“WATER DAMAGE: Mitigating the Loss”

Course Description

“Water Damage: Mitigating the Loss” will discuss the many advantages of restorative cleaning over tear-out and reconstruction in the event of a water loss, including faster recovery to pre-loss condition, significant claim cost reduction and substantial reduction of disruption and loss recovery time.

A | C | R

The Painless Restorer Delivering Total Claim Accountability

Presented for the

Conference for Catholic Facility Management

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"WATER DAMAGE: Mitigating the Loss"

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“WATER DAMAGE: Mitigating the Loss”

Learning Objectives

1. At the end of the program, participants will be able to understand the process of water loss restoration, using examples and/or case studies.
2. At the end of the program, participants will be able to elevate their expectations of the outcome in water losses, by being familiar with the industry best-practices and top-level protocol, using examples and/or case studies.
3. At the end of the program, participants will be able to greatly reduce cost, disruption and loss if use in the event of water losses, using examples and/or case studies.
4. At the end of the program, participants will be able to save far more structural elements and contents by choosing restorative cleaning over demolition as the first response, using examples and/or case studies.

The Purpose of this Course

- Teach the basic principles of restorative drying
- Provide an overview of the latest technology and techniques
- Provide general knowledge about handling Water Damage Losses
- Highlight the advantages of restorative drying over replacement

Course Overview

- Project Management
- Health And Safety
- Recognizing Unique Site Challenges
- Proper Drying Equipment For Top Level Protocol Restoration
- Drying Complex Structures
- Microbiological Considerations

Making Documenting Claims Easier

Files are delivered on a web based platform

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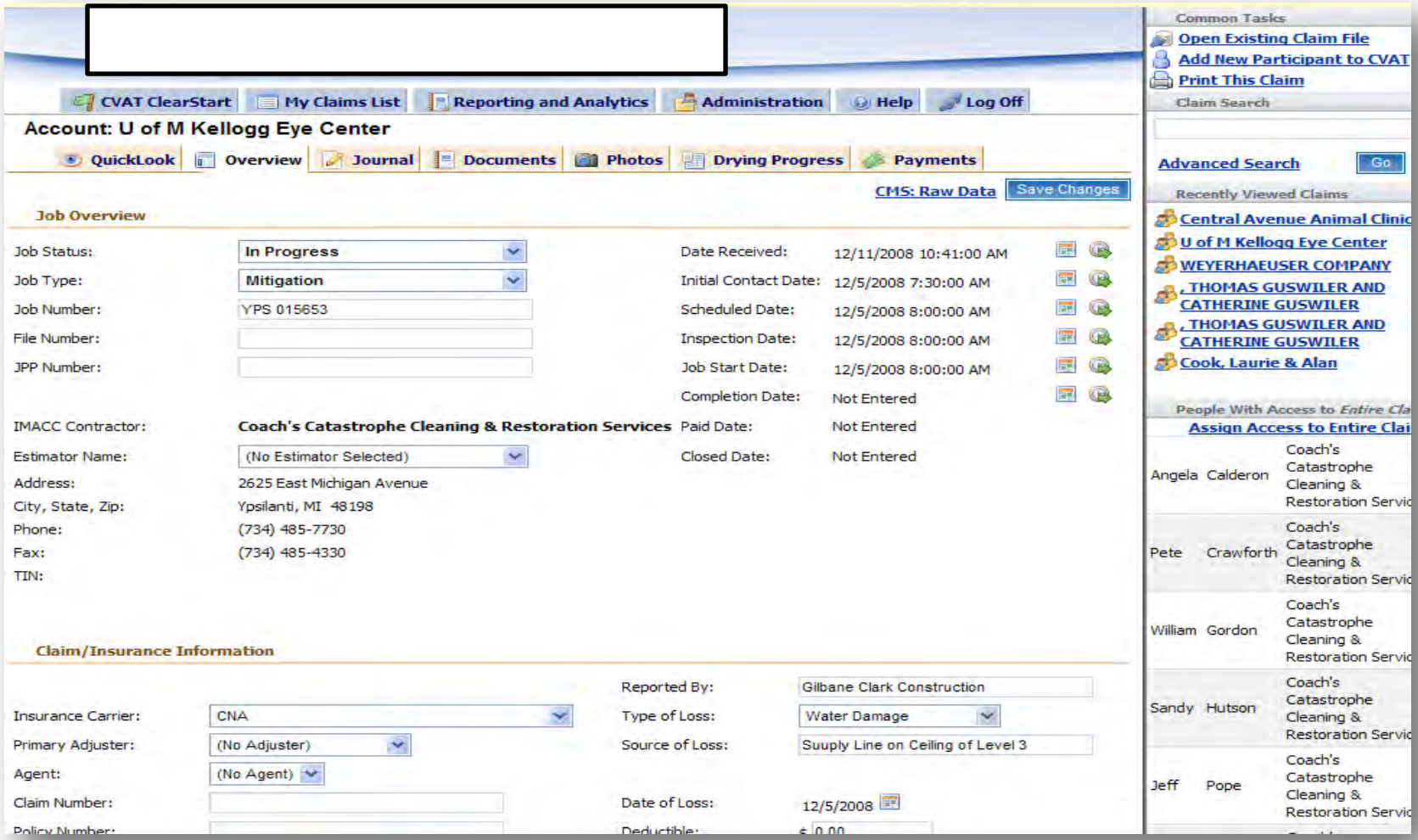
Total Claim Accountability:



“No Conflict of Interest” Service Policy

- We specialize **exclusively in mitigation** of damaged properties and has **chosen** not to directly profit from major structural repairs and materials or floor covering replacement.

“No Conflict of Interest” Service Policy

What are the Advantages?

- Restorative cleaning costs FAR less than tear-out/reconstruction
- Policy Limits are conserved
- Losses are restored much faster
- Disruption of normal activities is minimized
- Business Interruption costs are reduced or eliminated
- Temporary Housing Costs are reduced or eliminated

Why Discuss Water Damage?

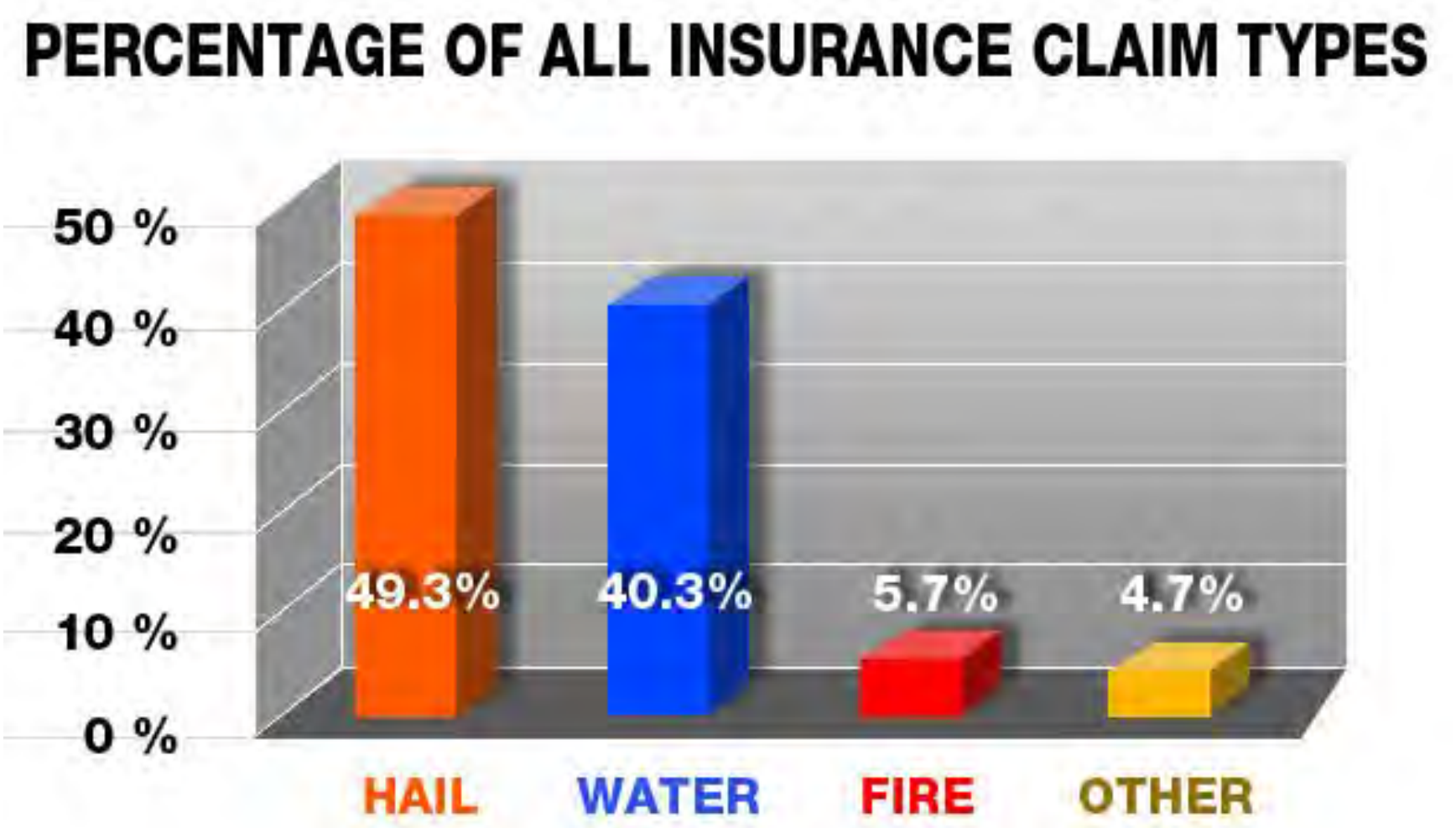
Dr. Michael Berry, an Indoor Air Quality (IAQ) expert states:

" Water is the single most long-term destructive substance in the indoor environment. It dissolves many materials and supports the growth of microorganisms on others."

Why Discuss Water Damage?

- Because of the money that is being spent on repairs, mitigation and restoration on water damage claims.
- Of the four major property claim types, water damage accounts for nearly 40% of claims (see following graph).

Property Insurance Claims



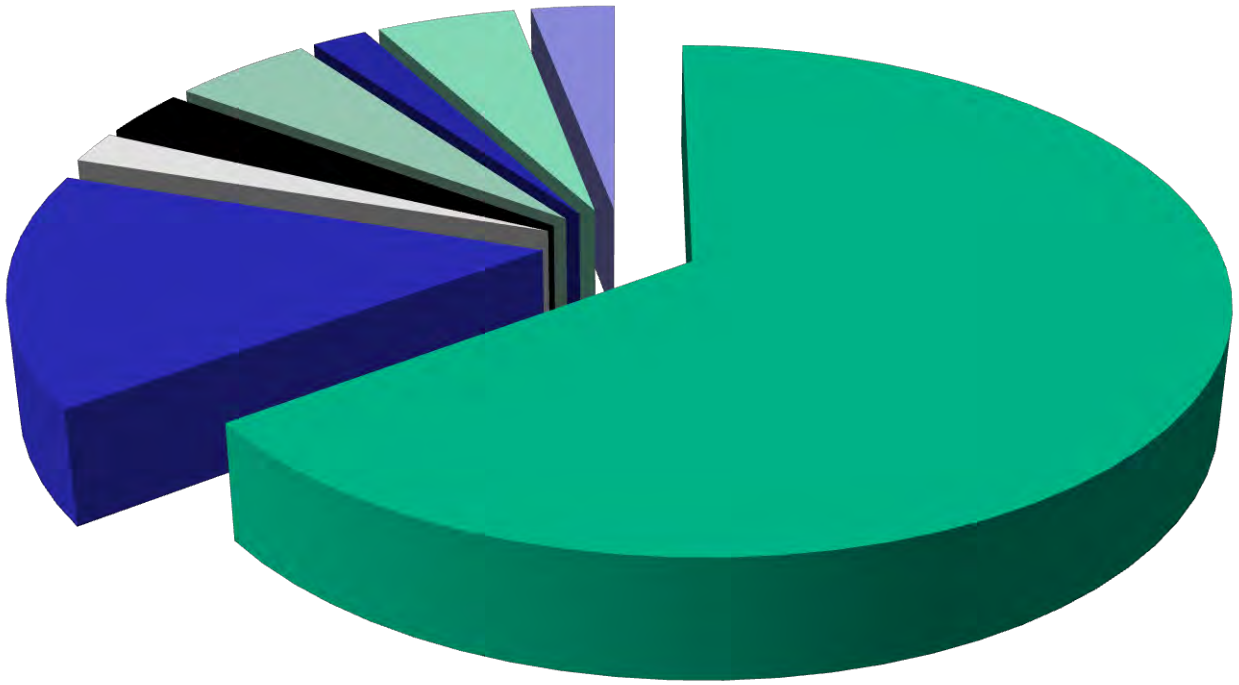
Why Talk Restoration vs. Replacement?

- Because of the large percentage of claims related to water damage, it is imperative that the latest restoration technology and techniques are being employed **in lieu of replacement options to help reduce the Loss Ratio and Loss Adjustment Expense on each claim.**

- The following graph depicts the percentage of **trade area dollars** spent on replacement of structural items.

Property Insurance Claims

Trade Area Dollars Spent



Flooring - 65%
Roof - 15%
Siding - 2%
Paint - 3%
Wall coverings - 5%
Framing - 2%
Drywall - 5%
Other - 3%

"Research shows that restoration saves on average 20% per claim versus replacement."

Based on 2001 survey by JP Service Associates showing that when professional restorers are used in advance of construction companies the average insurance claim totals $ 4,000. Claims resulting from full service companies average $ 5,000.

Restoration Industry Standards

If you are responsible for property damaged in loss, it is imperative that you know the “standards of care” of the restoration industry.

- IICRC S500 - Standard & Reference Guide for Professional Water Damage Restoration
- IICRC S520 – Standard & Reference Guide for Professional Mold Remediation
- IICRC S100 – Standard & Reference Guide for Professional Carpet Cleaning
- IICRC S300 – Standard & Reference Guide for Professional Upholstery Cleaning
- RIA- NIDR – Guidelines for Fire & Smoke Damage Repair
- CRI 104 & 105 – Standards for Installation of Commercial & Residential Carpet

AIHA Protecting Worker Health American Industrial Hygiene Association

BBB COMPLAINT-FREE A+

IICRC Institute for Inspection, Cleaning & Restoration Certification

RIA Restoration Industry Association MEMBER

LEAD-SAFE EPA CERTIFIED FIRM

Indoor Air Quality ASSOCIATION MEMBER

Major Causes of Water Damage

- Faulty or damaged plumbing
- Frozen Water Pipes
- Defective Appliances and Fixtures
- Faulty or Damaged Construction
- Accidents or negligence
- Weather – floods
- Willful misconduct and vandalism
- Fire control & high humidity conditions

Sources and Categories of Water Losses

According to IICRC S500, water sources are placed in three general categories. Before defining the three categories, we will discuss how S500 categorizes water.

- S500 states:

"A categorization of the level of contamination from water in a damaged structure is required to perform loss assessment and evaluation activities. The category of water contamination must be considered so that procedures can be established for processing water-damaged structures and materials safely."

Sources and Categories of Water Losses

- Water sources are divided into three general categories:
  - **Category 1: Clean Water**
  - **Category 2: Gray Water**
  - **Category 3: Black Water**

- The category of water contamination is **not determined by the color** of the water source alone; rather, the category is determined by a combination of **source**, **contents** affected, **time**, **history** and **characteristics** of the water. Thus, though the source may be clean, the loss may be considered category 3: Black Water.

Category 1: CLEAN WATER

- A “clean” water source is one that does not pose substantial harm to humans.
  - Examples are broken water supply lines, tub or sink overflows, melting ice or snow, falling rainwater, broken toilet tanks, etc.
  - Once a clean water source contacts other sources and materials, its condition may change as it dissolves or mixes with soils and other contaminants, as time elapses.

Category 2: GRAY WATER

- Unsanitary or “gray” water contains some level of contamination and has the potential to cause discomfort or sickness if consumed by or exposed to humans.

  - Examples are discharge from dishwashers or washing machines, overflows from washing machines, overflows from toilet bowls with some urine (no feces), sump pump failures, punctured water beds, fire suppression (sprinkler head), etc.
  - Time and temperature aggravate Category 2 (gray) water contamination levels significantly. Gray water in flooded structures that remains untreated for longer than 36 hours can change from Category 2 to Category 3.


OXFORD

Category 3: BLACK WATER

- “Black” water always contains pathogenic (disease causing) agents and is grossly unsanitary.
  - Black water sources are those that arise from sewage or other contaminated water entering a structure. Includes all forms of flooding from seawaters, ground surface water and rising water from rivers or streams. They carry silt and organic matter into structures.
  - The water is considered to be “black” where structural materials and/or contents have been contaminated with such contaminants as pesticides, heavy metals or toxic organic substances.

Microbial Activity

- To prevent amplification of microorganisms, immediate response is necessary for all categories of water intrusion.

FACT

- Microorganisms are always present in the indoor environment.
  - Whether water is categorized as clean, gray, or black, when there is a water intrusion…
  - … if it is left unattended, microorganisms will amplify. While the amplification will not be immediately noticeable, the greater the length of the time, the greater the amplification.
  - With the passage of time, microorganisms present in any category of water intrusion will begin to amplify.

Air Filtration Device

- Mandatory in all Category 3 water losses as per IICRC S500 standards.

Principles of Restorative Drying

- There are four general principles that must be understood before any materials subjected to water damage can be returned to a pre-loss condition.

They are:

1. **EXTRACTION**
2. **EVAPORATION**
3. **DEHUMIDIFICATION**
4. **TEMPERATURE CONTROL**

Principles of Restorative Drying

Extraction

- Removal of excess water usually through the use of more sophisticated techniques and equipment to include pumps or heavy-duty wet pick-up vacuuming equipment.
- It is generally accepted that it is 500 times faster to remove water through extraction than it is to evaporate it.

Principles of Restorative Drying

Evaporation

- Once excess water is removed, technicians must concentrate on changing water from a liquid to a vapor by promoting evaporation to increase the rate of drying.
- Normally, this is accomplished with “air movers”.


TYPHOON

Principles of Restorative Drying

Dehumidification

- Once moisture is evaporated from the structural and contents materials into the air, it must be removed through dehumidification if substantial secondary damage is to be avoided.

Secondary Damage


PATRIOTS
SCOUTS
BEARS
MUSTANGS
EAGLES
BULLDOGS
ROUND LAKE
PANTHERS
WAUCONDA
BULLDOGS
EXIT
FIRE

Principles of Restorative Drying

Temperature Control

- Both evaporation and dehumidification capabilities are greatly enhanced by controlling the temperature in a confined environment.
- Thus, temperature modification and control becomes an important basic principle for restorative drying.
  - Later in this course, we will discuss the science of Psychometrics, which manages the ambient temperature according to relative humidity in order to achieve a balanced drying system.

Principles of Restorative Drying

Other Restoration Considerations

- Obviously, there are many other considerations, but reduced to the most basic form, the four restorative drying principles are the guiding principles for all other procedures that must be performed.
- Total restoration involves many other procedures that may be required to bring the structure and contents back to a pre-loss condition. They might include:
  - Inspecting
  - Coordinating
  - Tear Out
  - Cleaning
  - Deodorizing
  - Refinishing
  - Reconstruction…to name a few.

Principles of Restorative Drying

Mitigating the Damage

Equipment of Water Damage Restoration

- Water Extraction Equipment
- Air Movers
- Drying Equipment
- Inspection/Detection Equipment
- Dehumidifiers

Principles of Restorative Drying

Water Removal Equipment

- **Extraction Units**
  - Portable – dual vacuum system preferred
  - Truck-mounted extraction unit
- **Extraction Tools**
  - Light wand (scrub wand)
  - Stationary Extraction Tool
  - Self-propelled extraction tool
  - Vacuum squeegee or hard surface type wand.
- **Submersible Pump**
  - For basements, crawlspaces

Water Removal Equipment

“Xtreme Xtractor”

Water Extraction unit with Self - Contained Vacuum unit

Water Removal Equipment

Extraction Unit - Portable

Evaporation Drying Equipment

- **Air Movers**

  Used to cause evaporation.

  - Centrifugal Fans
    - Standard Air Mover.
  - Axial Fans
    - Move more air while requiring less power.

Evaporation Drying Equipment

Determining the # of Air Movers Needed

- Per the IICRC guidelines, one air mover placed every 10 to 14 linear feet (50-60 square feet) around the perimeter of the room at a 45 degree angle.

- Example: 12’ x 12’ room size
  - 48 linear feet /10 =

    5 air movers

Air Filtration Devices

- **Air Scrubbers (HEPA-rated)**
- Removes 99.97% of particles @ 0.3 microns
  - Used in structures occupied by ill or respiratory-impaired persons(allergies, asthma)
  - Set up after initial day of drying when particles are being rendered airborne.
  - Mandatory in mold or sewage losses, as per IICRC S500.
  - Create negative pressure in contaminated areas to prevent cross-contamination

Inspection / Detection Equipment

- Non-Penetrating Moisture Detector
- Thermal-hygrometer
- Penetrating Moisture Meter

Inspection / Detection Equipment

Moisture Detector Probe

- The most efficient tool to use in determining the exact perimeter of damage to carpet and pad.

Inspection / Detection Equipment

Moisture Detector

Inspection / Detection Equipment

Digital Hygrometer

- Measures temperature (“thermo”) and relative humidity (“hygro”) of the air.
- Used to determine:
  - The difference between inside and outside humidity/temperature, in order to decide whether to use an “open” or “closed” drying system.
  - Used to determine when the structure has returned to normal humidity (before removing drying equipment).
  - Remember that there is a great deal of variation in morning and afternoon humidity.

Inspection / Detection Equipment

Moisture Meters

- Device with pins or probes which measures moisture absorbed within structural materials
- **Penetrating**
  - Pin probe: insulation probe; hammer probe
    - Used in drywall, hardwood floors/sub floor

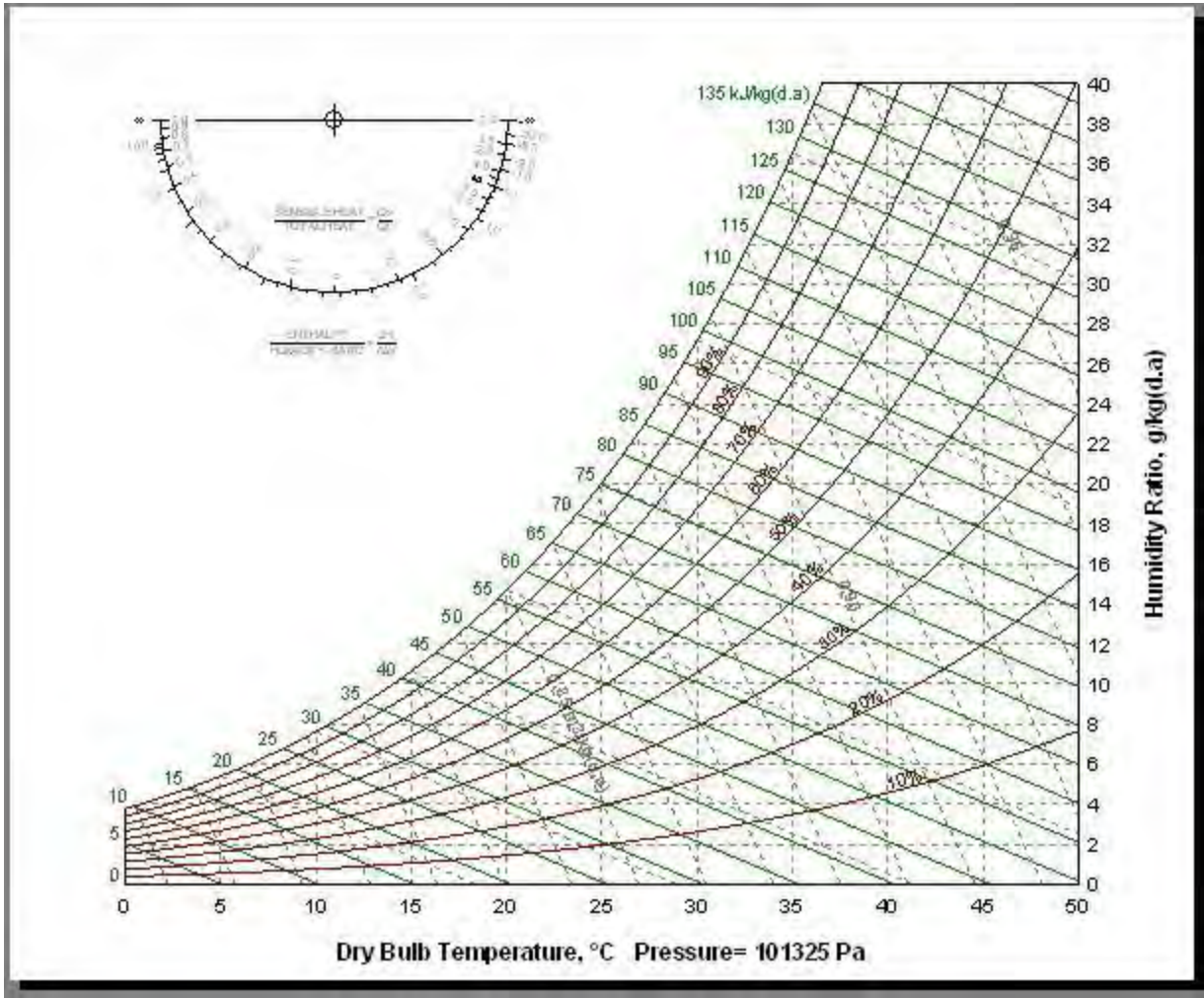
- **Non-Penetrating**
  - Used to detect moisture under sheet vinyl, VCT, wood, paneling, drywall, ceramic tile, etc.

Moisture Meter

Inspection / Detection Equipment

Other Meters

- **Psychrometric Chart or Calculator**
  - Used to determine Specific Humidity (SH), Vapor Pressure (VP), Dew Point (DP).



Inspection / Detection Equipment

Other Meters

- **Boroscope**
  - Used to view inside walls or other cavities to check for the presence of unknowns

Inspection / Detection Equipment

Other Meters

- **Thermal Imaging Camera**
  - Use of infrared imaging technology to locate pockets of saturation inside walls and under flooring.

Dehumidification

Two Types of Dehumidifiers

- **Refrigerant Dehumidifier (most common)**
  - They work on the condensation principle, by drawing warm, moist air across metal coils cooled by a gaseous coolant.
  - Two Types
    - Standard Refrigerant
    - Low Grain Refrigerant (LGR)

- **Desiccant Dehumidifier**
  - They are highly hygroscopic (adsorbent or absorbent) compounds that absorb moisture.

Dehumidification

Refrigerant Dehumidifiers

- **Standard Refrigerants**
  - Low-capacity standard refrigerants are used by home owners and professionals in some cases. When ambient temperature is low, e.g. below 68F, the combination low air temperature and evaporator coil temperature causes ice to form on the coils. When coils are blocked with ice, air circulation and condensation are reduced substantially, causing dehumidification to slow or stop completely.

Dehumidification

Refrigerant Dehumidifiers

- **Low-Grain Refrigerants (LGR)**
  - An LGR uses an air-to-air heat exchanger to transfer heat around the evaporator of a refrigeration system. The incoming air is pre-cooled by redirecting the cold air leaving the evaporator back through the inlet air changer. In the final stages of drying, the LGR is able to significantly reduce specific humidity for continued drying efficiency.
  - LGRs can continue dehumidifying air temps up to 110 degrees.

Dehumidification

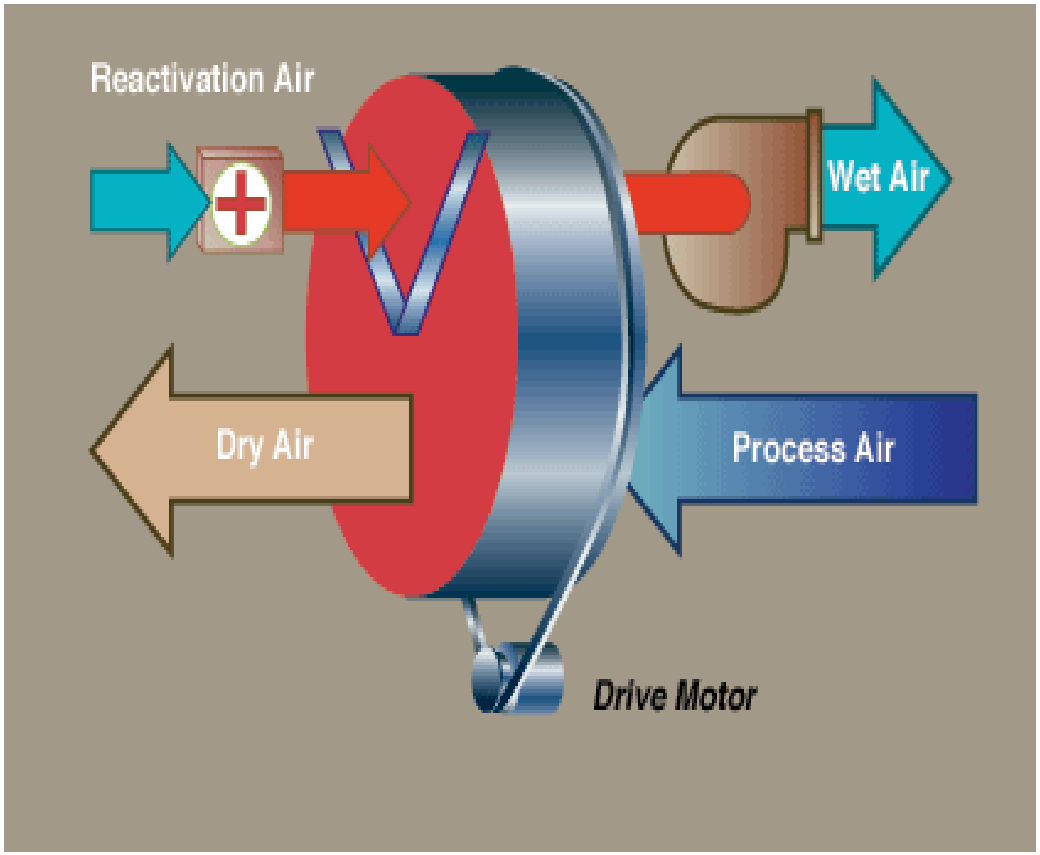
Desiccant Dehumidifier

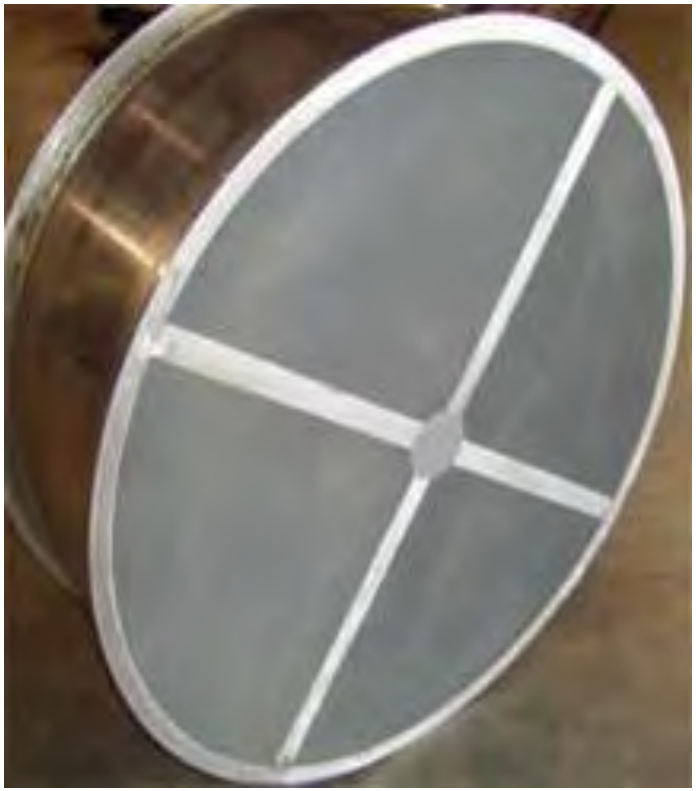
- Desiccants function when a fan draws moist air from an indoor environment through a series of panels mounted on a rotating carousel containing the desiccant. As that air passes through the desiccant, its moisture is adsorbed, and the resulting dry air is recirculated back into the environment from which it is drawn.

Although somewhat more expensive to purchase and operate, the chief advantage of desiccants dehumidification is that the system can continue to absorb moisture at greatly reduced temperatures (below 32F).

Dehumidification

Operation of a Desiccant Dehumidifier



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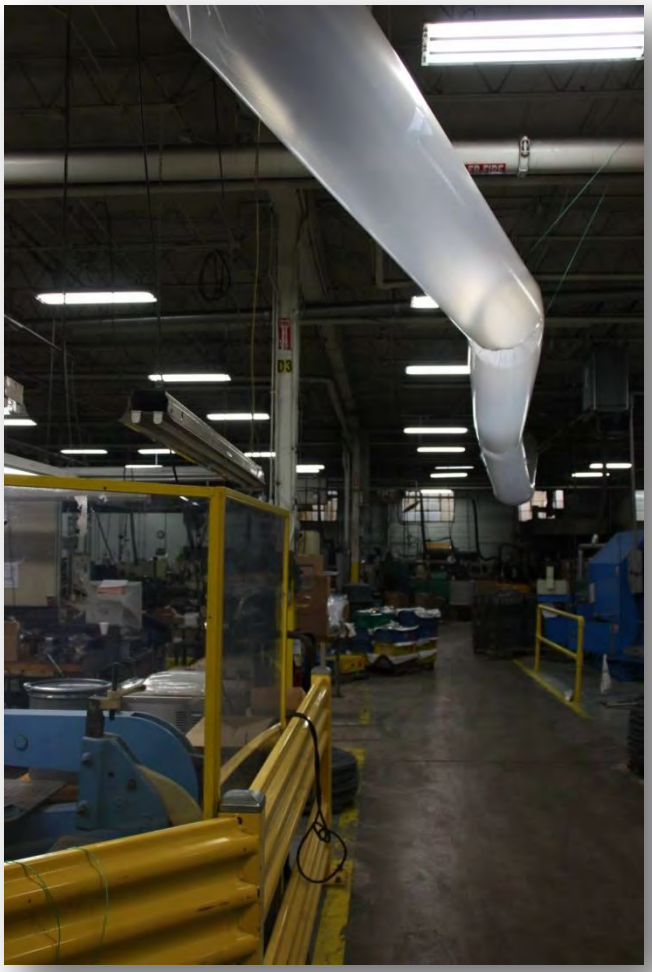


Dehumidification

Dehumidifiers And Their Uses

Dehumidifier Type	*Operates down to:*	*Reduced Performance*	*Typical use*	*Comments*
Standard Residential	68 degrees	below 55-60 gpp	homeowner	Have a tendency to ice up.
Low-grain Refrigerant (LGR)	60 degrees	below 32-35 gpp	90% of professional restoration	Normal for most restoration companies.
Dessicant	32 degrees and below	below 10-15 gpp or lower	Used in large loss situations	Absorb moisture. Work well in the cold. Draws moist air out and recirculates the warm air.

Classes of Water Losses

- To simplify the discussion of water damage, the IICRC has offered four classes of water losses. Even these four classes have variations to consider, but generally, they make it easier to communicate within the industry.
- With the Categories of water (clean, gray, black) in mind, the Classes of water losses defined by the IICRC Applied Structural Drying (ASD) Technical Advisory Committee are:
  - Class 1: Slow Rate of Evaporation
  - Class 2: Fast Rate of Evaporation
  - Class 3: Fastest Rate of Evaporation
  - Class 4: Specialty Drying Situations

Classes of Water Losses

Class 1: Slow Rate of Evaporation

- Losses that affect only part of a room or area; or losses with low-permeance/porosity materials such as plywood, particle board, structural wood, vinyl composite tile (VCT), concrete, etc.
- There exists little or no wet carpet and/or pad.
- There is minimal moisture absorbed by low porosity surfaces which will release moisture slowly once absorbed.

Classes of Water Losses

Class 2: Fast Rate of Evaporation

- Losses that affect the entire room of carpet and pad. Water has wicked up walls less than 24 inches.
- There exists moisture in structural materials such as plywood, structural wood, VCT, concrete, particle board, etc.
- Due to the porosity of the wet materials and volume of water there will be faster release of this moisture through evaporation.

Classes of Water Losses

Class 3: Fastest Rate of Evaporation

- Loss that enters the structure from overhead affecting the ceiling, walls, insulation, carpet, pad, and subfloor. The entire area is saturated.

- Due to the porosity of the wet materials and volume of water there will be the fastest release of this moisture through evaporation.

Classes of Water Losses

Class 4: Specialty Drying Situations

- Loss that involves wet materials with very low permeance/porosity, such as hardwoods, subfloor, plaster, brick, concrete, stone, crawlspaces, etc.

- Typically, there are deep pockets of saturation, that normally require very low specific humidity to force the water out. Normally require long periods of drying time to remove saturation.

Determining Dehumidification Requirements

Initially, effective drying of structural materials requires that air in a structure must be exchanged based on the dehumidifier's ability to remove a specific number of pints of water per day. In order to determine the amount of dehumidification in pints needed to verify adequate and safe drying you need the following four pieces of information:

1. **Classification of Water Damage**
2. **Cubic footage of the area to be dried.**
3. **Division Factor (using AHAM chart)**
4. **Dehumidifier Type**

Determining Dehumidification Requirements

Determining Exact # of Pints Required

- With those four pieces of information, you can determine the initial amount of dehumidification in pints needed to verify adequate and safe drying.
- After determining the cubic footage of the Area to be dried, divide the cubic feet by the AHAM division factor for the correct classification of water damage to determine the amount in dehumidification in pints required on the loss.

200 X 100 X 15 FT CEILING = **300,000** CF / AHAM FACTOR 50 FOR CLASS 2 LOSS = 6000 PINTS OF DH NEEDED / 175 PINTS per LGR= **34** DH UNITS

Determining Dehumidification Requirements

Determining Exact # Of CFM Required

- With those four pieces of information, you can determine the initial amount of dehumidification in CFM needed to verify adequate and safe drying.
- After determining the cubic footage of the Area to be dried, divide the cubic feet by the Number of Air Changes Per Hour needed to process the air in a Desiccant Dehumidifier-

200 X 100 X 15 FT CEILING = **300,000** CF / 60 minutes

(1 Air Change per hour) x 2 ACH for a **Class 2** loss=

10,000 cfm of desiccant dehumidification

Determining Dehumidification Requirements

From IICRC Reference Guide for Professional Water Damage Restoration (IICC S500)

Initial Dehumidification Factors

Type of Dehumidifier	Class 1	Class 2	Class 3	Class 4
Conventional Refrigerant	100	40	30	N/A
Low Grain Refrigerant (LRG)	100	50	40	50
Desiccant	1 ACH	2 ACH	3 ACH	2 ACH

- Initial Desiccant Dehumidifier Calculations (based on air exchanges per hour or ACH)
  - Formula: ft^3 ⁄ 60 min = cfm x # ACH (see chart) = total cfm required. Divide this number by dehumidifier's process cfm = # units
  - Example: 3000 sf Class 4 project with 12' ceilings = 36,000 ft^3
  - 600 cfm x 2 ACH = a requirement of 1200 cfm of desiccant dehumidification
  - 1200 cfm / desiccant dehumidifier output (e.g., desiccant dehumidifier @ 600 cfm) = 2 units needed for effective drying

Note: The recommendations arrived at using this process form a starting point that is based on research and observation in IICRC-approved Applied Structural Drying houses. Psychometric readings recorded on the Daily Humidity Record dictate decisions about on-going dehumidifier capacity throughout the drying process. Adjustments may be necessary.

The Effects of Sanitary Water on Materials

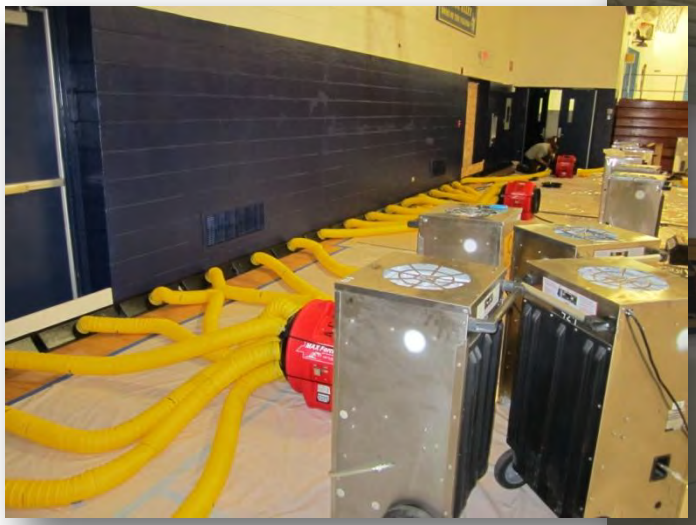
- **Vinyl Floor Coverings**
  - Moisture becomes trapped under non-porous finish or vinyl materials. Discoloring or rotting of subfloor components results, along with health hazards.
  - Remove vinyl and replace swollen wood with new.
- **Wood Floor Coverings**
  - Swells (up to 4% across grain) or warps (cupping, crowning)
  - Supports fungus growth
  - Finishes create a barrier to evaporation
  - All portions of a wood floor must be within 1% MC of other portions
  - Wood subfloor must be within 4 percentage points of finished floor to be considered dry
- **Concrete**
  - Absorbs some moisture and prolongs drying if not considered.

Structural Drying

- **Common Structural Drying Problems**
  - Non-porous paint / wall coverings
  - Integrity of drywall
  - Electrical fixtures/wiring
  - Curled/bubbled wall coverings
  - Moisture retention by moldings
  - Insulation's resistance "R" factor
  - Blown in insulation
  - Concrete slabs
  - EPA new RRP lead rule

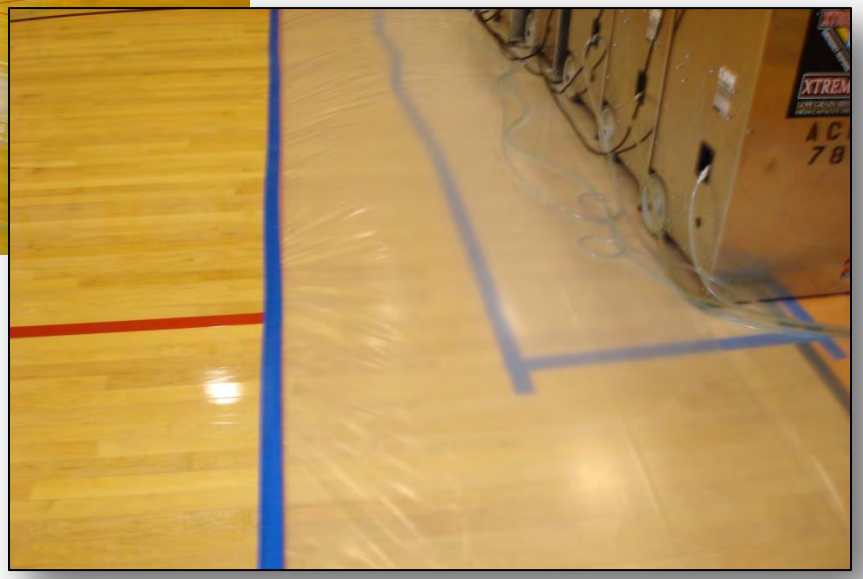
CASE STUDY

Gymnasium Floor - Restoration vs. Replacement



Gym Floor:
88 x 73 ft (6424 sq.ft)

Restorative Drying: $43,500.00 ($6.70/sq. ft)
Removal and Replacement: $160,000.00 ($25.00/sq. ft)



Partial floors can also benefit greatly from the restorative drying process.

Hardwood flooring routinely saved by restorative drying is not limited to court floors…

- Rectory
- Sanctuary
- Chapels
- Schools
- Study rooms

Anywhere that hardwood may be used in or on the church's property.

EPA Lead-Safe Certification

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Renovator Initial - English
Per 40 CFR Part 745.225

JOHN SCHAEFER
925 SETON CT UNIT 35 | WHEELING, IL 60090

Certificate Number: R-I-18506-10-01988

Course Date: 03/17/2010
Examination Date: 03/17/2010
Expiration Date: 03/17/2015

03/17/2010

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Certificate of Attendance and Successful Completion
Renovator Initial - English
Per 40 CFR Part 745.225

JEFF KNEBL
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Certificate Number: R-I-18506-10-01991

Course Date: 03/17/2010
Examination Date: 03/17/2010
Expiration Date: 03/17/2015

03/17/2010

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EPA Lead Renovation Requirements

- Structure must be built on or before 1978 or a commercial property regardless of age
- Structure has children under 6 years of age or elderly residents
- Work consists of disturbing 6 SF of painted surface PER ROOM
- The property has been deemed to be free of lead by a certified lead inspector
- Housing is a zero-bedroom dwelling (studio apartment)
- Consultation with building owner and tenants
- PPE must be work by all workers
- Containment must be erected for dust control
- Engineering controls established
- Documentation kept
- Testing of materials for lead content
- Provide lead safe pamphlet
- Cleaning verification
- HUD’s regulations superseded EPA – more stringent

Possible Drying Challenges

Possible Drying Challenges

Potential Water Damage Health Effects

- **Water-Damaged Structures as Microbiological Reservoirs**
  - A water-damaged building is always a reservoir for harmful bacteria and fungi. Recent studies show that airborne concentrations of bacteria and fungi increase significantly with humidity. Water can either transmit these harmful organisms directly to humans or create environmental conditions where these organisms multiply and concentrate and increase the risk of exposure and adverse health effects.

Potential Water Damage Health Effects

- **Immuno-Compromised Individuals**
  - These individuals are highly susceptible to adverse health effects when exposed to a water-damaged building. Do not allow these individuals in a building until it is fully restored.
- **Water Damage Restoration and Asthma**
  - Fungal spores and wet environments often trigger asthma attacks. Not only do humidity levels correlate with asthma, but recent studies suggest biocides, such as those used in the restoration process, also may be a contributing factor to asthma attacks.

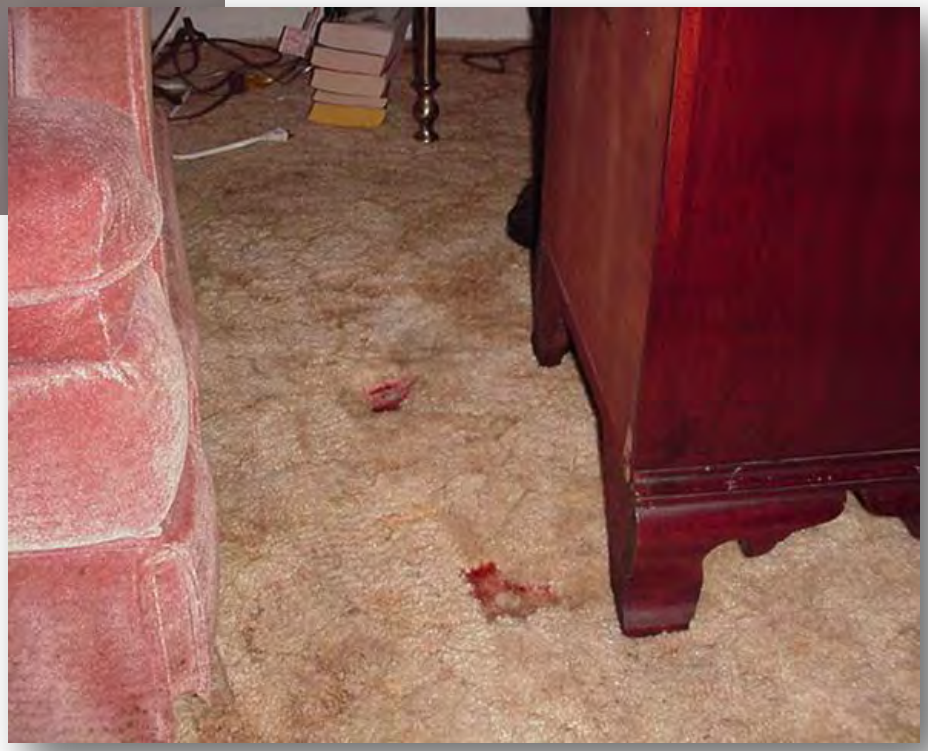
The Continuing Effect of Water Contamination

Degree of Damage

1. **Condition of the Water**
   - Category 1, 2, 3
2. **Materials Exposed**
   - Synthetic or natural, porous or non-porous.
3. **Time of Exposure**
   - The longer exposure is sustained, the more water is absorbed, causing surfaces to swell, split, delaminate, and dissolve.
4. **Humidity**
   - Moisture in the air is absorbed into hygroscopic materials causing greatly increased *secondary damage.*
5. **Temperature**
   - With proper temperature, lighting and air circulation, bacteria and fungi have a chance to grow and eventually destroy host materials.

The Continuing Effect of Water Contamination

- **Minutes**
  - Water contamination spreads to additional areas, thereby rapidly increasing the cost of the claim.
  - Stain released from furniture stains carpet permanently.
  - Moisture sensitive furniture finishes turn white.
  - Paper goods are ruined due to moisture absorptions, swelling & warping.
  - Electronics start to corrode from high humidity.



The Continuing Effect of Water Contamination

- **Hours**
  - Furniture in direct contact with water delaminates or swells, legs begin to split.
  - Drywall swells and begins to absorb.
  - Hardwoods begin to swell.
  - Bacterial odor (sour) becomes apparent

The Continuing Effect of Water Contamination

- **Days**
  - Fungi appear, along with characteristic “musty” odor.
  - Metal surfaces begin to rust.
  - Door and window casings swell and distort or delaminate.
  - Wood structural members begin to swell, warp and split.
  - Electronic components with condensed internal moisture malfunction.
  - Occupants with respiratory problems or compromised immune systems must be evacuated.

The Continuing Effect of Water Contamination

- **Weeks**
  - Fungi associated with prolonged dampness sinks roots in organic materials (jute backings, paper coverings on drywall, paneling, wood, etc.)
  - Wood components warp and split, while chemicals within the wood are dissolved and discolor or destroy finishes.
  - Claim costs escalate astronomically as requirement for gutting the structure and replacing components becomes necessary.
  - Serious occupant health hazards abound; liability increases.

"WATER DAMAGE: Mitigating the Loss"

Thank You for Your Time!

QUESTIONS?

A | C | R

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