators should not mist or fog disinfectants or sanitizers in an attempt to kill mold in lieu of source removal
- Insurance information is updated to reflect pollution exclusions, adequate coverage for performing mold work and the addition of recommending professional liability coverage if rendering opinions
- It is recommended that an HVAC system not be used for dehumidification or drying during a mold remediation project
- All references and definitions were updated



the clean trust

2715 E Mill Plain Blvd.  
Vancouver, WA 98661  
P 360 693 5675  
F 360 693 4858

[www.thecleantrust.org](http://www.thecleantrust.org)

# Primary Changes in 3rd Edition S520

Slide 3

- Remediators may perform Post Remediation Evaluation (PRE) and IEPs may perform Post Remediation Verification (PRV)
- If the IEP conducting assessment or PRV is not independent from the remediator, they **should** disclose in writing to the client that they are deviating from the Standard.
- If the IEP conducting any activity such as assessment or post-remediation verification is not independent from the remediator, they **should** disclose this “complexity” in writing to the client that they are deviating from the Standard
- If the project involves post remediation verification by an IEP, it **should** be conducted prior to application of coatings: including resurfacers, repair coatings, or HVAC sealants



# S540: Trauma and Crime Scene Cleanup

- Chair: Kent Berg; Vice Chair: David Oakes
- ANSI/IICRC S540: 2017 Standard published April 2017
- Available on Webstore and Standards Subscription Site.





# ANSI/IICRC S540-2017

## The ANSI Process

- S540 Consensus Body formed - end of 2011
- Drafting work began in 2012
- PINs changed in February 2016
  - Original title - S540 IICRC Standard and Reference Guide for Trauma and Crime Scene Biological and Infectious Hazard Clean Up.
- Public review in October-November 2016
- ANSI Approval in March 2017
- ANSI/IICRC S540 published in April 2017

# ANSI/ICRC S540-2017

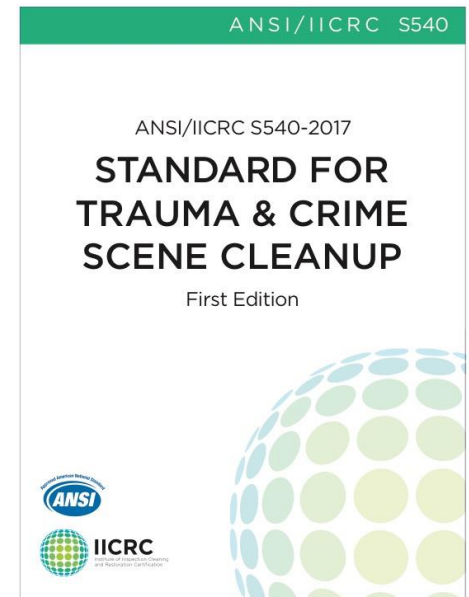
## The ANSI Process

### Name changed to narrow the focus

- Not wanting to give license to technicians to address:
  - Epidemic outbreaks
  - Other infectious diseases not directly related to trauma or crime scene
  - Clean rooms
  - Medical
- Future S540 may include or may be a separate Standard

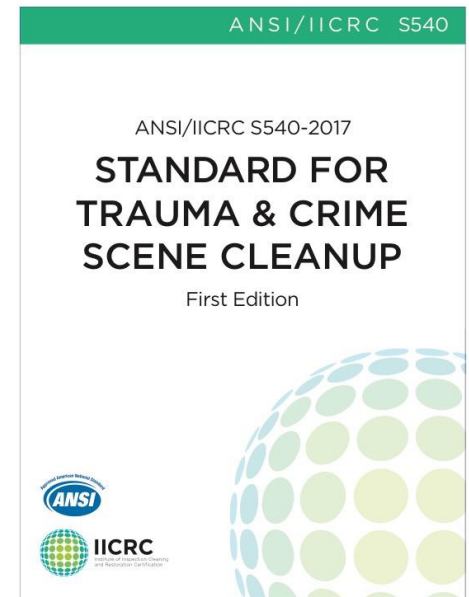
# Trauma and Crime Scene Technician

- Technical Advisory Committee (TAC)
  - formed summer of 2017
  - Certification Program Development (CPD)
    - Syllabus
    - Exam
- Approved by BOD
  - August 16, 2018
  - Beta class scheduled Sept. 2018



# Trauma and Crime Scene Technician

- All new IICRC category
- TCST Certification 541



# Trauma and Crime Scene Technician

- What you want to know:
  - How do I get started?
  - Who can do this type of work?
  - What are the secrets?
  - What licenses are needed?
  - How do I market my services?
  - Does insurance cover these services?

# Trauma and Crime Scene Technician

- How do I get started?
  - Company health and safety program
  - BBP program
  - Respirator protection program
  - Technician Training

# Trauma and Crime Scene Technician

- Who can do this type of work?
  - Technicians and workers *must* be:
    - Safety trained
    - BBP program
    - Respirator protection program
    - Mentally prepared
    - Certified

# Trauma and Crime Scene Technician

- Who can do this type of work?
  - Technicians and workers *should* be:
    - Skilled in detail cleaning
    - Fire Restoration cleaning skills and/or
    - Carpet and Upholstery cleaning skills



# Trauma and Crime Scene Technician

- What are the secrets?
  - Get trained.
  - Be discreet.
  - Be professional.
  - Do a perfect job the first time!

# Trauma and Crime Scene Technician

- What licenses are needed?
- No special Federal, State or Provincial license
  - Some state require licenses for:
    - Transportation
    - Disposal
    - Storage

# Trauma and Crime Scene Technician

- How do I market my services?
- Please be discreet
- Direct contact with:
  - Law enforcement
  - EMT and Ambulance services
  - Fire Department
  - Corner

# Safety and Health Field Guides

- Disaster Restoration Professionals
- Professional Cleaners
- Information on safety and health hazard identification procedures, safe work practices and control methods
- Not ANSI Standards
- Chair: Lee Senter
- Vice-Chair Jim Thompson

# Accepting Volunteers

- Accepting applications for:
  - BSR/IICRC S300: Upholstery Cleaning
  - BSR/IICRC S400: Built Environment Cleaning
  - BSR/IICRC S530: Indoor Environmental Assessment for Mold
  - BSR/IICRC S550: Commercial Water Damage
  - BSR/IICRC S590: HVAC Cleaning in Water Damaged Environment
  - [www.iicrc.org/standards](http://www.iicrc.org/standards) - application forms

# Accepting Volunteers

- BSR/IICRC S710: Scope of Work in Fire and Smoke Damaged Environment
- BSR/IICRC S740: Restoration of Fire and Smoke Damaged Personal Items
- BSR/IICRC S800: Carpet Inspection
- Field Guide for Safety and Health for Disaster Restoration Professionals
- Field Guide for Safety and Health for Professional Cleaners
- [www.iicrc.org/standards](http://www.iicrc.org/standards) - application forms

# Questions/Comments?

**IICRC Standards:** [Standards@iicrcnet.org](mailto:Standards@iicrcnet.org)

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